KCB Consultants Ltd.

Resolution Copper Mining LLC

Resolution Copper Project

Skunk Camp TSF Reclamation Plan

Doc. # CCC.03-81600-EX-REP-00023 - Rev. 1

KCB Consultants Ltd.

May 13, 2021

Resolution Copper Mining
P.O. Box 1944
Superior, Arizona
85273

Ms. Victoria Peacey
Senior Manager of Environment, Permitting and Communities

Dear Ms. Peacey:

Resolution Copper Project
Skunk Camp TSF Reclamation Plan
Doc. # CCC.03-81600-EX-REP-00023 – Rev. 1

Please find enclosed the Skunk Camp Tailings Storage Facility (TSF) reclamation plan in response to FS-226 described in the Draft Environmental Impact Statement.

Yours truly,

KCB CONSULTANTS LTD.

Kate Patterson, P.E., P.Eng.
Project Manager

JS/KP:dl

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Resolution Copper Mining LLC

Resolution Copper Project

Skunk Camp TSF Reclamation Plan

Doc. # CCC.03-81600-EX-REP-00023 - Rev. 1

EXECUTIVE SUMMARY

Resolution Copper Mining LLC (RCM) is proposing to develop the Resolution Copper Project, an underground copper mine approximately two miles east of the town of Superior in the Pioneer Mining District, Pinal County, Arizona. Tonto National Forest (the Forest) issued the Draft Environmental Impact Statement (DEIS) for the proposed Resolution Copper Project and Land Exchange in August 2019 (Forest 2019). The DEIS identified the preferred Tailings Storage Facility (TSF) alternative as the Alternative 6 – Skunk Camp. The DEIS also listed mitigation measures, some to be completed prior to issuing the Final Environmental Impact Statement (FEIS).

RCM commissioned KCB Consultants Ltd. (KCBCL) to develop a reclamation plan for the proposed TSF at the Skunk Camp site for the FEIS in part to address the mitigation measure (FS-226). The objective of this plan is to support the site-wide reclamation plan (Tetra Tech 2020) by providing the strategy and design for implementing closure measures for the Skunk Camp TSF.

Reclamation Strategy

The long-term closure goals for the Skunk Camp TSF are to have a stable facility and to limit the generation and potential release of poor water quality seepage. Management during operations of the potentially acid generating (PAG) pyrite tailings and their location within the facility post-closure is important to reducing the risk of acid rock drainage (ARD) and metals leaching (ML).

The Skunk Camp TSF closure objectives are listed in Table 1.

Table 1 Skunk Camp TSF Post-Closure Performance Objectives

Closure Focus	Objectives
Physical (geotechnical stability, water management, erosion protection)	▪ Develop long-term landform that maintains stability and integrity of the TSF. ▪ Minimize ponded water on the closed tailings surface. ▪ Safely route TSF surface and catchment runoff downstream of the TSF to Dripping Springs Wash. ▪ Manage erosion of closed surfaces to acceptable levels consistent with established performance criteria.
Geochemical (protection of water/land/air)	▪ Protect reclaimed covered surfaces against wind and water erosion, to avoid exposure of tailings. ▪ Minimize oxidation of the PAG pyrite tailings by limiting oxygen and water ingress. ▪ Minimize long-term seepage from the TSF, by limiting seepage from the TSF via pyrite cell low permeability layers and minimizing net infiltration and oxygen ingress into the TSF post-closure. ▪ Preserve groundwater and surface water quality downstream of the TSF, in accordance with regulatory requirements. ▪ Return of TSF draindown seepage to beneficial uses.
End land-use (vegetation, access)	▪ Construct a self-sustaining vegetated landform that is compatible with a beneficial land use. ▪ Transition TSF to land uses that are consistent with surrounding areas (e.g., low-intensity livestock grazing (if possible) and wildlife habitat).

Cover Material Characterization

The Skunk Camp TSF footprint is founded on Gila Conglomerate, Gila Sandstone, Quaternary Pediment, and Quaternary Alluvium. A field sampling program of the foundation materials was conducted in September 2019 to characterize surface material available for reclamation and potential suitability of cover material. A laboratory testing program was subsequently completed to characterize and assess the suitability for TSF cover. Deeper core samples were tested to assess geochemical and nutrient characteristics at depth. A high-level summary of each material type is provided in Table 2.

Table 2 Surficial Deposits Material Summary

Material Type	Physical Description	Non-Potentially Acid Generating (NPAG)?	Acid Neutralization Potential?
Gila Conglomerate	Variably cemented fine to coarse gravel, and sand, some cobbles, and some silt. Its characteristics as a cover borrow are expected to be variable, corresponding to local gradation. Excavated and placed Gila Conglomerate as a monolithic cover material is expected to have relatively saturated hydraulic conductivity initially but is expected to decrease with weathering. Coarse Gila Conglomerate is expected to have low moisture retention capacity, thus acting more like an infiltration cover. However, weathered or soil-like Gila Conglomerate (typical of what is at surface), will have a high moisture retention capacity, acting more like a store-and-release cover material.	Yes	Yes
Gila Sandstone	Variably cemented coarse to fine sand, and silt to silty, with trace to some fine gravel. Its characteristics as a cover borrow are expected to be variable, corresponding to local gradation. Excavated and placed Gila Sandstone as a monolithic cover material is expected to have moderate saturated hydraulic conductivity initially and is expected to decrease with weathering. Weathered or processed Gila Sandstone is expected to have high moisture retention capacity, acting like a store-and-release cover.	Yes	Yes
Quaternary Pediment	Typically uncemented clayey sand and gravel, trace cobbles to and cobbles. Its characteristics as a cover borrow are expected to be variable, corresponding to local gradation. Excavated and placed Quaternary Pediment as a monolithic cover material is expected to have moderate saturated hydraulic conductivity initially and is expected to decrease with weathering. Weathered or processed Pediment is expected to have high moisture retention capacity, acting like a store-and-release cover.	Yes	Yes
Quaternary Alluvium	Uncemented sand and gravel, clayey to clean, some cobbles and boulders. Its characteristics as a cover borrow are expected to be highly variable, corresponding to local gradation. Excavated and placed Quaternary Alluvium as a monolithic cover material is expected to have high saturated hydraulic conductivity initially and may decrease with weathering. Retention capacity will be dependent on the grainsize of the alluvium.	Yes	Yes

Risk Assessment

A Failure Modes and Effects Analysis (FMEA) was completed on the Skunk Camp TSF impoundment in response to a mitigation measure (FS-227) in the DEIS. The FMEA focused on dam safety aspects of the Main Embankment and pyrite cells. The Forest held a collaborative FMEA workshop in Phoenix, Arizona from February 5-7, 2020.

During the FMEA workshop, closure implications for each failure modes were discussed. The consequence of failure or Annual Exceedance Probability (AEP) is expected to decrease post-closure for all dam safety failure modes evaluated during the workshop.

Closure Plan

In the DEIS, scavenger tailings were deposited from the Main Embankment during the entire operations to develop an ultimate beach that will drain to the north. At closure, a diversion channel was to be excavated through the catchment divide between Dripping Springs Wash and Mineral Creek, draining the TSF surface and upstream catchment to Mineral Creek, which ultimately flows through the Ray Mine to the Gila River. To address DEIS comments, RCM has updated the closure objective to divert the TSF catchment to the south, towards Dripping Springs Wash, post-closure. In order to establish this updated ultimate TSF configuration, the following approach will be undertaken:

- The deposition strategy up to Mine Year 30 remains the same as the DEIS with spigotting from the Main Embankment crest.
- From Mine Year 31 to the end of operations, spigotting of scavenger tailings will take place at the north and west side of the TSF in order to grade the ultimate surface towards the southeast corner of the tailings beach.
- In the final years of operations, scavenger tailings will be deposited in Pyrite Cell 2 with a surface grade towards the southeast to both cover the pyrite tailings and reduce the operating pond surface by pushing the water to the south. Ultimately the area of the Pyrite Cell 2 will be fully covered by scavenger tailings. The overall elevation of the pyrite tailings is lower than the surrounding scavenger tailings. This can be used to the benefit of placement of enough scavenger tailings with appropriate thickness to limit oxygen and water ingress.
- At the end of operations, a closure channel will be excavated through a Gila Conglomerate ridge on the east side of the TSF a minimum of 300 ft from the left abutment of the Main Embankment and will drain the TSF surface and upstream catchment to Dripping Springs Wash.

A cover concept focused on encouraging evapotranspiration (“store and release” cover) for the entire TSF surface is the preferred cover configuration based on the closure objectives, local climate, locally available cover materials, and constructability.

Preliminary Reclamation Schedule

A preliminary closure schedule and key activities required to implement the reclamation plan was prepared, see Table 3.

Table 3 Preliminary Reclamation Schedule

Stage	Mine Year	Key Activities
Life of Mine Progressive Reclamation	1 to 41	▪ Progressive reclamation (e.g., tailings deposition to achieve ultimate configuration, Main Embankment surface reclamation). ▪ Excavate Closure Diversion Channel to Dripping Springs Wash (the channel will not connect the TSF surface to Dripping Springs Wash until TSF surface is reclaimed after the Closure Transition Period). ▪ Lined Contact Water Collection Ditches convey seepage from finger drains and contact surface water from Main Embankment to the SCP. ▪ Shallow alluvial pumpback wells to collect TSF seepage and return to SCP. ▪ SCP water is pumped back to the operating pyrite cell. ▪ Ongoing field data collection to refine closure plan.
End of Operations	41	▪ Cessation of tailings deposition within the TSF. ▪ Cessation of shallow alluvial pumpback well operations.
Closure Transition Period	42 to 51 (approximately 10 years after the end of operations)	▪ Closure of Pyrite Cell 2 (resulting in no ponded water on the TSF surface). ▪ Surface shaping to closure design configuration. ▪ Place closure cover and vegetate. ▪ Construct Closure Embankment Bench and Toe Ditches on the Main Embankment. ▪ Connect TSF surface to Drippings Springs Wash via Closure Diversion Channel. ▪ Decommission Operational Upstream Diversion Channels and Contact Water Collection Ditches. ▪ Install Finger Drain Collection Pipes, to convey TSF impoundment draindown from finger drains to the SCP. ▪ During this period, the SCP does not have capacity to manage inflow with evaporation solely and will need active management (water treatment, additional evaporation ponds, spray evaporators, etc.). ▪ Monitoring closure performance criteria, in preparation for the Closure Active Care Phase. ▪ Monitoring/surveillance for dam safety, to meet long-term performance criteria, e.g., non-flowable scavenger tailings.
Closure – Active Care	51 to 120 (approximately 10 years to 80 years after the end of operations)	▪ Finger Drain Collection Pipes convey TSF impoundment draindown from finger drains to the SCP. ▪ Continue active management of the SCP (water treatment, additional evaporation ponds, spray evaporators, etc.). ▪ Monitoring closure performance criteria, in preparation for Closure Passive Care Phase. ▪ Monitoring/surveillance for dam safety, to meet long-term performance criteria – non-flowable scavenger tailings.

Stage	Mine Year	Key Activities
Closure – Passive Care Phase 1	120 to ~290 (approximately 80 years to 250 years after the end of operations)	▪ Finger Drain Collection Pipes convey TSF impoundment draindown finger drains to the SCP. ▪ SCP has capacity to manage inflow passively with evaporation. ▪ Dam safety and water quality compliance surveillance and monitoring frequency is decreased.
Closure – Passive Care Phase 2	Post ~290 (approximately 250 years after the end of operations)	▪ Seepage from finger drains ceases and with water quality standards are met at the POC. ▪ Decommission Finger Drain Collection Pipes, SCP, grout curtain and shallow pumpback well. ▪ Dam safety and water quality compliance surveillance and monitoring frequency is further decreased.

Monitoring and Maintenance

The purpose of the closure maintenance and monitoring program is to assess the implementation and effectiveness of reclamation measures against success criteria. Closure objectives will be achieved once the success criteria are met.

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Appendix VI Seepage Collection Pond Post-Closure Water Balance

1 INTRODUCTION

Resolution Copper Mining LLC (RCM) commissioned KCB Consultants Ltd. (KCBCL) to develop a reclamation plan for the proposed Tailings Storage Facility (TSF) at the Skunk Camp site for the Final Environmental Impact Statement (FEIS). The objective of this plan is to support the site-wide reclamation plan (Tetra Tech 2020) by providing the strategy and design for implementing closure measures for the Skunk Camp TSF.

RCM is proposing to develop an underground copper mine using the Panel Cave mining method approximately two miles east of the town of Superior in the Pioneer Mining District, Pinal County, Arizona. Tonto National Forest (the Forest) issued the Draft Environmental Impact Statement (DEIS) for the proposed Resolution Copper Project and Land Exchange in August 2019 (Forest 2019). Table 1.1 outlines the Forest's DEIS requirements to be addressed prior to issuing the FEIS.

Table 1.1 FS-226 Requirements for Preparation of a Detailed Reclamation Plan

FS-226: Preparation of detailed reclamation plans for the Preferred Alternative
Description/overview: Information derived from the soil surveys, vegetation surveys, and soil testing would be used to develop detailed reclamation plans for the Preferred Alternative. These reclamation plans would be more specific than those included in the GPO, and would include such details as: maps of the post-closure landform depicting the type of final closure cover for each area (depth of material, type of material, anticipated source of material and preparation methods like crushing or sorting, and need for/presence of armoring); anticipated reclamation techniques such as surface preparation, seeding, planting, watering (if any), soil amendments; soil salvage storage locations and storage management techniques; maps of the post-closure landform or the landform over time, depicting phasing of revegetation or reclamation activities; monitoring details including proposed success criteria and the potential use of comparison reference plots. The detailed reclamation plans would also include more specific information on post-closure stormwater controls, the anticipated longevity of engineered control systems, and criteria for when stormwater would be deemed appropriate for release back to the downstream drainages. The appropriate level of detail for the final reclamation plans would be determined in conjunction with the Tonto National Forest. The Forest Service is requiring that these plans be prepared between the DEIS and FEIS.
Source of measure: Forest Service
Resource affected/impacts being mitigated: This statement seeks to mitigate impacts on long-term reclamation and vegetation.
Applicable alternatives: Preferred Alternative
Authority to require: While the footprint of the Preferred Alternative may not involve Forest Service surface resources, other aspects of the project still involve Forest Service surface resources, and the information collected under this measure is considered necessary to support the final mining plan of operations.
Additional ground disturbance: No additional ground disturbance anticipated.

The main text of this document is organized as follows:

- **Section 1 Introduction:** summarizes objectives, scope and organization of the report.
- **Section 2 Project Description and Site Characterization**: summarizes the staging and deposition plan, an overview of the closure water management infrastructures, the regulatory framework and the site conditions.
- **Section 3 Regulatory Framework**: summarizes the federal and state regulatory requirements for TSF reclamation.
- **Section 4 Reclamation Strategy:** summarizes the post-closure objectives and concepts used to guide the closure design.
- **Section 5 Post-Closure Dam Safety:** summarizes the outcomes of the dam safety Failure Modes and Effects Analysis (FMEA) workshop and how the reclamation plan addresses potential failure modes related to the TSF post-closure.
- **Section 6 Closure Cover Surface Sampling for Characterization**: summarizes the design governance requirements, assumptions and criteria used to support the reclamation plan.
- **Section 7 Closure Design**: summarizes the technical focus areas of the reclamation plan, with supporting technical appendices.
- **Section 8 Reclamation Materials and Approach**: summarizes the reclamation materials, type, required volumes and potential sources to support the reclamation plan.
- **Section 9 Reclamation Schedule**: provides a preliminary closure schedule for implementing the reclamation plan.
- **Section 10 Temporary Shutdown Plan**: summarizes the care and maintenance activities to be undertaken during periods of prolonged unplanned shutdown of the mine.
- **Section 11 Maintenance and Monitoring:** provides a summary of the reclamation success criteria and proposed monitoring and maintenance program required for assurance.

2 PROJECT DESCRIPTION AND SITE CHARACTERIZATION

2.1 Project Description and Skunk Camp TSF

The proposed Skunk Camp TSF is presented as Alternative 6 in the DEIS, with the design details included in KCB (2018). The Resolution Project's Mine Plan of Operations (MPO) production case includes generation of approximately 1.37 billion tons (Bton) of tailings with an average daily tailings production rate at peak production of 120,000 tons per day (tpd). Mineral processing will generate two physically, mineralogically, and geochemically discrete tailings streams known as "scavenger" tailings and "pyrite" tailings. Scavenger tailings will mostly be classified as Non-Potentially Acid Generating (NPAG) and account for approximately 84% of tailings produced by weight. The pyrite tailings will be classified as Potentially Acid Generating (PAG) and account for the remaining 16%. Pyrite tailings will be segregated and managed separate to scavenger tailings.

The TSF will be designed to withstand the 10,000-year return-period event design earthquake and the probable maximum flood (PMF) inflow design flood (IDF) for operations and post-closure.

The TSF ultimate configuration and post-closure water management plan presented in KCB (2018) included a closure diversion channel to the north, ultimately diverting the entire TSF catchment towards Mineral Creek. To address DEIS comments, RCM has updated the closure objective to divert the TSF catchment to the south, towards Dripping Springs Wash, post-closure. To achieve this objective, an update to the tailings staging and deposition plan for the proposed Skunk Camp TSF was completed, results are discussed in Section 4.2 and additional details are provided in Appendix II.

The proposed Skunk Camp TSF consists of two pyrite tailings storage cells upstream of the scavenger tailings beach and Main Embankment. The Skunk Camp TSF site (Figure 2.1) is located immediately east of the Asarco Ray Open Pit mine and waste rock facilities in the head waters of Dripping Springs Wash approximately 13-miles southeast of the Resolution ore body. The ultimate TSF configuration at the end of operations is shown on Figure 2.2.

The pyrite tailings will be deposited subaqueously in the low permeability cells contained by downstream-raised, compacted, cycloned sand embankments. Pyrite Cell 1 will receive tailings from startup to Mine Year 15 and will be subsequently covered with scavenger tailings starting in Mine Year 16. Pyrite Cell 2 cell construction will start prior to Mine Year 15 and will receive pyrite tailings from Mine Year 16 to Mine Year 41. The pyrite cells will also act as the supernatant or reclaim pond for reuse in processing. Runoff from the scavenger tailings beach will be collected in low areas and pumped into the active pyrite cell, such that no permanent pond will be maintained on the scavenger beach.

The pyrite cell dams and the Main Embankment will be constructed from compacted cycloned sand (coarser scavenger tailings produced from cycloning); the Main Embankment will be raised using the centerline method to an elevation of 3,565 feet above sea level (fasl) and the pyrite cell dams will be raised using the downstream method. Cyclone overflow (finer scavenger tailings produced during cycloning) and uncycloned scavenger tailings will be deposited upstream of the Main Embankment to

form the tailings beach. Entrained water within the scavenger beach will be minimized by thickening prior to deposition in the TSF and adopting "thin-lift" deposition allowing time for water to evaporate. This approach will reduce ponding on the scavenger beach, reduce the potential mobility of the tailings, and reduce seepage into the foundation during operations and post-closure. The ultimate footprint will be approximately 4,000 acres in size with the ultimate height of the embankment crest reaching approximately 500 feet in height.

The objectives of the tailings deposition strategy are to:

- construct a stable TSF, by containing the TSF with well-drained cycloned sand dams (centerline and downstream embankments combined into one impoundment) and managing the reclaim pond far from the Main Embankment (i.e., reducing the likelihood for overtopping of the dam and reducing the incremental consequence of a potential release);
- limit seepage into the foundation, by depositing the pyrite tailings within low permeability lined cells and thickening scavenger tailings to remove water before deposition within the beach;
- maintain saturation of the pyrite tailings during operations, reducing the risk of oxidation (leading to acid rock drainage (ARD) or metals leaching (ML) by depositing the pyrite tailings sub aqueously from floating barges or pipelines directly into the supernatant reclaim ponds in the low permeability cells;
- cover the pyrite tailings with a thick sequence of scavenger tailings fines, limiting infiltration and oxygen ingress long-term; and
- during operations, deposit the tailings to develop an ultimate TSF surface that limits permanent post-closure ponding on the TSF surface with drainage towards Dripping Springs Wash.

The operational seepage management strategy for the Skunk Camp TSF includes the following:

- Construction of a lined seepage collection pond (SCP) downstream of the TSF for short-term management of seepage and construction water prior to returning to the active pyrite cell.
- Low permeability layers installed over the pyrite cells' foundations and embankment upstream slopes to reduce seepage flows from the reclaim pond during operations.
- Managing the scavenger beach as dry as possible using thickening to maximize water recovery and thin lift deposition to maximize evaporation losses so the scavenger tailings mass has low saturation and a low phreatic surface, thus minimizing the infiltration from the scavenger tailings that reaches the foundation.
- Construct well-drained cycloned sand embankments (pyrite cell embankments and the Main Embankment) that does not develop a phreatic surface within the sand long-term.
- Finger drain system within the Main Embankment and scavenger beach near the Main Embankment to capture and convey seepage, from tailings deposition and embankment construction, to the SCP for recovery.

- A series of lined Contact Water Collection Ditches that convey construction water and seepage from the Main Embankment finger drains to the SCP.
- Shallow alluvial pumpback wells between the TSF impoundment and SCP to capture seepage that enters into the shallow foundation.
- A grout curtain and shallow pumpback well downstream of the SCP to capture storm water flow in the alluvium or leakage from the SCP.

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800,000

750,000

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SUPERIOR

Boyce Thompson Arboretum State Park

ARNETT CREEK

GILA PINAL

MINERAL CREEK

PINAL MOUNTAINS

PINAL CREEK

TULAPAI CREEK

LITTLE BOX LAKE

RAY MINE

White Canyon

HALEYS MOUNTAIN

SILVER CREEK

DRIPPING SPRINGS WASH

EL CAPITAN MOUNTAIN

SAN CARLOS RESERVOIR

SAN CARLOS DAM

MESCAL MOUNTAINS

Needles Eye

GILA PINAL

GILA RIVER

DRIPPING SPRINGS MOUNTAINS

KEARNY

GILA RIVER

HAYDEN

WINKELMAN

LEGEND

- PROPOSED CONCENTRATOR SITE (WEST PLANTSITE)
- RESOLUTION OREBODY
- SKUNK CAMP TSF
- SEEPAGE COLLECTION DAM
- SKUNK CAMP TSF - WEST PLANT PIPELINE CORRIDOR AND TUNNEL
- MAJOR CATCHMENT BOUNDARY
- TSF CATCHMENT BOUNDARY
- WILDERNESS AREA AND STATE PARK
- SAN CARLOS DAM
- TOWN OR CITY
- COUNTY LINE
- HIGHWAY
- EXISTING RAILWAY
- ARIZONA NATIONAL SCENIC TRAIL (ARIZONA TRAIL)
- NATURAL WATERCOURSE

NOTES:
1. NAD83, ARIZONA STATE PLANE CENTRAL, COORDINATES IN FEET
2. IMAGERY PROVIDED BY ESRI/BING AERIAL IMAGERY
3. TERRAIN AND IMAGERY DATA SOURCE: ESRI

NOT FOR CONSTRUCTION

TO BE READ WITH KLOHN CRIPPEN BERGER REPORT DATED: MAY 2021

0 5 Mile

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CLIENT: RESOLUTION COPPER

KCB Consultants Ltd.

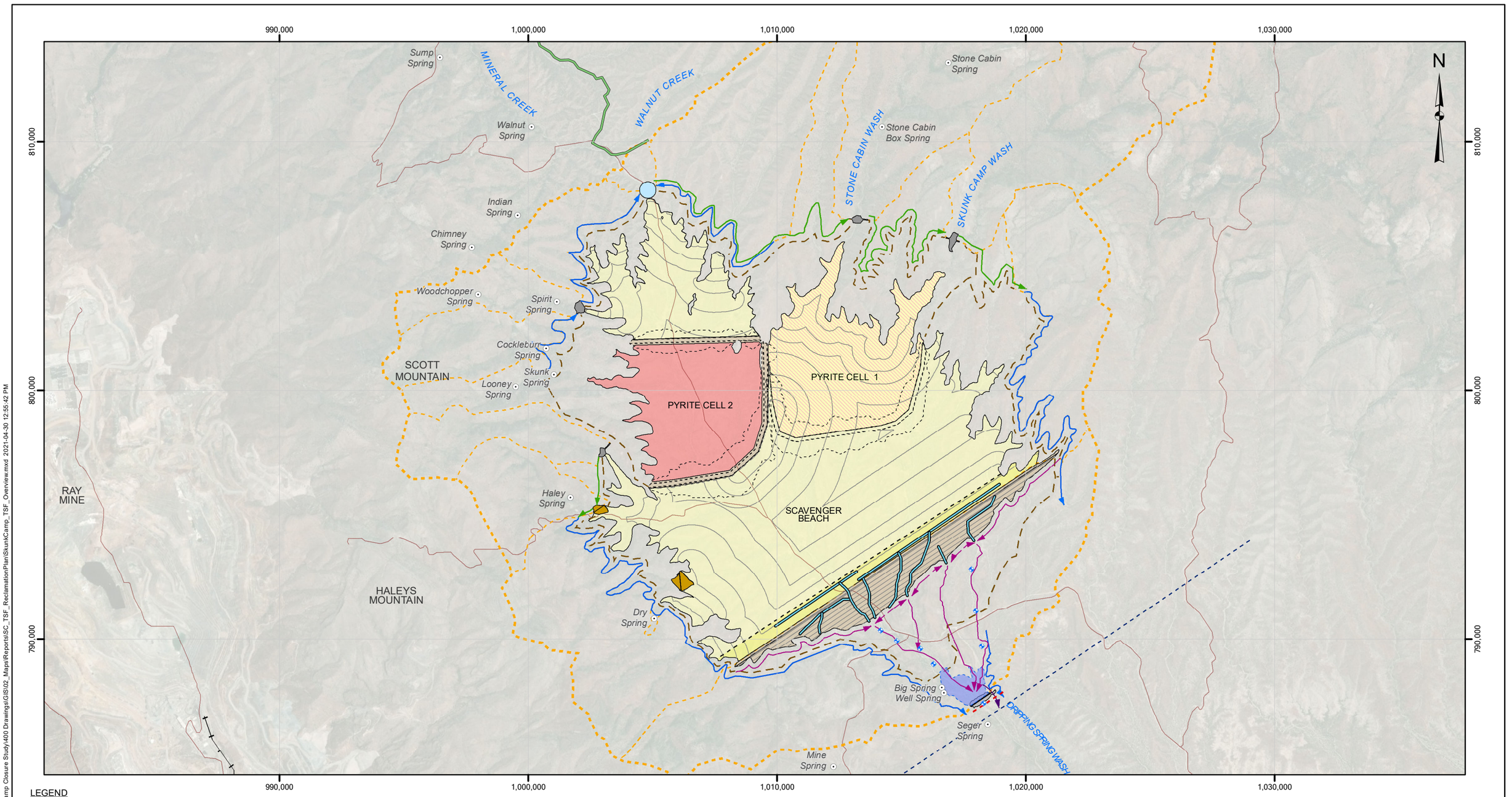
PROJECT: RESOLUTION COPPER PROJECT
SKUNK CAMP TSF RECLAMATION PLAN

TITLE: SKUNK CAMP LOCATION PLAN

PROJECT No. UM09441A23

FIG No. 2.1

\\int.klohn.com\Proj\Data\MI\PHX\UM09441A23-RES-Skunk Camp Closure Study\400 Drawings\GIS\02_Maps\Reports\SC_TSF_ReclamationPlan\SkunkCamp_LocationMap.mxd 2021-04-30 12:54:43 PM



LEGEND

- MAIN EMBANKMENT -CYCLONED SAND
- NEAR DAM SCAVENGER BEACH
- SCAVENGER BEACH
- PYRITE TAILINGS
- PYRITE TAILINGS UNDER SCAVENGER BEACH
- PYRITE CELL EMBANKMENT FOOTPRINT
- CONTAINMENT DAM
- SKUNK CAMP TSF - WEST PLANT PIPELINE CORRIDOR AND TUNNEL
- PROPOSED ROAD
- SPRING
- TSF CATCHMENT BOUNDARY
- SUB-CATCHMENT BOUNDARY
- SURFACE WATER DIVERSION DAM DRAWDOWN PIPELINE
- OPERATIONAL UPSTREAM DIVERSION CHANNEL
- CONTACT WATER COLLECTION DITCH
- SCP EMERGENCY SPILLWAY
- FINGER DRAIN
- SHALLOW ALLUVIAL PUMPBACK WELL
- GROUT CURTAIN
- POINT OF COMPLIANCE LOCATION
- SURFACE WATER DIVERSION DAM
- SEEPAGE COLLECTION DAM
- SEEPAGE COLLECTION POND
- STORM RETENTION POND
- EXISTING ROAD
- EXISTING RAILWAY
- RIVER OR MAJOR DRAINAGE

NOTES:
1. NAD83, ARIZONA STATE PLANE CENTRAL
2. TERRAIN AND IMAGERY DATA SOURCE: ESRI
3. CONTAINMENT DAM REQUIRED FOR AVOIDANCE OF SPRINGS

NOT FOR CONSTRUCTION

TO BE READ WITH KLOHN CRIPPEN BERGER REPORT DATED: MAY 2021

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SKUNK CAMP TSF RECLAMATION PLAN

TITLE: SKUNK CAMP DEIS TSF OVERVIEW

PROJECT No. UM09441A23

FIG No. 2.2

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2.2 Existing Site Conditions

The following sections summarize relevant site conditions and provide context for the Skunk Camp TSF reclamation plan.

2.2.1 Climate and Hydrology

Climate analysis was completed to support design. Details are provided in Appendix IV-A.

The Skunk Camp site is in a semi-arid climate zone with low average annual precipitation (~18 inches to 19 inches) and high estimated average annual potential evapotranspiration, or PET (~72 inches). Annual average temperature is 69°F and daily temperatures typically range from 40°F to 100°F. The climate is suitable for store and release cover systems, given the year-round PET and a high ratio of PET to precipitation.

Southern Arizona experiences three generalized types of precipitation events seasonally with very little precipitation occurring from April through June. Typically, July and August are the wettest months and April to June are the driest. The three types of precipitation seasons are winter storms that occur during October through March, tropical storms that occur during August through October and local monsoonal storms that occur during June through September. Winter storms are typically longer duration, lower intensity precipitation events. Local monsoon storms are typically short-duration, high-intensity thunderstorms.

The site is bounded by the Dripping Spring Mountains to the west, and Pinal Mountains to the east and a watershed divide with Mineral Creek to the north. Surface water south of the divide flows through the site, roughly southeast through Dripping Springs Wash basin to the Gila River, while surface water north of the divide flows into the Mineral Creek basin, which flows into the Gila River approximately 13 miles downstream of the confluence of Dripping Springs Wash and the Gila River (surface water point of compliance (POC)).

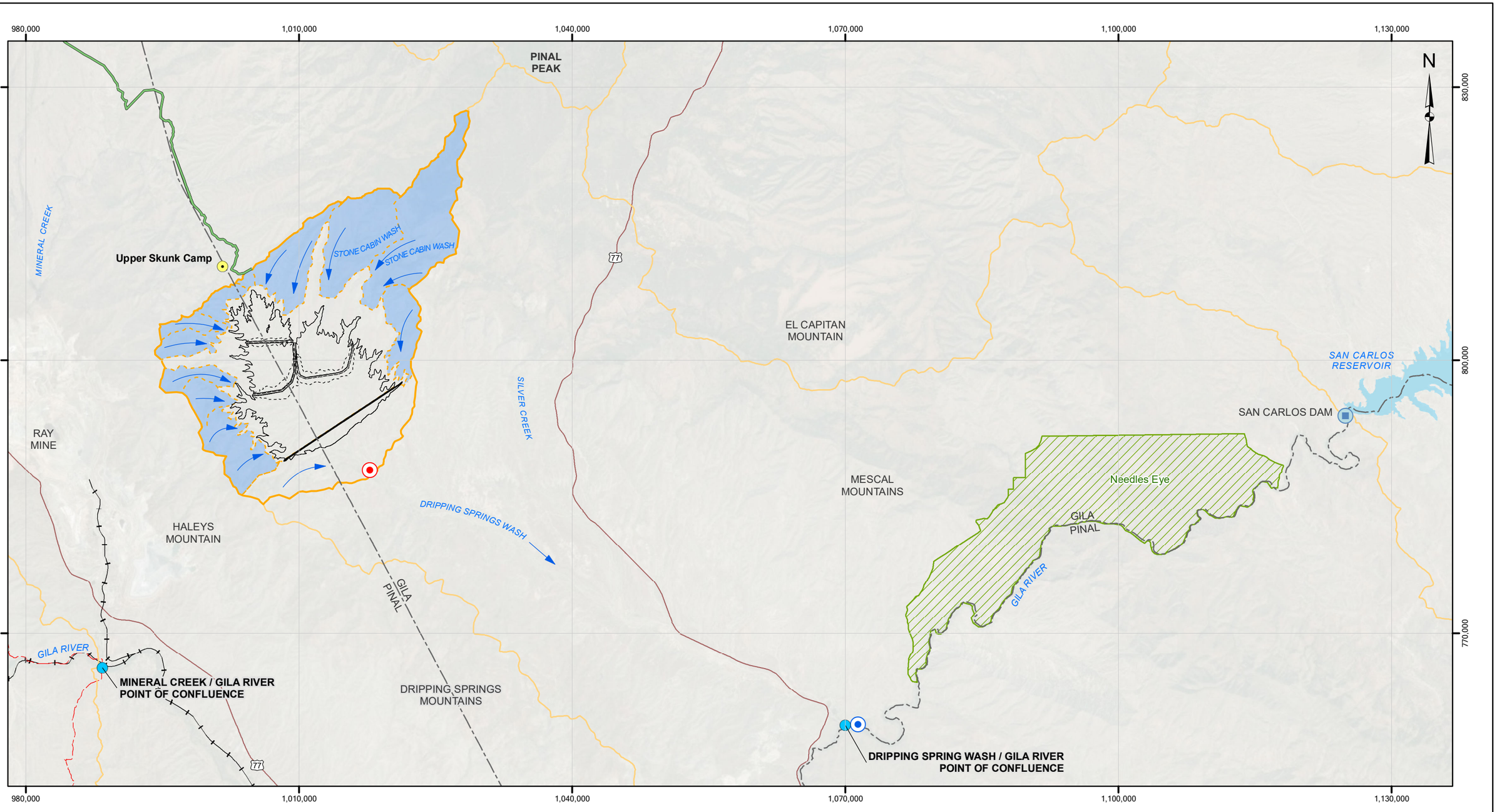
Estimated catchment areas reporting to the TSF and closure water management structures are summarized in Table 2.1.

Table 2.1 Summary of Catchment Areas

Feature	Approximate Catchment Area (acres)	Description
Natural Catchments Upstream of TSF	10,700 acres	East of TSF: 7,200 acres West of TSF: 3,500 acres
Tailings Surface Area	3,840 acres	Excludes Main Embankment slope
Upper Closure Diversion Channel	14,550 acres	Catchment area upstream of the TSF Main Embankment centerline. Includes Natural catchments upstream of TSF and the tailings surface area.
Lower Closure Diversion Channel	15,030 acres	Total catchment area where the Closure Diversion Channel meets Dripping Springs Wash.

Feature	Approximate Catchment Area (acres)	Description
West Closure Embankment Toe Ditch	1,090 acres	Includes half of Main Embankment slope and natural catchment
East Closure Embankment Toe Ditch	480 acres	Includes half of Main Embankment slope and natural catchment
Seepage Collection Pond (SCP)	300 acres	Remaining undiverted catchment area assuming the Closure Embankment Bench and Toe Ditches have been constructed and are successfully diverting upstream runoff around the SCP.

The Skunk Camp hydrological context is shown in Figure 2.3. The site contains confined and braided ephemeral water ways, typical of desert systems. No special aquatic sites (i.e., wetlands) or seeps and springs are located within the footprint of this TSF.



LEGEND

- SKUNK CAMP TSF
- SKUNK CAMP TSF - WEST PLANT PIPELINE CORRIDOR AND TUNNEL
- CLIMATE STATION
- POINT OF CONFLUENCE

POINT OF COMPLIANCE

- SURFACE WATER
- GROUNDWATER

- TSF CATCHMENT BOUNDARY
- MAJOR CATCHMENT BOUNDARY
- SUB-CATCHMENT BOUNDARY
- UNDIVERTED CATCHMENT
- WILDERNESS AREA AND STATE PARK

- SAN CARLOS DAM
- COUNTY LINE
- HIGHWAY
- EXISTING RAILWAY
- ARIZONA NATIONAL SCENIC TRAIL (ARIZONA TRAIL)
- NATURAL WATERCOURSE

NOTES:
1. NAD83, ARIZONA STATE PLANE CENTRAL, COORDINATES IN FEET
2. IMAGERY PROVIDED BY ESRI/BING AERIAL IMAGERY
3. TERRAIN AND IMAGERY DATA SOURCE: ESRI

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SKUNK CAMP TSF RECLAMATION PLAN

TITLE: SKUNK CAMP HYDROLOGICAL CONTEXT

PROJECT No. UM09441A23

FIG No. 2.3

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2.2.2 Geology

The regional basement in the area of the proposed Skunk Camp TSF site consists of facies of the Precambrian Pinal schist. The schist is overlain by the younger Precambrian Apache Group, comprising Pioneer Formation siltstone and sandstone; Dripping Spring quartzite; Mescal limestone; basalt; and the Troy quartzite. All of the Precambrian rock units are intruded by Precambrian Diabase dykes and sills. The Precambrian rocks are in turn overlain by Paleozoic sedimentary rocks, including the Abrigo Formation, Bolsa Quartzite, and the Martin, Escabrosa and Naco limestones. The entire sequence of rock units are intruded by Late Cretaceous and Tertiary dikes and plutons, including the Rattler Granodiorite; Rhyodacite Porphyry; and the Teapot Mountain Porphyry. Tertiary tuffs and conglomerates were deposited over the older rocks in the region (Cornwall et al. 1971).

The pre-Tertiary rocks in the region have been deformed, mostly by tilting and faulting, with most faults dipping steeply, indicating normal movement. Normal faulting has produced graben features with stratigraphic displacements in excess of 2,000 ft. Dripping Springs Wash flows through one such graben which is infilled with a thick package of Tertiary conglomerate (Cornwall et al. 1971).

The TSF footprint is entirely founded on the Tertiary conglomerate (locally known as the Gila Formation).

The surficial geology at site consists primarily of Tertiary Gila Conglomerate and Sandstone, with ridges capped with Quaternary Pediment, incised by narrow drainage channels infilled with alluvium. There is minimal to no overlying soil, the surface soil or weathered bedrock has low organic matter (expected to be approximately 1%) (KCBCL 2019). Appendix I supports these observed site conditions.

2.2.3 Hydrogeology

The site is located within a broad alluvial valley that is flanked to the east and west by mountains. This valley is known as the Dripping Springs Wash and is bounded by the Dripping Spring Mountains to the west and the Pinal Mountains to the east. The Precambrian basement rocks are typically comprised primarily of granitic, volcanic and metamorphic crystalline units. The water yield from these units is likely to be controlled by the degree and continuity of fractures. This unit is overlain by Precambrian Siltstone, sandstone and Quartzite and Paleozoic Limestone with varying water yields. Several perennial and ephemeral springs occur on the Dripping Spring Mountains along the contact between the Precambrian metamorphic units and the younger Precambrian Quartzite units.

The primary aquifer in the study area occurs at the base of the Dripping Springs Wash with the primary producing aquifers located within the Tertiary sandstone and conglomerate units (Gila Formation). The lateral extent of this aquifer is interpreted to extend across the broad valley bottom. The vertical extent of the aquifer is not defined across the entire lateral extent, however the thickness of the aquifer is confirmed to a depth of at least 980 ft from the ground surface at a single location, the same depth as the deepest borehole drilled during the SI program to date. However, wells within the Dripping Springs Wash catchment have been observed to be up to 1,400 ft in depth, and still in the Gila Formation, based on records from the Arizona water well database (ADWR 2009). The median water well depth in the area according to the Arizona water well database is 250 ft.

The Tertiary sandstone and conglomerate encountered has a high degree of heterogeneity. The composition of this unit varies from fine to medium grained sandstone to coarse conglomerate that contains gravel and cobble sized clasts. Cementation varies from very weak to strong and is moderate to highly calcareous. Weak cementation typically occurs in the sandstone and strong cemented zones occur within the conglomerate.

The Tertiary sandstone and conglomerate is overlain by unconsolidated alluvial sediments that consist primarily of sand and gravel with varying proportions of silt and clay. This unit is not expected to provide a reliable groundwater source within the vicinity of the proposed TSF as the majority of water in this unit likely reports to the underlying Tertiary sandstone and conglomerate.

2.2.4 Groundwater Flow Regime

The regional groundwater flow within the Dripping Springs Wash basin is from the northwest to southeast along a shallow dipping potentiometric surface that eventually reports to the Gila River. Tertiary conglomerate is weakly to strongly cemented and the degree of cementation varies both laterally and vertically within the formation. Extensive alternating cemented and uncemented layers, or continuous cemented zones, may act as layers that effectively confine the groundwater within Tertiary sandstone/conglomerate. The depth to groundwater ranges between 70 ft to 270 ft below ground surface.

The Dripping Springs Wash groundwater basin is bounded to the east by the Pinal Mountains, to the south near the Gila River and to the north at or near Mineral Creek. These groundwater boundaries are generally a reflection of the surface water divides.

The highland areas of Dripping Springs Wash basin, including Pinal Peak, form a large portion of the upstream catchment and is anticipated to be a primary source of groundwater recharge for the region. Downstream of the site, the Gila River, a perennial water course, acts as the regional drainage point for the surface water catchment.

2.2.5 Vegetation

The Skunk Camp site contains three biotic communities: Semi-desert Grassland, Interior Chaparral, and Arizona Upland Subdivision of Sonoran Desert scrub. Juniper Woodland Alliance dominates the majority of the Skunk Camp TSF footprint area (approximately 66%). These juniper woodlands are most conspicuous along north facing slopes but also occur in variety of topographies. Approximately 30% of the proposed footprint area was mapped as Shrubland Alliance and Sparsely Vegetated Area. These areas typically align with upland topography receiving full sun and are dominated by shrubs and grasses. The remaining vegetation alliance is mapped Mesquite-Catclaw Acacia that is characterized by relatively flat lowland floodplains and washes.

Further details of vegetation type, density and abundance of native/non-native species, and status of special status plant species or potential habitat is provided by WestLand Resources (WestLand 2020).

2.2.6 Surrounding Land Uses

The Skunk Camp site is located immediately east of the Asarco Ray Open Pit Mine. The proposed site is relatively remote and does not include National Forest System lands within the proposed TSF footprint. The site is currently owned by RCM and the state.

The proposed Skunk Camp TSF footprint is currently used for low-intensity ranching along with mineral exploration and prospecting. Due to the absence of federal public lands, the location of the proposed TSF has low recreational use. No known hiking trails (including the Arizona National Scenic Trail) or recreational areas have been identified in the footprint. This area is not highly visible from towns, cities, or densely populated areas.

3 REGULATORY FRAMEWORK

The following sections summarize the federal and state regulatory requirements for reclamation and closure.

Arizona Mined Land Reclamation Act (AMLRA) Program

Administered by the Arizona State Mine Inspector's Office (ASMIO), the AMLRA program applies to reclamation of surface disturbance from mining operations on state and private lands in Arizona. The ASMIO sets reclamation requirements and approves the project proponent's mined land reclamation plan (MLRP).

Arizona Aquifer Protection Permit (APP)

The APP program is administered by the Arizona Department of Environmental Quality (ADEQ). The APP program requirements that pertain to closure are provided in Arizona Administrative Code (AAC) R18-9A-209 (ADEQ 2019). The APP program requires that a closure/post-closure strategy be drafted and submitted with the APP application to ADEQ for approval.

A closure plan must be submitted before closure and must include the management of discharges from the APP permitted facilities, procedures for maintaining aquifer quality, and monitoring. This state program also requires financial assurance, which is developed from the approved closure/post-closure plan. This reclamation plan is prepared in compliance with the Forest's reclamation requests and meets APP program closure requirements.

Forest Service (FS) Plan of Operations

Administered by the FS and requires that the final Plan of Operations includes provisions for reclaiming FS lands disturbed by mineral operations and associated activities, including a financial assurance to cover the cost of closure and reclamation, and post-closure monitoring. Although the proposed Skunk Camp TSF footprint does not involve FS surface resources, the final reclamation plan submitted for the FEIS will be written consistent with FS regulations at 36 Code of Federal Regulations (CFR) 228A (2019).

4 RECLAMATION STRATEGY

Mine closure is the cessation of mining and processing at an operation, and functionally includes the decommissioning of processing facility and mining equipment.

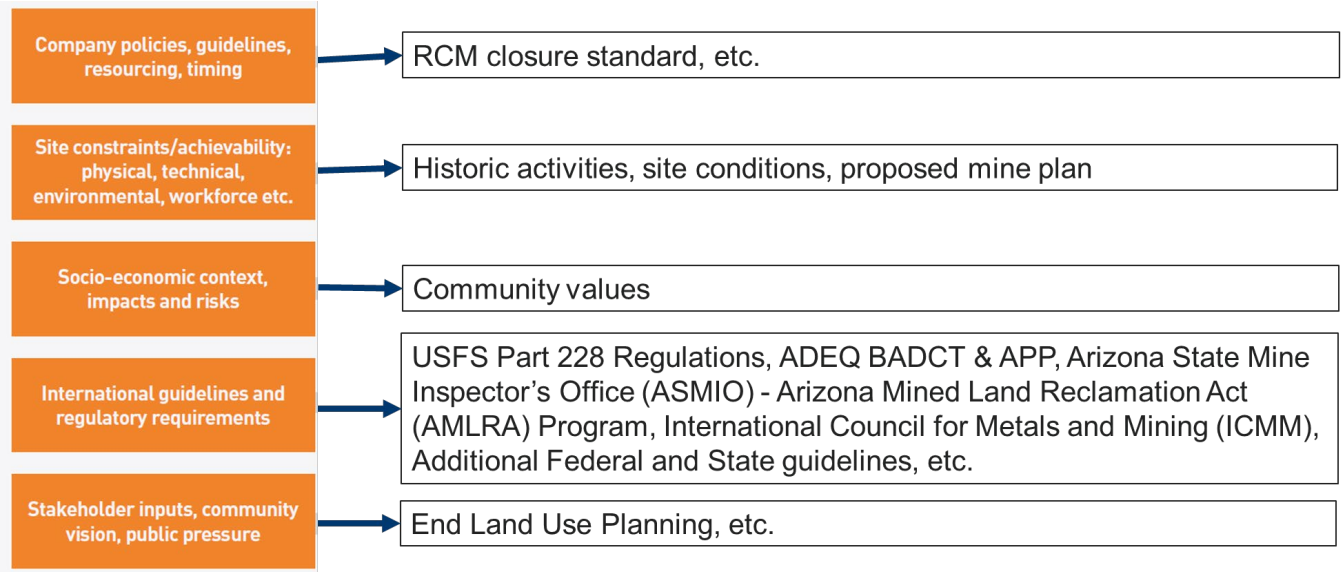
The following sections summarize the post-closure objectives and TSF closure concept for the Skunk Camp TSF.

4.1 Post-Closure Objectives

The overall post-closure strategy for the proposed Skunk Camp TSF is to provide a physically and geochemically stable, landform that meets water quality standards and has a beneficial post-mining end land use that is compatible with surrounding land uses.

The International Council of Mining and Metals (ICMM) framework (2019) was used to help guide the range of inputs (Figure 4.1) considered when identifying closure objectives for the Skunk Camp TSF.

Figure 4.1 Input Considerations for Developing Closure Objectives (adapted from ICMM 2019)



The Skunk Camp TSF closure objectives are summarized in Table 4.1. Performance against closure success criteria will be further confirmed and refined throughout the life of mine. A preliminary monitoring program used to measure success against objectives for each closure stage is summarized in Section 11.

Table 4.1 Skunk Camp TSF Post-Closure Performance Objectives

Closure Focus	Objectives
Physical (geotechnical stability, water management, erosion protection)	▪ Develop long-term landform that maintains stability and integrity of the TSF. ▪ Minimize ponded water on the closed tailings surface. ▪ Safely route TSF surface and catchment runoff downstream of the TSF to Dripping Springs Wash. ▪ Manage erosion of closed surfaces to acceptable levels consistent with established performance criteria.
Geochemical (protection of water/land/air)	▪ Protect reclaimed covered surfaces against wind and water erosion, to avoid exposure of tailings. ▪ Minimize oxidation of the PAG pyrite tailings by limiting oxygen and water ingress. ▪ Minimize long-term seepage from the TSF, by limiting seepage from the TSF via pyrite cell low permeability layers, minimizing net infiltration[1] and oxygen ingress into the TSF post-closure. ▪ Preserve groundwater and surface water quality downstream of the TSF, in accordance with regulatory requirements. ▪ Return of TSF draindown seepage to beneficial uses.
End land-use (vegetation, access)	▪ Construct a self-sustaining vegetated landform that is compatible with a beneficial land use. ▪ Transition TSF to land uses that are consistent with surrounding areas (e.g., low-intensity livestock grazing (if possible) and wildlife habitat).

Note:
1. Net Infiltration: infiltration of precipitation that is not subsequently lost to evaporation or plant transpiration.

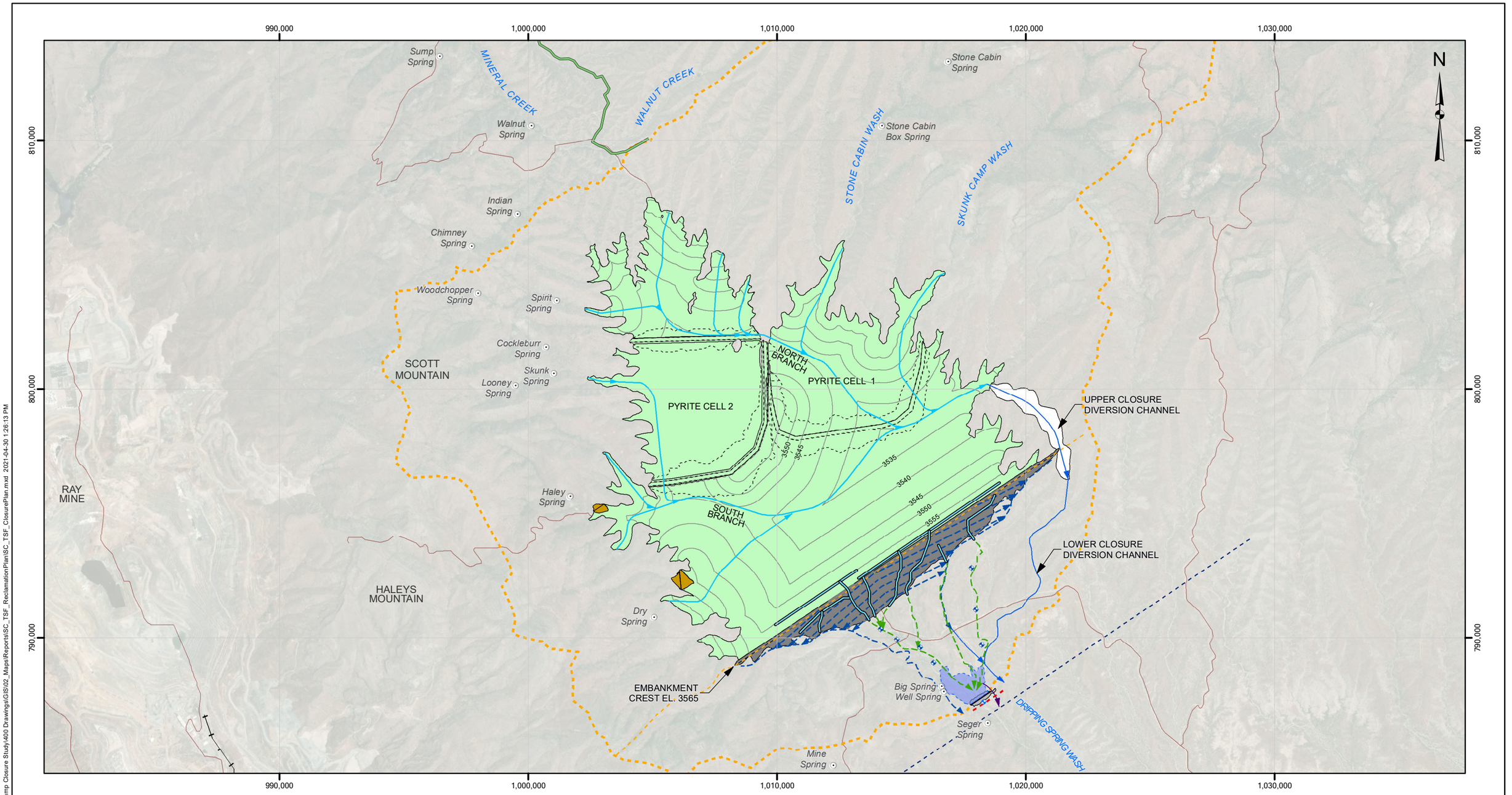
4.2 Skunk Camp TSF Closure Concept

The Skunk Camp TSF closure concept is shown in Figure 4.2. Design details that support this closure concept are provided in Section 7.

In the DEIS (KCB 2018, Forest 2019), scavenger tailings were deposited from the Main Embankment during the entire operations to develop an ultimate beach that will drain to the north. At closure, a diversion channel was to be excavated through the catchment divide between Dripping Springs Wash and Mineral Creek, draining the TSF surface and upstream catchment to Mineral Creek, which ultimately flows through the Ray Mine to the Gila River. To respond to comments on the DEIS, RCM has updated the closure objective to divert the TSF catchment to the south, towards Dripping Springs Wash, post-closure. In order to establish this updated ultimate TSF configuration, the following approach will be undertaken:

- The deposition strategy up to Mine Year 30 remains the same as the DEIS (KCB 2018, Forest 2019) with spigotting from the Main Embankment crest.
- From Mine Year 31 to the end of operations, spigotting of scavenger tailings will take place at the north and west side of the TSF in order to grade the ultimate surface towards the southeast corner of the tailings beach.
- In the final years of operations, scavenger tailings will be deposited in Pyrite Cell 2 with a surface grade towards the southeast to both cover the pyrite tailings and reduce the operating pond surface by pushing the water to the south. Ultimately the area of the Pyrite Cell 2 will be fully covered by scavenger tailings. The overall elevation of the pyrite tailings is lower than the surrounding scavenger tailings. This can be used to the benefit of placement of enough scavenger tailings with appropriate thickness to limit oxygen and water ingress.
- At the end of operations, a closure channel will be excavated through a Gila Conglomerate ridge on the east side of the TSF a minimum of 300 ft from the left abutment of the Main Embankment and will drain the TSF surface and upstream catchment to Dripping Springs Wash.

A cover concept focused on encouraging evapotranspiration (“store and release” cover) for the entire TSF surface is the preferred cover configuration based on the post-closure performance objectives, local climate, locally available cover materials, constructability, maintenance, and monitoring.



LEGEND

- RECLAIMED EMBANKMENT
- RECLAIMED TAILINGS SURFACE
- PYRITE CELL EMBANKMENT FOOTPRINT
- CONTAINMENT DAM
- SKUNK CAMP TSF - WEST PLANT PIPELINE CORRIDOR AND TUNNEL
- SPRING
- TSF CATCHMENT BOUNDARY
- SUB-CATCHMENT BOUNDARY
- TAILINGS SURFACE CHANNELS
- CLOSURE EMBANKMENT BENCH AND TOE DITCHES
- FINGER DRAIN COLLECTION PIPE
- CLOSURE DIVERSION CHANNEL
- SCP EMERGENCY SPILLWAY
- CLOSURE SURFACE DIVERSION CHANNEL EXCAVATION
- FINGER DRAIN
- SHALLOW ALLUVIAL PUMPBACK WELL
- DECOMISSIONED PUMPBACK WELL
- GROUT CURTAIN
- POINT OF COMPLIANCE LOCATION
- SEEPAGE COLLECTION DAM
- SEEPAGE COLLECTION POND
- EXISTING ROAD
- EXISTING RAILWAY
- RIVER OR MAJOR DRAINAGE

NOTES:
1. NAD83, ARIZONA STATE PLANE CENTRAL
2. TERRAIN AND IMAGERY DATA SOURCE: ESRI
3. CONTAINMENT DAM REQUIRED FOR AVOIDANCE OF SPRINGS
4. CONTOURS NOT SHOWN ON PYRITE CELL 2, HOWEVER, THE TAILINGS WOULD BE GRADED TO DRAIN TOWARDS THE SOUTH

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TITLE: SKUNK CAMP TSF CLOSURE PLAN

PROJECT No. UM09441A23

FIG No. 4.2

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5 POST-CLOSURE DAM SAFETY

A FMEA was completed on the Skunk Camp TSF impoundment in response to a mitigation measure (FS-227) in the DEIS, see Gannett-Fleming (2020). The FMEA focused on dam safety aspects of the Main Embankment and pyrite cells. The Forest held a collaborative FMEA workshop in Phoenix, Arizona from February 5-7, 2020. Attendees included:

- Gannett Fleming (Facilitator)
- Resolution Copper (Proponent) with supporting consultants (KCBCL, Golder and Tetra Tech)Government Agencies and Regulators:
  - The Forest (Lead Agency) with supporting consultants SWCA Environmental Consultants (SWCA) and BGC Engineering Inc. (BGC);
  - ADEQ;
  - Environmental Protection Agency (EPA); and
  - US Army Corps of Engineers (USACE).

The objectives of the FMEA were to:

- identify significant dam safety failure modes that could occur within the project (during operations and post-closure) and study the consequences of these potential failures;
- disclose potential impacts in the EIS;
- document potential failure mechanisms, consequences and actions required to manage the risk of failures; and
- plan for further evaluation of risk.

Three loading conditions were identified during the workshop, which apply to all potential failure modes at closure:

- normal conditions (static, steady state);
- hydrologic (flood conditions); and
- seismic (earthquake) loading.

Failure modes identified during the workshop all plotted as low risk (i.e., either having relatively low likelihood or relatively low consequence or both). Table 5.1 summarizes the key potential failure modes and risks identified in the workshop pertaining to post-closure and how the TSF design, reclamation and closure plan will manage these risks. The consequence of failure or Annual Exceedance Probability (AEP) is expected to decrease post-closure for all failure modes discussed during the workshop . Please refer to the design report (KCB 2018) and risk assessment report (Gannett-Fleming 2020) for further details.

Table 5.1 Post-Closure Failure Modes, Risks and Mitigations

Potential Failure Mode	Applicable Loading Condition(s)	Further Description of Failure Mode	Potential Trigger(s)	Preventative Post-Control Measures (in addition to existing operational controls)
Slope instability	Normal, hydrologic, seismic	Slope failure[1] through the foundation or embankment; release of tailings downstream	Combination of multiple conditions, resulting in very low likelihood: ▪ Weak layer in the embankment or foundation ▪ High or excess pore pressures ▪ Terrain instability (ancient landslides) at the abutment(s) ▪ Geochemical changes over time	▪ Flexibility to flatten Main Embankment slopes to 4H:1V, if needed. Although, if this was needed it would likely be identified during operations. ▪ Construction Quality Assurance / Quality Control (QA/QC) and operational monitoring will provide significant understanding of embankment and abutments for post-closure. ▪ Significantly reduced loading to the impoundment after operations, further reducing likelihood of slope failure. ▪ No permanent pond on impoundment post-closure, allowing TSF to draindown and minimize pore pressures and reducing likelihood and consequence of potential failure. ▪ Post-closure monitoring and maintenance, as required.
Overtopping	Hydrologic	Overtopping of the Main Embankment; release of tailings downstream	▪ Storm event or series of storms greater than the 72-hr PMF	▪ No permanent pond on impoundment post-closure, increasing the capacity of the TSF surface. ▪ Closure Diversion Channel designed to route the PMF from the TSF catchment downstream to Dripping Springs Wash. ▪ Capacity to store in excess of the 72-hr PMF in the impoundment if the Closure Diversion Channel was completely blocked (which is very unlikely). ▪ Post-closure monitoring and maintenance, as required.
External erosion	Normal, hydrologic	Accelerated surface erosion from storm events, localized seepage and/or surface ponding leading to concentrated flows, gully erosion or slope failure; release of tailings downstream	▪ Extreme storm events	▪ Shaping the ultimate tailings surface to shed water to riprap lined Tailings Surface Channels to convey water to the Closure Diversion Channel. ▪ Directing upstream catchment flow through closure channel in abutment, not on TSF surface. ▪ Reclamation of the downstream embankment slopes, including an erosion protection layer and Closure Embankment Bench Ditches on the slopes to convey local surface runoff. ▪ Post-closure monitoring and maintenance, as required.
Internal erosion	*Normal*	*During the FMEA, this failure mode was considered but not developed. Decreased consequence of failure or AEP at closure:* ▪ *Tailings, embankment and foundation materials are filter compatible* ▪ *No permanent supernatant water within impoundment post-closure* ▪ *Continued drawdown of phreatic levels within the impoundment (lower hydraulic gradient compared to operations)*		

[1] Slope failure could be triggered by a weak layer in the embankment or foundation, high or excess pore pressures, terrain instability (ancient landslides) at the abutment, or geochemical changes over time.

6 CLOSURE COVER SURFACE SAMPLING FOR CHARACTERIZATION

The Gila Conglomerate, Gila Sandstone, Quaternary Pediment was identified as potential materials for cover construction. Characteristics of the Gila Conglomerate depend on the sources of the constituent materials, the transportation and sorting mechanisms during deposition, and nature of cementation. Deposits range from unsorted and unconsolidated rubble of angular blocks as much as 15 ft in diameter to well-stratified deposits of firmly cemented sand, silt and gravel containing well-rounded pebbles and cobbles (Peterson 1962).

A sampling and testing program to address DEIS mitigation measures FS-223 and FS-224 was completed (see Appendix I) consisting of:

- A field sampling program of Gila Conglomerate, Gila Sandstone, Quaternary Pediment, and Quaternary Alluvium at the Skunk Camp site was conducted in September 2019.
- A laboratory testing program was subsequently conducted on the unconsolidated surficial deposits samples to characterize and assess the suitability for store and release closure cover material.
- Deeper core samples were tested to characterized geochemical and nutrient characteristics at depth.

A total of twenty-nine samples were collected for laboratory testing: twenty-five unconsolidated surficial deposits, three deep core samples from a previous site investigation and pyrite tailings sample.

The samples were subjected to the following physical and geochemical tests:

- physical index testing (particle size distribution (with hydrometer), gravimetric water content, specific gravity, Atterberg limits);
- standard Proctor test;
- chemical analyses including total elemental,
- acid rock drainage testing using Sobek Acid Base Accounting (ABA) with siderite correction methods,
- metal leaching potential using Synthetic Precipitation Leaching Procedure (SPLP) and Toxicity Characteristic Leaching Procedure (TCLP) where physiochemical parameters, acidity and dissolved elemental analyses performed on resulting leachates;
- soil nutrient testing (total organic carbon, organic matter, cation exchange capacity and available nutrients);
- unsaturated soil parameters (particle size distribution (with hydrometer) and the moisture retention curves); and
- saturated hydraulic conductivity (rigid wall).

The results of the physical, geochemical and hydraulic material properties of the surficial deposit testing are summarized in Appendix I. A summary of each material type is provided in Table 6.1, evaluation of the suitability of these materials as a store-and-release cover are included in Section 7.2. Material properties used in the cover modeling is provided in Appendix IV.

Table 6.1 Surficial Deposits Material Summary

Material Type	Physical Description	Non-Potentially Acid Generating (NPAG)?	Acid Neutralization Potential?
Gila Conglomerate	Variably cemented fine to coarse gravel, and sand, some cobbles, and some silt. Its characteristics as a cover borrow are expected to be variable, corresponding to local gradation. Excavated and placed Gila Conglomerate as a monolithic cover material is expected to have relatively saturated hydraulic conductivity initially but is expected to decrease with weathering. Coarse Gila Conglomerate is expected to have low moisture retention capacity, thus acting more like an infiltration cover. However, weathered or soil-like Gila Conglomerate (typical of what is at surface), will have a high moisture retention capacity, acting more like a store-and-release cover material.	Yes	Yes
Gila Sandstone	Variably cemented coarse to fine sand, and silt to silty, with trace to some fine gravel. Its characteristics as a cover borrow are expected to be variable, corresponding to local gradation. Excavated and placed Gila Sandstone as a monolithic cover material is expected to have moderate saturated hydraulic conductivity initially and is expected to decrease with weathering. Weathered or processed Gila Sandstone is expected to have high moisture retention capacity, acting like a store-and-release cover.	Yes	Yes
Quaternary Pediment	Typically uncemented clayey sand and gravel, trace cobbles to and cobbles. Its characteristics as a cover borrow are expected to be variable, corresponding to local gradation. Excavated and placed Quaternary Pediment as a monolithic cover material is expected to have moderate saturated hydraulic conductivity initially and is expected to decrease with weathering. Weathered or processed Pediment is expected to have high moisture retention capacity, acting like a store-and-release cover.	Yes	Yes
Quaternary Alluvium	Uncemented sand and gravel, clayey to clean, some cobbles and boulders. Its characteristics as a cover borrow are expected to be highly variable, corresponding to local gradation. Excavated and placed Quaternary Alluvium as a monolithic cover material is expected to have high saturated hydraulic conductivity initially and may decrease with weathering. Retention capacity will be dependent on the grainsize of the alluvium.	Yes	Yes

7 CLOSURE DESIGN

The following sections provide a summary of the design objectives, assessment methods and results as it relates to the following scopes of work:

- Closure Surface Water Management Plan (Section 7.1 with details in Appendix III);
- Closure Cover Design (Section 7.2 with details in Appendix IV);
- Post-Closure Settlement (Section 7.3 with details in Appendix V);
- Preliminary Erosion Assessment (Section 7.4); and
- Post-Closure Seepage Management (Section 7.5).

An integrated post-closure water management strategy is proposed to meet closure objectives (e.g., physical and geochemical risks). This includes management of both surface water and seepage.

7.1 Surface Water Management

The tailings staging plan was updated in April 2020 to provide an ultimate tailings surface (see Figure 7.1) that diverts post-closure TSF catchment runoff to the south into Dripping Springs Wash, rather than to the north into Mineral Creek, see Appendix II.

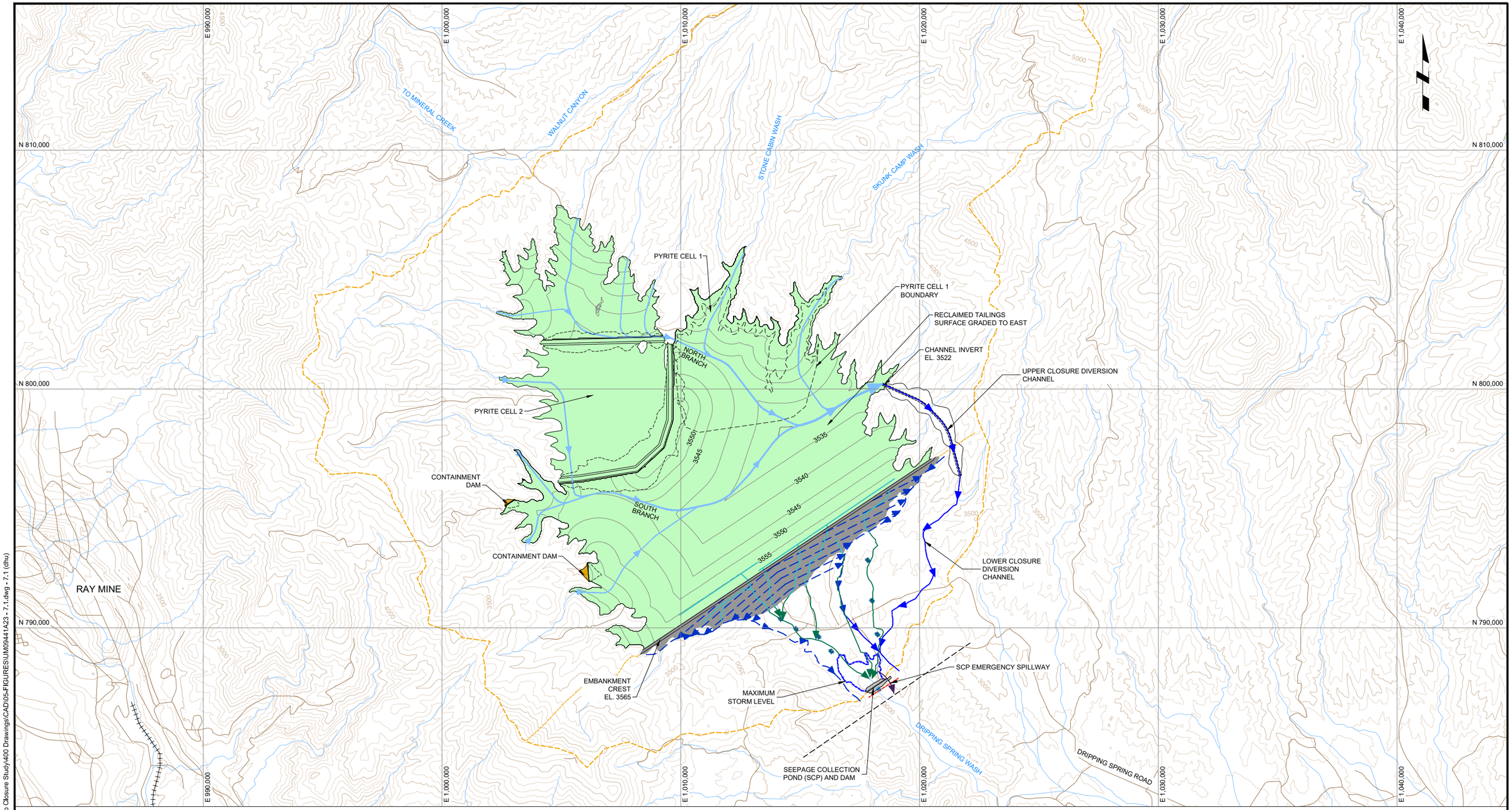
The objectives of the closure water management system are as follows:

- minimize the amount of water ponding on TSF post-closure surface;
- safely convey flood runoff from the tailings surface and upstream natural catchments around the Main Embankment;
- limit the erosion of the closed TSF with minimal maintenance requirements;
- minimize oxidation of the pyrite tailings by limiting water and oxygen ingress into the pyrite tailings;
- limit the amount of seepage from the TSF that is released to the environment; and
- maintain water quality criteria.

The closure water management plan and key TSF water management infrastructure (i.e., Closure Diversion Channel, Tailings Surface Channels, Closure Embankment Bench and Toe Ditches, SCP) are described further in Appendix III. Key features of the surface water management plan are shown on Figure 7.1. Design criteria include:

- Shaping the ultimate tailings surface to shed water to riprap lined Tailings Surface Channels that convey water to the Closure Diversion Channel so that no permanent ponds will be maintained on the surface, while limiting erosion of the landform surface.

- The Operational Upstream Diversion Channels will be decommissioned and ditches on the TSF surface will be constructed to convey upstream catchment runoff to the Closure Diversion Channel, without ponding on the tailings surface.
- The Closure Diversion Channel will be designed to convey the PMF from the entire TSF upstream catchment.
- Reclamation of the downstream slopes of the embankment, including constructing cover erosion protection and runoff collection ditches (Closure Embankment Bench Ditches are low gradient channels proposed at 300 ft horizontal spacing (100 ft vertical spacing) to capture runoff from the embankment surface and convey it to Closure Embankment Toe Ditches) on the slopes to convey surface runoff to the natural drainages downstream of the Seepage Collection Pond.
- Closure Embankment Bench Ditches will be designed for the 1000-year 24-hr storm event. Dam safety for the actual tailings impoundment will be maintained for up to the PMF.



LEGEND

- RECLAIMED EMBANKMENT
- RECLAIMED TAILINGS SURFACE
- TSF CATCHMENT BOUNDARY
- SUB CATCHMENT BOUNDARY
- CONTAINMENT DAM
- 200-YR 24-HR STORM
- RAILWAY
- EXISTING ROAD
- NATURAL DRAINAGE
- 3550 MAJOR CONTOURS 500 FT
- 3550 MINOR CONTOURS 100 FT
- 3550 PROPOSED CONTOURS 5 FT
- PROPOSED DAM FOOTPRINT
- DECOMMISSIONED PUMPBACK WELL
- SHALLOW ALLUVIAL PUMPBACK WELL
- CLOSURE EMBANKMENT BENCH AND TOE DITCH
- TAILINGS SURFACE CHANNEL
- CLOSURE DIVERSION CHANNEL
- SCP EMERGENCY SPILLWAY
- FINGER DRAIN COLLECTION PIPE
- FINGER DRAIN
- POINT OF COMPLIANCE LOCATION
- GROUT CURTAIN

PLAN
SCALE A

NOTES

1. PROJECTION AND DATUM: ARIZONA STATE PLANE CENTRAL NAD 83 - INTERNATIONAL FOOT.
2. TOPOGRAPHY BASED ON INTERMAP NEXTMAP DSM AND DTM ACQUIRED IN 2004.
3. CONTOURS NOT SHOWN ON PYRITE CELL 2, HOWEVER, THE TAILINGS WOULD BE GRADED TO DRAIN TOWARDS THE SOUTH.

NOT FOR CONSTRUCTION

TO BE READ WITH KCB CONSULTANTS LTD. REPORT DATED: MAY 2021

SCALE A 2000 0 2000 FT

CLIENT: RESOLUTION COPPER

KCB Consultants Ltd.

PROJECT: RESOLUTION COPPER PROJECT
SKUNK CAMP TSF RECLAMATION PLAN

TITLE: CLOSURE WATER MANAGEMENT PLAN

SCALE	PROJECT No.	FIG. No.
AS SHOWN	UM09441A23	7.1

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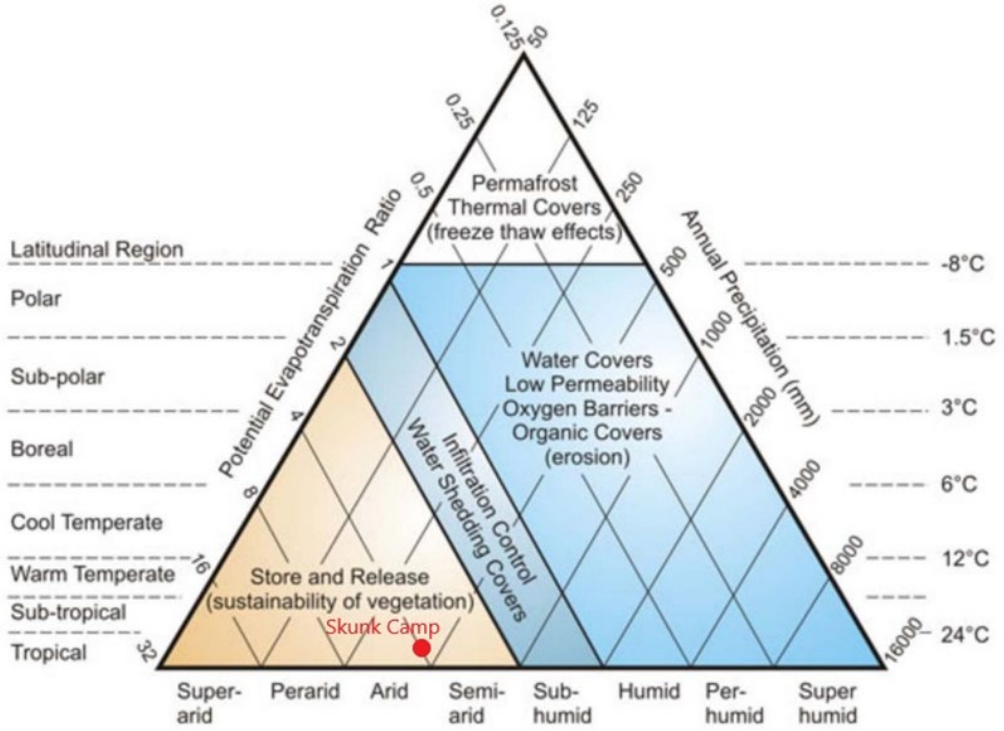
7.2 Closure Cover Design

7.2.1 General

Based on climate conditions and TSF closure objectives (see Section 4.1) the proposed cover design will be an evaporative store and release (Figure 7.2) because of the evapotranspiration, low precipitation, and soil moisture storage. These covers function by providing a "storage layer" which collects water during precipitation events and releases the water through runoff or by evaporation and evapotranspiration during dry periods.

Figure 7.2 Skunk Camp TSF Cover and Climate Type (INAP 2009)



7.2.2 Closure Cover Performance Assessment

Predictive water balance (or soil-atmosphere) modeling of conceptual closure cover options was conducted using the software program Hydrus1D (Šimůnek et al. 2009) or TOUGH2, which simulates liquid and vapor flow in one dimension. Details of modeling and results are given in Appendix IV.

The objective of the modeling was to identify the most suitable closure cover(s) by assessing quantitatively:

- the tailings cover water balance (accounting for precipitation, runoff, evaporation, root uptake and plant transpiration, moisture storage and redistribution, and deep percolation);
- the moisture and saturation profiles within the near surface tailings; and
- the relative hydraulic performance for base case (no cover) conditions and closure cover options.

Multiple cover configurations on the scavenger and pyrite tailings, including different thicknesses of scavenger tailings on pyrite tailings and borrow material source (e.g., coarse or soil-like; Gila Conglomerate or Quaternary Pediment) have been assessed to determine the potential infiltration.

The scenarios performed includes:

- presence of a monolithic Gila Conglomerate cover on the surface;
- fine ("soil-like") or coarse texture of the cover material;
- thickness of cover materials;
- with and without root water uptake and transpiration by vegetation; and
- allowance for ponding of excess precipitation (e.g., reducing runoff).

Major findings are:

- Predicted net infiltration rates for scavenger tailings are sensitive to:
  1. the gradation of the scavenger tailings, with higher predicted net infiltration for coarser materials, lower for finer grained materials;
  2. the hydraulic properties of the cover materials, with higher predicted net infiltration for coarser cover material; and
  3. the presence of vegetation, with higher predicted net infiltration when vegetation is not established.
- The predicted net infiltration was lowest for revegetated covers consisting of soil-like Gila Conglomerate (either selectively borrowed or processed to cover requirement specifications).
- The low-permeability layer underneath the pyrite cell is the controlling factor for seepage and is insensitive to the cover type.

7.2.3 Proposed Closure Cover Design

The proposed cover design for the Skunk Camp TSF is summarized in Table 7.1, and shown on Figure III-3 in Appendix III.

The cover takes into consideration several other characteristics not quantified as part of the modeling including:

- Cover constructability. In general, cover depths were specified based on constructability (minimum 2 ft cover thicknesses), however, sensitivity to construction imperfections on a large scale (1 ft cover thicknesses) were also evaluated.
- The ability of the cover material to support vegetation was selected as a preferred characteristic in the "soil-like" Gila, given the hydraulic characteristics of this material type are better suited to support vegetation (which in turn decreases net infiltration through transpiration).

- The preferred cover in the pyrite tailings is based on the same design principles as the scavenger beach tailings, given the cover will reduce net infiltration and support vegetation, even though the limiting factor for base seepage from the pyrite cells is the basal low permeability layer. The thickness of scavenger tailings on top of the pyrite cell will also limit oxygen ingress into the pyrite tailings, minimizing oxidation of the pyrite tailings.

The proposed cover materials are summarized below:

- Soil-like Gila Conglomerate: material with hydraulic properties similar to surficial deposits present at the Skunk Camp site at surface. This may require crushing Coarse Gila Conglomerate if suitable borrow areas cannot be identified.
- Coarse Gila Conglomerate: Gila Conglomerate from coarser layers that will provide erosion protection.

Table 7.1 Proposed Cover Design Criteria

Location	Cover Design
Pyrite Cells	2 ft soil-like Gila Conglomerate over minimum of 10 ft scavenger tailings
Scavenger Beach	1-2 ft of soil-like Gila Conglomerate
Cycloned Sand Embankment	3 ft soil-like Gila Conglomerate

7.3 Post-Closure Settlement

An assessment of consolidation was conducted to help inform potential long-term risks to closure water management infrastructure (e.g., surface ditches and invert elevation for the Closure Diversion Channel). Consolidation modeling was conducted for life of mine and post-closure settlement. Results provide an order of magnitude indication of what the settlement potential is. Modeling assumptions and details are provided in Appendix V, note conservative assumptions were used to estimate an upper bound of settlement.

The assessment indicates that:

- Settlement of the tailings surface is anticipated to be greatest in the deepest areas of the scavenger beach where cyclone overflow tailings are present, or near areas of ponded water during operations (i.e., pyrite cell), where the tailings would be primarily be a finer fraction and have been deposited sub-aqueously. Conservative estimates of settlement include up to approximately 20 ft in the finer portion of the scavenger beach (i.e., cyclone overflow properties) and up to approximately 5 ft in the pyrite tailings during post-closure. To mitigate the potential for ponding in these areas, additional scavenger tailings material can be deposited during operations or mounded during closure construction in areas where expected settlement could affect water management.

- Settlement is not expected to impact dam safety or the TSF Main Embankment. Cycloned sand will be densely compacted. Some minor progressive settlement may occur, but this is accounted for in the long-term freeboard allowance as part of the final landform.
- Settlement is anticipated to be differential across the TSF, forming short-term depressions. Settlement is considered in the final landform design and water management structures within the impoundment surface. The closure monitoring and maintenance program will monitor these against defined success criteria and maintain drainage.

7.4 Erosion Protection

TSF surface, Main Embankment and channel geomorphology and erosion protection was reviewed and benchmarked to natural analogs and other closed TSF facilities. The geomorphology review is included in Appendix III.

Additional review of the Main Embankment erosion protection is provided in this section.

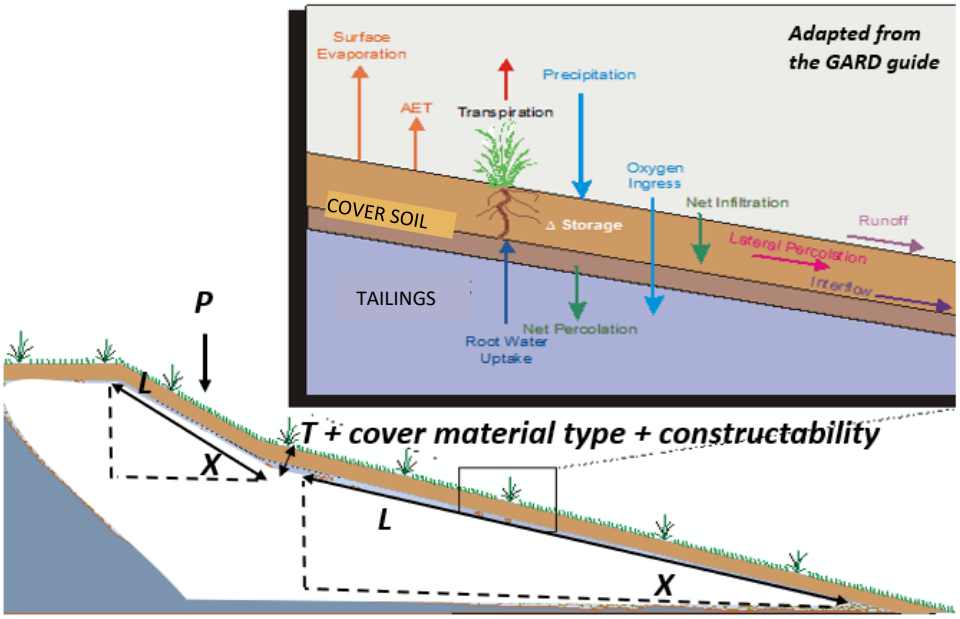
The Main Embankment is constructed of cycloned sand, which is erodible because it contains entirely sand material, is uniformly graded, and is non-cohesive. The cycloned sand is incapable of “self-armoring”, the process where only the fine fraction of a soil erodes, leaving coarse grained material to provide a level of erosion protection. Therefore, when erosion events occur, they are rapid and result in deep gullies.

At the end of operations (or during the operations as part of progressive reclamation), a closure cover will be constructed over the downstream slope and crest zone of the Main Embankment to manage erosion risks. Cover systems must be monitored and maintained to limit degradation of the cover.

Key landform design considerations are listed below and shown on Figure 7.3:

- objectives (e.g., dam safety, reduce maintenance requirements, etc.);
- design precipitation event (P);
- slope geometry (slope length (L), slope angle (X) and overall shape (e.g., concave, etc.));
- cover material type (e.g., gradation, soil-moisture retention, etc.);
- cover thickness (T); and
- cover constructability method (e.g., surface texturing, micro-catchments, etc.).

Figure 7.3 Key Landform Design Considerations



Note: AET = actual evapotranspiration.

Several cycloned sand tailings storage facilities with rockfill or vegetated closures covers were reviewed to provide a benchmark for the proposed cover design and erosions control measures. A summary is provided in Table 7.2.

Table 7.2 Preliminary Benchmarking for Cycloned Sand Dams

Parameter	San Manuel TSF (Arizona)	Typical of Regional Sites (Southern Arizona)	Tyrone (New Mexico)
Reference	Braun et al. (2018)	N/A	Shelly (2019)
Closure stage	Closed (since 1999)	Various	Closed (since 1992)
Approx. maximum uninterrupted slope length	1000 ft	1000 ft	300 ft
Slope angle	3H:1V to 5H:1V	3H:1V	3H:1V
Dam slope cover type and thickness	Upper 1/3 slopes: 2 ft thick coarse random fill. Lower 2/3 slopes: 1 ft rock armor overlying 1 ft fine random fill	0.5 ft of rock armor fill overlying 2 ft of cover material	2 to 3 ft
Slope drains	Nil. Toe drains only	Bench stormwater diversion channel connected to reinforced drop channels	Bench stormwater diversion channel connected to reinforced drop channels

Key learnings from this preliminary benchmarking that can been applied to the Main Embankment cover design are included below.

- Erosion of the cycloned sand slope during a single storm event is unlikely to pose a risk to the overall stability of the dam. Therefore, the design storm event for the cycloned sand cover can be independent of the dam consequence classification, because the facility will be inspected, monitored, and maintained (Section 11).
- Localized seepage and surface ponding causing concentrated flows is a major cause of gully erosion. To minimize erosion of this cover and the Main Embankment during high-intensity storm events, Closure Embankment Bench Ditches (parallel low gradient ditches) will be constructed on the downstream slope and will convey water to Closure Embankment Toe Ditches. The Closure Embankment Toe Ditches will re-direct water around the seepage collection facility and into the Dripping Springs Wash to the south. Two Closure Embankment Toe Ditches will be required (on the western and eastern extents of the dam toe). Cover material with a higher cohesion factor or ability to "self-armor" minimizes potential for erosion. Further details are in Appendix III.
- Vegetation will be established on slopes typically 3H:1V or flatter. Vegetation growth on inert mixed rock types (i.e., Gila Conglomerate, Whitetail Conglomerate, Pinal Schist, limestone, and other) has been successfully achieved in reclamation projects throughout similar semi-arid locations.

7.5 Post-Closure Seepage Management

The operational seepage management strategy is outlined in Section 2.1. The post-closure seepage management strategy includes the following:

- Maintain the SCP to manage tailings impoundment draindown, until it is no longer required, see Section 9 for schedule estimates. Maintain the grout curtain and shallow pumpback well downstream of the SCP to capture storm water flow in the alluvium or leakage from the SCP.
- Place the closure cover on the TSF surface and embankment slopes to limit infiltration into the tailings and thus seepage into the foundation.
- Install Finger Drain Collection Pipes in the lined Contact Water Collection Ditches to convey tailings impoundment draindown from the Main Embankment finger drains to the SCP. Pipes are required to separate flow from the finger drains and non-contact water surface runoff in the ditches.
- Closure Embankment Bench and Toe Ditches will be constructed to route embankment surface runoff around the SCP, see Section 7.1.
- At the end of operations, decommission the shallow alluvial pumpback wells between the TSF impoundment and SCP, after it is confirmed they are no longer required.

KCBCL (2020) and Montgomery & Associates (M&A 2020) have completed operational and post-closure seepage assessments for the TSF, and as part of a regional assessment, to estimate seepage from the TSF and compliance with water quality criteria. The results of the analyses indicate that the shallow alluvial pumpback wells between the TSF and SCP are not required post-closure (M&A 2020). The SCP will continue to operate, and the downstream shallow pumpback well and grout curtain will be maintained.

The SCP will continue to operate to manage the TSF impoundment draindown from the Finger Drain Collection Pipes. The TSF impoundment draindown (flow over time) was estimated by KCBCL (2020) and M&A (2020). A closure water balance was completed to estimate the period of time active water management is likely to be required for the SCP. Active water management is defined as when the inflows to the SCP exceed the outflows (i.e., evaporative capacity). Active water management could be water treatment, construction of additional evaporation ponds, the use of spray evaporators or a combination of the previous. The closure water balance is described in Appendix VI. For proof of concept, a preliminary plan for the use of spray evaporators is outlined in Section 7.5.1, which would be used as a contingency if a more beneficial use could not be implemented.

The closure water balance predicts that the evaporative capacity of the SCP will exceed the inflows by approximately Mine Year 120 (equivalent to 80 years after the end of operations). When the TSF impoundment is sufficiently drained, and the Finger Drain Collection Pipes no longer flow, the SCP and associated grout curtain and shallow pumpback wells will be decommissioned, this is estimated to be approximately Mine Year 290 (equivalent to 250 years after the end of operations).

The closure schedule is further detailed in Section 9.

7.5.1 Spray Evaporator Plan

The post-closure water balance surplus from Mine Years 41 to 120 can be actively managed with two mechanical evaporators from Minetek PTY (Couton & Timones 2017). These evaporators have an expected evaporative efficiency of around 50% and a maximum uptake of 600 gpm per evaporator, which results in a design evaporative capacity of approximately 300 gpm per evaporator. However, the evaporator efficiency will be subject to seasonal and diurnal effects. Therefore, an efficiency of 25% was assumed for planning purposes.

The water balance and evaporator efficiency will be monitored and calibrated to actual conditions, so that number of spray evaporators can be adjusted accordingly. The spray evaporators will be operated daily, inspected regularly, and maintained as needed.

The evaporators will be installed at each abutment of the SCD, as shown on Figure 7.4, and will draw water directly from the SCP to maximize the volume of water available for uptake.

Table 7.3 summarizes the results of the SCP closure water balance (also given in Appendix VI), the number of spray evaporators and the expected design evaporative capacity of the system.

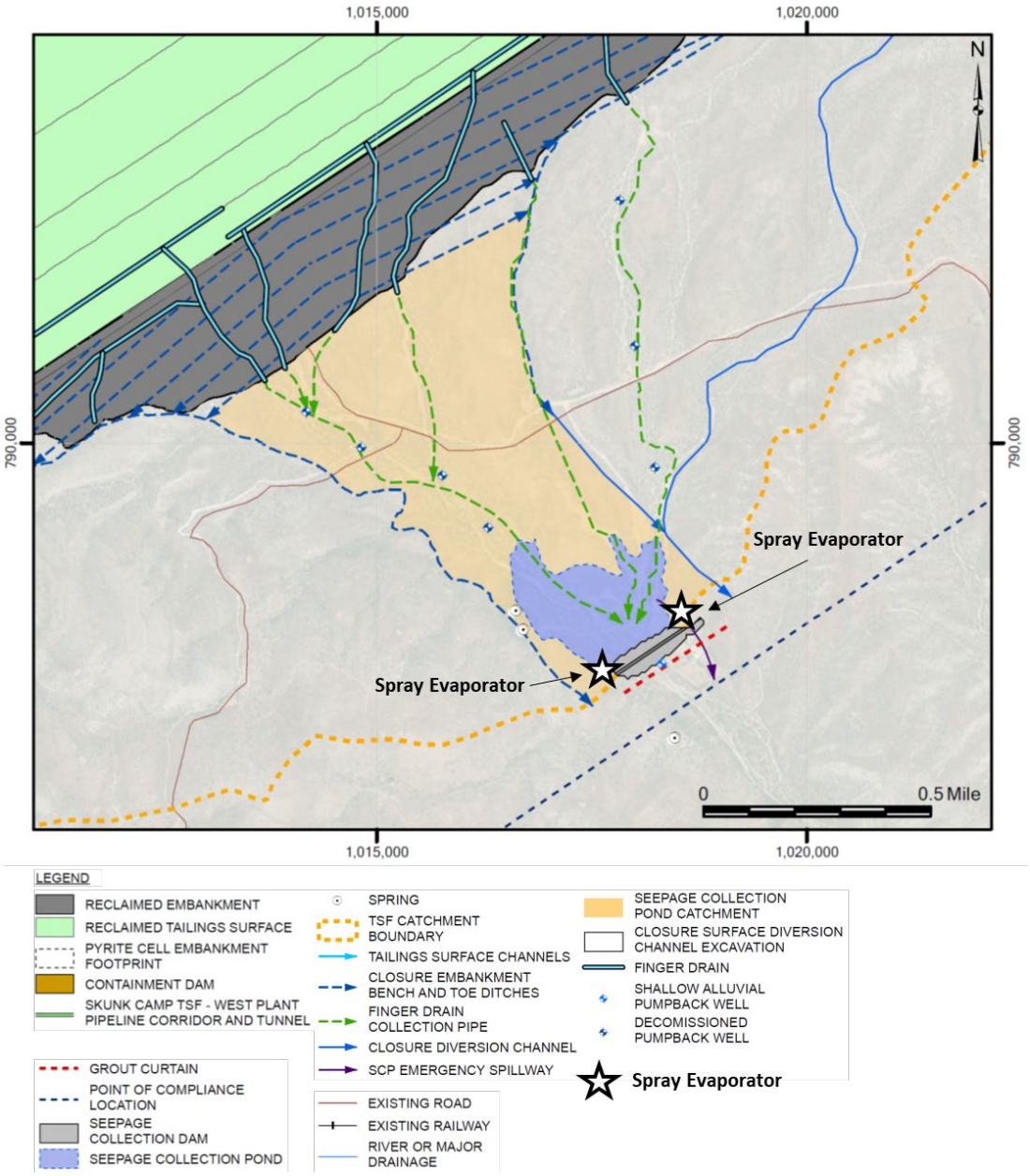
Table 7.3 SCP Post-Closure Simplified Water Balance Results and Active Water Management

Mine Year	Inflows – Outflows (gpm) [2]	Number of Spray Evaporators	Total Factored Evaporative Capacity (2 evaporators x 25% efficiency) (gpm)
41[1]	197	2	300
46	280	2	300
51	277	2	300
56	246	2	300
66	191	2	300
86	88	2	300
136	-39	0	0
286	-96	0	0

Notes:

1. End of Operations
2. Red highlighted cells indicate that there is excess water going into the SCP, which needs to be actively managed. The magnitude of these flows can be managed through spray evaporators. The green highlighted cells indicate that the SCP is in deficit and the inflows can be managed through passive evaporation.

Figure 7.4 Post-Closure Spray Evaporator Locations



7.5.2 Potential for Seepage Treatment with Wetlands

The proposed evaporation system in Section 7.5.1 is provided as a base case option (i.e., a concept that has a high confidence in managing the surplus water given the site conditions) for managing post-closure tailings facility draindown. However, during operations and near the end of operations RCM will assess more beneficial uses and passive treatment options for tailings draindown, with enhanced evaporation as a contingency, by developing an adaptive management framework for post-

closure water management. An option the EPA has suggested is to use constructed wetlands as a method for water treatment.

The success of wetland treatment depends on many aspects, including:

- quality of the water for treatment, i.e., what constituents of interest need treatment?;
- site and foundation conditions, including:
  - climate;
  - hydrogeology, the ability to create a production wetland;
  - available and useful vegetation; and
- water quality standards to be achieved.

Wetlands are not applicable in all situations and may be a challenge in a desert environment with a water table at depth below the ground surface. However, this may provide a more passive solution with lower operating costs, if feasible.

Options, including wetlands, would be assessed during operations and near the end of operations, potentially with pilot-scale testing, to determine the feasibility of this option post-closure.

8 RECLAMATION MATERIALS AND APPROACH

This section outlines the closure cover borrow material availability (the sources, types and material balance required to support the closure design) and surface preparation and revegetation methods and criteria required to support vegetation establishment and promote wildlife.

8.1 Reclamation Material Availability

Salvageable Growth Medium

Surficial geology surveys conducted within the proposed Skunk Camp TSF footprint (see Appendix I) indicate that there is not a significant amount of soil-like material at site and, where it is present, it consist of shallow (on average less than 1 foot), gravelly materials with thin loamy topsoil and subsoil layers underlain by weathered bedrock. These observations are supported by the Web Soil Survey operated by the U.S. Department of Agriculture (USDA) Natural Resources Conservation Service (Soil Science Division Staff 2017).

During site preparation involving clearing and grubbing, potential cover material will be stockpiled adjacent to the TSF footprint that can be used later for reclamation. Available volumes are estimated in Table 8.1.

Borrow Sources

The characteristics of the sampled Gila Conglomerate, Gila Sandstone and Pediment suggest that locally it exhibits variable physical properties, but generally finer zones or processed material can be used as a cover material and the coarser zones will provide “self-armoring” erosion protection.

Borrow for the proposed cover is planned to come from the stockpiled material adjacent to the TSF footprint, from the excavation of the Closure Diversion Channel or ridges on the west side of the TSF or reclaimed diversions. The benefit of the Closure Diversion Channel borrow source is that this planned disturbance does not require reclamation and work can be done progressively during the life of mine. To achieve the preferred “soil-like” properties to meet the closure objectives (see Section 7.2), some zones of the borrow material may need to be processed (e.g., crushed to break down cementation).

Preliminary Materials Balance

A preliminary reclamation material balance for the TSF is summarized in Table 8.1 to assist in identifying required and available materials required for reclamation. Excluded quantities are:

- recontouring (i.e., the TSF impoundment or downstream slopes);
- construction of roads for access;
- demolition of redundant infrastructure at closure (e.g., cyclone house, etc.); and
- revegetation and growth amendment measures to support the end land use objectives (see Tetra Tech 2020).

Table 8.1 Preliminary Reclamation Materials Balance for Closure Concept

Material Type	Material Purpose (Note 1)	Estimated Volume Required (Myd^3)	Potential Sources	Potential Volume Available (Myd^3)
Riprap (Troy Quartzite or coarse processed Tertiary Conglomerate)	Erosion protection for Closure Embankment Bench and Toe Ditches	0.1 (Note 2)	Troy Quartzite area on the right abutment	Not estimated, but will be sufficient
Embankment slope cover (coarse crushed Tertiary (Gila) Conglomerate)	Downstream Main Embankment and slope cover material (assumed thickness = 2 ft to 3 ft)	1.9 (Note 3)	Excavation from Closure Diversion Channel (Appendix III) or ridges on the west side of the TSF or reclaimed diversions	Closure Diversion Channel ~14.0 Surrounding ridges - expected to be well in excess of any requirements
Tailings surface cover (Pediment or crushed Tertiary (Gila) Conglomerate)	TSF impoundment surfaces and dam crest cover material (assumed thickness = 1 ft to 2 ft)	12.0 (Note 4)		
Organics	Growth medium to support end land use (assumed thickness less than 0.1 ft)	0.7 (Note 5)	Clear and grubbing of TSF footprint prior to construction will be stored north of the TSF during operation. Likely that soil amendments will be required to establish vegetation	more than 0.8

Notes:

1. Water management plan and infrastructure is provided in Appendix III. Closure cover assessment is provided in Appendix IV.
2. Preliminary channel sizing using the rational method. Riprap was sized assuming a depth of 4.5 ft. See Appendix III for design details.
3. Volume was estimated by assuming a 3 ft cover depth (vertical depth) over the embankment downstream slope area. The surface area is estimated to be 400 acres.
4. Volume was estimated by assuming a 2 ft cover depth over the ultimate tailings surface. The surface area is estimated to be 3,800 acres.
5. Volume was estimated by assuming 0.1 ft thickness over the entire prepared surface. The surface area is estimated at 4,700 acres.

8.2 Surface Preparation and Revegetation

Surface Preparation

TSF impoundment surfaces will be recontoured in line with the water management plan (Appendix III) to minimize the potential for ponding on surface. Surfaces will be deep ripped along the contour to moderately mix the overburden and underlying surface, leaving an overall landscape of divots and hummocks as well as slow down surface water runoff. Surface preparation using dozers is the preferred method over excavator for sloped and flat areas to minimize potential for flow concentration that can lead to rilling etc.

The following general conditions are considered when applying the cover to recontoured TSF surfaces during reclamation:

- Prior to cover placement, conduct laboratory testing for particle size distribution and nutrient availability requirements and amendment requirements for revegetation.
- Load and haul cover material from borrow source to the reclamation area.
- Spread cover material using low ground bearing pressure equipment (e.g., track mounted dozers or scrapers) to required depths, level to an even surface, and avoid a compacted or over-smooth finish to reduce the potential for erosion. Conduct quality control inspections on cover thickness using onsite survey or remote sensing.

Management of Fugitive Dust

Operational controls for management of fugitive dust from exposed tailings surfaces (e.g., non-toxic dust suppressants – either biological (e.g., hay) or chemical) will be implemented until a final cover is placed and it is not required as defined by their operational air quality permit and management plan.

There is potential for fugitive dust to be generated from materials handling activities during cover construction (i.e., loading, hauling, screening/crushing, placement, etc.). Mitigation measures during cover construction may include restricting vehicle traffic entering disturbed areas, the use of water carts, and/or selecting construction windows during favorable wind conditions.

The cover will be constructed with wind- and water-erosion resistant materials. Over time, the establishment of vegetation on surfaces will assist in reducing the potential for finer materials to become mobilized during period of high-velocity winds.

Revegetation and Wildlife Enhancement

In general, the TSF surface will be revegetated with species native to the area. A vegetation assessment was conducted by WestLand (2020) to support detailed final reclamation plans and a final MPO. The vegetation surveys were conducted within the disturbance footprint of the proposed Skunk Camp TSF. These surveys identify general vegetation present, density, abundance of native/non-native species, and any special status plant species for which site characteristics are appropriate for occurrence.

The baseline information from these surveys will help inform details of the native vegetation species required for revegetation. Revegetation requirements and site-appropriate seed mixtures are addressed in the MLRP required by ASMIO. A final seed mix list will be submitted for review to ADEQ and ASMIO in line with the final APP closure requirements and MLRP before revegetation activities are initiated. The availability of the native seed mixes and success criteria will be confirmed as that point.

Stockpiled materials (see Section 8.1) will be utilized for growth medium and are assumed to have minimal stored native seed bank with some organic matter that will assist revegetation efforts, however, it is likely that it will need to be supplemented with addition seeding. Nutrient availability

(N, P, K) of available reclamation materials is low (Appendix I), therefore stockpiling cleared and grubbed material is important. Growth amendments (e.g., slow release N-P-K fertilizer) will likely be required to establish vegetation on surfaces. Specifications for type and application rates will be determined in conjunction with the site-appropriate seed mixtures. More detail on soil amendments, revegetation and seed mixes for the TSF are included in the reclamation and closure plan (Tetra Tech 2020).

Based on the closure cover modeling results (Appendix IV), the covered pyrite tailings are expected to remain near 100% saturation to minimize oxidation. The thickness of the scavenger tailings cover will aid in both limiting oxygen ingress but also avoid wicking of moisture from the pyrite tailings porewater to the surface. There have been several reclamation projects of effective re-vegetation of whole scavenger tailings. In addition, periodic storms from monsoons or wet periods will help to flush salts from the rooting zone.

The application of wildlife enhancement features (e.g., brush piles or rock piles) can provide benefit in terms of reducing erosion, promoting vegetation establishing and building in structural diversity. These features provide a rougher surface for slowing water movement and can trap weathered materials to allow pioneering vegetation to establish. This, in turn, can enhance local biodiversity by providing habitat for reptiles and small mammals.

9 RECLAMATION SCHEDULE

A preliminary closure schedule for the Skunk Camp TSF is summarized in Table 9.1 and provided in the following sections.

Table 9.1 Preliminary Reclamation Schedule

Stage	Mine Year	Key Activities
Life of Mine Progressive Reclamation	1 to 41	▪ Progressive reclamation (e.g., tailings deposition to achieve ultimate configuration, Main Embankment surface reclamation). ▪ Excavate Closure Diversion Channel to Dripping Springs Wash (the channel will not connect the TSF surface to Dripping Springs Wash until TSF surface is reclaimed after the Closure Transition Period). ▪ Lined Contact Water Collection Ditches convey seepage from finger drains and contact surface water from Main Embankment to the SCP. ▪ Shallow alluvial pumpback wells to collect TSF seepage and return to SCP. ▪ SCP water is pumped back to the operating pyrite cell. ▪ Ongoing field data collection to refine closure plan.
End of Operations	41	▪ Cessation of tailings deposition within the TSF. ▪ Cessation of shallow alluvial pumpback well operations.
Closure Transition Period	42 to 51 (approximately 10 years after the end of operations)	▪ Closure of Pyrite Cell 2 (resulting in no ponded water on the TSF surface). ▪ Surface shaping to closure design configuration. ▪ Place closure cover and vegetate. ▪ Construct Closure Embankment Bench and Toe Ditches on the Main Embankment. ▪ Connect TSF surface to Drippings Springs Wash via Closure Diversion Channel. ▪ Decommission Operational Upstream Diversion Channels and Contact Water Collection Ditches. ▪ Install Finger Drain Collection Pipes, to convey TSF impoundment draindown from finger drains to the SCP. ▪ During this period, the SCP does not have capacity to manage inflow with evaporation solely and will need active management (water treatment, additional evaporation ponds, spray evaporators, etc.). ▪ Monitoring closure performance criteria, in preparation for the Closure Active Care Phase. ▪ Monitoring/surveillance for dam safety, to meet long-term performance criteria, e.g., non-flowable scavenger tailings.
Closure – Active Care	51 to 120 (approximately 10 years to 80 years after the end of operations)	▪ Finger Drain Collection Pipes convey TSF impoundment draindown from finger drains to the SCP. ▪ Continue active management of the SCP (water treatment, additional evaporation ponds, spray evaporators, etc.). ▪ Monitoring closure performance criteria, in preparation for Closure Passive Care Phase. ▪ Monitoring/surveillance for dam safety, to meet long-term performance criteria – non-flowable scavenger tailings.

Stage	Mine Year	Key Activities
Closure – Passive Care Phase 1	120 to ~290 (approximately 80 years to 250 years after the end of operations)	▪ Finger Drain Collection Pipes convey TSF impoundment draindown finger drains to the SCP. ▪ SCP has capacity to manage inflow passively with evaporation. ▪ Dam safety and water quality compliance surveillance and monitoring frequency is decreased.
Closure – Passive Care Phase 2	Post ~290 (approximately 250 years after the end of operations)	▪ Seepage from finger drains ceases and with water quality standards are met at the POC. ▪ Decommission Finger Drain Collection Pipes, SCP, grout curtain and shallow pumpback well. ▪ Dam safety and water quality compliance surveillance and monitoring frequency is further decreased.

Life of Mine Progressive Reclamation of TSF (Mine Years 1 to 41)

During this stage, the Main Embankment will be constructed to the ultimate toe and extents as soon as practical, allowing for progressive reclamation of the outer slope to occur concurrent with operations. Ongoing progressive reclamation and site-specific field-scale trials will progress with the goal to improve the confidence in developing the closure design and associated success to meet the closure objectives (Section 4.2). As part of the operational water management, the Closure Diversion Channel will be constructed into the right abutment of the Main Embankment to drain to Drippings Springs Wash. Material generated from this excavation will be stockpiled and used for reclamation.

End of Operations (Mine Year 41)

During this stage, mining and processing operation is permanently terminated, and tailings will cease to be deposited within the TSF, other than to support closure (i.e., relocating scavenger tailings for pyrite cover). The shallow alluvial pumpback wells upstream of the SCP are no longer required and will be decommissioned.

Closure Transition Period (Mine Years 42 to 51)

During this stage, much of the earthworks will take place to construct the final covers and erosion protection measures.

Closure of the pyrite cell reclaim pond and filling low points on the scavenger beach may take up to 15 years after closure, depending on final settlement and equipment accessibility on the surface of the tailings. During the early closure transition period, excess seepage in seepage ponds will be pumped back to the Pyrite Cell 2 pond for additional evaporative capacity, and reclamation will take place on the Main Embankment and tailings beaches. After the Pyrite Cell 2 pond is removed, the seepage pond will be used to evaporate seepage, and the remaining reclamation of the tailings surface will occur.

Operational Upstream Diversion Channels, and other stormwater control elements, will be maintained to direct surface flows around and downstream of the tailings impoundment until the Closure Diversion Channel and Tailings Surface Channels are constructed and connected, at which point the Operational Upstream Diversion Channels will be decommissioned. At this stage, the

Tailings Surface Channels and Closure Diversion Channel will be connected, so that TSF surface runoff will be directed downstream to Dripping Springs Wash.

Surfaces will be regraded to slope toward the southeast. At the end of operations, the remaining area of PAG pyrite tailings will be covered with a minimum 10-foot layer of NPAG scavenger tailings. The TSF surface will be shaped to reduce the potential for standing water (mounding in some locations to account for predicted settlement) and divert runoff to the Closure Diversion Channel.

Erosion resistant cover (e.g., Gila Conglomerate or equivalent soil, sand, and gravel mix) will be placed onto the TSF surface and revegetated. The timing of cover placement is dependent on equipment accessibility onto the TSF surface following adequate drain down of the phreatic surface within the impoundment. The Closure Embankment Bench and Toe Ditches will be constructed to mitigate erosion on the Main Embankment slope and convey runoff around the SCP. Finger Drain Collection Pipes will be installed in the lined Contact Water Collection Ditches to convey seepage from the embankment finger drains to the SCP.

Continued seepage collection in the finger drains is anticipated during the drain down period of the tailings post-closure. Seepage water will be routed from the finger drains to the SCP via the Finger Drain Collection Pipes. During the transition period, the SCP is not expected to have sufficient evaporative capacity to manage seepage passively. As such, active management will be required through water treatment, additional evaporative ponds, spray evaporators or other measures.

Closure – Active Care (Mine Years 51 to 120)

During this stage, there is on-going maintenance and surveillance for dam safety and environmental compliance stage infrastructure and frequent onsite presence.

During this stage, the SCP does not have sufficient evaporative capacity to manage seepage passively. As such, active management will be required through water treatment, additional evaporative ponds, spray evaporators or other measures. Spray evaporators are effective at the rates estimated in the closure water balance (Appendix VI).

Closure – Passive Care Phase 1 (Mine Years 120 to ~290)

The closure water balance indicates seepage can be managed through passive evaporation in the SCP after Mine Year 150 (Appendix VI).

Closure – Passive Care Phase 2 (Post Mine Year ~290)

The Skunk Camp Regional Groundwater Model (M&A 2020) predicts that the TSF impoundment draindown through the finger drains ceases by approximately Mine Year 290. At this stage, The SCP is decommissioned and the monitoring of the POC wells show compliance.

“Passive Care” is not the same as “relinquishment” as some level of inspections by dam safety engineers and dam safety reviews will continue with maintenance undertaken as required. This final stage of closure is implemented when there is no active seepage management.

The timing and ability of any mine closure domain in reaching the Closure-Passive Care stage will require each structure to meet the following completion criteria with respect to dam safety, although other criteria may also apply to satisfy other requirements such as end land use.

10 TEMPORARY SHUTDOWN PLAN

During a period of temporary shutdown, the mine will require ongoing management, monitoring, and maintenance to maintain performance objectives of the TSF and protect the environment. This section outlines the approach for temporary shutdowns of the Skunk Camp TSF.

10.1 Water Management

Water management during temporary or interim closure will include:

- Downstream seepage management system will be maintained, including the shallow alluvial pumpback well network downstream of the TSF. Local runoff and groundwater pumpback reporting to the SCP will be returned to the pyrite cell to maintain water cover.
- Mobile pumps on the scavenger beach will be used to pump ponded water to the pyrite cell.
- Pyrite tailings cell operating pond will be maintained and monitored to ensure adequate water cover to maintain pyrite tailings saturation and adequate flood storage.
- Excess water from the TSF system (if any) will be managed via active management (e.g., water treatment, additional evaporation ponds).
- Continued monitoring and sampling to ensure compliance with permit requirements

10.2 Dam Safety

This section summarizes suggested activities during temporary shutdown to ensure dam safety is maintained. Activities should be carried out with the qualified geotechnical engineer/engineer of record (EoR). Suggested tasks that should be completed for temporary shutdown are listed in order of priority below. In all cases, this should begin with a detailed inspection of the TSF by the EoR to document the current condition of the TSF, which should include a photographic record of the conditions, prioritization of tasks. Key tasks to be carried out include:

1. The condition of all diversion channels and outlets should be assessed. Where any blockages exist, these should be cleared to the extent possible such that the diversions are flowing unimpeded.
2. The available flood storage volume between pond level and crest level should be documented along with a preliminary estimate of what rainfall events might be anticipated over the next six months, including both storms and prolonged wet periods. Where practical, the water level in the impoundment should be drawn down to the extent possible while maintaining water cover for the pyrite tailings, see Section 10.1.
3. The condition of the pumps and pipes should be assessed and the fuel supply for the pumps should be reviewed, and increased where possible, to ensure that they can continue to function as intended.

4. The condition of automated monitoring systems should be reviewed. If not automated, then essential monitoring should be identified, and personnel identified or trained who can conduct manual monitoring during the shutdown.
5. The condition of the TSF dam crest, slopes and abutments should be regularly inspected. Where defects exist, such as pre-existing erosion channels, these should be repaired/regraded to the extent possible.
6. The security of the TSF should be reviewed and increased, as required, to limit the potential for sabotage during the period of evacuation.
7. The risk assessments and Operations, Maintenance and Surveillance (OMS) manual for the TSF should be reviewed to identify any other risks or procedures that require action prior to demobilization. To the extent possible, all hazards that could develop and cause failure of the TSF within the period of evacuation should have pre-emptive mitigations implemented prior to demobilization. This may require modification of the mitigations outlined in the OMS manual, preparation of stockpiles of emergency materials, and preparation of equipment, pumps, machinery or spare parts that could be required.

10.3 Dust Management

Dust management during temporary shutdown will include:

- Cycloned sand embankments: where embankment slopes have not been progressively reclaimed, the slopes will be protected with temporary covers (e.g., vegetation, hay, sand/gravel cover).
- Scavenger tailings beach: when tailings are not being spigotted on the beach, additional dust suppressant (e.g., magnesium chloride or hay)may be required.
- Pyrite tailings cells: pond will be maintained, additional dust management is not necessary.
- Perimeter roads: dust suppressant (e.g., magnesium chloride) will be applied as needed.

11 MAINTENANCE AND MONITORING

The purpose of the closure maintenance and monitoring program is to assess the implementation and effectiveness of reclamation measures against success criteria. Activities are summarized below.

Maintenance Program

The Skunk Camp TSF will be inspected immediately following extreme events (e.g., flooding, earthquake, forest fire, etc.) or abnormal events that may impact the performance of reclamation and stability of structures. The TSF OMS manual will define the minimum frequency magnitude event for event driven inspections.

Potential maintenance activities to be undertaken during the Active Care Phase of TSF closure are summarized in Table 11.1. Maintenance required during this phase is expected to be minimal. Maintenance expected during Passive Care Phase 1 will be associated with the seepage infrastructure.

Table 11.1 Maintenance Program For TSF Closure Active Care Phase

Maintenance Activity	Components	Potential Concern	Maintenance Activity
Sediment and Obstruction Removal	Channels, Ditches, Spillways	Reduces hydraulic capacity of ditches and spillways	Remove obstructions from diversions and spillways
Erosion Repair	Dam slopes, Diversions, Spillways and Access Roads	Accelerated erosion, slope failures, failure of structures.	Erosion to dams, diversions and access roads will be repaired in a timely manner. Access roads can be repaired by site staff using their typical procedures. Structures related to dam safety (dams, pond berms, spillways and diversions) will be repaired with guidance from the EoR.
Instrumentation Maintenance	Instrumentation (e.g., piezometers, monitoring wells, pumps, pumping wells, etc.)	Inadequate monitoring of dam performance and pond levels due to damage, loss or misidentification of instrumentation.	Instrumentation will be maintained in good condition, highly visible, easily identifiable, and protected from equipment and wildlife by barricades and surface monuments as appropriate.
Livestock and Wildlife Control	Dams, Diversions, Spillways	Animals and livestock may damage exposed dam instrumentation	Monitor livestock access to site and restrict from reclaimed areas that may require protection.
Security	Fenced areas with restricted access	Public health and safety risks	Repair physical barriers and signage

Monitoring Program

A preliminary monitoring program with defined reclamation success criteria for each TSF closure stage is detailed in Table 11.2 (physical stability objectives), Table 11.3 (geochemical stability objectives) and Table 11.4 (end land-use/ecological objectives).

Objectives provide the “goalposts” for closure. Success criteria are indicators used to define specific requirements that, if met, denote the success of the closure activities in meeting closure objectives. Evaluation methods are independent assessments of whether the success criteria have been met or not.

Table 11.2 Reclamation Monitoring Program and Success Criteria (physical stability objectives)

Stage	Closure Objective (in addition to those described in Section 4.1)	Preliminary Success Criteria	Supporting Assessment or Evaluation	Monitoring/Surveillance Requirements
Life of Mine Progressive Reclamation	▪ Implement life of mine tailings design that contributes to meeting the closure objectives (see Section 4.1), for example, staging plan to achieve ultimate configuration and progressive reclamation of embankment slopes	▪ Minimum Factor of Safety (FoS) requirements are met (see Design Basis Memorandum (DBM) in DEIS (KCB 2018)) ▪ Erosion does not threaten the dam stability ▪ Minimum dam safety surveillance thresholds are met (e.g., minimum freeboard, etc.)	▪ Dam Safety Inspections (DSI's) completed annually ▪ Dam Safety Reviews (DSR's) completed every 5 or 7 years, depending on Dam Classification ▪ Independent tailings review board (ITRB)	▪ As per the OMS manual
End of Operations	▪ See “Life of Mine Progressive Reclamation”	▪ See “Life of Mine Progressive Reclamation”	▪ See “Life of Mine Progressive Reclamation”	▪ See “Life of Mine Progressive Reclamation”
Closure Transition Period	▪ Establish final surfaces that meet the Closure – Passive Care conditions (i.e., no long-term ponded water on the TSF surface) ▪ Safety decommission the Operational Upstream Diversion Channels and commission new Closure Diversion Channel	▪ Downstream embankment slopes are covered with minimum 3 ft of crushed Tertiary conglomerate and the crest covered with a minimum 2 ft of the same material	▪ As-built survey of final surfaces ▪ As-built diversion channel report ▪ DSR’s conducted by an independent qualified dam safety engineer ▪ ITRB review	▪ OMS manual to be revised to reflect surveillance type, location and frequency required for closure-active phase
Closure – Active Care	▪ See “Closure Transition Period”	▪ See “Closure Transition Period”	▪ See “Closure Transition Period”	▪ See “Closure Transition Period”
Closure – Passive Care Phase 1 and Phase 2	▪ TSF can be defined as a "landform" (low risk of a catastrophic consequence with limited or no water/tailings release and limited capacity for stored tailings to flow) ▪ Water management infrastructure is gravity-driven, adaptable/resilient to climate change, and little to no maintenance ▪ Surfaces minimize ponded water and safely runoff downstream of the TSF ▪ Manage erosion of closed surfaces to acceptable levels consistent with established performance criteria	▪ Minimum FoS requirements are met (see DBM in DEIS (KCB 2018)) ▪ Pore pressures have stabilized following change in TSF configuration, operation or construction activities during the transition and active care stages ▪ Scavenger tailings can be shown to be non-flowable under static and seismic conditions (i.e., well-drained) ▪ Deformations (settlement or horizontal) have stopped or reached a stable, steady-state trend which does not pose any concern with respect to meeting closure objectives (e.g., stability of the dam or no ponded water) ▪ Erosion and water management measures are established and demonstrated to be effective without frequent maintenance under typical climate conditions ▪ Constructed water conveyance structures (e.g., berms, ditches, engineered drop structures and surface armor, etc.) functioning with little to no maintenance	▪ DSR's conducted by an independent qualified dam safety engineer ▪ Erosion assessment compared to established reference sites	▪ OMS manual to be revised to reflect surveillance type, location and frequency required for closure-passive phase

Table 11.3 Reclamation Monitoring Program and Success Criteria (geochemical stability objectives)

Stage	Closure Objective (in addition to those described in Section 4.1)	Preliminary Success Criteria	Supporting Assessment or Evaluation	Monitoring/Surveillance Requirements
Life of Mine Progressive Reclamation	▪ Implement life of mine tailings design that contributes to meeting the closure objectives (see Section 4.1), for example, tailings thickening staging plan to achieve ultimate configuration and early draindown of tailings ▪ Conduct field trials that contributes to improved cover design ▪ Mitigate downstream migration of poor quality seepage	▪ Maintain downstream discharge water quality compliance (i.e., permit conditions are met at POCs)	▪ Monitoring reports and supporting technical assessments	▪ As per APP permit conditions
End of Operations	▪ See “Life of Mine Progressive Reclamation”	▪ See “Life of Mine Progressive Reclamation”	▪ See “Life of Mine Progressive Reclamation”	▪ See “Life of Mine Progressive Reclamation”
Closure Transition Period	▪ Establish a final surface closure cover ▪ Maintain seepage management infrastructure will TSF impoundment drains down ▪ Mitigate downstream migration of poor quality seepage	▪ No exposed tailings surfaces (i.e., prevent wind-blown fugitive tailings dust) ▪ Maintain downstream discharge water quality compliance (i.e., permit conditions are met at POCs). Cover design meets design specifications and establishes vegetation	▪ Closure cover QA/QC construction report	▪ See “Life of Mine Progressive Reclamation”
Closure – Active Care	▪ See “Closure Transition Period” ▪ Passively manage seepage via evaporation	▪ See “Closure Transition Period”	▪ See “Closure Transition Period”	▪ See “Closure Transition Period”
Closure – Passive Care Phase 1 and Phase 2	▪ Protect reclaimed covered surfaces against wind and water erosion, to avoid exposure of tailings ▪ Prevent oxidation of the PAG pyrite tailings ▪ Minimize potential effects of long-term seepage from the TSF, by limiting net infiltration into the TSF post-closure ▪ Achieve steady-state conditions where seepage management is no longer required to meet regulatory requirements ▪ Mitigate downstream migration of poor quality seepage	▪ Maintain downstream discharge water quality compliance (i.e., permit conditions are met at POCs) ▪ Closure cover prevents wind-blown dust from exposed tailings surfaces. Air quality is comparable to baseline conditions Permit conditions are met at POCs ▪ Evidence that seepage quality and quantity is static or improving, and that POC limits or specified site-specific performance risk-based values are met for at least 10 years ▪ Monitoring trends reflect predicted water quality modeling predictions for long-term effects against identified permit conditions	▪ Independently reviewed technical assessment that demonstrates the success criteria is met	▪ Surface water flows and quality ▪ Groundwater/seepage levels and quality (to be determined as per APP permit requirements) ▪ Visual inspection of exposed tailings surfaces (as per dam safety surveillance program) ▪ Review ongoing need for surveillance based on performance against closure success criteria (Section 4.1)

Table 11.4 Reclamation Monitoring Program and Success Criteria (end land-use/ecological objectives)

Stage	Closure Objective (in addition to those described in Section 4.1)	Preliminary Success Criteria	Supporting Assessment or Evaluation	Monitoring/Surveillance Requirements
Life of Mine Progressive Reclamation	▪ Implement life of mine tailings design that contributes to meeting the closure objectives (see Section 4.1), for example, progressive reclamation of embankment slopes ▪ Salvage growth medium for use in progressive reclamation ▪ Conduct field trials (reference sites) that contributes to improved revegetation design and criteria ▪ Conduct progressive reclamation in areas on the TSF that become permanently inactive	▪ Progressive reclamation targets are met. Revegetation meets closure criteria against established reference sites ▪ Reclamation field trials (reference sites) contributes to improved closure design criteria	▪ Monitoring reports and supporting technical assessments	▪ Annual review of progressive reclamation success
End of Operations	▪ See “Life of Mine Progressive Reclamation”	▪ See “Life of Mine Progressive Reclamation”	▪ See “Life of Mine Progressive Reclamation”	▪ See “Life of Mine Progressive Reclamation”
Closure Transition Period	▪ Reclaim surface with agreed vegetation mix/density/ amendments ▪ Decommission non-essential operational infrastructure not required during post-closure	▪ Vegetation establishment meets a minimum 50% survival rate in year 1. Revegetation meets criteria against established reference sites. ▪ Non-essential infrastructure is safely decommissioned within 5 years of final mill throughput.	▪ Revegetation cover QA/QC construction report	▪ See “Life of Mine Progressive Reclamation”
Closure – Active Care	▪ See “Closure Transition Period”	▪ See “Closure Transition Period”	▪ See “Closure Transition Period”	▪ See “Closure Transition Period”
Closure – Passive Care Phase 1 and Phase 2	▪ Construct a self-sustaining vegetated landform that is compatible with a beneficial land use ▪ Transition TSF to land uses that are consistent with surrounding areas (e.g., low-intensity livestock grazing, if possible, and wildlife habitat)	▪ Vegetation on rehabilitated land is native and self-sustaining. Species presence, density and abundance is comparable to baseline conditions (Westland 2020) or agreed reference sites. ▪ Habitat for native wildlife is provided in appropriate rehabilitated areas. ▪ The prevalence of invasive species (i.e., weeds, feral animals) is similar to that in nearby reference sites.	▪ Independently reviewed technical assessment that demonstrates the success criteria is met	▪ Revegetated surfaces compared to reference sites. Conduct annually (end of the growing season). Evaluate the survival rate of revegetated areas by appropriately qualified personnel. Treat and monitor invasive/noxious species on the Site through to closure. ▪ Review ongoing need for surveillance based on performance against closure success criteria and remaining closure residual risk.

12 CLOSING

This report is an instrument of service of KCB Consultants Ltd. (KCBCL). The letter has been prepared for the exclusive use of Resolution Copper Mining LLC (Client) for the specific application to the Resolution Copper Project, and it may not be relied upon by any other party without KCBCL's written consent. KCBCL has prepared this report in a manner consistent with the level of care, skill and diligence ordinarily provided by members of the same profession for projects of a similar nature at the time and place the services were rendered. KCBCL makes no warranty, express or implied.

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KCB CONSULTANTS LTD.

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APPENDIX I

Site Investigation and Laboratory Testing Summary

KCB Consultants Ltd.

Resolution Copper Mining LLC

Resolution Copper Project

Skunk Camp Closure Study
Site Investigation and Laboratory Testing Summary

Doc. # CCC.03-81600-EX-REP-00021 - Rev. 0

KCB Consultants Ltd.

June 4, 2020

Resolution Copper Mining LLC
P.O. Box 1944
Superior, Arizona
85273

Ms. Victoria Peacey
Senior Manager - Permitting and Approvals

Dear Ms. Peacey:

Resolution Copper Project
Skunk Camp Closure Study
Site Investigation and Laboratory Testing Summary
Doc. # CCC.03-81600-EX-REP-00021 – Rev. 0

Please find enclosed the Skunk Camp Tailings Storage Facility (TSF) Site Investigation and Laboratory Testing Summary for the Skunk Camp Closure Study for your review and comment.

Yours truly,

KCB CONSULTANTS LTD.

Kate Patterson, P.E., P.Eng.
Project Manager

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Resolution Copper Mining LLC

Resolution Copper Project

Skunk Camp Closure Study
Site Investigation and Laboratory Testing Summary

Doc. # CCC.03-81600-EX-REP-00021 - Rev. 0

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1 INTRODUCTION

Tonto National Forest (the Forest) issued the Draft Environmental Impact Statement (DEIS) for the proposed Resolution Copper Project and Land Exchange in August 2019 (Forest 2019). As part of the DEIS, the Forest included several mitigation measures that should be addressed prior to issuing the Final Environmental Impact Statement (FEIS), some of these include:

- ***FS-223: Conduct soil surveys within the area to be disturbed by the Preferred Alternative TSF footprint***
- ***FS-224: Conduct appropriate testing of soil materials within the Preferred Alternative TSF footprint***
- ***FS-226: Preparation of detailed reclamation plans for the Preferred Alternative***

Detailed description of the mitigation measures from the DEIS are included below.

FS-223: Conduct soil surveys within the area to be disturbed by the Preferred Alternative Tailings Storage Facility footprint
Description/overview: While adequate soil and vegetation information exists to conduct an assessment for the purposes of disclosing impacts under NEPA and comparing between alternatives, the level of information may not be sufficient to support detailed final reclamation plans and a final mining plan of operations. To support these documents, soil surveys need to be conducted within the disturbance footprint of the Preferred Alternative tailings storage facility. The specific purpose of the surveys would be identify general soil characteristics, estimate the amount of soil or unconsolidated material that would be available for salvage to support reclamation activities, and inform the ability of salvaged material to support reclamation efforts. The appropriate level of detail for the soil survey would be determined in conjunction with the Tonto National Forest. The Forest Service is requiring that these surveys be conducted between the draft EIS (DEIS) and final EIS (FEIS).
Source of measure: Forest Service
Resource affected/impacts being mitigated: This statement seeks to mitigate impacts on long-term reclamation and vegetation.
Applicable alternatives: Preferred Alternative
Authority to require: While the footprint of the Preferred Alternative may not involve Forest Service surface resources, other aspects of the project still involve Forest Service surface resources, and the information collected under this measure is considered necessary for the development of reclamation plans supporting the final mining plan of operations.
Additional ground disturbance: While this would require ground disturbance, it would be within the existing area of analysis of the project fence line.

FS-224: Conduct appropriate testing of soil materials within the Preferred Alternative Tailings Storage Facility footprint
Description/overview: Similarly, in order to support detailed final reclamation plans and a final mining plan of operations, appropriate testing would be conducted on soil samples collected from within the Preferred Alternative footprint. These tests could include such parameters as soil organic carbon, moisture capacity, nutrients, pH/acidity/alkalinity. Tests would also include those appropriate to estimate post-closure water quality of stormwater runoff interacting with the salvaged soil. The appropriate suite of tests to be conducted would be determined in conjunction with the Tonto National Forest. The Forest Service is requiring that these tests be conducted between the DEIS and FEIS.
Source of measure: Forest Service
Resource affected/impacts being mitigated: This statement seeks to mitigate impacts on long-term reclamation and vegetation.
Applicable alternatives: Preferred Alternative
Authority to require: While the footprint of the Preferred Alternative may not involve Forest Service surface resources, other aspects of the project still involve Forest Service surface resources, and the information collected under this measure is considered necessary for the development of reclamation plans supporting the final mining plan of operations.
Additional ground disturbance: While this would require ground disturbance, it would be within the existing area of analysis of the project fence line.

FS-226: Preparation of detailed reclamation plans for the Preferred Alternative
Description/overview: Information derived from the soil surveys, vegetation surveys, and soil testing would be used to develop detailed reclamation plans for the Preferred Alternative. These reclamation plans would be more specific than those included in the GPO, and would include such details as: maps of the post-closure landform depicting the type of final closure cover for each area (depth of material, type of material, anticipated source of material and preparation methods like crushing or sorting, and need for/presence of armoring); anticipated reclamation techniques such as surface preparation, seeding, planting, watering (if any), soil amendments; soil salvage storage locations and storage management techniques; maps of the post-closure landform or the landform over time, depicting phasing of revegetation or reclamation activities; monitoring details including proposed success criteria and the potential use of comparison reference plots. The detailed reclamation plans would also include more specific information on post-closure stormwater controls, the anticipated longevity of engineered control systems, and criteria for when stormwater would be deemed appropriate for release back to the downstream drainages. The appropriate level of detail for the final reclamation plans would be determined in conjunction with the Tonto National Forest. The Forest Service is requiring that these plans be prepared between the DEIS and FEIS.
Source of measure: Forest Service
Resource affected/impacts being mitigated: This statement seeks to mitigate impacts on long-term reclamation and vegetation.
Applicable alternatives: Preferred Alternative
Authority to require: While the footprint of the Preferred Alternative may not involve Forest Service surface resources, other aspects of the project still involve Forest Service surface resources, and the information collected under this measure is considered necessary to support the final mining plan of operations.
Additional ground disturbance: No additional ground disturbance anticipated.

The Soil Science Society of America define a soil as the unconsolidated mineral or organic material on the immediate surface of the Earth that serves as a natural medium for the growth of land plant (Soil Science Division Staff, 2017). It should be noted that the Forest recognizes that the Skunk Camp footprint has limited soil cover and the surficial geology should be defined as unconsolidated surficial deposits such as Alluvium, or weathered Quaternary Pediment and Gila Conglomerate (referred to as Tertiary Conglomerate in the attached geology map). For the purposes of this study, the FS-223 and FS-224 mitigation measures have been interpreted as surficial geological survey and unconsolidated surficial deposits testing program, rather than a conventional soil survey.

To address these mitigation measures, Resolution Copper Mining LLC (RCM) commissioned KCB Consultants Ltd. (KCBCL) to conduct unconsolidated surficial deposits closure cover material sampling, laboratory testing and develop a tailing storage facility (TSF) closure plan (closure water management, closure covers, erosion protection).

This report summarizes the laboratory testing undertaken on soil material taken from the proposed Skunk Camp Tailings Storage Facility (TSF) for closure cover design. Overall the results of the testing program indicate that nutrient levels are somewhat low and growth amendments (e.g., slow release N-P-K fertilizer) will likely be required to establish vegetation on surfaces. Specifications for type and application rates will be determined in conjunction with the site-appropriate seed mixtures in some cover materials. Other material characteristics indicate a suitable closure cover with excess neutralization capacity.

This report includes:

- **Sample Collection** (Section 2): summarizes the field sampling approach and sample types collected for laboratory testing.
- **Laboratory Testing** (Section 3, 4, 5, 6 and 7): summarizes the laboratory testing approach and results for initial index testing, saturated and unsaturated material testing, geochemical testing, and nutrient testing. A summary of the laboratory quality control measures is provided.
- **Limitations** (Section 8).

2 SAMPLE COLLECTION

2.1 Approach

Michael O'Byrne (KCBCL) collected the soil samples for the laboratory testing program between September 16th, 2019 and September 20th, 2019. The soil sampling locations are shown in Figure 1 of Appendix I. Photographs of the sampling locations and samples are given in Appendix II. A list of the samples with descriptions are provided with test pit logs and core logs in Appendix VI.

Samples were described in the field following the Unified Soil Classification System, the Arizona Mining Guidance Manual Best Available Demonstrated Control Technology (BADCT) (ADEQ 2005) and the Field Book for Describing and Sampling Soils (Schoeneberger et al. 2012).

Geologic units sampled for this study include Gila Conglomerate, Gila Sandstone, Quaternary Pediment, and Quaternary Alluvium. The geological description of the above units is described in the Skunk Camp Site Investigation Report (KCBCL 2019). The testing occurred between October 9th, 2019 and November 5th, 2019. The work was conducted by KCB Consultants Ltd (KCBCL).

2.2 Sample Types Collected

A total of twenty-nine (29) samples were gathered for laboratory testing: twenty-five (25) surface samples, three (3) core samples, and one (1) tailings sample. Each sample set is described in the sections below. A summary of the sample types can be found in Table 2.1 below. A detailed summary of the laboratory testing program can be found in Appendix III.

Table 2.1 Summary of Sample Types

Sample Type	Location_ID	Geological Unit	Sampling Depth (ft below ground surface)
Surface	TPC19-1	Quaternary Pediment	1
	TPC19-2	Gila Conglomerate	
	TPC19-3	Quaternary Pediment	
	TPC19-4	Gila Conglomerate	
	TPC19-5	Gila Sandstone	
	TPC19-6	Quaternary Alluvium	
	TPC19-7	Gila Conglomerate	
	TPC19-8	Quaternary Alluvium	
	TPC19-9	Quaternary Alluvium	
	TPC19-10	Quaternary Pediment	
	TPC19-11	Quaternary Alluvium	
	TPC19-12	Gila Conglomerate	
	TPC19-13	Quaternary Pediment	
	TPC19-14	Quaternary Alluvium	
	TPC19-15	Gila Conglomerate	
	TPC19-16	Quaternary Alluvium	
	TPC19-17	Quaternary Pediment	
	TPC19-18	Gila Conglomerate	

Sample Type	Location_ID	Geological Unit	Sampling Depth (ft below ground surface)
Surface	TPC19-19	Quaternary Pediment	1
	TPC19-20	Quaternary Pediment	
	TPC19-21	Quaternary Pediment	
	TPC19-22	Quaternary Alluvium	
	TPC19-23	Quaternary Alluvium	
	TPC19-24	Gila Conglomerate	
	TP19-9	Gila Conglomerate	4.5
Deep Core	DH18-5	Gila Conglomerate	45
	DH19-12	Gila Conglomerate	97
	DH19-16	Gila Conglomerate	87
Tailings	Pyrite Tailings	Pyrite Tailings	n/a

Test Pit (Surface) Samples

The surface samples were sourced from test pits within the footprint of the proposed Skunk Camp TSF. Sampling locations were located either along ridges, slopes, close to access roads, or within drainage channels.

Materials sampled were mainly comprised of soil taken from varying conditions, such as slope position and proximity to drainage. Soil samples were collected in hand-dug excavations at a depth of approximately 1 ft below the ground surface as shown in Table 2.1 above. One (1) to two (2) buckets of material were taken at each test pit location.

Intact Gila Conglomerate rock in the drainage channels were collected for comparison. Intact “clasts” of Gila were broken off outcrops using chisels and picks. Samples were described in the field and carbonate content was assessed qualitatively using hydrochloric acid, this information is provided for each sample in the test pit logs. When possible, larger clasts were milled in the field to pass a 1” sieve, intent to provide a more representative sample. The field observations and test pit logs are reported in Appendix VI.

Core Samples

Three (3) deeper samples show in Table 2.1 above were drilled from a previous site investigation (KCBCL 2019) and used for geochemical testing for this study. The field observations and test pit logs are reported in Appendix VI.

Tailings Sample

A pyrite tailings sample was supplied by RCM from their metallurgical testing inventory. Tailings were taken from the barrel leaching testing program (Duke Hydrochem 2014). The pyrite tailings sample was shipped with dry ice and courier within 24 hours to GeoSystems Analysis (GSA) in Tucson, Arizona. GSA confirmed the integrity of the pyrite tailings sample on arrival (non-oxidized). The pyrite tailings sample was kept below freezing conditions until the testing program started.

3 LABORATORY TESTING

3.1 Approach

The samples were subjected to the following physical and chemical tests to support the study objectives:

- physical index testing (particle size distribution (with hydrometer), gravimetric water content, specific gravity, Atterberg limits);
- standard proctor test;
- unsaturated soil parameters (particle size distribution (with hydrometer) and the moisture retention curves);
- saturated hydraulic conductivity (rigid wall);
- acid rock drainage testing using Sobek Acid Base Accounting (ABA) with siderite correction methods;
- chemical analyses including total elemental analyses by four acid digest and ICP-AES / MS and XRF methods;
- metal leaching potential using Synthetic Precipitation Leaching Procedure (SPLP) and Toxicity Characteristic Leaching Procedure (TCLP); and
- soil nutrient testing (total organic carbon, organic matter, cation exchange capacity and available nutrients).

A summary of the laboratory testing program is provided in Appendix III. Two laboratories were used for the testing of samples:

- Geochemical testing was undertaken by ALS in three lab locations in Tucson, AZ, Kelso, WA, and Vancouver, BC.
- The testing required for physical cover properties and soil moisture was undertaken by GSA in Tucson, Arizona.

4 INITIAL PHYSICAL TESTING

Physical index testing for comparison of the Skunk Camp site soil samples was undertaken by GSA in November 2019. All physical test results presented in Sections 4.1 to 4.5 are presented in Appendix IV.

4.1 Particle Size Distribution

Particulate size distribution testing (i.e., gradation) was completed to inform cover material permeability and potential resistivity to erosion. The following particle size distribution comparisons:

1. A “dry” particle size distribution test (ASTM D6913 (2017d)).
2. A “wet” particle size distribution with hydrometer (ASTM D6913 (2017d)).

Sample TPC19-7 was made up of intact “clasts” of Gila Conglomerate collected from outcrops using chisel and pick. TPC19-5 was sampled from a drainage outcrop, largely weathered, and collected using a similar methodology as TPC19-7. These samples were chosen to represent fresh, un-weathered Gila Conglomerate borrow material from the Skunk Camp site. Results are summarized in Table 4.1.

Table 4.1 Summary of Particle Size Distribution (PSD) Results

Sample ID	Test Type	USCS Classification (Note 1)	% Fines (below #200 sieve)	% Coarse (above ¾”)
TPC19-1	Dry PSD	SC	17.3	10
TPC19-2	Wet PSD	SC	17.8	1
TPC19-3	Wet PSD	SM-SC	20.6	16
TPC19-4	Dry PSD	SM	8.5	3
TPC19-4 H[2]	Dry PSD	SM	21.4	0
TPC19-5	Wet PSD	SC	17.4	18
TPC19-6	Dry PSD	SW-SC	8.4	2
TPC19-7	Wet PSD	GW	4.8	15
TPC19-8	Dry PSD	SP	1.3	1
TPC19-9	Dry PSD	SC	21.4	3
TPC19-10	Wet PSD	GC	24.6	24
TPC19-11	Dry PSD	SP-SM	11.8	2
TPC19-12	Wet PSD	SC	38.2	6
TPC19-13	Wet PSD	SC	29.3	10
TPC19-14	Dry PSD	SP-SM	10.8	3
TPC19-15	Dry PSD	SC	19	1
TPC19-15 H[2]	Dry PSD	SC	25.8	6
TPC19-16	Dry PSD	SM	13.5	3
TPC19-17	Wet PSD	CH	50.6	6
TPC19-18	Wet PSD	GC	18.4	46
TPC19-19	Wet PSD	GC	20.3	58
TPC19-20	Dry PSD	GC	17.6	4

Sample ID	Test Type	USCS Classification (Note 1)	% Fines (below #200 sieve)	% Coarse (above ¾")
TPC19-20 H[2]	Dry PSD	SC	42.4	9
TPC19-21	Wet PSD	SC	33.9	22
TPC19-22	Dry PSD	SP-SM	6.4	1
TPC19-23	Wet PSD	SC	30.7	8
TPC19-24	Dry PSD	SC	18	5
Pyrite Tailing	Dry PSD	ML	78.6	0

Notes:
1. Unified Soil Classification System (USCS) – ASTM D2487 (2017a)
2. Duplicates run as part of hydraulic properties suite testing.

These results indicate that the Gila Conglomerate in the proposed Skunk Camp TSF produces coarse gravelly and cobbly material with some fines.

4.2 Moisture Content

The twenty-four (24) surface samples were tested for in situ moisture content (ASTM D2216 (2019)) to better understand permeability, available water for supporting revegetation, and bearing capacity. Moisture contents ranged from 0.8% to 7.9%, with an average of 3%.

4.3 Specific Gravity

Specific gravity tests (ASTM D854-14 (2014b)) were completed on twenty-eight (28) samples in total to further understand material strengths, bearing capacity and degree of saturation. Twenty-four (24) surface samples, three (3) duplicate surface samples for hydraulic testing, and one (1) sample of pyrite tailings. The Skunk Camp samples were "chunks" of Gila Conglomerate (matrix and clasts), Gila Sandstone, Quaternary Pediment, and Alluvium. The average specific gravity for the Skunk Camp samples is 2.81. The specific gravity value for the pyrite tailing sample is 3.56.

4.4 Atterberg Limits

Atterberg Limits testing (ASTM D4318 (2017c)) was completed on the fines fraction of the surface soil samples (i.e., silts and clays) to understand its shrinkage limit, plastic limit, and liquid limit. These surficial samples may have undergone physical change during transportation and therefore may not be indicative of in situ conditions. The test results indicate that the fine portions of the Gila Conglomerate samples are medium plasticity clay.

4.5 Standard Proctor Compaction Test

Four samples from the Skunk Camp TSF (TPC19-4, TPC19-6, TPC19-15, TPC19-20) were crushed to pass the ¾" screen and analyzed by the Standard Proctor Compaction Test method (ASTM D698 - 12e2 (2012)) to understand soil compaction properties, (i.e., optimal water content at which soil can reach its maximum dry density. A correction was not required to account for oversized material since all oversized pieces were broken to pass the ¾" screen. The maximum dry density (MDD) achieved was 129.7 pcf (2080 kg/m^3) at the optimum moisture content of 12.7% (TPC19-4).

5 SATURATED AND UNSATURATED MATERIAL TESTING

Both saturated and unsaturated testing was performed on four samples for the Skunk Camp site to estimate saturated and unsaturated hydraulic parameters. They are summarized in Table 5.1 below. The testing was completed by GSA. The results are presented in Appendix IV.

Table 5.1 Test Samples for Saturated Hydraulic Conductivity and Soil Moisture Retention Curves

Sample Name	Geological Unit
TPC19-4	Gila Conglomerate
TPC19-15	
TPC19-20	Quaternary Pediment
Pyrite Tailings	Pyrite Tailings

5.1 Particle Size Distribution – Hydrometer

As described in Section 4.1, particle size distributions (ASTM D 6913-17 / ASTM C136-14 (2014a)) were duplicated with a hydrometer for samples TPC19-4, TPC19-15, and TPC19-20. A total of four tests were completed on the Gila Conglomerate, Quaternary Pediment, and pyrite tailings. The results are presented in Table 5.2 below.

Table 5.2 Summary of Particle Size Distributions with Hydrometer Results

Sample	Test	USCS Classification (Note 1)	% Fines (below #200 sieve)	% Coarse (above ¾")
TPC19-4 H	Dry PSD	SM	21.4	0
TPC19-15 H	Dry PSD	SC	25.8	6
TPC19-20 H	Dry PSD	SC	42.4	9
Pyrite Tailings	Dry PSD	ML	78.6	0

Notes:
1. Unified Soil Classification System (USCS) – ASTM D2487 (2017a)

5.2 Saturated Hydraulic Conductivity and Moisture Retention Curves

The samples were tested to estimate Rigid-Wall Saturated Hydraulic Conductivity (ASTM D5856 – 15 (2015)), Soil Moisture Retention Characteristic Curves (ASTM D6836 - 161 / MOSA, Part 4, Method 3.3.2 (2016)), and van Genuchten parameters (ASTM D6836 – 16 (2016)). The test results and fitted parameters are shown in Table 5.3.

Table 5.3 Saturated Hydraulic Conductivity, Porosity, Density, Moisture Retention and van Genuchten Hydraulic Parameters

Parameter	Bulk Density	Total Porosity	Particle Density	Available Water Holding Capacity (AWHC)[1]	Unsaturated Hydraulic Parameters					Saturated Hydraulic Conductivity[4]
					Volumetric Residual Water Content[2]	Volumetric Saturated Water Content[2]	α^2	n^2	L^3	
Units	g/cm3	cm3/cm3	g/cm3	cm/cm	cm3/cm3	-	1/cm	-	-	cm/s
Gila Conglomerate[5]	1.65	0.42	2.80	0.13	0.020	0.415	0.043	1.298	-1.0	1.03E-03
Quaternary Pediment	1.50	0.47	2.83	0.13	0.005	0.469	0.068	1.269	-1.0	2.10E-03
Pyrite Tailings	1.77	Void ratio of 1.0: 0.49	3.56	0.46	0.001	0.475	0.001	2.347	-1.0	Void ratio 1.0: 1.7E-05
		Void ratio of 0.8: 0.43								Void ratio 0.8: 1.0E-05

Notes:

1. Calculated as the difference between field capacity (volumetric water content at -1/3 bar for coarse materials and -1/10 bar for tailings) and permanent wilting point (volumetric water content at -15 bar)
2. Fitted
3. Assumed
4. Measured
5. Values reported for Gila Conglomerate are averages of sample TPC19-4 and TPC19-15 and may not represent in-situ field saturated hydraulic conductivity

The moisture retention curves indicate that the Gila Conglomerate and Quaternary Pediment samples lose moisture easily with increased matric suction and have a low AWHC. The pyrite tailings sample can retain moisture at higher matric suctions and has a higher AWHC.

6 GEOCHEMICAL TESTING

A total of twenty-eight (28) samples of soil material taken from the Skunk Camp Tailings Storage Facility (TSF) for closure cover design were sent to ALS laboratories, Tucson, AZ for geochemical analyses to understand the Acid Rock Drainage (ARD) and Metal Leaching (ML) potential of the proposed cover materials. The samples included eight (8) alluvium, eleven (11) Gila Conglomerate, one (1) Gila Sandstone and eight (8) pediment samples (Table 6.1).

Table 6.1 Samples Submitted for Geochemical Testing

Sample ID	Collected Sample Depth (ft)	Geological Unit
TPC19-6	1	Quaternary Alluvium
TPC19-8	1	Quaternary Alluvium
TPC19-9	4.5	Quaternary Alluvium
TPC19-11	1	Quaternary Alluvium
TPC19-14	1	Quaternary Alluvium
TPC19-16	1	Quaternary Alluvium
TPC19-22	1	Quaternary Alluvium
TPC19-23	1	Quaternary Alluvium
TPC19-2	1	Gila Conglomerate
TPC19-4	1	Gila Conglomerate
TPC19-7	1	Gila Conglomerate
TPC19-12	1	Gila Conglomerate
TPC19-15	1	Gila Conglomerate
TPC19-18	1	Gila Conglomerate
TPC19-24	1	Gila Conglomerate
DH18-5	45	Gila Conglomerate
D19-12	97	Gila Conglomerate
D19-16	87	Gila Conglomerate
TP19-9	1	Gila Conglomerate
TPC19-5	1	Gila Sandstone
TPC19-1	1	Quaternary Pediment
TPC19-3	1	Quaternary Pediment
TPC19-10	1	Quaternary Pediment
TPC19-13	1	Quaternary Pediment
TPC19-17	1	Quaternary Pediment
TPC19-19	1	Quaternary Pediment
TPC19-20	1	Quaternary Pediment
TPC19-21	1	Quaternary Pediment

The geochemical testing program consisted of whole rock analyses by XRF on a fused glass sample for major elements chemical composition following a four acid digestion and ICP-AES and MS analysis for selected trace elements; and, modified acid base accounting (ABA), and leachate assessments using the synthetic precipitation leaching procedure (SPLP) and toxicity characteristic leaching procedure (TCLP). These tests were performed to understand the potential for acid rock drainage (ARD) and metal leaching (ML) and the methods used in the testing program are referenced in the appended laboratory reports.

6.1.1 Sample Preparation

Sample preparation for the geochemical and soil nutrient test work included multiple steps at ALS laboratories including:

- Sample was air dried at 40°C in air drying ovens for several days and the moisture loss was calculated.
- The air-dried samples were then crushed to <10mm and four splits were taken using the cone and quartering methods and placed in separate plastic wide mouth jars or bags.
- Two of the splits were recombined and retained in the Tucson laboratory for additional geochemical testing not discussed in this report.
- One of the splits was sent to the ALS Kelso Washington laboratory for TCLP and SPLP analyses.
- The final split was further ground to <100 mesh using a tungsten carbide ring and puck mill.
- This material was split into several sub-splits for ABA, nutrient and salinity testing performed by the Tucson laboratory along with one sent being to the ALS Mineral laboratory in Vancouver, BC for XRD analyses.

6.1.2 Acid-Base Accounting

Acid-base Accounting (ABA) testing involves static (i.e., one-time) laboratory tests that measure the Acid Potential (AP) and Neutralization Potential (NP) of material in order to understand its potential for ARD.

An extended ABA analyses was performed as part of the test work to include sulfur speciation, for a greater understanding of the potential AP. The AP is determined from the total-sulfur (TAP) and/or the sulfide-sulfur (SAP) content of the sample, and assumes it occurs as pyrite (FeS_2), whereby pyrite reacts to produce a known amount of acidity. TAP assumes all of the sulfur content measured occurs as pyrite; whereas, SAP assumes only the measured sulfide component of the total sulfur occurs as pyrite. The majority of the samples contain very little sulfur (below detection) so measurements of the sulfide sulfur were not completed. TAP is therefore used to assess the ARD potential of the materials which may be an overestimation of the AP. Where total sulfur was reported below detection, half of the value of the level of detection was used in the AP calculation.

The Sobek-siderite NP method included a titration method to measure the total NP of the samples. The method involves the addition of a known volume of hydrochloric acid (HCl) to a known mass of sample. The volume of HCl added to the sample is based on the results of a fizz test. The addition of hydrochloric acid (HCl) is followed by a back titration with sodium hydroxide (NaOH). The amount of acid consumed by the sample is then calculated as a kg $CaCO_3$ equivalent per tonne (kg $CaCO_3$/t) to provide an indication of the total NP of the sample. The Modified Sobek NP method measures the neutralizing potential from both carbonate minerals and slower reacting non-carbonates (e.g. silicates or clays). The Sobek Siderite corrected method was used in this characterization program and will be referred to as the Sobek NP.

The ratio of NP to AP is referred to the Neutralization Potential Ratio (NPR), and ratios were calculated based on the Sobek NP and the TAP. Results of the ABA testing and calculations are presented in Table 6.2.

Table 6.2 Summary of ABA Results for Collected Samples by Unit

Parameter	Paste pH	Total Carbon	Total Organic Carbon	Total Inorganic Carbon	Total Sulfur	TAP (Total Sulfur AP)	Sobek NP	Carbonate NP	NPR (Siderite Corrected NP /TAP)
Units	-	% C	% C	% C	% S	kgCaCO3/t	kgCaCO3/t	kgCaCO3/t	-
Alluvium (n = 8)									
Minimum	5.9	0.4	0.10	0.0062	<0.03	0.47	18	0.05	19
P25	7.0	0.4	0.28	0.022	<0.03	0.47	19	0.18	41
Median	7.4	0.9	0.70	0.043	<0.03	0.47	30	0.35	50
P75	7.7	1.4	1.2	0.07	0.019	0.59	42	0.6	79
Maximum	7.8	2.6	1.3	0.5	0.030	0.94	201	4.3	429
Average	7.2	1.0	0.71	0.10	0.019	0.59	51	0.8	101
Gila Conglomerate (n = 11)									
Minimum	6.7	0.4	0.03	0.016	<0.03	0.47	17	0.130	36
P25	7.6	0.9	0.08	0.055	<0.03	0.47	83	0.45	176
Median	7.7	2.2	0.60	0.30	<0.03	0.47	208	2.42	367
P75	7.9	3.2	0.7	0.78	<0.03	0.47	301	6.3	506
Maximum	8.2	5.1	1.3	1.20	0.030	0.94	377	9.7	804
Average	7.6	2.2	0.51	0.48	0.016	0.51	189	3.8	370
Gila Sandstone (n = 1)									
TPC19-5	7.7	2.3	0.40	0.6	<0.03	0.47	210	4.6	448
Pediment (n = 8)									
Minimum	5.7	0.8	0.70	0.010	<0.03	0.47	9	0.08	10
P25	6.1	1.0	0.95	0.017	<0.03	0.47	16	0.14	19
Median	6.7	1.3	1.15	0.022	<0.03	0.47	18	0.2	33
P75	7.1	1.7	1.6	0.032	0.030	0.94	25	0.3	53
Maximum	7.4	1.8	1.6	0.052	0.030	0.94	56	0.4	119
Average	6.6	1.3	1.20	0.026	0.021	0.64	23	0.2	44

Notes:

- NP represents Neutralizing Potential; AP represents Acid Generating Potential. NPR represents the Net Potential Ratio which is calculated by NP/AP. Where total sulfur was reported below detection, half of the value of the level of detection was used in the AP calculation. Due to the low concentration of total sulfur, sulfur speciation methods were abandoned by the lab and resulted in sulfide and sulphate sulfur not being reported (NA); consequently, SAP could not be calculated.
  Potentially Acid Generating (PAG) is characterized by having an NPR<2; Not Potentially Acid Generating (NPAG) is characterized as having an NPR>2.

Paste pH was all circum-neutral to alkaline and ranged from 5.9 to 8.2 with the highest pH values being primarily associated to samples where some inorganic carbon, assumed in the form of carbonate NP, was available for immediate neutralization. On average, paste pH was neutral for the alluvium, Gila Conglomerate, Gila Sandstone units and slightly neutral for the pediment unit considering their relatively low inorganic carbon content.

Sobek-siderite corrected neutralization potential, which is a measurement of NP from both the fast-acting carbonate minerals corrected for the presence of ferromagnesian carbonates as well as the slower reacting silicate minerals, ranged from 15 kg $CaCO_3$/tonne to 377 kg $CaCO_3$/tonne.

Acid potential (AP) was determined based on the total sulfur content of the samples (TAP) because sulphide-sulfur was not detected in many of the samples and sulfur speciation testing was not included in this assessment due to the low to non-detect nature of total sulfur in the samples. The level of detection was relatively high for total sulfur but the measured total sulfur was respectively low, ranging from largely below detection (<0.03 kg $CaCO_3$/tonne) to the level right at detection (0.03 kg $CaCO_3$/tonne). Where the total sulfur was reported below the level of detection, the detection level value was halved for TAP and statistical calculations. The resulting TAP was very low across the tested samples and ranged from 0.5 to 0.9 kg $CaCO_3$/tonne.

The amount of total sulfur based acid potential (TAP) was far less than the total neutralizing potential (Sobek NP). Using the Sobek siderite corrected NP and TAP NPR's are well in excess of 2, indicating the samples can be considered as not potentially acid generating (NPAG) (INAP 2014).

6.1.3 Elemental Analysis

The total elemental analysis was conducted using a combination of whole rock analyses using XRF methods (ALS method BULK-OXIDES-AX) for major elements and a four acid digestion method and inductively coupled plasma atomic emission spectrometry (ICP-AES) (ALS method ME-ICP61) for most trace parameters with an inductively coupled plasma mass spectrometry (ICP-MS) method for mercury (ALS method HG-MS42).

The purpose of the solid-phase multi-element analysis is to understand the sample composition and give context to ABA and leachate results. In addition, this test can be used to assess the total concentration of major and trace elements, or the "total theoretical reservoir" of elements available for metal leaching and dissolution reactions.

A summary of the chemical composition for major elements is presented as "metal(oid)"-oxides in Table 6.3. Results indicate the samples are largely composed of silicon, iron and aluminum having concentrations greater than 10 wt.%. The samples contain moderate potassium, sodium, magnesium, titanium and calcium having concentrations between 1 and 5 wt. %. Minor amounts of P, Cr and Na are also present across the sample set having concentrations less than 1 wt.%. The results suggest major minerals are likely in the form of quartz and Fe, Al, Na and Mg silicate minerals with minor amounts of Fe and Ti oxides. The major elements measured correspond well with the Sobek NP measured in the ABA analyses and correspond with the dominant NP being in the form of slower reacting silicate minerals across the units.

The Gila Conglomerate and Gila Sandstone contain more Ca than the other units which corresponds well with the elevated TIC results from the ABA analyses and the presence of minor fast acting carbonates. Calcium content does not correspond well with the TIC from the ABA analyses across the Alluvium and Pediment samples suggesting calcium is found in other non-carbonates which also confirmed the low Carb NP.

Elevated loss on ignition (LOI) values indicate the presence of volatiles. LOI corresponds well with total C but not with TIC suggesting the presence of organic materials.

Table 6.3 Summary of Major Elemental Composition of Potential Cover Materials

Parameter	SiO2	TiO2	Al2O3	Fe2O3	MnO	MgO	CaO	Na2O	K2O	P2O5	BaO	K2O	SO3	SrO	Cr2O3	LOI	Total
Units	wt.%	wt.%	wt.%	wt.%	wt.%	wt.%	wt.%	wt.%	wt.%	wt.%	wt.%	wt.%	wt.%	wt.%	wt.%	wt.%	wt.%
MDL	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	
Alluvium (n = 8)																	
Minimum	46.87	1.78	10.94	9.45	0.13	1.38	2.01	1.30	1.80	0.19	0.050	1.80	0.010	0.020	0.010	2.97	98.9
P25	51	1.9	12	9.8	0.14	1.6	2.4	1.4	2.2	0.31	0.060	2.2	0.018	0.020	0.010	3.6	99
Median	56.06	2.64	12.58	12.49	0.17	1.82	2.91	1.48	2.36	0.34	0.060	2.36	0.035	0.020	0.020	4.88	99.1
P75	59	3.3	13	14	0.19	2.3	4.0	1.6	2.5	0.36	0.060	2.5	0.043	0.020	0.020	5.3	99
Maximum	60.86	4.92	13.62	20.79	0.26	3.15	11.20	1.89	2.78	0.54	0.070	2.78	0.050	0.030	0.030	11.43	99.7
Average	55	2.8	12	13	0.17	2.0	4.0	1.5	2.4	0.34	0.060	2.4	0.031	0.021	0.018	5.2	99
Gila Conglomerate (n = 11)																	
Minimum	38.3	0.66	8.17	3.93	0.07	1.54	1.86	0.53	1.3	0.15	0.040	1.29	0.005	0.020	0.005	4.21	98.8
P25	44	0.93	9.7	5.8	0.10	1.9	4.2	0.78	1.6	0.20	0.060	1.6	0.010	0.020	0.010	5.3	99
Median	49.7	1.18	11.35	7.06	0.10	2.33	11.10	1.00	1.9	0.27	0.060	1.87	0.030	0.020	0.010	11.73	99.4
P75	61	1.8	13	9.4	0.13	2.4	17	1.4	2.3	0.28	0.065	2.3	0.030	0.035	0.010	16	100
Maximum	70.8	2.06	13.70	9.67	0.14	2.61	20.70	1.50	2.8	0.49	0.080	2.78	0.080	0.050	0.020	19.99	100.0
Average	52	1.3	11	7.3	0.11	2.2	10	1.0	2.0	0.27	0.061	2.0	0.027	0.029	0.010	11	99
Gila Sandstone (n = 1)																	
TPC19-5	50.1	1.14	11.25	6.60	0.09	2.31	11.30	0.96	2.1	0.27	0.050	2.11	0.030	0.030	0.010	12.15	98.6
Pediment (n = 8)																	
Minimum	54.0	1.38	11.40	6.16	0.08	0.93	0.90	0.81	2.2	0.09	0.060	2.16	0.030	0.010	0.010	5.22	98.7
P25	58	1.9	12	8.0	0.11	1.2	1.2	0.88	2.3	0.10	0.060	2.3	0.038	0.010	0.010	5.4	99
Median	61.4	2.36	12.87	9.63	0.14	1.36	1.44	1.06	2.4	0.11	0.060	2.44	0.045	0.020	0.010	5.79	99.0
P75	64	2.6	14	11	0.14	1.5	1.7	1.1	2.6	0.14	0.063	2.6	0.063	0.020	0.010	6.4	99
Maximum	67.9	2.79	14.92	12.67	0.16	2.72	2.03	1.18	3.3	0.14	0.070	3.34	0.090	0.020	0.020	7.67	100.1
Average	61	2.2	13	9.6	0.13	1.5	1.4	1.0	2.5	0.12	0.063	2.5	0.051	0.016	0.011	6.0	99

Concentrations reported below the level of detection were halved for statistical calculations where n>1.

A summary of the chemical composition for trace elements is presented in Table 6.4.

Elemental abundances were compared to three times the average crustal abundance of high-Ca granite to see which elements occur in elevated concentrations and to identify potential elements of concern (EOC). Given the samples are either sedimentary in origin or conglomerates containing granitic clasts, granite was chosen as the comparison since sedimentary sandstones and shales would have likely been overly conservative.

Table 6.4 Summary of Trace Elemental Composition of Potential Cover Materials

Parameter	Ag	Al	Ba	Ca	Cr	Cu	Fe	K	Mg	Mn	Na	Ni	P	S	Sr	Ti	V	Zn	As	Be	Bi	Cd	Co	Ga	Mo	Pb	Se	Sb	Sc	Th	Tl	U	W
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Level	0.5	100	10	100	1	1	100	100	100	5	100	1	10	100	1	100	1	2	5	0.5	2	0.5	1	10	1	2	10	5	1	20	10	10	10
Average Crustal Abundance	0.05	8200	420	25300	22	30	29600	25000	9400	540	28400	15	920	300	440	3400	35	60	1.9	2	0.0001	0.1	30	17	1	15	0.05	0.2	14	8.5	0.72	3	1.3
3x Average Crustal Abundance	0.15	24600	1260	75900	66	90	88800	75000	28200	1620	85200	45	2760	900	1320	10200	105	180	5.7	6	0.0003	0.4	90	51	3	45	0.15	0.6	42	25.5	2.16	9	3.9
Alluvium (n = 8)																																	
Minimum	**<0.5**	**55300**	480	14700	53	34	56100	14200	7900	945	9400	29	800	50	<1	9300	**144**	96	<5	1.2	**1**	**<0.5**	16	<10	<1	15	**<10**	**<5**	14	<20	**<10**	**<10**	**<10**
P25	**<0.5**	**57425**	520	16600	**70**	41	61750	18100	9125	996	10050	32	1238	100	1.01	9550	**160**	107	<5	1.2	**1**	**<0.5**	19	20	<1	21	**<10**	**<5**	16	<20	**<10**	**<10**	**<10**
Median	**<0.5**	**63900**	555	21500	**75**	49	72050	19950	10300	1153	10700	33	1340	100	1.07	**12950**	**201**	120	5	1.4	**1**	**<0.5**	22	20	<1	22	**<10**	**<5**	18	<20	**<10**	**<10**	**<10**
P75	**<0.5**	**67775**	610	26400	**103**	58	**92450**	21375	12700	1346	12275	39	1523	200	1.23	**18175**	**303**	143	6	1.6	**1**	**<0.5**	36	20	2	26	**<10**	**<5**	18	<20	**<10**	**<10**	**24**
Maximum	**<0.5**	**71600**	610	**76600**	**125**	76	**127000**	22700	18300	1740	14300	**61**	2230	200	1.43	**14638**	**507**	181	10	1.6	**4**	**<0.5**	46	20	2	35	**<10**	**6**	20	<20	**<10**	**<10**	**150**
Average	**<0.5**	**63263**	555	27663	**85**	51	80025	19463	11363	1208	11250	37	1414	131	1.13	**25800**	**253**	128	5.3	1.4	**1.4**	**<0.5**	27	19	1.3	23	**<10**	**2.9**	17	<20	**<10**	**<10**	**33**
Gila Conglomerate (n = 11)																																	
Minimum	**<0.5**	**43500**	390	13300	26	23	27100	10600	8500	538	3900	18	590	50	<1	3500	60	51	<5	0.9	**1**	**<0.5**	7	<10	<1	6	**<10**	**<5**	8	<20	**<10**	**<10**	**<10**
P25	**<0.5**	**48750**	520	30250	39	34	39800	13250	10800	663	5850	25	830	50	<1	4800	84	80	5.5	1.1	**1**	**<0.5**	13	<10	<1	13	**<10**	**<5**	13	<20	**<10**	**<10**	**<10**
Median	**<0.5**	**59500**	550	73800	40	48	46200	15300	12900	760	7500	28	1070	100	<1	6400	104	87	**6**	1.2	**1**	**<0.5**	17	<10	<1	19	**<10**	**<5**	15	<20	**<10**	**<10**	**<10**
P75	**0.38**	**65850**	620	**110500**	53	49	57800	18350	13850	937	9550	32	1155	100	<1	9400	**144**	106	**7**	1.4	**2**	**<0.5**	21	20	<1	22	**<10**	**<5**	15	<20	**<10**	**<10**	**33**
Maximum	**0.6**	**69000**	630	**139000**	65	60	61700	23400	15200	963	11400	38	2030	300	1.14	**10700**	**152**	**184**	**12**	1.6	**2**	**<0.5**	42	20	**3**	27	**<10**	**8**	19	<20	**<10**	**<10**	**350**
Average	**0.34**	**57591**	549	70564	45	43	47164	16218	12300	772	7773	28	1087	109	<1	6800	**109**	96	**6.4**	1.2	**1.4**	**<0.5**	19	14	1.1	17	**<10**	**3.2**	14	<20	**<10**	**<10**	49
Gila Sandstone (n = 1)																																	
TPC19-5	**<0.5**	**57000**	460	**78400**	38	41	43000	16900	13200	625	6900	24	1130	100	<1	5900	95	88	<5	1.3	**1**	**<0.5**	13	<10	<1	15	**<10**	**<5**	13	<20	**<10**	**<10**	**<10**
Pediment (n = 8)																																	
Minimum	**<0.5**	**59300**	510	6800	49	37	40900	17200	5500	569	6000	17	310	100	<1	7100	104	71	**6**	1.2	**1**	**<0.5**	13	<10	<1	15	**<10**	**<5**	11	<20	**<10**	**<10**	**<10**
P25	**<0.5**	**63075**	540	8350	58	55	48275	18475	6975	738	6575	27	360	200	<1	9275	**124**	84	**7.5**	1.4	**1**	**<0.5**	16	20	<1	20	**<10**	**<5**	14	<20	**<10**	**<10**	**<10**
Median	**<0.5**	**65000**	570	10450	63	65	58950	20150	7650	934	7750	31	425	200	<1	**11150**	**161**	95	**9**	1.5	**1**	**<0.5**	20	20	1.5	23	**<10**	**<5**	15	<20	**<10**	**<10**	**<10**
P75	**<0.5**	**69750**	583	11900	**73**	75	68550	21150	8725	1039	8450	34	528	300	<1	**13450**	**210**	107	**9.3**	1.6	**1.3**	**<0.5**	25	20	2.3	30	**<10**	**<5**	17	<20	**<10**	**<10**	**20**
Maximum	**<0.5**	**73600**	590	13800	**96**	**95**	76700	28100	15200	1125	8600	44	550	400	<1	**16000**	**219**	124	**10**	1.8	**4**	**<0.5**	33	20	**7**	33	**<10**	**<5**	21	20	**<10**	**10**	**40**
Average	**<0.5**	**65925**	561	10238	**67**	65	58900	20613	8400	889	7500	31	435	238	<1	**11338**	**164**	96	**8.4**	1.5	**1.5**	**<0.5**	21	19	2.3	24	**<10**	**<5**	15	11	**<10**	6	**13**

Values reported below the level of detection were halved for statistical calculations where n>1. Values in bold and highlighted in grey represent concentrations that exceed the screening criterion and values in bold represent concentrations where the detection levels exceed the screening criterion.

6.1.4 SPLP and TCLP Assessment

A modified (less diluted) Synthetic Precipitation Leaching Procedure (SPLP) and standard Toxicity Characteristic Leaching Potential (TCLP) tests were conducted on a subset of the samples to evaluate the risk of metal leaching. The methods, samples tested and results are presented in Sections 6.1.4.1 and 6.1.4.2. Note that leachate testing can result in higher or lower concentrations than those reported for a site due to site specific conditions that do not occur within the laboratory (e.g. dilution or evaporation), however the tests can be used to screen the risk of ML. In general, leachates from the SPLP and TCLP tests contained variable but very low concentrations of metal(oid)s suggesting the potential for ML is low.

6.1.4.1 Synthetic Precipitation Leaching Procedure

Synthetic Precipitation Leaching Procedure (SPLP) (EPA SW-846 Method 1312) tests were performed on thirteen (13) spatially representative samples from the 28 samples collected. The thirteen (13) samples tested comprised of one (1) Alluvium, nine (9) Gila Conglomerate, one (1) Gila Sandstone and two (2) Pediment samples.

The SPLP used an extraction fluid comprised of sulfuric and nitric acids adjusted to pH 5. The leaching procedure used a liquid to solid ratio of 4 liquid to 1 (4:1) solid ratio instead of 20:1 to decrease dilution and aimed for a greater probability that concentrations for trace elements would be within the detectable range, given the higher detection levels. Following the 18-hour leaching procedure, the leachate was filtered and analyzed by a combination of ICP-MS and ICP-AES for the physiochemical parameters and dissolved elements. The results are summarized in Table 6.5 and discussed below.

Table 6.5 Summary of SPLP Results for Selected Parameters for Potential Cover Materials

Parameter	pH	Conductivity	Alkalinity	SO4	Al	Sb	As	Ca	Cd	Cr	Cu	Fe	K	Mg	Mn	Na	Ni	P	Pb	Se	Tl	U	Zn
Units	pH units	µMHOS/ cm or S/cm	mg/L CaCO3	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Alluvium (n = 1)																							
TPC19-16	6.88	70	17	0.3	6.77	<0.02	<0.01	4.20	<0.02	<0.01	0.02	6.250	1.74	1.61	0.138	10	<0.08	0.73	<0.01	<0.02	<0.01	<0.0002	0.023
Gila Conglomerate (n = 9)																							
Minimum	8.14	54	68	<0.2	1.61	<0.02	<0.01	12.20	<0.02	<0.01	<0.01	1.82	0.29	1.21	0.088	<10	<0.08	0.070	<0.01	<0.01	<0.0002	0.0060	
P25	9.0	68	137	<0.2	3.2	<0.02	<0.01	12.4	<0.02	<0.01	<0.01	2.7	0.36	1.5	0.090	<10	<0.08	0.12	<0.01	<0.01	<0.0002	0.0064	
Median	9.27	81	187	<0.2	3.37	<0.02	<0.01	13.40	<0.02	<0.01	<0.01	3.34	0.42	1.73	0.11	<10	<0.08	0.13	<0.01	<0.01	<0.0002	0.0082	
P75	9.4	99	253	0.4	3.4	<0.02	<0.01	14	<0.02	<0.01	<0.01	3.8	0.43	1.9	0.14	<10	<0.08	0.14	<0.01	<0.01	<0.0002	0.011	
Maximum	9.67	125	798	0.8	7.20	<0.02	<0.01	22.10	<0.02	<0.01	0.012	9.84	0.63	3.16	0.15	<10	<0.08	0.15	<0.01	<0.01	<0.0002	0.017	
Average	9.1	85	261	0.3	3.8	<0.02	<0.01	155	<0.02	<0.01	0.006	4.3	0.43	1.9	0.11	<10	<0.08	0.12	<0.01	<0.01	<0.0002	0.010	
Gila Sandstone (n = 1)																							
TPC19-5	9.29	91	405	<0.2	2.53	<0.02	<0.01	15.90	<0.02	<0.01	<0.01	2.07	0.33	1.72	0.074	<10	<0.08	0.12	<0.01	<0.01	<0.0002	0.0058	
Pediment (n = 3)																							
Minimum	6.52	66	18	<0.2	1.60	<0.02	<0.01	4.80	<0.02	<0.01	0.005	1.450	0.25	1.10	0.030	<10	<0.08	0.020	<0.01	<0.01	<0.0002	0.0080	
P25	6.7	68	20	0.3	5.3	<0.02	<0.01	4.9	<0.02	<0.01	0.005	6.9	0.77	1.4	0.063	<10	<0.08	0.089	<0.01	<0.01	<0.0002	0.013	
Median	6.91	70	22	0.5	8.89	<0.02	<0.01	5.00	0.01	0.005	0.01	12.40	1.29	1.73	0.10	<10	<0.08	0.16	0.0050	<0.01	0.00010	0.019	
P75	8.2	87	86	0.9	10	0.01	0.005	6.8	0.016	0.013	0.01	14	3.3	2.2	0.11	10	0.040	0.55	0.008	0.005	0.0015	0.021	
Maximum	9.42	104	150	1.4	12.00	0.01	0.005	8.60	0.022	0.020	0.02	15.40	5.24	2.6	0.12	10	0.040	0.94	0.011	0.005	0.0029	0.024	
Average	7.6	80	63	0.6	7.5	0.01	0.005	6.1	0.014	0.010	0.01	9.8	2.3	1.8	0.08	10	0.040	0.37	0.007	0.005	0.0010	0.017	

Notes: Concentrations reported below the level of detection were halved for statistical calculations for each respective unit, except where all tested sample results were reported below the level of detection.

The pH of the leachates ranged from 6.5 to 9.7 which is neutral to slightly alkaline, in a similar range to the ABA results. The Gila Conglomerate resulted in the lowest paste pH (ABA results), however, it resulted in the highest pH in the SPLP leachates (avg. SPLP pH 9.14). The Alluvium, Pediment and Gila Sandstones had a neutral average paste pH but resulted in sub-neutral SPLP pH values in the Alluvium sample (SPLP pH 6.88), neutral average SPLP pH in the Pediment unit (avg. SPLP pH 7.62) and alkaline SPLP pH in the Gila Sandstone sample (SPLP pH 9.3). The pH results suggest alkalinity was produced throughout the test, likely from slow reacting silicates which helped to buffer the leachate pH and confirms the NP availability suggested by the ABA test work.

SPLP results indicated largely non-detectable to very low concentrations of dissolved parameters across many of the leachates of the samples tested. The liquid to solid ratio was modified (4:1) as it was expected most parameters would measure below detection at the standard ratio of 20:1. Therefore the method overestimates the concentrations of all constituents based on the standard procedure.

6.1.4.2 Toxicity Characteristic Leaching Procedure

Toxicity Characteristic Leaching Procedure (TCLP) (EPA SW-846 method 1311) tests were performed on fourteen (14) spatially representative samples from the 28 samples collected. The samples included two (2) Alluvium, eight (8) Gila Conglomerate, one (1) Gila Sandstone and three (3) Pediment samples.

The TCLP tests used two extraction fluids (TCLP Fluid #1 and #2) comprised of acetic acid adjusted to pH 4.9 and 2.9, respectively, using sodium hydroxide. This method was designed to simulate leaching from organic acids under landfill type conditions, however this test is a well-known standard so was conducted for these materials. The leaching procedure uses an extraction ratio of 20:1 liquid to solid ratio which was not altered (as was done for the SPLP testing). Following the agitated (30 ±2 rpm) 18 ±2 hour leaching procedure, the leachate was filtered and analyzed by a combination of ICP-MS and ICP-AES for the physiochemical parameters and dissolved elements. The results are summarized in Table 6.6 and discussed below.

Table 6.6 Summary of TCLP Results for Selected Parameters for Potential Cover Materials

Parameter	Ag	Al	Sb	As	Ca	Cd	Co	Cr	Cu	Fe	Hg	K	Mg	Mn	Mo	Na	Ni	P	Pb	Se	Tl	U	Zn
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Alluvium (n = 2)																							
Minimum	<0.05	<0.05	<0.1	<0.05	38	<0.05	<0.01	<0.05	<0.1	0.10	<0.001	3.1	4.74	0.061	<0.02	1310	<0.1	<0.2	<0.05	<0.1	<0.05	<0.0002	<1
P25	<0.05	<0.05	<0.1	<0.05	189	<0.05	<0.01	<0.05	<0.1	0.53	<0.001	4.6	5.5	0.17	0.43	1317	<0.1	<0.2	<0.05	<0.1	<0.05	<0.0002	<1
Median	<0.05	<0.05	<0.1	<0.05	339	<0.05	<0.01	<0.05	<0.1	0.95	<0.001	6.2	6.3	0.27	0.76	1325	<0.1	<0.2	<0.05	<0.1	<0.05	<0.0002	<1
P75	<0.05	<0.05	<0.1	<0.05	490	<0.05	<0.01	<0.05	<0.1	1.4	<0.001	7.7	7.1	0.37	1.1	1332	<0.1	1.1	<0.05	<0.1	<0.05	0.00024	<1
Maximum	<0.05	<0.05	<0.1	<0.05	640	<0.05	0.026	<0.05	<0.1	1.80	<0.001	9.2	7.86	0.48	1.41	1340	<0.1	1.41	<0.05	<0.1	<0.05	0.00029	<1
Average	<0.05	<0.05	<0.1	<0.05	339	<0.05	0.009	<0.05	<0.1	0.95	<0.001	6.2	6.3	0.27	0.76	1325	<0.1	0.76	<0.05	<0.1	<0.05	<0.0002	<1
Gila Conglomerate (n = 9)																							
Minimum	<0.05	<0.05	<0.1	<0.05	204	<0.05	<0.01	<0.05	<0.1	0.050	<0.001	1.90	5.46	0.015	<0.02	1330	<0.1	<0.2	<0.05	<0.1	<0.05	<0.0002	<1
P25	<0.05	<0.05	<0.1	<0.05	355	<0.05	<0.01	<0.05	<0.1	0.10	<0.001	2.6	5.8	0.037	<0.02	1330	<0.1	<0.2	<0.05	<0.1	<0.05	<0.0002	<1
Median	<0.05	<0.05	<0.1	<0.05	493	<0.05	<0.01	<0.05	<0.1	0.10	<0.001	3.55	6.67	0.073	<0.02	1335	<0.1	<0.2	<0.05	<0.1	<0.05	0.00039	<1
P75	<0.05	<0.05	<0.1	<0.05	677	<0.05	<0.01	<0.05	<0.1	0.10	<0.001	4.5	9.4	0.11	0.013	1345	<0.1	<0.2	<0.05	<0.1	<0.05	0.00043	<1
Maximum	<0.05	<0.05	<0.1	<0.05	692	<0.05	0.026	<0.05	<0.1	1.1	<0.001	5.4	16	1.1	0.11	1360	<0.1	0.25	<0.05	<0.1	<0.05	0.00049	<1
Average	<0.05	<0.05	<0.1	<0.05	484	<0.05	0.0076	<0.05	<0.1	0.22	<0.001	3.58	8.54	0.20	0.024	1340	<0.1	0.12	<0.05	<0.1	<0.05	0.00031	<1
Gila Sandstone (n = 1)																							
TPC19-5	<0.05	<0.05	<0.1	<0.05	669	<0.05	<0.01	<0.05	<0.1	0.10	<0.001	6.30	11.20	0.061	<0.02	1330	<0.1	0.25	<0.05	<0.1	<0.05	0.00067	<1
Pediment (n = 3)																							
Minimum	<0.05	0.087	<0.1	<0.05	40.4	<0.05	<0.01	<0.05	<0.1	0.10	<0.001	1.90	6.99	0.48	<0.02	1310	<0.1	<0.2	<0.05	<0.1	<0.05	<0.0002	<1
P25	<0.05	0.13	<0.1	<0.05	42	<0.05	<0.01	<0.05	<0.1	0.14	<0.001	3.2	11	0.62	<0.02	1315	<0.1	<0.2	<0.05	<0.1	<0.05	0.00019	<1
Median	<0.05	0.18	<0.1	<0.05	44.1	<0.05	<0.01	<0.05	<0.1	0.18	<0.001	4.60	15.50	0.76	<0.02	1320	<0.1	<0.2	<0.05	<0.1	<0.05	0.00027	<1
P75	<0.05	1.8	<0.1	<0.05	47	<0.05	0.013	<0.05	<0.1	2.8	<0.001	8.7	16	0.94	<0.02	1320	<0.1	0.56	<0.05	<0.1	<0.05	0.0014	<1
Maximum	<0.05	3.52	<0.1	<0.05	50.2	<0.05	0.020	<0.05	<0.1	5.44	<0.001	12.70	16.80	1.11	<0.02	1320	<0.1	1.02	<0.05	<0.1	<0.05	0.0026	<1
Average	<0.05	1.3	<0.1	<0.05	45	<0.05	0.010	<0.05	<0.1	1.9	<0.001	6.4	13	0.79	<0.02	1317	<0.1	0.41	<0.05	<0.1	<0.05	0.00099	<1

Notes: concentrations reported below the level of detection were halved for statistical calculations for each respective unit, except where all tested sample results were reported below the level of detection.

TCLP results indicated, low concentrations of dissolved parameters with many reporting below the level of detection across many of the leachates of the samples tested. TCLP leachates contained concentrations of Al, B, Ca, Co, Fe, K, Mg, Mn, Na, P, Si, Sr and U in the dissolved fraction across many of the units.

7 SOIL NUTRIENT TESTING

A total of twenty-eight (28) samples (Table 6.1) of soil material taken from the Skunk Camp Tailings Storage Facility (TSF) for closure cover design were sent to ALS laboratories, Tucson, AZ for soil nutrient testing analyses. The soil nutrient testing program consisted of total moisture content, cation exchange capacity (CEC), total carbon, total inorganic and organic carbon, organic matter, and total nitrogen, available nutrients and paste conductivity and saturated paste extraction tests. The sample preparations followed those for the geochemical test work and the results are appended. Summarized results are presented and discussed in the following sections.

7.1 Total Moisture Content and Cation Exchange Capacity

The total moisture content and cation exchange capacity of the twenty-eight (28) samples were tested using D2974 and EPA 9081 methods. The results are presented in Table 7.1.

Table 7.1 Total Moisture and CEC Results

Sample	Sedimentary Unit	Total Moisture	Cation Exchange Capacity (CEC)
		D2974	EPA 9081
		wt%	
TPC19-6	Quaternary Alluvium	6.06	38.2
TPC19-8	Quaternary Alluvium	1.53	16.9
TPC19-9	Quaternary Alluvium	3.41	34.3
TPC19-11	Quaternary Alluvium	2.21	23.4
TPC19-14	Quaternary Alluvium	3.37	32.5
TPC19-16	Quaternary Alluvium	3.23	30.6
TPC19-22	Quaternary Alluvium	1.96	17.5
TPC19-23	Quaternary Alluvium	5	38.9
TPC19-2	Gila Conglomerate	6.08	47.5
TPC19-4	Gila Conglomerate	6.62	43.7
TPC19-7	Gila Conglomerate	4.5	37.4
TPC19-12	Gila Conglomerate	6.27	50.6
TPC19-15	Gila Conglomerate	7.25	51.9
TPC19-18	Gila Conglomerate	2.76	30.6
TPC19-24	Gila Conglomerate	2.91	28.8
DH18-5	Gila Conglomerate	6.03	33.9
D19-12	Gila Conglomerate	3.57	13.3
D19-16	Gila Conglomerate	7.43	30
TP19-9	Gila Conglomerate	11.95	17.4
TPC19-5	Gila Sandstone	5.21	40.1
TPC19-1	Quaternary Pediment	2.58	27.3
TPC19-3	Quaternary Pediment	6.32	48.3
TPC19-10	Quaternary Pediment	3.71	35.6
TPC19-13	Quaternary Pediment	6.02	40.7
TPC19-17	Quaternary Pediment	7.13	71.7
TPC19-19	Quaternary Pediment	6.21	43.3
TPC19-20	Quaternary Pediment	39.49	69.1
TPC19-21	Quaternary Pediment	3.86	40.5

In general, the results show a positive relationship between moisture content and CEC. Moisture content and CEC were greatest in the Pediment unit (avg. 9.4 wt.% and avg. 47 wt.%, respectively), followed by Gila Conglomerate (avg. 5.9 wt.% and avg. 35 wt.%, respectively) and Gila Sandstone (avg. 5.2 wt.% and 40 wt.%, respectively) units. Lower moisture content and CEC were observed across the Alluvium samples (3.4 wt.% and 47 wt.%, respectively).

7.2 Total Inorganic Carbon, Carbon, Organic Carbon, Organic Matter and Total Nitrogen

The soil carbon and nitrogen testing program consisted of total carbon, total inorganic carbon, total organic carbon, organic matter and total nitrogen tests on the 28 samples collected for the analysis. The methods used are detailed with the appended results which are summarized in Table 7.2.

Table 7.2 Total Inorganic Carbon, Carbon, Organic Carbon, Organic Matter and Total Nitrogen

Sample	Sedimentary Unit	Total Inorganic Carbon	Total Carbon	Total Organic Carbon	Organic Matter	Total Nitrogen
		Calc.	EPA 440.0	EPA 9060 Khan	Calc.	D2974
		Moist Free wt% as CaCO3	Moist Free wt%	Moist Free wt%	Moist Free wt%	Moist Free wt%
TPC19-6	Quaternary Alluvium	4.31	2.6	0.8	1.4	0.1
TPC19-8	Quaternary Alluvium	0.74	0.4	0.1	0.2	<0.1
TPC19-9	Quaternary Alluvium	0.18	1.1	1.1	1.8	0.2
TPC19-11	Quaternary Alluvium	0.05	0.4	0.3	0.6	<0.1
TPC19-14	Quaternary Alluvium	0.44	1.4	1.3	2.2	0.2
TPC19-16	Quaternary Alluvium	0.26	1.4	1.3	2.3	0.2
TPC19-22	Quaternary Alluvium	0.56	0.4	0.2	0.4	<0.1
TPC19-23	Quaternary Alluvium	0.16	0.6	0.6	1	<0.1
TPC19-2	Gila Conglomerate	4.47	2.2	0.4	0.8	<0.1
TPC19-4	Gila Conglomerate	8.19	3.9	0.6	1	0.1
TPC19-7	Gila Conglomerate	9.71	4	0.1	0.2	<0.1
TPC19-12	Gila Conglomerate	4.45	2.5	0.7	1.2	<0.1
TPC19-15	Gila Conglomerate	2.26	1.6	0.7	1.1	0.1
TPC19-18	Gila Conglomerate	9.54	5.1	1.3	2.2	0.2
TPC19-24	Gila Conglomerate	0.13	0.7	0.6	1.1	0.2
DH18-5	Gila Conglomerate	2.42	2.5	0.06	0.1	<0.1
D19-12	Gila Conglomerate	0.57	0.6	0.03	0.1	<0.1
D19-16	Gila Conglomerate	0.32	0.4	0.06	0.1	<0.1
TP19-9	Gila Conglomerate	3.64	3.9	0.22	0.4	<0.1
TPC19-5	Gila Sandstone	4.62	2.3	0.4	0.7	<0.1

Sample	Sedimentary Unit	Total Inorganic Carbon	Total Carbon	Total Organic Carbon	Organic Matter	Total Nitrogen
		Calc.	EPA 440.0	EPA 9060 Khan	Calc.	D2974
		Moist Free wt% as CaCO3	Moist Free wt%	Moist Free wt%	Moist Free wt%	Moist Free wt%
TPC19-1	Quaternary Pediment	0.33	1.7	1.6	2.7	0.2
TPC19-3	Quaternary Pediment	0.19	1	1	1.7	0.1
TPC19-10	Quaternary Pediment	0.16	1.7	1.6	2.8	0.2
TPC19-13	Quaternary Pediment	0.16	0.8	0.7	1.2	0.1
TPC19-17	Quaternary Pediment	0.24	1.1	1	1.8	0.2
TPC19-19	Quaternary Pediment	0.08	1.4	1.3	2.3	0.2
TPC19-20	Quaternary Pediment	0.08	0.8	0.8	1.3	<0.1
TPC19-21	Quaternary Pediment	0.42	1.8	1.6	2.8	0.2

The results indicate the Alluvium and Pediment samples contain the least amount of total inorganic carbon with less than 1 wt.% $CaCO_3$ being measured on the moist free samples. The Gila Conglomerate and Sandstone samples contain more total inorganic carbon with more than 4 wt.% $CaCO_3$ on average (n=11) for the Gila Conglomerate and 4.6 wt.% $CaCO_3$ measured in the Gila Sandstone sample (TP19-5).

Total organic content is found to be greatest in the Alluvium and Pediment samples, with more than 1 wt.% and lowest across the Gila Conglomerate (avg. 0.8 wt.% C) and Gila Sandstone (avg. 0.7 wt.% C). Similarly, total nitrogen was highest in the Alluvium and Pediment samples, with more than 0.1 wt.% and lowest across the Gila Conglomerate (avg. 0.09 wt.% N) and Gila Sandstone (avg. 0.05 wt.% N) suggesting more nutrients are available for vegetation growth in the Alluvium and Pediment units.

7.3 Available Nutrients

The testing program also included available nutrient tests (EPA 6010 method) on the 28 samples collected for the analysis. The results are summarized in Table 7.3.

Table 7.3 Available Nutrients Results

Sample	Sedimentary Unit	Ca	Cu	Fe	Mg	Mn	P	K	Na	Zn
		EPA 6010 ICP-OES								
		mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
TPC19-6	Quaternary Alluvium	440	3	3	95	<2	2	70	5	<0.4
TPC19-8	Quaternary Alluvium	317	1	25	97	13	3	182	24	<0.4
TPC19-9	Quaternary Alluvium	348	9	25	182	18	9	283	2	1
TPC19-11	Quaternary Alluvium	319	2	10	156	9	5	111	6	<0.4
TPC19-14	Quaternary Alluvium	350	10	13	171	7	22	367	46	1.9
TPC19-16	Quaternary Alluvium	309	10	39	136	19	21	253	4	2
TPC19-22	Quaternary Alluvium	311	2	22	128	13	4	158	20	0.4
TPC19-23	Quaternary Alluvium	355	5	6	135	<2	3	133	3	<0.4
TPC19-2	Gila Conglomerate	391	4	3	80	3	4	160	4	<0.4
TPC19-4	Gila Conglomerate	407	3	3	53	3	2	39	4	<0.4
TPC19-7	Gila Conglomerate	336	1	8	194	2	1	119	28	<0.4
TPC19-12	Gila Conglomerate	410	5	6	62	7	4	84	4	<0.4
TPC19-15	Gila Conglomerate	402	4	4	76	5	5	97	5	<0.4
TPC19-18	Gila Conglomerate	360	11	6	59	10	8	196	2	0.6
TPC19-24	Gila Conglomerate	291	8	11	249	12	18	299	4	1
DH18-5	Gila Conglomerate	284	0.3	34	442	4.7	0.4	209	57	<0.4
D19-12	Gila Conglomerate	330	0.6	39	306	19	0.9	154	52	1.2
D19-16	Gila Conglomerate	329	4	39	475	5.3	1.2	169	55	45
TP19-9	Gila Conglomerate	320	1.6	44	187	13	3.1	170	19	3.5
TPC19-5	Gila Sandstone	389	2	3	163	5	3	181	5	<0.4
TPC19-1	Quaternary Pediment	314	12	50	153	27	17	408	13	3
TPC19-3	Quaternary Pediment	230	7	13	543	21	4	158	21	0.5
TPC19-10	Quaternary Pediment	284	12	12	384	33	8	996	3	1.3
TPC19-13	Quaternary Pediment	240	4	12	450	30	2	214	19	<0.4
TPC19-17	Quaternary Pediment	240	5	33	407	21	4	169	12	<0.4
TPC19-19	Quaternary Pediment	213	9	24	458	36	4	220	15	0.7
TPC19-20	Quaternary Pediment	342	5	23	945	31	3	134	44	<0.4
TPC19-21	Quaternary Pediment	283	14	13	340	29	12	354	3	1.9

Available nutrient results suggest the Pediment unit contains the highest amount of Ca, Cu, Fe, Mg, Mn, P, K, Na and Zn compared to the other units confirming the unit is best suited to support vegetation as suggested by the Paste Conductivity, CEC and Carbon test results. In addition, the extractable nutrients agree well with the leachate test results, with the exception of Cu and Zn, further indicating Ca, Fe, Mg, Mn, P, K, and Na are available as nutrients to vegetation.

7.4 Paste Conductivity

Paste conductivity was measured on the twenty-eight (28) samples collected for the SI investigation, results are presented in Table 7.4.

Table 7.4 Paste Conductivity Results

Sample	Sedimentary Unit	Saturated Paste pH	Saturated Paste	Conductivity, Sat Paste Extraction
		units	wt%	µS/cm at 25C
TPC19-6	Quaternary Alluvium	7.77	33.2	248
TPC19-8	Quaternary Alluvium	7.80	28.5	440
TPC19-9	Quaternary Alluvium	6.66	30.0	492
TPC19-11	Quaternary Alluvium	7.06	24.1	379
TPC19-14	Quaternary Alluvium	7.71	28.6	625
TPC19-16	Quaternary Alluvium	5.94	31.3	316
TPC19-22	Quaternary Alluvium	7.64	21.9	414
TPC19-23	Quaternary Alluvium	7.07	31.4	349
TPC19-2	Gila Conglomerate	7.73	36.8	357
TPC19-4	Gila Conglomerate	7.76	36.0	266
TPC19-7	Gila Conglomerate	7.82	35.1	248
TPC19-12	Gila Conglomerate	7.67	43.9	365
TPC19-15	Gila Conglomerate	7.72	38.5	468
TPC19-18	Gila Conglomerate	7.56	43.7	528
TPC19-24	Gila Conglomerate	6.75	29.2	477
DH18-5	Gila Conglomerate	8.02	43.1	340
D19-12	Gila Conglomerate	8.22	32.9	491
D19-16	Gila Conglomerate	7.91	42.0	443
TP19-9	Gila Conglomerate	8.18	37.4	382
TPC19-5	Gila Sandstone	7.73	35.8	295
TPC19-1	Quaternary Pediment	5.72	31.0	469
TPC19-3	Quaternary Pediment	6.83	34.6	417
TPC19-10	Quaternary Pediment	7.41	37.5	1,669
TPC19-13	Quaternary Pediment	6.55	36.5	342
TPC19-17	Quaternary Pediment	7.13	54.7	557
TPC19-19	Quaternary Pediment	6.10	45.6	345
TPC19-20	Quaternary Pediment	6.11	45.5	209
TPC19-21	Quaternary Pediment	7.11	42.0	691

Most of the samples had paste conductivity values ranging between 200 µS/cm and 500 µS/cm which agrees well with the total organic content reported for the units. Higher paste conductivities are observed in the Pediment unit (avg. 588 µS/cm) whereas the lowest are predominantly reported for the Gila Conglomerate and Sandstone units (avg. 396 µS/cm and 295 µS/cm, respectively). The paste conductivity results show low soluble salt concentrations which are not expected to influence the salinity of the pore water to a level that would be deleterious to vegetation.

7.4.1 Saturated Paste Ca, Mg, K, Na and Cl Extractions

Saturated paste extractions for Ca, Mg, K, Na and Cl were performed on nine (9) selected samples from the 28 sample collected, the results are given in Table 7.5.

Table 7.5 Saturated Paste Extraction Results for Ca, Mg, K, Na and Cl

Sample	Sedimentary Unit	Calcium	Magnesium	Potassium	Sodium	Chloride
		Sat Paste Extraction: EPA 6010C-ICP-OES				EPA 9056-IC
		meq/L	meq/L	meq/L	meq/L	meq/L
TPC19-16	Quaternary Alluvium	2.5	0.6	0.5	<0.2	0.5
TPC19-2	Gila Conglomerate	4.6	0.3	<0.1	<0.2	0.2
TPC19-4	Gila Conglomerate	3.3	0.2	<0.1	<0.2	0.2
DH18-5	Gila Conglomerate	1.8	0.6	0.1	1.1	1.25
D19-12	Gila Conglomerate	2.3	0.9	0.2	1.6	3.38
D19-16	Gila Conglomerate	2.9	1	<0.1	1.2	1.69
TP19-9	Gila Conglomerate	2.2	0.8	0.3	0.6	1.33
TPC19-1	Quaternary Pediment	4.3	1.4	1	0.7	0.5
TPC19-19	Quaternary Pediment	2.3	1.3	0.2	0.4	0.9

Results indicate Cl is lower across the Alluvium and Pediment samples while Ca, Mg and Na are elevated with respect to the Gila Conglomerate samples. The results agree well with the available nutrients and CEC results for the units and indicate they may support suitable vegetation when used as a cover material at the Tailings Storage Facility (TSF).

7.5 Quality Assurance and Quality Control

Quality control and quality assurance (QC/QA) of laboratory data were restricted to the procedures undertaken by the individual analytical laboratories.

The ALS QC Report is presented in the laboratory testing results in Appendix V and summarized below. Overall the analytical program has met the defined analytical control criteria.

Reference materials, method blanks, and sample replicates were utilized to control quality in the laboratory analyses. The QA/QC results are summarized by laboratory:

- GSA performed a quality assurance plan in accordance with their Standard Operating Procedure manual for the physical tests performed on all soil samples.
- ALS in the Tucson, AZ lab performed QC tests for the following test types:
  - pH (TPC19-1, TPC19-11, DH18-5);
  - Sulfur (TPC19-1, TPC19-7);
  - Neutralization Potential (TPC19-1, TPC19-21, DH18-5);
  - Moisture Content (TPC19-13, DH18-5);
  - Carbon (TPC19-1, TPC19-7);

  - Total Organic Carbon (TPC19-1, TPC19-11, DH18-5);
  - Nitrogen (TPC19-1, TPC19-2, TPC19-11, DH18-5);
  - Cation Exchange Capacity (TPC19-1, TPC19-11, DH18-5);
  - AB-DTPA Extractible Nutrients (TPC19-1, TPC19-11, DH18-5);
  - Saturated Paste (TPC19-1, TPC19-11, DH18-5); and
  - Conductivity, Saturated Paste Extraction (TPC19-1, TPC19-11, DH18-5).
- ALS in the Kelso, WA lab performed QC tests for the following test types:
  - Synthetic Precipitation Leachate Procedure (SPLP) – used method blanks and replicate samples for TPC19-2, TPC19-4, and TPC19-5;
  - Toxicity Characteristics Leachate Procedure (TCLP) – used method blanks and replicate samples for TPC19-2, TPC19-4, and TPC19-5; and
  - General Chemistry Parameters (Fluoride, Chloride, Bromide, Sulfate, Nitrogen content, Acidity, Alkalinity as CaC03, pH, and Conductivity) – used replicate samples for TPC19-1, and TPC19-2 laboratory-controlled samples.
- ALS in the Vancouver, BC lab completed QC tests for the following:
  - Whole rock elemental by XRF (TPC19-8, TPC19-10, TPC19-13).
- QC measures reported by ALS were within acceptable limits.

8 LIMITATIONS

Results of the Gila Conglomerate material characterization align with previous testing.

KCBCL collected surface samples at the Skunk Camp site within the limits of private and land permitted for drilling and collected bulk samples.

Results of the tailings testing agree with previous physical characterization results.

9 CLOSING

This report is an instrument of service of KCB Consultants (KCBCL). The report has been prepared for the exclusive use of Resolution Copper Mining LLC (Client) for the specific application to the Resolution Copper Project, and it may not be relied upon by any other party without KCB's written consent.

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Kate Patterson, P.E., P.Eng.
Project Manager

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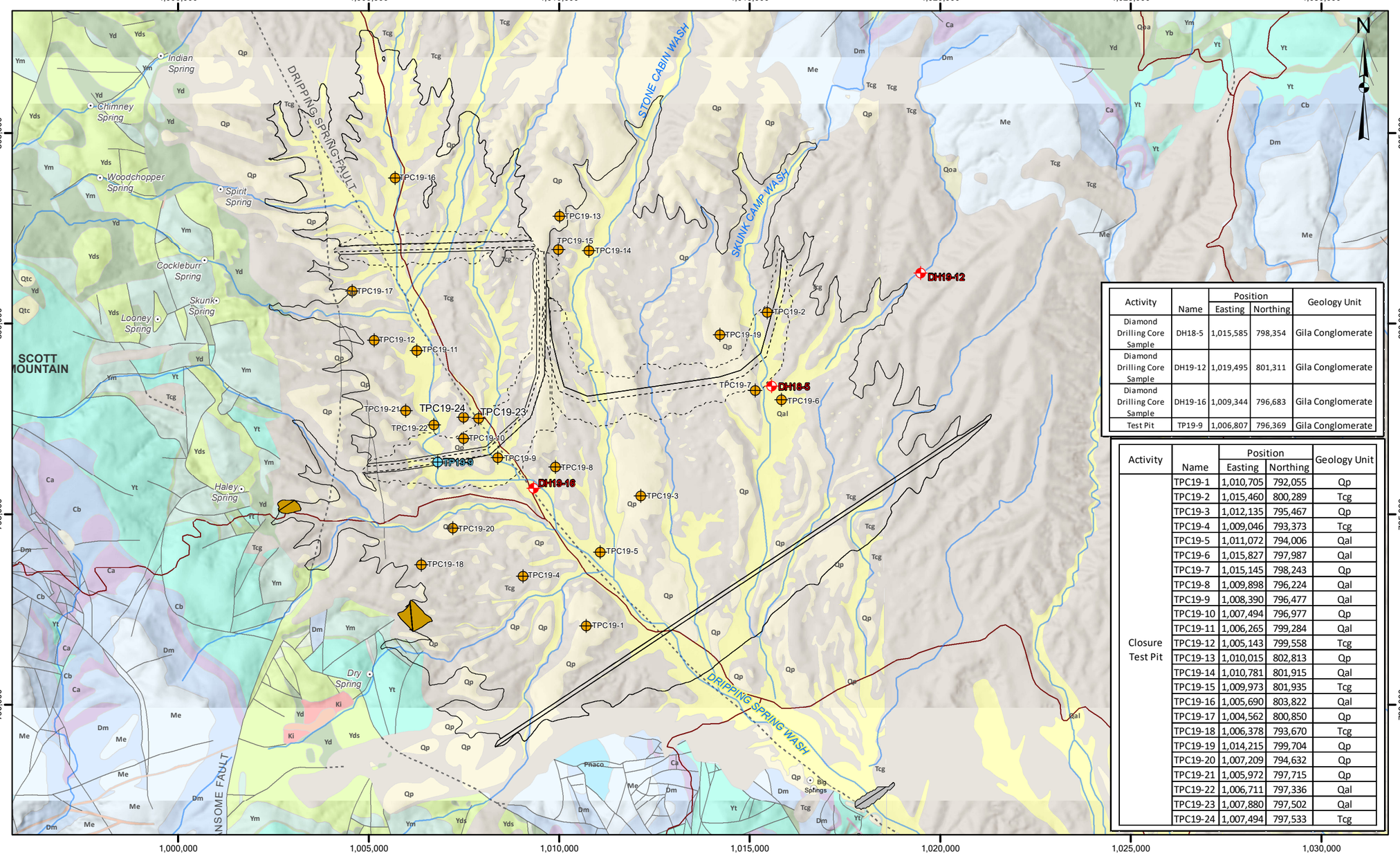
APPENDIX I

Sample Locations



Activity	Name	Position		Geology Unit
		Easting	Northing	
Diamond Drilling Core Sample	DH18-5	1,015,585	798,354	Gila Conglomerate
Diamond Drilling Core Sample	DH19-12	1,019,495	801,311	Gila Conglomerate
Diamond Drilling Core Sample	DH19-16	1,009,344	796,683	Gila Conglomerate
Test Pit	TP19-9	1,006,807	796,369	Gila Conglomerate

Activity	Name	Position		Geology Unit
		Easting	Northing	
Closure Test Pit	TPC19-1	1,010,705	792,055	Qp
	TPC19-2	1,015,460	800,289	Tcg
	TPC19-3	1,012,135	795,467	Qp
	TPC19-4	1,009,046	793,373	Tcg
	TPC19-5	1,011,072	794,006	Qal
	TPC19-6	1,015,827	797,987	Qal
	TPC19-7	1,015,145	798,243	Qp
	TPC19-8	1,009,898	796,224	Qal
	TPC19-9	1,008,390	796,477	Qal
	TPC19-10	1,007,494	796,977	Qp
	TPC19-11	1,006,265	799,284	Qal
	TPC19-12	1,005,143	799,558	Tcg
	TPC19-13	1,010,015	802,813	Qp
	TPC19-14	1,010,781	801,915	Qal
	TPC19-15	1,009,973	801,935	Tcg
	TPC19-16	1,005,690	803,822	Qal
	TPC19-17	1,004,562	800,850	Qp
	TPC19-18	1,006,378	793,670	Tcg
	TPC19-19	1,014,215	799,704	Qp
	TPC19-20	1,007,209	794,632	Qp
	TPC19-21	1,005,972	797,715	Qp
	TPC19-22	1,006,711	797,336	Qal
	TPC19-23	1,007,880	797,502	Qal
	TPC19-24	1,007,494	797,533	Tcg

RELEVANT GEOLOGICAL UNITS

- Qal Alluvium (Quaternary)
- Qp Pediment (Quaternary)
- Tcg Tertiary Conglomerate (Miocene-Pliocene)

GEOLOGICAL UNITS

- Qtc Talus (Quaternary)
- Qoa Older Gravel (Quaternary)
- QTls Landslide Deposit (Quaternary)
- Ti Teapot Mountain Porphyry (Paleocene)
- TKi Hornblende Andesite Porphyry (Tertiary-Cretaceious)
- Ttm Teapot Mountain Porphyry (Tertiary)
- Ki Rattler Granodiorite (Upper Cretaceous)
- Mzbp Basalt Porphyry (Mesozoic)
- Pnaco Naco Limestone (Pennsylvanian)
- Me Escobrosa Limestone (Mississippian)
- Dm Martin Limestone (Devonian)
- Ca Abrigo Formation (Upper & Middle Cambrian)
- Cb Bolsa Quartzite (Middle Cambrian)
- Yd Diabase (Younger PreCambrian)
- Yt Troy Quartzite (Younger PreCambrian)
- Yb Basalt (Younger PreCambrian)
- Ym Mescal Limestone (Younger PreCambrian)
- Yds Dripping Spring Quartzite (Younger PreCambrian)
- Yp Pioneer Formation (Younger PreCambrian)
- Xp Pinal Schist (PreCambrian)

LEGEND

- SKUNK CAMP TSF
- PYRITE CELL EMBANKMENT FOOTPRINT
- CONTAINMENT DAM
- SEEPAGE COLLECTION DAM
- SPRING
- FAULT - CONCEALED
- FAULT
- EXISTING ROAD
- RIVER OR MAJOR DRAINAGE

SITE INVESTIGATION - CLOSURE

- TEST PIT

SITE INVESTIGATION - PHASE 1/2

- DIAMOND DRILLHOLE
- TEST PIT

NOTES:
1. NAD83, ARIZONA STATE PLANE CENTRAL
2. TERRAIN DATA SOURCE: ESRI
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CORNWALL, H.R., BANKS, N.G., AND PHILLIPS, C.H. 1971. GEOLOGIC MAP OF THE SONORA QUADRANGLE, PINAL AND GILA COUNTIES, ARIZONA. U.S. GEOLOGICAL SURVEY QUADRANGLE MAP GQ - 1021, SCALE 1:24,000.

NOT FOR CONSTRUCTION

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0 1 Mile

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SKUNK CAMP TSF RECLAMATION PLAN

TITLE: LAB SUMMARY - SAMPLES LOCATIONS

PROJECT No. UM09441A23

FIG No. 1

Z:\MP\KU\M09441A23-RES-Skunk Camp Closure Study\400 Drawings\GIS\02_Maps\Reports\SC_TSF_ReclamationPlan\LabSummary_SamplesLocation.mxd 2020-06-04 4:05:13 PM

APPENDIX II

Sample Field Photographs

Appendix II
Sample Photographs

II-1 TCP19-1

Skunk Camp Closure
9/18/19 35°C
UM09441A23 Sunny
TPC19-1

II-2 TPC19-2

II-3 TPC19-3

Skunk camp closure
9/18/19 34°C.
TPC19-3

Skunk camp closure
9/18/19 34°C.
TPC19-3

Skunk camp closure
9/18/19
TPCM-3

II-4 TPC19-4

Skunk Camp Closure
9/16/19 35°C
UM09441A23
TPC19-4

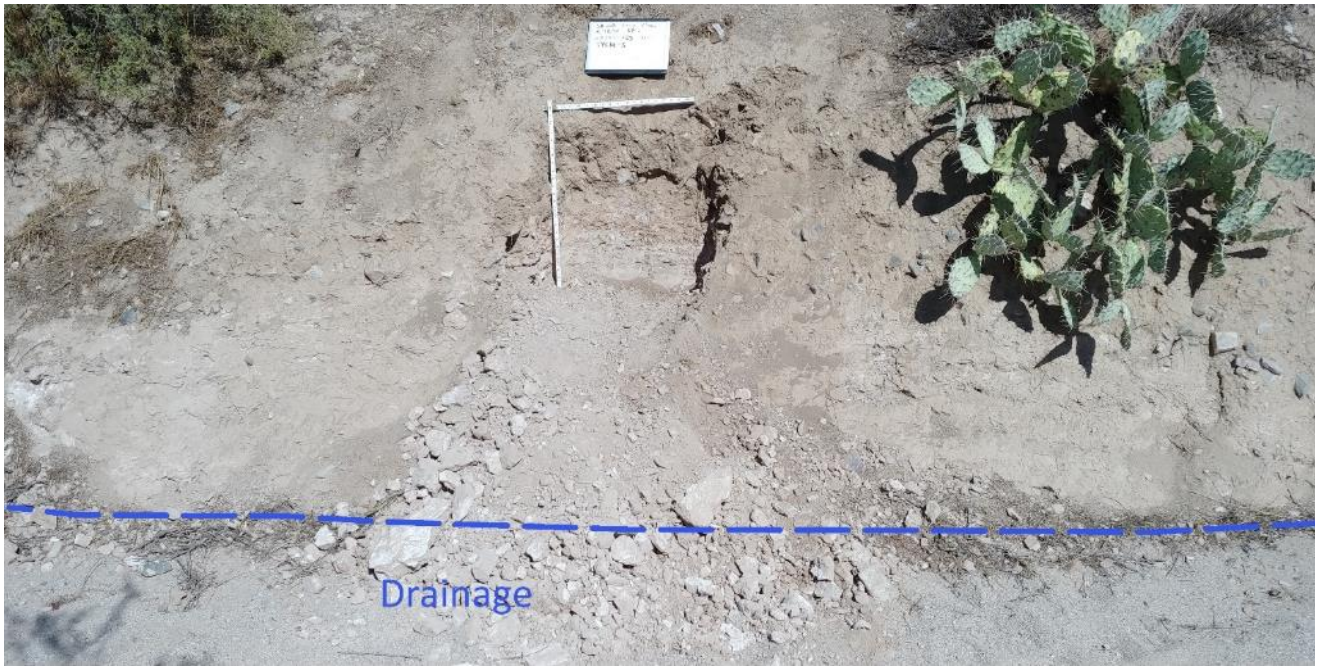
Skunk Camp Closure
9/16/19 35°C
UM09441A23
TPC19-4

II-5 TPC19-5

TPC19-5

TPC19-5

Skunk Camp Closure
9/18/19 37°C
UM09441A23
TPC19-5


Drainage

II-6 TCP19-6

Drainage

Skunk Camp Closure
4/17/19 38°C
UM09441A23 Sunny
TPC19-6

Skunk Camp Closure
9/17/19 38°C
UM09441A23 Sunny
TR19-6

Drainage

Skunk Camp Closure
9/17/19 38°C
UM09441A23 Sunny
TPC19-6

II-7 TCP19-7

Qp
Tcg

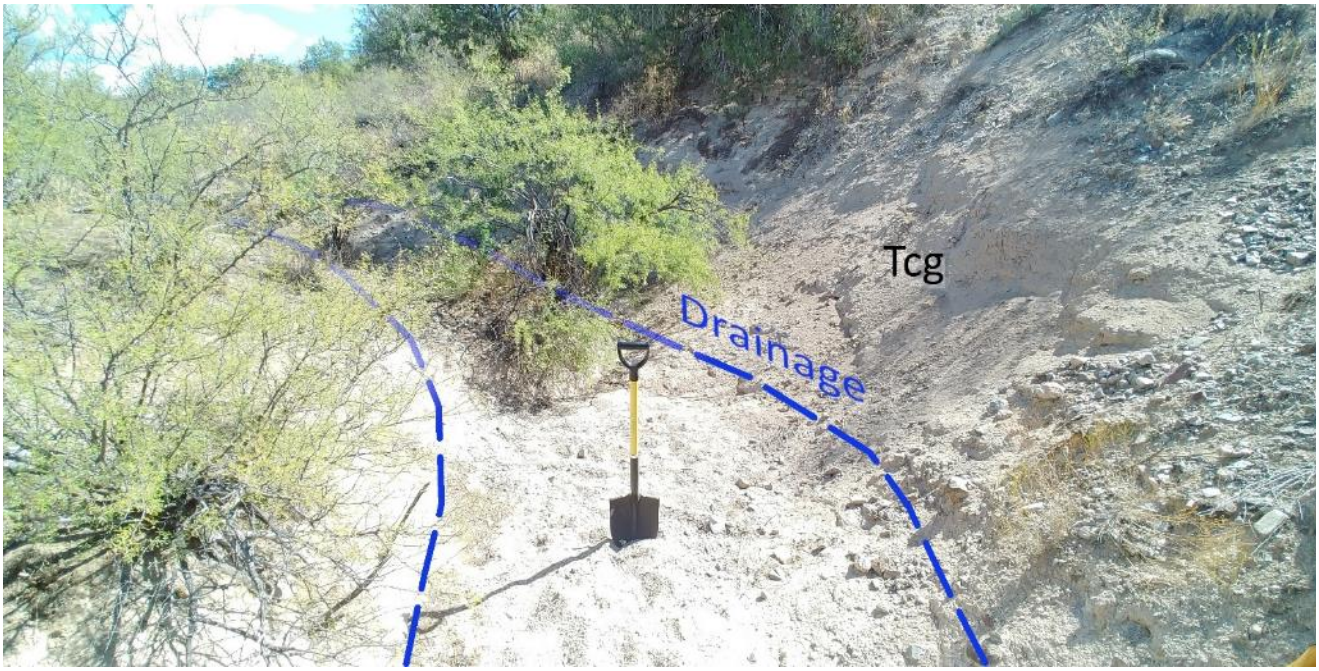
Skunk Camp Closure
9/17/19 37°C
UM09441A23 Sunny
TPC19-7

Skunk Camp Closure
9/17/19 37°C
UM09441A23 Sunny
TPC19-7.

Skunk Camp Closure
9/17/19 37°C
UM09441A23 Sunny
TPC19-7.

Qp
Tcg
TPC19-7
Drainage

II-8 TPC19-8



Skunk camp closure
9/19/19 34°C
UM09441A23 Sunny
TPC19-B

Skunk camp closure
9/19/19 34°C
UM09441A23 Sunny
TPC19-B

Skunk camp closure
9/19/19
UM09441A23 Skinny
TPL14-B

II-9 TCP19-9

Skunk camp closure
UMC9441A23 38°C dumy
TPC19-9

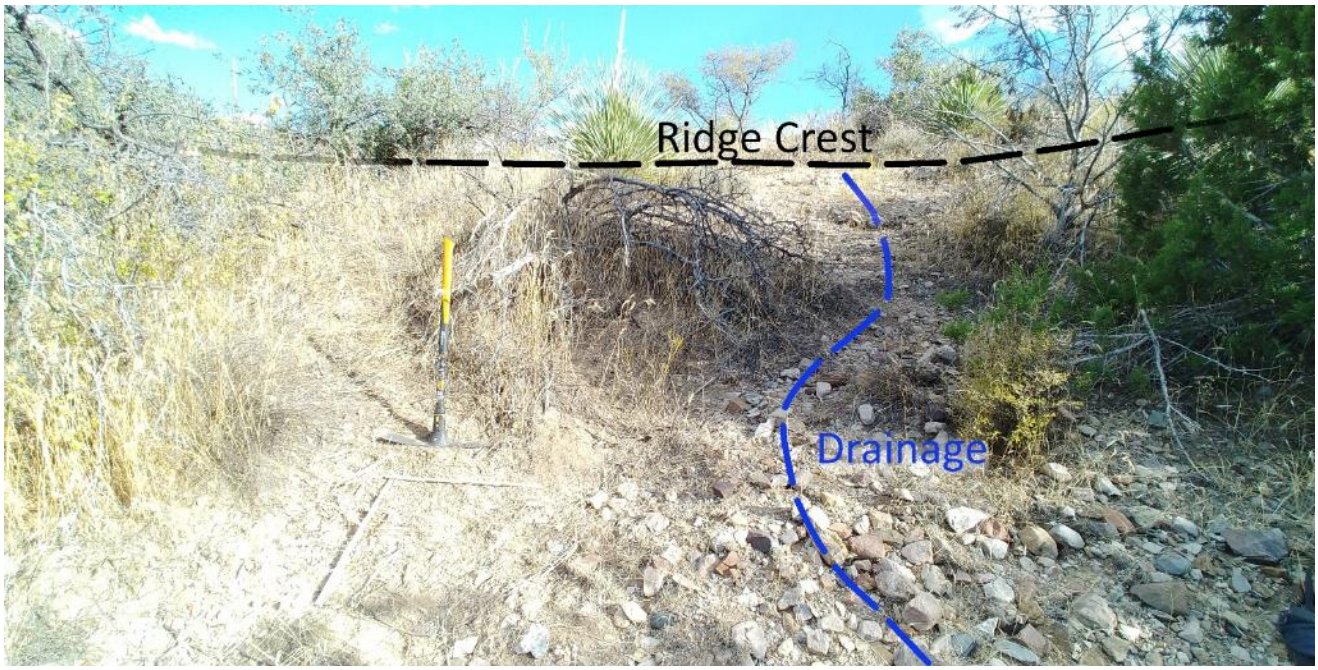
Skunk camp closure
UM09441A23 38°C dunny
TP19 · 9

II-10 TCP19-10

II-11 TPC19-11

Drainage

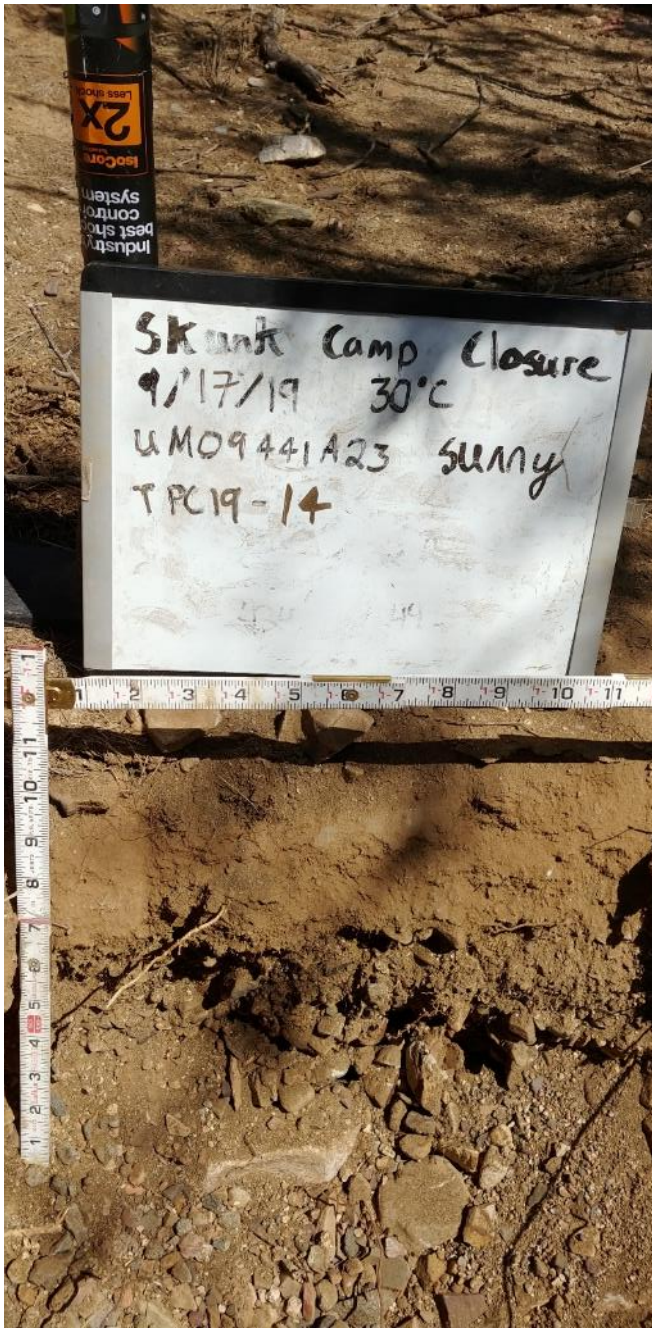
II-12 TPC19-12



II-13 TPC19-13

Skunk Camp Closure
9/17/19 30°C
UM09441A23 Sunny
TPC19-13

II-14 TPC19-14


Skunk Camp Closure
9/17/19 30°C
UM09441A23 sunny
TPC19-14

Skunk Camp Closure
9/17/19 30°C
UM09441A23 sunny
TPC19-14

II-15 TPC19-15

Skunk Camp Closure
9/17/19
30°C
UM09441A23
sunny
TP19-15

Skunk Camp Closure
9/17/19 30°C
UM09441A23 Sunny
TP19-15

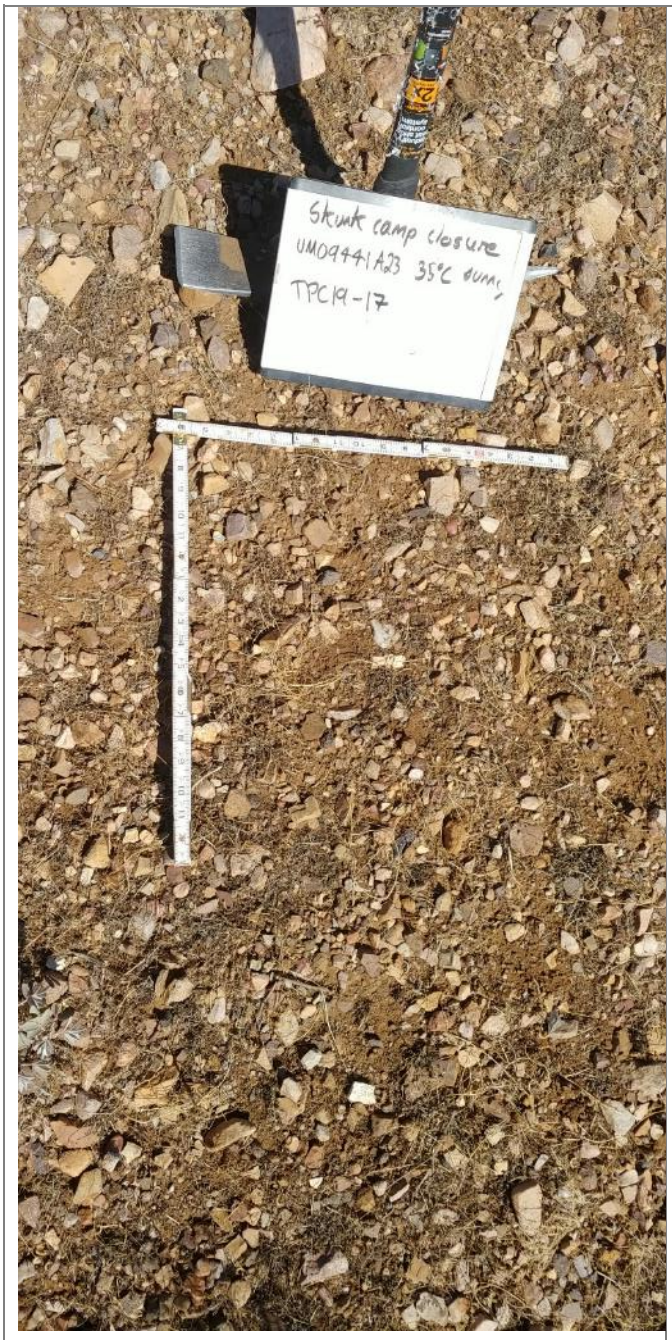
II-16 TPC19-16

Drainage

Skunk camp closure
UM09441A23 36°C dump
TPC19-16

Skunk camp closure
UM09441A23 34°C sunny
TPC19-16

II-17 TPC19-17


Skunk camp closure
UM09441A23 35°C dunes
TPC19-17

Skunk camp closure
UM09441A23 35°C dunes
TPC19-17

II-18 TPC19-18

Skunk camp closure
9/18/19 32°C
TPC19-18

Skunk camp closure
9/18/19 32°C
TPC19-18

Skunk Camp Closure
9/18/19 32°C
UM09441A23 Sleany
TP19-18

II-19 TPC19-19

II-20 TPC19-20

Skunk Camp Closure
9/16/19 34°C
UM09441A23 cloudy
TPC19-20

II-21 TPC19-21

Skunk camp closure
UM09441A23 38°C dunes
TPC19-21

Skunk camp closure
UM09441A23 38°C dunes
TPC19-21

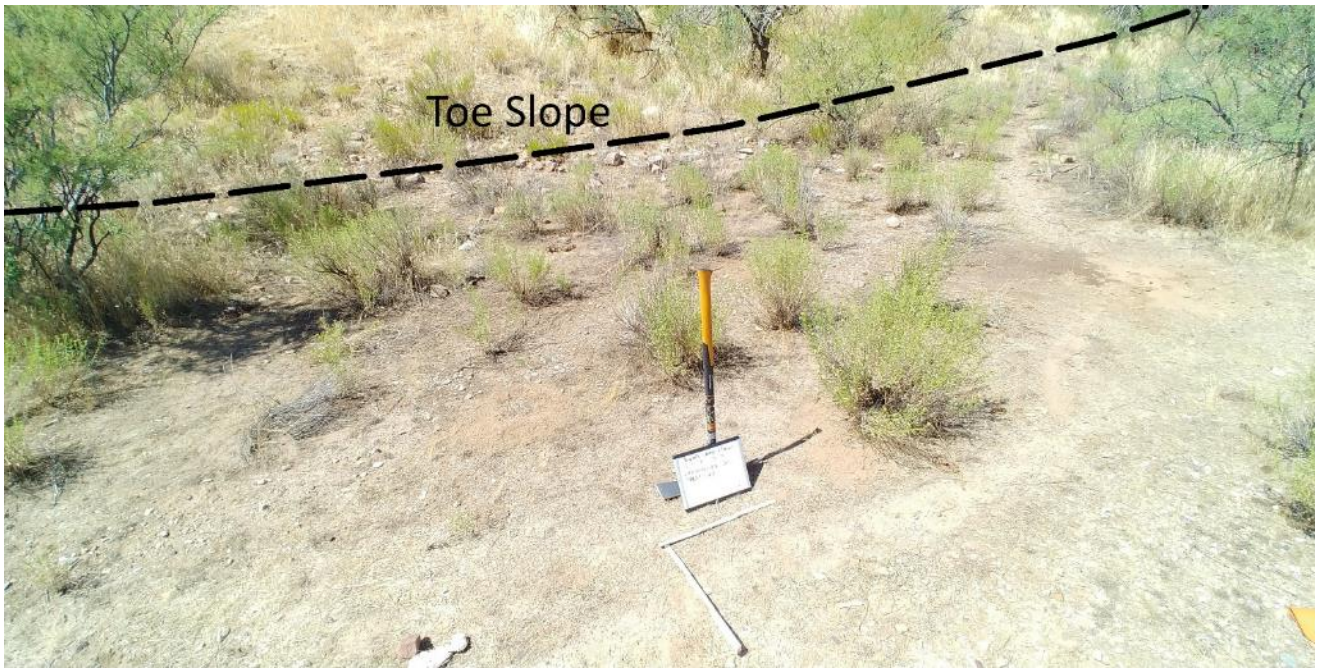
Skunk camp closure
UM09441A23 38°C dum
TPC19 -2

II-22 TPC19-22

Skunk camp closure
UM09441A23 37°C dunn,
TPC19-22

Skunk camp closure
UM09441A23 37°C dunes
TPC19-22

II-23 TPC19-23



Skunk camp closure
9/19/19 3 °C
UM09441A23 Sunny
TPC19-23

II-24 TPC19-24

Skunk camp closure
9/19/19
UM09441A23
TP19-24

APPENDIX III

Laboratory Testing Program

Appendix III
Laboratory Testing Program

III-1 FIELD OBSERVATIONS AND LABORATORY TESTING SUMMARY

Table III-1 Field Observations of Surface Samples

Location ID	Easting (ft)	Northing (ft)	Geological Unit	Soil Description	Acid Reaction	Slope	Vegetation Cover in Area	Rock Fragment Cover	Drainage	Soil	2" % Passing	1" % Passing
TPC19-1	1010502	791842	Quaternary Pediment	SAND (SC) fine to coarse, and fine to coarse gravel, clayey, some cobbles up to 7 in, gap graded, loose, subrounded, reddish brown (5YR4/3), dry, homogeneous, clasts are quartzite and chert, no HCl reaction, stage I carbonate development [Quaternary Pediment].	0	Ridge crest, flat, simple shape	Bush, grass, cactus (40%)	Cobbles and gravel (30%)	Flooding: no, ponding: possible, moderately well drained	C/B	-	40
TPC19-2	1015504	800300	Gila Conglomerate	SAND (SC) fine, some coarse sand, some clay, trace fine gravel, well graded, dense, low plasticity, dry, light brown (7.5YR6/4), homogeneous, strong HCl reaction, stage I carbonate development, refusal at 1 ft on cemented layer [Gila Conglomerate].	4	Ridge, (linear, convex), Aspect (341°) Dip (15°)	Grass, cactus, (10%)	Gravel (10%), cover mostly barren	Flooding: no, ponding: no, moderately well drained	B/C	-	100
TPC19-3	1012034	794956	Quaternary Pediment	SAND (SC-SM) mostly fine, some medium to coarse sand, gravelly, some clay/silt, trace cobbles, gap graded, compact, low plastic, reddish brown (5YR5/4), dry, homogeneous, earthy odor, no HCl reaction, stage I carbonate development [Quaternary Pediment].	0	Back Slope, linear, Aspect (39°) Dip (5°)	Bush, cactus (20%)	Coarse gravel (40%) barren (20%)	Flooding: no, ponding: no, moderately well drained	B	-	87
TPC19-4	1009074	793286	Gila Conglomerate	SAND (SM), fine to coarse, some silt, some gravel, gap graded, compact, low plasticity, no dilatancy, brown (7.5YR5/4), homogeneous, no odor, weak HCl reaction, dry, stage I to II carbonate development [Gila Conglomerate].	2	Shoulder, convex, simple shape, Aspect (121°), Dip (20°)	Bush, grass (25%), root depth 6"	Gravel (10%), cover mostly barren	Flooding: no, ponding: no, well drained	B	93	87
TPC19-5	1010848	794121	Gila Sandstone	SAND (SC) fine to medium, trace coarse sand, some clay, some coarse gravel, gap graded, loose to compact, low plasticity, brown (7.5YR5/4), low dry strength, dry, strong HCl reaction, stage III carbonate development [Gila Sandstone].	4	Channel outcrop, linear, convex, Aspect (95°), Dip (70°)	Bush, grass (40%)	Sandstone and silt (50%), remainder barren	Flooding: often, ponding: 1' above drainage (common ponding), moderately drained	B	-	83
TPC19-6	1015767	798122	Quaternary Alluvium	SAND (SW-SC) fine to coarse, some gravel, trace to some silt, well graded, loose to compact, no plasticity, no dilatancy, brown (7.5YR4/6), homogeneous, quartzite, calcite fragments, some dolomite, weak to moderate dry strength; dry, strong HCl reaction, stage I carbonate development [Quaternary Alluvium].	3	Channel overbank, aspect (161°), Dip (10°), concave, linear	Bush, cactus (25%)	Sand and gravel (60%)	Flooding and ponding likely, 18' from nearby drainage, ground surface 4' above drainage bottom	B	-	96
TPC19-7	1015248	798267	Gila Conglomerate	GRAVEL (GW) fine to coarse, and sand (mostly medium to coarse), trace silt, well graded, very dense, max particle size 2 in, sub-rounded, grayish brown (10YR5/2), matrix supported clasts consist of quartzite, chert, trace granite, dry, strong cementation, strong HCl reaction [Gila Conglomerate].	4	Channel outcrop, linear, convex, shape: complex Aspect (235°), Dip (45°)	Bush, grass (40%)	Cobbles and gravel (40%)	Flooding possible, ponding: no, Well drained	R	-	90
TPC19-8	1009895	796150	Quaternary Alluvium	SAND (SP) medium, trace fine, some coarse, some gravel, well graded, very loose, max particle size 1 in, brown (7.5YR5/2), dry, homogeneous, clasts consist of quartzite, schist, mafics, strong HCl reaction [Quaternary Alluvium].	3	Channel, linear, concave, Aspect (22°), Dip (5°)	Barren (in drainage)	Sand gravel 100%	Flooding common, ponding common	C	-	84

Location ID	Easting (ft)	Northing (ft)	Geological Unit	Soil Description	Acid Reaction	Slope	Vegetation Cover in Area	Rock Fragment Cover	Drainage	Soil	2" % Passing	1" % Passing
TPC19-9	1008500	796294	Quaternary Alluvium	SAND (SC) fine to coarse, clayey, some gravel, broadly graded, loose, no dilatancy, dark brown (10YR3/3), homogeneous, no cementation, no HCl reaction, dry [Quaternary Alluvium].	0	Channel, convex, convex, Aspect (19°), Dip (10°)	Grass, trees, and bush (70%), root depth 1'	Gravel and cobble (10%)	Flooding common, ponding common, ~ 3' above major drainage, moderately drained. ~20' away bearing: 200	A/E	-	92
TPC19-10	1007527	796817	Quaternary Pediment	GRAVEL (GC) coarse, and cobbles, sandy, clayey, trace boulders, gap graded, rounded, max particle size 12 in, reddish brown (5RY4/4), round, clasts consist of quartzite and gneiss and chert, homogeneous with clay content increasing with depth, no HCl reaction (Quaternary Pediment).	0	Mid slope, linear, linear, Aspect (26°), Dip (10°)	Grass bushes and trees (40%) land surface disturbed by cattle, root depth 1'	Cobbles (20%)	Flooding: no, ponding no	E	-	78
TPC19-11	1006482	799968	Quaternary Alluvium	SAND (SP-SM) fine to coarse, some gravel, some silt, sandier with depth, poorly graded, loose, low to non-plastic, brown (7.5YR4/4), dry, no dry strength, no cementation, no HCl reaction, stage I carbonate development (Quaternary Alluvium).	0	Channel outcrop, Aspect (38°), Dip (70°)	Tall bushes (50%), root depth 4"	Cobbles (30%)	Flooding: yes, ponding possible,	B/A	-	83
TPC19-12	1005795	799735	Gila Conglomerate	SAND (SC) fine to medium, trace coarse, and clay, trace fine to coarse gravel, poorly graded, loose to compact, low plasticity, pale olive (5YR6/4), laminated to homogeneous, strong HCl reaction, stage I carbonate development, low to no dry strength (Gila Conglomerate).	4	Mid-slope, concave / convex, undulating hillside, Aspect (103°), Dip (30°)	Bush Grass trees (60%), root Depth 4"	Gravel (30%), soil (10%)	Flooding no, ponding no, well drained	C/A	-	94
TPC19-13	1010063	802851	Quaternary Pediment	SAND (SC) clayey, gravelly, broadly graded, compact to dense, max. particle size 2 in, round to planar, low to intermediate plasticity, sensitive, yellowish red (5YR4/6), dry, homogeneous, no dilatancy, low to medium dry strength, clasts consist mostly of quartzite, no HCl reaction, stage III carbonate development (Quaternary Pediment).	0	Crest, Aspect (231°), convex	Low shrubs, cactus (15%), no roots visible	Gravel (30%) remainder soil	No ponding, no flooding, well drained	B/C	-	92
TPC19-14	1010581	801596	Quaternary Alluvium	SAND (SP-SM) medium to coarse, gravelly, some silt, gap graded, sub-rounded, max. particle size 1 in, dark brown (10YR3/3), dry, clasts consist mostly of quartzite, homogeneous, weak to moderate HCl reaction [Quaternary Alluvium].	2	Channel position, concave, linear, Aspect (13°), Dip (5°)	Bush, grass (40%) root depth 6"	Boulders, cobbles (40%)	Flooding common, ponding common, poorly drained	B	-	90
TPC19-15	1009980	801830	Gila Conglomerate	SAND (SC) gravelly, some clay, poorly graded, compact, dark yellowish brown (10YR4/6), dry, no dilatancy, dry strength weak to moderate, clasts consist of quartzite, slate, granite, strong HCl reaction, stage III carbonate development (Gila Conglomerate).	4	Slope toe, linear, concave, Aspect (286°), Dip (30°)	cactus, grass (30%)	Gravel and cobble (40%)	Flooding possible, ponding unlikely, located in ephemeral drainage, moderately well drained	B/C	96	87
TPC19-16	1005735	803864	Quaternary Alluvium	SAND (SM) medium to coarse, gravelly, some silt, dark brown (10YR3/3), dry, earthly odor, homogeneous, no cementation, no HCl reaction, no carbonate development [Quaternary Alluvium].	0	Channel, overbank, flat	Grass, bush (50%) root depth 4"	Coarse gravel (15%), barren soil (35%)	Flooding: yes, ponding: yes, poorly drained	C	-	88
TPC19-17	1004587	800585	Quaternary Pediment	CLAY (CH) sandy, some gravel, intermediate to high plasticity, firm, reddish brown (5YR4/6), gravel consists of quartzite, trace chert, trace mafics, homogeneous, moderate dry strength; weak to moderate HCl reaction, stage I carbonate development [Quaternary Pediment].	2	Back slope, linear, Aspect (340°) Dip (10°)	Bush (20%) root depth 3"	Gravel (50%), soil clay cover (30%)	Flooding: no, ponding: no, well drained, 2' from minor drainage	B/A	-	95

Location ID	Easting (ft)	Northing (ft)	Geological Unit	Soil Description	Acid Reaction	Slope	Vegetation Cover in Area	Rock Fragment Cover	Drainage	Soil	2" % Passing	1" % Passing
TPC19-18	1006602	794045	Gila Conglomerate	GRAVEL (GC) coarse, and cobbles, some clay, gap graded, loose, subround to subangular, max. particle size 5 in, dark yellowish brown (10YR4/4), clast supported, homogeneous, slight sulfur odor, weak to moderate cementation, nodules present, clasts consist of predominantly grey quartzite and black volcanics, strong HCl reaction, stage III carbonate development [Gila Conglomerate].	3	Back slope, linear, Aspect (349°), Dip (35°)	Bushes, grass (40%) root depth 12"	Cobbles (40%) remainder barren	Flooding: no, ponding: no, well drained	B	-	56
TPC19-19	1014225	799650	Quaternary Pediment	GRAVEL (GC) and cobbles, some clay, gap graded, loose, subrounded, yellowish red (5YR4/6), homogeneous, earthly odor, clasts consist of quartzite (white/grey), granite, no HCl reaction; no to stage I carbonate development [Quaternary Pediment].	0	Shoulder, convex, Aspect (242°), Dip (10°)	Bush, cactus (10%), Root Depth 3"	Cobbles and boulders (50%)	Flooding: no, ponding: no, well drained, low soil development	B/C	-	43
TPC19-20	1007839	794975	Quaternary Pediment	GRAVEL (GC) fine to coarse, and clay to some clay, some coarse sand, trace cobbles, broadly graded, compact, low to intermediate plasticity, clasts consist of sub rounded quartzite; homogeneous; no dilatancy, low dry strength, weak to no HCl reaction, stage I carbonate development [Quaternary Pediment].	1	Shoulder, convex, Aspect (108°), Dip (30°)	Bushes and grass (30%), root depth 1'	Gravel (40%)	Flooding: no, ponding: no, well drained	C	91	85
TPC19-21	1006109	797623	Quaternary Pediment	SAND (SC) fine to coarse, clayey, gravelly, broadly graded, compact to dense, low to medium plasticity, reddish brown (5YR4/3), dry, homogeneous, dry strength low to medium increasing with depth, weak cementation, weak to no HCl reaction, stage I carbonate development [Quaternary Pediment].	0	Backslope, Aspect (240°), Dip (20°),	Bush and grass (20%), root depth 4"	Coarse gravel and cobbles (20%)	Flooding: no, ponding: no, well drained	B	-	80
TPC19-22	1006731	797443	Quaternary Alluvium	SAND (SP-SM) fine to coarse, some fine gravel, trace to some silt, poorly graded, loose to compact, subrounded to angular, max. particle size 3 in, low plasticity, dark brown (10YR3/3), dry, homogeneous, sand consists of quartz, plagioclase and mafic grains, moderate HCl reaction, stage I carbonate development [Quaternary Alluvium].	3	Channel, linear, concave Aspect (20°), Dip (5°)	Trees and grass (30%), Root depth 2"	Cobbles (30%)	Flooding: yes, ponding: yes	C/B	-	93
TPC19-23	1007880	797502	Quaternary Alluvium	SAND (SC) fine to coarse, clayey, some fine gravel, broadly graded, compact, low to intermediate plasticity, reddish brown (5YR4/4), no dilatancy, medium dry strength, clasts consist of quartzite, dolomite [Quaternary Alluvium].	0	Channel terrace, flat, linear, linear	Grass, bushes, trees (30%), Root Depth 1"	Gravel (5%), barren (65%)	Flooding: common, ponding: common, poorly drained	C/B	-	93
TPC19-24	1007494	797533	Gila Conglomerate	SAND (SC) fine to coarse, some clay, some gravel, broadly graded, compact, no to low plasticity, brown (7.5YR4/4), homogeneous; earthy odor; dry; clasts quartzite, chert, dolomite, moderate HCl reaction, stage I carbonate development [Gila Conglomerate].	0-2	Back slope, convex, convex, Aspect (160°), Dip (20°)	Trees and grass (40%), Root depth 1"	Coarse gravel (20%)	Flooding: no, ponding: no, well drained, 5' on either side from drainage	B/A	-	83

Table III-2 Summary of Laboratory Testing of all Sample Types

Location_ID	Easting	Northing	Geological Unit	Lab Testing																								
				GSA												ALS												
				Physical Cover Properties					Soil Moisture Retention							ARD/ML Potential									Nutrient Availability for Vegetation				
				Water Contents[1]	Atterberg Limits[2]	Physical Index Testing[3]	Specific Gravity[4]	Standard Proctor Test[5]	Specific Gravity[6]	Particle Size with Hydrometer[7]	Rigid Wall Saturate Hydraulic Conductivity[8]	Soil Moisture Retention Curves[9]	WP4 Water Activity Meter (>3 bar)[10]	Van Genuchten Modelling[11]	Erosion (Pinhole Test)[12]	Sobek NP (with Siderite Correction)[13]	Total Sulfur[14]	Carbonate Neutralization Potential[15]	Total Element Analysis (by four acid digest and ICP-AES / MS)[16]	Whole Rock Element Analysis (by XRF)[17]	Synthetic Precipitation Leaching Procedure (SPLP)[18]	Toxicity Characteristic Leaching Procedure (TCLP)[19]	Sulfur Speciation[20]	Short Term Batch Extraction Test (STB)[21]	Total Organic Carbon[22]	Organic Matter[23]	Available Nutrients[24]	Cation Exchange Capacity (CEC)[25]	Salinity Test[26]
TPC19-1	1010502	791842	Pediment	X	X	X	X									X	X	X	X	X	X	X	X	X	X	X	X	X
TPC19-2	1015504	800300	Gila Conglomerate	X	X	X	X									X	X	X	X	X	X	X	X	X	X	X	X	X
TPC19-3	1012034	794956	Pediment	X	X	X	X									X	X	X	X	X					X	X	X	X	
TPC19-4	1009074	793286	Gila Conglomerate	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X
TPC19-5	1010848	794121	Gila Sandstone	X	X	X	X									X	X	X	X	X	X	X	X	X	X	X	X	
TPC19-6	1015767	798122	Alluvium	X	X	X	X	X								X	X	X	X	X		X	X	X	X	X	X	
TPC19-7	1015248	798267	Gila Conglomerate	X	X	X	X									X	X	X	X	X	X				X	X	X	X	
TPC19-8	1009895	796150	Alluvium	X	X	X	X									X	X	X	X	X					X	X	X	X	
TPC19-9	1008500	796294	Alluvium	X	X	X	X									X	X	X	X	X					X	X	X	X	
TPC19-10	1007527	796817	Pediment	X	X	X	X								X	X	X	X	X	X					X	X	X	X	
TPC19-11	1006482	799968	Alluvium	X	X	X	X									X	X	X	X	X					X	X	X	X	
TPC19-12	1005795	799735	Gila Conglomerate	X	X	X	X									X	X	X	X	X	X	X	X	X	X	X	X	X	
TPC19-13	1010063	802851	Pediment	X	X	X	X									X	X	X	X	X					X	X	X	X	
TPC19-14	1010582	801597	Alluvium	X	X	X	X									X	X	X	X	X					X	X	X	X	
TPC19-15	1009980	801830	Gila Conglomerate	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	
TPC19-16	1005735	803864	Alluvium	X	X	X	X									X	X	X	X	X	X	X	X	X	X	X	X	X	X
TPC19-17	1004587	800585	Pediment	X	X	X	X									X	X	X	X	X	X				X	X	X	X	
TPC19-18	1006602	794045	Gila Conglomerate	X	X	X	X									X	X	X	X	X					X	X	X	X	
TPC19-19	1014225	799650	Pediment	X	X	X	X									X	X	X	X	X	X	X	X	X	X	X	X	X	X
TPC19-20	1007839	794975	Pediment	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X		X	X	X	X	X	X	X	

Location_ID	Easting	Northing	Geological Unit	Lab Testing																									
				GSA												ALS													
				Physical Cover Properties					Soil Moisture Retention							ARD/ML Potential									Nutrient Availability for Vegetation				
				Water Contents[1]	Atterberg Limits[2]	Physical Index Testing[3]	Specific Gravity[4]	Standard Proctor Test[5]	Specific Gravity[6]	Particle Size with Hydrometer[7]	Rigid Wall Saturate Hydraulic Conductivity[8]	Soil Moisture Retention Curves[9]	WP4 Water Activity Meter (>3 bar)[10]	Van Genuchten Modelling[11]	Erosion (Pinhole Test)[12]	Sobek NP (with Siderite Correction)[13]	Total Sulfur[14]	Carbonate Neutralization Potential[15]	Total Element Analysis (by four acid digest and ICP-AES / MS)[16]	Whole Rock Element Analysis (by XRF)[17]	Synthetic Precipitation Leaching Procedure (SPLP)[18]	Toxicity Characteristic Leaching Procedure (TCLP)[19]	Sulfur Speciation[20]	Short Term Batch Extraction Test (STB)[21]	Total Organic Carbon[22]	Organic Matter[23]	Available Nutrients[24]	Cation Exchange Capacity (CEC)[25]	Salinity Test[26]
TPC19-21	1006109	797623	Pediment	X	X	X	X									X	X	X	X	X					X	X	X	X	
TPC19-22	1006731	797443	Alluvium	X	X	X	X									X	X	X	X	X					X	X	X	X	
TPC19-23	1007880.27	797502.125	Alluvium	X	X	X	X								X	X	X	X	X	X					X	X	X	X	
TPC19-24	1007494.3	797532.822	Gila Conglomerate	X	X	X	X								X	X	X	X	X	X					X	X	X	X	
DH18-5	1015585	798354	Gila Conglomerate													X	X	X	X	X	X	X	X	X	X	X	X	X	X
DH19-12	1019495	801311	Gila Conglomerate													X	X	X	X	X	X	X	X	X	X	X	X	X	X
DH19-16	1009344	796683	Gila Conglomerate													X	X	X	X	X	X	X	X	X	X	X	X	X	X
TP19-9	1006807	796369	Gila Conglomerate													X	X	X	X	X	X	X	X	X	X	X	X	X	X
Pyrite Tailing	NA	NA	Pyrite Tailing			X			X	X	X	X	X	X															

1. Water Contents: ASTM D2216
2. Atterberg Limits: ASTM D4318
3. Physical Index Testing: ASTM D 6913-17 / ASTM C136-14
4. Specific Gravity: ASTM D854-14
5. Standard Proctor Test: ASTM D698-12e2
6. Specific Gravity: ASTM D854-14
7. Particle Size with Hydrometer: ASTM D 6913-17 / ASTM C136-14
8. Rigid Wall Saturate Hydraulic Conductivity: ASTM D5856 – 15
9. Soil Moisture Retention Curves: ASTM D6836 - 161 / MOSA, Part 4, Method 3.3.2
10. WP4 Water Activity Meter
11. Van Genuchten Modelling: ASTM D6836 – 16
12. Erosion (Pinhole) Test: ASTM D4647 - 13
13. Sobek NP (with Siderite Correction): Sobek 3.2.18 and 3.2.3
14. Total Sulfur: E1915
15. Carbonate Neutralization Potential: Calc based on 22
16. Total Element Analysis ALS method ME-ICP61 and ALS method HG-MS42
17. Whole Rock Element Analysis (by XRF): ALS method BULK-OXIDES-AX
18. Synthetic Precipitation Leaching Procedure (SPLP): EPA SW-846 Method 1312, 6020A, 6010C, 7470A
19. Toxicity Characteristic Leaching Procedure (TCLP): EPA SW-846 Method 1311, 6020A, 6010C, 7470A
20. Sulphur Speciation: ALS S-CAL06
21. Short Term Batch Extractions (STB): 7470A, 6010C, 6020A, 9056A
22. Total Organic Carbon: EPA 440.0 and EPA 9060 Khan
23. Organic Matter: Calc based on 22
24. Available Nutrients: EPA 6010, D2974
25. Cation Exchange Capacity (CEC): EPA 9081
26. Salinity Test: 9056

APPENDIX IV

GSA Laboratory Results

GeoSystems Analysis, Inc.
Innovations in Hydrology

3393 N Dodge Blvd
Tucson, AZ 85716
520-628-9330
Fax: 520-628-1122
www.gsanalysis.com

DATE: December 17, 2019
Project # **91900d**
Project Name **Tailings and Gila Conglomerate Physical and Hydraulic Properties Testing Analysis**
TO: Klohn Crippen Berger
500 - 2955 Virtual Way
Vancouver, BC V5M 4X6 CANADA
Project Contact Julie Lheureux

Enclosed are results for: Physical and Hydraulic Property Testing on Tailings and Gila Conglomerate

Test	*Method*	*Qty*
Specific Gravity of Soils	ASTM D 854 - 14	28
Atterberg Limits[1]	ASTM D 4318 - 17e1	24
Standard Proctor[1]	ASTM D698 - 12e2	4
Gravimetric Water Content/Dry Bulk Density	ASTM D 2216 - 19 / ASTM D 2937-17e2	24
Particle Size Analysis with Hydrometer	ASTM D 6913-17 / ASTM C136-14	28
Rigid-Wall Saturated Hydraulic Conductivity	ASTM D5856 - 15	5
Soil Moisture Retention Curve (MRC)	ASTM D6836 - 161 / MOSA, Part 4, Method 3.3.2	4
van Genuchten Modeling	ASTM D6836 - 16	4
WP4 Water Activity Meter (>3 bar)	MOSA, Part 4, Method 3.2.4.6	12
Pinhole Test	ASTM D4647 / D4647M - 13	6

[1] Testing performed by outside contractor Conforma Tech

Thank you for choosing GeoSystems Analysis for your material testing needs. We look forward to working with you again. If you have any questions or require additional information, please contact us at 1-520-628-9330

Sincerely,

Prepared By: Katherine Heydorn
Laboratory Project Manager

Reviewed By: Mike Yao
Laboratory Technical Director

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Laboratory Test Results - Soil Particle Density

Date: December 17, 2019
Job No: **91900d**
Job Name: **Tailings and Gila Conglomerate Physical and Hydraulic Properties Testing Analysis**
Job Description: Physical and Hydraulic Property Testing on Tailings and Gila Conglomerate
Company: Klohn Crippen Berger

Sample ID	Particle Density (g/cm^3)
TPC19-1	2.73
TPC19-2	2.83
TPC19-3	2.87
TPC19-4	2.81
TPC19-4 H*	2.75
TPC19-5	2.88
TPC19-6	2.86
TPC19-7	2.81
TPC19-8	2.87
TPC19-9	2.79
TPC19-10	2.83
TPC19-11	2.78
TPC19-12	2.81
TPC19-13	2.85
TPC19-14	2.90
TPC19-15	2.86
TPC19-15 H*	2.66
TPC19-16	2.78
TPC19-17	2.74
TPC19-18	2.74
TPC19-19	2.82
TPC19-20	2.83
TPC19-20 H*	2.83
TPC19-21	2.72
TPC19-22	3.06
TPC19-23	2.74
TPC19-24	2.86
Pyrite Tailing	3.56

*Duplicates run as part of hydraulic properties suite testing

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Laboratory Test Results - Atterberg Limits

Date: December 17, 2019
Job No: **91900d**
Job Name: **Tailings and Gila Conglomerate Physical and Hydraulic Properties Testing Analysis**
Job Description: Physical and Hydraulic Property Testing on Tailings and Gila Conglomerate
Company: Klohn Crippen Berger

Sample ID	Liquid Limit (LL)	Plastic Limit (PL)	Plasticity Index (PI)	Clay Activity (PI/% Clay)	Clay Type
TPC19-1	23	16	7	0.41	Inactive
TPC19-2	26	23	3	0.45	Inactive
TPC19-3	29	15	14	0.55	Normal
TPC19-4	NV	NV	NP	N/A	N/A
TPC19-5	26	23	3	0.59	Inactive
TPC19-6	22	19	3	0.25	Inactive
TPC19-7	NV	NV	NP	N/A	N/A
TPC19-8	NV	NV	NP	N/A	N/A
TPC19-9	25	18	7	0.45	Inactive
TPC19-10	30	16	14	0.57	Normal
TPC19-11	NV	NV	NP	N/A	N/A
TPC19-12	30	22	8	0.98	Normal
TPC19-13	29	15	14	0.55	Inactive
TPC19-14	NV	NV	NP	N/A	N/A
TPC19-15	27	22	5	0.53	Inactive
TPC19-16	NV	NV	NP	N/A	N/A
TPC19-17	38	17	21	0.50	Inactive
TPC19-18	31	18	13	1.31	Active
TPC19-19	27	15	12	0.34	Inactive
TPC19-20	29	15	14	0.40	Inactive
TPC19-21	37	17	20	0.55	Inactive
TPC19-22	NV	NV	NP	N/A	N/A
TPC19-23	22	16	6	0.38	Inactive
TPC19-24	23	19	4	0.32	Inactive

NV: Nonviscous

NP: Nonplastic

N/A: Not Applicable

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Laboratory Test Results - Standard Proctor

Date: December 17, 2019
Job No: **91900d**
Job Name: **Tailings and Gila Conglomerate Physical and Hydraulic Properties Testing Analysis**
Job Description: Physical and Hydraulic Property Testing on Tailings and Gila Conglomerate
Company: Klohn Crippen Berger

Sample ID	Maximum Dry Density (pcf)	Maximum Dry Density (g/cm3)	Optimum % Moisture
TPC19-4	129.7	2.08	12.7
TPC19-6	129.3	2.07	8.5
TPC19-15	119.3	1.91	12.1
TPC19-20	116.3	1.86	10.7

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Laboratory Test Results - Water Content

Date: December 17, 2019
Job No: **91900d**

Job Name: **Tailings and Gila Conglomerate Physical and Hydraulic Properties Testing Analysis**

Job Description: Physical and Hydraulic Property Testing on Tailings and Gila Conglomerate
Company: Klohn Crippen Berger

Sample ID	Gravimetric Water Content
	(g/g)
TPC19-1	0.013
TPC19-2	0.031
TPC19-3	0.037
TPC19-4	0.035
TPC19-5	0.044
TPC19-6	0.030
TPC19-7	0.023
TPC19-8	0.008
TPC19-9	0.020
TPC19-10	0.026
TPC19-11	0.009
TPC19-12	0.056
TPC19-13	0.048
TPC19-14	0.018
TPC19-15	0.040
TPC19-16	0.015
TPC19-17	0.056
TPC19-18	0.014
TPC19-19	0.079
TPC19-20	0.054
TPC19-21	0.037
TPC19-22	0.012
TPC19-23	0.021
TPC19-24	0.027

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Laboratory Test Results - Soil Particle Size Distribution with Hydrometer

Date: December 17, 2019
Job No: **91900d**
Job Name: **Tailings and Gila Conglomerate Physical and Hydraulic Properties Testing Analysis**
Job Description: Physical and Hydraulic Property Testing on Tailings and Gila Conglomerate
Company: Klohn Crippen Berger

Pre-Test PSD						
Mesh (mm)	Sieve	Sample ID				
		TPC19-1	TPC19-2*	TPC19-3*	TPC19-4	TPC19-4 H
		Percent Passing				
152	6"	100	100	100	100	100
100	4"	100	100	100	100	100
75	3"	100	100	100	100	100
50.8	2"	100	100	100	100	100
38.1	1.5"	100	100	100	100	100
25.4	1"	94	100	87	98	100
19.05	3/4"	90	99	84	97	100
12.7	1/2"	79	98	79	91	96
9.525	3/8"	72	96	76	84	94
6.4	0.25"	64	94	71	73	91
4.75	#4	59	90	68	66	88
2.36	#8	51	80	60	54	81
2	#10	49	77	59	52	79
1.18	#16	44	66	55	45	78
0.6	#30	38	52	49	35	69
0.425	#40	34	46	46	30	64
0.3	#50	29	40	40	24	55
0.15	#100	22	27	27	14	34
0.075	#200	17.3	17.8	20.6	8.5	21.4
0.05	Hydrometer	15.6	13.6	19.3	6.1	16.2
0.025		13.0	8.6	17.3	3.6	10.2
0.02		12.2	7.3	16.7	3.1	8.9
0.01		9.9	5.0	15.1	2.4	6.2
0.005		8.0	3.9	13.5	2.3	4.9
0.002		5.8	3.1	11.6	2.2	3.7

*Sample tested with the large-scale wet-sieve method as opposed to dry sieve

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Laboratory Test Results - Soil Particle Size Distribution with Hydrometer

Date: December 17, 2019
Job No: **91900d**
Job Name: **Tailings and Gila Conglomerate Physical and Hydraulic Properties Testing Analysis**
Job Description: Physical and Hydraulic Property Testing on Tailings and Gila Conglomerate
Company: Klohn Crippen Berger

Pre-Test PSD						
Mesh (mm)	Sieve	Sample ID				
		TPC19-5*	TPC19-6	TPC19-7*	TPC19-8	TPC19-9
		Percent Passing				
152	6"	100	100	100	100	100
100	4"	100	100	100	100	100
75	3"	100	100	100	100	100
50.8	2"	100	100	100	100	100
38.1	1.5"	100	100	99	100	100
25.4	1"	83	100	90	100	100
19.05	3/4"	82	98	85	99	97
12.7	1/2"	80	94	79	97	92
9.525	3/8"	79	92	73	95	89
6.4	0.25"	77	89	64	89	86
4.75	#4	75	85	58	85	82
2.36	#8	71	69	44	71	74
2	#10	70	65	42	69	73
1.18	#16	64	52	31	54	63
0.6	#30	55	38	20	34	49
0.425	#40	50	32	16	25	43
0.3	#50	43	25	12	14	38
0.15	#100	28	14	7.3	3.3	27
0.075	#200	17.4	8.4	4.8	1.3	21.4
0.05	Hydrometer	13.8	6.7	3.2	0.9	16.5
0.025		9.2	5.1	1.6	0.7	11.1
0.02		8.0	4.8	1.3	0.7	10.0
0.01		5.2	4.4	0.8	0.9	8.0
0.005		3.5	4.3	0.7	1.1	7.4
0.002		2.6	3.8	0.8	1.2	6.8

*Sample tested with the large-scale wet-sieve method as opposed to dry sieve

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Laboratory Test Results - Soil Particle Size Distribution with Hydrometer

Date: December 17, 2019
Job No: **91900d**
Job Name: **Tailings and Gila Conglomerate Physical and Hydraulic Properties Testing Analysis**
Job Description: Physical and Hydraulic Property Testing on Tailings and Gila Conglomerate
Company: Klohn Crippen Berger

Pre-Test PSD						
Mesh (mm)	Sieve	Sample ID				
		TPC19-10*	TPC19-11	TPC19-12*	TPC19-13*	TPC19-14
		Percent Passing				
152	6"	100	100	100	100	100
100	4"	100	100	100	100	100
75	3"	100	100	100	100	100
50.8	2"	100	100	100	100	100
38.1	1.5"	100	100	100	100	100
25.4	1"	78	100	94	92	100
19.05	3/4"	76	98	94	90	97
12.7	1/2"	72	91	93	82	89
9.525	3/8"	69	88	92	77	84
6.4	0.25"	64	83	90	71	78
4.75	#4	61	79	89	67	74
2.36	#8	56	69	86	59	65
2	#10	55	68	86	57	62
1.18	#16	51	60	81	54	54
0.6	#30	45	45	72	48	43
0.425	#40	41	38	67	45	37
0.3	#50	37	29	60	42	29
0.15	#100	28	17	48	34	16
0.075	#200	24.6	11.8	38.2	29.3	10.8
0.05	Hydrometer	22.0	9.1	30.4	25.9	8.8
0.025		18.0	6.0	19.6	20.9	5.9
0.02		16.9	5.4	16.9	19.5	5.1
0.01		13.9	4.1	10.3	15.8	3.4
0.005		11.8	3.7	6.6	13.2	2.4
0.002		10.2	3.7	5.5	11.4	2.5

*Sample tested with the large-scale wet-sieve method as opposed to dry sieve

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520-628-9330
Fax: 520-628-1122
www.gsanalysis.com

Laboratory Test Results - Soil Particle Size Distribution with Hydrometer

Date: December 17, 2019
Job No: **91900d**
Job Name: **Tailings and Gila Conglomerate Physical and Hydraulic Properties Testing Analysis**
Job Description: Physical and Hydraulic Property Testing on Tailings and Gila Conglomerate
Company: Klohn Crippen Berger

Pre-Test PSD						
Mesh (mm)	Sieve	Sample ID				
		TPC19-15	TPC19-15 H	TPC19-16	TPC19-17*	TPC19-18*
		Percent Passing				
152	6"	100	100	100	100	100
100	4"	100	100	100	100	100
75	3"	100	100	100	100	100
50.8	2"	100	100	100	100	100
38.1	1.5"	100	99	100	100	100
25.4	1"	100	97	100	95	56
19.05	3/4"	99	94	97	94	54
12.7	1/2"	95	91	90	90	51
9.525	3/8"	92	88	86	88	48
6.4	0.25"	87	83	79	85	44
4.75	#4	84	80	74	83	42
2.36	#8	72	72	62	80	37
2	#10	69	72	60	79	36
1.18	#16	62	70	49	77	34
0.6	#30	50	64	37	71	30
0.425	#40	45	60	31	68	28
0.3	#50	39	54	25	63	25
0.15	#100	26	37	17	55	21
0.075	#200	19.0	25.8	13.5	50.6	18.4
0.05	Hydrometer	13.4	17.4	10.6	46.6	14.5
0.025		7.3	8.5	7.3	40.8	9.4
0.02		6.2	6.8	6.6	39.2	8.1
0.01		4.3	4.2	5.2	34.8	5.2
0.005		4.1	3.9	4.7	31.4	3.6
0.002		4.3	3.7	4.3	28.1	2.8

*Sample tested with the large-scale wet-sieve method as opposed to dry sieve

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Laboratory Test Results - Soil Particle Size Distribution with Hydrometer

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Job No: **91900d**
Job Name: **Tailings and Gila Conglomerate Physical and Hydraulic Properties Testing Analysis**
Job Description: Physical and Hydraulic Property Testing on Tailings and Gila Conglomerate
Company: Klohn Crippen Berger

Pre-Test PSD						
Mesh (mm)	Sieve	Sample ID				
		TPC19-19*	TPC19-20	TPC19-20 H	TPC19-21*	TPC19-22
		Percent Passing				
152	6"	100	100	100	100	100
100	4"	100	100	100	100	100
75	3"	100	100	100	100	100
50.8	2"	100	100	100	100	100
38.1	1.5"	100	100	100	100	100
25.4	1"	43	100	94	80	100
19.05	3/4"	42	96	91	78	99
12.7	1/2"	40	84	86	74	96
9.525	3/8"	39	75	82	71	94
6.4	0.25"	37	61	76	67	91
4.75	#4	36	53	72	65	88
2.36	#8	34	37	63	61	78
2	#10	33	34	62	61	77
1.18	#16	31	31	60	57	65
0.6	#30	29	27	56	53	45
0.425	#40	28	26	54	49	34
0.3	#50	26	24	51	45	23
0.15	#100	23	20	45	37	10
0.075	#200	20.3	17.6	42.4	33.9	6.4
0.05	Hydrometer	18.1	15.7	39.2	29.3	5.2
0.025		15.1	13.2	34.4	23.8	4.0
0.02		14.3	12.5	33.0	22.6	3.7
0.01		12.3	11.1	29.0	20.0	3.3
0.005		11.0	10.1	25.7	18.7	3.3
0.002		9.9	9.0	22.3	17.9	3.4

*Sample tested with the large-scale wet-sieve method as opposed to dry sieve

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Laboratory Test Results - Soil Particle Size Distribution with Hydrometer

Date: December 17, 2019
Job No: **91900d**
Job Name: **Tailings and Gila Conglomerate Physical and Hydraulic Properties Testing Analysis**
Job Description: Physical and Hydraulic Property Testing on Tailings and Gila Conglomerate
Company: Klohn Crippen Berger

Pre-Test PSD				
Mesh (mm)	Sieve	Sample ID		
		TPC19-23*	TPC19-24	Pyrite Tailing
		Percent Passing		
152	6"	100	100	100
100	4"	100	100	100
75	3"	100	100	100
50.8	2"	100	100	100
38.1	1.5"	100	100	100
25.4	1"	93	100	100
19.05	3/4"	92	95	100
12.7	1/2"	90	89	100
9.525	3/8"	88	86	100
6.4	0.25"	86	81	100
4.75	#4	84	78	100
2.36	#8	79	71	100
2	#10	78	69	100
1.18	#16	72	64	100
0.6	#30	63	55	100
0.425	#40	57	50	100
0.3	#50	50	41	100
0.15	#100	38	25	91
0.075	#200	30.7	18.0	78.6
0.05	Hydrometer	24.6	15.1	75.1
0.025		17.3	11.4	62.7
0.02		15.6	10.4	57.5
0.01		11.9	8.2	39.7
0.005		10.1	7.0	22.5
0.002		9.0	6.2	7.1

*Sample tested with the large-scale wet-sieve method as opposed to dry sieve

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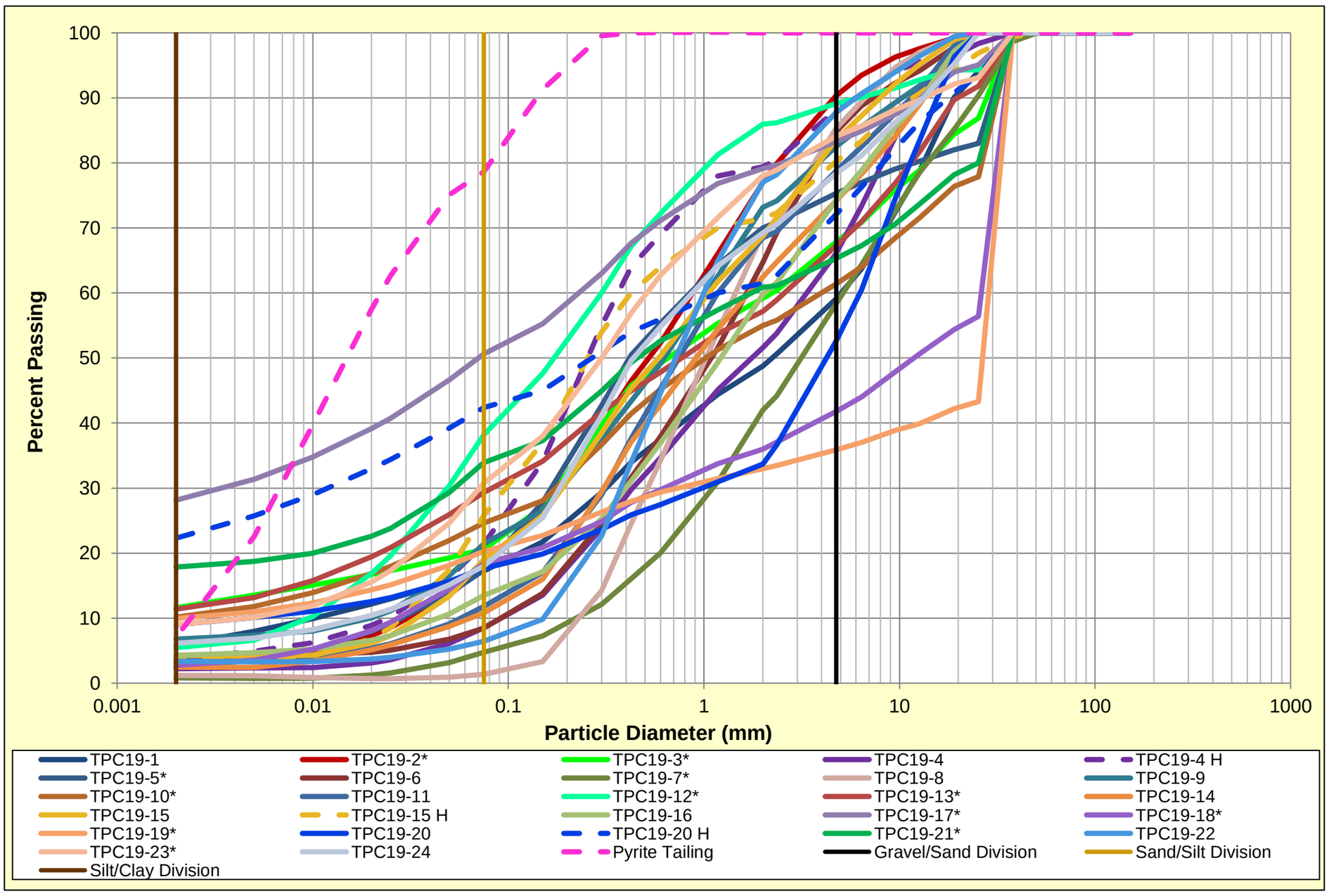
Job Name: **Tailings and Gila Conglomerate Physical and Hydraulic Properties Testing Analysis**
Job Description: Physical and Hydraulic Property Testing on Tailings and Gila Conglomerate
Company: Klohn Crippen Berger



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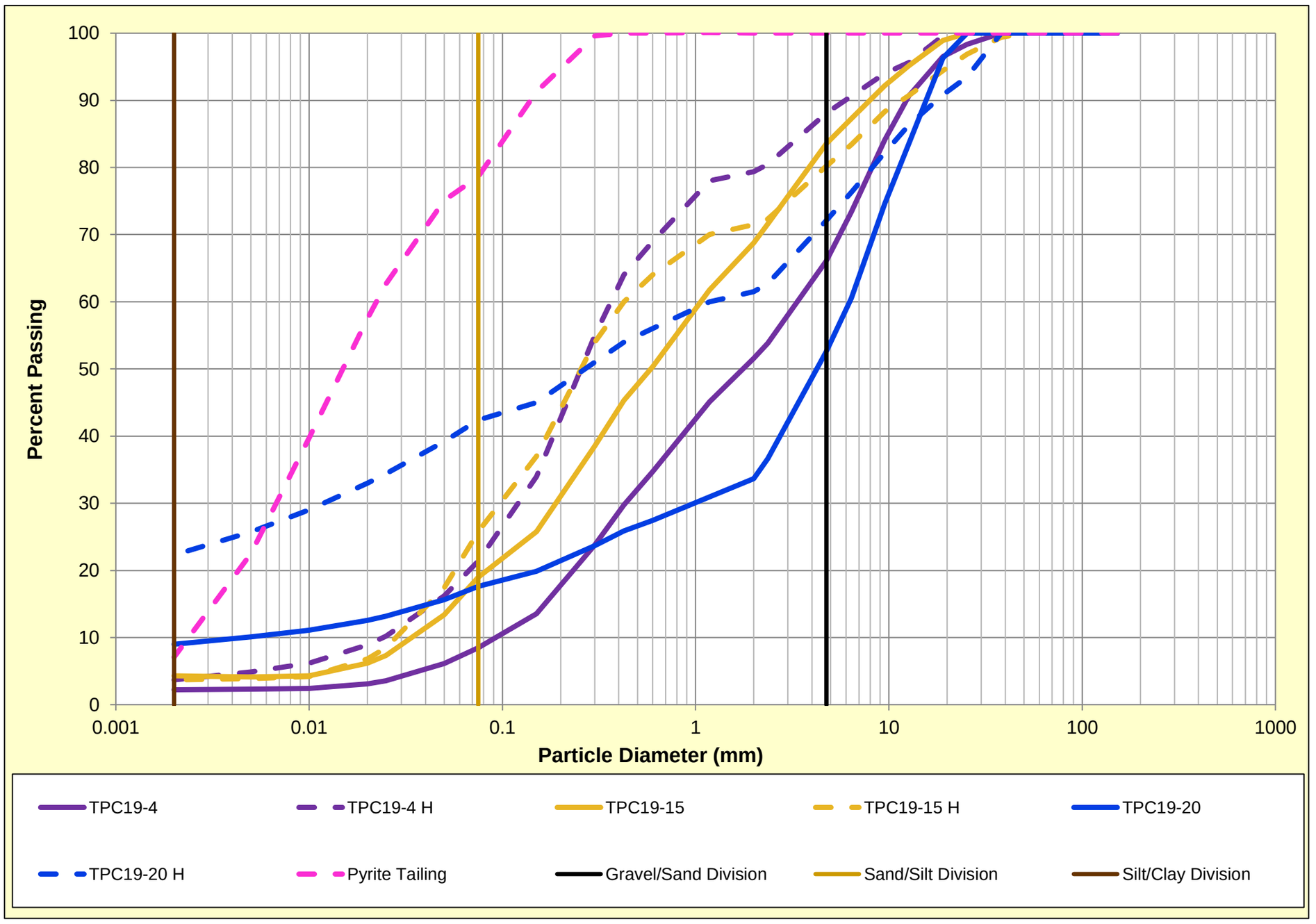

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Laboratory Test Results - Rigid Wall Saturated Hydraulic Conductivity

Date: December 17, 2019
Job No: **91900d**
Job Name: **Tailings and Gila Conglomerate Physical and Hydraulic Properties Testing Analysis**
Job Description: Physical and Hydraulic Property Testing on Tailings and Gila Conglomerate
Company: Klohn Crippen Berger

Saturated Hydraulic Conductivity - 2-inch Rigid Wall			
Sample ID	**Dry Bulk Density (g/cm^3)**	**Total Porosity (cm^3/cm^3)**	**Saturated Hydraulic Conductivity (cm/sec)**
Pyrite Tailing (Void Ratio 1.0)	1.80	0.49	1.7E-05
Pyrite Tailing (Void Ratio 0.8)	2.02	0.43	1.0E-05

Saturated Hydraulic Conductivity - 6-inch Rigid Wall			
Sample ID	**Dry Bulk Density (g/cm^3)**	**Total Porosity (cm^3/cm^3)**	**Saturated Hydraulic Conductivity (cm/sec)**
TPC19-15	1.54	0.46	1.3E-03

Saturated Hydraulic Conductivity - 12-inch Rigid Wall			
Sample ID	**Dry Bulk Density (g/cm^3)**	**Total Porosity (cm^3/cm^3)**	**Saturated Hydraulic Conductivity (cm/sec)**
TPC19-4	1.72	0.39	7.5E-04
TPC19-20	1.50	0.47	2.1E-03

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Laboratory Test Results - Moisture Retention Characteristic Curve

Date: December 17, 2019
Job No: **91900d**
Job Name: **Tailings and Gila Conglomerate Physical and Hydraulic Properties Testing Analysis**
Job Description: Physical and Hydraulic Property Testing on Tailings and Gila Conglomerate
Company: Klohn Crippen Berger

Sample ID	Bulk Density (g/cm^3)	Particle Density (g/cm^3)	Total Porosity (cm^3/cm^3)	Soil Water Potential (-cm)	Volumetric Water Content (cm^3/cm^3)
Pyrite Tailing	1.77	3.56	0.495	0	0.495
				5	0.481
				10	0.474
				30	0.470
				60	0.464
				133	0.460
				333	0.456
				600	0.423
				4030	0.083
				19900	0.035
				1248500	0.000
TCP19-4	1.73	2.75	0.383	0	0.383
				3	0.366
				5	0.363
				10	0.357
				30	0.333
				50	0.303
				60	0.287
				125	0.218
				333	0.177
				600	0.175
				35600	0.056
				88000	0.046
				883800	0.038
TCP19-15	1.57	2.86	0.451	0	0.451
				3	0.438
				5	0.436
				10	0.411
				30	0.374
				50	0.327
				60	0.315
				125	0.249
				333	0.199
				600	0.186
				22700	0.077
				779400	0.035
TCP19-20	1.50	2.83	0.469	0	0.469
				3	0.443
				5	0.440
				10	0.436
				30	0.360
				60	0.309
				125	0.273
				333	0.194
				600	0.179
				20400	0.073
				847000	0.029

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Laboratory Test Results - Moisture Retention Characteristic Curve

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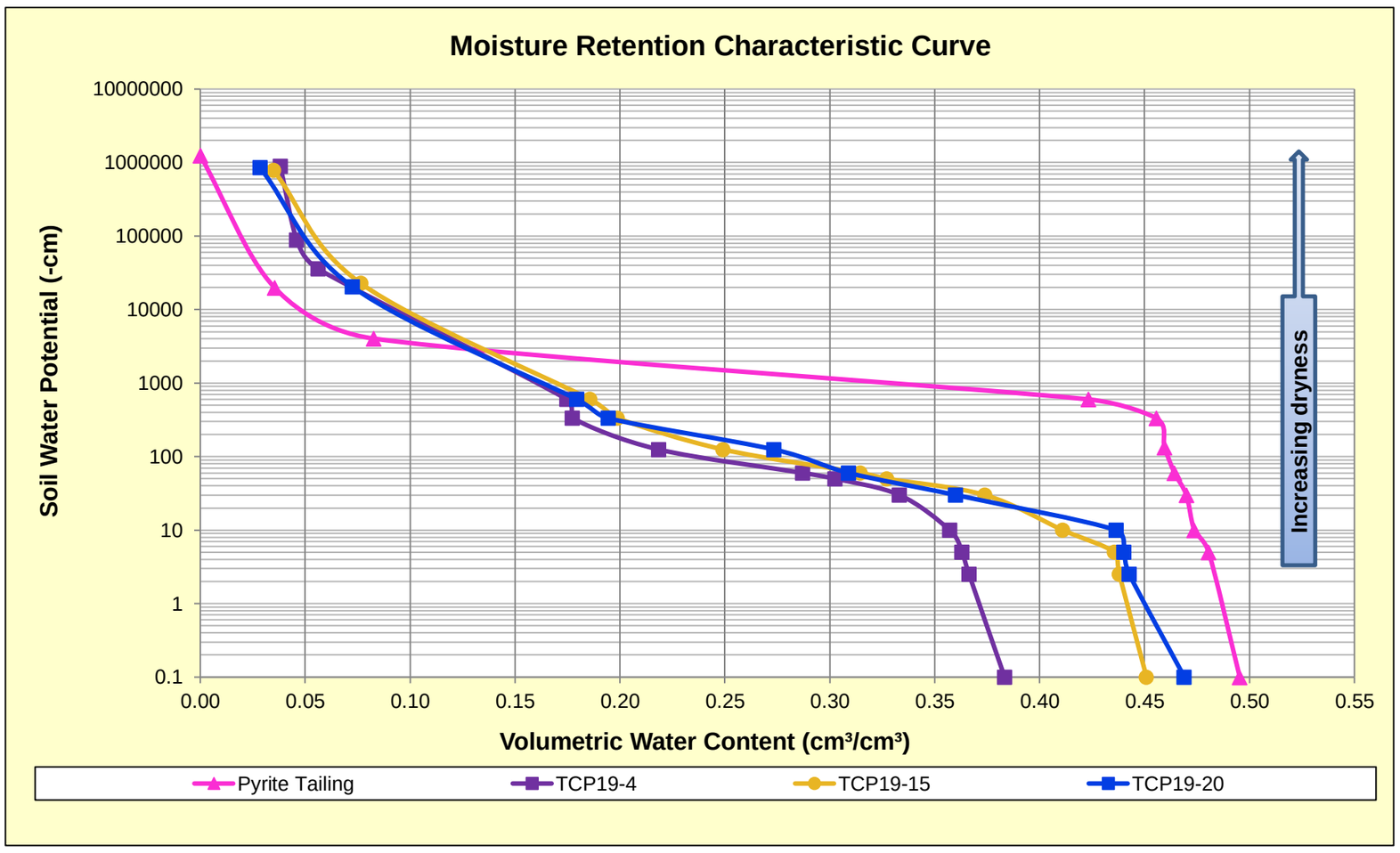
Job Description: Physical and Hydraulic Property Testing on Tailings and Gila Conglomerate
Company: Klohn Crippen Berger



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Laboratory Test Results - van Genuchten Fitted Moisture Retention Characteristics and Hydraulic Conductivity

Date: December 17, 2019
Job No: **91900d**
Job Name: **Tailings and Gila Conglomerate Physical and Hydraulic Properties Testing Analysis**
Job Description: Physical and Hydraulic Property Testing on Tailings and Gila Conglomerate
Company: Klohn Crippen Berger

Sample	Unsaturated Hydraulic Parameters					Saturated Hydraulic Conductivity (cm/sec)[b]
	Residual Water (cm^3/cm^3)[a]	Saturated Water (cm^3/cm^3)[a]	alpha (1/cm)[a]	N (-)[a]	L (-)[c]	
Pyrite Tailing	0.001	0.495	0.001	2.079	-1.000	2.80E-07 *
TPC19-4	0.020	0.380	0.035	1.298	-1.000	7.50E-04
TPC19-15	0.020	0.450	0.051	1.297	-1.000	1.30E-03
TPC19-20	0.005	0.469	0.068	1.269	-1.000	2.10E-03

a - fitted
b - measured
c - assumed
M = 1-1/N
* from KCB lab report

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Laboratory Test Results - van Genuchten Fitted Moisture Retention Characteristics and Hydraulic Conductivity

Date: December 17, 2019
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Job Name: **Tailings and Gila Conglomerate Physical and Hydraulic Properties Testing Analysis**
Job Description: Physical and Hydraulic Property Testing on Tailings and Gila Conglomerate
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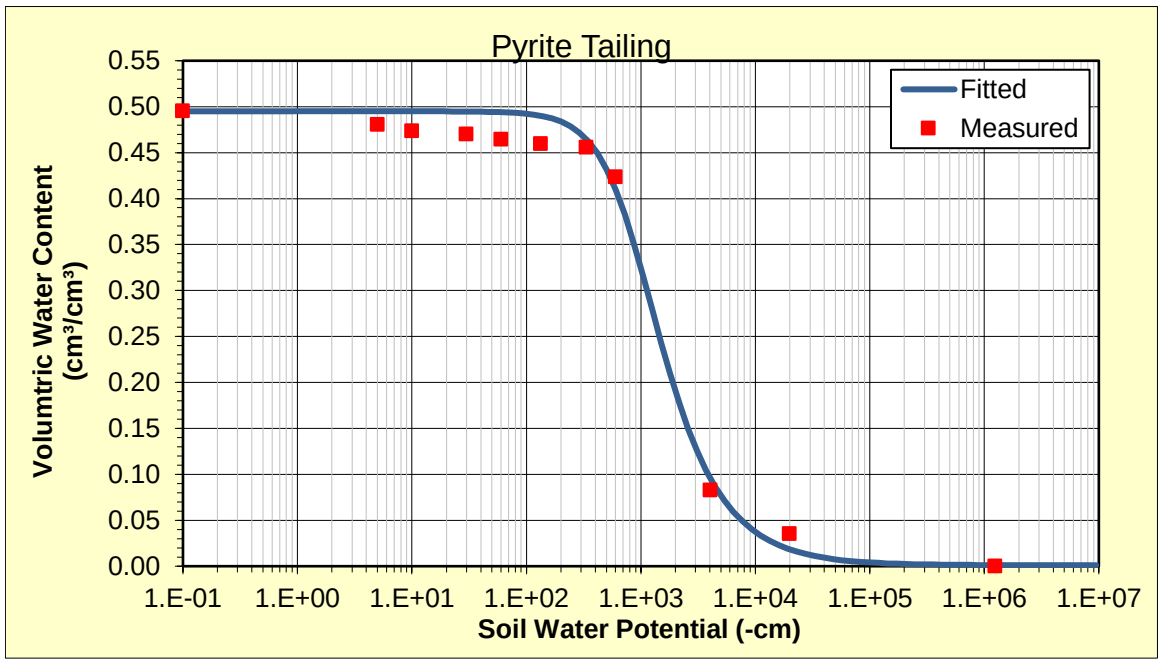

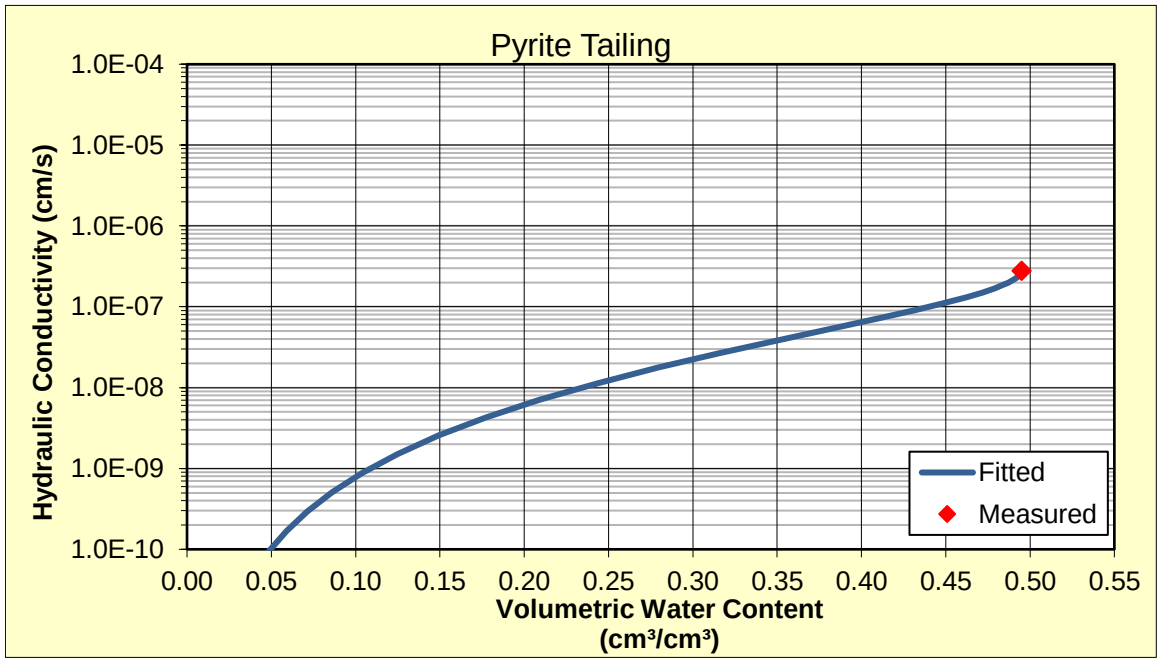

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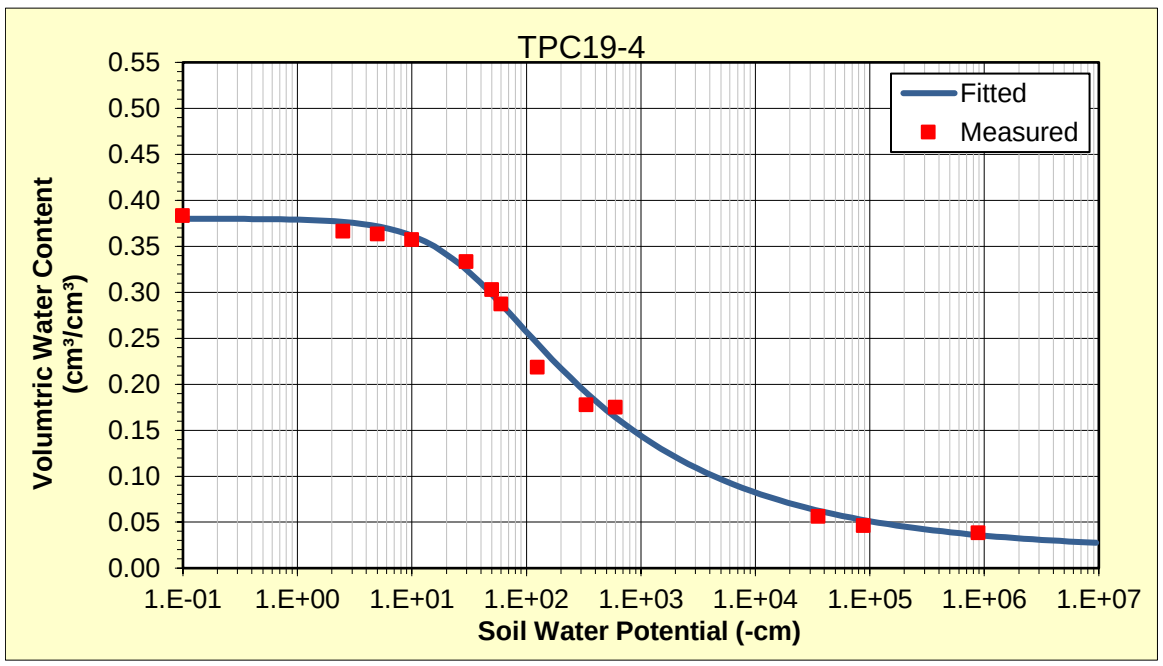

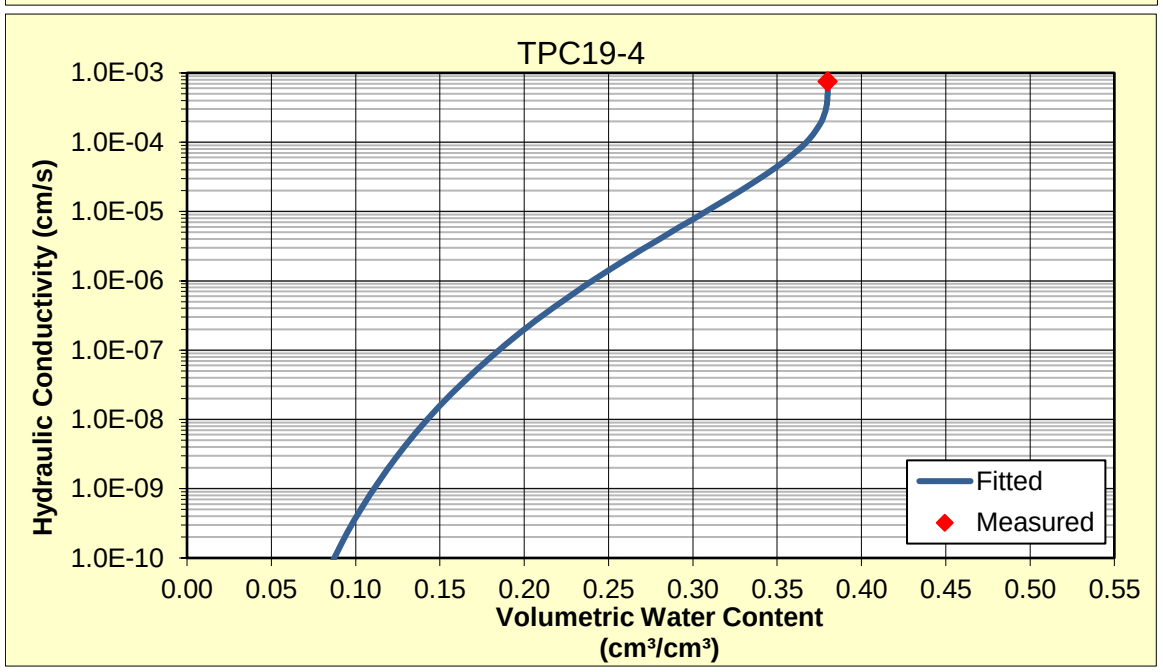

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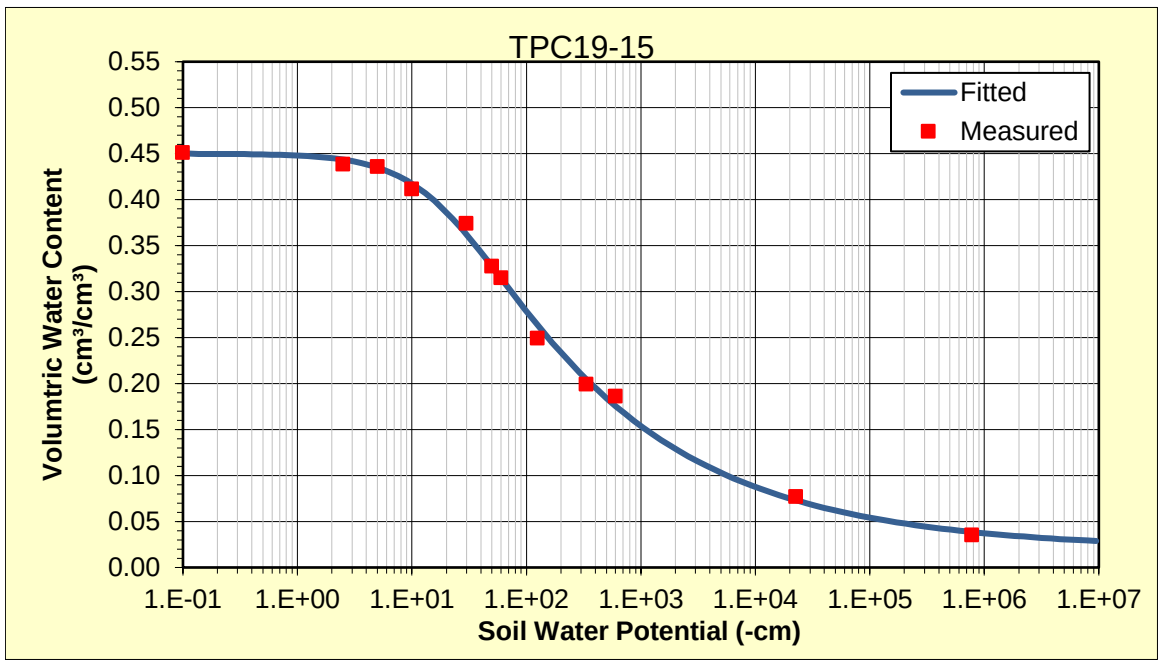

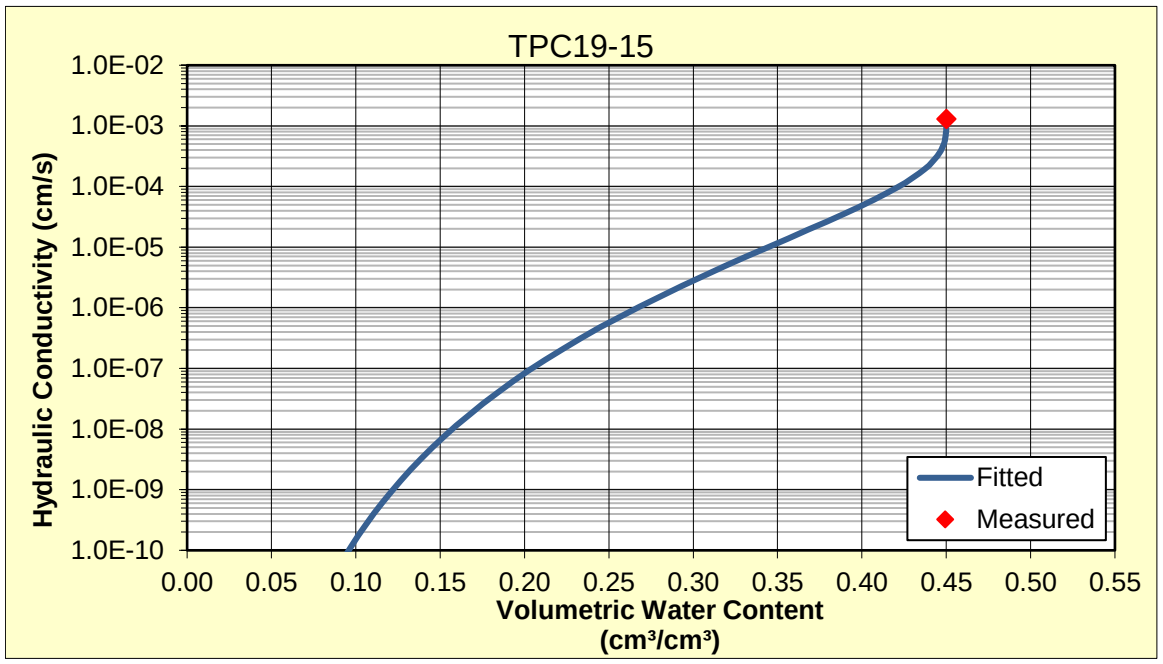

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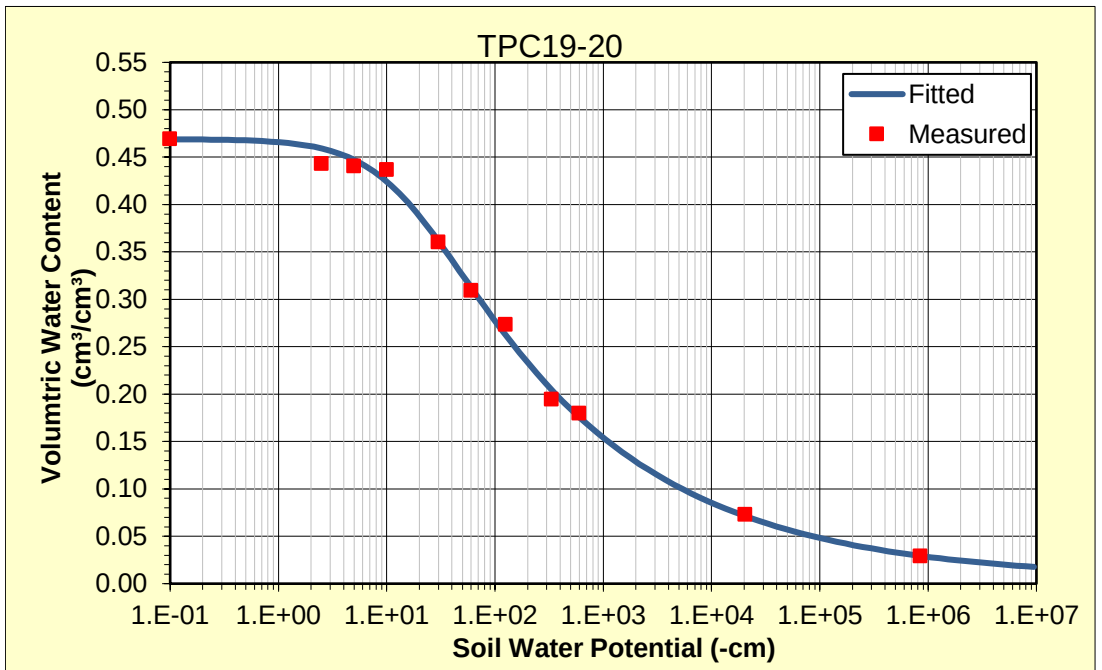

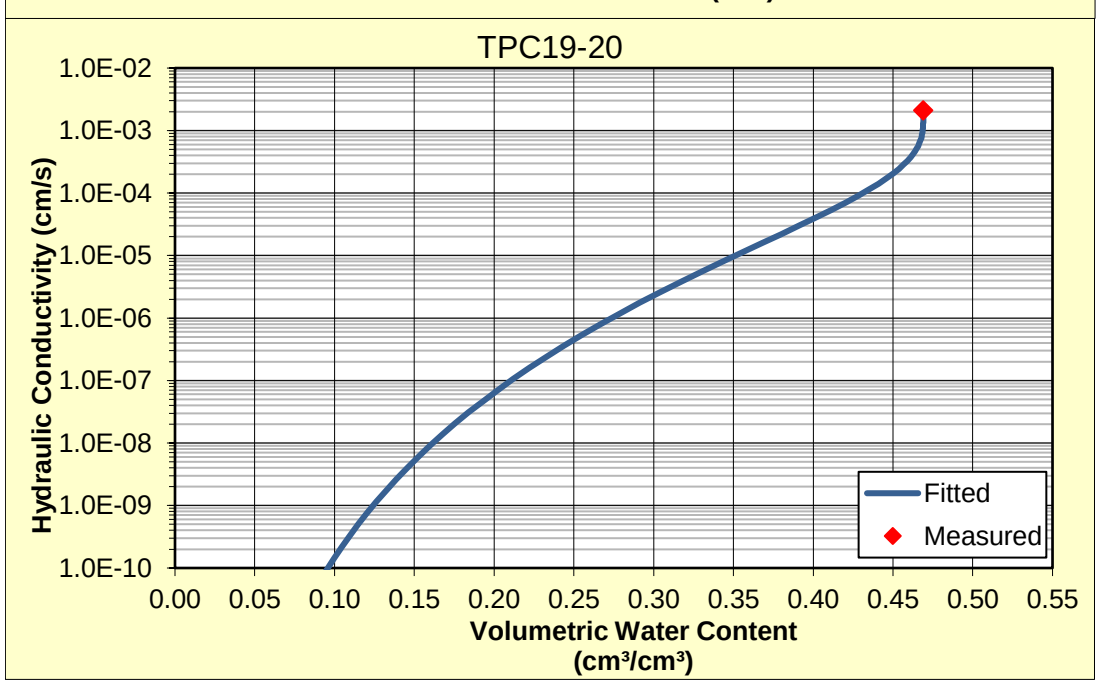

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Laboratory Test Results - Pinhole Test

Date: December 17, 2019

Job No: **91900d**

Job Name: **Tailings and Gila Conglomerate Physical and Hydraulic Properties Testing Analysis**

Job Description: Physical and Hydraulic Property Testing on Tailings and Gila Conglomerate

Company: Klohn Crippen Berger

Sample ID	Bulk Density* (g/cm3)	Packing Water content (g/g)	Classification of Test Results	Classification of Soil
TPC19-10	1.74	13.6	ND3	Intermediate
TPC19-10	1.68	13.2	ND3	Intermediate
TPC19-23	1.56	13.0	ND3	Intermediate
TPC19-23	1.51	12.9	ND3	Intermediate
TPC19-24	1.57	12.9	ND3	Intermediate
TPC19-24	1.52	13.1	D2	dispersive

*** High Density for tight packing, low density for light packing**

APPENDIX V

ALS Laboratory Results

December 13, 2019 Service Request No:T1901660

Julie L'Heureux
KCB Consultants
2 North Central Avenue
18th Floor
Phoenix, AZ 85004

Laboratory Results for: Skunk Camp Closure

Dear Julie,

Enclosed are the results of the sample(s) submitted to our laboratory September 20, 2019
For your reference, these analyses have been assigned our service request number **T1901660.**

All analyses were performed according to our laboratory's quality assurance program. All results are intended to be considered in their entirety, and ALS Environmental is not responsible for use of less than the complete report. Results
apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report.

Please contact me if you have any questions. My extension is 7102. You may also contact me via email at Wendy.Hyatt@alsglobal.com.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental

Wendy Hyatt
Client Services
Manager

ADDRESS 4208 S Santa Rita Avenue, Tucson, AZ 85714
PHONE +1 520 573 1061 | FAX +1 520 623 9218
ALS Group USA, Corp.
dba ALS Environmental

Client: Resolution Copper Mining LLC **Service Request:**T1901660

Project: Skunk Camp Closure/M09441A23

SAMPLE CROSS-REFERENCE

SAMPLE #	CLIENT SAMPLE ID	DATE	TIME
T1901660-025	TPC19-1	9/18/2019	0000
T1901660-026	TPC19-2	9/17/2019	0000
T1901660-027	TPC19-4	9/16/2019	0000
T1901660-028	TPC19-5	9/18/2019	0000
T1901660-029	TPC19-7	9/17/2019	0000
T1901660-030	TPC19-12	9/19/2019	0000
T1901660-031	TPC19-15	9/17/2019	0000
T1901660-032	TPC19-16	9/20/2019	0000
T1901660-033	TPC19-17	9/20/2019	0000
T1901660-034	TPC19-19	9/17/2019	0000

Chain of Custody

T1901660 5
KCB Consultants
Skunk Camp Closure

ALS Environmental – Tucson
ADDRESS 4208 S Santa Rita Ave, Tucson, AZ 85714
PHONE +1 520 573 1061 FAX +1 520 623 9218
ALS Group USA, Corp.

REPORTING				INVOICING			
Company Name:	KCB			AP Contact:			
Contact Name:				Company:			
Address:				Address:			
City, State ZIP:				Email:		Phone:	
Email:		Phone:		PO Number:			
CC Report to:							
Project Name:	skunk camp closure						
Project Number:	UM9441A23						
Sampler's Name:	Michael O'Byrne						

SAMPLE RECEIPT

Temperature (°C):		Temp Blank Present			
Received Intact:	Yes	No	N/A	Wet Ice / Blue Ice	
Cooler Custody Seals:	Yes	No	N/A	Total Containers:	
Sample Custody Seals:	Yes	No	N/A		

REQUESTED ANALYSIS

TAT (circle): same* next BD* 2BD* 3-4BD* 5BD* 6BD* routine** (approx.12)

* Please call for availability. Rush charges will apply.

**TAT depends on complexity of samples and analysis.

Sample Identification	Matrix	Date Sampled	Time Sampled	Lab ID	No. of Containers	Comments
TPC19-1	soil	9/18		001	1	
TPC19-2		9/17		002	1	
TPC19-3		9/18		003	1	
TPC19-4		9/16		004	1	
TPC19-5		9/18		005	1	
TPC19-6		9/17		006	1	
TPC19-7		9/17		007	1	
TPC19-8		9/19		008	1	
TPC19-9		9/20		009	1	
TPC19-10		9/19		010	1	
TPC19-11		9/19		011	1	

RELINQUISHED BY			RECEIVED BY		
Print Name	Signature	Date/Time	Print Name	Signature	Date/Time
Michael O'Byrne	Michael O'Byrne	9/20/19 17:04	Sonia N. Gonzalez	Sonia N. Gonzalez	9/20/19 (1705)

Chain of Custody

T1901660 5

KCB Consultants
Skunk Camp Closure

ALS Environmental – Tucson
ADDRESS 4208 S Santa Rita Ave, Tucson, AZ 85714
PHONE +1 520 573 1061 FAX +1 520 623 9218
ALS Group USA, Corp.

REPORTING				INVOICING			
Company Name:	KCB			AP Contact:			
Contact Name:				Company:			
Address:				Address:			
City, State ZIP:				Email:		Phone:	
Email:		Phone:		PO Number:			
CC Report to:							
Project Name:	Skunk Camp Closure						
Project Number:	M0944/A23						
Sampler's Name:	Michael O'Byrne						

SAMPLE RECEIPT

Temperature (°C):		Temp Blank Present	
Received Intact:	Yes No N/A	Wet Ice / Blue Ice	
Cooler Custody Seals:	Yes No N/A	Total Containers:	
Sample Custody Seals:	Yes No N/A		

REQUESTED ANALYSIS

TAT (circle): same* next BD* 2BD* 3-4BD* 5BD* 6BD* routine** (approx.12)

* Please call for availability. Rush charges will apply.

**TAT depends on complexity of samples and analysis.

Sample Identification	Matrix	Date Sampled	Time Sampled	Lab ID	No. of Containers	Comments
TPC19-12	SOIL	9/19		012	1	
TPC19-13		9/17		013	1	
TPC19-14		9/17		014	1	
TPC19-15		9/17		015	1	
TPC19-16		9/20		016	1	
TPC19-17		9/20		017	1	
TPC19-18		9/18		018	1	
TPC19-19		9/17		019	1	
TPC19-20		9/18		020	1	
TPC19-21		9/20		021	1	
TPC19-22		9/20		022	1	

RELINQUISHED BY			RECEIVED BY		
Print Name	Signature	Date/Time	Print Name	Signature	Date/Time
Michael O'Byrne	Michael O'Byrne	9/20/19 17:04	Sonia N. Gonzalez		9/20/19 1705

Revised: 1/3/09/2019

Chain of Custody

T1901660 5

KCB Consultants
Skunk Camp Closure

ALS Environmental – Tucson
ADDRESS 4208 S Santa Rita Ave, Tucson, AZ 85714
PHONE +1 520 573 1061 FAX +1 520 623 9218
ALS Group USA, Corp.

REPORTING			INVOICING		
Company Name:	TCB		AP Contact:		
Contact Name:			Company:		
Address:			Address:		
City, State ZIP:			Email:	Phone:	
Email:	kPatterson@tklohn.com Phone:		PO Number:		
CC Report to:	JLHeyreux@tklohn.com – mOByrne@tklohn.com				
Project Name:	Skunk Camp Closure				
Project Number:	M0441A23				
Sampler's Name:	Michael O'Byrne				

SAMPLE RECEIPT

Temperature (°C):		Temp Blank Present		
Received Intact:	Yes No N/A	Wet Ice / Blue Ice		
Cooler Custody Seals:	Yes No N/A	Total Containers:		
Sample Custody Seals:	Yes No N/A			

REQUESTED ANALYSIS

TAT (circle): same* next BD* 2BD* 3-4BD* 5BD* 6BD* routine** (approx.12)

* Please call for availability. Rush charges will apply.

**TAT depends on complexity of samples and analysis.

Sample Identification	Matrix	Date Sampled	Time Sampled	Lab ID	No. of Containers	Comments
TPC19-23	soil	9/19		023	1	
TPC19-24	soil	9/19		024	1	

RELINQUISHED BY

Print Name	Signature	Date/Time
michael O'Byrne	Michael O'Byrne	9/20/19 17:04

RECEIVED BY

Print Name	Signature	Date/Time
Sonia N. Gonzalez	Sonia N. Gonzalez	9/20/19 (1708)

Revised: 13/09/2019

Chain of Custody

T1901660 5
KCB Consultants
Skunk Camp Closure

ALS Environmental – Tucson
ADDRESS 4208 S Santa Rita Ave, Tucson, AZ 85714
PHONE +1 520 573 1061 FAX +1 520 623 9218
ALS Group USA, Corp.

REPORTING				INVOICING			
Company Name:	KCB			AP Contact:			
Contact Name:				Company:			
Address:				Address:			
City, State ZIP:				Email:		Phone:	
Email:		Phone:		PO Number:			
CC Report to:							
Project Name:	skunk camp closure						
Project Number:	UM9441A23						
Sampler's Name:	Michael O'Byrne						

SAMPLE RECEIPT

Temperature (°C):		Temp Blank Present			
Received Intact:	Yes	No	N/A	Wet Ice / Blue Ice	
Cooler Custody Seals:	Yes	No	N/A	Total Containers:	
Sample Custody Seals:	Yes	No	N/A		

REQUESTED ANALYSIS

TAT (circle)

same* next BD*
2BD* 3-4BD*
5BD* 6BD*
routine** (approx.12)

* Please call for availability. Rush charges will apply.

**TAT depends on complexity of samples and analysis.

Sample Identification	Matrix	Date Sampled	Time Sampled	Lab ID	No. of Containers	Comments
TPC19-1	soil	9/18		001	1	
TPC19-2		9/17		002	1	
TPC19-3		9/18		003	1	
TPC19-4		9/18		004	1	
TPC19-5		9/18		005	1	
TPC19-6		9/17		006	1	
TPC19-7		9/17		007	1	
TPC19-8		9/19		008	1	
TPC19-9		9/20		009	1	
TPC19-10		9/19		010	1	
TPC19-11		9/19		011	1	

RELINQUISHED BY

Print Name	Signature	Date/Time
Michael O'Byrne	Michael O'Byrne	9/20/19 17:07

RECEIVED BY

Print Name	Signature	Date/Time
Sonia N. Gonzalez	Sonia N. Gonzalez	9/20/19 (1705)

Chain of Custody

T1901660 5

KCB Consultants
Skunk Camp Closure

ALS Environmental – Tucson
ADDRESS 4208 S Santa Rita Ave, Tucson, AZ 85714
PHONE +1 520 573 1061 **FAX** +1 520 623 9218
ALS Group USA, Corp.

REPORTING				INVOICING			
Company Name:	KCB			AP Contact:			
Contact Name:				Company:			
Address:				Address:			
City, State ZIP:				Email:		Phone:	
Email:		Phone:		PO Number:			
CC Report to:							
Project Name:	Skunk camp closure						
Project Number:	M0944/A23						
Sampler's Name:	Michael O'Byrne						

SAMPLE RECEIPT

Temperature (°C):		Temp Blank Present	
Received Intact:	Yes No N/A	Wet Ice / Blue Ice	
Cooler Custody Seals:	Yes No N/A	Total Containers:	
Sample Custody Seals:	Yes No N/A		

REQUESTED ANALYSIS

TAT (circle): same* next BD* 2BD* 3-4BD* 5BD* 6BD* routine** (approx.12)

* Please call for availability. Rush charges will apply.

**TAT depends on complexity of samples and analysis.

Sample Identification	Matrix	Date Sampled	Time Sampled	Lab ID	No. of Containers	Comments
TPC19-12	soil	9/19		012	1	
TPC19-13		9/17		013	1	
TPC19-14		9/17		014	1	
TPC19-15		9/17		015	1	
TPC19-16		9/20		016	1	
TPC19-17		9/20		017	1	
TPC19-18		9/18		018	1	
TPC19-19		9/17		019	1	
TPC19-20		9/18		020	1	
TPC19-21		9/20		021	1	
TPC19-22		9/20		022	1	

RELINQUISHED BY			RECEIVED BY		
Print Name	Signature	Date/Time	Print Name	Signature	Date/Time
Michael O'Byrne	Michael O'Byrne	9/20/19 17:04	Sonia N. Gonzalez	Sonia N. Gonzalez	9/20/19 1705

Revised: 13/09/2019

Chain of Custody

T1901660 5

KCB Consultants
Skunk Camp Closure

ALS Environmental – Tucson
ADDRESS 4208 S Santa Rita Ave, Tucson, AZ 85714
PHONE +1 520 573 1061 FAX +1 520 623 9218
ALS Group USA, Corp.

REPORTING			INVOICING		
Company Name:	KCB		AP Contact:		
Contact Name:			Company:		
Address:			Address:		
City, State ZIP:			Email:	Phone:	
Email:	kPatterson@tklohn.com Phone:		PO Number:		
CC Report to:	JLHeyreux@tklohn.com – mOByrne@tklohn.com				
Project Name:	Skunk Camp Closure				
Project Number:	M0a441A23				
Sampler's Name:	Michael O'Byrne				

SAMPLE RECEIPT

Temperature (°C):		Temp Blank Present		
Received Intact:	Yes No N/A	Wet Ice / Blue Ice		
Cooler Custody Seals:	Yes No N/A	Total Containers:		
Sample Custody Seals:	Yes No N/A			

REQUESTED ANALYSIS

TAT (circle): same* next BD* 2BD* 3-4BD* 5BD* 6BD* routine** (approx.12)

* Please call for availability. Rush charges will apply.

**TAT depends on complexity of samples and analysis.

Sample Identification	Matrix	Date Sampled	Time Sampled	Lab ID	No. of Containers	Comments
TPC19-23	soil	9/19		023	1	
TPC19-24	soil	9/19		024	1	

RELINQUISHED BY

Print Name	Signature	Date/Time
michael O'Byrne	Michael O'Byrne	9/20/19 17:04

RECEIVED BY

Print Name	Signature	Date/Time
Sonia N. Gonzalez	Sonia N. Gonzalez	9/20/19 (1705)

Revised: 13/09/2019

4208 S. Santa Rita Ave.
Tucson, AZ 85714
T: +1 520 573 1061
www.alsglobal.com

Sample Receipt Form

T1901660 5
KCB Consultants
Skunk Camp Closure

Client/Project: **KCB/Resolution Copper** Work Order Number:

Received by: Sonia Gonzalez Date & Time: 9/20/19 1705 Matrix: Solid

Samples were received via?: Hand Delivery Samples were received in: 5 Gallon Bucket x4

Were custody seals on containers? ○ Yes ○ No ◉ NA If yes, how many and where?

If present were custody seals intact? ○ Yes ◉ No If present, were they signed and dated? ○ Yes ◉ No

Arrival Temp C	Temp Blank C	Tracking Number
Ambient	N/A	N/A

Packing material used? N/A

Did all the bottles arrive in good condition (unbroken)? ◉ Yes ○ No ○ NA If No, record comments below

Did all sample labels and tags agree with COC? ◉ Yes ○ No ○ NA If No, record discrepancies below

Were all the appropriate containers and volumes received for the tests indicated? ◉ Yes ○ No ○ NA

Are samples received deemed acceptable? ◉ Yes ○ No

Comments:
24 samples in gallon ziplock bags.

Notes, discrepancies, & resolutions:

As a part of ISO 17025 protocols, ALS must notify clients that the quoted analytical methods performed by ALS may have minor modifications from the methods as published. These modifications are written into our Standard Operating Procedures and do not impact the quality of the data. Receipt of this document will be considered an acceptance of the procedures used by the laboratory for analysis unless notified by the client.
Modifications may include, but are not limited to:

- The analysis of a sample matrix that differs from that stated in the published method (example - ASTM D5865 Standard Test Method for Gross Calorific Value of Coal and Coke is used for other matrices such as biomass, Tire Derived Fuel, etc.).
- Analyzing a sample mass that differs from those in the published method (example - to accommodate samples with high concentrations of analyte, samples of limited volume, or to comply with the instrument manufacturer's operating guidelines).
- Instruments used for the analysis may differ from those listed in the published method (example - using ICP- OES when the method references flame Atomic Absorption Spectroscopy)

Location_ID	Lab Testing													
	ALS													
	ARD/ML Potential										Nutrient Availability for Vegetation			
	SDG TEMPLATE (S) Erosion TO USE	Sobek NP with siderite correction	Total Sulfur	Carbonate Neutralization Potential	Total Elemental analysis by four acid digest and ICP-AES / MS	by XR whole rock elemental F	Synthetic Precipitation Leaching Procedure (SPLP)	Toxicity Characteristic Leaching Procedure (TCLP)	Sulfur Speciation	Shake Flask Extraction Test.	total organic carbon	Organic matter	Available nutrients	Cation Exchange Capacity (CEC)
TPC19-1	Full + LQ	X	X	X	X	X	X	X	X	X	X	X	X	X
TPC19-2	Full + LQ	X	X	X	X	X	X	X	X	X	X	X	X	X
TPC19-3	std	X	X	X	X	X					X	X	X	X
TPC19-4	Full + LQ	X	X	X	X	X	X	X	X	X	X	X	X	X
TPC19-5	Full + LQ	X	X	X	X	X	X	X	X	X	X	X	X	X
TPC19-6	Full – SPLP	X	X	X	X	X		X	X	X	X	X	X	X
TPC19-7	STD SPLP + LQ	X	X	X	X	X	X				X	X	X	X
TPC19-8	STD	X	X	X	X	X					X	X	X	X
TPC19-9	STD	X	X	X	X	X					X	X	X	X
TPC19-10	STDX	X	X	X	X	X					X	X	X	X
TPC19-11	STD	X	X	X	X	X					X	X	X	X
TPC19-12	Full + LQ	X	X	X	X	X	X	X	X	X	X	X	X	X
TPC19-13	STD	X	X	X	X	X					X	X	X	X
TPC19-14	STD	X	X	X	X	X					X	X	X	X
TPC19-15	Full + LQ	X	X	X	X	X	X	X	X	X	X	X	X	X
TPC19-16	Full + LQ	X	X	X	X	X	X	X	X	X	X	X	X	X
TPC19-17	STD SPLP + LQ	X	X	X	X	X	X				X	X	X	X
TPC19-18	STD	X	X	X	X	X					X	X	X	X
TPC19-19	Full + LQ	X	X	X	X	X	X	X	X	X	X	X	X	X
TPC19-20	Full – SPLP	X	X	X	X	X		X	X	X	X	X	X	X
TPC19-21	STD	X	X	X	X	X					X	X	X	X
TPC19-22	STD	X	X	X	X	X					X	X	X	X
TPC19-23	STD X	X	X	X	X	X					X	X	X	X
TPC19-24	STD X	X	X	X	X	X					X	X	X	X

↑
SPLP requires seperate LIQUID LOG IN

Client: KCB Consultants
2 North Central Avenue
18th Floor
Phoenix, AZ 85004
Attn: Julie L'Heureux
Project: Skunk Camp Closure

Date Received: 9/20/19

Certificate of Analysis

Sample ID:	Sample Date:	Lab #:	pH, Saturated Paste Sobek 3.2.18 units	Sulfur, Total E1915 Moist Free wt%	Acid Potential Sobek 1.3.1 t CaCO3/1000t	Neutralization Potential (Siderite Correction) Sobek 3.2.3 t CaCO3/1000t	Acid - Base Accounting Sobek 1.3.1 t CaCO3/1000t	Total Inorganic Carbon calculation Moist Free wt% as CaCO3
TPC19-1	9/18/19	T1901660-001	5.72	0.03	1	9	8	0.33
TPC19-2	9/17/19	T1901660-002	7.73	<0.03	0	214	214	4.47
TPC19-3	9/18/19	T1901660-003	6.83	<0.03	0	23	23	0.19
TPC19-4	9/16/19	T1901660-004	7.76	<0.03	0	342	342	8.19
TPC19-5	9/18/19	T1901660-005	7.73	<0.03	0	210	210	4.62
TPC19-6	9/17/19	T1901660-006	7.77	<0.03	0	201	201	4.31
TPC19-7	9/17/19	T1901660-007	7.82	<0.03	0	377	377	9.71
TPC19-8	9/19/19	T1901660-008	7.80	<0.03	0	52	52	0.74
TPC19-9	9/20/19	T1901660-009	6.66	<0.03	0	19	19	0.18
TPC19-10	9/19/19	T1901660-010	7.41	0.03	1	18	17	0.16
TPC19-11	9/19/19	T1901660-011	7.06	<0.03	0	19	19	0.05
TPC19-12	9/19/19	T1901660-012	7.67	<0.03	0	133	133	4.45
TPC19-13	9/17/19	T1901660-013	6.55	<0.03	0	15	15	0.16
TPC19-14	9/17/19	T1901660-014	7.71	0.03	1	38	37	0.44
TPC19-15	9/17/19	T1901660-015	7.72	<0.03	0	208	208	2.26
TPC19-16	9/20/19	T1901660-016	5.94	0.03	1	18	17	0.26
TPC19-17	9/20/19	T1901660-017	7.13	<0.03	0	31	31	0.24
TPC19-18	9/18/19	T1901660-018	7.56	0.03	1	344	343	9.54

Client: KCB Consultants
2 North Central Avenue
18th Floor
Phoenix, AZ 85004
Attn: Julie L'Heureux
Project: Skunk Camp Closure

Date Received: 9/20/19

Certificate of Analysis

Sample ID:	Sample Date:	Lab #:	pH, Saturated Paste Sobek 3.2.18 units	Sulfur, Total E1915 Moist Free wt%	Acid Potential Sobek 1.3.1 t CaCO3/1000t	Neutralization Potential (Siderite Correction) Sobek 3.2.3 t CaCO3/1000t	Acid - Base Accounting Sobek 1.3.1 t CaCO3/1000t	Total Inorganic Carbon calculation Moist Free wt% as CaCO3
TPC19-19	9/17/19	T1901660-019	6.10	<0.03	0	16	16	0.08
TPC19-20	9/16/19	T1901660-020	6.11	<0.03	0	56	56	0.08
TPC19-21	9/20/19	T1901660-021	7.11	0.03	1	18	17	0.42
TPC19-22	9/20/19	T1901660-022	7.64	<0.03	0	32	32	0.56
TPC19-23	9/19/19	T1901660-023	7.07	<0.03	0	28	28	0.16
TPC19-24	9/19/19	T1901660-024	6.75	<0.03	0	17	17	0.13

Notes:

The Neutralization Potential - The HCl acid reaction was performed at without heating 24 hours and includes correction for Siderite.

Acid Potential value calculation = Total Sulfur wt% X 31.25 Acid - Base Potential calculation = NP - AP

Reporting Limit for Sulfur is 0.03 wt%.

Sulfur Form analyses were requested, but not performed since Total Sulfur values are all at or below the reporting limit 0.1 for Sulfur Forms.

Client: KCB Consultants
2 North Central Avenue
18th Floor
Phoenix, AZ 85004
Attn: Julie L'Heureux
Project: Skunk Camp Closure

Date Received: 9/20/19

Certificate of Analysis

Sample ID:	Sample Date:	Lab #:	Moisture, Total D2974 wt%	Carbon, Total EPA 440.0 Moist Free wt%	Total Organic Carbon EPA 9060 Khan Moist Free wt%	Organic Matter calculation Moist Free wt%	Nitrogen, Total D2974 Moist Free wt%	Cation Exchange Capacity EPA 9081
TPC19-1	9/18/19	T1901660-001	2.58	1.7	1.6	2.7	0.2	27.3
TPC19-2	9/17/19	T1901660-002	6.08	2.2	0.4	0.8	<0.1	47.5
TPC19-3	9/18/19	T1901660-003	6.32	1.0	1.0	1.7	0.1	48.3
TPC19-4	9/16/19	T1901660-004	6.62	3.9	0.6	1.0	0.1	43.7
TPC19-5	9/18/19	T1901660-005	5.21	2.3	0.4	0.7	<0.1	40.1
TPC19-6	9/17/19	T1901660-006	6.06	2.6	0.8	1.4	0.1	38.2
TPC19-7	9/17/19	T1901660-007	4.50	4.0	0.1	0.2	<0.1	37.4
TPC19-8	9/19/19	T1901660-008	1.53	0.4	0.1	0.2	<0.1	16.9
TPC19-9	9/20/19	T1901660-009	3.41	1.1	1.1	1.8	0.2	34.3
TPC19-10	9/19/19	T1901660-010	3.71	1.7	1.6	2.8	0.2	35.6
TPC19-11	9/19/19	T1901660-011	2.21	0.4	0.3	0.6	<0.1	23.4
TPC19-12	9/19/19	T1901660-012	6.27	2.5	0.7	1.2	<0.1	50.6
TPC19-13	9/17/19	T1901660-013	6.02	0.8	0.7	1.2	0.1	40.7
TPC19-14	9/17/19	T1901660-014	3.37	1.4	1.3	2.2	0.2	32.5
TPC19-15	9/17/19	T1901660-015	7.25	1.6	0.7	1.1	0.1	51.9
TPC19-16	9/20/19	T1901660-016	3.23	1.4	1.3	2.3	0.2	30.6

Client: KCB Consultants
2 North Central Avenue
18th Floor
Phoenix, AZ 85004
Attn: Julie L'Heureux
Project: Skunk Camp Closure

Date Received: 9/20/19

Certificate of Analysis

Sample ID:	Sample Date:	Lab #:	Moisture, Total D2974 wt%	Carbon, Total EPA 440.0 Moist Free wt%	Total Organic Carbon EPA 9060 Khan Moist Free wt%	Organic Matter calculation Moist Free wt%	Nitrogen, Total D2974 Moist Free wt%	Cation Exchange Capacity EPA 9081
TPC19-17	9/20/19	T1901660-017	7.13	1.1	1.0	1.8	0.2	71.7
TPC19-18	9/18/19	T1901660-018	2.76	5.1	1.3	2.2	0.2	30.6
TPC19-19	9/17/19	T1901660-019	6.21	1.4	1.3	2.3	0.2	43.3
TPC19-20	9/16/19	T1901660-020	39.49	0.8	0.8	1.3	<0.1	69.1
TPC19-21	9/20/19	T1901660-021	3.86	1.8	1.6	2.8	0.2	40.5
TPC19-22	9/20/19	T1901660-022	1.96	0.4	0.2	0.4	<0.1	17.5
TPC19-23	9/19/19	T1901660-023	5.00	0.6	0.6	1.0	<0.1	38.9
TPC19-24	9/19/19	T1901660-024	2.91	0.7	0.6	1.1	0.2	28.8

Client: KCB Consultants
2 North Central Avenue
18th Floor
Phoenix, AZ 85004
Attn: Julie L'Heureux
Project: Skunk Camp Closure

Date Received: 9/20/19

Certificate of Analysis

Sample ID:	Sample Date:	Lab #:	AB-DTPA Extractable Nutrients								
			Ca	Cu	Fe	Mg	MN	P	K	Na	Zn
			EPA 6010 ICP-OES								
			mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
TPC19-1	9/18/19	T1901660-001	314	12	50	153	27	17	408	13	3.0
TPC19-2	9/17/19	T1901660-002	391	4	3	80	3	4	160	4	<0.4
TPC19-3	9/18/19	T1901660-003	230	7	13	543	21	4	158	21	0.5
TPC19-4	9/16/19	T1901660-004	407	3	3	53	3	2	39	4	<0.4
TPC19-5	9/18/19	T1901660-005	389	2	3	163	5	3	181	5	<0.4
TPC19-6	9/17/19	T1901660-006	440	3	3	95	<2	2	70	5	<0.4
TPC19-7	9/17/19	T1901660-007	336	1	8	194	2	1	119	28	<0.4
TPC19-8	9/19/19	T1901660-008	317	1	25	97	13	3	182	24	<0.4
TPC19-9	9/20/19	T1901660-009	348	9	25	182	18	9	283	2	1.0
TPC19-10	9/19/19	T1901660-010	284	12	12	384	33	8	996	3	1.3
TPC19-11	9/19/19	T1901660-011	319	2	10	156	9	5	111	6	<0.4
TPC19-12	9/19/19	T1901660-012	410	5	6	62	7	4	84	4	<0.4
TPC19-13	9/17/19	T1901660-013	240	4	12	450	30	2	214	19	<0.4
TPC19-14	9/17/19	T1901660-014	350	10	13	171	7	22	367	46	1.9
TPC19-15	9/17/19	T1901660-015	402	4	4	76	5	5	97	5	<0.4
TPC19-16	9/20/19	T1901660-016	309	10	39	136	19	21	253	4	2.0

Client: KCB Consultants
2 North Central Avenue
18th Floor
Phoenix, AZ 85004
Attn: Julie L'Heureux
Project: Skunk Camp Closure

Date Received: 9/20/19

Certificate of Analysis

Sample ID:	Sample Date:	Lab #:	AB-DTPA Extractable Nutrients								
			Ca	Cu	Fe	Mg	MN	P	K	Na	Zn
			EPA 6010 ICP-OES								
			mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
TPC19-17	9/20/19	T1901660-017	240	5	33	407	21	4	169	12	<0.4
TPC19-18	9/18/19	T1901660-018	360	11	6	59	10	8	196	2	0.6
TPC19-19	9/17/19	T1901660-019	213	9	24	458	36	4	220	15	0.7
TPC19-20	9/16/19	T1901660-020	342	5	23	945	31	3	134	44	<0.4
TPC19-21	9/20/19	T1901660-021	283	14	13	340	29	12	354	3	1.9
TPC19-22	9/20/19	T1901660-022	311	2	22	128	13	4	158	20	0.4
TPC19-23	9/19/19	T1901660-023	355	5	6	135	<2	3	133	3	<0.4
TPC19-24	9/19/19	T1901660-024	291	8	11	249	12	18	299	4	1.0

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Certificate of Analysis

Sample ID:	Sample Date:	Lab #:	Saturated Paste Sobek 3.2.18 wt%	Conductivity, Sat Paste Extraction Sobek 3.2.18 uS/cm at 25C				
TPC19-1	9/18/19	T1901660-001	31.0	469				
TPC19-2	9/17/19	T1901660-002	36.8	357				
TPC19-3	9/18/19	T1901660-003	34.6	417				
TPC19-4	9/16/19	T1901660-004	36.0	266				
TPC19-5	9/18/19	T1901660-005	35.8	295				
TPC19-6	9/17/19	T1901660-006	33.2	248				
TPC19-7	9/17/19	T1901660-007	35.1	248				
TPC19-8	9/19/19	T1901660-008	28.5	440				
TPC19-9	9/20/19	T1901660-009	30.0	492				
TPC19-10	9/19/19	T1901660-010	37.5	1,669				
TPC19-11	9/19/19	T1901660-011	24.1	379				
TPC19-12	9/19/19	T1901660-012	43.9	365				
TPC19-13	9/17/19	T1901660-013	36.5	342				
TPC19-14	9/17/19	T1901660-014	28.6	625				
TPC19-15	9/17/19	T1901660-015	38.5	468				
TPC19-16	9/20/19	T1901660-016	31.3	316				

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Certificate of Analysis

Sample ID:	Sample Date:	Lab #:	Saturated Paste Sobek 3.2.18 wt%	Conductivity, Sat Paste Extraction Sobek 3.2.18 uS/cm at 25C				
TPC19-17	9/20/19	T1901660-017	54.7	557				
TPC19-18	9/18/19	T1901660-018	43.7	528				
TPC19-19	9/17/19	T1901660-019	45.6	345				
TPC19-20	9/16/19	T1901660-020	45.5	209				
TPC19-21	9/20/19	T1901660-021	42.0	691				
TPC19-22	9/20/19	T1901660-022	21.9	414				
TPC19-23	9/19/19	T1901660-023	31.4	349				
TPC19-24	9/19/19	T1901660-024	29.2	477				

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Date Received: 9/20/19

Quality Control

			pH, Saturated Paste	Sulfur, Total	Acid Potential	Neutralization Potential (Siderite Correction)	Acid - Base Accounting	Total Inorganic Carbon
			Sobek 3.2.18	E1915	Sobek 1.3.1	Sobek 3.2.3	Sobek 1.3.1	calculation
			units	Moist Free wt%	t CaCO3/1000t	t CaCO3/1000t	t CaCO3/1000t	Moist Free wt% as CaCO3
Prep Blank			n/a	<0.02	calculation	<1	calculation	calculation
LCS			**pH 8.0**	**AR744**		**CaCO3**		
		Observed Value	7.99	2.47		964		
		True Value	8.00	2.50		1,000		
		%R	**99.9**	**98.8**		**96.4**		
Duplicate			**T1901660-001**	**T1901660-001**		**T1901660-001**		
		Observed Value	5.72	0.03		9		
		Duplicate Value	5.72	0.03		8		
		%RPD	**0.0**	**0.0**		**11.8**		
		Observed Value	**T1901660-011**	**T1901660-007**		**T1901660-021**		
		Duplicate Value	5.72	<0.03		18		
		%RPD	5.72	<0.03		18		
			0.0	-		**0.0**		

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Quality Control

			Moisture, Total	Carbon, Total	Total Organic Carbon	Organic Matter	Nitrogen, Total	Cation Exchange Capacity
			D2974	EPA 440.0	EPA 9060 Khan	calculation	D2974	EPA 9081
			wt%	Moist Free wt%	Moist Free wt%	Moist Free wt%	Moist Free wt%	
Prep Blank			<0.01	<0.02	<0.02	calculation	<0.1	<1
LCS			LCS sand and water	EDTA	CRM 029		EDTA	ICV IV-26
		Observed Value	22.89	41.08	25.80		9.56	10.09
		True Value	22.98	41.10	22.25		9.58	10.05
		%R	**99.6**	**100.0**	**116.0**		**99.8**	**100.4**
Duplicate			J1905604-001	T1901660-001	T1901660-001		T1901660-001	T1901660-001
		Observed Value	6.78	1.70	1.57		0.23	27.35
		Duplicate Value	6.74	1.64	1.55		0.22	27.79
		%RPD	**0.6**	**3.7**	**1.3**		**4.7**	**1.6**
Duplicate			T1901660-013	T1901660-007	T1901660-011		T1901660-011	T1901660-011
		Observed Value	6.02	4.00	0.34		<0.1	23.35
		Duplicate Value	5.99	4.08	0.33		<0.1	23.36
		%RPD	**0.5**	**2.1**	**3.1**		-	**0.0**

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Date Received: 9/20/19

Quality Control

			AB-DTPA Extractable Nutrients								
			Ca	Cu	Fe	Mg	Mn	P	K	Na	Zn
			EPA 6010 ICP-OES								
			mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
Prep Blank			<4	<0.2	<0.6	<10	<2	<1	<10	<2	<0.4
LCS			ICSA/B AB-DTPA								
		Observed Value	383	2.2	111.4	115	12	11	13	384	3.4
		True Value	388	1.8	114.8	115	12	12	12	389	3.3
		%R	**98.7**	**122.2**	**97.0**	**100.0**	**100.0**	**91.7**	**108.3**	**98.7**	**103.0**
Duplicate			T1901660-001								
		Observed Value	314	11.7	50.0	153	27	17	408	13	3.0
		Duplicate Value	302	12.3	49.4	159	28	18	430	13	3.2
		%RPD	**3.9**	**5.0**	**1.2**	**3.8**	**3.6**	**5.7**	**5.3**	**0.0**	**6.5**
Duplicate			T1901660-011								
		Observed Value	319	2.0	10.4	156	9	5	111	6	<0.4
		Duplicate Value	328	2.5	10.2	165	11	6	119	6	<0.4
		%RPD	**2.9**	**22.2**	**1.9**	**5.6**	**20.0**	**18.2**	**7.0**	**0.0**	-

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Attn: Julie L'Heureux
Project: Skunk Camp Closure

Date Received: 9/20/19

Quality Control

			Saturated Paste Sobek 3.2.18 wt%	Conductivity, Sat Paste Extraction Sobek 3.2.18 uS/cm at 25C				
Prep Blank			<0.01	1.05				

LCS		LCS sand and water	Cond Std 6200
	Observed Value	9.21	1,285
	True Value	9.16	1,412
	%R	**100.5**	**91.0**

Duplicate		T1901660-001	T1901660-001
	Observed Value	31	469
	Duplicate Value	32	466
	%RPD	**3.5**	**0.6**

		T1901660-011	T1901660-011
	Observed Value	24	379
	Duplicate Value	29	368
	%RPD	**17.2**	**2.9**

Subcontracted Work

ALS Environmental - Kelso, Washington

October 25, 2019 Service Request No:T1901660

Julie L'Heureux
KCB Consultants
2 North Central Avenue
18th Floor
Phoenix, AZ 85004

Laboratory Results for: Skunk Camp Closure

Dear Julie,

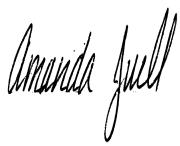
Enclosed are the results of the sample(s) submitted to our laboratory October 08, 2019
For your reference, these analyses have been assigned our service request number **T1901660.**

All analyses were performed according to our laboratory's quality assurance program. All results are intended to be considered in their entirety, and ALS Environmental is not responsible for use of less than the complete report. Results
apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report.

Please contact me if you have any questions. My extension is 3342. You may also contact me via email at Amanda.Juell@alsglobal.com.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental



Amanda Juell
Project Manager

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ALS Group USA, Corp.
dba ALS Environmental

Narrative Documents

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360) 577-7222 Fax (360) 425-9096
www.alsglobal.com

Client: Resolution Copper Mining LLC
Project: Skunk Camp Closure
Sample Matrix: Soil, Water

Service Request: T1901660
Date Received: 10/08/2019

CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of ALS Environmental. This report contains analytical results for samples for the Tier II level requested by the client.

Sample Receipt:

Twenty two soil, water samples were received for analysis at ALS Environmental on 10/08/2019. Any discrepancies upon initial sample inspection are annotated on the sample receipt and preservation form included within this report. The samples were stored at minimum in accordance with the analytical method requirements.

Metals:

Method 6010C, 10/23/2019: The matrix spike recovery of Silicon for sample TPC19-4 was outside control criteria. Recovery in the Laboratory Control Sample (LCS) was acceptable, which indicated the analytical batch was in control. No further corrective action was appropriate.

General Chemistry:

No significant anomalies were noted with this analysis.

Approved by Amanda Juell Date 10/25/2019

SAMPLE DETECTION SUMMARY

CLIENT ID: TPC19-1			Lab ID: T1901660-001			
Analyte	**Results**	**Flag**	**MDL**	**MRL**	**Units**	**Method**
Aluminum	3.52			0.050	mg/L	6010C
Aluminum	8.89			0.010	mg/L	6010C
Bismuth	0.00056			0.00050	mg/L	6020A
Boron	0.040			0.040	mg/L	6010C
Cadmium	0.022			0.020	mg/L	6010C
Calcium	4.8			1.0	mg/L	6010C
Calcium	40.4			0.10	mg/L	6010C
Cobalt	0.020			0.010	mg/L	6010C
Copper	0.045			0.010	mg/L	6010C
Iron	12.4			0.020	mg/L	6010C
Iron	5.44			0.10	mg/L	6010C
Lead	0.011			0.010	mg/L	6010C
Magnesium	6.99			0.050	mg/L	6010C
Magnesium	1.73			0.080	mg/L	6010C
Manganese	1.11			0.0050	mg/L	6010C
Manganese	0.095			0.010	mg/L	6010C
Phosphorus	1.02			0.20	mg/L	6010C
Phosphorus	0.935			0.040	mg/L	6010C
Potassium	12.7			1.0	mg/L	6010C
Potassium	5.24			0.20	mg/L	6010C
Silicon	8.6			1.0	mg/L	6010C
Silicon	15.3			1.0	mg/L	6010C
Sodium	1320			1.0	mg/L	6010C
Strontium	0.022			0.010	mg/L	6010C
Strontium	0.184			0.0050	mg/L	6010C
Uranium	0.00026			0.00020	mg/L	6020A
Uranium	0.00029			0.00020	mg/L	6020A
Zinc	0.0235			0.0040	mg/L	6010C

CLIENT ID: TPC19-2			Lab ID: T1901660-002			
Analyte	**Results**	**Flag**	**MDL**	**MRL**	**Units**	**Method**
Aluminum	3.37			0.010	mg/L	6010C
Calcium	13.9			1.0	mg/L	6010C
Calcium	692			0.10	mg/L	6010C
Iron	3.34			0.020	mg/L	6010C
Magnesium	1.73			0.080	mg/L	6010C
Magnesium	7.19			0.050	mg/L	6010C
Manganese	0.0967			0.0050	mg/L	6010C
Manganese	0.140			0.010	mg/L	6010C
Phosphorus	0.150			0.040	mg/L	6010C
Potassium	5.4			1.0	mg/L	6010C
Potassium	0.42			0.20	mg/L	6010C

SAMPLE DETECTION SUMMARY

CLIENT ID: TPC19-2			Lab ID: T1901660-002			
Analyte	**Results**	**Flag**	**MDL**	**MRL**	**Units**	**Method**
Silicon	4.9			1.0	mg/L	6010C
Silicon	13.8			1.0	mg/L	6010C
Sodium	1330			1.0	mg/L	6010C
Strontium	0.016			0.010	mg/L	6010C
Strontium	0.497			0.0050	mg/L	6010C
Uranium	0.00048			0.00020	mg/L	6020A
Zinc	0.0064			0.0040	mg/L	6010C

CLIENT ID: TPC19-4			Lab ID: T1901660-004			
Analyte	**Results**	**Flag**	**MDL**	**MRL**	**Units**	**Method**
Aluminum	1.61			0.040	mg/L	6010C
Calcium	12.4			1.0	mg/L	6010C
Calcium	684			0.10	mg/L	6010C
Iron	1.82			0.020	mg/L	6010C
Magnesium	5.46			0.050	mg/L	6010C
Magnesium	1.21			0.080	mg/L	6010C
Manganese	0.090			0.010	mg/L	6010C
Manganese	0.0392			0.0050	mg/L	6010C
Phosphorus	0.070			0.040	mg/L	6010C
Potassium	1.9			1.0	mg/L	6010C
Potassium	0.29			0.20	mg/L	6010C
Silicon	3.5			1.0	mg/L	6010C
Silicon	8.5			1.0	mg/L	6010C
Sodium	1340			1.0	mg/L	6010C
Strontium	0.237			0.0050	mg/L	6010C
Uranium	0.00041			0.00020	mg/L	6020A
Zinc	0.0060			0.0040	mg/L	6010C

CLIENT ID: TPC19-5			Lab ID: T1901660-005			
Analyte	**Results**	**Flag**	**MDL**	**MRL**	**Units**	**Method**
Aluminum	2.53			0.010	mg/L	6010C
Calcium	669			0.10	mg/L	6010C
Calcium	15.9			1.0	mg/L	6010C
Iron	2.07			0.020	mg/L	6010C
Magnesium	11.2			0.050	mg/L	6010C
Magnesium	1.72			0.080	mg/L	6010C
Manganese	0.0608			0.0050	mg/L	6010C
Manganese	0.074			0.010	mg/L	6010C
Phosphorus	0.118			0.040	mg/L	6010C
Phosphorus	0.25			0.20	mg/L	6010C
Potassium	6.3			1.0	mg/L	6010C
Potassium	0.33			0.20	mg/L	6010C

ALS Environmental

SAMPLE DETECTION SUMMARY

CLIENT ID: TPC19-5			Lab ID: T1901660-005			
Analyte	**Results**	**Flag**	**MDL**	**MRL**	**Units**	**Method**
Silicon	4.9			1.0	mg/L	6010C
Silicon	11.9			1.0	mg/L	6010C
Sodium	1330			1.0	mg/L	6010C
Strontium	0.025			0.010	mg/L	6010C
Strontium	0.743			0.0050	mg/L	6010C
Uranium	0.00067			0.00020	mg/L	6020A
Zinc	0.0058			0.0040	mg/L	6010C

CLIENT ID: TPC19-6			Lab ID: T1901660-006			
Analyte	**Results**	**Flag**	**MDL**	**MRL**	**Units**	**Method**
Calcium	640			0.10	mg/L	6010C
Magnesium	7.86			0.050	mg/L	6010C
Manganese	0.0613			0.0050	mg/L	6010C
Potassium	3.1			1.0	mg/L	6010C
Silicon	3.4			1.0	mg/L	6010C
Sodium	1340			1.0	mg/L	6010C
Strontium	0.266			0.0050	mg/L	6010C
Uranium	0.00029			0.00020	mg/L	6020A

CLIENT ID: TPC19-7			Lab ID: T1901660-007			
Analyte	**Results**	**Flag**	**MDL**	**MRL**	**Units**	**Method**
Aluminum	7.20			0.010	mg/L	6010C
Calcium	13.4			1.0	mg/L	6010C
Copper	0.012			0.010	mg/L	6010C
Iron	9.84			0.020	mg/L	6010C
Magnesium	3.16			0.080	mg/L	6010C
Manganese	0.088			0.010	mg/L	6010C
Phosphorus	0.122			0.040	mg/L	6010C
Potassium	0.63			0.20	mg/L	6010C
Silicon	20.1			1.0	mg/L	6010C
Strontium	0.035			0.010	mg/L	6010C
Zinc	0.0107			0.0040	mg/L	6010C

CLIENT ID: TPC19-12			Lab ID: T1901660-012			
Analyte	**Results**	**Flag**	**MDL**	**MRL**	**Units**	**Method**
Aluminum	3.37			0.010	mg/L	6010C
Calcium	675			0.10	mg/L	6010C
Calcium	22.1			1.0	mg/L	6010C
Iron	3.76			0.020	mg/L	6010C
Magnesium	6.15			0.050	mg/L	6010C
Magnesium	1.93			0.080	mg/L	6010C
Manganese	0.148			0.010	mg/L	6010C
Manganese	0.0685			0.0050	mg/L	6010C

SAMPLE DETECTION SUMMARY

CLIENT ID: TPC19-12			Lab ID: T1901660-012			
Analyte	**Results**	**Flag**	**MDL**	**MRL**	**Units**	**Method**
Phosphorus	0.129			0.040	mg/L	6010C
Potassium	2.6			1.0	mg/L	6010C
Potassium	0.43			0.20	mg/L	6010C
Silicon	14.4			1.0	mg/L	6010C
Silicon	5.1			1.0	mg/L	6010C
Sodium	1330			1.0	mg/L	6010C
Strontium	0.474			0.0050	mg/L	6010C
Strontium	0.017			0.010	mg/L	6010C
Uranium	0.00049			0.00020	mg/L	6020A
Zinc	0.0082			0.0040	mg/L	6010C

CLIENT ID: TPC19-15			Lab ID: T1901660-015			
Analyte	**Results**	**Flag**	**MDL**	**MRL**	**Units**	**Method**
Aluminum	3.24			0.010	mg/L	6010C
Boron	0.054			0.040	mg/L	6010C
Calcium	579			0.10	mg/L	6010C
Calcium	12.2			1.0	mg/L	6010C
Iron	2.71			0.020	mg/L	6010C
Magnesium	1.46			0.080	mg/L	6010C
Magnesium	5.56			0.050	mg/L	6010C
Manganese	0.158			0.0050	mg/L	6010C
Manganese	0.108			0.010	mg/L	6010C
Phosphorus	0.25			0.20	mg/L	6010C
Phosphorus	0.139			0.040	mg/L	6010C
Potassium	0.36			0.20	mg/L	6010C
Potassium	3.8			1.0	mg/L	6010C
Silicon	12.7			1.0	mg/L	6010C
Silicon	4.4			1.0	mg/L	6010C
Sodium	1360			1.0	mg/L	6010C
Strontium	0.015			0.010	mg/L	6010C
Strontium	0.321			0.0050	mg/L	6010C
Zinc	0.0173			0.0040	mg/L	6010C

CLIENT ID: TPC19-16			Lab ID: T1901660-016			
Analyte	**Results**	**Flag**	**MDL**	**MRL**	**Units**	**Method**
Aluminum	2.01			0.050	mg/L	6010C
Aluminum	6.77			0.010	mg/L	6010C
Boron	0.11			0.10	mg/L	6010C
Calcium	38.1			0.10	mg/L	6010C
Calcium	4.2			1.0	mg/L	6010C
Copper	0.015			0.010	mg/L	6010C
Iron	1.80			0.10	mg/L	6010C

ALS Environmental

SAMPLE DETECTION SUMMARY

CLIENT ID: TPC19-16			Lab ID: T1901660-016			
Analyte	**Results**	**Flag**	**MDL**	**MRL**	**Units**	**Method**
Iron	6.25			0.020	mg/L	6010C
Magnesium	1.61			0.080	mg/L	6010C
Magnesium	4.74			0.050	mg/L	6010C
Manganese	0.138			0.010	mg/L	6010C
Manganese	0.478			0.0050	mg/L	6010C
Phosphorus	0.731			0.040	mg/L	6010C
Phosphorus	1.41			0.20	mg/L	6010C
Potassium	9.2			1.0	mg/L	6010C
Potassium	1.74			0.20	mg/L	6010C
Silicon	6.4			1.0	mg/L	6010C
Silicon	9.4			1.0	mg/L	6010C
Sodium	1310			1.0	mg/L	6010C
Strontium	0.010			0.010	mg/L	6010C
Strontium	0.110			0.0050	mg/L	6010C
Zinc	0.0234			0.0040	mg/L	6010C

CLIENT ID: TPC19-17			Lab ID: T1901660-017			
Analyte	**Results**	**Flag**	**MDL**	**MRL**	**Units**	**Method**
Aluminum	1.60			0.040	mg/L	6010C
Calcium	8.6			1.0	mg/L	6010C
Iron	1.45			0.020	mg/L	6010C
Magnesium	1.10			0.080	mg/L	6010C
Manganese	0.030			0.010	mg/L	6010C
Potassium	0.25			0.20	mg/L	6010C
Silicon	5.6			1.0	mg/L	6010C
Strontium	0.016			0.010	mg/L	6010C
Zinc	0.0080			0.0040	mg/L	6010C

CLIENT ID: TPC19-19			Lab ID: T1901660-019			
Analyte	**Results**	**Flag**	**MDL**	**MRL**	**Units**	**Method**
Aluminum	12.0			0.010	mg/L	6010C
Aluminum	0.182			0.050	mg/L	6010C
Boron	0.11			0.10	mg/L	6010C
Calcium	50.2			0.10	mg/L	6010C
Calcium	5.0			1.0	mg/L	6010C
Chromium	0.020			0.010	mg/L	6010C
Copper	0.019			0.010	mg/L	6010C
Iron	0.18			0.10	mg/L	6010C
Iron	15.4			0.020	mg/L	6010C
Magnesium	2.64			0.080	mg/L	6010C
Magnesium	15.5			0.050	mg/L	6010C
Manganese	0.484			0.0050	mg/L	6010C

SAMPLE DETECTION SUMMARY

CLIENT ID: TPC19-19			Lab ID: T1901660-019			
Analyte	**Results**	**Flag**	**MDL**	**MRL**	**Units**	**Method**
Manganese	0.116			0.010	mg/L	6010C
Phosphorus	0.157			0.040	mg/L	6010C
Potassium	1.29			0.20	mg/L	6010C
Potassium	4.6			1.0	mg/L	6010C
Silicon	23.6			1.0	mg/L	6010C
Silicon	5.7			1.0	mg/L	6010C
Sodium	1310			1.0	mg/L	6010C
Strontium	0.284			0.0050	mg/L	6010C
Strontium	0.023			0.010	mg/L	6010C
Zinc	0.0185			0.0040	mg/L	6010C

CLIENT ID: TPC19-20			Lab ID: T1901660-020			
Analyte	**Results**	**Flag**	**MDL**	**MRL**	**Units**	**Method**
Aluminum	0.087			0.050	mg/L	6010C
Calcium	44.1			0.10	mg/L	6010C
Magnesium	16.8			0.050	mg/L	6010C
Manganese	0.762			0.0050	mg/L	6010C
Potassium	1.9			1.0	mg/L	6010C
Silicon	3.7			1.0	mg/L	6010C
Sodium	1320			1.0	mg/L	6010C
Strontium	0.247			0.0050	mg/L	6010C
Uranium	0.00027			0.00020	mg/L	6020A

CLIENT ID: TPC19-1			Lab ID: T1901660-025			
Analyte	**Results**	**Flag**	**MDL**	**MRL**	**Units**	**Method**
Acidity, Total	18.0			2.0	mg/L	SM 2310 B(4a)
Alkalinity as CaCO3, Total	18.0			2.0	mg/L	SM 2320 B
Chloride	17.3			0.20	mg/L	9056A
Conductivity at 25 Degrees Celsius	69.5			2.0	uMHOS/cm	120.1
Nitrate as Nitrogen	0.40			0.20	mg/L	9056A
pH	6.52				pH Units	SM 4500-H+ B
Sulfate	1.36			0.20	mg/L	9056A

CLIENT ID: TPC19-2			Lab ID: T1901660-026			
Analyte	**Results**	**Flag**	**MDL**	**MRL**	**Units**	**Method**
Alkalinity as CaCO3, Total	187			2.0	mg/L	SM 2320 B
Chloride	15.4			0.20	mg/L	9056A
Conductivity at 25 Degrees Celsius	78.7			2.0	uMHOS/cm	120.1
pH	9.27				pH Units	SM 4500-H+ B

SAMPLE DETECTION SUMMARY

CLIENT ID: TPC19-4			Lab ID: T1901660-027			
Analyte	**Results**	**Flag**	**MDL**	**MRL**	**Units**	**Method**
Alkalinity as CaCO3, Total	253			2.0	mg/L	SM 2320 B
Chloride	13.1			0.20	mg/L	9056A
Conductivity at 25 Degrees Celsius	66.6			2.0	uMHOS/cm	120.1
pH	9.34				pH Units	SM 4500-H+ B

CLIENT ID: TPC19-5			Lab ID: T1901660-028			
Analyte	**Results**	**Flag**	**MDL**	**MRL**	**Units**	**Method**
Alkalinity as CaCO3, Total	405			2.0	mg/L	SM 2320 B
Chloride	14.5			0.20	mg/L	9056A
Conductivity at 25 Degrees Celsius	90.8			2.0	uMHOS/cm	120.1
pH	9.29				pH Units	SM 4500-H+ B

CLIENT ID: TPC19-7			Lab ID: T1901660-029			
Analyte	**Results**	**Flag**	**MDL**	**MRL**	**Units**	**Method**
Acidity, Total	5.0			2.0	mg/L	SM 2310 B(4a)
Alkalinity as CaCO3, Total	68.0			2.0	mg/L	SM 2320 B
Chloride	22.6			0.50	mg/L	9056A
Conductivity at 25 Degrees Celsius	125			2.0	uMHOS/cm	120.1
pH	8.14				pH Units	SM 4500-H+ B
Sulfate	0.55			0.20	mg/L	9056A

CLIENT ID: TPC19-12			Lab ID: T1901660-030			
Analyte	**Results**	**Flag**	**MDL**	**MRL**	**Units**	**Method**
Alkalinity as CaCO3, Total	410			2.0	mg/L	SM 2320 B
Chloride	14.0			0.20	mg/L	9056A
Conductivity at 25 Degrees Celsius	96.9			2.0	uMHOS/cm	120.1
pH	8.97				pH Units	SM 4500-H+ B

CLIENT ID: TPC19-15			Lab ID: T1901660-031			
Analyte	**Results**	**Flag**	**MDL**	**MRL**	**Units**	**Method**
Alkalinity as CaCO3, Total	108			2.0	mg/L	SM 2320 B
Chloride	13.3			0.20	mg/L	9056A
Conductivity at 25 Degrees Celsius	100			2.0	uMHOS/cm	120.1
Nitrate as Nitrogen	0.38			0.20	mg/L	9056A
pH	8.82				pH Units	SM 4500-H+ B

CLIENT ID: TPC19-16			Lab ID: T1901660-032			
Analyte	**Results**	**Flag**	**MDL**	**MRL**	**Units**	**Method**
Acidity, Total	8.0			2.0	mg/L	SM 2310 B(4a)
Alkalinity as CaCO3, Total	17.0			2.0	mg/L	SM 2320 B
Chloride	19.3			0.20	mg/L	9056A

SAMPLE DETECTION SUMMARY

CLIENT ID: TPC19-16			Lab ID: T1901660-032			
Analyte	**Results**	**Flag**	**MDL**	**MRL**	**Units**	**Method**
Conductivity at 25 Degrees Celsius	69.8			2.0	uMHOS/cm	120.1
Nitrate as Nitrogen	0.31			0.20	mg/L	9056A
pH	6.88				pH Units	SM 4500-H+ B
Sulfate	0.26			0.20	mg/L	9056A

CLIENT ID: TPC19-17			Lab ID: T1901660-033			
Analyte	**Results**	**Flag**	**MDL**	**MRL**	**Units**	**Method**
Alkalinity as CaCO3, Total	150			2.0	mg/L	SM 2320 B
Chloride	6.87			0.20	mg/L	9056A
Conductivity at 25 Degrees Celsius	65.6			2.0	uMHOS/cm	120.1
pH	9.42				pH Units	SM 4500-H+ B

CLIENT ID: TPC19-19			Lab ID: T1901660-034			
Analyte	**Results**	**Flag**	**MDL**	**MRL**	**Units**	**Method**
Acidity, Total	18.0			2.0	mg/L	SM 2310 B(4a)
Alkalinity as CaCO3, Total	22.0			2.0	mg/L	SM 2320 B
Chloride	26.5			0.50	mg/L	9056A
Conductivity at 25 Degrees Celsius	104			2.0	uMHOS/cm	120.1
Fluoride	0.43			0.40	mg/L	9056A
Nitrate as Nitrogen	0.36			0.20	mg/L	9056A
pH	6.91				pH Units	SM 4500-H+ B
Sulfate	0.45			0.20	mg/L	9056A

Sample Receipt Information

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360) 577-7222 Fax (360) 425-9096
www.alsglobal.com

Client: Resolution Copper Mining LLC **Service Request:**T1901660

Project: Skunk Camp Closure/M09441A23

SAMPLE CROSS-REFERENCE

SAMPLE #	CLIENT SAMPLE ID	DATE	TIME
T1901660-025	TPC19-1	9/18/2019	0000
T1901660-026	TPC19-2	9/17/2019	0000
T1901660-027	TPC19-4	9/16/2019	0000
T1901660-028	TPC19-5	9/18/2019	0000
T1901660-029	TPC19-7	9/17/2019	0000
T1901660-030	TPC19-12	9/19/2019	0000
T1901660-031	TPC19-15	9/17/2019	0000
T1901660-032	TPC19-16	9/20/2019	0000
T1901660-033	TPC19-17	9/20/2019	0000
T1901660-034	TPC19-19	9/17/2019	0000

Intra-Network Chain of Custody

4208 S Santa Rita Ave • Tucson, AZ 85714 • 520-573-1061 • FAX 520-623-9218

ALS Contact: Wendy Hyatt

Project Name: Skunk Camp Closure
Project Number: M09441A23
Project Manager: Julie L'Heureux
Company: KCB Consultants
QAP: LAB QAP

Lab Code	Client Sample ID	# of Cont.	Matrix	Sample Date	Sample Time	Date Received	Send To	Acid Titr SM 2310 B(4a)	Alkalinity Titr SM 2320 B	Br 9056A	Chloride 9056	Chloride 9056A	Cond Filt 120.1	Cond Spec 120.1
T1901660-001	TPC19-1	1	Soil	9/18/19	0000	9/20/19	KELSO				II			
T1901660-002	TPC19-2		Soil	9/17/19	0000	9/20/19	KELSO				II			
T1901660-004	TPC19-4		Soil	9/16/19	0000	9/20/19	KELSO				II			
T1901660-005	TPC19-5		Soil	9/18/19	0000	9/20/19	KELSO				II			
T1901660-006	TPC19-6		Soil	9/17/19	0000	9/20/19	KELSO				II			
T1901660-007	TPC19-7		Soil	9/17/19	0000	9/20/19	KELSO							
T1901660-012	TPC19-12		Soil	9/19/19	0000	9/20/19	KELSO				II			
T1901660-015	TPC19-15		Soil	9/17/19	0000	9/20/19	KELSO				II			
T1901660-016	TPC19-16		Soil	9/20/19	0000	9/20/19	KELSO				II			
T1901660-017	TPC19-17		Soil	9/20/19	0000	9/20/19	KELSO							
T1901660-019	TPC19-19		Soil	9/17/19	0000	9/20/19	KELSO				II			
T1901660-020	TPC19-20		Soil	9/16/19	0000	9/20/19	KELSO				II			

Special Instructions/Comments
Send reports, confirmations, and invoices to: TUC.Reporting@ALSGlobal.com

pH Checked _____

Turnaround Requirements
____ **RUSH** (Surcharges Apply)
PLEASE CIRCLE WORK DAYS
1 2 3 4 5
____ **STANDARD**
Requested FAX Date: _____
Requested Report Date: ~~10/07/19~~ 10/22/19

Report Requirements
____ I. Results Only
____ II. Results + QC Summaries
____ III. Results + QC and Calibration Summaries
____ IV. Data Validation Report with Raw Data
PQL/MDL/J N
EDD N

Invoice Information
PO# 56T1901660
Bill to

Relinquished By: _____ OCT 04 2019

Received By: _____ 10/8/19 1020

Airbill Number: _____

								F 9056A	Hg SPLP 7470A	Hg TCLP 7470A	Metals SPLP 6010C	Metals SPLP 6020A	Metals T ICP-MS	Metals T ICP-OES
T1901660-001	TPC19-1		Soil	9/18/19	0000	9/20/19	KELSO		II	II	II	II	II	II
T1901660-002	TPC19-2		Soil	9/17/19	0000	9/20/19	KELSO		II	II	II	II	II	II
T1901660-004	TPC19-4		Soil	9/16/19	0000	9/20/19	KELSO		II	II	II	II	II	II
T1901660-005	TPC19-5		Soil	9/18/19	0000	9/20/19	KELSO		II	II	II	II	II	II
T1901660-006	TPC19-6		Soil	9/17/19	0000	9/20/19	KELSO			II				
T1901660-007	TPC19-7		Soil	9/17/19	0000	9/20/19	KELSO		II		II	II		
T1901660-012	TPC19-12		Soil	9/19/19	0000	9/20/19	KELSO		II	II	II	II	II	II
T1901660-015	TPC19-15		Soil	9/17/19	0000	9/20/19	KELSO		II	II	II	II	II	II
T1901660-016	TPC19-16		Soil	9/20/19	0000	9/20/19	KELSO		II	II	II	II	II	II
T1901660-017	TPC19-17		Soil	9/20/19	0000	9/20/19	KELSO		II		II	II		
T1901660-019	TPC19-19		Soil	9/17/19	0000	9/20/19	KELSO		II	II	II	II	II	II
T1901660-020	TPC19-20		Soil	9/16/19	0000	9/20/19	KELSO			II				

								Metals TCLP 6010C	Metals TCLP 6020A	Misc Gen I None	NO2 9056A	NO3 9056A	pH SM 4500-H+ B	SO4 9056A
T1901660-001	TPC19-1		Soil	9/18/19	0000	9/20/19	KELSO	II	II	II				
T1901660-002	TPC19-2		Soil	9/17/19	0000	9/20/19	KELSO	II	II	II				
T1901660-004	TPC19-4		Soil	9/16/19	0000	9/20/19	KELSO	II	II	II				
T1901660-005	TPC19-5		Soil	9/18/19	0000	9/20/19	KELSO	II	II	II				
T1901660-006	TPC19-6		Soil	9/17/19	0000	9/20/19	KELSO	II	II	II				
T1901660-007	TPC19-7		Soil	9/17/19	0000	9/20/19	KELSO							
T1901660-012	TPC19-12		Soil	9/19/19	0000	9/20/19	KELSO	II	II	II				
T1901660-015	TPC19-15		Soil	9/17/19	0000	9/20/19	KELSO	II	II	II				
T1901660-016	TPC19-16		Soil	9/20/19	0000	9/20/19	KELSO	II	II	II				
T1901660-017	TPC19-17		Soil	9/20/19	0000	9/20/19	KELSO							
T1901660-019	TPC19-19		Soil	9/17/19	0000	9/20/19	KELSO	II	II	II				
T1901660-020	TPC19-20		Soil	9/16/19	0000	9/20/19	KELSO	II	II	II				

								SPLP EPA 1312	TCLP EPA 1311
T1901660-001	TPC19-1		Soil	9/18/19	0000	9/20/19	KELSO	II	II
T1901660-002	TPC19-2		Soil	9/17/19	0000	9/20/19	KELSO	II	II
T1901660-004	TPC19-4		Soil	9/16/19	0000	9/20/19	KELSO	II	II
T1901660-005	TPC19-5		Soil	9/18/19	0000	9/20/19	KELSO	II	II
T1901660-006	TPC19-6		Soil	9/17/19	0000	9/20/19	KELSO		II
T1901660-007	TPC19-7		Soil	9/17/19	0000	9/20/19	KELSO	II	
T1901660-012	TPC19-12		Soil	9/19/19	0000	9/20/19	KELSO	II	II
T1901660-015	TPC19-15		Soil	9/17/19	0000	9/20/19	KELSO	II	II
T1901660-016	TPC19-16		Soil	9/20/19	0000	9/20/19	KELSO	II	II
T1901660-017	TPC19-17		Soil	9/20/19	0000	9/20/19	KELSO	II	
T1901660-019	TPC19-19		Soil	9/17/19	0000	9/20/19	KELSO	II	II
T1901660-020	TPC19-20		Soil	9/16/19	0000	9/20/19	KELSO		II

Intra-Network Chain of Custody

4208 S Santa Rita Ave • Tucson, AZ 85714 • 520-573-1061 • FAX 520-623-9218

ALS Contact: Wendy Hyatt

Project Name: Skunk Camp Closure
Project Number: M09441A23
Project Manager: Julie L'Heureux
Company: KCB Consultants
QAP: LAB QAP

Test Comments

Metals SPLP - 6010C	,19	Ag,Al,As,Ba,Be,Bi,B,Ca, Cd,Co,Cr,Cu,Fe,K,Mg,Mn, Hg,Mo,Na,Ni,P,Pb,Sb,Si, Se,Sr,Tl,,& Zn
Metals SPLP - 6020A	T1901660-001,2,4,5,7,12,15,16,17,19	Extraction Procedure - SPLP Metals & Merucy - 7470A, 6010C ICP-OES, 6020A ICP-MS
Metals TCLP - 6020A	T1901660-001,2,4,5,6,12,15,16,19,20	Extraction Procedure - TCLP Metals & Merucy - 7470A, 6010C ICP-OES, 6020A ICP-MS
Hg TCLP - 7470A	T1901660-001,2,4,5,6,12,15,16,19,20	Extraction Procedure - TCLP Metals & Merucy - 7470A, 6010C ICP-OES, 6020A ICP-MS
Hg SPLP - 7470A	T1901660-001,2,4,5,7,12,15,16,17,19	Extraction Procedure - SPLP Metals & Merucy - 7470A, 6010C ICP-OES, 6020A ICP-MS
Chloride - 9056	T1901660-001,2,4,5,6,12,15,16,19,20	Extraction Procedure - STB 18 hr 4:1 Ratio Anions 9056A
TCLP - EPA 1311	T1901660-001,2,4,5,6,12,15,16,19,20	Extraction Procedure - TCLP (requires one extractions for metals)
SPLP - EPA 1312	T1901660-001,2,4,5,7,12,15,16,17,19	Extraction Procedure - SPLP (requires two extractions - one for metals & one for Anions & Wet Chem A
Metals T - ICP-MS	T1901660-001,2,4,5,12,15,16,19	Extraction Procedure - SPLP Metals & Merucy - 7470A, 6010C ICP-OES, 6020A ICP-MS
Metals T - ICP-OES	T1901660-001,2,4,5,12,15,16,19	Ag,Al,As,Ba,Be,Bi,B,Ca, Cd,Co,Cr,Cu,Fe,K,Mg,Mn, Hg.Mo,Na,Ni,P,Pb,Sb,Si,, Se,Sr,U,Tl,,Zn plus Cl,F,NO3,SO4
Misc Gen 1 - None	T1901660-002,4,5,6,12,15,16,19,20	Extraction Procedure - STB 18 hr 4;1 Ratio Metals & Merucy - 7470A, 6010C ICP-OES, 6020A ICP-MS
Misc Gen 1 - None	T1901660-001	Extraction Procedure - STB 18 hr 4;1 Ratio Metals & Merucy - 7470A,6010C ICP-OES,6020A ICP-MS

Special Instructions/Comments
Send reports, confirmations, and invoices to: TUC.Reporting@ALSGlobal.com

pH Checked _____

Turnaround Requirements
_____**RUSH** (Surcharges Apply)
PLEASE CIRCLE WORK DAYS
1 2 3 4 5
____ **STANDARD**
Requested FAX Date: _____
Requested Report Date: ~~10/07/19~~ 10/23/19 10/4/19

Report Requirements
____ I. Results Only
____ II. Results + QC Summaries
____ III. Results + QC and Calibration Summaries
____ IV. Data Validation Report with Raw Data
PQL/MDL/J N
EDD N

Invoice Information
PO# 56T1901660
Bill to

Relinquished By: [signature] OCT 04 [illegible]
Received By: _____
Airbill Number: _____

PC (V)

Cooler Receipt and Preservation Form

Client ALS / Tucson Service Request K19 T1901660

Received: 10/8/19 Opened: 10/8/19 By: [signature] Unloaded: 10/8/19 By: [signature]

1. Samples were received via? *USPS* (*Fed Ex*) *UPS* *DHL* *PDX* *Courier* *Hand Delivered*
2. Samples were received in: (circle) (*Coolers*) *Box* *Envelope* *Other* _____ *NA*
3. Were custody seals on coolers? NA Y (N) If yes, how many and where? _____

If present, were custody seals intact? Y N If present, were they signed and dated? Y N

Raw Cooler Temp	Corrected Cooler Temp	Raw Temp Blank	Corrected Temp Blank	Corr. Factor	Thermometer ID	Cooler/COC ID (NA)	Tracking Number NA	Filed
18.3	18.3	—	—	0	374		7765 1343 1074	

4. Packing material: *Inserts* *Baggies* (*Bubble Wrap*) *Gel Packs* *Wet Ice* *Dry Ice* *Sleeves* _____
5. Were custody papers properly filled out (ink, signed, etc.)? NA (Y) N
6. Were samples received in good condition (temperature, unbroken)? *Indicate in the table below.* NA (Y) N

If applicable, tissue samples were received: *Frozen* *Partially Thawed* *Thawed*

7. Were all sample labels complete (i.e analysis, preservation, etc.)? NA (Y) N
8. Did all sample labels and tags agree with custody papers? *Indicate major discrepancies in the table on page 2.* NA (Y) N
9. Were appropriate bottles/containers and volumes received for the tests indicated? NA (Y) N
10. Were the pH-preserved bottles (*see SMO GEN SOP*) received at the appropriate pH? *Indicate in the table below* (NA) Y N
11. Were VOA vials received without headspace? *Indicate in the table below.* (NA) Y N
12. Was C12/Res negative? (NA) Y N

Sample ID on Bottle	Sample ID on COC	Identified by:

Sample ID	Bottle Count Bottle Type	Out of Temp	Head-space	Broke	pH	Reagent	Volume added	Reagent Lot Number	Initials	Time

Notes, Discrepancies, & Resolutions: _____

Miscellaneous Forms

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360) 577-7222 Fax (360) 425-9096
www.alsglobal.com

Inorganic Data Qualifiers

*	The result is an outlier. See case narrative.
#	The control limit criteria is not applicable. See case narrative.
B	The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
E	The result is an estimate amount because the value exceeded the instrument calibration range.
J	The result is an estimated value.
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.2 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
i	The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
X	See case narrative.
Q	See case narrative. One or more quality control criteria was outside the limits.
H	The holding time for this test is immediately following sample collection. The samples were analyzed as soon as possible after receipt by the laboratory.

Metals Data Qualifiers

#	The control limit criteria is not applicable. See case narrative.
J	The result is an estimated value.
E	The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample.
M	The duplicate injection precision was not met.
N	The Matrix Spike sample recovery is not within control limits. See case narrative.
S	The reported value was determined by the Method of Standard Additions (MSA).
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.2 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
W	The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.
i	The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
X	See case narrative.
+	The correlation coefficient for the MSA is less than 0.995.
Q	See case narrative. One or more quality control criteria was outside the limits.

Organic Data Qualifiers

*	The result is an outlier. See case narrative.
#	The control limit criteria is not applicable. See case narrative.
A	A tentatively identified compound, a suspected aldol-condensation product.
B	The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
C	The analyte was qualitatively confirmed using GC/MS techniques, pattern recognition, or by comparing to historical data.
D	The reported result is from a dilution.
E	The result is an estimated value.
J	The result is an estimated value.
N	The result is presumptive. The analyte was tentatively identified, but a confirmation analysis was not performed.
P	The GC or HPLC confirmation criteria was exceeded. The relative percent difference is greater than 40% between the two analytical results.
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.2 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
i	The MRL/MDL or LOQ/LOD is elevated due to a chromatographic interference.
X	See case narrative.
Q	See case narrative. One or more quality control criteria was outside the limits.

Additional Petroleum Hydrocarbon Specific Qualifiers

F	The chromatographic fingerprint of the sample matches the elution pattern of the calibration standard.
L	The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of lighter molecular weight constituents than the calibration standard.
H	The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of heavier molecular weight constituents than the calibration standard.
O	The chromatographic fingerprint of the sample resembles an oil, but does not match the calibration standard.
Y	The chromatographic fingerprint of the sample resembles a petroleum product eluting in approximately the correct carbon range, but the elution pattern does not match the calibration standard.
Z	The chromatographic fingerprint does not resemble a petroleum product.

ALS Group USA Corp. dba ALS Environmental (ALS) - Kelso
State Certifications, Accreditations, and Licenses

Agency	Web Site	Number
Alaska DEH	http://dec.alaska.gov/eh/lab/cs/csapproval.htm	UST-040
Arizona DHS	http://www.azdhs.gov/lab/license/env.htm	AZ0339
Arkansas - DEQ	http://www.adeq.state.ar.us/techsvs/labcert.htm	88-0637
California DHS (ELAP)	http://www.cdph.ca.gov/certlic/labs/Pages/ELAP.aspx	2795
DOD ELAP	http://www.denix.osd.mil/edqw/Accreditation/AccreditedLabs.cfm	L16-58-R4
Florida DOH	http://www.doh.state.fl.us/lab/EnvLabCert/WaterCert.htm	E87412
Hawaii DOH	http://health.hawaii.gov/	-
ISO 17025	http://www.pjlabs.com/	L16-57
Louisiana DEQ	http://www.deq.louisiana.gov/page/la-lab-accreditation	03016
Maine DHS	http://www.maine.gov/dhhs/	WA01276
Minnesota DOH	http://www.health.state.mn.us/accreditation	053-999-457
Nevada DEP	http://ndep.nv.gov/bsdw/labservice.htm	WA01276
New Jersey DEP	http://www.nj.gov/dep/enforcement/oqa.html	WA005
New York - DOH	https://www.wadsworth.org/regulatory/elap	12060
North Carolina DEQ	https://deq.nc.gov/about/divisions/water-resources/water-resources-data/water-sciences-home-page/laboratory-certification-branch/non-field-lab-certification	605
Oklahoma DEQ	http://www.deq.state.ok.us/CSDnew/labcert.htm	9801
Oregon – DEQ (NELAP)	http://public.health.oregon.gov/LaboratoryServices/EnvironmentalLaboratoryAccreditation/Pages/index.aspx	WA100010
South Carolina DHEC	http://www.scdhec.gov/environment/EnvironmentalLabCertification/	61002
Texas CEQ	http://www.tceq.texas.gov/field/qa/env_lab_accreditation.html	T104704427
Washington DOE	http://www.ecy.wa.gov/programs/eap/labs/lab-accreditation.html	C544
Wyoming (EPA Region 8)	https://www.epa.gov/region8-waterops/epa-region-8-certified-drinking-water-	-
Kelso Laboratory Website	www.alsglobal.com	NA

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. A complete listing of specific NELAP-certified analytes, can be found in the certification section at www.ALSGlobal.com or at the accreditation bodies web site.
Please refer to the certification and/or accreditation body's web site if samples are submitted for compliance purposes. The states highlighted above, require the analysis be listed on the state certification if used for compliance purposes and if the method/anlayte is offered by that state.

Acronyms

ASTM	American Society for Testing and Materials
A2LA	American Association for Laboratory Accreditation
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
LOD	Limit of Detection
LOQ	Limit of Quantitation
LUFT	Leaking Underground Fuel Tank
M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
NC	Not Calculated
NCASI	National Council of the Paper Industry for Air and Stream Improvement
ND	Not Detected
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.

Analyst Summary report

Client: Resolution Copper Mining LLC **Service Request:** T1901660
Project: Skunk Camp Closure/M09441A23

Sample Name: TPC19-1 **Date Collected:** 09/18/19
Lab Code: T1901660-001 **Date Received:** 09/20/19
Sample Matrix: Soil

Analysis Method	Extracted/Digested By	Analyzed By
310.1		NBORDOWITZ
440.0		MMALCOMSON
6010B		NBORDOWITZ
6010C	JHINSON	AMCKORNEY
6020A	YZOOK	EMCALLISTER
6020A	JHINSON	EMCALLISTER
7470A	JHINSON	JHINSON
ASTM C25		NBORDOWITZ
ASTM D2974-07a		DCASTRO
ASTM D6316-09b		MMALCOMSON
ASTM E1915 - 09		KBEATTIE
EPA LKahn 7-27-1988		MMALCOMSON
Sobek 3.2.18		NBORDOWITZ

Sample Name: TPC19-2 **Date Collected:** 09/17/19
Lab Code: T1901660-002 **Date Received:** 09/20/19
Sample Matrix: Soil

Analysis Method	Extracted/Digested By	Analyzed By
310.1		NBORDOWITZ
440.0		MMALCOMSON
6010B		NBORDOWITZ
6010C	JHINSON	AMCKORNEY
6020A	YZOOK	EMCALLISTER
6020A	JHINSON	EMCALLISTER
7470A	JHINSON	JHINSON
ASTM C25		NBORDOWITZ
ASTM D2974-07a		DCASTRO
ASTM D6316-09b		MMALCOMSON
ASTM E1915 - 09		KBEATTIE
EPA LKahn 7-27-1988		MMALCOMSON
Sobek 3.2.18		NBORDOWITZ

Analyst Summary report

Client:	Resolution Copper Mining LLC	**Service Request:**	T1901660
Project:	Skunk Camp Closure/M09441A23		

Sample Name:	TPC19-3	**Date Collected:**	09/18/19
Lab Code:	T1901660-003	**Date Received:**	09/20/19
Sample Matrix:	Soil		

Analysis Method	Extracted/Digested By	Analyzed By
310.1		NBORDOWITZ
440.0		MMALCOMSON
6010B		NBORDOWITZ
ASTM C25		NBORDOWITZ
ASTM D2974-07a		DCASTRO
ASTM D6316-09b		MMALCOMSON
ASTM E1915 - 09		KBEATTIE
EPA LKahn 7-27-1988		MMALCOMSON
Sobek 3.2.18		NBORDOWITZ

Sample Name:	TPC19-4	**Date Collected:**	09/16/19
Lab Code:	T1901660-004	**Date Received:**	09/20/19
Sample Matrix:	Soil		

Analysis Method	Extracted/Digested By	Analyzed By
310.1		NBORDOWITZ
440.0		MMALCOMSON
6010B		NBORDOWITZ
6010C	JHINSON	AMCKORNEY
6020A	YZOOK	EMCALLISTER
6020A	JHINSON	EMCALLISTER
7470A	JHINSON	JHINSON
ASTM C25		NBORDOWITZ
ASTM D2974-07a		DCASTRO
ASTM D6316-09b		MMALCOMSON
ASTM E1915 - 09		KBEATTIE
EPA LKahn 7-27-1988		MMALCOMSON
Sobek 3.2.18		NBORDOWITZ

Analyst Summary report

Client: Resolution Copper Mining LLC **Service Request:** T1901660
Project: Skunk Camp Closure/M09441A23

Sample Name: TPC19-5 **Date Collected:** 09/18/19
Lab Code: T1901660-005 **Date Received:** 09/20/19
Sample Matrix: Soil

Analysis Method	Extracted/Digested By	Analyzed By
310.1		NBORDOWITZ
440.0		MMALCOMSON
6010B		NBORDOWITZ
6010C	JHINSON	AMCKORNEY
6020A	YZOOK	EMCALLISTER
6020A	JHINSON	EMCALLISTER
7470A	JHINSON	JHINSON
ASTM C25		NBORDOWITZ
ASTM D2974-07a		DCASTRO
ASTM D6316-09b		MMALCOMSON
ASTM E1915 - 09		KBEATTIE
EPA LKahn 7-27-1988		MMALCOMSON
Sobek 3.2.18		NBORDOWITZ

Sample Name: TPC19-6 **Date Collected:** 09/17/19
Lab Code: T1901660-006 **Date Received:** 09/20/19
Sample Matrix: Soil

Analysis Method	Extracted/Digested By	Analyzed By
310.1		NBORDOWITZ
440.0		MMALCOMSON
6010B		NBORDOWITZ
6010C	JHINSON	AMCKORNEY
6020A	YZOOK	EMCALLISTER
7470A	JHINSON	JHINSON
ASTM C25		NBORDOWITZ
ASTM D2974-07a		DCASTRO
ASTM D6316-09b		MMALCOMSON
ASTM E1915 - 09		KBEATTIE
EPA LKahn 7-27-1988		MMALCOMSON
Sobek 3.2.18		NBORDOWITZ

Analyst Summary report

Client: Resolution Copper Mining LLC **Service Request:** T1901660
Project: Skunk Camp Closure/M09441A23

Sample Name: TPC19-7 **Date Collected:** 09/17/19
Lab Code: T1901660-007 **Date Received:** 09/20/19
Sample Matrix: Soil

Analysis Method	Extracted/Digested By	Analyzed By
310.1		NBORDOWITZ
440.0		MMALCOMSON
6010B		NBORDOWITZ
6010C	JHINSON	AMCKORNEY
6020A	JHINSON	EMCALLISTER
7470A	JHINSON	JHINSON
ASTM C25		NBORDOWITZ
ASTM D2974-07a		DCASTRO
ASTM D6316-09b		MMALCOMSON
ASTM E1915 - 09		KBEATTIE
EPA LKahn 7-27-1988		MMALCOMSON
Sobek 3.2.18		NBORDOWITZ

Sample Name: TPC19-8 **Date Collected:** 09/19/19
Lab Code: T1901660-008 **Date Received:** 09/20/19
Sample Matrix: Soil

Analysis Method	Extracted/Digested By	Analyzed By
310.1		NBORDOWITZ
440.0		MMALCOMSON
6010B		NBORDOWITZ
ASTM C25		NBORDOWITZ
ASTM D2974-07a		DCASTRO
ASTM D6316-09b		MMALCOMSON
ASTM E1915 - 09		KBEATTIE
EPA LKahn 7-27-1988		MMALCOMSON
Sobek 3.2.18		NBORDOWITZ

Analyst Summary report

Client: Resolution Copper Mining LLC **Service Request:** T1901660
Project: Skunk Camp Closure/M09441A23

Sample Name: TPC19-9 **Date Collected:** 09/20/19
Lab Code: T1901660-009 **Date Received:** 09/20/19
Sample Matrix: Soil

Analysis Method	Extracted/Digested By	Analyzed By
310.1		NBORDOWITZ
440.0		MMALCOMSON
6010B		NBORDOWITZ
ASTM C25		NBORDOWITZ
ASTM D2974-07a		DCASTRO
ASTM D6316-09b		MMALCOMSON
ASTM E1915 - 09		KBEATTIE
EPA LKahn 7-27-1988		MMALCOMSON
Sobek 3.2.18		NBORDOWITZ

Sample Name: TPC19-10 **Date Collected:** 09/19/19
Lab Code: T1901660-010 **Date Received:** 09/20/19
Sample Matrix: Soil

Analysis Method	Extracted/Digested By	Analyzed By
310.1		NBORDOWITZ
440.0		MMALCOMSON
6010B		NBORDOWITZ
ASTM C25		NBORDOWITZ
ASTM D2974-07a		DCASTRO
ASTM D6316-09b		MMALCOMSON
ASTM E1915 - 09		KBEATTIE
EPA LKahn 7-27-1988		MMALCOMSON
Sobek 3.2.18		NBORDOWITZ

Sample Name: TPC19-11 **Date Collected:** 09/19/19
Lab Code: T1901660-011 **Date Received:** 09/20/19
Sample Matrix: Soil

Analysis Method	Extracted/Digested By	Analyzed By
310.1		NBORDOWITZ
440.0		MMALCOMSON

Analyst Summary report

Client: Resolution Copper Mining LLC **Service Request:** T1901660
Project: Skunk Camp Closure/M09441A23

Sample Name: TPC19-11 **Date Collected:** 09/19/19
Lab Code: T1901660-011 **Date Received:** 09/20/19
Sample Matrix: Soil

Analysis Method	Extracted/Digested By	Analyzed By
6010B		NBORDOWITZ
ASTM C25		NBORDOWITZ
ASTM D2974-07a		DCASTRO
ASTM D6316-09b		MMALCOMSON
ASTM E1915 - 09		KBEATTIE
EPA LKahn 7-27-1988		MMALCOMSON
Sobek 3.2.18		NBORDOWITZ

Sample Name: TPC19-12 **Date Collected:** 09/19/19
Lab Code: T1901660-012 **Date Received:** 09/20/19
Sample Matrix: Soil

Analysis Method	Extracted/Digested By	Analyzed By
310.1		NBORDOWITZ
440.0		MMALCOMSON
6010B		NBORDOWITZ
6010C	JHINSON	AMCKORNEY
6020A	YZOOK	EMCALLISTER
6020A	JHINSON	EMCALLISTER
7470A	JHINSON	JHINSON
ASTM C25		NBORDOWITZ
ASTM D2974-07a		DCASTRO
ASTM D6316-09b		MMALCOMSON
ASTM E1915 - 09		KBEATTIE
EPA LKahn 7-27-1988		MMALCOMSON
Sobek 3.2.18		NBORDOWITZ

Analyst Summary report

Client: Resolution Copper Mining LLC **Service Request:** T1901660
Project: Skunk Camp Closure/M09441A23

Sample Name: TPC19-13 **Date Collected:** 09/17/19
Lab Code: T1901660-013 **Date Received:** 09/20/19
Sample Matrix: Soil

Analysis Method	Extracted/Digested By	Analyzed By
310.1		NBORDOWITZ
440.0		MMALCOMSON
6010B		NBORDOWITZ
ASTM C25		NBORDOWITZ
ASTM D2974-07a		DCASTRO
ASTM D6316-09b		MMALCOMSON
ASTM E1915 - 09		KBEATTIE
EPA LKahn 7-27-1988		MMALCOMSON
Sobek 3.2.18		NBORDOWITZ

Sample Name: TPC19-14 **Date Collected:** 09/17/19
Lab Code: T1901660-014 **Date Received:** 09/20/19
Sample Matrix: Soil

Analysis Method	Extracted/Digested By	Analyzed By
310.1		NBORDOWITZ
440.0		MMALCOMSON
6010B		NBORDOWITZ
ASTM C25		NBORDOWITZ
ASTM D2974-07a		DCASTRO
ASTM D6316-09b		MMALCOMSON
ASTM E1915 - 09		KBEATTIE
EPA LKahn 7-27-1988		MMALCOMSON
Sobek 3.2.18		NBORDOWITZ

Sample Name: TPC19-15 **Date Collected:** 09/17/19
Lab Code: T1901660-015 **Date Received:** 09/20/19
Sample Matrix: Soil

Analysis Method	Extracted/Digested By	Analyzed By
310.1		NBORDOWITZ
440.0		MMALCOMSON

Analyst Summary report

Client: Resolution Copper Mining LLC **Service Request:** T1901660
Project: Skunk Camp Closure/M09441A23

Sample Name: TPC19-15 **Date Collected:** 09/17/19
Lab Code: T1901660-015 **Date Received:** 09/20/19
Sample Matrix: Soil

Analysis Method	Extracted/Digested By	Analyzed By
6010B		NBORDOWITZ
6010C	JHINSON	AMCKORNEY
6020A	YZOOK	EMCALLISTER
6020A	JHINSON	EMCALLISTER
7470A	JHINSON	JHINSON
ASTM C25		NBORDOWITZ
ASTM D2974-07a		DCASTRO
ASTM D6316-09b		MMALCOMSON
ASTM E1915 - 09		KBEATTIE
EPA LKahn 7-27-1988		MMALCOMSON
Sobek 3.2.18		NBORDOWITZ

Sample Name: TPC19-16 **Date Collected:** 09/20/19
Lab Code: T1901660-016 **Date Received:** 09/20/19
Sample Matrix: Soil

Analysis Method	Extracted/Digested By	Analyzed By
310.1		NBORDOWITZ
440.0		MMALCOMSON
6010B		NBORDOWITZ
6010C	JHINSON	AMCKORNEY
6020A	JHINSON	EMCALLISTER
6020A	YZOOK	EMCALLISTER
7470A	JHINSON	JHINSON
ASTM C25		NBORDOWITZ
ASTM D2974-07a		DCASTRO
ASTM D6316-09b		MMALCOMSON
ASTM E1915 - 09		KBEATTIE
EPA LKahn 7-27-1988		MMALCOMSON
Sobek 3.2.18		NBORDOWITZ

Analyst Summary report

Client: Resolution Copper Mining LLC **Service Request:** T1901660
Project: Skunk Camp Closure/M09441A23

Sample Name: TPC19-17 **Date Collected:** 09/20/19
Lab Code: T1901660-017 **Date Received:** 09/20/19
Sample Matrix: Soil

Analysis Method	Extracted/Digested By	Analyzed By
310.1		NBORDOWITZ
440.0		MMALCOMSON
6010B		NBORDOWITZ
6010C	JHINSON	AMCKORNEY
6020A	JHINSON	EMCALLISTER
7470A	JHINSON	JHINSON
ASTM C25		NBORDOWITZ
ASTM D2974-07a		DCASTRO
ASTM D6316-09b		MMALCOMSON
ASTM E1915 - 09		KBEATTIE
EPA LKahn 7-27-1988		MMALCOMSON
Sobek 3.2.18		NBORDOWITZ

Sample Name: TPC19-18 **Date Collected:** 09/18/19
Lab Code: T1901660-018 **Date Received:** 09/20/19
Sample Matrix: Soil

Analysis Method	Extracted/Digested By	Analyzed By
310.1		NBORDOWITZ
440.0		MMALCOMSON
6010B		NBORDOWITZ
ASTM C25		NBORDOWITZ
ASTM D2974-07a		DCASTRO
ASTM D6316-09b		MMALCOMSON
ASTM E1915 - 09		KBEATTIE
EPA LKahn 7-27-1988		MMALCOMSON
Sobek 3.2.18		NBORDOWITZ

Analyst Summary report

Client: Resolution Copper Mining LLC **Service Request:** T1901660
Project: Skunk Camp Closure/M09441A23

Sample Name: TPC19-19 **Date Collected:** 09/17/19
Lab Code: T1901660-019 **Date Received:** 09/20/19
Sample Matrix: Soil

Analysis Method	Extracted/Digested By	Analyzed By
310.1		NBORDOWITZ
440.0		MMALCOMSON
6010B		NBORDOWITZ
6010C	JHINSON	AMCKORNEY
6020A	JHINSON	EMCALLISTER
6020A	YZOOK	EMCALLISTER
7470A	JHINSON	JHINSON
ASTM C25		NBORDOWITZ
ASTM D2974-07a		DCASTRO
ASTM D6316-09b		MMALCOMSON
ASTM E1915 - 09		KBEATTIE
EPA LKahn 7-27-1988		MMALCOMSON
Sobek 3.2.18		NBORDOWITZ

Sample Name: TPC19-20 **Date Collected:** 09/16/19
Lab Code: T1901660-020 **Date Received:** 09/20/19
Sample Matrix: Soil

Analysis Method	Extracted/Digested By	Analyzed By
310.1		NBORDOWITZ
440.0		MMALCOMSON
6010B		NBORDOWITZ
6010C	JHINSON	AMCKORNEY
6020A	YZOOK	EMCALLISTER
7470A	JHINSON	JHINSON
ASTM C25		NBORDOWITZ
ASTM D2974-07a		DCASTRO
ASTM D6316-09b		MMALCOMSON
ASTM E1915 - 09		KBEATTIE
EPA LKahn 7-27-1988		MMALCOMSON
Sobek 3.2.18		NBORDOWITZ

Analyst Summary report

Client: Resolution Copper Mining LLC **Service Request:** T1901660
Project: Skunk Camp Closure/M09441A23

Sample Name: TPC19-21 **Date Collected:** 09/20/19
Lab Code: T1901660-021 **Date Received:** 09/20/19
Sample Matrix: Soil

Analysis Method	Extracted/Digested By	Analyzed By
310.1		NBORDOWITZ
440.0		MMALCOMSON
6010B		NBORDOWITZ
ASTM C25		NBORDOWITZ
ASTM D2974-07a		DCASTRO
ASTM D6316-09b		MMALCOMSON
ASTM E1915 - 09		KBEATTIE
EPA LKahn 7-27-1988		MMALCOMSON
Sobek 3.2.18		NBORDOWITZ

Sample Name: TPC19-22 **Date Collected:** 09/20/19
Lab Code: T1901660-022 **Date Received:** 09/20/19
Sample Matrix: Soil

Analysis Method	Extracted/Digested By	Analyzed By
310.1		NBORDOWITZ
440.0		MMALCOMSON
6010B		NBORDOWITZ
ASTM C25		NBORDOWITZ
ASTM D2974-07a		DCASTRO
ASTM D6316-09b		MMALCOMSON
ASTM E1915 - 09		KBEATTIE
EPA LKahn 7-27-1988		MMALCOMSON
Sobek 3.2.18		NBORDOWITZ

Sample Name: TPC19-23 **Date Collected:** 09/19/19
Lab Code: T1901660-023 **Date Received:** 09/20/19
Sample Matrix: Soil

Analysis Method	Extracted/Digested By	Analyzed By
310.1		NBORDOWITZ
440.0		MMALCOMSON

Client: Resolution Copper Mining LLC **Service Request:** T1901660
Project: Skunk Camp Closure/M09441A23

Sample Name: TPC19-23 **Date Collected:** 09/19/19
Lab Code: T1901660-023 **Date Received:** 09/20/19
Sample Matrix: Soil

Analysis Method	Extracted/Digested By	Analyzed By
6010B		NBORDOWITZ
ASTM C25		NBORDOWITZ
ASTM D2974-07a		DCASTRO
ASTM D6316-09b		MMALCOMSON
ASTM E1915 - 09		KBEATTIE
EPA LKahn 7-27-1988		MMALCOMSON
Sobek 3.2.18		NBORDOWITZ

Sample Name: TPC19-24 **Date Collected:** 09/19/19
Lab Code: T1901660-024 **Date Received:** 09/20/19
Sample Matrix: Soil

Analysis Method	Extracted/Digested By	Analyzed By
310.1		NBORDOWITZ
440.0		MMALCOMSON
6010B		NBORDOWITZ
ASTM C25		NBORDOWITZ
ASTM D2974-07a		DCASTRO
ASTM D6316-09b		MMALCOMSON
ASTM E1915 - 09		KBEATTIE
EPA LKahn 7-27-1988		MMALCOMSON
Sobek 3.2.18		NBORDOWITZ

Sample Name: TPC19-1 **Date Collected:** 09/18/19
Lab Code: T1901660-025 **Date Received:** 09/20/19
Sample Matrix: Water

Analysis Method	Extracted/Digested By	Analyzed By
120.1		JMADISON
9056A		MRODRIGUEZ
SM 2310 B(4a)		DBRADBURY
SM 2320 B		DBRADBURY

Analyst Summary report

Client: Resolution Copper Mining LLC **Service Request:** T1901660
Project: Skunk Camp Closure/M09441A23

Sample Name: TPC19-1 **Date Collected:** 09/18/19
Lab Code: T1901660-025 **Date Received:** 09/20/19
Sample Matrix: Water

Analysis Method	Extracted/Digested By	Analyzed By
SM 4500-H+ B		ACHEATLEY

Sample Name: TPC19-2 **Date Collected:** 09/17/19
Lab Code: T1901660-026 **Date Received:** 09/20/19
Sample Matrix: Water

Analysis Method	Extracted/Digested By	Analyzed By
120.1		JMADISON
9056A		MRODRIGUEZ
SM 2310 B(4a)		DBRADBURY
SM 2320 B		DBRADBURY
SM 4500-H+ B		ACHEATLEY

Sample Name: TPC19-4 **Date Collected:** 09/16/19
Lab Code: T1901660-027 **Date Received:** 09/20/19
Sample Matrix: Water

Analysis Method	Extracted/Digested By	Analyzed By
120.1		JMADISON
9056A		MRODRIGUEZ
SM 2310 B(4a)		DBRADBURY
SM 2320 B		DBRADBURY
SM 4500-H+ B		ACHEATLEY

Sample Name: TPC19-5 **Date Collected:** 09/18/19
Lab Code: T1901660-028 **Date Received:** 09/20/19
Sample Matrix: Water

Analysis Method	Extracted/Digested By	Analyzed By
120.1		JMADISON
9056A		MRODRIGUEZ

Analyst Summary report

Client: Resolution Copper Mining LLC
Project: Skunk Camp Closure/M09441A23
Service Request: T1901660

Sample Name: TPC19-5
Lab Code: T1901660-028
Sample Matrix: Water
Date Collected: 09/18/19
Date Received: 09/20/19

Analysis Method	Extracted/Digested By	Analyzed By
SM 2310 B(4a)		DBRADBURY
SM 2320 B		DBRADBURY
SM 4500-H+ B		ACHEATLEY

Sample Name: TPC19-7
Lab Code: T1901660-029
Sample Matrix: Water
Date Collected: 09/17/19
Date Received: 09/20/19

Analysis Method	Extracted/Digested By	Analyzed By
120.1		JMADISON
9056A		MRODRIGUEZ
SM 2310 B(4a)		DBRADBURY
SM 2320 B		DBRADBURY
SM 4500-H+ B		ACHEATLEY

Sample Name: TPC19-12
Lab Code: T1901660-030
Sample Matrix: Water
Date Collected: 09/19/19
Date Received: 09/20/19

Analysis Method	Extracted/Digested By	Analyzed By
120.1		JMADISON
9056A		MRODRIGUEZ
SM 2310 B(4a)		DBRADBURY
SM 2320 B		DBRADBURY
SM 4500-H+ B		ACHEATLEY

Analyst Summary report

Client: Resolution Copper Mining LLC
Project: Skunk Camp Closure/M09441A23
Service Request: T1901660

Sample Name: TPC19-15
Lab Code: T1901660-031
Sample Matrix: Water
Date Collected: 09/17/19
Date Received: 09/20/19

Analysis Method	Extracted/Digested By	Analyzed By
120.1		JMADISON
9056A		MRODRIGUEZ
SM 2310 B(4a)		DBRADBURY
SM 2320 B		DBRADBURY
SM 4500-H+ B		ACHEATLEY

Sample Name: TPC19-16
Lab Code: T1901660-032
Sample Matrix: Water
Date Collected: 09/20/19
Date Received: 09/20/19

Analysis Method	Extracted/Digested By	Analyzed By
120.1		JMADISON
9056A		MRODRIGUEZ
SM 2310 B(4a)		DBRADBURY
SM 2320 B		DBRADBURY
SM 4500-H+ B		ACHEATLEY

Sample Name: TPC19-17
Lab Code: T1901660-033
Sample Matrix: Water
Date Collected: 09/20/19
Date Received: 09/20/19

Analysis Method	Extracted/Digested By	Analyzed By
120.1		JMADISON
9056A		MRODRIGUEZ
SM 2310 B(4a)		DBRADBURY
SM 2320 B		DBRADBURY
SM 4500-H+ B		ACHEATLEY

Analyst Summary report

Client:	Resolution Copper Mining LLC	**Service Request:**	T1901660
Project:	Skunk Camp Closure/M09441A23		

Sample Name:	TPC19-19	**Date Collected:**	09/17/19
Lab Code:	T1901660-034	**Date Received:**	09/20/19
Sample Matrix:	Water		

Analysis Method	Extracted/Digested By	Analyzed By
120.1		JMADISON
9056A		MRODRIGUEZ
SM 2310 B(4a)		DBRADBURY
SM 2320 B		DBRADBURY
SM 4500-H+ B		ACHEATLEY

Sample Results

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360) 577-7222 Fax (360) 425-9096
www.alsglobal.com

Metals

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360) 577-7222 Fax (360) 425-9096
www.alsglobal.com

Analytical Report

Client:	Resolution Copper Mining LLC	**Service Request:**	T1901660
Project:	Skunk Camp Closure/M09441A23	**Date Collected:**	09/18/19 00:00
Sample Matrix:	Soil	**Date Received:**	09/20/19 17:05
Sample Name:	TPC19-1	**Basis:**	As Received
Lab Code:	T1901660-001		

Synthetic Precipitation Leachate Procedure (SPLP)

SPLP Metals

Pre-Prep Method: EPA 1312

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Aluminum	6010C	**8.89**	mg/L	0.010	1	10/23/19 10:44	10/17/19	
Antimony	6010C	ND U	mg/L	0.020	1	10/23/19 10:44	10/17/19	
Arsenic	6010C	ND U	mg/L	0.010	1	10/23/19 10:44	10/17/19	
Barium	6010C	ND U	mg/L	0.20	1	10/23/19 10:44	10/17/19	
Beryllium	6010C	ND U	mg/L	0.010	1	10/23/19 10:44	10/17/19	
Bismuth	6020A	**0.00056**	mg/L	0.00050	1	10/22/19 14:12	10/16/19	
Boron	6010C	**0.040**	mg/L	0.040	1	10/23/19 10:44	10/17/19	
Cadmium	6010C	**0.022**	mg/L	0.020	1	10/23/19 10:44	10/17/19	
Calcium	6010C	**4.8**	mg/L	1.0	1	10/23/19 10:44	10/17/19	
Chromium	6010C	ND U	mg/L	0.010	1	10/23/19 10:44	10/17/19	
Cobalt	6010C	ND U	mg/L	0.010	1	10/23/19 10:44	10/17/19	
Copper	6010C	**0.045**	mg/L	0.010	1	10/23/19 10:44	10/17/19	
Iron	6010C	**12.4**	mg/L	0.020	1	10/23/19 10:44	10/17/19	
Lead	6010C	**0.011**	mg/L	0.010	1	10/23/19 10:44	10/17/19	
Magnesium	6010C	**1.73**	mg/L	0.080	1	10/23/19 10:44	10/17/19	
Manganese	6010C	**0.095**	mg/L	0.010	1	10/23/19 10:44	10/17/19	
Mercury	7470A	ND U	mg/L	0.0010	1	10/18/19 11:30	10/17/19	
Molybdenum	6010C	ND U	mg/L	0.010	1	10/23/19 10:44	10/17/19	
Nickel	6010C	ND U	mg/L	0.080	1	10/23/19 10:44	10/17/19	
Phosphorus	6010C	**0.935**	mg/L	0.040	1	10/23/19 10:44	10/17/19	
Potassium	6010C	**5.24**	mg/L	0.20	1	10/23/19 10:44	10/17/19	
Selenium	6010C	ND U	mg/L	0.020	1	10/23/19 10:44	10/17/19	
Silicon	6010C	**15.3**	mg/L	1.0	1	10/23/19 10:44	10/17/19	
Silver	6010C	ND U	mg/L	0.020	1	10/23/19 10:44	10/17/19	
Sodium	6010C	ND U	mg/L	20	1	10/23/19 10:44	10/17/19	
Strontium	6010C	**0.022**	mg/L	0.010	1	10/23/19 10:44	10/17/19	
Thallium	6010C	ND U	mg/L	0.010	1	10/23/19 10:44	10/17/19	
Uranium	6020A	**0.00029**	mg/L	0.00020	1	10/22/19 14:12	10/16/19	
Zinc	6010C	**0.0235**	mg/L	0.0040	1	10/23/19 10:44	10/17/19	

Analytical Report

Client:	Resolution Copper Mining LLC	**Service Request:**	T1901660
Project:	Skunk Camp Closure/M09441A23	**Date Collected:**	09/18/19 00:00
Sample Matrix:	Soil	**Date Received:**	09/20/19 17:05
Sample Name:	TPC19-1	**Basis:**	As Received
Lab Code:	T1901660-001		

Toxicity Characteristics Leachate Procedure (TCLP)

TCLP Metals

Pre-Prep Method: EPA 1311

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Aluminum	6010C	**3.52**	mg/L	0.050	5	10/21/19 14:21	10/16/19	
Antimony	6010C	ND U	mg/L	0.10	5	10/21/19 14:21	10/16/19	
Arsenic	6010C	ND U	mg/L	0.050	5	10/21/19 14:21	10/16/19	
Barium	6010C	ND U	mg/L	1.0	5	10/21/19 14:21	10/16/19	
Beryllium	6010C	ND U	mg/L	0.0050	5	10/21/19 14:21	10/16/19	
Bismuth	6020A	ND U	mg/L	0.010	10	10/24/19 12:32	10/22/19	
Boron	6010C	ND U	mg/L	0.10	5	10/21/19 14:21	10/16/19	
Cadmium	6010C	ND U	mg/L	0.050	5	10/21/19 14:21	10/16/19	
Calcium	6010C	**40.4**	mg/L	0.10	5	10/21/19 14:21	10/16/19	
Chromium	6010C	ND U	mg/L	0.050	5	10/21/19 14:21	10/16/19	
Cobalt	6010C	**0.020**	mg/L	0.010	5	10/21/19 14:21	10/16/19	
Copper	6010C	ND U	mg/L	0.10	5	10/21/19 14:21	10/16/19	
Iron	6010C	**5.44**	mg/L	0.10	5	10/21/19 14:21	10/16/19	
Lead	6010C	ND U	mg/L	0.050	5	10/21/19 14:21	10/16/19	
Magnesium	6010C	**6.99**	mg/L	0.050	5	10/21/19 14:21	10/16/19	
Manganese	6010C	**1.11**	mg/L	0.0050	5	10/21/19 14:21	10/16/19	
Mercury	7470A	ND U	mg/L	0.0010	1	10/18/19 09:50	10/17/19	
Molybdenum	6010C	ND U	mg/L	0.020	5	10/21/19 14:21	10/16/19	
Nickel	6010C	ND U	mg/L	0.10	5	10/21/19 14:21	10/16/19	
Phosphorus	6010C	**1.02**	mg/L	0.20	5	10/21/19 14:21	10/16/19	
Potassium	6010C	**12.7**	mg/L	1.0	5	10/21/19 14:21	10/16/19	
Selenium	6010C	ND U	mg/L	0.10	5	10/21/19 14:21	10/16/19	
Silicon	6010C	**8.6**	mg/L	1.0	5	10/21/19 14:21	10/16/19	
Silver	6010C	ND U	mg/L	0.050	5	10/21/19 14:21	10/16/19	
Sodium	6010C	**1320**	mg/L	1.0	5	10/21/19 14:21	10/16/19	
Strontium	6010C	**0.184**	mg/L	0.0050	5	10/21/19 14:21	10/16/19	
Thallium	6010C	ND U	mg/L	0.050	5	10/21/19 14:21	10/16/19	
Uranium	6020A	**0.00026**	mg/L	0.00020	10	10/24/19 12:32	10/22/19	
Zinc	6010C	ND U	mg/L	1.0	5	10/21/19 14:21	10/16/19	

Analytical Report

Client:	Resolution Copper Mining LLC	**Service Request:**	T1901660
Project:	Skunk Camp Closure/M09441A23	**Date Collected:**	09/17/19 00:00
Sample Matrix:	Soil	**Date Received:**	09/20/19 17:05
Sample Name:	TPC19-2	**Basis:**	As Received
Lab Code:	T1901660-002		

Synthetic Precipitation Leachate Procedure (SPLP)

SPLP Metals

Pre-Prep Method: EPA 1312

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Aluminum	6010C	**3.37**	mg/L	0.010	1	10/23/19 10:47	10/17/19	
Antimony	6010C	ND U	mg/L	0.020	1	10/23/19 10:47	10/17/19	
Arsenic	6010C	ND U	mg/L	0.010	1	10/23/19 10:47	10/17/19	
Barium	6010C	ND U	mg/L	0.20	1	10/23/19 10:47	10/17/19	
Beryllium	6010C	ND U	mg/L	0.010	1	10/23/19 10:47	10/17/19	
Bismuth	6020A	ND U	mg/L	0.00050	1	10/22/19 14:14	10/16/19	
Boron	6010C	ND U	mg/L	0.040	1	10/23/19 10:47	10/17/19	
Cadmium	6010C	ND U	mg/L	0.020	1	10/23/19 10:47	10/17/19	
Calcium	6010C	**13.9**	mg/L	1.0	1	10/23/19 10:47	10/17/19	
Chromium	6010C	ND U	mg/L	0.010	1	10/23/19 10:47	10/17/19	
Cobalt	6010C	ND U	mg/L	0.010	1	10/23/19 10:47	10/17/19	
Copper	6010C	ND U	mg/L	0.010	1	10/23/19 10:47	10/17/19	
Iron	6010C	**3.34**	mg/L	0.020	1	10/23/19 10:47	10/17/19	
Lead	6010C	ND U	mg/L	0.010	1	10/23/19 10:47	10/17/19	
Magnesium	6010C	**1.73**	mg/L	0.080	1	10/23/19 10:47	10/17/19	
Manganese	6010C	**0.140**	mg/L	0.010	1	10/23/19 10:47	10/17/19	
Mercury	7470A	ND U	mg/L	0.0010	1	10/18/19 11:32	10/17/19	
Molybdenum	6010C	ND U	mg/L	0.010	1	10/23/19 10:47	10/17/19	
Nickel	6010C	ND U	mg/L	0.080	1	10/23/19 10:47	10/17/19	
Phosphorus	6010C	**0.150**	mg/L	0.040	1	10/23/19 10:47	10/17/19	
Potassium	6010C	**0.42**	mg/L	0.20	1	10/23/19 10:47	10/17/19	
Selenium	6010C	ND U	mg/L	0.020	1	10/23/19 10:47	10/17/19	
Silicon	6010C	**13.8**	mg/L	1.0	1	10/23/19 10:47	10/17/19	
Silver	6010C	ND U	mg/L	0.020	1	10/23/19 10:47	10/17/19	
Sodium	6010C	ND U	mg/L	20	1	10/23/19 10:47	10/17/19	
Strontium	6010C	**0.016**	mg/L	0.010	1	10/23/19 10:47	10/17/19	
Thallium	6010C	ND U	mg/L	0.010	1	10/23/19 10:47	10/17/19	
Uranium	6020A	ND U	mg/L	0.00020	1	10/22/19 14:14	10/16/19	
Zinc	6010C	**0.0064**	mg/L	0.0040	1	10/23/19 10:47	10/17/19	

Analytical Report

Client:	Resolution Copper Mining LLC	**Service Request:**	T1901660
Project:	Skunk Camp Closure/M09441A23	**Date Collected:**	09/17/19 00:00
Sample Matrix:	Soil	**Date Received:**	09/20/19 17:05
Sample Name:	TPC19-2	**Basis:**	As Received
Lab Code:	T1901660-002		

Toxicity Characteristics Leachate Procedure (TCLP)

TCLP Metals

Pre-Prep Method: EPA 1311

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Aluminum	6010C	ND U	mg/L	0.050	5	10/21/19 13:58	10/16/19	
Antimony	6010C	ND U	mg/L	0.10	5	10/21/19 13:58	10/16/19	
Arsenic	6010C	ND U	mg/L	0.050	5	10/21/19 13:58	10/16/19	
Barium	6010C	ND U	mg/L	1.0	5	10/21/19 13:58	10/16/19	
Beryllium	6010C	ND U	mg/L	0.0050	5	10/21/19 13:58	10/16/19	
Bismuth	6020A	ND U	mg/L	0.010	10	10/24/19 12:33	10/22/19	
Boron	6010C	ND U	mg/L	0.10	5	10/21/19 13:58	10/16/19	
Cadmium	6010C	ND U	mg/L	0.050	5	10/21/19 13:58	10/16/19	
Calcium	6010C	**692**	mg/L	0.10	5	10/21/19 13:58	10/16/19	
Chromium	6010C	ND U	mg/L	0.050	5	10/21/19 13:58	10/16/19	
Cobalt	6010C	ND U	mg/L	0.010	5	10/21/19 13:58	10/16/19	
Copper	6010C	ND U	mg/L	0.10	5	10/21/19 13:58	10/16/19	
Iron	6010C	ND U	mg/L	0.10	5	10/21/19 13:58	10/16/19	
Lead	6010C	ND U	mg/L	0.050	5	10/21/19 13:58	10/16/19	
Magnesium	6010C	**7.19**	mg/L	0.050	5	10/21/19 13:58	10/16/19	
Manganese	6010C	**0.0967**	mg/L	0.0050	5	10/21/19 13:58	10/16/19	
Mercury	7470A	ND U	mg/L	0.0010	1	10/18/19 09:58	10/17/19	
Molybdenum	6010C	ND U	mg/L	0.020	5	10/21/19 13:58	10/16/19	
Nickel	6010C	ND U	mg/L	0.10	5	10/21/19 13:58	10/16/19	
Phosphorus	6010C	ND U	mg/L	0.20	5	10/21/19 13:58	10/16/19	
Potassium	6010C	**5.4**	mg/L	1.0	5	10/21/19 13:58	10/16/19	
Selenium	6010C	ND U	mg/L	0.10	5	10/21/19 13:58	10/16/19	
Silicon	6010C	**4.9**	mg/L	1.0	5	10/21/19 13:58	10/16/19	
Silver	6010C	ND U	mg/L	0.050	5	10/21/19 13:58	10/16/19	
Sodium	6010C	**1330**	mg/L	1.0	5	10/21/19 13:58	10/16/19	
Strontium	6010C	**0.497**	mg/L	0.0050	5	10/21/19 13:58	10/16/19	
Thallium	6010C	ND U	mg/L	0.050	5	10/21/19 13:58	10/16/19	
Uranium	6020A	**0.00048**	mg/L	0.00020	10	10/24/19 12:33	10/22/19	
Zinc	6010C	ND U	mg/L	1.0	5	10/21/19 13:58	10/16/19	

Analytical Report

Client:	Resolution Copper Mining LLC	**Service Request:**	T1901660
Project:	Skunk Camp Closure/M09441A23	**Date Collected:**	09/16/19 00:00
Sample Matrix:	Soil	**Date Received:**	09/20/19 17:05
Sample Name:	TPC19-4	**Basis:**	As Received
Lab Code:	T1901660-004		

Synthetic Precipitation Leachate Procedure (SPLP)

SPLP Metals

Pre-Prep Method: EPA 1312

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Aluminum	6010C	**1.61**	mg/L	0.040	1	10/23/19 10:54	10/17/19	
Antimony	6010C	ND U	mg/L	0.020	1	10/23/19 10:54	10/17/19	
Arsenic	6010C	ND U	mg/L	0.010	1	10/23/19 10:54	10/17/19	
Barium	6010C	ND U	mg/L	0.20	1	10/23/19 10:54	10/17/19	
Beryllium	6010C	ND U	mg/L	0.010	1	10/23/19 10:54	10/17/19	
Bismuth	6020A	ND U	mg/L	0.00050	1	10/22/19 14:20	10/16/19	
Boron	6010C	ND U	mg/L	0.040	1	10/23/19 10:54	10/17/19	
Cadmium	6010C	ND U	mg/L	0.020	1	10/23/19 10:54	10/17/19	
Calcium	6010C	**12.4**	mg/L	1.0	1	10/23/19 10:54	10/17/19	
Chromium	6010C	ND U	mg/L	0.010	1	10/23/19 10:54	10/17/19	
Cobalt	6010C	ND U	mg/L	0.010	1	10/23/19 10:54	10/17/19	
Copper	6010C	ND U	mg/L	0.010	1	10/23/19 10:54	10/17/19	
Iron	6010C	**1.82**	mg/L	0.020	1	10/23/19 10:54	10/17/19	
Lead	6010C	ND U	mg/L	0.010	1	10/23/19 10:54	10/17/19	
Magnesium	6010C	**1.21**	mg/L	0.080	1	10/23/19 10:54	10/17/19	
Manganese	6010C	**0.090**	mg/L	0.010	1	10/23/19 10:54	10/17/19	
Mercury	7470A	ND U	mg/L	0.0010	1	10/18/19 11:34	10/17/19	
Molybdenum	6010C	ND U	mg/L	0.010	1	10/23/19 10:54	10/17/19	
Nickel	6010C	ND U	mg/L	0.080	1	10/23/19 10:54	10/17/19	
Phosphorus	6010C	**0.070**	mg/L	0.040	1	10/23/19 10:54	10/17/19	
Potassium	6010C	**0.29**	mg/L	0.20	1	10/23/19 10:54	10/17/19	
Selenium	6010C	ND U	mg/L	0.020	1	10/23/19 10:54	10/17/19	
Silicon	6010C	**8.5**	mg/L	1.0	1	10/23/19 10:54	10/17/19	
Silver	6010C	ND U	mg/L	0.020	1	10/23/19 10:54	10/17/19	
Sodium	6010C	ND U	mg/L	20	1	10/23/19 10:54	10/17/19	
Strontium	6010C	ND U	mg/L	0.010	1	10/23/19 10:54	10/17/19	
Thallium	6010C	ND U	mg/L	0.010	1	10/23/19 10:54	10/17/19	
Uranium	6020A	ND U	mg/L	0.00020	1	10/22/19 14:20	10/16/19	
Zinc	6010C	**0.0060**	mg/L	0.0040	1	10/23/19 10:54	10/17/19	

Analytical Report

Client:	Resolution Copper Mining LLC	**Service Request:**	T1901660
Project:	Skunk Camp Closure/M09441A23	**Date Collected:**	09/16/19 00:00
Sample Matrix:	Soil	**Date Received:**	09/20/19 17:05
Sample Name:	TPC19-4	**Basis:**	As Received
Lab Code:	T1901660-004		

Toxicity Characteristics Leachate Procedure (TCLP)

TCLP Metals

Pre-Prep Method: EPA 1311

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Aluminum	6010C	ND U	mg/L	0.050	5	10/21/19 14:31	10/16/19	
Antimony	6010C	ND U	mg/L	0.10	5	10/21/19 14:31	10/16/19	
Arsenic	6010C	ND U	mg/L	0.050	5	10/21/19 14:31	10/16/19	
Barium	6010C	ND U	mg/L	1.0	5	10/21/19 14:31	10/16/19	
Beryllium	6010C	ND U	mg/L	0.0050	5	10/21/19 14:31	10/16/19	
Bismuth	6020A	ND U	mg/L	0.010	10	10/24/19 12:26	10/22/19	
Boron	6010C	ND U	mg/L	0.10	5	10/21/19 14:31	10/16/19	
Cadmium	6010C	ND U	mg/L	0.050	5	10/21/19 14:31	10/16/19	
Calcium	6010C	**684**	mg/L	0.10	5	10/21/19 14:31	10/16/19	
Chromium	6010C	ND U	mg/L	0.050	5	10/21/19 14:31	10/16/19	
Cobalt	6010C	ND U	mg/L	0.010	5	10/21/19 14:31	10/16/19	
Copper	6010C	ND U	mg/L	0.10	5	10/21/19 14:31	10/16/19	
Iron	6010C	ND U	mg/L	0.10	5	10/21/19 14:31	10/16/19	
Lead	6010C	ND U	mg/L	0.050	5	10/21/19 14:31	10/16/19	
Magnesium	6010C	**5.46**	mg/L	0.050	5	10/21/19 14:31	10/16/19	
Manganese	6010C	**0.0392**	mg/L	0.0050	5	10/21/19 14:31	10/16/19	
Mercury	7470A	ND U	mg/L	0.0010	1	10/18/19 09:59	10/17/19	
Molybdenum	6010C	ND U	mg/L	0.020	5	10/21/19 14:31	10/16/19	
Nickel	6010C	ND U	mg/L	0.10	5	10/21/19 14:31	10/16/19	
Phosphorus	6010C	ND U	mg/L	0.20	5	10/21/19 14:31	10/16/19	
Potassium	6010C	**1.9**	mg/L	1.0	5	10/21/19 14:31	10/16/19	
Selenium	6010C	ND U	mg/L	0.10	5	10/21/19 14:31	10/16/19	
Silicon	6010C	**3.5**	mg/L	1.0	5	10/21/19 14:31	10/16/19	
Silver	6010C	ND U	mg/L	0.050	5	10/21/19 14:31	10/16/19	
Sodium	6010C	**1340**	mg/L	1.0	5	10/21/19 14:31	10/16/19	
Strontium	6010C	**0.237**	mg/L	0.0050	5	10/21/19 14:31	10/16/19	
Thallium	6010C	ND U	mg/L	0.050	5	10/21/19 14:31	10/16/19	
Uranium	6020A	**0.00041**	mg/L	0.00020	10	10/24/19 12:26	10/22/19	
Zinc	6010C	ND U	mg/L	1.0	5	10/21/19 14:31	10/16/19	

Analytical Report

Client:	Resolution Copper Mining LLC	**Service Request:**	T1901660
Project:	Skunk Camp Closure/M09441A23	**Date Collected:**	09/18/19 00:00
Sample Matrix:	Soil	**Date Received:**	09/20/19 17:05
Sample Name:	TPC19-5	**Basis:**	As Received
Lab Code:	T1901660-005		

Synthetic Precipitation Leachate Procedure (SPLP)

SPLP Metals

Pre-Prep Method: EPA 1312

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Aluminum	6010C	**2.53**	mg/L	0.010	1	10/23/19 11:21	10/17/19	
Antimony	6010C	ND U	mg/L	0.020	1	10/23/19 11:21	10/17/19	
Arsenic	6010C	ND U	mg/L	0.010	1	10/23/19 11:21	10/17/19	
Barium	6010C	ND U	mg/L	0.20	1	10/23/19 11:21	10/17/19	
Beryllium	6010C	ND U	mg/L	0.010	1	10/23/19 11:21	10/17/19	
Bismuth	6020A	ND U	mg/L	0.00050	1	10/22/19 14:21	10/16/19	
Boron	6010C	ND U	mg/L	0.040	1	10/23/19 11:21	10/17/19	
Cadmium	6010C	ND U	mg/L	0.020	1	10/23/19 11:21	10/17/19	
Calcium	6010C	**15.9**	mg/L	1.0	1	10/23/19 11:21	10/17/19	
Chromium	6010C	ND U	mg/L	0.010	1	10/23/19 11:21	10/17/19	
Cobalt	6010C	ND U	mg/L	0.010	1	10/23/19 11:21	10/17/19	
Copper	6010C	ND U	mg/L	0.010	1	10/23/19 11:21	10/17/19	
Iron	6010C	**2.07**	mg/L	0.020	1	10/23/19 11:21	10/17/19	
Lead	6010C	ND U	mg/L	0.010	1	10/23/19 11:21	10/17/19	
Magnesium	6010C	**1.72**	mg/L	0.080	1	10/23/19 11:21	10/17/19	
Manganese	6010C	**0.074**	mg/L	0.010	1	10/23/19 11:21	10/17/19	
Mercury	7470A	ND U	mg/L	0.0010	1	10/18/19 11:35	10/17/19	
Molybdenum	6010C	ND U	mg/L	0.010	1	10/23/19 11:21	10/17/19	
Nickel	6010C	ND U	mg/L	0.080	1	10/23/19 11:21	10/17/19	
Phosphorus	6010C	**0.118**	mg/L	0.040	1	10/23/19 11:21	10/17/19	
Potassium	6010C	**0.33**	mg/L	0.20	1	10/23/19 11:21	10/17/19	
Selenium	6010C	ND U	mg/L	0.020	1	10/23/19 11:21	10/17/19	
Silicon	6010C	**11.9**	mg/L	1.0	1	10/23/19 11:21	10/17/19	
Silver	6010C	ND U	mg/L	0.020	1	10/23/19 11:21	10/17/19	
Sodium	6010C	ND U	mg/L	20	1	10/23/19 11:21	10/17/19	
Strontium	6010C	**0.025**	mg/L	0.010	1	10/23/19 11:21	10/17/19	
Thallium	6010C	ND U	mg/L	0.010	1	10/23/19 11:21	10/17/19	
Uranium	6020A	ND U	mg/L	0.00020	1	10/22/19 14:21	10/16/19	
Zinc	6010C	**0.0058**	mg/L	0.0040	1	10/23/19 11:21	10/17/19	

Analytical Report

Client:	Resolution Copper Mining LLC	**Service Request:**	T1901660
Project:	Skunk Camp Closure/M09441A23	**Date Collected:**	09/18/19 00:00
Sample Matrix:	Soil	**Date Received:**	09/20/19 17:05
Sample Name:	TPC19-5	**Basis:**	As Received
Lab Code:	T1901660-005		

Toxicity Characteristics Leachate Procedure (TCLP)

TCLP Metals

Pre-Prep Method: EPA 1311

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Aluminum	6010C	ND U	mg/L	0.050	5	10/21/19 14:34	10/16/19	
Antimony	6010C	ND U	mg/L	0.10	5	10/21/19 14:34	10/16/19	
Arsenic	6010C	ND U	mg/L	0.050	5	10/21/19 14:34	10/16/19	
Barium	6010C	ND U	mg/L	1.0	5	10/21/19 14:34	10/16/19	
Beryllium	6010C	ND U	mg/L	0.0050	5	10/21/19 14:34	10/16/19	
Bismuth	6020A	ND U	mg/L	0.010	10	10/24/19 12:35	10/22/19	
Boron	6010C	ND U	mg/L	0.10	5	10/21/19 14:34	10/16/19	
Cadmium	6010C	ND U	mg/L	0.050	5	10/21/19 14:34	10/16/19	
Calcium	6010C	**669**	mg/L	0.10	5	10/21/19 14:34	10/16/19	
Chromium	6010C	ND U	mg/L	0.050	5	10/21/19 14:34	10/16/19	
Cobalt	6010C	ND U	mg/L	0.010	5	10/21/19 14:34	10/16/19	
Copper	6010C	ND U	mg/L	0.10	5	10/21/19 14:34	10/16/19	
Iron	6010C	ND U	mg/L	0.10	5	10/21/19 14:34	10/16/19	
Lead	6010C	ND U	mg/L	0.050	5	10/21/19 14:34	10/16/19	
Magnesium	6010C	**11.2**	mg/L	0.050	5	10/21/19 14:34	10/16/19	
Manganese	6010C	**0.0608**	mg/L	0.0050	5	10/21/19 14:34	10/16/19	
Mercury	7470A	ND U	mg/L	0.0010	1	10/18/19 10:01	10/17/19	
Molybdenum	6010C	ND U	mg/L	0.020	5	10/21/19 14:34	10/16/19	
Nickel	6010C	ND U	mg/L	0.10	5	10/21/19 14:34	10/16/19	
Phosphorus	6010C	**0.25**	mg/L	0.20	5	10/21/19 14:34	10/16/19	
Potassium	6010C	**6.3**	mg/L	1.0	5	10/21/19 14:34	10/16/19	
Selenium	6010C	ND U	mg/L	0.10	5	10/21/19 14:34	10/16/19	
Silicon	6010C	**4.9**	mg/L	1.0	5	10/21/19 14:34	10/16/19	
Silver	6010C	ND U	mg/L	0.050	5	10/21/19 14:34	10/16/19	
Sodium	6010C	**1330**	mg/L	1.0	5	10/21/19 14:34	10/16/19	
Strontium	6010C	**0.743**	mg/L	0.0050	5	10/21/19 14:34	10/16/19	
Thallium	6010C	ND U	mg/L	0.050	5	10/21/19 14:34	10/16/19	
Uranium	6020A	**0.00067**	mg/L	0.00020	10	10/24/19 12:35	10/22/19	
Zinc	6010C	ND U	mg/L	1.0	5	10/21/19 14:34	10/16/19	

Analytical Report

Client:	Resolution Copper Mining LLC	**Service Request:**	T1901660
Project:	Skunk Camp Closure/M09441A23	**Date Collected:**	09/17/19 00:00
Sample Matrix:	Soil	**Date Received:**	09/20/19 17:05
Sample Name:	TPC19-6	**Basis:**	As Received
Lab Code:	T1901660-006		

Toxicity Characteristics Leachate Procedure (TCLP)

TCLP Metals

Pre-Prep Method: EPA 1311

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Aluminum	6010C	ND U	mg/L	0.050	5	10/21/19 14:37	10/16/19	
Antimony	6010C	ND U	mg/L	0.10	5	10/21/19 14:37	10/16/19	
Arsenic	6010C	ND U	mg/L	0.050	5	10/21/19 14:37	10/16/19	
Barium	6010C	ND U	mg/L	1.0	5	10/21/19 14:37	10/16/19	
Beryllium	6010C	ND U	mg/L	0.0050	5	10/21/19 14:37	10/16/19	
Bismuth	6020A	ND U	mg/L	0.010	10	10/24/19 12:39	10/22/19	
Boron	6010C	ND U	mg/L	0.10	5	10/21/19 14:37	10/16/19	
Cadmium	6010C	ND U	mg/L	0.050	5	10/21/19 14:37	10/16/19	
Calcium	6010C	**640**	mg/L	0.10	5	10/21/19 14:37	10/16/19	
Chromium	6010C	ND U	mg/L	0.050	5	10/21/19 14:37	10/16/19	
Cobalt	6010C	ND U	mg/L	0.010	5	10/21/19 14:37	10/16/19	
Copper	6010C	ND U	mg/L	0.10	5	10/21/19 14:37	10/16/19	
Iron	6010C	ND U	mg/L	0.10	5	10/21/19 14:37	10/16/19	
Lead	6010C	ND U	mg/L	0.050	5	10/21/19 14:37	10/16/19	
Magnesium	6010C	**7.86**	mg/L	0.050	5	10/21/19 14:37	10/16/19	
Manganese	6010C	**0.0613**	mg/L	0.0050	5	10/21/19 14:37	10/16/19	
Mercury	7470A	ND U	mg/L	0.0010	1	10/18/19 10:07	10/17/19	
Molybdenum	6010C	ND U	mg/L	0.020	5	10/21/19 14:37	10/16/19	
Nickel	6010C	ND U	mg/L	0.10	5	10/21/19 14:37	10/16/19	
Phosphorus	6010C	ND U	mg/L	0.20	5	10/21/19 14:37	10/16/19	
Potassium	6010C	**3.1**	mg/L	1.0	5	10/21/19 14:37	10/16/19	
Selenium	6010C	ND U	mg/L	0.10	5	10/21/19 14:37	10/16/19	
Silicon	6010C	**3.4**	mg/L	1.0	5	10/21/19 14:37	10/16/19	
Silver	6010C	ND U	mg/L	0.050	5	10/21/19 14:37	10/16/19	
Sodium	6010C	**1340**	mg/L	1.0	5	10/21/19 14:37	10/16/19	
Strontium	6010C	**0.266**	mg/L	0.0050	5	10/21/19 14:37	10/16/19	
Thallium	6010C	ND U	mg/L	0.050	5	10/21/19 14:37	10/16/19	
Uranium	6020A	**0.00029**	mg/L	0.00020	10	10/24/19 12:39	10/22/19	
Zinc	6010C	ND U	mg/L	1.0	5	10/21/19 14:37	10/16/19	

Analytical Report

Client:	Resolution Copper Mining LLC	**Service Request:**	T1901660
Project:	Skunk Camp Closure/M09441A23	**Date Collected:**	09/17/19 00:00
Sample Matrix:	Soil	**Date Received:**	09/20/19 17:05
Sample Name:	TPC19-7	**Basis:**	As Received
Lab Code:	T1901660-007		

Synthetic Precipitation Leachate Procedure (SPLP)

SPLP Metals

Pre-Prep Method: EPA 1312

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Aluminum	6010C	**7.20**	mg/L	0.010	1	10/23/19 11:24	10/17/19	
Antimony	6010C	ND U	mg/L	0.020	1	10/23/19 11:24	10/17/19	
Arsenic	6010C	ND U	mg/L	0.010	1	10/23/19 11:24	10/17/19	
Barium	6010C	ND U	mg/L	0.20	1	10/23/19 11:24	10/17/19	
Beryllium	6010C	ND U	mg/L	0.010	1	10/23/19 11:24	10/17/19	
Bismuth	6020A	ND U	mg/L	0.00050	1	10/22/19 14:26	10/16/19	
Boron	6010C	ND U	mg/L	0.040	1	10/23/19 11:24	10/17/19	
Cadmium	6010C	ND U	mg/L	0.020	1	10/23/19 11:24	10/17/19	
Calcium	6010C	**13.4**	mg/L	1.0	1	10/23/19 11:24	10/17/19	
Chromium	6010C	ND U	mg/L	0.010	1	10/23/19 11:24	10/17/19	
Cobalt	6010C	ND U	mg/L	0.010	1	10/23/19 11:24	10/17/19	
Copper	6010C	**0.012**	mg/L	0.010	1	10/23/19 11:24	10/17/19	
Iron	6010C	**9.84**	mg/L	0.020	1	10/23/19 11:24	10/17/19	
Lead	6010C	ND U	mg/L	0.010	1	10/23/19 11:24	10/17/19	
Magnesium	6010C	**3.16**	mg/L	0.080	1	10/23/19 11:24	10/17/19	
Manganese	6010C	**0.088**	mg/L	0.010	1	10/23/19 11:24	10/17/19	
Mercury	7470A	ND U	mg/L	0.0010	1	10/18/19 11:42	10/17/19	
Molybdenum	6010C	ND U	mg/L	0.010	1	10/23/19 11:24	10/17/19	
Nickel	6010C	ND U	mg/L	0.080	1	10/23/19 11:24	10/17/19	
Phosphorus	6010C	**0.122**	mg/L	0.040	1	10/23/19 11:24	10/17/19	
Potassium	6010C	**0.63**	mg/L	0.20	1	10/23/19 11:24	10/17/19	
Selenium	6010C	ND U	mg/L	0.020	1	10/23/19 11:24	10/17/19	
Silicon	6010C	**20.1**	mg/L	1.0	1	10/23/19 11:24	10/17/19	
Silver	6010C	ND U	mg/L	0.020	1	10/23/19 11:24	10/17/19	
Sodium	6010C	ND U	mg/L	20	1	10/23/19 11:24	10/17/19	
Strontium	6010C	**0.035**	mg/L	0.010	1	10/23/19 11:24	10/17/19	
Thallium	6010C	ND U	mg/L	0.010	1	10/23/19 11:24	10/17/19	
Uranium	6020A	ND U	mg/L	0.00020	1	10/22/19 14:26	10/16/19	
Zinc	6010C	**0.0107**	mg/L	0.0040	1	10/23/19 11:24	10/17/19	

Analytical Report

Client:	Resolution Copper Mining LLC	**Service Request:**	T1901660
Project:	Skunk Camp Closure/M09441A23	**Date Collected:**	09/19/19 00:00
Sample Matrix:	Soil	**Date Received:**	09/20/19 17:05
Sample Name:	TPC19-12	**Basis:**	As Received
Lab Code:	T1901660-012		

Synthetic Precipitation Leachate Procedure (SPLP)

SPLP Metals

Pre-Prep Method: EPA 1312

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Aluminum	6010C	**3.37**	mg/L	0.010	1	10/23/19 11:26	10/17/19	
Antimony	6010C	ND U	mg/L	0.020	1	10/23/19 11:26	10/17/19	
Arsenic	6010C	ND U	mg/L	0.010	1	10/23/19 11:26	10/17/19	
Barium	6010C	ND U	mg/L	0.20	1	10/23/19 11:26	10/17/19	
Beryllium	6010C	ND U	mg/L	0.010	1	10/23/19 11:26	10/17/19	
Bismuth	6020A	ND U	mg/L	0.00050	1	10/22/19 14:28	10/16/19	
Boron	6010C	ND U	mg/L	0.040	1	10/23/19 11:26	10/17/19	
Cadmium	6010C	ND U	mg/L	0.020	1	10/23/19 11:26	10/17/19	
Calcium	6010C	**22.1**	mg/L	1.0	1	10/23/19 11:26	10/17/19	
Chromium	6010C	ND U	mg/L	0.010	1	10/23/19 11:26	10/17/19	
Cobalt	6010C	ND U	mg/L	0.010	1	10/23/19 11:26	10/17/19	
Copper	6010C	ND U	mg/L	0.010	1	10/23/19 11:26	10/17/19	
Iron	6010C	**3.76**	mg/L	0.020	1	10/23/19 11:26	10/17/19	
Lead	6010C	ND U	mg/L	0.010	1	10/23/19 11:26	10/17/19	
Magnesium	6010C	**1.93**	mg/L	0.080	1	10/23/19 11:26	10/17/19	
Manganese	6010C	**0.148**	mg/L	0.010	1	10/23/19 11:26	10/17/19	
Mercury	7470A	ND U	mg/L	0.0010	1	10/18/19 11:47	10/17/19	
Molybdenum	6010C	ND U	mg/L	0.010	1	10/23/19 11:26	10/17/19	
Nickel	6010C	ND U	mg/L	0.080	1	10/23/19 11:26	10/17/19	
Phosphorus	6010C	**0.129**	mg/L	0.040	1	10/23/19 11:26	10/17/19	
Potassium	6010C	**0.43**	mg/L	0.20	1	10/23/19 11:26	10/17/19	
Selenium	6010C	ND U	mg/L	0.020	1	10/23/19 11:26	10/17/19	
Silicon	6010C	**14.4**	mg/L	1.0	1	10/23/19 11:26	10/17/19	
Silver	6010C	ND U	mg/L	0.020	1	10/23/19 11:26	10/17/19	
Sodium	6010C	ND U	mg/L	20	1	10/23/19 11:26	10/17/19	
Strontium	6010C	**0.017**	mg/L	0.010	1	10/23/19 11:26	10/17/19	
Thallium	6010C	ND U	mg/L	0.010	1	10/23/19 11:26	10/17/19	
Uranium	6020A	ND U	mg/L	0.00020	1	10/22/19 14:28	10/16/19	
Zinc	6010C	**0.0082**	mg/L	0.0040	1	10/23/19 11:26	10/17/19	

Analytical Report

Client:	Resolution Copper Mining LLC	**Service Request:**	T1901660
Project:	Skunk Camp Closure/M09441A23	**Date Collected:**	09/19/19 00:00
Sample Matrix:	Soil	**Date Received:**	09/20/19 17:05
Sample Name:	TPC19-12	**Basis:**	As Received
Lab Code:	T1901660-012		

Toxicity Characteristics Leachate Procedure (TCLP)

TCLP Metals

Pre-Prep Method: EPA 1311

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Aluminum	6010C	ND U	mg/L	0.050	5	10/21/19 14:39	10/16/19	
Antimony	6010C	ND U	mg/L	0.10	5	10/21/19 14:39	10/16/19	
Arsenic	6010C	ND U	mg/L	0.050	5	10/21/19 14:39	10/16/19	
Barium	6010C	ND U	mg/L	1.0	5	10/21/19 14:39	10/16/19	
Beryllium	6010C	ND U	mg/L	0.0050	5	10/21/19 14:39	10/16/19	
Bismuth	6020A	ND U	mg/L	0.010	10	10/24/19 12:40	10/22/19	
Boron	6010C	ND U	mg/L	0.10	5	10/21/19 14:39	10/16/19	
Cadmium	6010C	ND U	mg/L	0.050	5	10/21/19 14:39	10/16/19	
Calcium	6010C	**675**	mg/L	0.10	5	10/21/19 14:39	10/16/19	
Chromium	6010C	ND U	mg/L	0.050	5	10/21/19 14:39	10/16/19	
Cobalt	6010C	ND U	mg/L	0.010	5	10/21/19 14:39	10/16/19	
Copper	6010C	ND U	mg/L	0.10	5	10/21/19 14:39	10/16/19	
Iron	6010C	ND U	mg/L	0.10	5	10/21/19 14:39	10/16/19	
Lead	6010C	ND U	mg/L	0.050	5	10/21/19 14:39	10/16/19	
Magnesium	6010C	**6.15**	mg/L	0.050	5	10/21/19 14:39	10/16/19	
Manganese	6010C	**0.0685**	mg/L	0.0050	5	10/21/19 14:39	10/16/19	
Mercury	7470A	ND U	mg/L	0.0010	1	10/18/19 10:09	10/17/19	
Molybdenum	6010C	ND U	mg/L	0.020	5	10/21/19 14:39	10/16/19	
Nickel	6010C	ND U	mg/L	0.10	5	10/21/19 14:39	10/16/19	
Phosphorus	6010C	ND U	mg/L	0.20	5	10/21/19 14:39	10/16/19	
Potassium	6010C	**2.6**	mg/L	1.0	5	10/21/19 14:39	10/16/19	
Selenium	6010C	ND U	mg/L	0.10	5	10/21/19 14:39	10/16/19	
Silicon	6010C	**5.1**	mg/L	1.0	5	10/21/19 14:39	10/16/19	
Silver	6010C	ND U	mg/L	0.050	5	10/21/19 14:39	10/16/19	
Sodium	6010C	**1330**	mg/L	1.0	5	10/21/19 14:39	10/16/19	
Strontium	6010C	**0.474**	mg/L	0.0050	5	10/21/19 14:39	10/16/19	
Thallium	6010C	ND U	mg/L	0.050	5	10/21/19 14:39	10/16/19	
Uranium	6020A	**0.00049**	mg/L	0.00020	10	10/24/19 12:40	10/22/19	
Zinc	6010C	ND U	mg/L	1.0	5	10/21/19 14:39	10/16/19	

Analytical Report

Client:	Resolution Copper Mining LLC	**Service Request:**	T1901660
Project:	Skunk Camp Closure/M09441A23	**Date Collected:**	09/17/19 00:00
Sample Matrix:	Soil	**Date Received:**	09/20/19 17:05
Sample Name:	TPC19-15	**Basis:**	As Received
Lab Code:	T1901660-015		

Synthetic Precipitation Leachate Procedure (SPLP)

SPLP Metals

Pre-Prep Method: EPA 1312

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Aluminum	6010C	**3.24**	mg/L	0.010	1	10/23/19 11:29	10/17/19	
Antimony	6010C	ND U	mg/L	0.020	1	10/23/19 11:29	10/17/19	
Arsenic	6010C	ND U	mg/L	0.010	1	10/23/19 11:29	10/17/19	
Barium	6010C	ND U	mg/L	0.20	1	10/23/19 11:29	10/17/19	
Beryllium	6010C	ND U	mg/L	0.010	1	10/23/19 11:29	10/17/19	
Bismuth	6020A	ND U	mg/L	0.00050	1	10/22/19 14:29	10/16/19	
Boron	6010C	**0.054**	mg/L	0.040	1	10/23/19 11:29	10/17/19	
Cadmium	6010C	ND U	mg/L	0.020	1	10/23/19 11:29	10/17/19	
Calcium	6010C	**12.2**	mg/L	1.0	1	10/23/19 11:29	10/17/19	
Chromium	6010C	ND U	mg/L	0.010	1	10/23/19 11:29	10/17/19	
Cobalt	6010C	ND U	mg/L	0.010	1	10/23/19 11:29	10/17/19	
Copper	6010C	ND U	mg/L	0.010	1	10/23/19 11:29	10/17/19	
Iron	6010C	**2.71**	mg/L	0.020	1	10/23/19 11:29	10/17/19	
Lead	6010C	ND U	mg/L	0.010	1	10/23/19 11:29	10/17/19	
Magnesium	6010C	**1.46**	mg/L	0.080	1	10/23/19 11:29	10/17/19	
Manganese	6010C	**0.108**	mg/L	0.010	1	10/23/19 11:29	10/17/19	
Mercury	7470A	ND U	mg/L	0.0010	1	10/18/19 11:08	10/17/19	
Molybdenum	6010C	ND U	mg/L	0.010	1	10/23/19 11:29	10/17/19	
Nickel	6010C	ND U	mg/L	0.080	1	10/23/19 11:29	10/17/19	
Phosphorus	6010C	**0.139**	mg/L	0.040	1	10/23/19 11:29	10/17/19	
Potassium	6010C	**0.36**	mg/L	0.20	1	10/23/19 11:29	10/17/19	
Selenium	6010C	ND U	mg/L	0.020	1	10/23/19 11:29	10/17/19	
Silicon	6010C	**12.7**	mg/L	1.0	1	10/23/19 11:29	10/17/19	
Silver	6010C	ND U	mg/L	0.020	1	10/23/19 11:29	10/17/19	
Sodium	6010C	ND U	mg/L	20	1	10/23/19 11:29	10/17/19	
Strontium	6010C	**0.015**	mg/L	0.010	1	10/23/19 11:29	10/17/19	
Thallium	6010C	ND U	mg/L	0.010	1	10/23/19 11:29	10/17/19	
Uranium	6020A	ND U	mg/L	0.00020	1	10/22/19 14:29	10/16/19	
Zinc	6010C	**0.0173**	mg/L	0.0040	1	10/23/19 11:29	10/17/19	

Analytical Report

Client:	Resolution Copper Mining LLC	**Service Request:**	T1901660
Project:	Skunk Camp Closure/M09441A23	**Date Collected:**	09/17/19 00:00
Sample Matrix:	Soil	**Date Received:**	09/20/19 17:05
Sample Name:	TPC19-15	**Basis:**	As Received
Lab Code:	T1901660-015		

Toxicity Characteristics Leachate Procedure (TCLP)

TCLP Metals

Pre-Prep Method: EPA 1311

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Aluminum	6010C	ND U	mg/L	0.050	5	10/21/19 14:42	10/16/19	
Antimony	6010C	ND U	mg/L	0.10	5	10/21/19 14:42	10/16/19	
Arsenic	6010C	ND U	mg/L	0.050	5	10/21/19 14:42	10/16/19	
Barium	6010C	ND U	mg/L	1.0	5	10/21/19 14:42	10/16/19	
Beryllium	6010C	ND U	mg/L	0.0050	5	10/21/19 14:42	10/16/19	
Bismuth	6020A	ND U	mg/L	0.010	10	10/24/19 12:41	10/22/19	
Boron	6010C	ND U	mg/L	0.10	5	10/21/19 14:42	10/16/19	
Cadmium	6010C	ND U	mg/L	0.050	5	10/21/19 14:42	10/16/19	
Calcium	6010C	**579**	mg/L	0.10	5	10/21/19 14:42	10/16/19	
Chromium	6010C	ND U	mg/L	0.050	5	10/21/19 14:42	10/16/19	
Cobalt	6010C	ND U	mg/L	0.010	5	10/21/19 14:42	10/16/19	
Copper	6010C	ND U	mg/L	0.10	5	10/21/19 14:42	10/16/19	
Iron	6010C	ND U	mg/L	0.10	5	10/21/19 14:42	10/16/19	
Lead	6010C	ND U	mg/L	0.050	5	10/21/19 14:42	10/16/19	
Magnesium	6010C	**5.56**	mg/L	0.050	5	10/21/19 14:42	10/16/19	
Manganese	6010C	**0.158**	mg/L	0.0050	5	10/21/19 14:42	10/16/19	
Mercury	7470A	ND U	mg/L	0.0010	1	10/18/19 10:11	10/17/19	
Molybdenum	6010C	ND U	mg/L	0.020	5	10/21/19 14:42	10/16/19	
Nickel	6010C	ND U	mg/L	0.10	5	10/21/19 14:42	10/16/19	
Phosphorus	6010C	**0.25**	mg/L	0.20	5	10/21/19 14:42	10/16/19	
Potassium	6010C	**3.8**	mg/L	1.0	5	10/21/19 14:42	10/16/19	
Selenium	6010C	ND U	mg/L	0.10	5	10/21/19 14:42	10/16/19	
Silicon	6010C	**4.4**	mg/L	1.0	5	10/21/19 14:42	10/16/19	
Silver	6010C	ND U	mg/L	0.050	5	10/21/19 14:42	10/16/19	
Sodium	6010C	**1360**	mg/L	1.0	5	10/21/19 14:42	10/16/19	
Strontium	6010C	**0.321**	mg/L	0.0050	5	10/21/19 14:42	10/16/19	
Thallium	6010C	ND U	mg/L	0.050	5	10/21/19 14:42	10/16/19	
Uranium	6020A	ND U	mg/L	0.00020	10	10/24/19 12:41	10/22/19	
Zinc	6010C	ND U	mg/L	1.0	5	10/21/19 14:42	10/16/19	

Analytical Report

Client:	Resolution Copper Mining LLC	**Service Request:**	T1901660
Project:	Skunk Camp Closure/M09441A23	**Date Collected:**	09/20/19 00:00
Sample Matrix:	Soil	**Date Received:**	09/20/19 17:05
Sample Name:	TPC19-16	**Basis:**	As Received
Lab Code:	T1901660-016		

Synthetic Precipitation Leachate Procedure (SPLP)

SPLP Metals

Pre-Prep Method: EPA 1312

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Aluminum	6010C	**6.77**	mg/L	0.010	1	10/23/19 11:32	10/17/19	
Antimony	6010C	ND U	mg/L	0.020	1	10/23/19 11:32	10/17/19	
Arsenic	6010C	ND U	mg/L	0.010	1	10/23/19 11:32	10/17/19	
Barium	6010C	ND U	mg/L	0.20	1	10/23/19 11:32	10/17/19	
Beryllium	6010C	ND U	mg/L	0.010	1	10/23/19 11:32	10/17/19	
Bismuth	6020A	ND U	mg/L	0.00050	1	10/22/19 14:30	10/16/19	
Boron	6010C	ND U	mg/L	0.040	1	10/23/19 11:32	10/17/19	
Cadmium	6010C	ND U	mg/L	0.020	1	10/23/19 11:32	10/17/19	
Calcium	6010C	**4.2**	mg/L	1.0	1	10/23/19 11:32	10/17/19	
Chromium	6010C	ND U	mg/L	0.010	1	10/23/19 11:32	10/17/19	
Cobalt	6010C	ND U	mg/L	0.010	1	10/23/19 11:32	10/17/19	
Copper	6010C	**0.015**	mg/L	0.010	1	10/23/19 11:32	10/17/19	
Iron	6010C	**6.25**	mg/L	0.020	1	10/23/19 11:32	10/17/19	
Lead	6010C	ND U	mg/L	0.010	1	10/23/19 11:32	10/17/19	
Magnesium	6010C	**1.61**	mg/L	0.080	1	10/23/19 11:32	10/17/19	
Manganese	6010C	**0.138**	mg/L	0.010	1	10/23/19 11:32	10/17/19	
Mercury	7470A	ND U	mg/L	0.0010	1	10/18/19 11:09	10/17/19	
Molybdenum	6010C	ND U	mg/L	0.010	1	10/23/19 11:32	10/17/19	
Nickel	6010C	ND U	mg/L	0.080	1	10/23/19 11:32	10/17/19	
Phosphorus	6010C	**0.731**	mg/L	0.040	1	10/23/19 11:32	10/17/19	
Potassium	6010C	**1.74**	mg/L	0.20	1	10/23/19 11:32	10/17/19	
Selenium	6010C	ND U	mg/L	0.020	1	10/23/19 11:32	10/17/19	
Silicon	6010C	**9.4**	mg/L	1.0	1	10/23/19 11:32	10/17/19	
Silver	6010C	ND U	mg/L	0.020	1	10/23/19 11:32	10/17/19	
Sodium	6010C	ND U	mg/L	20	1	10/23/19 11:32	10/17/19	
Strontium	6010C	**0.010**	mg/L	0.010	1	10/23/19 11:32	10/17/19	
Thallium	6010C	ND U	mg/L	0.010	1	10/23/19 11:32	10/17/19	
Uranium	6020A	ND U	mg/L	0.00020	1	10/22/19 14:30	10/16/19	
Zinc	6010C	**0.0234**	mg/L	0.0040	1	10/23/19 11:32	10/17/19	

Analytical Report

Client:	Resolution Copper Mining LLC	**Service Request:**	T1901660
Project:	Skunk Camp Closure/M09441A23	**Date Collected:**	09/20/19 00:00
Sample Matrix:	Soil	**Date Received:**	09/20/19 17:05
Sample Name:	TPC19-16	**Basis:**	As Received
Lab Code:	T1901660-016		

Toxicity Characteristics Leachate Procedure (TCLP)

TCLP Metals

Pre-Prep Method: EPA 1311

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Aluminum	6010C	**2.01**	mg/L	0.050	5	10/21/19 14:45	10/16/19	
Antimony	6010C	ND U	mg/L	0.10	5	10/21/19 14:45	10/16/19	
Arsenic	6010C	ND U	mg/L	0.050	5	10/21/19 14:45	10/16/19	
Barium	6010C	ND U	mg/L	1.0	5	10/21/19 14:45	10/16/19	
Beryllium	6010C	ND U	mg/L	0.0050	5	10/21/19 14:45	10/16/19	
Bismuth	6020A	ND U	mg/L	0.010	10	10/24/19 12:42	10/22/19	
Boron	6010C	**0.11**	mg/L	0.10	5	10/21/19 14:45	10/16/19	
Cadmium	6010C	ND U	mg/L	0.050	5	10/21/19 14:45	10/16/19	
Calcium	6010C	**38.1**	mg/L	0.10	5	10/21/19 14:45	10/16/19	
Chromium	6010C	ND U	mg/L	0.050	5	10/21/19 14:45	10/16/19	
Cobalt	6010C	ND U	mg/L	0.010	5	10/21/19 14:45	10/16/19	
Copper	6010C	ND U	mg/L	0.10	5	10/21/19 14:45	10/16/19	
Iron	6010C	**1.80**	mg/L	0.10	5	10/21/19 14:45	10/16/19	
Lead	6010C	ND U	mg/L	0.050	5	10/21/19 14:45	10/16/19	
Magnesium	6010C	**4.74**	mg/L	0.050	5	10/21/19 14:45	10/16/19	
Manganese	6010C	**0.478**	mg/L	0.0050	5	10/21/19 14:45	10/16/19	
Mercury	7470A	ND U	mg/L	0.0010	1	10/18/19 10:12	10/17/19	
Molybdenum	6010C	ND U	mg/L	0.020	5	10/21/19 14:45	10/16/19	
Nickel	6010C	ND U	mg/L	0.10	5	10/21/19 14:45	10/16/19	
Phosphorus	6010C	**1.41**	mg/L	0.20	5	10/21/19 14:45	10/16/19	
Potassium	6010C	**9.2**	mg/L	1.0	5	10/21/19 14:45	10/16/19	
Selenium	6010C	ND U	mg/L	0.10	5	10/21/19 14:45	10/16/19	
Silicon	6010C	**6.4**	mg/L	1.0	5	10/21/19 14:45	10/16/19	
Silver	6010C	ND U	mg/L	0.050	5	10/21/19 14:45	10/16/19	
Sodium	6010C	**1310**	mg/L	1.0	5	10/21/19 14:45	10/16/19	
Strontium	6010C	**0.110**	mg/L	0.0050	5	10/21/19 14:45	10/16/19	
Thallium	6010C	ND U	mg/L	0.050	5	10/21/19 14:45	10/16/19	
Uranium	6020A	ND U	mg/L	0.00020	10	10/24/19 12:42	10/22/19	
Zinc	6010C	ND U	mg/L	1.0	5	10/21/19 14:45	10/16/19	

Analytical Report

Client:	Resolution Copper Mining LLC	**Service Request:**	T1901660
Project:	Skunk Camp Closure/M09441A23	**Date Collected:**	09/20/19 00:00
Sample Matrix:	Soil	**Date Received:**	09/20/19 17:05
Sample Name:	TPC19-17	**Basis:**	As Received
Lab Code:	T1901660-017		

Synthetic Precipitation Leachate Procedure (SPLP)

SPLP Metals

Pre-Prep Method: EPA 1312

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Aluminum	6010C	**1.60**	mg/L	0.040	1	10/23/19 11:35	10/17/19	
Antimony	6010C	ND U	mg/L	0.020	1	10/23/19 11:35	10/17/19	
Arsenic	6010C	ND U	mg/L	0.010	1	10/23/19 11:35	10/17/19	
Barium	6010C	ND U	mg/L	0.20	1	10/23/19 11:35	10/17/19	
Beryllium	6010C	ND U	mg/L	0.010	1	10/23/19 11:35	10/17/19	
Bismuth	6020A	ND U	mg/L	0.00050	1	10/22/19 14:31	10/16/19	
Boron	6010C	ND U	mg/L	0.040	1	10/23/19 11:35	10/17/19	
Cadmium	6010C	ND U	mg/L	0.020	1	10/23/19 11:35	10/17/19	
Calcium	6010C	**8.6**	mg/L	1.0	1	10/23/19 11:35	10/17/19	
Chromium	6010C	ND U	mg/L	0.010	1	10/23/19 11:35	10/17/19	
Cobalt	6010C	ND U	mg/L	0.010	1	10/23/19 11:35	10/17/19	
Copper	6010C	ND U	mg/L	0.010	1	10/23/19 11:35	10/17/19	
Iron	6010C	**1.45**	mg/L	0.020	1	10/23/19 11:35	10/17/19	
Lead	6010C	ND U	mg/L	0.010	1	10/23/19 11:35	10/17/19	
Magnesium	6010C	**1.10**	mg/L	0.080	1	10/23/19 11:35	10/17/19	
Manganese	6010C	**0.030**	mg/L	0.010	1	10/23/19 11:35	10/17/19	
Mercury	7470A	ND U	mg/L	0.0010	1	10/18/19 11:11	10/17/19	
Molybdenum	6010C	ND U	mg/L	0.010	1	10/23/19 11:35	10/17/19	
Nickel	6010C	ND U	mg/L	0.080	1	10/23/19 11:35	10/17/19	
Phosphorus	6010C	ND U	mg/L	0.040	1	10/23/19 11:35	10/17/19	
Potassium	6010C	**0.25**	mg/L	0.20	1	10/23/19 11:35	10/17/19	
Selenium	6010C	ND U	mg/L	0.020	1	10/23/19 11:35	10/17/19	
Silicon	6010C	**5.6**	mg/L	1.0	1	10/23/19 11:35	10/17/19	
Silver	6010C	ND U	mg/L	0.020	1	10/23/19 11:35	10/17/19	
Sodium	6010C	ND U	mg/L	20	1	10/23/19 11:35	10/17/19	
Strontium	6010C	**0.016**	mg/L	0.010	1	10/23/19 11:35	10/17/19	
Thallium	6010C	ND U	mg/L	0.010	1	10/23/19 11:35	10/17/19	
Uranium	6020A	ND U	mg/L	0.00020	1	10/22/19 14:31	10/16/19	
Zinc	6010C	**0.0080**	mg/L	0.0040	1	10/23/19 11:35	10/17/19	

Analytical Report

Client:	Resolution Copper Mining LLC	**Service Request:**	T1901660
Project:	Skunk Camp Closure/M09441A23	**Date Collected:**	09/17/19 00:00
Sample Matrix:	Soil	**Date Received:**	09/20/19 17:05
Sample Name:	TPC19-19	**Basis:**	As Received
Lab Code:	T1901660-019		

Synthetic Precipitation Leachate Procedure (SPLP)

SPLP Metals

Pre-Prep Method: EPA 1312

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Aluminum	6010C	**12.0**	mg/L	0.010	1	10/23/19 11:37	10/17/19	
Antimony	6010C	ND U	mg/L	0.020	1	10/23/19 11:37	10/17/19	
Arsenic	6010C	ND U	mg/L	0.010	1	10/23/19 11:37	10/17/19	
Barium	6010C	ND U	mg/L	0.20	1	10/23/19 11:37	10/17/19	
Beryllium	6010C	ND U	mg/L	0.010	1	10/23/19 11:37	10/17/19	
Bismuth	6020A	ND U	mg/L	0.00050	1	10/22/19 14:33	10/16/19	
Boron	6010C	ND U	mg/L	0.040	1	10/23/19 11:37	10/17/19	
Cadmium	6010C	ND U	mg/L	0.020	1	10/23/19 11:37	10/17/19	
Calcium	6010C	**5.0**	mg/L	1.0	1	10/23/19 11:37	10/17/19	
Chromium	6010C	**0.020**	mg/L	0.010	1	10/23/19 11:37	10/17/19	
Cobalt	6010C	ND U	mg/L	0.010	1	10/23/19 11:37	10/17/19	
Copper	6010C	**0.019**	mg/L	0.010	1	10/23/19 11:37	10/17/19	
Iron	6010C	**15.4**	mg/L	0.020	1	10/23/19 11:37	10/17/19	
Lead	6010C	ND U	mg/L	0.010	1	10/23/19 11:37	10/17/19	
Magnesium	6010C	**2.64**	mg/L	0.080	1	10/23/19 11:37	10/17/19	
Manganese	6010C	**0.116**	mg/L	0.010	1	10/23/19 11:37	10/17/19	
Mercury	7470A	ND U	mg/L	0.0010	1	10/18/19 11:13	10/17/19	
Molybdenum	6010C	ND U	mg/L	0.010	1	10/23/19 11:37	10/17/19	
Nickel	6010C	ND U	mg/L	0.080	1	10/23/19 11:37	10/17/19	
Phosphorus	6010C	**0.157**	mg/L	0.040	1	10/23/19 11:37	10/17/19	
Potassium	6010C	**1.29**	mg/L	0.20	1	10/23/19 11:37	10/17/19	
Selenium	6010C	ND U	mg/L	0.020	1	10/23/19 11:37	10/17/19	
Silicon	6010C	**23.6**	mg/L	1.0	1	10/23/19 11:37	10/17/19	
Silver	6010C	ND U	mg/L	0.020	1	10/23/19 11:37	10/17/19	
Sodium	6010C	ND U	mg/L	20	1	10/23/19 11:37	10/17/19	
Strontium	6010C	**0.023**	mg/L	0.010	1	10/23/19 11:37	10/17/19	
Thallium	6010C	ND U	mg/L	0.010	1	10/23/19 11:37	10/17/19	
Uranium	6020A	ND U	mg/L	0.00020	1	10/22/19 14:33	10/16/19	
Zinc	6010C	**0.0185**	mg/L	0.0040	1	10/23/19 11:37	10/17/19	

Analytical Report

Client:	Resolution Copper Mining LLC	**Service Request:**	T1901660
Project:	Skunk Camp Closure/M09441A23	**Date Collected:**	09/17/19 00:00
Sample Matrix:	Soil	**Date Received:**	09/20/19 17:05
Sample Name:	TPC19-19	**Basis:**	As Received
Lab Code:	T1901660-019		

Toxicity Characteristics Leachate Procedure (TCLP)

TCLP Metals

Pre-Prep Method: EPA 1311

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Aluminum	6010C	**0.182**	mg/L	0.050	5	10/21/19 14:54	10/16/19	
Antimony	6010C	ND U	mg/L	0.10	5	10/21/19 14:54	10/16/19	
Arsenic	6010C	ND U	mg/L	0.050	5	10/21/19 14:54	10/16/19	
Barium	6010C	ND U	mg/L	1.0	5	10/21/19 14:54	10/16/19	
Beryllium	6010C	ND U	mg/L	0.0050	5	10/21/19 14:54	10/16/19	
Bismuth	6020A	ND U	mg/L	0.010	10	10/24/19 12:44	10/22/19	
Boron	6010C	**0.11**	mg/L	0.10	5	10/21/19 14:54	10/16/19	
Cadmium	6010C	ND U	mg/L	0.050	5	10/21/19 14:54	10/16/19	
Calcium	6010C	**50.2**	mg/L	0.10	5	10/21/19 14:54	10/16/19	
Chromium	6010C	ND U	mg/L	0.050	5	10/21/19 14:54	10/16/19	
Cobalt	6010C	ND U	mg/L	0.010	5	10/21/19 14:54	10/16/19	
Copper	6010C	ND U	mg/L	0.10	5	10/21/19 14:54	10/16/19	
Iron	6010C	**0.18**	mg/L	0.10	5	10/21/19 14:54	10/16/19	
Lead	6010C	ND U	mg/L	0.050	5	10/21/19 14:54	10/16/19	
Magnesium	6010C	**15.5**	mg/L	0.050	5	10/21/19 14:54	10/16/19	
Manganese	6010C	**0.484**	mg/L	0.0050	5	10/21/19 14:54	10/16/19	
Mercury	7470A	ND U	mg/L	0.0010	1	10/18/19 10:17	10/17/19	
Molybdenum	6010C	ND U	mg/L	0.020	5	10/21/19 14:54	10/16/19	
Nickel	6010C	ND U	mg/L	0.10	5	10/21/19 14:54	10/16/19	
Phosphorus	6010C	ND U	mg/L	0.20	5	10/21/19 14:54	10/16/19	
Potassium	6010C	**4.6**	mg/L	1.0	5	10/21/19 14:54	10/16/19	
Selenium	6010C	ND U	mg/L	0.10	5	10/21/19 14:54	10/16/19	
Silicon	6010C	**5.7**	mg/L	1.0	5	10/21/19 14:54	10/16/19	
Silver	6010C	ND U	mg/L	0.050	5	10/21/19 14:54	10/16/19	
Sodium	6010C	**1310**	mg/L	1.0	5	10/21/19 14:54	10/16/19	
Strontium	6010C	**0.284**	mg/L	0.0050	5	10/21/19 14:54	10/16/19	
Thallium	6010C	ND U	mg/L	0.050	5	10/21/19 14:54	10/16/19	
Uranium	6020A	ND U	mg/L	0.00020	10	10/24/19 12:44	10/22/19	
Zinc	6010C	ND U	mg/L	1.0	5	10/21/19 14:54	10/16/19	

Analytical Report

Client:	Resolution Copper Mining LLC	**Service Request:**	T1901660
Project:	Skunk Camp Closure/M09441A23	**Date Collected:**	09/16/19 00:00
Sample Matrix:	Soil	**Date Received:**	09/20/19 17:05
Sample Name:	TPC19-20	**Basis:**	As Received
Lab Code:	T1901660-020		

Toxicity Characteristics Leachate Procedure (TCLP)

TCLP Metals

Pre-Prep Method: EPA 1311

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Aluminum	6010C	**0.087**	mg/L	0.050	5	10/21/19 14:57	10/16/19	
Antimony	6010C	ND U	mg/L	0.10	5	10/21/19 14:57	10/16/19	
Arsenic	6010C	ND U	mg/L	0.050	5	10/21/19 14:57	10/16/19	
Barium	6010C	ND U	mg/L	1.0	5	10/21/19 14:57	10/16/19	
Beryllium	6010C	ND U	mg/L	0.0050	5	10/21/19 14:57	10/16/19	
Bismuth	6020A	ND U	mg/L	0.010	10	10/24/19 12:45	10/22/19	
Boron	6010C	ND U	mg/L	0.10	5	10/21/19 14:57	10/16/19	
Cadmium	6010C	ND U	mg/L	0.050	5	10/21/19 14:57	10/16/19	
Calcium	6010C	**44.1**	mg/L	0.10	5	10/21/19 14:57	10/16/19	
Chromium	6010C	ND U	mg/L	0.050	5	10/21/19 14:57	10/16/19	
Cobalt	6010C	ND U	mg/L	0.010	5	10/21/19 14:57	10/16/19	
Copper	6010C	ND U	mg/L	0.10	5	10/21/19 14:57	10/16/19	
Iron	6010C	ND U	mg/L	0.10	5	10/21/19 14:57	10/16/19	
Lead	6010C	ND U	mg/L	0.050	5	10/21/19 14:57	10/16/19	
Magnesium	6010C	**16.8**	mg/L	0.050	5	10/21/19 14:57	10/16/19	
Manganese	6010C	**0.762**	mg/L	0.0050	5	10/21/19 14:57	10/16/19	
Mercury	7470A	ND U	mg/L	0.0010	1	10/18/19 10:19	10/17/19	
Molybdenum	6010C	ND U	mg/L	0.020	5	10/21/19 14:57	10/16/19	
Nickel	6010C	ND U	mg/L	0.10	5	10/21/19 14:57	10/16/19	
Phosphorus	6010C	ND U	mg/L	0.20	5	10/21/19 14:57	10/16/19	
Potassium	6010C	**1.9**	mg/L	1.0	5	10/21/19 14:57	10/16/19	
Selenium	6010C	ND U	mg/L	0.10	5	10/21/19 14:57	10/16/19	
Silicon	6010C	**3.7**	mg/L	1.0	5	10/21/19 14:57	10/16/19	
Silver	6010C	ND U	mg/L	0.050	5	10/21/19 14:57	10/16/19	
Sodium	6010C	**1320**	mg/L	1.0	5	10/21/19 14:57	10/16/19	
Strontium	6010C	**0.247**	mg/L	0.0050	5	10/21/19 14:57	10/16/19	
Thallium	6010C	ND U	mg/L	0.050	5	10/21/19 14:57	10/16/19	
Uranium	6020A	**0.00027**	mg/L	0.00020	10	10/24/19 12:45	10/22/19	
Zinc	6010C	ND U	mg/L	1.0	5	10/21/19 14:57	10/16/19	

General Chemistry

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
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Analytical Report

Client:	Resolution Copper Mining LLC	**Service Request:**	T1901660
Project:	Skunk Camp Closure/M09441A23	**Date Collected:**	09/18/19 00:00
Sample Matrix:	Water	**Date Received:**	09/20/19 17:05
Sample Name:	TPC19-1	**Basis:**	As Received
Lab Code:	T1901660-025		

General Chemistry Parameters

Analyte Name	Analysis Method	Result		Units	MRL	Dil.	Date Analyzed	Q
Acidity, Total	SM 2310 B(4a)	**18.0**		mg/L	2.0	1	10/22/19 15:50	
Alkalinity as CaCO3, Total	SM 2320 B	**18.0**		mg/L	2.0	1	10/21/19 14:00	
Bromide	9056A	ND	U	mg/L	0.20	2	10/16/19 12:24	
Chloride	9056A	**17.3**		mg/L	0.20	2	10/16/19 12:24	
Conductivity at 25 Degrees Celsius	120.1	**69.5**		uMHOS/cm	2.0	1	10/18/19 11:05	
Fluoride	9056A	ND	U	mg/L	0.40	2	10/16/19 12:24	
Nitrate as Nitrogen	9056A	**0.40**		mg/L	0.20	2	10/16/19 12:24	
Nitrite as Nitrogen	9056A	ND	U	mg/L	0.20	2	10/16/19 12:24	
pH	SM 4500-H+ B	**6.52**		pH Units	-	1	10/16/19 12:26	
Sulfate	9056A	**1.36**		mg/L	0.20	2	10/16/19 12:24	

Analytical Report

Client:	Resolution Copper Mining LLC	**Service Request:**	T1901660
Project:	Skunk Camp Closure/M09441A23	**Date Collected:**	09/17/19 00:00
Sample Matrix:	Water	**Date Received:**	09/20/19 17:05
Sample Name:	TPC19-2	**Basis:**	As Received
Lab Code:	T1901660-026		

General Chemistry Parameters

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Q
Acidity, Total	SM 2310 B(4a)	ND U	mg/L	2.0	1	10/22/19 15:50	
Alkalinity as CaCO3, Total	SM 2320 B	**187**	mg/L	2.0	1	10/21/19 14:00	
Bromide	9056A	ND U	mg/L	0.20	2	10/16/19 15:37	
Chloride	9056A	**15.4**	mg/L	0.20	2	10/16/19 15:37	
Conductivity at 25 Degrees Celsius	120.1	**78.7**	uMHOS/cm	2.0	1	10/18/19 11:05	
Fluoride	9056A	ND U	mg/L	0.40	2	10/16/19 15:37	
Nitrate as Nitrogen	9056A	ND U	mg/L	0.20	2	10/16/19 15:37	
Nitrite as Nitrogen	9056A	ND U	mg/L	0.20	2	10/16/19 15:37	
pH	SM 4500-H+ B	**9.27**	pH Units	-	1	10/16/19 12:35	
Sulfate	9056A	ND U	mg/L	0.20	2	10/16/19 15:37	

Analytical Report

Client:	Resolution Copper Mining LLC	**Service Request:**	T1901660
Project:	Skunk Camp Closure/M09441A23	**Date Collected:**	09/16/19 00:00
Sample Matrix:	Water	**Date Received:**	09/20/19 17:05
Sample Name:	TPC19-4	**Basis:**	As Received
Lab Code:	T1901660-027		

General Chemistry Parameters

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Q
Acidity, Total	SM 2310 B(4a)	ND U	mg/L	2.0	1	10/22/19 15:50	
Alkalinity as CaCO3, Total	SM 2320 B	**253**	mg/L	2.0	1	10/21/19 14:00	
Bromide	9056A	ND U	mg/L	0.20	2	10/16/19 12:43	
Chloride	9056A	**13.1**	mg/L	0.20	2	10/16/19 12:43	
Conductivity at 25 Degrees Celsius	120.1	**66.6**	uMHOS/cm	2.0	1	10/18/19 11:05	
Fluoride	9056A	ND U	mg/L	0.40	2	10/16/19 12:43	
Nitrate as Nitrogen	9056A	ND U	mg/L	0.20	2	10/16/19 12:43	
Nitrite as Nitrogen	9056A	ND U	mg/L	0.20	2	10/16/19 12:43	
pH	SM 4500-H+ B	**9.34**	pH Units	-	1	10/16/19 12:36	
Sulfate	9056A	ND U	mg/L	0.20	2	10/16/19 12:43	

Analytical Report

Client:	Resolution Copper Mining LLC	**Service Request:**	T1901660
Project:	Skunk Camp Closure/M09441A23	**Date Collected:**	09/18/19 00:00
Sample Matrix:	Water	**Date Received:**	09/20/19 17:05
Sample Name:	TPC19-5	**Basis:**	As Received
Lab Code:	T1901660-028		

General Chemistry Parameters

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Q
Acidity, Total	SM 2310 B(4a)	ND U	mg/L	2.0	1	10/22/19 15:50	
Alkalinity as CaCO3, Total	SM 2320 B	**405**	mg/L	2.0	1	10/21/19 14:00	
Bromide	9056A	ND U	mg/L	0.20	2	10/16/19 16:16	
Chloride	9056A	**14.5**	mg/L	0.20	2	10/16/19 16:16	
Conductivity at 25 Degrees Celsius	120.1	**90.8**	uMHOS/cm	2.0	1	10/18/19 11:05	
Fluoride	9056A	ND U	mg/L	0.40	2	10/16/19 16:16	
Nitrate as Nitrogen	9056A	ND U	mg/L	0.20	2	10/16/19 16:16	
Nitrite as Nitrogen	9056A	ND U	mg/L	0.20	2	10/16/19 16:16	
pH	SM 4500-H+ B	**9.29**	pH Units	-	1	10/16/19 12:37	
Sulfate	9056A	ND U	mg/L	0.20	2	10/16/19 16:16	

Analytical Report

Client:	Resolution Copper Mining LLC	**Service Request:**	T1901660
Project:	Skunk Camp Closure/M09441A23	**Date Collected:**	09/17/19 00:00
Sample Matrix:	Water	**Date Received:**	09/20/19 17:05
Sample Name:	TPC19-7	**Basis:**	As Received
Lab Code:	T1901660-029		

General Chemistry Parameters

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Q
Acidity, Total	SM 2310 B(4a)	**5.0**	mg/L	2.0	1	10/22/19 15:50	
Alkalinity as CaCO3, Total	SM 2320 B	**68.0**	mg/L	2.0	1	10/21/19 14:00	
Bromide	9056A	ND U	mg/L	0.20	2	10/16/19 16:25	
Chloride	9056A	**22.6**	mg/L	0.50	5	10/17/19 11:40	
Conductivity at 25 Degrees Celsius	120.1	**125**	uMHOS/cm	2.0	1	10/18/19 11:05	
Fluoride	9056A	ND U	mg/L	0.40	2	10/16/19 16:25	
Nitrate as Nitrogen	9056A	ND U	mg/L	0.20	2	10/16/19 16:25	
Nitrite as Nitrogen	9056A	ND U	mg/L	0.20	2	10/16/19 16:25	
pH	SM 4500-H+ B	**8.14**	pH Units	-	1	10/16/19 12:38	
Sulfate	9056A	**0.55**	mg/L	0.20	2	10/16/19 16:25	

Analytical Report

Client:	Resolution Copper Mining LLC	**Service Request:**	T1901660
Project:	Skunk Camp Closure/M09441A23	**Date Collected:**	09/19/19 00:00
Sample Matrix:	Water	**Date Received:**	09/20/19 17:05
Sample Name:	TPC19-12	**Basis:**	As Received
Lab Code:	T1901660-030		

General Chemistry Parameters

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Q
Acidity, Total	SM 2310 B(4a)	ND U	mg/L	2.0	1	10/22/19 15:50	
Alkalinity as CaCO3, Total	SM 2320 B	**410**	mg/L	2.0	1	10/21/19 14:00	
Bromide	9056A	ND U	mg/L	0.20	2	10/16/19 16:35	
Chloride	9056A	**14.0**	mg/L	0.20	2	10/16/19 16:35	
Conductivity at 25 Degrees Celsius	120.1	**96.9**	uMHOS/cm	2.0	1	10/18/19 11:05	
Fluoride	9056A	ND U	mg/L	0.40	2	10/16/19 16:35	
Nitrate as Nitrogen	9056A	ND U	mg/L	0.20	2	10/16/19 16:35	
Nitrite as Nitrogen	9056A	ND U	mg/L	0.20	2	10/16/19 16:35	
pH	SM 4500-H+ B	**8.97**	pH Units	-	1	10/16/19 12:39	
Sulfate	9056A	ND U	mg/L	0.20	2	10/16/19 16:35	

Analytical Report

Client:	Resolution Copper Mining LLC	**Service Request:**	T1901660
Project:	Skunk Camp Closure/M09441A23	**Date Collected:**	09/17/19 00:00
Sample Matrix:	Water	**Date Received:**	09/20/19 17:05
Sample Name:	TPC19-15	**Basis:**	As Received
Lab Code:	T1901660-031		

General Chemistry Parameters

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Q
Acidity, Total	SM 2310 B(4a)	ND U	mg/L	2.0	1	10/22/19 15:50	
Alkalinity as CaCO3, Total	SM 2320 B	**108**	mg/L	2.0	1	10/21/19 14:00	
Bromide	9056A	ND U	mg/L	0.20	2	10/16/19 16:45	
Chloride	9056A	**13.3**	mg/L	0.20	2	10/16/19 16:45	
Conductivity at 25 Degrees Celsius	120.1	**100**	uMHOS/cm	2.0	1	10/18/19 11:05	
Fluoride	9056A	ND U	mg/L	0.40	2	10/16/19 16:45	
Nitrate as Nitrogen	9056A	**0.38**	mg/L	0.20	2	10/16/19 16:45	
Nitrite as Nitrogen	9056A	ND U	mg/L	0.20	2	10/16/19 16:45	
pH	SM 4500-H+ B	**8.82**	pH Units	-	1	10/16/19 12:41	
Sulfate	9056A	ND U	mg/L	0.20	2	10/16/19 16:45	

Analytical Report

Client:	Resolution Copper Mining LLC	**Service Request:**	T1901660
Project:	Skunk Camp Closure/M09441A23	**Date Collected:**	09/20/19 00:00
Sample Matrix:	Water	**Date Received:**	09/20/19 17:05
Sample Name:	TPC19-16	**Basis:**	As Received
Lab Code:	T1901660-032		

General Chemistry Parameters

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Q
Acidity, Total	SM 2310 B(4a)	**8.0**	mg/L	2.0	1	10/22/19 15:50	
Alkalinity as CaCO3, Total	SM 2320 B	**17.0**	mg/L	2.0	1	10/21/19 14:00	
Bromide	9056A	ND U	mg/L	0.20	2	10/16/19 17:14	
Chloride	9056A	**19.3**	mg/L	0.20	2	10/16/19 17:14	
Conductivity at 25 Degrees Celsius	120.1	**69.8**	uMHOS/cm	2.0	1	10/18/19 11:05	
Fluoride	9056A	ND U	mg/L	0.40	2	10/16/19 17:14	
Nitrate as Nitrogen	9056A	**0.31**	mg/L	0.20	2	10/16/19 17:14	
Nitrite as Nitrogen	9056A	ND U	mg/L	0.20	2	10/16/19 17:14	
pH	SM 4500-H+ B	**6.88**	pH Units	-	1	10/16/19 12:44	
Sulfate	9056A	**0.26**	mg/L	0.20	2	10/16/19 17:14	

Analytical Report

Client:	Resolution Copper Mining LLC	**Service Request:**	T1901660
Project:	Skunk Camp Closure/M09441A23	**Date Collected:**	09/20/19 00:00
Sample Matrix:	Water	**Date Received:**	09/20/19 17:05
Sample Name:	TPC19-17	**Basis:**	As Received
Lab Code:	T1901660-033		

General Chemistry Parameters

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Q
Acidity, Total	SM 2310 B(4a)	ND U	mg/L	2.0	1	10/22/19 15:50	
Alkalinity as CaCO3, Total	SM 2320 B	**150**	mg/L	2.0	1	10/21/19 14:00	
Bromide	9056A	ND U	mg/L	0.20	2	10/16/19 17:33	
Chloride	9056A	**6.87**	mg/L	0.20	2	10/16/19 17:33	
Conductivity at 25 Degrees Celsius	120.1	**65.6**	uMHOS/cm	2.0	1	10/18/19 11:05	
Fluoride	9056A	ND U	mg/L	0.40	2	10/16/19 17:33	
Nitrate as Nitrogen	9056A	ND U	mg/L	0.20	2	10/16/19 17:33	
Nitrite as Nitrogen	9056A	ND U	mg/L	0.20	2	10/16/19 17:33	
pH	SM 4500-H+ B	**9.42**	pH Units	-	1	10/16/19 12:47	
Sulfate	9056A	ND U	mg/L	0.20	2	10/16/19 17:33	

Analytical Report

Client:	Resolution Copper Mining LLC	**Service Request:**	T1901660
Project:	Skunk Camp Closure/M09441A23	**Date Collected:**	09/17/19 00:00
Sample Matrix:	Water	**Date Received:**	09/20/19 17:05
Sample Name:	TPC19-19	**Basis:**	As Received
Lab Code:	T1901660-034		

General Chemistry Parameters

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Q
Acidity, Total	SM 2310 B(4a)	**18.0**	mg/L	2.0	1	10/22/19 15:50	
Alkalinity as CaCO3, Total	SM 2320 B	**22.0**	mg/L	2.0	1	10/21/19 14:00	
Bromide	9056A	ND U	mg/L	0.20	2	10/16/19 17:43	
Chloride	9056A	**26.5**	mg/L	0.50	5	10/17/19 11:51	
Conductivity at 25 Degrees Celsius	120.1	**104**	uMHOS/cm	2.0	1	10/18/19 11:05	
Fluoride	9056A	**0.43**	mg/L	0.40	2	10/16/19 17:43	
Nitrate as Nitrogen	9056A	**0.36**	mg/L	0.20	2	10/16/19 17:43	
Nitrite as Nitrogen	9056A	ND U	mg/L	0.20	2	10/16/19 17:43	
pH	SM 4500-H+ B	**6.91**	pH Units	-	1	10/16/19 12:49	
Sulfate	9056A	**0.45**	mg/L	0.20	2	10/16/19 17:43	

QC Summary Forms

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
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Metals

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1317 South 13th Avenue, Kelso, WA 98626
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www.alsglobal.com

Analytical Report

Client:	Resolution Copper Mining LLC	**Service Request:**	T1901660
Project:	Skunk Camp Closure/M09441A23	**Date Collected:**	NA
Sample Matrix:	Soil	**Date Received:**	NA
Sample Name:	Method Blank	**Basis:**	As Received
Lab Code:	KQ1915073-03		

Synthetic Precipitation Leachate Procedure (SPLP)

SPLP Metals

Pre-Prep Method: EPA 1312

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Aluminum	6010C	ND U	mg/L	0.040	1	10/23/19 11:13	10/17/19	
Antimony	6010C	ND U	mg/L	0.020	1	10/23/19 11:13	10/17/19	
Arsenic	6010C	ND U	mg/L	0.010	1	10/23/19 11:13	10/17/19	
Barium	6010C	ND U	mg/L	0.20	1	10/23/19 11:13	10/17/19	
Beryllium	6010C	ND U	mg/L	0.010	1	10/23/19 11:13	10/17/19	
Boron	6010C	ND U	mg/L	0.040	1	10/23/19 11:13	10/17/19	
Cadmium	6010C	ND U	mg/L	0.020	1	10/23/19 11:13	10/17/19	
Calcium	6010C	ND U	mg/L	1.0	1	10/23/19 11:13	10/17/19	
Chromium	6010C	ND U	mg/L	0.010	1	10/23/19 11:13	10/17/19	
Cobalt	6010C	ND U	mg/L	0.010	1	10/23/19 11:13	10/17/19	
Copper	6010C	ND U	mg/L	0.010	1	10/23/19 11:13	10/17/19	
Iron	6010C	ND U	mg/L	0.020	1	10/23/19 11:13	10/17/19	
Lead	6010C	ND U	mg/L	0.010	1	10/23/19 11:13	10/17/19	
Magnesium	6010C	ND U	mg/L	0.080	1	10/23/19 11:13	10/17/19	
Manganese	6010C	ND U	mg/L	0.010	1	10/23/19 11:13	10/17/19	
Molybdenum	6010C	ND U	mg/L	0.010	1	10/23/19 11:13	10/17/19	
Nickel	6010C	ND U	mg/L	0.080	1	10/23/19 11:13	10/17/19	
Phosphorus	6010C	ND U	mg/L	0.040	1	10/23/19 11:13	10/17/19	
Potassium	6010C	ND U	mg/L	0.20	1	10/23/19 11:13	10/17/19	
Selenium	6010C	ND U	mg/L	0.020	1	10/23/19 11:13	10/17/19	
Silicon	6010C	ND U	mg/L	1.0	1	10/23/19 11:13	10/17/19	
Silver	6010C	ND U	mg/L	0.020	1	10/23/19 11:13	10/17/19	
Sodium	6010C	ND U	mg/L	20	1	10/23/19 11:13	10/17/19	
Strontium	6010C	ND U	mg/L	0.010	1	10/23/19 11:13	10/17/19	
Thallium	6010C	ND U	mg/L	0.010	1	10/23/19 11:13	10/17/19	
Zinc	6010C	ND U	mg/L	0.0040	1	10/23/19 11:13	10/17/19	

Analytical Report

Client:	Resolution Copper Mining LLC	**Service Request:**	T1901660
Project:	Skunk Camp Closure/M09441A23	**Date Collected:**	NA
Sample Matrix:	Soil	**Date Received:**	NA
Sample Name:	Method Blank	**Basis:**	As Received
Lab Code:	KQ1915074-03		

Toxicity Characteristics Leachate Procedure (TCLP)

TCLP Metals

Pre-Prep Method: EPA 1311

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Aluminum	6010C	ND U	mg/L	0.050	5	10/21/19 13:50	10/16/19	
Antimony	6010C	ND U	mg/L	0.10	5	10/21/19 13:50	10/16/19	
Arsenic	6010C	ND U	mg/L	0.050	5	10/21/19 13:50	10/16/19	
Barium	6010C	ND U	mg/L	1.0	5	10/21/19 13:50	10/16/19	
Beryllium	6010C	ND U	mg/L	0.0050	5	10/21/19 13:50	10/16/19	
Boron	6010C	ND U	mg/L	0.10	5	10/21/19 13:50	10/16/19	
Cadmium	6010C	ND U	mg/L	0.050	5	10/21/19 13:50	10/16/19	
Chromium	6010C	ND U	mg/L	0.050	5	10/21/19 13:50	10/16/19	
Cobalt	6010C	ND U	mg/L	0.010	5	10/21/19 13:50	10/16/19	
Copper	6010C	ND U	mg/L	0.10	5	10/21/19 13:50	10/16/19	
Iron	6010C	ND U	mg/L	0.10	5	10/21/19 13:50	10/16/19	
Lead	6010C	ND U	mg/L	0.050	5	10/21/19 13:50	10/16/19	
Manganese	6010C	ND U	mg/L	0.0050	5	10/21/19 13:50	10/16/19	
Molybdenum	6010C	ND U	mg/L	0.020	5	10/21/19 13:50	10/16/19	
Nickel	6010C	ND U	mg/L	0.10	5	10/21/19 13:50	10/16/19	
Phosphorus	6010C	ND U	mg/L	0.20	5	10/21/19 13:50	10/16/19	
Potassium	6010C	ND U	mg/L	1.0	5	10/21/19 13:50	10/16/19	
Selenium	6010C	ND U	mg/L	0.10	5	10/21/19 13:50	10/16/19	
Silicon	6010C	ND U	mg/L	1.0	5	10/21/19 13:50	10/16/19	
Silver	6010C	ND U	mg/L	0.050	5	10/21/19 13:50	10/16/19	
Strontium	6010C	ND U	mg/L	0.0050	5	10/21/19 13:50	10/16/19	
Thallium	6010C	ND U	mg/L	0.050	5	10/21/19 13:50	10/16/19	
Zinc	6010C	ND U	mg/L	1.0	5	10/21/19 13:50	10/16/19	

Analytical Report

Client:	Resolution Copper Mining LLC	**Service Request:**	T1901660
Project:	Skunk Camp Closure/M09441A23	**Date Collected:**	NA
Sample Matrix:	Soil	**Date Received:**	NA
Sample Name:	Method Blank	**Basis:**	As Received
Lab Code:	KQ1915076-02		

Synthetic Precipitation Leachate Procedure (SPLP)

SPLP Metals

Pre-Prep Method: EPA 1312

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Bismuth	6020A	ND U	mg/L	0.00050	1	10/22/19 14:10	10/16/19	
Uranium	6020A	ND U	mg/L	0.00020	1	10/22/19 14:10	10/16/19	

Analytical Report

Client:	Resolution Copper Mining LLC	**Service Request:**	T1901660
Project:	Skunk Camp Closure/M09441A23	**Date Collected:**	NA
Sample Matrix:	Soil	**Date Received:**	NA
Sample Name:	Method Blank	**Basis:**	As Received
Lab Code:	KQ1915077-01		

Toxicity Characteristics Leachate Procedure (TCLP)

TCLP Metals

Pre-Prep Method: EPA 1311

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Mercury	7470A	ND U	mg/L	0.0010	1	10/18/19 09:45	10/17/19	

Analytical Report

Client:	Resolution Copper Mining LLC	**Service Request:**	T1901660
Project:	Skunk Camp Closure/M09441A23	**Date Collected:**	NA
Sample Matrix:	Soil	**Date Received:**	NA
Sample Name:	Method Blank	**Basis:**	As Received
Lab Code:	KQ1915079-01		

Synthetic Precipitation Leachate Procedure (SPLP)

SPLP Metals

Pre-Prep Method: EPA 1312

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Mercury	7470A	ND U	mg/L	0.0010	1	10/18/19 11:27	10/17/19	

Analytical Report

Client:	Resolution Copper Mining LLC	**Service Request:**	T1901660
Project:	Skunk Camp Closure/M09441A23	**Date Collected:**	NA
Sample Matrix:	Soil	**Date Received:**	NA
Sample Name:	Method Blank	**Basis:**	As Received
Lab Code:	KQ1915398-02		

Toxicity Characteristics Leachate Procedure (TCLP)

TCLP Metals

Pre-Prep Method: EPA 1311

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Bismuth	6020A	ND U	mg/L	0.010	10	10/24/19 12:23	10/22/19	
Uranium	6020A	ND U	mg/L	0.00020	10	10/24/19 12:23	10/22/19	

QA/QC Report

Client:	Resolution Copper Mining LLC	**Service Request:**	T1901660
Project:	Skunk Camp Closure/M09441A23	**Date Collected:**	09/16/19
Sample Matrix:	Soil	**Date Received:**	09/20/19
		Date Analyzed:	10/23/19
		Date Extracted:	10/17/19

Matrix Spike Summary
SPLP Metals

Sample Name:	TPC19-4	**Units:**	mg/L
Lab Code:	T1901660-004	**Basis:**	As Received
Analysis Method:	6010C		
Prep Method:	EPA 3010A		

Matrix Spike
KQ1915073-05

Analyte Name	Sample Result	Result	Spike Amount	% Rec	% Rec Limits
Aluminum	1.61	11.5	10.0	98	75-125
Aluminum	1.61	12.7	10.0	111	75-125
Antimony	ND U	2.21	2.50	88	75-125
Arsenic	ND U	4.79	5.00	96	75-125
Barium	ND U	4.97	5.00	99	75-125
Beryllium	ND U	0.232	0.250	93	75-125
Boron	ND U	2.25	2.50	90	75-125
Cadmium	ND U	0.230	0.250	92	75-125
Calcium	12.4	109	100	97	75-125
Chromium	ND U	0.956	1.00	96	75-125
Cobalt	ND U	2.31	2.50	92	75-125
Copper	ND U	1.15	1.25	92	75-125
Iron	1.82	7.20	5.00	108	75-125
Lead	ND U	2.19	2.50	88	75-125
Magnesium	1.21	100	100	99	75-125
Magnesium	1.21	105	100	104	75-125
Manganese	0.090	2.49	2.50	96	75-125
Molybdenum	ND U	4.94	5.00	99	75-125
Nickel	ND U	2.25	2.50	90	75-125
Phosphorus	0.070	50.1	50.0	100	75-125
Potassium	0.29	99.7	100	99	75-125
Selenium	ND U	4.49	5.00	90	75-125
Silver	ND U	0.225	0.250	90	75-125
Sodium	ND U	114	100	114	75-125
Strontium	ND U	51.8	50.0	104	75-125
Thallium	ND U	0.858	1.00	86	75-125
Zinc	0.0060	2.32	2.50	93	75-125

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

QA/QC Report

Client:	Resolution Copper Mining LLC	**Service Request:**	T1901660
Project:	Skunk Camp Closure/M09441A23	**Date Collected:**	09/16/19
Sample Matrix:	Soil	**Date Received:**	09/20/19
		Date Analyzed:	10/23/19
		Date Extracted:	10/17/19

Matrix Spike Summary
SPLP Metals

Sample Name:	TPC19-4	**Units:**	mg/L
Lab Code:	T1901660-004	**Basis:**	As Received
Analysis Method:	6010C		
Prep Method:	EPA 3010A		

Matrix Spike
KQ1915073-06

Analyte Name	Sample Result	Result	Spike Amount	% Rec	% Rec Limits
Silicon	8.5	71.8	50.0	127 N	75-125

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QA/QC Report

Client:	Resolution Copper Mining LLC	**Service Request:**	T1901660
Project:	Skunk Camp Closure/M09441A23	**Date Collected:**	09/17/19
Sample Matrix:	Soil	**Date Received:**	09/20/19
		Date Analyzed:	10/21/19
		Date Extracted:	10/16/19

Matrix Spike Summary
TCLP Metals

Sample Name:	TPC19-2	**Units:**	mg/L
Lab Code:	T1901660-002	**Basis:**	As Received
Analysis Method:	6010C		
Prep Method:	EPA 3010A		

Matrix Spike
KQ1915074-05

Analyte Name	Sample Result	Result	Spike Amount	% Rec	% Rec Limits
Aluminum	ND U	8.64	10.0	86	75-125
Antimony	ND U	2.33	2.50	93	75-125
Arsenic	ND U	4.70	5.00	94	75-125
Barium	ND U	5.8	5.0	116	75-125
Beryllium	ND U	0.229	0.250	92	75-125
Boron	ND U	2.30	2.50	92	75-125
Cadmium	ND U	0.229	0.250	92	75-125
Calcium	692	795	100	103 #	75-125
Chromium	ND U	0.986	1.00	99	75-125
Cobalt	ND U	2.34	2.50	93	75-125
Copper	ND U	1.14	1.25	91	75-125
Iron	ND U	4.80	5.00	96	75-125
Lead	ND U	2.22	2.50	89	75-125
Magnesium	7.19	103	100	96	75-125
Manganese	0.0967	2.50	2.50	96	75-125
Molybdenum	ND U	5.09	5.00	102	75-125
Nickel	ND U	2.29	2.50	92	75-125
Phosphorus	ND U	52.4	50.0	105	75-125
Potassium	5.4	110	100	104	75-125
Selenium	ND U	4.81	5.00	96	75-125
Silver	ND U	0.218	0.250	87	75-125
Sodium	1330	1460	100	127 #	75-125
Strontium	0.497	48.4	50.0	96	75-125
Thallium	ND U	0.826	1.00	83	75-125
Zinc	ND U	2.3	2.5	90	75-125

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QA/QC Report

Client:	Resolution Copper Mining LLC	**Service Request:**	T1901660
Project:	Skunk Camp Closure/M09441A23	**Date Collected:**	09/17/19
Sample Matrix:	Soil	**Date Received:**	09/20/19
		Date Analyzed:	10/21/19
		Date Extracted:	10/16/19

Matrix Spike Summary
TCLP Metals

Sample Name:	TPC19-2	**Units:**	mg/L
Lab Code:	T1901660-002	**Basis:**	As Received
Analysis Method:	6010C		
Prep Method:	EPA 3010A		

Matrix Spike
KQ1915074-06

Analyte Name	Sample Result	Result	Spike Amount	% Rec	% Rec Limits
Silicon	4.9	60.3	50.0	111	75-125

Results flagged with an asterisk (*) indicate values outside control criteria.

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Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

QA/QC Report

Client:	Resolution Copper Mining LLC	**Service Request:**	T1901660
Project:	Skunk Camp Closure/M09441A23	**Date Collected:**	09/17/19
Sample Matrix:	Soil	**Date Received:**	09/20/19
		Date Analyzed:	10/22/19
		Date Extracted:	10/16/19

Matrix Spike Summary
SPLP Metals

Sample Name:	TPC19-2	**Units:**	mg/L
Lab Code:	T1901660-002	**Basis:**	As Received
Analysis Method:	6020A		
Prep Method:	EPA 3020A		

Matrix Spike
KQ1915076-04

Analyte Name	Sample Result	Result	Spike Amount	% Rec	% Rec Limits
Bismuth	ND U	0.124	0.125	99	75-125
Uranium	ND U	0.119	0.125	95	75-125

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Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Client:	Resolution Copper Mining LLC	**Service Request:**	T1901660
Project:	Skunk Camp Closure/M09441A23	**Date Collected:**	09/18/19
Sample Matrix:	Soil	**Date Received:**	09/20/19
		Date Analyzed:	10/18/19
		Date Extracted:	10/17/19

Matrix Spike Summary
TCLP Metals

Sample Name:	TPC19-5	**Units:**	mg/L
Lab Code:	T1901660-005	**Basis:**	As Received
Analysis Method:	7470A		
Prep Method:	Method		

Matrix Spike
KQ1915077-04

Analyte Name	Sample Result	Result	Spike Amount	% Rec	% Rec Limits
Mercury	ND U	0.0057	0.0050	114	75-125

Results flagged with an asterisk (*) indicate values outside control criteria.

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Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Client:	Resolution Copper Mining LLC	**Service Request:**	T1901660
Project:	Skunk Camp Closure/M09441A23	**Date Collected:**	09/18/19
Sample Matrix:	Soil	**Date Received:**	09/20/19
		Date Analyzed:	10/18/19
		Date Extracted:	10/17/19

Matrix Spike Summary
SPLP Metals

Sample Name:	TPC19-5	**Units:**	mg/L
Lab Code:	T1901660-005	**Basis:**	As Received
Analysis Method:	7470A		
Prep Method:	Method		

Matrix Spike
KQ1915079-04

Analyte Name	Sample Result	Result	Spike Amount	% Rec	% Rec Limits
Mercury	ND U	0.0051	0.0050	102	75-125

Results flagged with an asterisk (*) indicate values outside control criteria.

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Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

QA/QC Report

Client:	Resolution Copper Mining LLC	**Service Request:**	T1901660
Project:	Skunk Camp Closure/M09441A23	**Date Collected:**	09/16/19
Sample Matrix:	Soil	**Date Received:**	09/20/19
		Date Analyzed:	10/24/19
		Date Extracted:	10/22/19

Matrix Spike Summary
TCLP Metals

Sample Name:	TPC19-4	**Units:**	mg/L
Lab Code:	T1901660-004	**Basis:**	As Received
Analysis Method:	6020A		
Prep Method:	EPA 3020A		

Matrix Spike
KQ1915398-04

Analyte Name	Sample Result	Result	Spike Amount	% Rec	% Rec Limits
Bismuth	ND U	0.115	0.125	92	75-125
Uranium	0.00041	0.120	0.125	96	75-125

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

QA/QC Report

Client: Resolution Copper Mining LLC
Project Skunk Camp Closure/M09441A23
Sample Matrix: Soil

Service Request: T1901660
Date Collected: 09/16/19
Date Received: 09/20/19
Date Analyzed: 10/23/19

Replicate Sample Summary
SPLP Metals

Sample Name: TPC19-4
Lab Code: T1901660-004

Units: mg/L
Basis: As Received

Analyte Name	Analysis Method	MRL	Sample Result	Duplicate Sample KQ1915073-04 Result	Average	RPD	RPD Limit
Aluminum	6010C	0.040	1.61	1.89	1.75	16	20
Antimony	6010C	0.020	ND U	ND U	ND	-	20
Arsenic	6010C	0.010	ND U	ND U	ND	-	20
Barium	6010C	0.20	ND U	ND U	ND	-	20
Beryllium	6010C	0.010	ND U	ND U	ND	-	20
Boron	6010C	0.040	ND U	ND U	ND	-	20
Cadmium	6010C	0.020	ND U	ND U	ND	-	20
Calcium	6010C	1.0	12.4	12.7	12.6	2	20
Chromium	6010C	0.010	ND U	ND U	ND	-	20
Cobalt	6010C	0.010	ND U	ND U	ND	-	20
Copper	6010C	0.010	ND U	ND U	ND	-	20
Iron	6010C	0.020	1.82	2.21	2.02	19	20
Lead	6010C	0.010	ND U	ND U	ND	-	20
Magnesium	6010C	0.080	1.21	1.24	1.23	2	20
Manganese	6010C	0.010	0.090	0.095	0.093	5	20
Molybdenum	6010C	0.010	ND U	ND U	ND	-	20
Nickel	6010C	0.080	ND U	ND U	ND	-	20
Phosphorus	6010C	0.040	0.070	0.077	0.074	10	20
Potassium	6010C	0.20	0.29	0.23	0.26	23 #	20
Selenium	6010C	0.020	ND U	ND U	ND	-	20
Silicon	6010C	1.0	8.5	7.1	7.8	18	20
Silver	6010C	0.020	ND U	ND U	ND	-	20
Sodium	6010C	20	ND U	ND U	ND	-	20
Strontium	6010C	0.010	ND U	ND U	ND	-	20
Thallium	6010C	0.010	ND U	ND U	ND	-	20
Zinc	6010C	0.0040	0.0060	0.0129	0.0095	73 #	20

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Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

QA/QC Report

Client: Resolution Copper Mining LLC
Project Skunk Camp Closure/M09441A23
Sample Matrix: Soil

Service Request: T1901660
Date Collected: 09/17/19
Date Received: 09/20/19
Date Analyzed: 10/21/19

Replicate Sample Summary
TCLP Metals

Sample Name: TPC19-2
Lab Code: T1901660-002

Units: mg/L
Basis: As Received

Analyte Name	Analysis Method	MRL	Sample Result	Duplicate Sample KQ1915074-04 Result	Average	RPD	RPD Limit
Aluminum	6010C	0.050	ND U	ND U	ND	-	20
Antimony	6010C	0.10	ND U	ND U	ND	-	20
Arsenic	6010C	0.050	ND U	ND U	ND	-	20
Barium	6010C	1.0	ND U	ND U	ND	-	20
Beryllium	6010C	0.0050	ND U	ND U	ND	-	20
Boron	6010C	0.10	ND U	ND U	ND	-	20
Cadmium	6010C	0.050	ND U	ND U	ND	-	20
Calcium	6010C	0.10	692	706	699	2	20
Chromium	6010C	0.050	ND U	ND U	ND	-	20
Cobalt	6010C	0.010	ND U	ND U	ND	-	20
Copper	6010C	0.10	ND U	ND U	ND	-	20
Iron	6010C	0.10	ND U	ND U	ND	-	20
Lead	6010C	0.050	ND U	ND U	ND	-	20
Magnesium	6010C	0.050	7.19	7.36	7.28	2	20
Manganese	6010C	0.0050	0.0967	0.0978	0.0973	1	20
Molybdenum	6010C	0.020	ND U	ND U	ND	-	20
Nickel	6010C	0.10	ND U	ND U	ND	-	20
Phosphorus	6010C	0.20	ND U	ND U	ND	-	20
Potassium	6010C	1.0	5.4	5.6	5.5	4	20
Selenium	6010C	0.10	ND U	ND U	ND	-	20
Silicon	6010C	1.0	4.9	5.0	5.0	2	20
Silver	6010C	0.050	ND U	ND U	ND	-	20
Sodium	6010C	1.0	1330	1390	1360	4	20
Strontium	6010C	0.0050	0.497	0.506	0.502	2	20
Thallium	6010C	0.050	ND U	ND U	ND	-	20
Zinc	6010C	1.0	ND U	ND U	ND	-	20

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

QA/QC Report

Client:	Resolution Copper Mining LLC	**Service Request:**	T1901660
Project	Skunk Camp Closure/M09441A23	**Date Collected:**	09/17/19
Sample Matrix:	Soil	**Date Received:**	09/20/19
		Date Analyzed:	10/22/19

Replicate Sample Summary
SPLP Metals

Sample Name:	TPC19-2	**Units:**	mg/L
Lab Code:	T1901660-002	**Basis:**	As Received

Analyte Name	Analysis Method	MRL	Sample Result	Duplicate Sample KQ1915076-03 Result	Average	RPD	RPD Limit
Bismuth	6020A	0.00050	ND U	ND U	ND	-	20
Uranium	6020A	0.00020	ND U	ND U	ND	-	20

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

QA/QC Report

Client: Resolution Copper Mining LLC
Project Skunk Camp Closure/M09441A23
Sample Matrix: Soil

Service Request: T1901660
Date Collected: 09/18/19
Date Received: 09/20/19
Date Analyzed: 10/18/19

Replicate Sample Summary
TCLP Metals

Sample Name: TPC19-5
Lab Code: T1901660-005

Units: mg/L
Basis: As Received

Analyte Name	Analysis Method	MRL	Sample Result	Duplicate Sample KQ1915077-03 Result	Average	RPD	RPD Limit
Mercury	7470A	0.0010	ND U	ND U	ND	-	20

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

QA/QC Report

Client:	Resolution Copper Mining LLC	**Service Request:**	T1901660
Project	Skunk Camp Closure/M09441A23	**Date Collected:**	09/18/19
Sample Matrix:	Soil	**Date Received:**	09/20/19
		Date Analyzed:	10/18/19

Replicate Sample Summary
SPLP Metals

Sample Name:	TPC19-5	**Units:**	mg/L
Lab Code:	T1901660-005	**Basis:**	As Received

Analyte Name	Analysis Method	MRL	Sample Result	Duplicate Sample KQ1915079-03 Result	Average	RPD	RPD Limit
Mercury	7470A	0.0010	ND U	ND U	ND	-	20

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

QA/QC Report

Client: Resolution Copper Mining LLC
Project Skunk Camp Closure/M09441A23
Sample Matrix: Soil

Service Request: T1901660
Date Collected: 09/16/19
Date Received: 09/20/19
Date Analyzed: 10/24/19

Replicate Sample Summary
TCLP Metals

Sample Name: TPC19-4
Lab Code: T1901660-004

Units: mg/L
Basis: As Received

Analyte Name	Analysis Method	MRL	Sample Result	Duplicate Sample KQ1915398-03 Result	Average	RPD	RPD Limit
Bismuth	6020A	0.010	ND U	ND U	ND	-	20
Uranium	6020A	0.00020	0.00041	0.00036	0.00039	13	20

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Client: Resolution Copper Mining LLC
Project: Skunk Camp Closure/M09441A23
Sample Matrix: Soil

Service Request: T1901660
Date Analyzed: 10/23/19

Lab Control Sample Summary
SPLP Metals

Units:mg/L
Basis: As Received

Lab Control Sample
KQ1915073-01

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
Aluminum	6010C	8.80	10.0	88	80-120
Aluminum	6010C	9.67	10.0	97	80-120
Antimony	6010C	2.27	2.50	91	80-120
Arsenic	6010C	4.58	5.00	92	80-120
Barium	6010C	4.85	5.00	97	80-120
Beryllium	6010C	0.227	0.250	91	80-120
Boron	6010C	2.25	2.50	90	80-120
Cadmium	6010C	0.226	0.250	90	80-120
Calcium	6010C	94.2	100	94	80-120
Chromium	6010C	0.936	1.00	94	80-120
Cobalt	6010C	2.27	2.50	91	80-120
Copper	6010C	1.12	1.25	89	80-120
Iron	6010C	4.68	5.00	94	80-120
Lead	6010C	2.16	2.50	87	80-120
Magnesium	6010C	99.8	100	100	80-120
Magnesium	6010C	96.7	100	97	80-120
Manganese	6010C	2.35	2.50	94	80-120
Molybdenum	6010C	5.00	5.00	100	80-120
Nickel	6010C	2.21	2.50	88	80-120
Phosphorus	6010C	48.7	50.0	97	80-120
Potassium	6010C	97.1	100	97	80-120
Selenium	6010C	4.32	5.00	86	80-120
Silver	6010C	0.218	0.250	87	80-120
Sodium	6010C	98	100	98	80-120
Strontium	6010C	51.3	50.0	103	80-120
Thallium	6010C	0.825	1.00	83	80-120
Zinc	6010C	2.26	2.50	90	80-120

Client: Resolution Copper Mining LLC
Project: Skunk Camp Closure/M09441A23
Sample Matrix: Soil

Service Request: T1901660
Date Analyzed: 10/23/19

Lab Control Sample Summary
SPLP Metals

Units:mg/L
Basis: As Received

Lab Control Sample
KQ1915073-02

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
Silicon	6010C	54.2	50.0	108	80-120

Client: Resolution Copper Mining LLC
Project: Skunk Camp Closure/M09441A23
Sample Matrix: Soil

Service Request: T1901660
Date Analyzed: 10/21/19

Lab Control Sample Summary
TCLP Metals

Units:mg/L
Basis: As Received

Lab Control Sample
KQ1915074-01

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
Aluminum	6010C	8.80	10.0	88	80-120
Antimony	6010C	2.34	2.50	94	80-120
Arsenic	6010C	4.74	5.00	95	80-120
Barium	6010C	5.1	5.0	101	80-120
Beryllium	6010C	0.232	0.250	93	80-120
Boron	6010C	2.39	2.50	96	80-120
Cadmium	6010C	0.235	0.250	94	80-120
Calcium	6010C	100	100	100	80-120
Chromium	6010C	0.986	1.00	99	80-120
Cobalt	6010C	2.37	2.50	95	80-120
Copper	6010C	1.13	1.25	91	80-120
Iron	6010C	4.85	5.00	97	80-120
Lead	6010C	2.25	2.50	90	80-120
Magnesium	6010C	97.9	100	98	80-120
Manganese	6010C	2.45	2.50	98	80-120
Molybdenum	6010C	5.12	5.00	102	80-120
Nickel	6010C	2.33	2.50	93	80-120
Phosphorus	6010C	51.3	50.0	103	80-120
Potassium	6010C	106	100	106	80-120
Selenium	6010C	4.66	5.00	93	80-120
Silver	6010C	0.223	0.250	89	80-120
Strontium	6010C	48.1	50.0	96	80-120
Thallium	6010C	0.863	1.00	86	80-120
Zinc	6010C	2.3	2.5	93	80-120

Client: Resolution Copper Mining LLC
Project: Skunk Camp Closure/M09441A23
Sample Matrix: Soil

Service Request: T1901660
Date Analyzed: 10/21/19

Lab Control Sample Summary
TCLP Metals

Units:mg/L
Basis: As Received

Lab Control Sample
KQ1915074-02

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
Silicon	6010C	57.2	50.0	114	80-120

Client: Resolution Copper Mining LLC
Project: Skunk Camp Closure/M09441A23
Sample Matrix: Soil

Service Request: T1901660
Date Analyzed: 10/22/19

Lab Control Sample Summary
SPLP Metals

Units:mg/L
Basis: As Received

Lab Control Sample
KQ1915076-01

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
Bismuth	6020A	0.126	0.125	101	80-120
Uranium	6020A	0.127	0.125	101	80-120

Client: Resolution Copper Mining LLC
Project: Skunk Camp Closure/M09441A23
Sample Matrix: Soil

Service Request: T1901660
Date Analyzed: 10/18/19

Lab Control Sample Summary
TCLP Metals

Units:mg/L
Basis: As Received

Lab Control Sample
KQ1915077-02

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
Mercury	7470A	0.0057	0.0050	113	80-120

Client: Resolution Copper Mining LLC
Project: Skunk Camp Closure/M09441A23
Sample Matrix: Soil

Service Request: T1901660
Date Analyzed: 10/18/19

Lab Control Sample Summary
SPLP Metals

Units:mg/L
Basis: As Received

Lab Control Sample
KQ1915079-02

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
Mercury	7470A	0.0051	0.0050	101	80-120

Client: Resolution Copper Mining LLC
Project: Skunk Camp Closure/M09441A23
Sample Matrix: Soil

Service Request: T1901660
Date Analyzed: 10/24/19

Lab Control Sample Summary
TCLP Metals

Units:mg/L
Basis: As Received

Lab Control Sample
KQ1915398-01

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
Bismuth	6020A	0.113	0.125	91	80-120
Uranium	6020A	0.118	0.125	95	80-120

General Chemistry

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360) 577-7222 Fax (360) 425-9096
www.alsglobal.com

Analytical Report

Client:	Resolution Copper Mining LLC	**Service Request:**	T1901660
Project:	Skunk Camp Closure/M09441A23	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Method Blank	**Basis:**	As Received
Lab Code:	T1901660-MB1		

General Chemistry Parameters

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Q
Acidity, Total	SM 2310 B(4a)	ND U	mg/L	2.0	1	10/22/19 15:50	
Alkalinity as CaCO3, Total	SM 2320 B	ND U	mg/L	2.0	1	10/21/19 14:00	
Bromide	9056A	ND U	mg/L	0.10	1	10/16/19 10:40	
Chloride	9056A	ND U	mg/L	0.10	1	10/16/19 10:40	
Conductivity at 25 Degrees Celsius	120.1	ND U	uMHOS/cm	2.0	1	10/18/19 11:05	
Fluoride	9056A	ND U	mg/L	0.20	1	10/16/19 10:40	
Nitrate as Nitrogen	9056A	ND U	mg/L	0.10	1	10/16/19 10:40	
Nitrite as Nitrogen	9056A	ND U	mg/L	0.10	1	10/16/19 10:40	
Sulfate	9056A	ND U	mg/L	0.10	1	10/16/19 10:40	

Analytical Report

Client:	Resolution Copper Mining LLC	**Service Request:**	T1901660
Project:	Skunk Camp Closure/M09441A23	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Method Blank	**Basis:**	As Received
Lab Code:	T1901660-MB2		

General Chemistry Parameters

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Q
Acidity, Total	SM 2310 B(4a)	ND U	mg/L	2.0	1	10/22/19 15:50	
Alkalinity as CaCO3, Total	SM 2320 B	ND U	mg/L	2.0	1	10/21/19 14:00	
Bromide	9056A	ND U	mg/L	0.10	1	10/16/19 19:40	
Chloride	9056A	ND U	mg/L	0.10	1	10/16/19 19:40	
Conductivity at 25 Degrees Celsius	120.1	ND U	uMHOS/cm	2.0	1	10/18/19 11:05	
Fluoride	9056A	ND U	mg/L	0.20	1	10/16/19 19:40	
Nitrate as Nitrogen	9056A	ND U	mg/L	0.10	1	10/16/19 19:40	
Nitrite as Nitrogen	9056A	ND U	mg/L	0.10	1	10/16/19 19:40	
Sulfate	9056A	ND U	mg/L	0.10	1	10/16/19 19:40	

Analytical Report

Client:	Resolution Copper Mining LLC	**Service Request:**	T1901660
Project:	Skunk Camp Closure/M09441A23	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Method Blank	**Basis:**	As Received
Lab Code:	T1901660-MB3		

General Chemistry Parameters

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Q
Chloride	9056A	ND U	mg/L	0.10	1	10/17/19 11:30	
Conductivity at 25 Degrees Celsius	120.1	**10.1**	uMHOS/cm	2.0	1	10/18/19 11:05	

Analytical Report

Client:	Resolution Copper Mining LLC	**Service Request:**	T1901660
Project:	Skunk Camp Closure/M09441A23	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Method Blank	**Basis:**	As Received
Lab Code:	T1901660-MB4		

General Chemistry Parameters

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Q
Chloride	9056A	ND U	mg/L	0.10	1	10/17/19 20:35	

QA/QC Report

Client: Resolution Copper Mining LLC
Project: Skunk Camp Closure/M09441A23
Sample Matrix: Water

Service Request:T1901660
Date Collected:09/17/19
Date Received:09/20/19
Date Analyzed:10/16/19

Duplicate Matrix Spike Summary
General Chemistry Parameters

Sample Name: TPC19-2
Lab Code: T1901660-026

Units:mg/L
Basis: As Received

			Matrix Spike T1901660-026MS			Duplicate Matrix Spike T1901660-026DMS					
Analyte Name	**Method**	**Sample Result**	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Fluoride	9056A	ND U	8.22	8.00	103	8.30	8.00	104	80-120	<1	20
Chloride	9056A	15.4	22.8	8.00	92	22.9	8.00	93	80-120	<1	20
Bromide	9056A	ND U	7.91	8.00	99	7.93	8.00	99	80-120	<1	20
Sulfate	9056A	ND U	7.77	8.00	97	7.85	8.00	98	90-110	1	20
Nitrite as Nitrogen	9056A	ND U	7.51	8.00	94	7.52	8.00	94	80-120	<1	20
Nitrate as Nitrogen	9056A	ND U	8.38	8.00	105	8.40	8.00	105	80-120	<1	20

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QA/QC Report

Client:	Resolution Copper Mining LLC	**Service Request:**	T1901660
Project	Skunk Camp Closure/M09441A23	**Date Collected:**	09/18/19
Sample Matrix:	Water	**Date Received:**	09/20/19
		Date Analyzed:	10/21/19 - 10/22/19

Replicate Sample Summary
General Chemistry Parameters

Sample Name:	TPC19-1	**Units:**	mg/L
Lab Code:	T1901660-025	**Basis:**	As Received

Analyte Name	Analysis Method	MRL	Sample Result	Duplicate Sample T1901660-025DUP Result	Average	RPD	RPD Limit
Acidity, Total	SM 2310 B(4a)	2.0	18.0	18.0	18.0	<1	20
Alkalinity as CaCO3, Total	SM 2320 B	2.0	18.0	18.0	18.0	<1	20

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Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

QA/QC Report

Client:	Resolution Copper Mining LLC	**Service Request:**	T1901660
Project	Skunk Camp Closure/M09441A23	**Date Collected:**	09/18/19
Sample Matrix:	Water	**Date Received:**	09/20/19
		Date Analyzed:	10/16/19

Replicate Sample Summary
General Chemistry Parameters

Sample Name:	TPC19-1	**Units:**	pH Units
Lab Code:	T1901660-025	**Basis:**	As Received

Analyte Name	Analysis Method	MRL	Sample Result	Duplicate Sample T1901660-025DUP Result	Average	RPD	RPD Limit
pH	SM 4500-H+ B	-	6.52	6.45	6.49	1	20

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

QA/QC Report

Client:	Resolution Copper Mining LLC	**Service Request:**	T1901660
Project	Skunk Camp Closure/M09441A23	**Date Collected:**	09/18/19
Sample Matrix:	Water	**Date Received:**	09/20/19
		Date Analyzed:	10/18/19

Replicate Sample Summary
General Chemistry Parameters

Sample Name:	TPC19-1	**Units:**	uMHOS/cm
Lab Code:	T1901660-025	**Basis:**	As Received

Analyte Name	Analysis Method	MRL	Sample Result	Duplicate Sample T1901660-025DUP Result	Average	RPD	RPD Limit
Conductivity at 25 Degrees Celsius	120.1	2.0	69.5	71.1	70.3	2	20

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

QA/QC Report

Client: Resolution Copper Mining LLC
Project Skunk Camp Closure/M09441A23
Sample Matrix: Water

Service Request: T1901660
Date Collected: 09/17/19
Date Received: 09/20/19
Date Analyzed: 10/16/19

Replicate Sample Summary
General Chemistry Parameters

Sample Name: TPC19-2
Lab Code: T1901660-026

Units: mg/L
Basis: As Received

Analyte Name	Analysis Method	MRL	Sample Result	Duplicate Sample T1901660-026DUP Result	Average	RPD	RPD Limit
Bromide	9056A	0.20	ND U	ND U	NC	NC	20
Chloride	9056A	0.20	15.4	15.5	15.5	<1	20
Fluoride	9056A	0.40	ND U	ND U	NC	NC	20
Sulfate	9056A	0.20	ND U	ND U	NC	NC	20
Nitrate as Nitrogen	9056A	0.20	ND U	0.20	NC	NC	20
Nitrite as Nitrogen	9056A	0.20	ND U	ND U	NC	NC	20

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Client: Resolution Copper Mining LLC
Project: Skunk Camp Closure/M09441A23
Sample Matrix: Water

Service Request: T1901660
Date Analyzed: 10/21/19 - 10/22/19

Lab Control Sample Summary
General Chemistry Parameters

Units:mg/L
Basis: As Received

Lab Control Sample
T1901660-LCS3

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
Acidity, Total	SM 2310 B(4a)	1060	1040	101	93-110
Alkalinity as CaCO3, Total	SM 2320 B	96.0	95.4	101	90-110

Client: Resolution Copper Mining LLC
Project: Skunk Camp Closure/M09441A23
Sample Matrix: Water

Service Request: T1901660
Date Analyzed: 10/18/19

Lab Control Sample Summary
General Chemistry Parameters

Units:uMHOS/cm
Basis: As Received

Lab Control Sample
T1901660-LCS3

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
Conductivity at 25 Degrees Celsius	120.1	196	192	102	86-113

QA/QC Report

Client: Resolution Copper Mining LLC
Project: Skunk Camp Closure/M09441A23
Sample Matrix: Water

Service Request: T1901660
Date Analyzed: 10/16/19

Lab Control Sample Summary
General Chemistry Parameters

Units: pH Units
Basis: As Received

Lab Control Sample
T1901660-LCS3

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
pH	SM 4500-H+ B	9.26	9.34	99	85-115

Client: Resolution Copper Mining LLC
Project: Skunk Camp Closure/M09441A23
Sample Matrix: Water

Service Request: T1901660
Date Analyzed: 10/16/19

Duplicate Lab Control Sample Summary
General Chemistry Parameters

Units:mg/L
Basis: As Received

		Lab Control Sample			Duplicate Lab Control Sample					
		T1901660-LCS1			T1901660-DLCS1					
Analyte Name	**Analytical Method**	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Bromide	9056A	2.49	2.50	100	2.48	2.50	99	90-110	<1	20
Chloride	9056A	4.76	5.00	95	4.75	5.00	95	80-120	<1	20
Fluoride	9056A	5.12	5.00	102	5.18	5.00	104	90-110	1	20
Nitrate as Nitrogen	9056A	2.42	2.50	97	2.41	2.50	97	85-115	<1	20
Nitrite as Nitrogen	9056A	2.51	2.50	100	2.52	2.50	101	85-115	<1	20
Sulfate	9056A	4.74	5.00	95	4.77	5.00	95	90-110	<1	20

QA/QC Report

Client:	Resolution Copper Mining LLC	**Service Request:**	T1901660
Project:	Skunk Camp Closure/M09441A23	**Date Analyzed:**	10/17/19
Sample Matrix:	Water		

Duplicate Lab Control Sample Summary
General Chemistry Parameters

Analysis Method:	9056A	**Units:**	mg/L
		Basis:	As Received
		Analysis Lot:	655915

	Lab Control Sample T1901660-LCS2			Duplicate Lab Control Sample T1901660-DLCS2					
Analyte Name	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Chloride	4.75	5.00	95	4.76	5.00	95	80-120	<1	20

Subcontracted Work
ALS Minerals - North Vancouver, Canada

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Page: 1
Total # Pages: 2 (A - D)
Plus Appendix Pages
Finalized Date: 5-NOV-2019
Account: TUCSON

CERTIFICATE VA19254204

Project: T1901660

P.O. No.: 56T1901660

This report is for 24 Pulp samples submitted to our lab in Vancouver, BC, Canada on 9-OCT-2019.

The following have access to data associated with this certificate:

RALPH POULSEN	TUC.REPORTING	

SAMPLE PREPARATION

ALS CODE	DESCRIPTION
WEI-21	Received Sample Weight
LOG-24	Pulp Login - Rcd w/o Barcode

ANALYTICAL PROCEDURES

ALS CODE	DESCRIPTION	INSTRUMENT
ME-XRF26	Whole Rock By Fusion/XRF	XRF
OA-GRA05x	LOI for XRF	WST-SEQ
ME-ICP61	33 element four acid ICP-AES	ICP-AES
Hg-MS42	Trace Hg by ICPMS	ICP-MS

This was updated in Jan 2020 to include Selenium

This is the Final Report and supersedes any preliminary report with this certificate number. Results apply to samples as submitted. All pages of this report have been checked and approved for release.

***** See Appendix Page for comments regarding this certificate *****

Signature:

Saa Traxler, General Manager, North Vancouver

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Project: T1901660

CERTIFICATE OF ANALYSIS VA19254204

Sample Description	Method	WEI-21	ME-XRF26	ME-XRF26	ME-XRF26	ME-XRF26	ME-XRF26	ME-XRF26	ME-XRF26	ME-XRF26	ME-XRF26	ME-XRF26	ME-XRF26	ME-XRF26	ME-XRF26	ME-XRF26
	Analyte	Recvd Wt.	Al2O3	BaO	CaO	Cr2O3	Fe2O3	K2O	MgO	MnO	Na2O	P2O5	SO3	SiO2	SrO	TiO2
	Units	kg	%	%	%	%	%	%	%	%	%	%	%	%	%	%
	LOD	0.02	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
TPC19-1		0.10	11.40	0.07	0.90	0.01	6.16	3.34	0.93	0.08	0.83	0.14	0.06	67.94	0.01	1.74
TPC19-2		0.10	11.47	0.07	11.55	0.01	9.38	1.78	2.41	0.12	0.99	0.49	0.03	47.22	0.02	1.76
TPC19-3		0.10	12.93	0.07	1.78	0.01	12.67	2.24	1.54	0.16	1.16	0.14	0.04	57.70	0.02	2.79
TPC19-4		0.08	9.78	0.06	17.65	<0.01	5.29	1.56	2.49	0.10	0.53	0.17	0.03	42.51	0.03	0.86
TPC19-5		0.08	11.25	0.05	11.30	0.01	6.60	2.11	2.31	0.09	0.96	0.27	0.03	50.14	0.03	1.14
TPC19-6		0.08	11.56	0.06	11.20	0.01	9.94	1.80	2.57	0.14	1.34	0.54	0.04	46.87	0.02	1.85
TPC19-7		0.08	9.54	0.06	20.7	0.01	6.90	1.29	2.00	0.10	0.72	0.28	0.01	38.25	0.04	1.14
TPC19-8		0.08	10.94	0.06	3.24	0.02	16.53	2.41	1.44	0.19	1.35	0.19	0.01	55.51	0.02	3.65
TPC19-9		0.10	13.12	0.06	2.01	0.01	9.45	2.78	1.63	0.13	1.48	0.28	0.04	60.86	0.02	1.90
TPC19-10		0.08	12.48	0.06	1.52	0.01	11.14	2.56	1.26	0.14	1.18	0.11	0.09	59.91	0.02	2.60
TPC19-11		0.10	13.62	0.06	2.57	0.02	11.46	2.49	1.60	0.15	1.89	0.32	0.01	59.13	0.02	2.37
TPC19-12		0.08	11.28	0.06	11.10	0.01	7.06	1.87	2.34	0.09	0.84	0.24	0.03	49.74	0.02	1.18
TPC19-13		0.08	12.80	0.06	1.26	0.01	8.09	2.52	1.17	0.11	1.08	0.09	0.03	64.13	0.01	1.93
TPC19-14		0.10	12.78	0.05	4.18	0.02	13.78	2.25	3.15	0.19	1.57	0.41	0.05	51.70	0.02	3.23
TPC19-15		0.10	12.84	0.06	6.80	0.02	9.67	2.06	2.27	0.14	1.00	0.38	0.03	52.50	0.02	1.85
TPC19-16		0.10	13.46	0.06	2.12	0.01	9.54	2.68	1.38	0.13	1.73	0.34	0.05	60.25	0.02	1.78
TPC19-17		0.10	14.04	0.06	2.03	0.01	12.06	2.16	2.72	0.15	0.81	0.14	0.04	54.02	0.02	2.61
TPC19-18		0.08	8.17	0.04	18.40	0.01	3.93	1.87	2.61	0.08	0.59	0.15	0.08	42.29	0.02	0.66
TPC19-19		0.08	14.24	0.06	1.64	0.02	10.41	2.32	1.30	0.14	1.14	0.10	0.05	58.34	0.02	2.77
TPC19-20		0.08	14.92	0.06	1.01	0.01	7.83	2.67	1.42	0.11	1.04	0.09	0.03	62.81	0.01	1.38
TPC19-21		0.10	11.68	0.06	1.36	0.01	8.85	2.36	1.48	0.13	0.89	0.11	0.07	64.12	0.02	2.11
TPC19-22		0.10	11.30	0.06	3.89	0.03	20.79	2.15	2.26	0.26	1.47	0.33	0.02	48.08	0.02	4.92
TPC19-23		0.08	12.38	0.07	2.51	0.02	13.51	2.30	2.00	0.18	1.30	0.34	0.03	56.61	0.03	2.91
TPC19-24		0.08	12.70	0.07	1.86	0.01	9.49	2.76	1.77	0.13	1.50	0.27	0.03	62.68	0.02	2.06

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Finalized Date: 5-NOV-2019
Account: TUCSON

Project: T1901660

CERTIFICATE OF ANALYSIS VA19254204

Sample Description	Method	ME-XRF26	OA-GRA05x	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61
	Analyte	Total	LOI 1000	Ag	Al	As	Ba	Be	Bi	Ca	Cd	Co	Cr	Cu	Fe	Ga
	Units	%	%	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm
	LOD	0.01	0.01	0.5	0.01	5	10	0.5	2	0.01	0.5	1	1	1	0.01	10
TPC19-1		99.35	5.55	<0.5	5.93	10	580	1.4	<2	0.68	<0.5	13	49	68	4.09	10
TPC19-2		99.28	11.73	<0.5	5.98	6	630	1.2	2	8.17	<0.5	17	49	49	6.17	10
TPC19-3		98.74	5.22	<0.5	6.60	6	590	1.7	4	1.31	<0.5	20	81	72	7.17	20
TPC19-4		99.36	18.16	<0.5	4.85	7	570	1.0	<2	11.60	<0.5	11	26	39	3.42	10
TPC19-5		98.60	12.15	<0.5	5.70	<5	460	1.3	<2	7.84	<0.5	13	38	41	4.30	10
TPC19-6		99.66	11.43	<0.5	5.76	6	530	1.2	<2	7.66	<0.5	20	53	39	6.28	20
TPC19-7		99.48	18.26	0.6	4.90	6	530	0.9	<2	13.90	<0.5	12	39	28	4.55	10
TPC19-8		99.40	3.61	<0.5	5.69	5	540	1.4	<2	2.41	<0.5	46	125	41	10.25	10
TPC19-9		99.03	5.08	<0.5	6.71	5	610	1.6	<2	1.47	<0.5	17	65	55	5.61	20
TPC19-10		99.34	6.03	<0.5	6.39	9	590	1.5	<2	1.10	<0.5	17	70	84	6.28	20
TPC19-11		98.89	2.97	<0.5	7.16	<5	610	1.6	<2	1.89	<0.5	20	76	34	6.74	20
TPC19-12		98.75	12.73	<0.5	5.73	7	510	1.2	<2	7.38	<0.5	14	39	48	4.62	10
TPC19-13		98.88	5.42	<0.5	6.40	8	570	1.5	<2	0.88	<0.5	14	65	41	4.83	20
TPC19-14		98.92	5.30	<0.5	6.63	<5	490	1.2	<2	2.91	<0.5	35	97	76	8.91	20
TPC19-15		98.89	9.06	<0.5	6.55	6	550	1.3	<2	4.72	<0.5	19	63	48	6.10	20
TPC19-16		99.04	5.29	<0.5	6.98	6	610	1.6	<2	1.54	<0.5	16	72	60	5.86	20
TPC19-17		98.71	7.67	<0.5	6.95	10	540	1.2	2	1.38	<0.5	33	59	59	7.67	20
TPC19-18		99.05	19.99	0.6	4.35	12	390	1.2	<2	12.50	<0.5	7	39	49	2.71	10
TPC19-19		99.03	6.26	<0.5	7.05	9	510	1.4	<2	1.15	<0.5	26	96	62	6.75	20
TPC19-20		98.76	5.22	<0.5	7.36	6	570	1.8	<2	0.70	<0.5	25	55	37	4.82	20
TPC19-21		100.10	6.66	<0.5	6.06	9	540	1.4	<2	0.99	<0.5	19	61	95	5.51	20
TPC19-22		99.28	3.38	<0.5	5.53	5	480	1.2	<2	2.55	<0.5	40	119	43	12.70	20
TPC19-23		99.13	4.68	<0.5	6.15	10	570	1.4	4	1.70	<0.5	23	73	57	7.67	20
TPC19-24		99.77	4.21	<0.5	6.62	10	630	1.5	<2	1.33	<0.5	20	57	60	5.95	20

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Account: TUCSON

Project: T1901660

CERTIFICATE OF ANALYSIS VA19254204

Sample Description	Method	Hg-MS42	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61
	Analyte	Hg	K	La	Mg	Mn	Mo	Na	Ni	P	Pb	S	Sb	Sc	Sr	Th
	Units	ppm	%	ppm	%	ppm	ppm	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm
	LOD	0.005	0.01	10	0.01	5	1	0.01	1	10	2	0.01	5	1	1	20
TPC19-1		0.025	2.81	40	0.55	569	1	0.62	17	550	23	0.03	<5	11	132	<20
TPC19-2		0.015	1.47	40	1.41	929	1	0.74	32	2030	13	0.01	<5	19	240	<20
TPC19-3		0.018	1.84	50	0.88	1125	2	0.86	32	550	32	0.02	<5	16	190	20
TPC19-4		0.027	1.23	20	1.36	716	1	0.39	18	680	22	0.01	<5	12	298	<20
TPC19-5		0.013	1.69	30	1.32	625	<1	0.69	24	1130	15	0.01	<5	13	270	<20
TPC19-6		0.014	1.42	40	1.42	1010	<1	0.96	30	2230	15	0.01	<5	18	213	<20
TPC19-7		0.008	1.06	30	1.14	736	<1	0.54	25	1150	8	<0.01	<5	15	393	<20
TPC19-8		<0.005	2.06	40	0.83	1380	1	1.02	33	800	25	<0.01	<5	14	184	<20
TPC19-9		0.015	2.27	40	0.94	945	1	1.09	32	1140	21	0.02	<5	15	180	<20
TPC19-10		0.029	2.11	40	0.73	949	3	0.86	27	420	29	0.04	<5	15	169	<20
TPC19-11		0.007	2.10	40	0.94	1105	<1	1.43	38	1310	21	0.01	<5	18	194	<20
TPC19-12		0.008	1.53	30	1.32	609	1	0.63	26	910	13	0.01	8	14	223	<20
TPC19-13		0.017	2.06	40	0.66	724	1	0.79	25	330	20	0.02	<5	14	132	<20
TPC19-14		0.019	1.93	30	1.83	1335	2	1.20	61	1740	19	0.02	<5	19	198	<20
TPC19-15		0.009	1.70	40	1.29	963	1	0.75	38	1560	19	0.01	5	18	213	<20
TPC19-16		0.022	2.25	40	0.79	952	2	1.31	29	1450	28	0.02	6	16	185	<20
TPC19-17		0.031	1.72	30	1.52	1035	1	0.60	44	520	15	0.02	<5	21	136	<20
TPC19-18		0.040	1.62	30	1.52	538	1	0.47	22	590	25	0.03	<5	8	142	<20
TPC19-19		0.024	1.85	30	0.71	1050	2	0.84	37	370	20	0.02	<5	18	150	<20
TPC19-20		0.029	2.13	40	0.80	742	1	0.76	33	310	23	0.01	<5	14	116	<20
TPC19-21		0.024	1.97	30	0.87	919	7	0.67	29	430	33	0.03	<5	14	135	<20
TPC19-22		0.005	1.69	30	1.22	1740	2	1.05	43	1270	35	0.01	<5	20	160	<20
TPC19-23		0.016	1.85	40	1.12	1200	1	0.94	33	1370	23	0.01	<5	17	236	<20
TPC19-24		0.022	2.34	40	1.02	950	1	1.14	28	1070	27	0.01	<5	15	228	<20

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Account: TUCSON

Project: T1901660

CERTIFICATE OF ANALYSIS VA19254204

Sample Description	Method	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61
	Analyte	Ti	Tl	U	V	W	Zn
	Units	%	ppm	ppm	ppm	ppm	ppm
	LOD	0.01	10	10	1	10	2
TPC19-1		0.89	<10	<10	104	<10	84
TPC19-2		0.95	<10	<10	145	<10	97
TPC19-3		1.34	<10	<10	207	<10	124
TPC19-4		0.41	<10	<10	74	<10	87
TPC19-5		0.59	<10	<10	95	<10	88
TPC19-6		0.96	<10	<10	165	<10	96
TPC19-7		0.57	<10	<10	104	<10	72
TPC19-8		1.93	<10	<10	382	150	161
TPC19-9		0.93	<10	<10	145	<10	110
TPC19-10		1.20	<10	10	174	<10	106
TPC19-11		1.16	<10	<10	189	<10	105
TPC19-12		0.64	<10	<10	96	<10	85
TPC19-13		0.94	<10	<10	124	<10	71
TPC19-14		1.78	<10	<10	276	<10	137
TPC19-15		0.99	<10	<10	143	<10	101
TPC19-16		0.94	<10	<10	144	<10	107
TPC19-17		1.36	<10	<10	219	20	104
TPC19-18		0.35	<10	<10	60	<10	87
TPC19-19		1.60	<10	<10	217	20	84
TPC19-20		0.71	<10	<10	122	40	86
TPC19-21		1.03	<10	<10	148	<10	111
TPC19-22		2.58	<10	<10	507	80	181
TPC19-23		1.43	<10	<10	213	<10	130
TPC19-24		1.07	<10	<10	152	<10	112

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CERTIFICATE OF ANALYSIS VA19254204

CERTIFICATE COMMENTS

LABORATORY ADDRESSES

Processed at ALS Vancouver located at 2103 Dollarton Hwy, North Vancouver, BC, Canada.

Applies to Method:			
Hg-MS42	LOG-24	ME-ICP61	ME-XRF26
OA-GRA05x	WEI-21		

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QC CERTIFICATE VA19254204

Project: T1901660

P.O. No.: 56T1901660

This report is for 24 Pulp samples submitted to our lab in Vancouver, BC, Canada on 9-OCT-2019.

The following have access to data associated with this certificate:

RALPH POULSEN	TUC.REPORTING	

SAMPLE PREPARATION

ALS CODE	DESCRIPTION
WEI-21	Received Sample Weight
LOG-24	Pulp Login - Rcd w/o Barcode

ANALYTICAL PROCEDURES

ALS CODE	DESCRIPTION	INSTRUMENT
ME-XRF26	Whole Rock By Fusion/XRF	XRF
OA-GRA05x	LOI for XRF	WST-SEQ
ME-ICP61	33 element four acid ICP-AES	ICP-AES
Hg-MS42	Trace Hg by ICPMS	ICP-MS

This is the Final Report and supersedes any preliminary report with this certificate number. Results apply to samples as submitted. All pages of this report have been checked and approved for release.

***** See Appendix Page for comments regarding this certificate *****

Signature:

Saa Traxler, General Manager, North Vancouver

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QC CERTIFICATE OF ANALYSIS VA19254204

Sample Description	Method	ME-XRF26	ME-XRF26	ME-XRF26	ME-XRF26	ME-XRF26	ME-XRF26	ME-XRF26	ME-XRF26	ME-XRF26	ME-XRF26	ME-XRF26	ME-XRF26	ME-XRF26	ME-XRF26	ME-XRF26
	Analyte	Al2O3	BaO	CaO	Cr2O3	Fe2O3	K2O	MgO	MnO	Na2O	P2O5	SO3	SiO2	SrO	TiO2	Total
	Units	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%
	LOD	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
STANDARDS																
AMIS0547																
Target Range - Lower Bound																
Upper Bound																
CDN-CM-34																
Target Range - Lower Bound																
Upper Bound																
EMOG-17																
Target Range - Lower Bound																
Upper Bound																
MRGeo08																
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Target Range - Lower Bound																
Upper Bound																
OREAS 218		13.48	0.02	10.10	0.04	12.10	0.23	7.15	0.19	2.93	0.11	0.36	49.04	0.01	1.12	97.04
Target Range - Lower Bound		13.04	<0.01	9.73	<0.01	11.63	0.20	6.81	0.16	2.75	0.07	0.31	48.02	<0.01	1.04	<0.01
Upper Bound		13.96	0.04	10.45	0.05	12.47	0.26	7.39	0.22	3.05	0.13	0.41	50.38	0.03	1.20	0.02
OREAS 220		13.72	0.02	9.70	0.04	11.41	0.47	7.18	0.17	2.75	0.18	0.36	50.30	0.02	1.29	97.77
Target Range - Lower Bound		13.12	<0.01	9.28	0.02	11.00	0.42	6.92	0.14	2.60	0.15	0.31	49.10	<0.01	1.19	<0.01
Upper Bound		14.04	0.05	10.00	0.06	11.80	0.51	7.50	0.20	2.90	0.21	0.41	51.50	0.05	1.37	0.02
OREAS 602																
Target Range - Lower Bound																
Upper Bound																
OREAS 624																
OREAS 624																
Target Range - Lower Bound																
Upper Bound																
OREAS-45e																
Target Range - Lower Bound																
Upper Bound																

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QC CERTIFICATE OF ANALYSIS VA19254204

Sample Description	Method	OA-GRA05x	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	Hg-MS42
	Analyte	LOI 1000	Ag	Al	As	Ba	Be	Bi	Ca	Cd	Co	Cr	Cu	Fe	Ga	Hg
	Units	%	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm
	LOD	0.01	0.5	0.01	5	10	0.5	2	0.01	0.5	1	1	1	0.01	10	0.005
STANDARDS																
AMIS0547		38.18														
Target Range - Lower Bound		36.19														
Upper Bound		40.02														
CDN-CM-34			4.0	6.82	108	480	1.0	<2	2.18	1.0	43	267	5900	4.90	20	
Target Range - Lower Bound			2.5	5.88	90	430	<0.5	<2	1.83	<0.5	37	217	5370	4.26	<10	
Upper Bound			4.9	7.21	122	610	2.1	8	2.25	2.0	47	267	6190	5.23	40	
EMOG-17			68.7	4.79	602	110	1.8	2	1.97	19.9	771	60	8430	4.95	10	
Target Range - Lower Bound			60.4	4.18	517	930	0.7	<2	1.72	17.7	685	49	7740	4.42	<10	
Upper Bound			75.0	5.13	643	1290	2.9	10	2.12	22.7	839	62	8910	5.42	30	
MRGeo08																0.055
MRGeo08																0.067
Target Range - Lower Bound																0.048
Upper Bound																0.074
MRGeo08			4.9	7.54	35	1140	3.3	<2	2.84	2.4	20	96	654	4.06	20	
Target Range - Lower Bound			3.2	6.64	21	920	2.2	<2	2.35	1.1	17	81	586	3.55	<10	
Upper Bound			5.6	8.14	45	1270	4.5	5	2.90	3.4	23	102	676	4.37	40	
OREAS 218																
Target Range - Lower Bound																
Upper Bound																
OREAS 220																
Target Range - Lower Bound																
Upper Bound																
OREAS 602			>100	4.51	716	90	0.8	64	0.68	26.8	10	31	5430	2.27	20	
Target Range - Lower Bound			107.5	3.92	579	590	<0.5	49	0.55	21.7	7	28	4790	2.01	<10	
Upper Bound			100.0	4.82	719	830	1.8	65	0.69	27.7	12	36	5510	2.47	40	
OREAS 624																2.00
OREAS 624																1.885
Target Range - Lower Bound																1.695
Upper Bound																2.08
OREAS-45e		8.63														
Target Range - Lower Bound		8.11														
Upper Bound		8.99														

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Sample Description	Method	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61
	Analyte	K	La	Mg	Mn	Mo	Na	Ni	P	Pb	S	Sb	Sc	Sr	Th	Ti
	Units	%	ppm	%	ppm	ppm	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	%
	LOD	0.01	10	0.01	5	1	0.01	1	10	2	0.01	5	1	1	20	0.01
STANDARDS																
AMIS0547																
Target Range - Lower Bound																
Upper Bound																
CDN-CM-34		2.96	20	3.83	454	294	0.79	254	1240	23	3.09	6	16	228	<20	0.52
Target Range - Lower Bound		2.51	<10	3.29	399	269	0.66	220	1110	19	2.70	<5	14	204	<20	0.43
Upper Bound		3.09	40	4.05	499	331	0.83	271	1370	29	3.32	17	19	251	40	0.55
EMOG-17		1.73	20	0.99	742	1090	1.14	7720	820	7240	3.27	815	8	207	<20	0.33
Target Range - Lower Bound		1.49	<10	0.86	670	996	0.99	6820	700	6570	2.91	638	6	184	<20	0.28
Upper Bound		1.85	40	1.08	830	1220	1.23	8330	880	8030	3.57	874	10	227	50	0.36
MRGeo08																
MRGeo08																
Target Range - Lower Bound																
Upper Bound																
MRGeo08		3.24	30	1.37	572	14	2.08	724	1070	1115	0.31	<5	11	312	20	0.51
Target Range - Lower Bound		2.79	<10	1.17	497	12	1.76	621	930	969	0.27	<5	10	276	<20	0.44
Upper Bound		3.43	60	1.45	619	18	2.18	761	1160	1190	0.35	15	15	340	60	0.56
OREAS 218																
Target Range - Lower Bound																
Upper Bound																
OREAS 220																
Target Range - Lower Bound																
Upper Bound																
OREAS 602		0.72	20	0.20	237	5	0.47	63	590	1065	2.19	87	4	474	<20	0.22
Target Range - Lower Bound		0.60	<10	0.17	198	2	0.40	53	500	918	1.90	61	2	417	<20	0.18
Upper Bound		0.76	40	0.23	253	7	0.51	67	640	1125	2.34	97	6	511	50	0.24
OREAS 624																
OREAS 624																
Target Range - Lower Bound																
Upper Bound																
OREAS-45e																
Target Range - Lower Bound																
Upper Bound																

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QC CERTIFICATE OF ANALYSIS VA19254204

Sample Description	Method Analyte Units LOD	ME-ICP61 Tl ppm 10	ME-ICP61 U ppm 10	ME-ICP61 V ppm 1	ME-ICP61 W ppm 10	ME-ICP61 Zn ppm 2
STANDARDS						
AMIS0547						
Target Range - Lower Bound						
Upper Bound						
CDN-CM-34		<10	<10	168	20	203
Target Range - Lower Bound		<10	<10	149	<10	176
Upper Bound		20	20	184	50	219
EMOG-17		<10	<10	74	<10	7600
Target Range - Lower Bound		<10	<10	67	<10	6800
Upper Bound		20	20	84	20	8320
MRGeo08						
MRGeo08						
Target Range - Lower Bound						
Upper Bound						
MRGeo08		<10	<10	114	<10	820
Target Range - Lower Bound		<10	<10	97	<10	722
Upper Bound		20	30	121	30	886
OREAS 218						
Target Range - Lower Bound						
Upper Bound						
OREAS 220						
Target Range - Lower Bound						
Upper Bound						
OREAS 602		<10	<10	34	10	4210
Target Range - Lower Bound		<10	<10	29	<10	3770
Upper Bound		20	20	37	30	4610
OREAS 624						
OREAS 624						
Target Range - Lower Bound						
Upper Bound						
OREAS-45e						
Target Range - Lower Bound						
Upper Bound						

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Sample Description	Method	ME-XRF26	ME-XRF26	ME-XRF26	ME-XRF26	ME-XRF26	ME-XRF26	ME-XRF26	ME-XRF26	ME-XRF26	ME-XRF26	ME-XRF26	ME-XRF26	ME-XRF26	ME-XRF26	ME-XRF26
	Analyte	Al2O3	BaO	CaO	Cr2O3	Fe2O3	K2O	MgO	MnO	Na2O	P2O5	SO3	SiO2	SrO	TiO2	Total
	Units	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%
	LOD	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
BLANKS																
BLANK																
BLANK																
Target Range - Lower Bound																
Upper Bound																
BLANK																
BLANK																
Target Range - Lower Bound																
Upper Bound																
BLANK		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	0.01	0.02	99.55	<0.01	<0.01	99.59
Target Range - Lower Bound		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Upper Bound		0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
BLANK																
Target Range - Lower Bound																
Upper Bound																
DUPLICATES																
ORIGINAL																
DUP																
Target Range - Lower Bound																
Upper Bound																
ORIGINAL																
DUP																
Target Range - Lower Bound																
Upper Bound																
TPC19-8																
DUP																
Target Range - Lower Bound																
Upper Bound																
TPC19-10		12.48	0.06	1.52	0.01	11.14	2.56	1.26	0.14	1.18	0.11	0.09	59.91	0.02	2.60	99.34
DUP		12.32	0.06	1.51	0.02	11.36	2.48	1.26	0.14	1.16	0.11	0.08	59.58	0.02	2.67	99.03
Target Range - Lower Bound		12.20	0.05	1.48	<0.01	11.07	2.45	1.23	0.13	1.13	0.10	0.07	58.84	<0.01	2.56	98.18
Upper Bound		12.60	0.07	1.55	0.02	11.43	2.59	1.29	0.15	1.21	0.12	0.10	60.65	0.03	2.71	100.20

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Sample Description	Method	OA-GRA05x	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	Hg-MS42
	Analyte	LOI 1000	Ag	Al	As	Ba	Be	Bi	Ca	Cd	Co	Cr	Cu	Fe	Ga	Hg
	Units	%	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm
	LOD	0.01	0.5	0.01	5	10	0.5	2	0.01	0.5	1	1	1	0.01	10	0.005
BLANKS																
BLANK																<0.005
BLANK																<0.005
Target Range - Lower Bound																<0.005
Upper Bound																0.010
BLANK			<0.5	<0.01	<5	<10	<0.5	<2	<0.01	<0.5	<1	<1	<1	<0.01	<10	
BLANK			<0.5	<0.01	<5	<10	<0.5	<2	<0.01	<0.5	<1	<1	<1	<0.01	<10	
Target Range - Lower Bound			<0.5	<0.01	<5	<10	<0.5	<2	<0.01	<0.5	<1	<1	<1	<0.01	<10	
Upper Bound			1.0	0.02	10	20	1.0	4	0.02	1.0	2	2	2	0.02	20	
BLANK																
Target Range - Lower Bound																
Upper Bound																
BLANK		-0.01														
Target Range - Lower Bound		<0.01														
Upper Bound		0.02														
DUPLICATES																
ORIGINAL																12.90
DUP																13.30
Target Range - Lower Bound																12.45
Upper Bound																13.75
ORIGINAL			15.7	3.08	157	630	0.7	<2	11.25	4.8	4	10	21	1.99	10	
DUP			13.6	3.18	166	500	0.7	<2	11.70	4.8	4	10	22	2.08	10	
Target Range - Lower Bound			13.4	2.96	148	510	<0.5	<2	10.90	4.1	3	9	20	1.92	<10	
Upper Bound			15.9	3.30	175	620	1.0	4	12.05	5.5	5	12	23	2.15	20	
TPC19-8		3.61														
DUP		3.48														
Target Range - Lower Bound		3.45														
Upper Bound		3.64														
TPC19-10																
DUP																
Target Range - Lower Bound																
Upper Bound																

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Sample Description	Method	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61
	Analyte	K	La	Mg	Mn	Mo	Na	Ni	P	Pb	S	Sb	Sc	Sr	Th	Ti
	Units	%	ppm	%	ppm	ppm	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	%
	LOD	0.01	10	0.01	5	1	0.01	1	10	2	0.01	5	1	1	20	0.01
BLANKS																
BLANK																
BLANK																
Target Range - Lower Bound																
Upper Bound																
BLANK		<0.01	<10	<0.01	<5	<1	<0.01	1	<10	<2	<0.01	<5	<1	<1	<20	<0.01
BLANK		<0.01	<10	<0.01	<5	<1	<0.01	<1	<10	<2	<0.01	<5	<1	<1	<20	<0.01
Target Range - Lower Bound		<0.01	<10	<0.01	<5	<1	<0.01	<1	<10	<2	<0.01	<5	<1	<1	<20	<0.01
Upper Bound		0.02	20	0.02	10	2	0.02	2	20	4	0.02	10	2	2	40	0.02
BLANK																
Target Range - Lower Bound																
Upper Bound																
BLANK																
Target Range - Lower Bound																
Upper Bound																
DUPLICATES																
ORIGINAL																
DUP																
Target Range - Lower Bound																
Upper Bound																
ORIGINAL		1.58	10	0.29	3970	3	0.28	4	420	287	2.02	7	5	369	<20	0.11
DUP		1.64	10	0.30	4130	3	0.29	7	430	300	2.10	10	6	383	<20	0.12
Target Range - Lower Bound		1.52	<10	0.27	3840	2	0.26	4	390	277	1.95	<5	4	356	<20	0.10
Upper Bound		1.70	20	0.32	4260	4	0.31	7	460	310	2.17	10	7	396	40	0.13
TPC19-8																
DUP																
Target Range - Lower Bound																
Upper Bound																
TPC19-10																
DUP																
Target Range - Lower Bound																
Upper Bound																

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Sample Description	Method Analyte Units LOD	ME-ICP61 Tl ppm 10	ME-ICP61 U ppm 10	ME-ICP61 V ppm 1	ME-ICP61 W ppm 10	ME-ICP61 Zn ppm 2
BLANKS						
BLANK						
BLANK						
Target Range - Lower Bound						
Upper Bound						
BLANK		<10	<10	<1	<10	<2
BLANK		<10	<10	<1	<10	<2
Target Range - Lower Bound		<10	<10	<1	<10	<2
Upper Bound		20	20	2	20	4
BLANK						
Target Range - Lower Bound						
Upper Bound						
BLANK						
Target Range - Lower Bound						
Upper Bound						
DUPLICATES						
ORIGINAL						
DUP						
Target Range - Lower Bound						
Upper Bound						
ORIGINAL		<10	<10	46	<10	768
DUP		<10	<10	48	<10	775
Target Range - Lower Bound		<10	<10	44	<10	731
Upper Bound		20	20	50	20	812
TPC19-8						
DUP						
Target Range - Lower Bound						
Upper Bound						
TPC19-10						
DUP						
Target Range - Lower Bound						
Upper Bound						

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Sample Description	Method	ME-XRF26	ME-XRF26	ME-XRF26	ME-XRF26	ME-XRF26	ME-XRF26	ME-XRF26	ME-XRF26	ME-XRF26	ME-XRF26	ME-XRF26	ME-XRF26	ME-XRF26	ME-XRF26	ME-XRF26
	Analyte	Al2O3	BaO	CaO	Cr2O3	Fe2O3	K2O	MgO	MnO	Na2O	P2O5	SO3	SiO2	SrO	TiO2	Total
	Units	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%
	LOD	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
DUPLICATES																
TPC19-13																
DUP																
Target Range - Lower Bound																
Upper Bound																
ORIGINAL																
DUP																
Target Range - Lower Bound																
Upper Bound																

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Sample Description	Method	OA-GRA05x	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	Hg-MS42
	Analyte	LOI 1000	Ag	Al	As	Ba	Be	Bi	Ca	Cd	Co	Cr	Cu	Fe	Ga	Hg
	Units	%	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm
	LOD	0.01	0.5	0.01	5	10	0.5	2	0.01	0.5	1	1	1	0.01	10	0.005
DUPLICATES																
TPC19-13																0.017
DUP																0.021
Target Range - Lower Bound																0.013
Upper Bound																0.025
ORIGINAL			<0.5	6.56	<5	90	0.9	<2	5.77	<0.5	22	60	84	4.54	20	
DUP			<0.5	6.64	<5	90	0.9	<2	5.70	<0.5	20	59	82	4.45	20	
Target Range - Lower Bound			<0.5	6.26	<5	70	<0.5	<2	5.44	<0.5	19	56	79	4.26	<10	
Upper Bound			1.0	6.94	10	110	1.0	4	6.03	1.0	23	63	87	4.73	30	

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ALS USA Inc.
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To: **ALS ENVIRONMENTAL**
3860 S PALO VERDE RD. STE302
TUCSON AZ 85714

Page: 4 - C
Total # Pages: 4 (A - D)
Plus Appendix Pages
Finalized Date: 5-NOV-2019
Account: TUCSON

Project: T1901660

QC CERTIFICATE OF ANALYSIS VA19254204

Sample Description	Method	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61
	Analyte	K	La	Mg	Mn	Mo	Na	Ni	P	Pb	S	Sb	Sc	Sr	Th	Ti
	Units	%	ppm	%	ppm	ppm	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	%
	LOD	0.01	10	0.01	5	1	0.01	1	10	2	0.01	5	1	1	20	0.01
DUPLICATES																
TPC19-13																
DUP																
Target Range - Lower Bound																
Upper Bound																
ORIGINAL		1.97	10	2.32	735	5	0.69	38	820	34	6.86	<5	15	512	<20	0.23
DUP		1.94	10	2.29	703	5	0.68	38	780	35	6.73	<5	15	501	<20	0.22
Target Range - Lower Bound		1.85	<10	2.18	678	4	0.64	35	750	31	6.45	<5	13	480	<20	0.20
Upper Bound		2.06	20	2.43	760	6	0.73	41	850	38	7.14	10	17	533	40	0.25

***** See Appendix Page for comments regarding this certificate *****

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To: **ALS ENVIRONMENTAL**
3860 S PALO VERDE RD. STE302
TUCSON AZ 85714

Page: 4 - D
Total # Pages: 4 (A - D)
Plus Appendix Pages
Finalized Date: 5-NOV-2019
Account: TUCSON

Project: T1901660

QC CERTIFICATE OF ANALYSIS VA19254204

Sample Description	Method / Analyte / Units / LOD	ME-ICP61 Tl ppm 10	ME-ICP61 U ppm 10	ME-ICP61 V ppm 1	ME-ICP61 W ppm 10	ME-ICP61 Zn ppm 2
		DUPLICATES				
TPC19-13						
DUP						
Target Range - Lower Bound						
Upper Bound						
ORIGINAL		<10	10	174	<10	113
DUP		<10	10	169	<10	110
Target Range - Lower Bound		<10	<10	162	<10	104
Upper Bound		20	20	181	20	119

***** See Appendix Page for comments regarding this certificate *****

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To: **ALS ENVIRONMENTAL**
3860 S PALO VERDE RD. STE302
TUCSON AZ 85714

Page: Appendix 1
Total # Appendix Pages: 1
Finalized Date: 5-NOV-2019
Account: TUCSON

Project: T1901660

QC CERTIFICATE OF ANALYSIS VA19254204

CERTIFICATE COMMENTS

LABORATORY ADDRESSES

Processed at ALS Vancouver located at 2103 Dollarton Hwy, North Vancouver, BC, Canada.

Applies to Method:			
Hg-MS42	LOG-24	ME-ICP61	ME-XRF26
OA-GRA05x	WEI-21		

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To: **ALS ENVIRONMENTAL**
3860 S PALO VERDE RD. STE302
TUCSON AZ 85714

Finalized Date: 22-JAN-2020
Account: TUCSON

CERTIFICATE VA19254204

Project: T1901660

P.O. No.: 56T1901660

This report is for 24 Pulp samples submitted to our lab in Vancouver, BC, Canada on 9-OCT-2019.

The following have access to data associated with this certificate:

RALPH POULSEN	TUC.REPORTING	

SAMPLE PREPARATION

ALS CODE	DESCRIPTION
WEI-21	Received Sample Weight
LOG-24	Pulp Login - Rcd w/o Barcode

ANALYTICAL PROCEDURES

ALS CODE	DESCRIPTION	INSTRUMENT
ME-XRF26	Whole Rock By Fusion/XRF	XRF
OA-GRA05x	LOI for XRF	WST-SEQ
ME-ICP61	33 element four acid ICP-AES	ICP-AES
Hg-MS42	Trace Hg by ICPMS	ICP-MS

This is the Final Report and supersedes any preliminary report with this certificate number. Results apply to samples as submitted. All pages of this report have been checked and approved for release.

***** See Appendix Page for comments regarding this certificate *****

Comments: ***Corrected copy reporting Se from ME-ICP61***

Signature:

Saa Traxler, General Manager, North Vancouver

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To: **ALS ENVIRONMENTAL**
3860 S PALO VERDE RD. STE302
TUCSON AZ 85714

Finalized Date: 22-JAN-2020
Account: TUCSON

Project: T1901660

CERTIFICATE OF ANALYSIS VA19254204

Sample Description	Method	WEI-21	ME-XRF26	ME-XRF26	ME-XRF26	ME-XRF26	ME-XRF26	ME-XRF26	ME-XRF26	ME-XRF26	ME-XRF26	ME-XRF26	ME-XRF26	ME-XRF26	ME-XRF26	ME-XRF26
	Analyte	Recvd Wt.	Al2O3	BaO	CaO	Cr2O3	Fe2O3	K2O	MgO	MnO	Na2O	P2O5	SO3	SiO2	SrO	TiO2
	Units	kg	%	%	%	%	%	%	%	%	%	%	%	%	%	%
	LOD	0.02	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
TPC19-1		0.10	11.40	0.07	0.90	0.01	6.16	3.34	0.93	0.08	0.83	0.14	0.06	67.94	0.01	1.74
TPC19-2		0.10	11.47	0.07	11.55	0.01	9.38	1.78	2.41	0.12	0.99	0.49	0.03	47.22	0.02	1.76
TPC19-3		0.10	12.93	0.07	1.78	0.01	12.67	2.24	1.54	0.16	1.16	0.14	0.04	57.70	0.02	2.79
TPC19-4		0.08	9.78	0.06	17.65	<0.01	5.29	1.56	2.49	0.10	0.53	0.17	0.03	42.51	0.03	0.86
TPC19-5		0.08	11.25	0.05	11.30	0.01	6.60	2.11	2.31	0.09	0.96	0.27	0.03	50.14	0.03	1.14
TPC19-6		0.08	11.56	0.06	11.20	0.01	9.94	1.80	2.57	0.14	1.34	0.54	0.04	46.87	0.02	1.85
TPC19-7		0.08	9.54	0.06	20.7	0.01	6.90	1.29	2.00	0.10	0.72	0.28	0.01	38.25	0.04	1.14
TPC19-8		0.08	10.94	0.06	3.24	0.02	16.53	2.41	1.44	0.19	1.35	0.19	0.01	55.51	0.02	3.65
TPC19-9		0.10	13.12	0.06	2.01	0.01	9.45	2.78	1.63	0.13	1.48	0.28	0.04	60.86	0.02	1.90
TPC19-10		0.08	12.48	0.06	1.52	0.01	11.14	2.56	1.26	0.14	1.18	0.11	0.09	59.91	0.02	2.60
TPC19-11		0.10	13.62	0.06	2.57	0.02	11.46	2.49	1.60	0.15	1.89	0.32	0.01	59.13	0.02	2.37
TPC19-12		0.08	11.28	0.06	11.10	0.01	7.06	1.87	2.34	0.09	0.84	0.24	0.03	49.74	0.02	1.18
TPC19-13		0.08	12.80	0.06	1.26	0.01	8.09	2.52	1.17	0.11	1.08	0.09	0.03	64.13	0.01	1.93
TPC19-14		0.10	12.78	0.05	4.18	0.02	13.78	2.25	3.15	0.19	1.57	0.41	0.05	51.70	0.02	3.23
TPC19-15		0.10	12.84	0.06	6.80	0.02	9.67	2.06	2.27	0.14	1.00	0.38	0.03	52.50	0.02	1.85
TPC19-16		0.10	13.46	0.06	2.12	0.01	9.54	2.68	1.38	0.13	1.73	0.34	0.05	60.25	0.02	1.78
TPC19-17		0.10	14.04	0.06	2.03	0.01	12.06	2.16	2.72	0.15	0.81	0.14	0.04	54.02	0.02	2.61
TPC19-18		0.08	8.17	0.04	18.40	0.01	3.93	1.87	2.61	0.08	0.59	0.15	0.08	42.29	0.02	0.66
TPC19-19		0.08	14.24	0.06	1.64	0.02	10.41	2.32	1.30	0.14	1.14	0.10	0.05	58.34	0.02	2.77
TPC19-20		0.08	14.92	0.06	1.01	0.01	7.83	2.67	1.42	0.11	1.04	0.09	0.03	62.81	0.01	1.38
TPC19-21		0.10	11.68	0.06	1.36	0.01	8.85	2.36	1.48	0.13	0.89	0.11	0.07	64.12	0.02	2.11
TPC19-22		0.10	11.30	0.06	3.89	0.03	20.79	2.15	2.26	0.26	1.47	0.33	0.02	48.08	0.02	4.92
TPC19-23		0.08	12.38	0.07	2.51	0.02	13.51	2.30	2.00	0.18	1.30	0.34	0.03	56.61	0.03	2.91
TPC19-24		0.08	12.70	0.07	1.86	0.01	9.49	2.76	1.77	0.13	1.50	0.27	0.03	62.68	0.02	2.06

Comments: ***Corrected copy reporting Se from ME-ICP61***

***** See Appendix Page for comments regarding this certificate *****

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To: **ALS ENVIRONMENTAL**
3860 S PALO VERDE RD. STE302
TUCSON AZ 85714

Finalized Date: 22-JAN-2020
Account: TUCSON

Project: T1901660

CERTIFICATE OF ANALYSIS VA19254204

Sample Description	Method	ME-XRF26	OA-GRA05x	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61
	Analyte	Total	LOI 1000	Ag	Al	As	Ba	Be	Bi	Ca	Cd	Co	Cr	Cu	Fe	Ga
	Units	%	%	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm
	LOD	0.01	0.01	0.5	0.01	5	10	0.5	2	0.01	0.5	1	1	1	0.01	10
TPC19-1		99.35	5.55	<0.5	5.93	10	580	1.4	<2	0.68	<0.5	13	49	68	4.09	10
TPC19-2		99.28	11.73	<0.5	5.98	6	630	1.2	2	8.17	<0.5	17	49	49	6.17	10
TPC19-3		98.74	5.22	<0.5	6.60	6	590	1.7	4	1.31	<0.5	20	81	72	7.17	20
TPC19-4		99.36	18.16	<0.5	4.85	7	570	1.0	<2	11.60	<0.5	11	26	39	3.42	10
TPC19-5		98.60	12.15	<0.5	5.70	<5	460	1.3	<2	7.84	<0.5	13	38	41	4.30	10
TPC19-6		99.66	11.43	<0.5	5.76	6	530	1.2	<2	7.66	<0.5	20	53	39	6.28	20
TPC19-7		99.48	18.26	0.6	4.90	6	530	0.9	<2	13.90	<0.5	12	39	28	4.55	10
TPC19-8		99.40	3.61	<0.5	5.69	5	540	1.4	<2	2.41	<0.5	46	125	41	10.25	10
TPC19-9		99.03	5.08	<0.5	6.71	5	610	1.6	<2	1.47	<0.5	17	65	55	5.61	20
TPC19-10		99.34	6.03	<0.5	6.39	9	590	1.5	<2	1.10	<0.5	17	70	84	6.28	20
TPC19-11		98.89	2.97	<0.5	7.16	<5	610	1.6	<2	1.89	<0.5	20	76	34	6.74	20
TPC19-12		98.75	12.73	<0.5	5.73	7	510	1.2	<2	7.38	<0.5	14	39	48	4.62	10
TPC19-13		98.88	5.42	<0.5	6.40	8	570	1.5	<2	0.88	<0.5	14	65	41	4.83	20
TPC19-14		98.92	5.30	<0.5	6.63	<5	490	1.2	<2	2.91	<0.5	35	97	76	8.91	20
TPC19-15		98.89	9.06	<0.5	6.55	6	550	1.3	<2	4.72	<0.5	19	63	48	6.10	20
TPC19-16		99.04	5.29	<0.5	6.98	6	610	1.6	<2	1.54	<0.5	16	72	60	5.86	20
TPC19-17		98.71	7.67	<0.5	6.95	10	540	1.2	2	1.38	<0.5	33	59	59	7.67	20
TPC19-18		99.05	19.99	0.6	4.35	12	390	1.2	<2	12.50	<0.5	7	39	49	2.71	10
TPC19-19		99.03	6.26	<0.5	7.05	9	510	1.4	<2	1.15	<0.5	26	96	62	6.75	20
TPC19-20		98.76	5.22	<0.5	7.36	6	570	1.8	<2	0.70	<0.5	25	55	37	4.82	20
TPC19-21		100.10	6.66	<0.5	6.06	9	540	1.4	<2	0.99	<0.5	19	61	95	5.51	20
TPC19-22		99.28	3.38	<0.5	5.53	5	480	1.2	<2	2.55	<0.5	40	119	43	12.70	20
TPC19-23		99.13	4.68	<0.5	6.15	10	570	1.4	4	1.70	<0.5	23	73	57	7.67	20
TPC19-24		99.77	4.21	<0.5	6.62	10	630	1.5	<2	1.33	<0.5	20	57	60	5.95	20

Comments: ***Corrected copy reporting Se from ME-ICP61***

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To: **ALS ENVIRONMENTAL**
3860 S PALO VERDE RD. STE302
TUCSON AZ 85714

Finalized Date: 22-JAN-2020
Account: TUCSON

Project: T1901660

CERTIFICATE OF ANALYSIS VA19254204

Sample Description	Method	Hg-MS42	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61
	Analyte	Hg	K	La	Mg	Mn	Mo	Na	Ni	P	Pb	S	Sb	Sc	Se	Sr
	Units	ppm	%	ppm	%	ppm	ppm	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm
	LOD	0.005	0.01	10	0.01	5	1	0.01	1	10	2	0.01	5	1	10	1
TPC19-1		0.025	2.81	40	0.55	569	1	0.62	17	550	23	0.03	<5	11	<10	132
TPC19-2		0.015	1.47	40	1.41	929	1	0.74	32	2030	13	0.01	<5	19	<10	240
TPC19-3		0.018	1.84	50	0.88	1125	2	0.86	32	550	32	0.02	<5	16	<10	190
TPC19-4		0.027	1.23	20	1.36	716	1	0.39	18	680	22	0.01	<5	12	<10	298
TPC19-5		0.013	1.69	30	1.32	625	<1	0.69	24	1130	15	0.01	<5	13	<10	270
TPC19-6		0.014	1.42	40	1.42	1010	<1	0.96	30	2230	15	0.01	<5	18	<10	213
TPC19-7		0.008	1.06	30	1.14	736	<1	0.54	25	1150	8	<0.01	<5	15	<10	393
TPC19-8		<0.005	2.06	40	0.83	1380	1	1.02	33	800	25	<0.01	<5	14	<10	184
TPC19-9		0.015	2.27	40	0.94	945	1	1.09	32	1140	21	0.02	<5	15	<10	180
TPC19-10		0.029	2.11	40	0.73	949	3	0.86	27	420	29	0.04	<5	15	<10	169
TPC19-11		0.007	2.10	40	0.94	1105	<1	1.43	38	1310	21	0.01	<5	18	<10	194
TPC19-12		0.008	1.53	30	1.32	609	1	0.63	26	910	13	0.01	8	14	<10	223
TPC19-13		0.017	2.06	40	0.66	724	1	0.79	25	330	20	0.02	<5	14	<10	132
TPC19-14		0.019	1.93	30	1.83	1335	2	1.20	61	1740	19	0.02	<5	19	<10	198
TPC19-15		0.009	1.70	40	1.29	963	1	0.75	38	1560	19	0.01	5	18	<10	213
TPC19-16		0.022	2.25	40	0.79	952	2	1.31	29	1450	28	0.02	6	16	<10	185
TPC19-17		0.031	1.72	30	1.52	1035	1	0.60	44	520	15	0.02	<5	21	<10	136
TPC19-18		0.040	1.62	30	1.52	538	1	0.47	22	590	25	0.03	<5	8	<10	142
TPC19-19		0.024	1.85	30	0.71	1050	2	0.84	37	370	20	0.02	<5	18	<10	150
TPC19-20		0.029	2.13	40	0.80	742	1	0.76	33	310	23	0.01	<5	14	<10	116
TPC19-21		0.024	1.97	30	0.87	919	7	0.67	29	430	33	0.03	<5	14	<10	135
TPC19-22		0.005	1.69	30	1.22	1740	2	1.05	43	1270	35	0.01	<5	20	<10	160
TPC19-23		0.016	1.85	40	1.12	1200	1	0.94	33	1370	23	0.01	<5	17	<10	236
TPC19-24		0.022	2.34	40	1.02	950	1	1.14	28	1070	27	0.01	<5	15	<10	228

Comments: ***Corrected copy reporting Se from ME-ICP61***

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To: **ALS ENVIRONMENTAL**
3860 S PALO VERDE RD. STE302
TUCSON AZ 85714

Finalized Date: 22-JAN-2020
Account: TUCSON

Project: T1901660

CERTIFICATE OF ANALYSIS VA19254204

Sample Description	Method	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61
	Analyte	Th	Ti	Tl	U	V	W	Zn
	Units	ppm	%	ppm	ppm	ppm	ppm	ppm
	LOD	20	0.01	10	10	1	10	2
TPC19-1		<20	0.89	<10	<10	104	<10	84
TPC19-2		<20	0.95	<10	<10	145	<10	97
TPC19-3		20	1.34	<10	<10	207	<10	124
TPC19-4		<20	0.41	<10	<10	74	<10	87
TPC19-5		<20	0.59	<10	<10	95	<10	88
TPC19-6		<20	0.96	<10	<10	165	<10	96
TPC19-7		<20	0.57	<10	<10	104	<10	72
TPC19-8		<20	1.93	<10	<10	382	150	161
TPC19-9		<20	0.93	<10	<10	145	<10	110
TPC19-10		<20	1.20	<10	10	174	<10	106
TPC19-11		<20	1.16	<10	<10	189	<10	105
TPC19-12		<20	0.64	<10	<10	96	<10	85
TPC19-13		<20	0.94	<10	<10	124	<10	71
TPC19-14		<20	1.78	<10	<10	276	<10	137
TPC19-15		<20	0.99	<10	<10	143	<10	101
TPC19-16		<20	0.94	<10	<10	144	<10	107
TPC19-17		<20	1.36	<10	<10	219	20	104
TPC19-18		<20	0.35	<10	<10	60	<10	87
TPC19-19		<20	1.60	<10	<10	217	20	84
TPC19-20		<20	0.71	<10	<10	122	40	86
TPC19-21		<20	1.03	<10	<10	148	<10	111
TPC19-22		<20	2.58	<10	<10	507	80	181
TPC19-23		<20	1.43	<10	<10	213	<10	130
TPC19-24		<20	1.07	<10	<10	152	<10	112

Comments: ***Corrected copy reporting Se from ME-ICP61***

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To: **ALS ENVIRONMENTAL**
3860 S PALO VERDE RD. STE302
TUCSON AZ 85714

Finalized Date: 22-JAN-2020
Account: TUCSON

Project: T1901660

CERTIFICATE OF ANALYSIS VA19254204

CERTIFICATE COMMENTS

LABORATORY ADDRESSES

Processed at ALS Vancouver located at 2103 Dollarton Hwy, North Vancouver, BC, Canada.

Applies to Method:			
Hg-MS42	LOG-24	ME-ICP61	ME-XRF26
OA-GRA05x	WEI-21		

December 17, 2019 Service Request No:T1901972

Julie L'Heureux
KCB Consultants
2 North Central Avenue
18th Floor
Phoenix, AZ 85004

Laboratory Results for:

Dear Julie,

Enclosed are the results of the sample(s) submitted to our laboratory November 08, 2019
For your reference, these analyses have been assigned our service request number **T1901972.**

All analyses were performed according to our laboratory's quality assurance program. All results are intended to be considered in their entirety, and ALS Environmental is not responsible for use of less than the complete report. Results
apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report.

Please contact me if you have any questions. My extension is 7102. You may also contact me via email at Wendy.Hyatt@alsglobal.com.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental

Wendy Hyatt
Client Services
Manager

ADDRESS 4208 S Santa Rita Avenue, Tucson, AZ 85714
PHONE +1 520 573 1061 | FAX +1 520 623 9218
ALS Group USA, Corp.
dba ALS Environmental

Client: Resolution Copper Mining LLC **Service Request:**T1901972
Project:

SAMPLE CROSS-REFERENCE

SAMPLE #	CLIENT SAMPLE ID	DATE	TIME
T1901972-005	DH18-5		
T1901972-006	DH19-12		
T1901972-007	DH19-16		
T1901972-008	TP19-9		

Data Qualifiers

AZ-DHS

B1 Target analyte detected in method blank at or above the method reporting limit.
B2 Non-target analyte detected in method blank and sample, producing interference.
B3 Target analyte detected in calibration blank at or above the method reporting limit.
B4 Target analyte detected in blank at or above method acceptance criteria.
B5 Target analyte detected in method blank at or above the method reporting limit, but below trigger level or MCL.
B6 Target analyte detected in calibration blank at or above the method reporting limit, but below trigger level or MCL.
B7 Target analyte detected in method blank at or above method reporting limit. Concentration found in the sample was 10 times above the concentration found in the method blank.
C1 Confirmatory analysis not performed as required by the method.
C2
C3 Qualitative confirmation performed.
C4 Confirmatory analysis was past holding time.
C5 Confirmatory analysis was past holding time. Original result not confirmed.
C6
C7
C8 Sample RPD between the primary and confirmatory analysis exceeded 40%. Per EPA Method 8000C, the lower value was reported as there was no evidence of chromatographic problems.
D1 Sample required dilution due to matrix.
D2 Sample required dilution due to high concentration of target analyte.
D3
D4 Minimum Reporting Limit adjusted to reflect sample amount received and analyzed.
D5 Minimum Reporting Limit adjusted due to sample dilution; analyte was non-detect in the sample.
D6 Minimum Reporting Limit adjusted due to an automatic 10X dilution performed on this sample for the purpose of reporting traditional drinking water analytes for wastewater requirements.
E1 Concentration estimated. Analyte exceeded calibration range. Reanalysis not possible due to insufficient sample.
E2 Concentration estimated. Analyte exceeded calibration range. Reanalysis not performed due to sample matrix.
E3 Concentration estimated. Analyte exceeded calibration range. Reanalysis not performed due to holding time requirements.
E4 Concentration estimated. Analyte was detected below laboratory minimum reporting limit.
E5 Concentration estimated. Analyte was detected below laboratory minimum reporting limit, but not confirmed by alternate analysis.
E6 Concentration estimated. Internal standard recoveries did not meet method acceptance criteria.
E7 Concentration estimated. Internal standard recoveries did not meet laboratory acceptance criteria.
E8 Analyte reported to MDL per project specification. Target analyte was not detected in the sample.
H1 Sample analysis performed past holding time.

Data Qualifiers

AZ-DHS

H2 Initial analysis within holding time. Reanalysis for the required dilution was past holding time.
H3 Sample was received and analyzed past holding time.
H4 Sample was extracted past required extraction holding time, but analyzed within analysis holding time.
H5
L1 The associated blank spike recovery was above laboratory acceptance limits.
L2 The associated blank spike recovery was below laboratory acceptance limits.
L3 The associated blank spike recovery was above method acceptance limits.
L4 The associated blank spike recovery was below method acceptance limits.
M1 Matrix spike recovery was high; the associated blank spike recovery was acceptable.
M2 Matrix spike recovery was low; the associated blank spike recovery was acceptable.
M3 The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The associated blank spike recovery was acceptable.
M4 The analysis of the spiked sample required a dilution such that the spike recovery calculation does not provide useful information. The associated blank spike recovery was acceptable.
M5 Analyte concentration was determined by the method of standard addition.
M6 Matrix spike recovery was high. Data reported per ADEQ policy 0154.000.
M7 Matrix spike recovery was low. Data reported per ADEQ policy 0154.000.
N1 See case narrative.
N2 See corrective action report.
N3
N4 The Minimum Reporting Limit verification check did not meet the laboratory acceptance limit.
N5 The Minimum Reporting Limit verification check did not meet the method acceptance limit.
N6 Data suspect due to quality control failure, reported per data user's request.
Q1 Sample integrity was not maintained. See case narrative.
Q2
Q3
Q4
Q5
Q6 Sample was received above recommended temperature.
Q7 Sample inadequately dechlorinated.
Q8 Insufficient sample received to meet method QC requirements. Batch QC requirements satisfy ADEQ policies 0154.000 and 0155.000.
Q9 Insufficient sample received to meet method QC requirements.
R1 RPD/RSD exceeded the method acceptance limit.
R2 RPD/RSD exceeded the laboratory acceptance limit.
R3
R4 MS/MSD RPD exceeded the method acceptance limit. Recovery met acceptance criteria.
R5 MS/MSD RPD exceeded the laboratory acceptance limit. Recovery met acceptance criteria.

Data Qualifiers

AZ-DHS

R6 LFB/LFBD RPD exceeded the method acceptance limit. Recovery met acceptance criteria.
R7 LFB/LFBD RPD exceeded the laboratory acceptance limit. Recovery met acceptance criteria.
R8 Sample RPD exceeded the method acceptance limit.
R9 Sample RPD exceeded the laboratory acceptance limit.
S1 Surrogate recovery was above laboratory acceptance limits, but within method acceptance limits.
S2
S3 Surrogate recovery was above laboratory acceptance limits, but within method acceptance limits. No target analytes were detected in the sample.
S4 Surrogate recovery was above laboratory and method acceptance limits. No target analytes were detected in the sample.
S5 Surrogate recovery was below laboratory acceptance limits, but within method acceptance limits.
S6 Surrogate recovery was below laboratory and method acceptance limits. Reextraction and/or reanalysis confirms low recovery caused by matrix effect.
S7 Surrogate recovery was below laboratory and method acceptance limits. Unable to confirm matrix effect.
S8 The analysis of the sample required a dilution such that the surrogate recovery calculation does not provide useful information. The associated blank spike recovery was acceptable.
S9
T1 Method approved by EPA, but not yet licensed by ADHS.
T2 Cited ADHS licensed method does not contain this analyte as part of method compound list.
T3 method not promulgated either by EPA or ADHS.
T4 Tentatively identified compound. Concentration is estimated and based on the closest internal standard.
T5 Laboratory not licensed for this parameter.
T6 The reported result cannot be used for compliance purposes.
T7 Incubator/Oven temperatures were not monitored as required during all days of use.
U Compound was analyzed for, but was not detected (ND).
V1 CCV recovery was above method acceptance limits. This target analyte was not detected in the sample.
V2 CCV recovery was above method acceptance limits. This target analyte was detected in the sample. The sample could not be reanalyzed due to insufficient sample.
V3 CCV recovery was above method acceptance limits. This target analyte was detected in the sample, but the sample was not reanalyzed. See case narrative.
V4
V5 CCV recovery after a group of samples was above acceptance limits. This target analyte was not detected in the sample; acceptable per EPA Method 8000C.
V6 Data reported from one-point calibration criteria per ADEQ policy 0155.000.
V7
V8
V9 CCV recovery was below method acceptance limits.

ALS Laboratory Group

Acronyms

ASTM	American Society for Testing and Materials
A2LA	American Association for Laboratory Accreditation
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
LUFT	Leaking Underground Fuel Tank
M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
NC	Not Calculated
NCASI	National Council of the Paper Industry for Air and Stream Improvement
ND	Not Detected
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.

Client: KCB Consultants
2 North Central Avenue
18th Floor
Phoenix, AZ 85004
Attn: Julie L'Heureux
Project: Skunk Camp Closure

Date Received: November 8, 2019

Certificate of Analysis

Sample ID:	Sample Date:	Lab #:	pH, Saturated Paste Sobek 3.2.18 units	Sulfur, Total E1915 Moist Free wt%	Acid Potential Sobek 1.3.1 t CaCO3/1000t	Neutralization Potential (Siderite Correction) Sobek 3.2.3 t CaCO3/1000t	Acid - Base Accounting Sobek 1.3.1 t CaCO3/1000t	Total Inorganic Carbon calculation Moist Free wt% as CaCO3
DH18-5	n/a	T1901972-001	8.02	<0.03	0	260	260	2.42
DH19-12	n/a	T1901972-002	8.22	<0.03	0	105	105	0.57
DH19-16	n/a	T1901972-003	7.91	<0.03	0	60	60	0.32
TP19-9	n/a	T1901972-004	8.18	<0.03	0	336	336	3.64

Notes:
The Neutralization Potential - The HCl acid reaction was performed at without heating 24 hours and includes correction for Siderite.
Acid Potential value calculation = Total Sulfur wt% X 31.25 Acid - Base Potential calculation = NP - AP

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Sample ID:	Sample Date:	Lab #:	pH, Saturated Paste	Sulfur, Total	Acid Potential	Neutralization Potential (Siderite Correction)	Acid - Base Accounting	Total Inorganic Carbon
			Sobek 3.2.18	E1915	Sobek 1.3.1	Sobek 3.2.3	Sobek 1.3.1	calculation
			units	Moist Free wt%	t CaCO3/1000t	t CaCO3/1000t	t CaCO3/1000t	Moist Free wt% as CaCO3

Reporting Limit for Sulfur is 0.03 wt%.

Sulfur Form analyses were requested, but not performed since Total Sulfur values are all at or below the reporting limit 0.1 for Sulfur Forms.

Client: KCB Consultants
2 North Central Avenue
18th Floor
Phoenix, AZ 85004
Attn: Julie L'Heureux
Project: 0

Date Received: November 8, 2019

Certificate of Analysis

Sample ID:	Sample Date:	Lab #:	Moisture, Total D2974 wt%	Carbon, Total EPA 440.0 Moist Free wt%	Total Organic Carbon EPA 9060 Khan Moist Free wt%	Organic Matter calculation Moist Free wt%	Nitrogen, Total D2974 Moist Free wt%	Cation Exchange Capacity EPA 9081 Moist Free meq/100g
DH18-5	1/0/00	T1901972-001	6.03	2.5	0.06	0.1	<0.1	33.9
DH19-12	1/0/00	T1901972-002	3.57	0.6	0.03	0.1	<0.1	13.3
DH19-16	1/0/00	T1901972-003	7.43	0.4	0.06	0.1	<0.1	30.0
TP19-9	1/0/00	T1901972-004	11.95	3.9	0.22	0.4	<0.1	17.4

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Certificate of Analysis

Sample ID:	Sample Date:	Lab #:	AB-DTPA Extractable Nutrients								
			Ca	Cu	Fe	Mg	Mn	P	K	Na	Zn
			EPA 6010 ICP-OES								
			mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
DH18-5	1/0/00	T1901972-001	284	0.3	34	442	4.7	0.4	209	57	<0.4
DH19-12	1/0/00	T1901972-002	330	0.6	39	306	19	0.9	154	52	1.2
DH19-16	1/0/00	T1901972-003	329	4.0	39	475	5.3	1.2	169	55	45
TP19-9	1/0/00	T1901972-004	320	1.6	44	187	13	3.1	170	19	3.5

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Certificate of Analysis

Sample ID:	Sample Date:	Lab #:	Saturated Paste Sobek 3.2.18 wt%	Conductivity, Sat Paste Extraction Sobek 3.2.18 uS/cm at 25C				
DH18-5	1/0/00	T1901972-001	43.1	340				
DH19-12	1/0/00	T1901972-002	32.9	491				
DH19-16	1/0/00	T1901972-003	42.0	443				
TP19-9	1/0/00	T1901972-004	37.4	382				

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Date Received: November 8, 2019

Quality Control

			pH, Saturated Paste	Sulfur, Total	Acid Potential	Neutralization Potential (Siderite Correction)	Acid - Base Accounting	Total Inorganic Carbon
			Sobek 3.2.18	E1915	Sobek 1.3.1	Sobek 3.2.3	Sobek 1.3.1	calculation
			units	Moist Free wt%	t CaCO3/1000t	t CaCO3/1000t	t CaCO3/1000t	Moist Free wt% as CaCO3
Prep Blank			n/a	<0.02	calculation	0.00	calculation	calculation
LCS			**pH 8.0**	**AR744**		**CaCO3**		
		Observed Value	8.07	2.55		1,066		
		True Value	8.00	2.50		1,000		
		%R	**100.9**	**102.0**		**106.6**		
Duplicate			**T1901972-001**	**T1902003-001**		**T1901972-001**		
		Observed Value	8.02	0.93		260		
		Duplicate Value	8.02	0.90		246		
		%RPD	**0.0**	**3.3**		**5.5**		

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Project: 0

Date Received: November 8, 2019

Quality Control

			Moisture, Total	Carbon, Total	Total Organic Carbon	Organic Matter	Nitrogen, Total	Cation Exchange Capacity
			D2974	EPA 440.0	EPA 9060 Khan	calculation	D2974	EPA 9081
			wt%	Moist Free wt%	Moist Free wt%	Moist Free wt%	Moist Free wt%	
Prep Blank			<0.01	<0.02	<0.02	calculation	<0.1	0.00
LCS			LCS sand and water	AR 744	AR 744		EDTA	ICV IV-26
		Observed Value	28.64	96.90	96.70		9.44	25.45
		True Value	28.36	96.21	96.21		9.58	24.89
		%R	**99.6**	**100.7**	**100.5**		**98.5**	**102.2**
Duplicate			T1901972-001	T1902017-003	T1901972-001		T1902044-002	T1901972-001
		Observed Value	6.03	44.80	0.06		0.35	33.84
		Duplicate Value	6.05	44.10	0.06		0.39	33.92
		%RPD	**0.2**	**1.6**	**0.0**		**10.8**	**0.2**

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Quality Control

			AB-DTPA Extractable Nutrients								
			Ca	Cu	Fe	Mg	Mn	P	K	Na	Zn
			EPA 6010 ICP-OES								
			mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
Prep Blank			<4	<0.2	<0.6	<10	<2	<0.2	<10	<2	<0.4
LCS			ICSA/B AB-DTPA								
		Observed Value	98	103	96	98	100	1,107	993	100	97
		True Value	100	100.0	100.0	100	100	1,008	1,000	100	100
		%R	**97.8**	**103.4**	**96.0**	**97.9**	**99.9**	**109.8**	**99.3**	**100.0**	**96.6**
Duplicate			T1901972-001								
		Observed Value	284	0.3	34	442	5	0.4	209	57	<0.4
		Duplicate Value	301	0.5	33	470	5	0.4	216	60	0.5
		%RPD	**5.9**	**48.3**	**3.6**	**6.2**	**0.0**	**0.0**	**3.5**	**5.3**	-

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Quality Control

			Saturated Paste	Conductivity, Sat Paste Extraction				
			Sobek 3.2.18	Sobek 3.2.18				
			wt%	uS/cm at 25C				
Prep Blank			<0.1	6				
LCS			LCS sand and water	Cond Std 6200				
		Observed Value	11.19	1,412				
		True Value	11.20	1,411				
		%R	**99.9**	**100.1**				
Duplicate			T1901972-001	T1901972-001				
		Observed Value	43	340				
		Duplicate Value	42	341				
		%RPD	**1.7**	**0.3**				

Subcontracted Work
ALS Minerals - North Vancouver, Canada

ALS USA Inc.
4977 Energy Way
Reno NV 89502
Phone: +1 775 356 5395 Fax: +1 775 355 0179
www.alsglobal.com/geochemistry

To: **ALS ENVIRONMENTAL**
3860 S PALO VERDE RD. STE302
TUCSON AZ 85714

Finalized Date: 16-DEC-2019
Account: TUCSON

QC CERTIFICATE VA19310163

Project: T1901972

P.O. No.: 56T1901972

This report is for 4 Pulp samples submitted to our lab in Vancouver, BC, Canada on 5-DEC-2019.

The following have access to data associated with this certificate:

WENDY HYATT	RALPH POULSEN	TUC.REPORTING

SAMPLE PREPARATION

ALS CODE	DESCRIPTION
WEI-21	Received Sample Weight
LOG-24	Pulp Login - Rcd w/o Barcode
TRA-21	Transfer sample

ANALYTICAL PROCEDURES

ALS CODE	DESCRIPTION	INSTRUMENT
ME-XRF26	Whole Rock By Fusion/XRF	XRF
OA-GRA05x	LOI for XRF	WST-SEQ
ME-ICP61	33 element four acid ICP-AES	ICP-AES

This is the Final Report and supersedes any preliminary report with this certificate number. Results apply to samples as submitted. All pages of this report have been checked and approved for release.

***** See Appendix Page for comments regarding this certificate *****

Signature:

Saa Traxler, General Manager, North Vancouver

ALS USA Inc.
4977 Energy Way
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To: **ALS ENVIRONMENTAL**
3860 S PALO VERDE RD. STE302
TUCSON AZ 85714

Project: T1901972

QC CERTIFICATE OF ANALYSIS VA19310163

Sample Description	Method Analyte Units LOD	ME-ICP61 Ag ppm 0.5	ME-ICP61 Al % 0.01	ME-ICP61 As ppm 5	ME-ICP61 Ba ppm 10	ME-ICP61 Be ppm 0.5	ME-ICP61 Bi ppm 2	ME-ICP61 Ca % 0.01	ME-ICP61 Cd ppm 0.5	ME-ICP61 Co ppm 1	ME-ICP61 Cr ppm 1	ME-ICP61 Cu ppm 1	ME-ICP61 Fe % 0.01	ME-ICP61 Ga ppm 10	ME-ICP61 K % 0.01	ME-ICP61 La ppm 10
STANDARDS																
AMIS0547																
Target Range - Lower Bound																
Upper Bound																
MRGeo08		4.4	7.40	32	1100	3.3	4	2.67	2.3	19	94	609	3.98	20	3.13	30
Target Range - Lower Bound		3.2	6.64	21	920	2.2	<2	2.35	1.1	17	81	586	3.55	<10	2.79	<10
Upper Bound		5.6	8.14	45	1270	4.5	5	2.90	3.4	23	102	676	4.37	40	3.43	60
OREAS 218																
Target Range - Lower Bound																
Upper Bound																
OREAS 220																
Target Range - Lower Bound																
Upper Bound																
OREAS 602		>100	4.31	671	100	0.8	60	0.63	24.8	9	32	4860	2.17	20	0.68	10
Target Range - Lower Bound		107.5	3.92	579	590	<0.5	49	0.55	21.7	7	28	4790	2.01	<10	0.60	<10
Upper Bound		100.0	4.82	719	830	1.8	65	0.69	27.7	12	36	5510	2.47	40	0.76	40
OREAS-45e																
Target Range - Lower Bound																
Upper Bound																
BLANKS																
BLANK		<0.5	<0.01	<5	<10	<0.5	<2	<0.01	<0.5	<1	<1	<1	<0.01	<10	<0.01	<10
Target Range - Lower Bound		<0.5	<0.01	<5	<10	<0.5	<2	<0.01	<0.5	<1	<1	<1	<0.01	<10	<0.01	<10
Upper Bound		1.0	0.02	10	20	1.0	4	0.02	1.0	2	2	2	0.02	20	0.02	20
BLANK																
Target Range - Lower Bound																
Upper Bound																
BLANK																
Target Range - Lower Bound																
Upper Bound																

***** See Appendix Page for comments regarding this certificate *****

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To: **ALS ENVIRONMENTAL**
3860 S PALO VERDE RD. STE302
TUCSON AZ 85714

Project: T1901972

QC CERTIFICATE OF ANALYSIS VA19310163

Sample Description	Method Analyte Units LOD	ME-ICP61 Mg % 0.01	ME-ICP61 Mn ppm 5	ME-ICP61 Mo ppm 1	ME-ICP61 Na % 0.01	ME-ICP61 Ni ppm 1	ME-ICP61 P ppm 10	ME-ICP61 Pb ppm 2	ME-ICP61 S % 0.01	ME-ICP61 Sb ppm 5	ME-ICP61 Sc ppm 1	ME-ICP61 Se ppm 10	ME-ICP61 Sr ppm 1	ME-ICP61 Th ppm 20	ME-ICP61 Ti % 0.01	ME-ICP61 Tl ppm 10
STANDARDS																
AMIS0547																
Target Range - Lower Bound																
Upper Bound																
MRGeo08		1.32	568	14	2.00	695	1040	1085	0.30	5	11	<10	303	20	0.49	<10
Target Range - Lower Bound		1.17	497	12	1.76	621	930	969	0.27	<5	10	<10	276	<20	0.44	<10
Upper Bound		1.45	619	18	2.18	761	1160	1190	0.35	15	15	20	340	60	0.56	20
OREAS 218																
Target Range - Lower Bound																
Upper Bound																
OREAS 220																
Target Range - Lower Bound																
Upper Bound																
OREAS 602		0.18	229	5	0.43	57	560	1020	2.08	83	4	30	453	<20	0.21	<10
Target Range - Lower Bound		0.17	198	2	0.40	53	500	918	1.90	61	2	<10	417	<20	0.18	<10
Upper Bound		0.23	253	7	0.51	67	640	1125	2.34	97	6	50	511	50	0.24	20
OREAS-45e																
Target Range - Lower Bound																
Upper Bound																
BLANKS																
BLANK		<0.01	<5	<1	<0.01	<1	<10	<2	<0.01	<5	<1	<10	<1	<20	<0.01	<10
Target Range - Lower Bound		<0.01	<5	<1	<0.01	<1	<10	<2	<0.01	<5	<1	<10	<1	<20	<0.01	<10
Upper Bound		0.02	10	2	0.02	2	20	4	0.02	10	2	20	2	40	0.02	20
BLANK																
Target Range - Lower Bound																
Upper Bound																
BLANK																
Target Range - Lower Bound																
Upper Bound																

***** See Appendix Page for comments regarding this certificate *****

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To: **ALS ENVIRONMENTAL**
3860 S PALO VERDE RD. STE302
TUCSON AZ 85714

Finalized Date: 16-DEC-2019
Account: TUCSON

Project: T1901972

QC CERTIFICATE OF ANALYSIS VA19310163

Sample Description	Method Analyte Units LOD	ME-ICP61 U ppm 10	ME-ICP61 V ppm 1	ME-ICP61 W ppm 10	ME-ICP61 Zn ppm 2	ME-XRF26 Al2O3 % 0.01	ME-XRF26 BaO % 0.01	ME-XRF26 CaO % 0.01	ME-XRF26 Cr2O3 % 0.01	ME-XRF26 Fe2O3 % 0.01	ME-XRF26 K2O % 0.01	ME-XRF26 MgO % 0.01	ME-XRF26 MnO % 0.01	ME-XRF26 Na2O % 0.01	ME-XRF26 P2O5 % 0.01	ME-XRF26 SO3 % 0.01
STANDARDS																
AMIS0547																
Target Range - Lower Bound																
Upper Bound																
MRGeo08		<10	109	<10	828											
Target Range - Lower Bound		<10	97	<10	722											
Upper Bound		30	121	30	886											
OREAS 218						13.46	0.02	10.05	0.03	12.14	0.23	7.11	0.19	2.99	0.10	0.39
Target Range - Lower Bound						13.04	<0.01	9.73	<0.01	11.63	0.20	6.81	0.16	2.75	0.07	0.31
Upper Bound						13.96	0.04	10.45	0.05	12.47	0.26	7.39	0.22	3.05	0.13	0.41
OREAS 220						13.61	0.03	9.60	0.04	11.39	0.46	7.22	0.17	2.75	0.18	0.35
Target Range - Lower Bound						13.12	<0.01	9.28	0.02	11.00	0.42	6.92	0.14	2.60	0.15	0.31
Upper Bound						14.04	0.05	10.00	0.06	11.80	0.51	7.50	0.20	2.90	0.21	0.41
OREAS 602		<10	32	<10	4140											
Target Range - Lower Bound		<10	29	<10	3770											
Upper Bound		20	37	30	4610											
OREAS-45e																
Target Range - Lower Bound																
Upper Bound																
BLANKS																
BLANK		<10	<1	<10	<2											
Target Range - Lower Bound		<10	<1	<10	<2											
Upper Bound		20	2	20	4											
BLANK						<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	<0.01	<0.01	<0.01	<0.01
Target Range - Lower Bound						<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Upper Bound						0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
BLANK																
Target Range - Lower Bound																
Upper Bound																

***** See Appendix Page for comments regarding this certificate *****

ALS USA Inc.
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www.alsglobal.com/geochemistry

To: **ALS ENVIRONMENTAL**
3860 S PALO VERDE RD. STE302
TUCSON AZ 85714

Finalized Date: 16-DEC-2019
Account: TUCSON

Project: T1901972

QC CERTIFICATE OF ANALYSIS VA19310163

Sample Description	Method / Analyte / Units / LOD	ME-XRF26 SiO2 % 0.01	ME-XRF26 SrO % 0.01	ME-XRF26 TiO2 % 0.01	ME-XRF26 Total % 0.01	OA-GRA05x LOI 1000 % 0.01
				STANDARDS		
AMIS0547						38.00
Target Range - Lower Bound						36.19
Upper Bound						40.02
MRGeo08						
Target Range - Lower Bound						
Upper Bound						
OREAS 218		49.10	0.02	1.11	97.12	
Target Range - Lower Bound		48.02	<0.01	1.04	<0.01	
Upper Bound		50.38	0.03	1.20	0.02	
OREAS 220		50.09	0.03	1.28	97.35	
Target Range - Lower Bound		49.10	<0.01	1.19	<0.01	
Upper Bound		51.50	0.05	1.37	0.02	
OREAS 602						
Target Range - Lower Bound						
Upper Bound						
OREAS-45e						8.50
Target Range - Lower Bound						8.11
Upper Bound						8.99
				BLANKS		
BLANK						
Target Range - Lower Bound						
Upper Bound						
BLANK		99.86	<0.01	<0.01	99.87	
Target Range - Lower Bound		<0.01	<0.01	<0.01	<0.01	
Upper Bound		0.02	0.02	0.02	0.02	
BLANK						0.01
Target Range - Lower Bound						<0.01
Upper Bound						0.02

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TUCSON AZ 85714

Project: T1901972

QC CERTIFICATE OF ANALYSIS VA19310163

Sample Description	Method	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61
	Analyte	Ag	Al	As	Ba	Be	Bi	Ca	Cd	Co	Cr	Cu	Fe	Ga	K	La
	Units	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	%	ppm
	LOD	0.5	0.01	5	10	0.5	2	0.01	0.5	1	1	1	0.01	10	0.01	10
DUPLICATES																
ORIGINAL		3.6	8.10	55	1250	1.8	2	0.09	0.6	<1	3	3	1.89	20	4.63	30
DUP		3.6	7.92	56	1220	1.7	<2	0.08	0.7	<1	3	3	1.84	20	4.29	30
Target Range - Lower Bound		2.9	7.60	48	1130	1.2	<2	0.07	<0.5	<1	2	2	1.76	<10	4.23	20
Upper Bound		4.3	8.42	63	1340	2.3	4	0.10	1.0	2	4	4	1.97	30	4.69	40
T1901972-004 TP19-9																
DUP																
Target Range - Lower Bound																
Upper Bound																

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QC CERTIFICATE OF ANALYSIS VA19310163

Sample Description	Method	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61
	Analyte	Mg	Mn	Mo	Na	Ni	P	Pb	S	Sb	Sc	Se	Sr	Th	Ti	Tl
	Units	%	ppm	ppm	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm
	LOD	0.01	5	1	0.01	1	10	2	0.01	5	1	10	1	20	0.01	10
DUPLICATES																
ORIGINAL		0.39	207	4	0.10	2	520	617	0.47	12	4	<10	379	<20	0.22	10
DUP		0.38	198	4	0.10	<1	520	611	0.46	13	4	<10	371	<20	0.22	10
Target Range - Lower Bound		0.36	187	3	0.09	<1	480	581	0.43	7	3	<10	355	<20	0.20	<10
Upper Bound		0.41	218	5	0.12	2	560	647	0.50	18	5	20	395	40	0.24	20
T1901972-004 TP19-9																
DUP																
Target Range - Lower Bound																
Upper Bound																

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Project: T1901972

QC CERTIFICATE OF ANALYSIS VA19310163

Sample Description	Method	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-XRF26	ME-XRF26	ME-XRF26	ME-XRF26	ME-XRF26	ME-XRF26	ME-XRF26	ME-XRF26	ME-XRF26	ME-XRF26	ME-XRF26
	Analyte	U	V	W	Zn	Al2O3	BaO	CaO	Cr2O3	Fe2O3	K2O	MgO	MnO	Na2O	P2O5	SO3
	Units	ppm	ppm	ppm	ppm	%	%	%	%	%	%	%	%	%	%	%
	LOD	10	1	10	2	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
DUPLICATES																
ORIGINAL		<10	30	<10	208											
DUP		<10	29	<10	203											
Target Range - Lower Bound		<10	27	<10	193											
Upper Bound		20	32	20	218											
T1901972-004 TP19-9						7.77	0.04	16.55	0.01	5.06	2.00	3.10	0.09	0.74	0.14	0.01
DUP						7.76	0.04	16.50	0.01	5.01	1.98	3.09	0.09	0.74	0.14	0.01
Target Range - Lower Bound						7.64	0.03	16.25	<0.01	4.95	1.93	3.04	0.08	0.71	0.13	<0.01
Upper Bound						7.89	0.05	16.80	0.02	5.12	2.05	3.15	0.10	0.77	0.15	0.02

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To: **ALS ENVIRONMENTAL**
3860 S PALO VERDE RD. STE302
TUCSON AZ 85714

Finalized Date: 16-DEC-2019
Account: TUCSON

Project: T1901972

QC CERTIFICATE OF ANALYSIS VA19310163

Sample Description	Method / Analyte / Units / LOD	ME-XRF26 SiO2 % 0.01	ME-XRF26 SrO % 0.01	ME-XRF26 TiO2 % 0.01	ME-XRF26 Total % 0.01	OA-GRA05x LOI 1000 % 0.01
DUPLICATES						
ORIGINAL						
DUP						
Target Range - Lower Bound						
Upper Bound						
T1901972-004 TP19-9		47.67	0.02	0.79	99.71	15.62
DUP		47.48	0.02	0.78	99.37	15.61
Target Range - Lower Bound		46.85	<0.01	0.76	98.53	15.21
Upper Bound		48.30	0.03	0.81	100.55	16.02

***** See Appendix Page for comments regarding this certificate *****

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To: **ALS ENVIRONMENTAL**
3860 S PALO VERDE RD. STE302
TUCSON AZ 85714

Finalized Date: 16-DEC-2019
Account: TUCSON

Project: T1901972

QC CERTIFICATE OF ANALYSIS VA19310163

CERTIFICATE COMMENTS

LABORATORY ADDRESSES

Processed at ALS Vancouver located at 2103 Dollarton Hwy, North Vancouver, BC, Canada.

Applies to Method:			
LOG-24	ME-ICP61	ME-XRF26	OA-GRA05x
TRA-21	WEI-21		

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To: **ALS ENVIRONMENTAL**
3860 S PALO VERDE RD. STE302
TUCSON AZ 85714

Finalized Date: 16-DEC-2019
Account: TUCSON

CERTIFICATE VA19310163

Project: T1901972

P.O. No.: 56T1901972

This report is for 4 Pulp samples submitted to our lab in Vancouver, BC, Canada on 5-DEC-2019.

The following have access to data associated with this certificate:

WENDY HYATT	RALPH POULSEN	TUC.REPORTING

SAMPLE PREPARATION

ALS CODE	DESCRIPTION
WEI-21	Received Sample Weight
LOG-24	Pulp Login - Rcd w/o Barcode
TRA-21	Transfer sample

ANALYTICAL PROCEDURES

ALS CODE	DESCRIPTION	INSTRUMENT
ME-XRF26	Whole Rock By Fusion/XRF	XRF
OA-GRA05x	LOI for XRF	WST-SEQ
ME-ICP61	33 element four acid ICP-AES	ICP-AES

This is the Final Report and supersedes any preliminary report with this certificate number. Results apply to samples as submitted. All pages of this report have been checked and approved for release.

***** See Appendix Page for comments regarding this certificate *****

Signature:

Saa Traxler, General Manager, North Vancouver

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To: **ALS ENVIRONMENTAL**
3860 S PALO VERDE RD. STE302
TUCSON AZ 85714

Finalized Date: 16-DEC-2019
Account: TUCSON

Project: T1901972

CERTIFICATE OF ANALYSIS VA19310163

Sample Description	Method	WEI-21	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61
	Analyte	Recvd Wt.	Ag	Al	As	Ba	Be	Bi	Ca	Cd	Co	Cr	Cu	Fe	Ga	K
	Units	kg	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	%
	LOD	0.02	0.5	0.01	5	10	0.5	2	0.01	0.5	1	1	1	0.01	10	0.01
T1901972-001 DH18-5		0.10	<0.5	5.95	<5	540	1.1	<2	10.50	<0.5	22	34	29	4.39	10	1.40
T1901972-002 DH19-12		0.10	<0.5	4.81	<5	450	0.9	<2	3.44	<0.5	42	42	23	3.57	10	1.25
T1901972-003 DH19-16		0.08	0.5	6.90	6	630	1.5	<2	2.61	<0.5	25	40	40	4.79	20	1.97
T1901972-004 TP19-9		0.08	<0.5	4.00	8	350	0.9	<2	11.05	0.5	23	25	22	3.42	10	1.63

***** See Appendix Page for comments regarding this certificate *****

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3860 S PALO VERDE RD. STE302
TUCSON AZ 85714

Finalized Date: 16-DEC-2019
Account: TUCSON

Project: T1901972

CERTIFICATE OF ANALYSIS VA19310163

Sample Description	Method	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61
	Analyte	La	Mg	Mn	Mo	Na	Ni	P	Pb	S	Sb	Sc	Se	Sr	Th	Ti
	Units	ppm	%	ppm	ppm	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%
	LOD	10	0.01	5	1	0.01	1	10	2	0.01	5	1	10	1	20	0.01
T1901972-001 DH18-5		30	1.43	760	1	0.90	32	1160	13	<0.01	<5	15	<10	450	<20	0.55
T1901972-002 DH19-12		20	0.85	539	3	0.89	25	750	6	<0.01	<5	11	<10	245	<20	0.37
T1901972-003 DH19-16		30	1.25	812	<1	1.01	30	920	22	<0.01	<5	15	<10	372	<20	0.65
T1901972-004 TP19-9		10	1.72	648	1	0.53	24	580	18	<0.01	<5	9	<10	119	<20	0.42

***** See Appendix Page for comments regarding this certificate *****

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To: **ALS ENVIRONMENTAL**
3860 S PALO VERDE RD. STE302
TUCSON AZ 85714

Finalized Date: 16-DEC-2019
Account: TUCSON

Project: T1901972

CERTIFICATE OF ANALYSIS VA19310163

Sample Description	Method	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-XRF26	ME-XRF26	ME-XRF26	ME-XRF26	ME-XRF26	ME-XRF26	ME-XRF26	ME-XRF26	ME-XRF26	ME-XRF26
	Analyte	Tl	U	V	W	Zn	Al2O3	BaO	CaO	Cr2O3	Fe2O3	K2O	MgO	MnO	Na2O	P2O5
	Units	ppm	ppm	ppm	ppm	ppm	%	%	%	%	%	%	%	%	%	%
	LOD	10	10	1	10	2	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
T1901972-001 DH18-5		<10	<10	90	60	75	11.35	0.06	15.45	0.01	6.40	1.70	2.58	0.10	1.26	0.28
T1901972-002 DH19-12		<10	<10	78	350	51	9.18	0.05	4.69	0.01	5.22	1.49	1.54	0.07	1.23	0.16
T1901972-003 DH19-16		<10	<10	113	90	184	13.70	0.08	3.74	0.01	7.48	2.48	2.33	0.11	1.44	0.22
T1901972-004 TP19-9		<10	<10	87	110	85	7.77	0.04	16.55	0.01	5.06	2.00	3.10	0.09	0.74	0.14

***** See Appendix Page for comments regarding this certificate *****

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3860 S PALO VERDE RD. STE302
TUCSON AZ 85714

Finalized Date: 16-DEC-2019
Account: TUCSON

Project: T1901972

CERTIFICATE OF ANALYSIS VA19310163

Sample Description	Method	ME-XRF26	ME-XRF26	ME-XRF26	ME-XRF26	ME-XRF26	OA-GRA05x
	Analyte	SO3	SiO2	SrO	TiO2	Total	LOI 1000
	Units	%	%	%	%	%	%
	LOD	0.01	0.01	0.01	0.01	0.01	0.01
T1901972-001 DH18-5		0.01	44.78	0.05	1.00	99.40	14.24
T1901972-002 DH19-12		<0.01	70.82	0.03	0.67	99.64	4.36
T1901972-003 DH19-16		<0.01	61.46	0.05	1.24	99.98	5.47
T1901972-004 TP19-9		0.01	47.67	0.02	0.79	99.71	15.62

***** See Appendix Page for comments regarding this certificate *****

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To: **ALS ENVIRONMENTAL**
3860 S PALO VERDE RD. STE302
TUCSON AZ 85714

Finalized Date: 16-DEC-2019
Account: TUCSON

Project: T1901972

CERTIFICATE OF ANALYSIS VA19310163

CERTIFICATE COMMENTS

LABORATORY ADDRESSES

Processed at ALS Vancouver located at 2103 Dollarton Hwy, North Vancouver, BC, Canada.

Applies to Method:			
LOG-24	ME-ICP61	ME-XRF26	OA-GRA05x
TRA-21	WEI-21		

Subcontracted Work
ALS Environmental - Kelso, Washington

ALS Environmental
ALS Group USA, Corp
1317 South 13th Avenue
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December 17, 2019 **Analytical Report for Service Request No:** T1901972

Wendy Hyatt
ALS Environmental
4208 S Santa Rita Ave

Tucson, AZ 85714

RE:

Dear Wendy Hyatt,

Enclosed are the results of the sample(s) submitted to our laboratory November 08, 2019
For your reference, these analyses have been assigned our service request number **T1901972.**

All analyses were performed according to our laboratory's quality assurance program. All results are intended to be considered in their entirety, and ALS Environmental is not responsible for use of less than the complete report. Results
apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report.

Please contact me if you have any questions. My extension is 3342. You may also contact me via email at Amanda.Juell@alsglobal.com.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental

Amanda Juell
Project Manager

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Table of Contents

Acronyms
Qualifiers
State Certifications, Accreditations, And Licenses
Chain of Custody
General Chemistry
Metals

Acronyms

ASTM	American Society for Testing and Materials
A2LA	American Association for Laboratory Accreditation
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
LOD	Limit of Detection
LOQ	Limit of Quantitation
LUFT	Leaking Underground Fuel Tank
M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
NC	Not Calculated
NCASI	National Council of the Paper Industry for Air and Stream Improvement
ND	Not Detected
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.

Inorganic Data Qualifiers

*	The result is an outlier. See case narrative.
#	The control limit criteria is not applicable. See case narrative.
B	The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
E	The result is an estimate amount because the value exceeded the instrument calibration range.
J	The result is an estimated value.
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.2 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
i	The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
X	See case narrative.
Q	See case narrative. One or more quality control criteria was outside the limits.
H	The holding time for this test is immediately following sample collection. The samples were analyzed as soon as possible after receipt by the laboratory.

Metals Data Qualifiers

#	The control limit criteria is not applicable. See case narrative.
J	The result is an estimated value.
E	The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample.
M	The duplicate injection precision was not met.
N	The Matrix Spike sample recovery is not within control limits. See case narrative.
S	The reported value was determined by the Method of Standard Additions (MSA).
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.2 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
W	The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.
i	The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
X	See case narrative.
+	The correlation coefficient for the MSA is less than 0.995.
Q	See case narrative. One or more quality control criteria was outside the limits.

Organic Data Qualifiers

*	The result is an outlier. See case narrative.
#	The control limit criteria is not applicable. See case narrative.
A	A tentatively identified compound, a suspected aldol-condensation product.
B	The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
C	The analyte was qualitatively confirmed using GC/MS techniques, pattern recognition, or by comparing to historical data.
D	The reported result is from a dilution.
E	The result is an estimated value.
J	The result is an estimated value.
N	The result is presumptive. The analyte was tentatively identified, but a confirmation analysis was not performed.
P	The GC or HPLC confirmation criteria was exceeded. The relative percent difference is greater than 40% between the two analytical results.
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.2 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
i	The MRL/MDL or LOQ/LOD is elevated due to a chromatographic interference.
X	See case narrative.
Q	See case narrative. One or more quality control criteria was outside the limits.

Additional Petroleum Hydrocarbon Specific Qualifiers

F	The chromatographic fingerprint of the sample matches the elution pattern of the calibration standard.
L	The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of lighter molecular weight constituents than the calibration standard.
H	The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of heavier molecular weight constituents than the calibration standard.
O	The chromatographic fingerprint of the sample resembles an oil, but does not match the calibration standard.
Y	The chromatographic fingerprint of the sample resembles a petroleum product eluting in approximately the correct carbon range, but the elution pattern does not match the calibration standard.
Z	The chromatographic fingerprint does not resemble a petroleum product.

ALS Group USA Corp. dba ALS Environmental (ALS) - Kelso
State Certifications, Accreditations, and Licenses

Agency	Web Site	Number
Alaska DEH	http://dec.alaska.gov/eh/lab/cs/csapproval.htm	UST-040
Arizona DHS	http://www.azdhs.gov/lab/license/env.htm	AZ0339
Arkansas - DEQ	http://www.adeq.state.ar.us/techsvs/labcert.htm	88-0637
California DHS (ELAP)	http://www.cdph.ca.gov/certlic/labs/Pages/ELAP.aspx	2795
DOD ELAP	http://www.denix.osd.mil/edqw/Accreditation/AccreditedLabs.cfm	L16-58-R4
Florida DOH	http://www.doh.state.fl.us/lab/EnvLabCert/WaterCert.htm	E87412
Hawaii DOH	http://health.hawaii.gov/	-
ISO 17025	http://www.pjlabs.com/	L16-57
Louisiana DEQ	http://www.deq.louisiana.gov/page/la-lab-accreditation	03016
Maine DHS	http://www.maine.gov/dhhs/	WA01276
Minnesota DOH	http://www.health.state.mn.us/accreditation	053-999-457
Nevada DEP	http://ndep.nv.gov/bsdw/labservice.htm	WA01276
New Jersey DEP	http://www.nj.gov/dep/enforcement/oqa.html	WA005
New York - DOH	https://www.wadsworth.org/regulatory/elap	12060
North Carolina DEQ	https://deq.nc.gov/about/divisions/water-resources/water-resources-data/water-sciences-home-page/laboratory-certification-branch/non-field-lab-certification	605
Oklahoma DEQ	http://www.deq.state.ok.us/CSDnew/labcert.htm	9801
Oregon – DEQ (NELAP)	http://public.health.oregon.gov/LaboratoryServices/EnvironmentalLaboratoryAccreditation/Pages/index.aspx	WA100010
South Carolina DHEC	http://www.scdhec.gov/environment/EnvironmentalLabCertification/	61002
Texas CEQ	http://www.tceq.texas.gov/field/qa/env_lab_accreditation.html	T104704427
Washington DOE	http://www.ecy.wa.gov/programs/eap/labs/lab-accreditation.html	C544
Wyoming (EPA Region 8)	https://www.epa.gov/region8-waterops/epa-region-8-certified-drinking-water-	-
Kelso Laboratory Website	www.alsglobal.com	NA

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. A complete listing of specific NELAP-certified analytes, can be found in the certification section at www.ALSGlobal.com or at the accreditation bodies web site.
Please refer to the certification and/or accreditation body's web site if samples are submitted for compliance purposes. The states highlighted above, require the analysis be listed on the state certification if used for compliance purposes and if the method/anlayte is offered by that state.

Chain of Custody

ALS Environmental—Kelso Laboratory
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Intra-Network Chain of Custody

4208 S Santa Rita Ave • Tucson, AZ 85714 • 520-573-1061 • FAX 520-623-9218

ALS Contact: Wendy Hyatt

Project Name:
Project Number:
Project Manager: Julie L'Heureux
Company: KCB Consultants
QAP: LAB QAP

Lab Code	Client Sample ID	# of Cont.	Matrix	Sample Date	Sample Time	Date Received	Send To	Acid Titr SM 2310 B(4a)	Alkalinity Titr SM 2320 B	Br 9056A	Chloride 9056	Chloride 9056A	Cond Filt 120.1	Cond Spec 120.1
T1901972-001	DH18-5	1	Soil			11/8/19	KELSO				II			
T1901972-002	DH19-12	1	Soil			11/8/19	KELSO				II			
T1901972-003	DH19-16	1	Soil			11/8/19	KELSO				II			
T1901972-004	TP19-9	1	Soil			11/8/19	KELSO				II			
T1901972-005	DH18-5	0	Water			11/8/19	KELSO	II	II	II		II	II	II
T1901972-006	DH19-12	0	Water			11/8/19	KELSO	II	II	II		II	II	II
T1901972-007	DH19-16	0	Water			11/8/19	KELSO	II	II	II		II	II	II
T1901972-008	TP19-9	0	Water			11/8/19	KELSO	II	II	II		II	II	II

Test Comments

Metals SPLP - 6010C	T1901972-001,2,3,4	Ag,Al,As,Ba,Be,Bi,B,Ca, Cd,Co,Cr,Cu,Fe,K,Mg,Mn, Hg,Mo,Na,Ni,P,Pb,Sb,Si, Se,Sr,Tl,,& Zn
Chloride - 9056	T1901972-001,2,3,4	Extraction Procedure - STB 18 hr 4:1 Ratio Anions 9056A

Special Instructions/Comments
Send reports, confirmations, and invoices to: TUC.Reporting@ALSGlobal.com

pH Checked _____

Turnaround Requirements
_____ **RUSH** (Surcharges Apply)
PLEASE CIRCLE WORK DAYS
1 2 3 4 5
____ **STANDARD**
Requested FAX Date: ~~Email RVP~~
Requested Report Date: ~~11/27/19~~ Result

Report Requirements
____ I. Results Only
____ II. Results + QC Summaries
____ III. Results + QC and Calibration Summaries
____ IV. Data Validation Report with Raw Data
PQL/MDL/J N
EDD Y

Invoice Information
PO# 56T1901972
Bill to

Relinquished By: _____ DEC 04 2019

Received By: RMowen ALS Kelso 12/5/19 10:10

Airbill Number: _____

								F 9056A	Hg SPLP 7470A	Hg TCLP 7470A	Metals SPLP 6010C	Metals SPLP 6020A	Metals T ICP-MS	Metals T ICP-OES
T1901972-001	DH18-5	1	Soil			11/8/19	KELSO		II	II	II	II	II	II
T1901972-002	DH19-12	1	Soil			11/8/19	KELSO		II	II	II	II	II	II
T1901972-003	DH19-16	1	Soil			11/8/19	KELSO		II	II	II	II	II	II
T1901972-004	TP19-9	1	Soil			11/8/19	KELSO		II	II	II	II	II	II
T1901972-005	DH18-5	0	Water			11/8/19	KELSO	II						
T1901972-006	DH19-12	0	Water			11/8/19	KELSO	II						
T1901972-007	DH19-16	0	Water			11/8/19	KELSO	II						
T1901972-008	TP19-9	0	Water			11/8/19	KELSO	II						

								Metals TCLP 6010C	Metals TCLP 6020A	Misc Gen 1 None	NO2 9056A	NO3 9056A	pH SM 4500-H+ B	SO4 9056A
T1901972-001	DH18-5	1	Soil			11/8/19	KELSO	II	II	II				
T1901972-002	DH19-12	1	Soil			11/8/19	KELSO	II	II	II				
T1901972-003	DH19-16	1	Soil			11/8/19	KELSO	II	II	II				
T1901972-004	TP19-9	1	Soil			11/8/19	KELSO	II	II	II				
T1901972-005	DH18-5	0	Water			11/8/19	KELSO				II	II	II	II
T1901972-006	DH19-12	0	Water			11/8/19	KELSO				II	II	II	II
T1901972-007	DH19-16	0	Water			11/8/19	KELSO				II	II	II	II
T1901972-008	TP19-9	0	Water			11/8/19	KELSO				II	II	II	II

								SPLP EPA 1312	TCLP EPA 1311
T1901972-001	DH18-5	1	Soil			11/8/19	KELSO	II	II
T1901972-002	DH19-12	1	Soil			11/8/19	KELSO	II	II
T1901972-003	DH19-16	1	Soil			11/8/19	KELSO	II	II
T1901972-004	TP19-9	1	Soil			11/8/19	KELSO	II	II
T1901972-005	DH18-5	0	Water			11/8/19	KELSO		
T1901972-006	DH19-12	0	Water			11/8/19	KELSO		
T1901972-007	DH19-16	0	Water			11/8/19	KELSO		
T1901972-008	TP19-9	0	Water			11/8/19	KELSO		

Intra-Network Chain of Custody

4208 S Santa Rita Ave • Tucson, AZ 85714 • 520-573-1061 • FAX 520-623-9218

ALS Contact: Wendy Hyatt

Project Name:
Project Number:
Project Manager: Julie L'Heureux
Company: KCB Consultants
QAP: LAB QAP

Test Comments

Metals T - ICP-OES	,4	Ag,Al,As,Ba,Be,Bi,B,Ca, Cd,Co,Cr,Cu,Fe,K,Mg,Mn, Hg.Mo,Na,Ni,P,Pb,Sb,Si,, Se,Sr,U,Tl,,Zn plus Cl,F,NO3,SO4
Misc Gen 1 - None	T1901972-001	Extraction Procedure - STB 18 hr 4;1 Ratio Metals & Merucy - 7470A, 6010C ICP-OES, 6020A ICP-MS

Folder Comments:

~~Used email in folder as Chain of Custody per RVP. Logged in like project T1901660,per RVP did not add anything for Salinity Test (1:2 ratio) because he said he needed to discuss with client.~~

12/4/19

Special Instructions/Comments	Turnaround Requirements	Report Requirements	Invoice Information
Send reports, confirmations, and invoices to: TUC.Reporting@ALSGlobal.com pH Checked _____	____**RUSH** (Surcharges Apply) **PLEASE CIRCLE WORK DAYS** 1 2 3 4 5 ____**STANDARD** Requested FAX Date: Email RVP Requested Report Date: ~~11/27/19~~ 12/4/19	____ I. Results Only ____ II. Results + QC Summaries ____ III. Results + QC and Calibration Summaries ____ IV. Data Validation Report with Raw Data PQL/MDL/J N EDD Y	PO# 56T1901972 Bill to

Relinquished By: _____ DEC 04 2019

Received By: B Morrow ALS Kelso 12/5/19

Airbill Number: 10:10

PC 04

Cooler Receipt and Preservation Form

Client ALS-Tucson Service Request *K19* T1901972

Received: 12/5/19 Opened: 12/5/19 By: KM Unloaded: 12/5/19 By: KM

1. Samples were received via? *USPS* (*Fed Ex*) *UPS* *DHL* *PDX* *Courier* *Hand Delivered*
2. Samples were received in: (circle) *Cooler* (*Box*) *Envelope* *Other*_____ *NA*
3. Were custody seals on coolers? NA Y (N) If yes, how many and where?_____
   If present, were custody seals intact? Y N If present, were they signed and dated? Y N

Raw Cooler Temp	Corrected Cooler Temp	Raw Temp Blank	Corrected Temp Blank	Corr. Factor	Thermometer ID	Cooler/COC ID (NA)	Tracking Number (NA)	Filed
N/A	N/A	N/A	N/A	N/A	N/A		7771 5359 0400	

4. Packing material: *Inserts* *Baggies* (*Bubble Wrap*) *Gel Packs* *Wet Ice* *Dry Ice* *Sleeves* paper
5. Were custody papers properly filled out (ink, signed, etc.)? NA (Y) N
6. Were samples received in good condition (temperature, unbroken)? *Indicate in the table below.* NA (Y) N
   If applicable, tissue samples were received: *Frozen* *Partially Thawed* *Thawed*
7. Were all sample labels complete (i.e analysis, preservation, etc.)? NA (Y) N
8. Did all sample labels and tags agree with custody papers? *Indicate major discrepancies in the table on page 2.* NA (Y) N
9. Were appropriate bottles/containers and volumes received for the tests indicated? NA (Y) N
10. Were the pH-preserved bottles (*see SMO GEN SOP*) received at the appropriate pH? *Indicate in the table below* (NA) Y N
11. Were VOA vials received without headspace? *Indicate in the table below.* (NA) Y N
12. Was C12/Res negative? (NA) Y N

Sample ID on Bottle	Sample ID on COC	Identified by:

Sample ID	Bottle Count Bottle Type	Out of Temp	Head-space	Broke	pH	Reagent	Volume added	Reagent Lot Number	Initials	Time

Notes, Discrepancies, & Resolutions:_____

General Chemistry

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

Analytical Report

Client:	Resolution Copper Mining LLC	**Service Request:**	T1901972
Project:		**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	11/8/19
Analysis Method:	120.1	**Units:**	uMHOS/cm
		Basis:	As Received

Conductivity at 25 Degrees Celsius

Sample Name	Lab Code	Result	MRL	Dil.	Date Analyzed	Q
DH18-5	T1901972-005	**99.0**	2.0	1	12/16/19 06:32	
DH19-12	T1901972-006	**54.1**	2.0	1	12/16/19 06:32	
DH19-16	T1901972-007	**81.2**	2.0	1	12/16/19 06:32	
TP19-9	T1901972-008	**67.5**	2.0	1	12/16/19 06:32	
Extraction Blank	T1901972-EB1	**7.5**	2.0	1	12/16/19 06:32	
Method Blank	T1901972-MB1	ND U	2.0	1	12/16/19 06:32	
Method Blank	T1901972-MB2	ND U	2.0	1	12/16/19 06:32	

ALS Group USA, Corp.

dba ALS Environmental

QA/QC Report

Client:	Resolution Copper Mining LLC	**Service Request:**	T1901972
Project		**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	11/08/19
		Date Analyzed:	12/16/19

Replicate Sample Summary

General Chemistry Parameters

Sample Name:	DH18-5	**Units:**	uMHOS/cm
Lab Code:	T1901972-005	**Basis:**	As Received

Analyte Name	Analysis Method	MRL	Sample Result	Duplicate Sample T1901972-005DUP Result	Average	RPD	RPD Limit
Conductivity at 25 Degrees Celsius	120.1	2.0	99.0	95.7	97.3	3	20

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Client:	Resolution Copper Mining LLC	**Service Request:**	T1901972
Project:		**Date Analyzed:**	12/16/19
Sample Matrix:	Water		

Lab Control Sample Summary
Conductivity at 25 Degrees Celsius

Analysis Method:	120.1	**Units:**	uMHOS/cm
		Basis:	As Received
		Analysis Lot:	663089

Sample Name	Lab Code	Result	Spike Amount	% Rec	% Rec Limits
Lab Control Sample	T1901972-LCS	189	192	99	86-113

Analytical Report

Client:	Resolution Copper Mining LLC	**Service Request:**	T1901972
Project:		**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	11/8/19
Analysis Method:	9056A	**Units:**	mg/L
		Basis:	As Received

Bromide

Sample Name	Lab Code	Result	MRL	Dil.	Date Analyzed	Q
DH18-5	T1901972-005	ND U	0.20	2	12/11/19 14:42	
DH19-12	T1901972-006	ND U	0.20	2	12/11/19 15:11	
DH19-16	T1901972-007	ND U	0.20	2	12/11/19 15:21	
TP19-9	T1901972-008	ND U	0.20	2	12/11/19 15:30	
Method Blank	T1901972-MB1	ND U	0.10	1	12/11/19 11:14	

Client:	Resolution Copper Mining LLC	**Service Request:**	T1901972
Project:		**Date Analyzed:**	12/11/19
Sample Matrix:	Water		

Lab Control Sample Summary
Bromide

Analysis Method:	9056A	**Units:**	mg/L
		Basis:	As Received
		Analysis Lot:	662925

Sample Name	Lab Code	Result	Spike Amount	% Rec	% Rec Limits
Lab Control Sample	T1901972-LCS	2.45	2.50	98	90-110

Analytical Report

Client:	Resolution Copper Mining LLC	**Service Request:**	T1901972
Project:		**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	11/8/19
Analysis Method:	9056A	**Units:**	mg/L
		Basis:	As Received

Chloride

Sample Name	Lab Code	Result	MRL	Dil.	Date Analyzed	Q
DH18-5	T1901972-005	**0.21**	0.20	2	12/11/19 14:42	
DH19-12	T1901972-006	ND U	0.20	2	12/11/19 15:11	
DH19-16	T1901972-007	**0.53**	0.20	2	12/11/19 15:21	
TP19-9	T1901972-008	ND U	0.20	2	12/11/19 15:30	
Method Blank	T1901972-MB1	ND U	0.10	1	12/11/19 11:14	

ALS Group USA, Corp.

dba ALS Environmental

QA/QC Report

Client:	Resolution Copper Mining LLC	**Service Request:**	T1901972
Project		**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
		Date Analyzed:	12/11/19

Replicate Sample Summary

General Chemistry Parameters

Sample Name:	Batch QC	**Units:**	mg/L
Lab Code:	KQ1918363-06	**Basis:**	As Received

Analyte Name	Analysis Method	MRL	Sample Result	Duplicate Sample KQ1918363-06DUP Result	Average	RPD	RPD Limit
Chloride	9056A	20	1050	1040	1040	<1	20

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Client:	Resolution Copper Mining LLC	**Service Request:**	T1901972
Project:		**Date Collected:**	N/A
Sample Matrix:	Water	**Date Received:**	N/A
		Date Analyzed:	12/11/19

Duplicate Matrix Spike Summary
Chloride

Sample Name:	Batch QC	**Units:**	mg/L
Lab Code:	KQ1918363-06	**Basis:**	As Received
Analysis Method:	9056A		

		Matrix Spike			Duplicate Matrix Spike					
		KQ1918363-06MS			KQ1918363-06DMS					
Analyte Name	**Sample Result**	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Chloride	1050	1990	1000	94	2000	1000	95	80-120	<1	20

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Client:	Resolution Copper Mining LLC	**Service Request:**	T1901972
Project:		**Date Analyzed:**	12/11/19
Sample Matrix:	Water		

Lab Control Sample Summary
Chloride

Analysis Method:	9056A	**Units:**	mg/L
		Basis:	As Received
		Analysis Lot:	662925

Sample Name	Lab Code	Result	Spike Amount	% Rec	% Rec Limits
Lab Control Sample	T1901972-LCS	4.75	5.00	95	80-120

Analytical Report

Client:	Resolution Copper Mining LLC	**Service Request:**	T1901972
Project:		**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	11/8/19
Analysis Method:	9056A	**Units:**	mg/L
		Basis:	As Received

Fluoride

Sample Name	Lab Code	Result	MRL	Dil.	Date Analyzed	Q
DH18-5	T1901972-005	ND U	0.40	2	12/11/19 14:42	
DH19-12	T1901972-006	ND U	0.40	2	12/11/19 15:11	
DH19-16	T1901972-007	ND U	0.40	2	12/11/19 15:21	
TP19-9	T1901972-008	ND U	0.40	2	12/11/19 15:30	
Method Blank	T1901972-MB1	ND U	0.20	1	12/11/19 11:14	

Client:	Resolution Copper Mining LLC	**Service Request:**	T1901972
Project:		**Date Analyzed:**	12/11/19
Sample Matrix:	Water		

Lab Control Sample Summary
Fluoride

Analysis Method:	9056A	**Units:**	mg/L
		Basis:	As Received
		Analysis Lot:	662925

Sample Name	Lab Code	Result	Spike Amount	% Rec	% Rec Limits
Lab Control Sample	T1901972-LCS	5.11	5.00	102	90-110

Analytical Report

Client:	Resolution Copper Mining LLC	**Service Request:**	T1901972
Project:		**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	11/8/19
Analysis Method:	9056A	**Units:**	mg/L
		Basis:	As Received

Nitrite as Nitrogen

Sample Name	Lab Code	Result	MRL	Dil.	Date Analyzed	Q
DH18-5	T1901972-005	ND U	0.20	2	12/11/19 14:42	
DH19-12	T1901972-006	ND U	0.20	2	12/11/19 15:11	
DH19-16	T1901972-007	ND U	0.20	2	12/11/19 15:21	
TP19-9	T1901972-008	ND U	0.20	2	12/11/19 15:30	
Method Blank	T1901972-MB1	ND U	0.10	1	12/11/19 11:14	

Client:	Resolution Copper Mining LLC	**Service Request:**	T1901972
Project:		**Date Analyzed:**	12/11/19
Sample Matrix:	Water		

Lab Control Sample Summary
Nitrite as Nitrogen

Analysis Method:	9056A	**Units:**	mg/L
		Basis:	As Received
		Analysis Lot:	662925

Sample Name	Lab Code	Result	Spike Amount	% Rec	% Rec Limits
Lab Control Sample	T1901972-LCS	2.53	2.50	101	85-115

Analytical Report

Client:	Resolution Copper Mining LLC	**Service Request:**	T1901972
Project:		**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	11/8/19
Analysis Method:	9056A	**Units:**	mg/L
		Basis:	As Received

Nitrate as Nitrogen

Sample Name	Lab Code	Result	MRL	Dil.	Date Analyzed	Q
DH18-5	T1901972-005	ND U	0.20	2	12/11/19 14:42	
DH19-12	T1901972-006	ND U	0.20	2	12/11/19 15:11	
DH19-16	T1901972-007	ND U	0.20	2	12/11/19 15:21	
TP19-9	T1901972-008	**0.21**	0.20	2	12/11/19 15:30	
Method Blank	T1901972-MB1	ND U	0.10	1	12/11/19 11:14	

QA/QC Report

Client:	Resolution Copper Mining LLC	**Service Request:**	T1901972
Project:		**Date Analyzed:**	12/11/19
Sample Matrix:	Water		

Lab Control Sample Summary
Nitrate as Nitrogen

Analysis Method:	9056A	**Units:**	mg/L
		Basis:	As Received
		Analysis Lot:	662925

Sample Name	Lab Code	Result	Spike Amount	% Rec	% Rec Limits
Lab Control Sample	T1901972-LCS	2.42	2.50	97	85-115

Analytical Report

Client:	Resolution Copper Mining LLC	**Service Request:**	T1901972
Project:		**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	11/8/19
Analysis Method:	9056A	**Units:**	mg/L
		Basis:	As Received

Sulfate

Sample Name	Lab Code	Result	MRL	Dil.	Date Analyzed	Q
DH18-5	T1901972-005	**0.36**	0.20	2	12/11/19 14:42	
DH19-12	T1901972-006	ND U	0.20	2	12/11/19 15:11	
DH19-16	T1901972-007	**0.75**	0.20	2	12/11/19 15:21	
TP19-9	T1901972-008	**0.35**	0.20	2	12/11/19 15:30	
Method Blank	T1901972-MB1	ND U	0.10	1	12/11/19 11:14	

Client:	Resolution Copper Mining LLC	**Service Request:**	T1901972
Project:		**Date Analyzed:**	12/11/19
Sample Matrix:	Water		

Lab Control Sample Summary
Sulfate

Analysis Method:	9056A	**Units:**	mg/L
		Basis:	As Received
		Analysis Lot:	662925

Sample Name	Lab Code	Result	Spike Amount	% Rec	% Rec Limits
Lab Control Sample	T1901972-LCS	4.91	5.00	98	90-110

Analytical Report

Client:	Resolution Copper Mining LLC	**Service Request:**	T1901972
Project:		**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	11/8/19
Analysis Method:	SM 2310 B(4a)	**Units:**	mg/L
		Basis:	As Received

Acidity, Total

Sample Name	Lab Code	Result	MRL	Dil.	Date Analyzed	Q
DH18-5	T1901972-005	ND U	2.0	1	12/17/19 12:45	
DH19-12	T1901972-006	ND U	2.0	1	12/17/19 12:45	
DH19-16	T1901972-007	ND U	2.0	1	12/17/19 12:45	
TP19-9	T1901972-008	ND U	2.0	1	12/17/19 12:45	
Method Blank	T1901972-MB1	ND U	2.0	1	12/17/19 12:45	
Method Blank	T1901972-MB2	ND U	2.0	1	12/17/19 12:45	

QA/QC Report

Client:	Resolution Copper Mining LLC	**Service Request:**	T1901972
Project		**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
		Date Analyzed:	12/17/19

Replicate Sample Summary
General Chemistry Parameters

Sample Name:	Batch QC	**Units:**	mg/L
Lab Code:	T1902124-003	**Basis:**	As Received

Analyte Name	Analysis Method	MRL	Sample Result	Duplicate Sample T1902124-003DUP Result	Average	RPD	RPD Limit
Acidity, Total	SM 2310 B(4a)	2.0	32.0	32.0	32.0	<1	20

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

QA/QC Report

Client:	Resolution Copper Mining LLC	**Service Request:**	T1901972
Project:		**Date Analyzed:**	12/17/19
Sample Matrix:	Water		

Lab Control Sample Summary
Acidity, Total

Analysis Method:	SM 2310 B(4a)	**Units:**	mg/L
		Basis:	As Received
		Analysis Lot:	663709

Sample Name	Lab Code	Result	Spike Amount	% Rec	% Rec Limits
Lab Control Sample	T1901972-LCS	1060	1040	102	93-110

Analytical Report

Client:	Resolution Copper Mining LLC	**Service Request:**	T1901972
Project:		**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	11/8/19
Analysis Method:	SM 2320 B	**Units:**	mg/L
		Basis:	As Received

Alkalinity as CaCO3, Total

Sample Name	Lab Code	Result	MRL	Dil.	Date Analyzed	Q
DH18-5	T1901972-005	**238**	2.0	1	12/16/19 20:00	
DH19-12	T1901972-006	**137**	2.0	1	12/16/19 20:00	
DH19-16	T1901972-007	**150**	2.0	1	12/16/19 20:00	
TP19-9	T1901972-008	**798**	2.0	1	12/16/19 20:00	
Method Blank	T1901972-MB1	ND U	2.0	1	12/16/19 20:00	
Method Blank	T1901972-MB2	ND U	2.0	1	12/16/19 20:00	

Client: Resolution Copper Mining LLC
Project
Sample Matrix: Water

Service Request: T1901972
Date Collected: NA
Date Received: 11/08/19
Date Analyzed: 12/16/19

Replicate Sample Summary
General Chemistry Parameters

Sample Name: DH19-12
Lab Code: T1901972-006

Units: mg/L
Basis: As Received

Analyte Name	Analysis Method	MRL	Sample Result	Duplicate Sample T1901972-006DUP Result	Average	RPD	RPD Limit
Alkalinity as CaCO3, Total	SM 2320 B	2.0	137	138	138	<1	20

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Client:	Resolution Copper Mining LLC	**Service Request:**	T1901972
Project:		**Date Analyzed:**	12/16/19
Sample Matrix:	Water		

Lab Control Sample Summary
Alkalinity as CaCO3, Total

Analysis Method:	SM 2320 B	**Units:**	mg/L
		Basis:	As Received
		Analysis Lot:	663579

Sample Name	Lab Code	Result	Spike Amount	% Rec	% Rec Limits
Lab Control Sample	T1901972-LCS	108	108	100	90-110

Analytical Report

Client:	Resolution Copper Mining LLC	**Service Request:**	T1901972
Project:		**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	11/8/19
Analysis Method:	SM 4500-H+ B	**Units:**	pH Units
		Basis:	As Received

pH

Sample Name	Lab Code	Result	MRL	Dil.	Date Analyzed	Q
DH18-5	T1901972-005	**9.37**	-	1	12/11/19 13:12	
DH19-12	T1901972-006	**9.67**	-	1	12/11/19 13:13	
DH19-16	T1901972-007	**9.16**	-	1	12/11/19 13:15	
TP19-9	T1901972-008	**9.55**	-	1	12/11/19 13:16	

QA/QC Report

Client: Resolution Copper Mining LLC
Project
Sample Matrix: Water

Service Request:T1901972
Date Collected:NA
Date Received:NA

Analysis Method: SM 4500-H+ B

Units:pH Units
Basis: As Received

Replicate Sample Summary
pH

Sample Name:	Lab Code:	MRL	Sample Result	Duplicate Result	Average	RPD	RPD Limit	Date Analyzed
Batch QC	K1911524-001DUP	-	7.53	7.49	7.51	<1	20	12/11/19
Batch QC	K1911567-001DUP	-	7.68	7.71	7.70	<1	20	12/11/19

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

QA/QC Report

Client:	Resolution Copper Mining LLC	**Service Request:**	T1901972
Project:		**Date Analyzed:**	12/11/19
Sample Matrix:	Water		

Lab Control Sample Summary
pH

Analysis Method:	SM 4500-H+ B	**Units:**	pH Units
		Basis:	As Received
		Analysis Lot:	662970

Sample Name	Lab Code	Result	Spike Amount	% Rec	% Rec Limits
Lab Control Sample	T1901972-LCS	9.28	9.34	99	85-115

Metals

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

Analytical Report

Client:	Resolution Copper Mining LLC	**Service Request:**	T1901972
Project:		**Date Collected:**	NA
Sample Matrix:	Soil	**Date Received:**	11/08/19 10:11
Sample Name:	DH18-5	**Basis:**	As Received
Lab Code:	T1901972-001		

TCLP Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Aluminum	6010C	ND U	mg/L	0.050	5	12/16/19 13:32	12/12/19	
Antimony	6010C	ND U	mg/L	0.10	5	12/16/19 13:32	12/12/19	
Arsenic	6010C	ND U	mg/L	0.050	5	12/16/19 13:32	12/12/19	
Barium	6010C	ND U	mg/L	1.0	5	12/16/19 13:32	12/12/19	
Beryllium	6010C	ND U	mg/L	0.0050	5	12/16/19 13:32	12/12/19	
Bismuth	6020A	ND U	mg/L	0.010	10	12/13/19 11:18	12/12/19	
Boron	6010C	ND U	mg/L	0.25	5	12/16/19 13:32	12/12/19	
Cadmium	6010C	ND U	mg/L	0.050	5	12/16/19 13:32	12/12/19	
Calcium	6010C	**395**	mg/L	0.10	5	12/16/19 13:32	12/12/19	
Chromium	6010C	ND U	mg/L	0.050	5	12/16/19 13:32	12/12/19	
Cobalt	6010C	ND U	mg/L	0.010	5	12/16/19 13:32	12/12/19	
Copper	6010C	ND U	mg/L	0.10	5	12/16/19 13:32	12/12/19	
Iron	6010C	ND U	mg/L	0.10	5	12/16/19 13:32	12/12/19	
Lead	6010C	ND U	mg/L	0.050	5	12/16/19 13:32	12/12/19	
Magnesium	6010C	**16.3**	mg/L	0.050	5	12/16/19 13:32	12/12/19	
Manganese	6010C	**0.0148**	mg/L	0.0050	5	12/16/19 13:32	12/12/19	
Mercury	7470A	ND U	mg/L	0.0010	1	12/13/19 12:01	12/12/19	
Molybdenum	6010C	ND U	mg/L	0.020	5	12/16/19 13:32	12/12/19	
Nickel	6010C	ND U	mg/L	0.10	5	12/16/19 13:32	12/12/19	
Phosphorus	6010C	ND U	mg/L	0.20	5	12/16/19 13:32	12/12/19	
Potassium	6010C	**4.6**	mg/L	2.0	5	12/16/19 13:32	12/12/19	
Selenium	6010C	ND U	mg/L	0.10	5	12/16/19 13:32	12/12/19	
Silicon	6010C	**4.5**	mg/L	1.0	5	12/17/19 14:12	12/17/19	
Silver	6010C	ND U	mg/L	0.040	5	12/16/19 13:32	12/12/19	
Strontium	6010C	**0.429**	mg/L	0.0050	5	12/16/19 13:32	12/12/19	
Thallium	6010C	ND U	mg/L	0.15	5	12/16/19 13:32	12/12/19	
Uranium	6020A	**0.00038**	mg/L	0.00020	10	12/13/19 11:18	12/12/19	
Zinc	6010C	ND U	mg/L	1.0	5	12/16/19 13:32	12/12/19	

Analytical Report

Client:	Resolution Copper Mining LLC	**Service Request:**	T1901972
Project:		**Date Collected:**	NA
Sample Matrix:	Soil	**Date Received:**	11/08/19 10:11
Sample Name:	DH19-12	**Basis:**	As Received
Lab Code:	T1901972-002		

TCLP Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Aluminum	6010C	ND U	mg/L	0.050	5	12/16/19 13:42	12/12/19	
Antimony	6010C	ND U	mg/L	0.10	5	12/16/19 13:42	12/12/19	
Arsenic	6010C	ND U	mg/L	0.050	5	12/16/19 13:42	12/12/19	
Barium	6010C	ND U	mg/L	1.0	5	12/16/19 13:42	12/12/19	
Beryllium	6010C	ND U	mg/L	0.0050	5	12/16/19 13:42	12/12/19	
Bismuth	6020A	ND U	mg/L	0.010	10	12/13/19 11:24	12/12/19	
Boron	6010C	ND U	mg/L	0.25	5	12/16/19 13:42	12/12/19	
Cadmium	6010C	ND U	mg/L	0.050	5	12/16/19 13:42	12/12/19	
Calcium	6010C	**235**	mg/L	0.10	5	12/16/19 13:42	12/12/19	
Chromium	6010C	ND U	mg/L	0.050	5	12/16/19 13:42	12/12/19	
Cobalt	6010C	**0.026**	mg/L	0.010	5	12/16/19 13:42	12/12/19	
Copper	6010C	ND U	mg/L	0.10	5	12/16/19 13:42	12/12/19	
Iron	6010C	**1.13**	mg/L	0.10	5	12/16/19 13:42	12/12/19	
Lead	6010C	ND U	mg/L	0.050	5	12/16/19 13:42	12/12/19	
Magnesium	6010C	**5.87**	mg/L	0.050	5	12/16/19 13:42	12/12/19	
Manganese	6010C	**1.14**	mg/L	0.0050	5	12/16/19 13:42	12/12/19	
Mercury	7470A	ND U	mg/L	0.0010	1	12/13/19 12:07	12/12/19	
Molybdenum	6010C	ND U	mg/L	0.020	5	12/16/19 13:42	12/12/19	
Nickel	6010C	ND U	mg/L	0.10	5	12/16/19 13:42	12/12/19	
Phosphorus	6010C	ND U	mg/L	0.20	5	12/16/19 13:42	12/12/19	
Potassium	6010C	**2.5**	mg/L	2.0	5	12/16/19 13:42	12/12/19	
Selenium	6010C	ND U	mg/L	0.10	5	12/16/19 13:42	12/12/19	
Silicon	6010C	**1.5**	mg/L	1.0	5	12/17/19 14:15	12/17/19	
Silver	6010C	ND U	mg/L	0.040	5	12/16/19 13:42	12/12/19	
Strontium	6010C	**0.113**	mg/L	0.0050	5	12/16/19 13:42	12/12/19	
Thallium	6010C	ND U	mg/L	0.15	5	12/16/19 13:42	12/12/19	
Uranium	6020A	ND U	mg/L	0.00020	10	12/13/19 11:24	12/12/19	
Zinc	6010C	ND U	mg/L	1.0	5	12/16/19 13:42	12/12/19	

Analytical Report

Client:	Resolution Copper Mining LLC	**Service Request:**	T1901972
Project:		**Date Collected:**	NA
Sample Matrix:	Soil	**Date Received:**	11/08/19 10:11
Sample Name:	DH19-16	**Basis:**	As Received
Lab Code:	T1901972-003		

TCLP Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Aluminum	6010C	ND U	mg/L	0.050	5	12/16/19 13:55	12/12/19	
Antimony	6010C	ND U	mg/L	0.10	5	12/16/19 13:55	12/12/19	
Arsenic	6010C	ND U	mg/L	0.050	5	12/16/19 13:55	12/12/19	
Barium	6010C	ND U	mg/L	1.0	5	12/16/19 13:55	12/12/19	
Beryllium	6010C	ND U	mg/L	0.0050	5	12/16/19 13:55	12/12/19	
Bismuth	6020A	ND U	mg/L	0.010	10	12/13/19 11:26	12/12/19	
Boron	6010C	ND U	mg/L	0.25	5	12/16/19 13:55	12/12/19	
Cadmium	6010C	ND U	mg/L	0.050	5	12/16/19 13:55	12/12/19	
Calcium	6010C	**204**	mg/L	0.10	5	12/16/19 13:55	12/12/19	
Chromium	6010C	ND U	mg/L	0.050	5	12/16/19 13:55	12/12/19	
Cobalt	6010C	ND U	mg/L	0.010	5	12/16/19 13:55	12/12/19	
Copper	6010C	ND U	mg/L	0.10	5	12/16/19 13:55	12/12/19	
Iron	6010C	ND U	mg/L	0.10	5	12/16/19 13:55	12/12/19	
Lead	6010C	ND U	mg/L	0.050	5	12/16/19 13:55	12/12/19	
Magnesium	6010C	**13.9**	mg/L	0.050	5	12/16/19 13:55	12/12/19	
Manganese	6010C	**0.0307**	mg/L	0.0050	5	12/16/19 13:55	12/12/19	
Mercury	7470A	ND U	mg/L	0.0010	1	12/13/19 12:09	12/12/19	
Molybdenum	6010C	**0.107**	mg/L	0.020	5	12/16/19 13:55	12/12/19	
Nickel	6010C	ND U	mg/L	0.10	5	12/16/19 13:55	12/12/19	
Phosphorus	6010C	ND U	mg/L	0.20	5	12/16/19 13:55	12/12/19	
Potassium	6010C	**3.3**	mg/L	2.0	5	12/16/19 13:55	12/12/19	
Selenium	6010C	ND U	mg/L	0.10	5	12/16/19 13:55	12/12/19	
Silicon	6010C	**4.9**	mg/L	1.0	5	12/17/19 14:02	12/17/19	
Silver	6010C	ND U	mg/L	0.040	5	12/16/19 13:55	12/12/19	
Strontium	6010C	**0.358**	mg/L	0.0050	5	12/16/19 13:55	12/12/19	
Thallium	6010C	ND U	mg/L	0.15	5	12/16/19 13:55	12/12/19	
Uranium	6020A	ND U	mg/L	0.00020	10	12/13/19 11:26	12/12/19	
Zinc	6010C	ND U	mg/L	1.0	5	12/16/19 13:55	12/12/19	

Analytical Report

Client:	Resolution Copper Mining LLC	**Service Request:**	T1901972
Project:		**Date Collected:**	NA
Sample Matrix:	Soil	**Date Received:**	11/08/19 10:11
Sample Name:	TP19-9	**Basis:**	As Received
Lab Code:	T1901972-004		

TCLP Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Aluminum	6010C	ND U	mg/L	0.050	5	12/16/19 13:58	12/12/19	
Antimony	6010C	ND U	mg/L	0.10	5	12/16/19 13:58	12/12/19	
Arsenic	6010C	ND U	mg/L	0.050	5	12/16/19 13:58	12/12/19	
Barium	6010C	ND U	mg/L	1.0	5	12/16/19 13:58	12/12/19	
Beryllium	6010C	ND U	mg/L	0.0050	5	12/16/19 13:58	12/12/19	
Bismuth	6020A	ND U	mg/L	0.010	10	12/13/19 11:27	12/12/19	
Boron	6010C	ND U	mg/L	0.25	5	12/16/19 13:58	12/12/19	
Cadmium	6010C	ND U	mg/L	0.050	5	12/16/19 13:58	12/12/19	
Calcium	6010C	**407**	mg/L	0.10	5	12/16/19 13:58	12/12/19	
Chromium	6010C	ND U	mg/L	0.050	5	12/16/19 13:58	12/12/19	
Cobalt	6010C	ND U	mg/L	0.010	5	12/16/19 13:58	12/12/19	
Copper	6010C	ND U	mg/L	0.10	5	12/16/19 13:58	12/12/19	
Iron	6010C	ND U	mg/L	0.10	5	12/16/19 13:58	12/12/19	
Lead	6010C	ND U	mg/L	0.050	5	12/16/19 13:58	12/12/19	
Magnesium	6010C	**7.91**	mg/L	0.050	5	12/16/19 13:58	12/12/19	
Manganese	6010C	**0.0772**	mg/L	0.0050	5	12/16/19 13:58	12/12/19	
Mercury	7470A	ND U	mg/L	0.0010	1	12/13/19 12:11	12/12/19	
Molybdenum	6010C	**0.021**	mg/L	0.020	5	12/16/19 13:58	12/12/19	
Nickel	6010C	ND U	mg/L	0.10	5	12/16/19 13:58	12/12/19	
Phosphorus	6010C	ND U	mg/L	0.20	5	12/16/19 13:58	12/12/19	
Potassium	6010C	**4.5**	mg/L	2.0	5	12/16/19 13:58	12/12/19	
Selenium	6010C	ND U	mg/L	0.10	5	12/16/19 13:58	12/12/19	
Silicon	6010C	**2.3**	mg/L	1.0	5	12/17/19 14:18	12/17/19	
Silver	6010C	ND U	mg/L	0.040	5	12/16/19 13:58	12/12/19	
Strontium	6010C	**0.200**	mg/L	0.0050	5	12/16/19 13:58	12/12/19	
Thallium	6010C	ND U	mg/L	0.15	5	12/16/19 13:58	12/12/19	
Uranium	6020A	**0.00040**	mg/L	0.00020	10	12/13/19 11:27	12/12/19	
Zinc	6010C	ND U	mg/L	1.0	5	12/16/19 13:58	12/12/19	

Analytical Report

Client:	Resolution Copper Mining LLC	**Service Request:**	T1901972
Project:		**Date Collected:**	NA
Sample Matrix:	Soil	**Date Received:**	NA
Sample Name:	Method Blank	**Basis:**	As Received
Lab Code:	KQ1918322-03		

TCLP Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Aluminum	6010C	ND U	mg/L	0.050	5	12/16/19 13:25	12/12/19	
Antimony	6010C	ND U	mg/L	0.10	5	12/16/19 13:25	12/12/19	
Arsenic	6010C	ND U	mg/L	0.050	5	12/16/19 13:25	12/12/19	
Barium	6010C	ND U	mg/L	1.0	5	12/16/19 13:25	12/12/19	
Beryllium	6010C	ND U	mg/L	0.0050	5	12/16/19 13:25	12/12/19	
Boron	6010C	ND U	mg/L	0.25	5	12/16/19 13:25	12/12/19	
Cadmium	6010C	ND U	mg/L	0.050	5	12/16/19 13:25	12/12/19	
Calcium	6010C	**2.95**	mg/L	0.10	5	12/16/19 13:25	12/12/19	
Chromium	6010C	ND U	mg/L	0.050	5	12/16/19 13:25	12/12/19	
Cobalt	6010C	ND U	mg/L	0.010	5	12/16/19 13:25	12/12/19	
Copper	6010C	ND U	mg/L	0.10	5	12/16/19 13:25	12/12/19	
Iron	6010C	ND U	mg/L	0.10	5	12/16/19 13:25	12/12/19	
Lead	6010C	ND U	mg/L	0.050	5	12/16/19 13:25	12/12/19	
Magnesium	6010C	**0.293**	mg/L	0.050	5	12/16/19 13:25	12/12/19	
Manganese	6010C	ND U	mg/L	0.0050	5	12/16/19 13:25	12/12/19	
Molybdenum	6010C	ND U	mg/L	0.020	5	12/16/19 13:25	12/12/19	
Nickel	6010C	ND U	mg/L	0.10	5	12/16/19 13:25	12/12/19	
Phosphorus	6010C	ND U	mg/L	0.20	5	12/16/19 13:25	12/12/19	
Potassium	6010C	ND U	mg/L	2.0	5	12/16/19 13:25	12/12/19	
Selenium	6010C	ND U	mg/L	0.10	5	12/16/19 13:25	12/12/19	
Silver	6010C	ND U	mg/L	0.040	5	12/16/19 13:25	12/12/19	
Strontium	6010C	ND U	mg/L	0.0050	5	12/16/19 13:25	12/12/19	
Thallium	6010C	ND U	mg/L	0.15	5	12/16/19 13:25	12/12/19	
Zinc	6010C	ND U	mg/L	1.0	5	12/16/19 13:25	12/12/19	

Analytical Report

Client:	Resolution Copper Mining LLC	**Service Request:**	T1901972
Project:		**Date Collected:**	NA
Sample Matrix:	Soil	**Date Received:**	NA
Sample Name:	Method Blank	**Basis:**	As Received
Lab Code:	KQ1918535-02		

TCLP Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Silicon	6010C	ND U	mg/L	1.0	5	12/17/19 13:49	12/17/19	

Analytical Report

Client:	Resolution Copper Mining LLC	**Service Request:**	T1901972
Project:		**Date Collected:**	NA
Sample Matrix:	Soil	**Date Received:**	NA
Sample Name:	Method Blank	**Basis:**	As Received
Lab Code:	KQ1918326-04		

TCLP Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Bismuth	6020A	ND U	mg/L	0.010	10	12/13/19 11:16	12/12/19	
Uranium	6020A	ND U	mg/L	0.00020	10	12/13/19 11:16	12/12/19	

Analytical Report

Client:	Resolution Copper Mining LLC	**Service Request:**	T1901972
Project:		**Date Collected:**	NA
Sample Matrix:	Soil	**Date Received:**	NA
Sample Name:	Method Blank	**Basis:**	As Received
Lab Code:	KQ1918313-01		

TCLP Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Mercury	7470A	ND U	mg/L	0.0010	1	12/13/19 11:58	12/12/19	

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QA/QC Report

Client:	Resolution Copper Mining LLC	**Service Request:**	T1901972
Project		**Date Collected:**	NA
Sample Matrix:	Soil	**Date Received:**	11/08/19
		Date Analyzed:	12/16/19

Replicate Sample Summary
TCLP Metals

Sample Name:	DH19-12	**Units:**	mg/L
Lab Code:	T1901972-002	**Basis:**	As Received

Analyte Name	Analysis Method	MRL	Sample Result	Duplicate Sample KQ1918322-04 Result	Average	RPD	RPD Limit
Aluminum	6010C	0.050	ND U	ND U	ND	-	20
Antimony	6010C	0.10	ND U	ND U	ND	-	20
Arsenic	6010C	0.050	ND U	ND U	ND	-	20
Barium	6010C	1.0	ND U	ND U	ND	-	20
Beryllium	6010C	0.0050	ND U	ND U	ND	-	20
Boron	6010C	0.25	ND U	ND U	ND	-	20
Cadmium	6010C	0.050	ND U	ND U	ND	-	20
Calcium	6010C	0.10	235	235	235	<1	20
Chromium	6010C	0.050	ND U	ND U	ND	-	20
Cobalt	6010C	0.010	0.026	0.025	0.026	4	20
Copper	6010C	0.10	ND U	ND U	ND	-	20
Iron	6010C	0.10	1.13	1.12	1.13	<1	20
Lead	6010C	0.050	ND U	ND U	ND	-	20
Magnesium	6010C	0.050	5.87	5.88	5.88	<1	20
Manganese	6010C	0.0050	1.14	1.14	1.14	<1	20
Molybdenum	6010C	0.020	ND U	ND U	ND	-	20
Nickel	6010C	0.10	ND U	ND U	ND	-	20
Phosphorus	6010C	0.20	ND U	ND U	ND	-	20
Potassium	6010C	2.0	2.5	2.6	2.6	4	20
Selenium	6010C	0.10	ND U	ND U	ND	-	20
Silver	6010C	0.040	ND U	ND U	ND	-	20
Strontium	6010C	0.0050	0.113	0.112	0.113	<1	20
Thallium	6010C	0.15	ND U	ND U	ND	-	20
Zinc	6010C	1.0	ND U	ND U	ND	-	20

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Printed 12/17/2019 3:42:51 PM Superset Reference:

ALS Group USA, Corp.

dba ALS Environmental

QA/QC Report

Client:	Resolution Copper Mining LLC	**Service Request:**	T1901972
Project		**Date Collected:**	NA
Sample Matrix:	Soil	**Date Received:**	11/08/19
		Date Analyzed:	12/17/19

Replicate Sample Summary

TCLP Metals

Sample Name:	DH19-16	**Units:**	mg/L
Lab Code:	T1901972-003	**Basis:**	As Received

Analyte Name	Analysis Method	MRL	Sample Result	Duplicate Sample KQ1918535-03 Result	Average	RPD	RPD Limit
Silicon	6010C	1.0	4.9	4.5	4.7	9	20

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Printed 12/17/2019 3:42:52 PM Superset Reference:

ALS Group USA, Corp.

dba ALS Environmental

QA/QC Report

Client:	Resolution Copper Mining LLC	**Service Request:**	T1901972
Project		**Date Collected:**	NA
Sample Matrix:	Soil	**Date Received:**	11/08/19
		Date Analyzed:	12/13/19

Replicate Sample Summary
TCLP Metals

Sample Name:	DH18-5	**Units:**	mg/L
Lab Code:	T1901972-001	**Basis:**	As Received

Analyte Name	Analysis Method	MRL	Sample Result	Duplicate Sample KQ1918326-01 Result	Average	RPD	RPD Limit
Bismuth	6020A	0.010	ND U	ND U	ND	-	20
Uranium	6020A	0.00020	0.00038	0.00036	0.00037	5	20

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Printed 12/17/2019 3:42:53 PM Superset Reference:

ALS Group USA, Corp.

dba ALS Environmental

QA/QC Report

Client:	Resolution Copper Mining LLC	**Service Request:**	T1901972
Project		**Date Collected:**	NA
Sample Matrix:	Soil	**Date Received:**	11/08/19
		Date Analyzed:	12/13/19

Replicate Sample Summary

TCLP Metals

Sample Name:	DH18-5	**Units:**	mg/L
Lab Code:	T1901972-001	**Basis:**	As Received

Analyte Name	Analysis Method	MRL	Sample Result	Duplicate Sample KQ1918313-03 Result	Average	RPD	RPD Limit
Mercury	7470A	0.0010	ND U	ND U	ND	-	20

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Printed 12/17/2019 3:42:54 PM Superset Reference:

Client:	Resolution Copper Mining LLC	**Service Request:**	T1901972
Project:		**Date Collected:**	N/A
Sample Matrix:	Soil	**Date Received:**	11/08/19
		Date Analyzed:	12/16/19
		Date Extracted:	12/12/19

Matrix Spike Summary
TCLP Metals

Sample Name:	DH19-12	**Units:**	mg/L
Lab Code:	T1901972-002	**Basis:**	As Received
Analysis Method:	6010C		
Prep Method:	EPA 3010A		

Matrix Spike
KQ1918322-05

Analyte Name	Sample Result	Result	Spike Amount	% Rec	% Rec Limits
Aluminum	ND U	9.32	10.0	93	75-125
Antimony	ND U	2.36	2.50	94	75-125
Arsenic	ND U	4.88	5.00	98	75-125
Barium	ND U	5.0	5.0	100	75-125
Beryllium	ND U	0.241	0.250	96	75-125
Boron	ND U	2.58	2.50	103	75-125
Cadmium	ND U	0.238	0.250	95	75-125
Calcium	235	279	50.0	89 #	75-125
Chromium	ND U	0.960	1.00	96	75-125
Cobalt	0.026	2.39	2.50	95	75-125
Copper	ND U	1.17	1.25	94	75-125
Iron	1.13	5.78	5.00	93	75-125
Lead	ND U	2.28	2.50	91	75-125
Magnesium	5.87	53.9	50.0	96	75-125
Manganese	1.14	3.49	2.50	94	75-125
Molybdenum	ND U	5.11	5.00	102	75-125
Nickel	ND U	2.37	2.50	95	75-125
Phosphorus	ND U	51.6	50.0	103	75-125
Potassium	2.5	51.8	50.0	99	75-125
Selenium	ND U	4.69	5.00	94	75-125
Silver	ND U	0.243	0.250	97	75-125
Strontium	0.113	48.4	50.0	97	75-125
Thallium	ND U	0.86	1.00	86	75-125
Zinc	ND U	2.4	2.5	96	75-125

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Client:	Resolution Copper Mining LLC	**Service Request:**	T1901972
Project:		**Date Collected:**	N/A
Sample Matrix:	Soil	**Date Received:**	11/08/19
		Date Analyzed:	12/17/19
		Date Extracted:	12/17/19

Matrix Spike Summary
TCLP Metals

Sample Name:	DH19-16	**Units:**	mg/L
Lab Code:	T1901972-003	**Basis:**	As Received
Analysis Method:	6010C		
Prep Method:	EPA 3010A		

Matrix Spike
KQ1918535-04

Analyte Name	Sample Result	Result	Spike Amount	% Rec	% Rec Limits
Silicon	4.9	52.2	50.0	95	75-125

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

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QA/QC Report

Client:	Resolution Copper Mining LLC	**Service Request:**	T1901972
Project:		**Date Collected:**	N/A
Sample Matrix:	Soil	**Date Received:**	11/08/19
		Date Analyzed:	12/13/19
		Date Extracted:	12/12/19

Matrix Spike Summary
TCLP Metals

Sample Name:	DH18-5	**Units:**	mg/L
Lab Code:	T1901972-001	**Basis:**	As Received
Analysis Method:	6020A		
Prep Method:	EPA 3020A		

Matrix Spike
KQ1918326-02

Analyte Name	Sample Result	Result	Spike Amount	% Rec	% Rec Limits
Bismuth	ND U	0.114	0.125	91	75-125
Uranium	0.00038	0.128	0.125	102	75-125

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

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dba ALS Environmental

QA/QC Report

Client:	Resolution Copper Mining LLC	**Service Request:**	T1901972
Project:		**Date Collected:**	N/A
Sample Matrix:	Soil	**Date Received:**	11/08/19
		Date Analyzed:	12/13/19
		Date Extracted:	12/12/19

Matrix Spike Summary
TCLP Metals

Sample Name:	DH18-5	**Units:**	mg/L
Lab Code:	T1901972-001	**Basis:**	As Received
Analysis Method:	7470A		
Prep Method:	Method		

Matrix Spike
KQ1918313-04

Analyte Name	Sample Result	Result	Spike Amount	% Rec	% Rec Limits
Mercury	ND U	0.0047	0.0050	93	75-125

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Printed 12/17/2019 3:42:54 PM Superset Reference:

Client: Resolution Copper Mining LLC
Project:
Sample Matrix: Soil

Service Request: T1901972
Date Analyzed: 12/16/19

Lab Control Sample Summary
TCLP Metals

Units: mg/L
Basis: As Received

Lab Control Sample
KQ1918322-01

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
Aluminum	6010C	9.11	10.0	91	80-120
Antimony	6010C	2.33	2.50	93	80-120
Arsenic	6010C	4.86	5.00	97	80-120
Barium	6010C	4.7	5.0	93	80-120
Beryllium	6010C	0.239	0.250	96	80-120
Boron	6010C	2.41	2.50	97	80-120
Cadmium	6010C	0.229	0.250	92	80-120
Calcium	6010C	46.4	50.0	93	80-120
Chromium	6010C	0.926	1.00	93	80-120
Cobalt	6010C	2.34	2.50	94	80-120
Copper	6010C	1.16	1.25	93	80-120
Iron	6010C	4.54	5.00	91	80-120
Lead	6010C	2.21	2.50	88	80-120
Magnesium	6010C	47.9	50.0	96	80-120
Manganese	6010C	2.34	2.50	94	80-120
Molybdenum	6010C	4.94	5.00	99	80-120
Nickel	6010C	2.29	2.50	92	80-120
Phosphorus	6010C	49.5	50.0	99	80-120
Potassium	6010C	48.1	50.0	96	80-120
Selenium	6010C	4.62	5.00	92	80-120
Silver	6010C	0.251	0.250	100	80-120
Strontium	6010C	46.6	50.0	93	80-120
Thallium	6010C	0.84	1.00	84	80-120
Zinc	6010C	2.3	2.5	92	80-120

Client: Resolution Copper Mining LLC
Project:
Sample Matrix: Soil

Service Request: T1901972
Date Analyzed: 12/17/19

Lab Control Sample Summary
TCLP Metals

Units: mg/L
Basis: As Received

Lab Control Sample
KQ1918535-01

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
Silicon	6010C	46.6	50.0	93	80-120

Client: Resolution Copper Mining LLC
Project:
Sample Matrix: Soil

Service Request: T1901972
Date Analyzed: 12/13/19

Lab Control Sample Summary
TCLP Metals

Units:mg/L
Basis: As Received

Lab Control Sample
KQ1918326-03

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
Bismuth	6020A	0.114	0.125	91	80-120
Uranium	6020A	0.124	0.125	100	80-120

Client: Resolution Copper Mining LLC
Project:
Sample Matrix: Soil

Service Request: T1901972
Date Analyzed: 12/13/19

Lab Control Sample Summary
TCLP Metals

Units: mg/L
Basis: As Received

Lab Control Sample
KQ1918313-02

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
Mercury	7470A	0.0047	0.0050	93	80-120

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December 17, 2019 **Analytical Report for Service Request No:** T1902124

Wendy Hyatt
ALS Environmental
4208 S Santa Rita Ave

Tucson, AZ 85714

RE: RCM Soil Survey - STB 18 hr 4:1 Ratio Extraction

Dear Wendy Hyatt,

Enclosed are the results of the sample(s) submitted to our laboratory December 11, 2019
For your reference, these analyses have been assigned our service request number **T1902124.**

All analyses were performed according to our laboratory's quality assurance program. All results are intended to be considered in their entirety, and ALS Environmental is not responsible for use of less than the complete report. Results
apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report.

Please contact me if you have any questions. My extension is 3342. You may also contact me via email at Amanda.Juell@alsglobal.com.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental

Amanda Juell
Project Manager

ALS Environmental
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1317 South 13th Avenue
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Acronyms

ASTM	American Society for Testing and Materials
A2LA	American Association for Laboratory Accreditation
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
LOD	Limit of Detection
LOQ	Limit of Quantitation
LUFT	Leaking Underground Fuel Tank
M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
NC	Not Calculated
NCASI	National Council of the Paper Industry for Air and Stream Improvement
ND	Not Detected
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.

Inorganic Data Qualifiers

*	The result is an outlier. See case narrative.
#	The control limit criteria is not applicable. See case narrative.
B	The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
E	The result is an estimate amount because the value exceeded the instrument calibration range.
J	The result is an estimated value.
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.2 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
i	The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
X	See case narrative.
Q	See case narrative. One or more quality control criteria was outside the limits.
H	The holding time for this test is immediately following sample collection. The samples were analyzed as soon as possible after receipt by the laboratory.

Metals Data Qualifiers

#	The control limit criteria is not applicable. See case narrative.
J	The result is an estimated value.
E	The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample.
M	The duplicate injection precision was not met.
N	The Matrix Spike sample recovery is not within control limits. See case narrative.
S	The reported value was determined by the Method of Standard Additions (MSA).
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.2 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
W	The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.
i	The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
X	See case narrative.
+	The correlation coefficient for the MSA is less than 0.995.
Q	See case narrative. One or more quality control criteria was outside the limits.

Organic Data Qualifiers

*	The result is an outlier. See case narrative.
#	The control limit criteria is not applicable. See case narrative.
A	A tentatively identified compound, a suspected aldol-condensation product.
B	The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
C	The analyte was qualitatively confirmed using GC/MS techniques, pattern recognition, or by comparing to historical data.
D	The reported result is from a dilution.
E	The result is an estimated value.
J	The result is an estimated value.
N	The result is presumptive. The analyte was tentatively identified, but a confirmation analysis was not performed.
P	The GC or HPLC confirmation criteria was exceeded. The relative percent difference is greater than 40% between the two analytical results.
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.2 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
i	The MRL/MDL or LOQ/LOD is elevated due to a chromatographic interference.
X	See case narrative.
Q	See case narrative. One or more quality control criteria was outside the limits.

Additional Petroleum Hydrocarbon Specific Qualifiers

F	The chromatographic fingerprint of the sample matches the elution pattern of the calibration standard.
L	The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of lighter molecular weight constituents than the calibration standard.
H	The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of heavier molecular weight constituents than the calibration standard.
O	The chromatographic fingerprint of the sample resembles an oil, but does not match the calibration standard.
Y	The chromatographic fingerprint of the sample resembles a petroleum product eluting in approximately the correct carbon range, but the elution pattern does not match the calibration standard.
Z	The chromatographic fingerprint does not resemble a petroleum product.

ALS Group USA Corp. dba ALS Environmental (ALS) - Kelso
State Certifications, Accreditations, and Licenses

Agency	Web Site	Number
Alaska DEH	http://dec.alaska.gov/eh/lab/cs/csapproval.htm	UST-040
Arizona DHS	http://www.azdhs.gov/lab/license/env.htm	AZ0339
Arkansas - DEQ	http://www.adeq.state.ar.us/techsvs/labcert.htm	88-0637
California DHS (ELAP)	http://www.cdph.ca.gov/certlic/labs/Pages/ELAP.aspx	2795
DOD ELAP	http://www.denix.osd.mil/edqw/Accreditation/AccreditedLabs.cfm	L16-58-R4
Florida DOH	http://www.doh.state.fl.us/lab/EnvLabCert/WaterCert.htm	E87412
Hawaii DOH	http://health.hawaii.gov/	-
ISO 17025	http://www.pjlabs.com/	L16-57
Louisiana DEQ	http://www.deq.louisiana.gov/page/la-lab-accreditation	03016
Maine DHS	http://www.maine.gov/dhhs/	WA01276
Minnesota DOH	http://www.health.state.mn.us/accreditation	053-999-457
Nevada DEP	http://ndep.nv.gov/bsdw/labservice.htm	WA01276
New Jersey DEP	http://www.nj.gov/dep/enforcement/oqa.html	WA005
New York - DOH	https://www.wadsworth.org/regulatory/elap	12060
North Carolina DEQ	https://deq.nc.gov/about/divisions/water-resources/water-resources-data/water-sciences-home-page/laboratory-certification-branch/non-field-lab-certification	605
Oklahoma DEQ	http://www.deq.state.ok.us/CSDnew/labcert.htm	9801
Oregon – DEQ (NELAP)	http://public.health.oregon.gov/LaboratoryServices/EnvironmentalLaboratoryAccreditation/Pages/index.aspx	WA100010
South Carolina DHEC	http://www.scdhec.gov/environment/EnvironmentalLabCertification/	61002
Texas CEQ	http://www.tceq.texas.gov/field/qa/env_lab_accreditation.html	T104704427
Washington DOE	http://www.ecy.wa.gov/programs/eap/labs/lab-accreditation.html	C544
Wyoming (EPA Region 8)	https://www.epa.gov/region8-waterops/epa-region-8-certified-drinking-water-	-
Kelso Laboratory Website	www.alsglobal.com	NA

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. A complete listing of specific NELAP-certified analytes, can be found in the certification section at www.ALSGlobal.com or at the accreditation bodies web site.
Please refer to the certification and/or accreditation body's web site if samples are submitted for compliance purposes. The states highlighted above, require the analysis be listed on the state certification if used for compliance purposes and if the method/anlayte is offered by that state.

Chain of Custody

ALS Environmental—Kelso Laboratory
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Intra-Network Chain of Custody

4208 S Santa Rita Ave • Tucson, AZ 85714 • 520-573-1061 • FAX 520-623-9218

ALS Contact: Wendy Hyatt

Project Name: RCM Soil Survey - STB 18 hr 4:1 Ratio Extraction
Project Number:
Project Manager: Julie L'Heureux
Company: KCB Consultants
QAP: LAB QAP

Lab Code	Client Sample ID	# of Cont.	Matrix	Sample Date	Sample Time	Date Received	Send To	Acid Titr SM 2310 B(4a)	Alkalinity Titr SM 2320 B	Br 9056A	Chloride 9056A	Cond Filt 120.1	Cond Spec 120.1	F 9056A
T1902124-001	DH18-5	2	Water			12/11/19	KELSO	II	II	II	II	II	II	II
T1902124-002	DH19-12	1	Water			12/11/19	KELSO	II	II	II	II	II	II	II
T1902124-003	DH19-16	1	Water			12/11/19	KELSO	II	II	II	II	II	II	II
T1902124-004	TP19-9	1	Water			12/11/19	KELSO	II	II	II	II	II	II	II
T1902124-005	DH18-5 Duplicate	1	Water			12/11/19	KELSO	II	II	II	II	II	II	II
T1902124-006	Method Blank	1	Water			12/11/19	KELSO	II	II	II	II	II	II	II

Folder Comments:
~~Relog of samples from T1901972 per RVP,~~analyses the same as ~~SPLP but on STB extraction~~
MJ 12/11/19

Special Instructions/Comments
Send reports, confirmations, and invoices to: TUC.Reporting@ALSGlobal.com

pH Checked _____

Turnaround Requirements
_____ **RUSH** (Surcharges Apply)
PLEASE CIRCLE WORK DAYS
1 2 3 4 5
____ **STANDARD**
Requested FAX Date: _____
Requested Report Date: 12/27/19

Report Requirements
____ I. Results Only
____ II. Results + QC Summaries
____ III. Results + QC and Calibration Summaries
____ IV. Data Validation Report with Raw Data
PQL/MDL/J N
EDD Y

Invoice Information
PO# 56T1902124
Bill to

Relinquished By: _____ DEC 13 2019

Received By: _____ 1040 12/14/19

Airbill Number: _____

								NO2 9056A	NO3 9056A	pH SM 4500-H+ B	SO4 9056A
T1902124-001	DH18-5		Water			12/11/19	KELSO	II	II	II	II
T1902124-002	DH19-12		Water			12/11/19	KELSO	II	II	II	II
T1902124-003	DH19-16		Water			12/11/19	KELSO	II	II	II	II
T1902124-004	TP19-9		Water			12/11/19	KELSO	II	II	II	II
T1902124-005	DH18-5 Duplicate		Water			12/11/19	KELSO	II	II	II	II
T1902124-006	Method Blank		Water			12/11/19	KELSO	II	II	II	II

PC AS

Cooler Receipt and Preservation Form

Client AIS Tucson Service Request ~~K19~~ T1907424

Received: 12/14/19 Opened: 12/14/19 By: AP Unloaded: 12/14/19 By: AP

1. Samples were received via? *USPS* *Fed Ex* *UPS* *DHL* *PDX* *Courier* *Hand Delivered*
2. Samples were received in: (circle) *Cooler* *Box* *Envelope* *Other* _____ *NA*
3. Were custody seals on coolers? NA Y N If yes, how many and where? _____

   If present, were custody seals intact? Y N If present, were they signed and dated? Y N

Raw Cooler Temp	Corrected Cooler Temp	Raw Temp Blank	Corrected Temp Blank	Corr. Factor	Thermometer ID	Cooler/COC ID NA	Tracking Number NA	Filed
-0.7	-0.6	—	—	0.1	323		7772 4572 6240	

4. Packing material: *Inserts* *Baggies* *Bubble Wrap* *Gel Packs* *Wet Ice* *Dry Ice* *Sleeves* Paper
5. Were custody papers properly filled out (ink, signed, etc.)? NA Y N
6. Were samples received in good condition (temperature, unbroken)? *Indicate in the table below.* NA Y N

   If applicable, tissue samples were received: *Frozen* *Partially Thawed* *Thawed*
7. Were all sample labels complete (i.e analysis, preservation, etc.)? NA Y N
8. Did all sample labels and tags agree with custody papers? *Indicate major discrepancies in the table on page 2.* NA Y N
9. Were appropriate bottles/containers and volumes received for the tests indicated? NA Y N
10. Were the pH-preserved bottles (*see SMO GEN SOP*) received at the appropriate pH? *Indicate in the table below* NA Y N
11. Were VOA vials received without headspace? *Indicate in the table below.* NA Y N
12. Was C12/Res negative? NA Y N

Sample ID on Bottle	Sample ID on COC	Identified by:

Sample ID	Bottle Count Bottle Type	Out of Temp	Head-space	Broke	pH	Reagent	Volume added	Reagent Lot Number	Initials	Time

Notes, Discrepancies, & Resolutions: _____

General Chemistry

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

Analytical Report

Client:	Resolution Copper Mining LLC	**Service Request:**	T1902124
Project:	RCM Soil Survey - STB 18 hr 4:1 Ratio Extraction	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	12/11/19
Analysis Method:	120.1	**Units:**	uMHOS/cm
		Basis:	NA

Conductivity at 25 Degrees Celsius

Sample Name	Lab Code	Result	MRL	Dil.	Date Analyzed	Q
DH18-5	T1902124-001	**108**	2.0	1	12/16/19 12:50	
DH19-12	T1902124-002	**71.1**	2.0	1	12/16/19 12:50	
DH19-16	T1902124-003	**329**	2.0	1	12/16/19 12:50	
TP19-9	T1902124-004	**108**	2.0	1	12/16/19 12:50	
DH18-5 Duplicate	T1902124-005	**121**	2.0	1	12/16/19 12:50	
Method Blank	T1902124-006	**4.3**	2.0	1	12/16/19 12:50	
Method Blank	T1902124-MB1	ND U	2.0	1	12/16/19 12:50	
Method Blank	T1902124-MB2	ND U	2.0	1	12/16/19 12:50	

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QA/QC Report

Client:	Resolution Copper Mining LLC	**Service Request:**	T1902124
Project	RCM Soil Survey - STB 18 hr 4:1 Ratio Extraction	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	12/11/19
		Date Analyzed:	12/16/19

Replicate Sample Summary

General Chemistry Parameters

Sample Name:	DH18-5	**Units:**	uMHOS/cm
Lab Code:	T1902124-001	**Basis:**	NA

Analyte Name	Analysis Method	MRL	Sample Result	Duplicate Sample T1902124-001DUP Result	Average	RPD	RPD Limit
Conductivity at 25 Degrees Celsius	120.1	2.0	108	111	110	2	20

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Client:	Resolution Copper Mining LLC	**Service Request:**	T1902124
Project:	RCM Soil Survey - STB 18 hr 4:1 Ratio Extraction	**Date Analyzed:**	12/16/19
Sample Matrix:	Water		

Lab Control Sample Summary
Conductivity at 25 Degrees Celsius

Analysis Method:	120.1	**Units:**	uMHOS/cm
		Basis:	NA
		Analysis Lot:	663478

Sample Name	Lab Code	Result	Spike Amount	% Rec	% Rec Limits
Lab Control Sample	T1902124-LCS2	189	192	98	86-113

Analytical Report

Client:	Resolution Copper Mining LLC	**Service Request:**	T1902124
Project:	RCM Soil Survey - STB 18 hr 4:1 Ratio Extraction	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	12/11/19
Analysis Method:	9056A	**Units:**	mg/L
		Basis:	NA

Bromide

Sample Name	Lab Code	Result	MRL	Dil.	Date Analyzed	Q
DH18-5	T1902124-001	ND U	0.20	2	12/16/19 13:25	
DH19-12	T1902124-002	ND U	0.20	2	12/16/19 15:13	
DH19-16	T1902124-003	ND U	0.20	2	12/16/19 13:47	
TP19-9	T1902124-004	ND U	0.20	2	12/16/19 13:57	
DH18-5 Duplicate	T1902124-005	ND U	0.20	2	12/16/19 14:08	
Method Blank	T1902124-006	ND U	0.20	2	12/16/19 14:19	
Method Blank	T1902124-MB1	ND U	0.10	1	12/16/19 10:52	
Method Blank	T1902124-MB2	ND U	0.10	1	12/16/19 20:40	

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QA/QC Report

Client:	Resolution Copper Mining LLC	**Service Request:**	T1902124
Project	RCM Soil Survey - STB 18 hr 4:1 Ratio Extraction	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	12/11/19
		Date Analyzed:	12/16/19

Replicate Sample Summary

General Chemistry Parameters

Sample Name:	DH18-5	**Units:**	mg/L
Lab Code:	T1902124-001	**Basis:**	NA

Analyte Name	Analysis Method	MRL	Sample Result	Duplicate Sample T1902124-001DUP Result	Average	RPD	RPD Limit
Bromide	9056A	0.20	ND U	ND U	NC	NC	20

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Client:	Resolution Copper Mining LLC	**Service Request:**	T1902124
Project:	RCM Soil Survey - STB 18 hr 4:1 Ratio Extraction	**Date Collected:**	N/A
Sample Matrix:	Water	**Date Received:**	12/11/19
		Date Analyzed:	12/16/19

Duplicate Matrix Spike Summary
Bromide

Sample Name:	DH18-5	**Units:**	mg/L
Lab Code:	T1902124-001	**Basis:**	NA
Analysis Method:	9056A		

		Matrix Spike			Duplicate Matrix Spike					
		T1902124-001MS			T1902124-001DMS					
Analyte Name	**Sample Result**	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Bromide	ND U	8.13	8.00	102	8.26	8.00	103	80-120	2	20

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QA/QC Report

Client:	Resolution Copper Mining LLC	**Service Request:**	T1902124
Project:	RCM Soil Survey - STB 18 hr 4:1 Ratio Extraction	**Date Analyzed:**	12/16/19
Sample Matrix:	Water		

Duplicate Lab Control Sample Summary
General Chemistry Parameters

Analysis Method:	9056A	**Units:**	mg/L
		Basis:	NA
		Analysis Lot:	663504

	Lab Control Sample T1902124-LCS1			Duplicate Lab Control Sample T1902124-DLCS1					
Analyte Name	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Bromide	2.57	2.50	103	2.58	2.50	103	90-110	<1	20

Analytical Report

Client:	Resolution Copper Mining LLC	**Service Request:**	T1902124
Project:	RCM Soil Survey - STB 18 hr 4:1 Ratio Extraction	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	12/11/19
Analysis Method:	9056A	**Units:**	mg/L
		Basis:	NA

Chloride

Sample Name	Lab Code	Result	MRL	Dil.	Date Analyzed	Q
DH18-5	T1902124-001	**1.89**	0.20	2	12/16/19 13:25	
DH19-12	T1902124-002	**1.47**	0.20	2	12/16/19 15:13	
DH19-16	T1902124-003	**6.08**	0.20	2	12/16/19 13:47	
TP19-9	T1902124-004	**1.35**	0.20	2	12/16/19 13:57	
DH18-5 Duplicate	T1902124-005	**1.99**	0.20	2	12/16/19 14:08	
Method Blank	T1902124-006	ND U	0.20	2	12/16/19 14:19	
Method Blank	T1902124-MB1	ND U	0.10	1	12/16/19 10:52	
Method Blank	T1902124-MB2	ND U	0.10	1	12/16/19 20:40	

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QA/QC Report

Client:	Resolution Copper Mining LLC	**Service Request:**	T1902124
Project	RCM Soil Survey - STB 18 hr 4:1 Ratio Extraction	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	12/11/19
		Date Analyzed:	12/16/19

Replicate Sample Summary

General Chemistry Parameters

Sample Name:	DH18-5	**Units:**	mg/L
Lab Code:	T1902124-001	**Basis:**	NA

Analyte Name	Analysis Method	MRL	Sample Result	Duplicate Sample T1902124-001DUP Result	Average	RPD	RPD Limit
Chloride	9056A	0.20	1.89	1.91	1.90	1	20

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QA/QC Report

Client:	Resolution Copper Mining LLC	**Service Request:**	T1902124
Project:	RCM Soil Survey - STB 18 hr 4:1 Ratio Extraction	**Date Collected:**	N/A
Sample Matrix:	Water	**Date Received:**	12/11/19
		Date Analyzed:	12/16/19

Duplicate Matrix Spike Summary
Chloride

Sample Name:	DH18-5	**Units:**	mg/L
Lab Code:	T1902124-001	**Basis:**	NA
Analysis Method:	9056A		

		Matrix Spike			Duplicate Matrix Spike					
		T1902124-001MS			T1902124-001DMS					
Analyte Name	**Sample Result**	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Chloride	1.89	9.38	8.00	94	9.48	8.00	95	80-120	1	20

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QA/QC Report

Client:	Resolution Copper Mining LLC	**Service Request:**	T1902124
Project:	RCM Soil Survey - STB 18 hr 4:1 Ratio Extraction	**Date Analyzed:**	12/16/19
Sample Matrix:	Water		

Duplicate Lab Control Sample Summary
General Chemistry Parameters

Analysis Method:	9056A	**Units:**	mg/L
		Basis:	NA
		Analysis Lot:	663504

	Lab Control Sample T1902124-LCS1			Duplicate Lab Control Sample T1902124-DLCS1					
Analyte Name	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Chloride	4.92	5.00	98	4.93	5.00	99	80-120	<1	20

Analytical Report

Client:	Resolution Copper Mining LLC	**Service Request:**	T1902124
Project:	RCM Soil Survey - STB 18 hr 4:1 Ratio Extraction	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	12/11/19
Analysis Method:	9056A	**Units:**	mg/L
		Basis:	NA

Fluoride

Sample Name	Lab Code	Result	MRL	Dil.	Date Analyzed	Q
DH18-5	T1902124-001	**0.57**	0.40	2	12/16/19 13:25	
DH19-12	T1902124-002	ND U	0.40	2	12/16/19 15:13	
DH19-16	T1902124-003	**0.52**	0.40	2	12/16/19 13:47	
TP19-9	T1902124-004	ND U	0.40	2	12/16/19 13:57	
DH18-5 Duplicate	T1902124-005	**0.63**	0.40	2	12/16/19 14:08	
Method Blank	T1902124-006	ND U	0.40	2	12/16/19 14:19	
Method Blank	T1902124-MB1	ND U	0.20	1	12/16/19 10:52	
Method Blank	T1902124-MB2	ND U	0.20	1	12/16/19 20:40	

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QA/QC Report

Client:	Resolution Copper Mining LLC	**Service Request:**	T1902124
Project	RCM Soil Survey - STB 18 hr 4:1 Ratio Extraction	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	12/11/19
		Date Analyzed:	12/16/19

Replicate Sample Summary

General Chemistry Parameters

Sample Name:	DH18-5	**Units:**	mg/L
Lab Code:	T1902124-001	**Basis:**	NA

Analyte Name	Analysis Method	MRL	Sample Result	Duplicate Sample T1902124-001DUP Result	Average	RPD	RPD Limit
Fluoride	9056A	0.40	0.57	0.64	0.606	12	20

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Client:	Resolution Copper Mining LLC	**Service Request:**	T1902124
Project:	RCM Soil Survey - STB 18 hr 4:1 Ratio Extraction	**Date Collected:**	N/A
Sample Matrix:	Water	**Date Received:**	12/11/19
		Date Analyzed:	12/16/19

Duplicate Matrix Spike Summary
Fluoride

Sample Name:	DH18-5	**Units:**	mg/L
Lab Code:	T1902124-001	**Basis:**	NA
Analysis Method:	9056A		

		Matrix Spike			Duplicate Matrix Spike					
		T1902124-001MS			T1902124-001DMS					
Analyte Name	**Sample Result**	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Fluoride	0.57	8.90	8.00	104	8.99	8.00	105	80-120	1	20

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QA/QC Report

Client:	Resolution Copper Mining LLC	**Service Request:**	T1902124
Project:	RCM Soil Survey - STB 18 hr 4:1 Ratio Extraction	**Date Analyzed:**	12/16/19
Sample Matrix:	Water		

Duplicate Lab Control Sample Summary
General Chemistry Parameters

Analysis Method:	9056A	**Units:**	mg/L
		Basis:	NA
		Analysis Lot:	663504

	Lab Control Sample T1902124-LCS1			Duplicate Lab Control Sample T1902124-DLCS1					
Analyte Name	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Fluoride	4.80	5.00	96	4.83	5.00	97	90-110	<1	20

Analytical Report

Client:	Resolution Copper Mining LLC	**Service Request:**	T1902124
Project:	RCM Soil Survey - STB 18 hr 4:1 Ratio Extraction	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	12/11/19
Analysis Method:	9056A	**Units:**	mg/L
		Basis:	NA

Nitrite as Nitrogen

Sample Name	Lab Code	Result	MRL	Dil.	Date Analyzed	Q
DH18-5	T1902124-001	ND U	0.20	2	12/16/19 13:25	
DH19-12	T1902124-002	ND U	0.20	2	12/16/19 15:13	
DH19-16	T1902124-003	ND U	0.20	2	12/16/19 13:47	
TP19-9	T1902124-004	ND U	0.20	2	12/16/19 13:57	
DH18-5 Duplicate	T1902124-005	ND U	0.20	2	12/16/19 14:08	
Method Blank	T1902124-006	ND U	0.20	2	12/16/19 14:19	
Method Blank	T1902124-MB1	ND U	0.10	1	12/16/19 10:52	
Method Blank	T1902124-MB2	ND U	0.10	1	12/16/19 20:40	

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QA/QC Report

Client:	Resolution Copper Mining LLC	**Service Request:**	T1902124
Project	RCM Soil Survey - STB 18 hr 4:1 Ratio Extraction	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	12/11/19
		Date Analyzed:	12/16/19

Replicate Sample Summary

General Chemistry Parameters

Sample Name:	DH18-5	**Units:**	mg/L
Lab Code:	T1902124-001	**Basis:**	NA

Analyte Name	Analysis Method	MRL	Sample Result	Duplicate Sample T1902124-001DUP Result	Average	RPD	RPD Limit
Nitrite as Nitrogen	9056A	0.20	ND U	ND U	NC	NC	20

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ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client:	Resolution Copper Mining LLC	**Service Request:**	T1902124
Project:	RCM Soil Survey - STB 18 hr 4:1 Ratio Extraction	**Date Collected:**	N/A
Sample Matrix:	Water	**Date Received:**	12/11/19
		Date Analyzed:	12/16/19

Duplicate Matrix Spike Summary
Nitrite as Nitrogen

Sample Name:	DH18-5	**Units:**	mg/L
Lab Code:	T1902124-001	**Basis:**	NA
Analysis Method:	9056A		

		Matrix Spike			Duplicate Matrix Spike					
		T1902124-001MS			T1902124-001DMS					
Analyte Name	**Sample Result**	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Nitrite as Nitrogen	ND U	7.90	8.00	99	8.00	8.00	100	80-120	1	20

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Client:	Resolution Copper Mining LLC	**Service Request:**	T1902124
Project:	RCM Soil Survey - STB 18 hr 4:1 Ratio Extraction	**Date Analyzed:**	12/16/19
Sample Matrix:	Water		

Duplicate Lab Control Sample Summary
General Chemistry Parameters

Analysis Method:	9056A	**Units:**	mg/L
		Basis:	NA
		Analysis Lot:	663504

	Lab Control Sample T1902124-LCS1			Duplicate Lab Control Sample T1902124-DLCS1					
Analyte Name	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Nitrite as Nitrogen	2.44	2.50	98	2.51	2.50	101	85-115	3	20

Analytical Report

Client:	Resolution Copper Mining LLC	**Service Request:**	T1902124
Project:	RCM Soil Survey - STB 18 hr 4:1 Ratio Extraction	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	12/11/19
Analysis Method:	9056A	**Units:**	mg/L
		Basis:	NA

Nitrate as Nitrogen

Sample Name	Lab Code	Result	MRL	Dil.	Date Analyzed	Q
DH18-5	T1902124-001	**2.39**	0.20	2	12/16/19 13:25	
DH19-12	T1902124-002	**2.46**	0.20	2	12/16/19 15:13	
DH19-16	T1902124-003	**23.2**	1.0	10	12/16/19 21:34	
TP19-9	T1902124-004	**4.70**	0.20	2	12/16/19 13:57	
DH18-5 Duplicate	T1902124-005	**2.25**	0.20	2	12/16/19 14:08	
Method Blank	T1902124-006	**0.59**	0.20	2	12/16/19 14:19	
Method Blank	T1902124-MB1	ND U	0.10	1	12/16/19 10:52	
Method Blank	T1902124-MB2	ND U	0.10	1	12/16/19 20:40	

ALS Group USA, Corp.

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QA/QC Report

Client:	Resolution Copper Mining LLC	**Service Request:**	T1902124
Project	RCM Soil Survey - STB 18 hr 4:1 Ratio Extraction	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	12/11/19
		Date Analyzed:	12/16/19

Replicate Sample Summary

General Chemistry Parameters

Sample Name:	DH18-5	**Units:**	mg/L
Lab Code:	T1902124-001	**Basis:**	NA

Analyte Name	Analysis Method	MRL	Sample Result	Duplicate Sample T1902124-001DUP Result	Average	RPD	RPD Limit
Nitrate as Nitrogen	9056A	0.20	2.39	2.41	2.40	<1	20

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QA/QC Report

Client:	Resolution Copper Mining LLC	**Service Request:**	T1902124
Project:	RCM Soil Survey - STB 18 hr 4:1 Ratio Extraction	**Date Collected:**	N/A
Sample Matrix:	Water	**Date Received:**	12/11/19
		Date Analyzed:	12/16/19

Duplicate Matrix Spike Summary
Nitrate as Nitrogen

Sample Name:	DH18-5	**Units:**	mg/L
Lab Code:	T1902124-001	**Basis:**	NA
Analysis Method:	9056A		

		Matrix Spike			Duplicate Matrix Spike					
		T1902124-001MS			T1902124-001DMS					
Analyte Name	**Sample Result**	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Nitrate as Nitrogen	2.39	10.3	8.00	99	10.4	8.00	101	80-120	<1	20

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QA/QC Report

Client:	Resolution Copper Mining LLC	**Service Request:**	T1902124
Project:	RCM Soil Survey - STB 18 hr 4:1 Ratio Extraction	**Date Analyzed:**	12/16/19
Sample Matrix:	Water		

Duplicate Lab Control Sample Summary
General Chemistry Parameters

Analysis Method:	9056A	**Units:**	mg/L
		Basis:	NA
		Analysis Lot:	663504

	Lab Control Sample T1902124-LCS1			Duplicate Lab Control Sample T1902124-DLCS1					
Analyte Name	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Nitrate as Nitrogen	2.45	2.50	98	2.46	2.50	98	85-115	<1	20

Analytical Report

Client:	Resolution Copper Mining LLC	**Service Request:**	T1902124
Project:	RCM Soil Survey - STB 18 hr 4:1 Ratio Extraction	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	12/11/19
Analysis Method:	9056A	**Units:**	mg/L
		Basis:	NA

Sulfate

Sample Name	Lab Code	Result	MRL	Dil.	Date Analyzed	Q
DH18-5	T1902124-001	**1.92**	0.20	2	12/16/19 13:25	
DH19-12	T1902124-002	**0.87**	0.20	2	12/16/19 15:13	
DH19-16	T1902124-003	**28.5**	1.0	10	12/16/19 21:34	
TP19-9	T1902124-004	**2.07**	0.20	2	12/16/19 13:57	
DH18-5 Duplicate	T1902124-005	**2.11**	0.20	2	12/16/19 14:08	
Method Blank	T1902124-006	ND U	0.20	2	12/16/19 14:19	
Method Blank	T1902124-MB1	ND U	0.10	1	12/16/19 10:52	
Method Blank	T1902124-MB2	ND U	0.10	1	12/16/19 20:40	

Client:	Resolution Copper Mining LLC	**Service Request:**	T1902124
Project	RCM Soil Survey - STB 18 hr 4:1 Ratio Extraction	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	12/11/19
		Date Analyzed:	12/16/19

Replicate Sample Summary
General Chemistry Parameters

Sample Name:	DH18-5	**Units:**	mg/L
Lab Code:	T1902124-001	**Basis:**	NA

Analyte Name	Analysis Method	MRL	Sample Result	Duplicate Sample T1902124-001DUP Result	Average	RPD	RPD Limit
Sulfate	9056A	0.20	1.92	2.02	1.97	5	20

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Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

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QA/QC Report

Client:	Resolution Copper Mining LLC	**Service Request:**	T1902124
Project:	RCM Soil Survey - STB 18 hr 4:1 Ratio Extraction	**Date Collected:**	N/A
Sample Matrix:	Water	**Date Received:**	12/11/19
		Date Analyzed:	12/16/19

Duplicate Matrix Spike Summary
Sulfate

Sample Name:	DH18-5	**Units:**	mg/L
Lab Code:	T1902124-001	**Basis:**	NA
Analysis Method:	9056A		

		Matrix Spike			Duplicate Matrix Spike					
		T1902124-001MS			T1902124-001DMS					
Analyte Name	**Sample Result**	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Sulfate	1.92	9.79	8.00	98	9.90	8.00	100	90-110	1	20

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QA/QC Report

Client:	Resolution Copper Mining LLC	**Service Request:**	T1902124
Project:	RCM Soil Survey - STB 18 hr 4:1 Ratio Extraction	**Date Analyzed:**	12/16/19
Sample Matrix:	Water		

Duplicate Lab Control Sample Summary
General Chemistry Parameters

Analysis Method:	9056A	**Units:**	mg/L
		Basis:	NA
		Analysis Lot:	663504

	Lab Control Sample T1902124-LCS1			Duplicate Lab Control Sample T1902124-DLCS1					
Analyte Name	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Sulfate	5.10	5.00	102	5.12	5.00	102	90-110	<1	20

Analytical Report

Client:	Resolution Copper Mining LLC	**Service Request:**	T1902124
Project:	RCM Soil Survey - STB 18 hr 4:1 Ratio Extraction	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	12/11/19
Analysis Method:	SM 2310 B(4a)	**Units:**	mg/L
		Basis:	NA

Acidity, Total

Sample Name	Lab Code	Result	MRL	Dil.	Date Analyzed	Q
DH18-5	T1902124-001	ND U	2.0	1	12/17/19 12:45	
DH19-12	T1902124-002	ND U	2.0	1	12/17/19 12:45	
DH19-16	T1902124-003	**32.0**	2.0	1	12/17/19 12:45	
TP19-9	T1902124-004	**2.0**	2.0	1	12/17/19 12:45	
DH18-5 Duplicate	T1902124-005	ND U	2.0	1	12/17/19 12:45	
Method Blank	T1902124-006	**2.0**	2.0	1	12/17/19 12:45	
Method Blank	T1902124-MB1	ND U	2.0	1	12/17/19 12:45	
Method Blank	T1902124-MB2	ND U	2.0	1	12/17/19 12:45	

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QA/QC Report

Client:	Resolution Copper Mining LLC	**Service Request:**	T1902124
Project	RCM Soil Survey - STB 18 hr 4:1 Ratio Extraction	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	12/11/19
		Date Analyzed:	12/17/19

Replicate Sample Summary

General Chemistry Parameters

Sample Name:	DH19-16	**Units:**	mg/L
Lab Code:	T1902124-003	**Basis:**	NA

Analyte Name	Analysis Method	MRL	Sample Result	Duplicate Sample T1902124-003DUP Result	Average	RPD	RPD Limit
Acidity, Total	SM 2310 B(4a)	2.0	32.0	32.0	32.0	<1	20

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Client:	Resolution Copper Mining LLC	**Service Request:**	T1902124
Project:	RCM Soil Survey - STB 18 hr 4:1 Ratio Extraction	**Date Analyzed:**	12/17/19
Sample Matrix:	Water		

Lab Control Sample Summary
Acidity, Total

Analysis Method:	SM 2310 B(4a)	**Units:**	mg/L
		Basis:	NA
		Analysis Lot:	663709

Sample Name	Lab Code	Result	Spike Amount	% Rec	% Rec Limits
Lab Control Sample	T1902124-LCS2	1060	1040	102	93-110

Analytical Report

Client:	Resolution Copper Mining LLC	**Service Request:**	T1902124
Project:	RCM Soil Survey - STB 18 hr 4:1 Ratio Extraction	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	12/11/19
Analysis Method:	SM 2320 B	**Units:**	mg/L
		Basis:	NA

Alkalinity as CaCO3, Total

Sample Name	Lab Code	Result	MRL	Dil.	Date Analyzed	Q
DH18-5	T1902124-001	**34.0**	2.0	1	12/16/19 20:00	
DH19-12	T1902124-002	**17.0**	2.0	1	12/16/19 20:00	
DH19-16	T1902124-003	ND U	2.0	1	12/16/19 20:00	
TP19-9	T1902124-004	**24.0**	2.0	1	12/16/19 20:00	
DH18-5 Duplicate	T1902124-005	**38.0**	2.0	1	12/16/19 20:00	
Method Blank	T1902124-006	ND U	2.0	1	12/16/19 20:00	
Method Blank	T1902124-MB1	ND U	2.0	1	12/16/19 20:00	
Method Blank	T1902124-MB2	ND U	2.0	1	12/16/19 20:00	

QA/QC Report

Client:	Resolution Copper Mining LLC	**Service Request:**	T1902124
Project	RCM Soil Survey - STB 18 hr 4:1 Ratio Extraction	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
		Date Analyzed:	12/16/19

Replicate Sample Summary
General Chemistry Parameters

Sample Name:	Batch QC	**Units:**	mg/L
Lab Code:	T1901972-006	**Basis:**	NA

Analyte Name	Analysis Method	MRL	Sample Result	Duplicate Sample T1901972-006DUP Result	Average	RPD	RPD Limit
Alkalinity as CaCO3, Total	SM 2320 B	2.0	137	138	138	<1	20

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Client:	Resolution Copper Mining LLC	**Service Request:**	T1902124
Project:	RCM Soil Survey - STB 18 hr 4:1 Ratio Extraction	**Date Analyzed:**	12/16/19
Sample Matrix:	Water		

Lab Control Sample Summary
Alkalinity as CaCO3, Total

Analysis Method:	SM 2320 B	**Units:**	mg/L
		Basis:	NA
		Analysis Lot:	663579

Sample Name	Lab Code	Result	Spike Amount	% Rec	% Rec Limits
Lab Control Sample	T1902124-LCS2	108	108	100	90-110

Analytical Report

Client:	Resolution Copper Mining LLC	**Service Request:**	T1902124
Project:	RCM Soil Survey - STB 18 hr 4:1 Ratio Extraction	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	12/11/19
Analysis Method:	SM 4500-H+ B	**Units:**	pH Units
		Basis:	NA

pH

Sample Name	Lab Code	Result	MRL	Dil.	Date Analyzed	Q
DH18-5	T1902124-001	**7.86**	-	1	12/16/19 22:16	
DH19-12	T1902124-002	**7.58**	-	1	12/16/19 22:18	
DH19-16	T1902124-003	**3.29**	-	1	12/16/19 22:20	
TP19-9	T1902124-004	**7.53**	-	1	12/16/19 22:23	
DH18-5 Duplicate	T1902124-005	**7.92**	-	1	12/16/19 22:26	
Method Blank	T1902124-006	**4.44**	-	1	12/16/19 22:29	

QA/QC Report

Client:	Resolution Copper Mining LLC	**Service Request:**	T1902124
Project	RCM Soil Survey - STB 18 hr 4:1 Ratio Extraction	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
		Date Analyzed:	12/16/19

Replicate Sample Summary
General Chemistry Parameters

Sample Name:	Batch QC	**Units:**	pH Units
Lab Code:	K1911763-001	**Basis:**	NA

Analyte Name	Analysis Method	MRL	Sample Result	Duplicate Sample K1911763-001DUP Result	Average	RPD	RPD Limit
pH	SM 4500-H+ B	-	6.89	6.91	6.90	<1	20

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Client:	Resolution Copper Mining LLC	**Service Request:**	T1902124
Project:	RCM Soil Survey - STB 18 hr 4:1 Ratio Extraction	**Date Analyzed:**	12/16/19
Sample Matrix:	Water		

Lab Control Sample Summary
pH

Analysis Method:	SM 4500-H+ B	**Units:**	pH Units
		Basis:	NA
		Analysis Lot:	663580

Sample Name	Lab Code	Result	Spike Amount	% Rec	% Rec Limits
Lab Control Sample	T1902124-LCS2	9.31	9.34	100	85-115

Metals

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
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www.alsglobal.com

Analytical Report

Client:	Resolution Copper Mining LLC	**Service Request:**	T1902124
Project:	RCM Soil Survey - STB 18 hr 4:1 Ratio Extraction	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	12/11/19 14:59
Sample Name:	DH18-5	**Basis:**	NA
Lab Code:	T1902124-001		

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Aluminum	6010C	**38**	ug/L	21	1	12/17/19 09:34	12/16/19	
Antimony	6010C	ND U	ug/L	21	1	12/17/19 09:34	12/16/19	
Arsenic	6010C	ND U	ug/L	21	1	12/17/19 09:34	12/16/19	
Barium	6010C	ND U	ug/L	4.2	1	12/17/19 09:34	12/16/19	
Beryllium	6010C	ND U	ug/L	1.1	1	12/17/19 09:34	12/16/19	
Boron	6010C	ND U	ug/L	21	1	12/17/19 09:34	12/16/19	
Cadmium	6010C	ND U	ug/L	1.1	1	12/17/19 09:34	12/16/19	
Calcium	6010C	**11000**	ug/L	21	1	12/17/19 09:34	12/16/19	
Chromium	6010C	ND U	ug/L	8.4	1	12/17/19 09:34	12/16/19	
Cobalt	6010C	ND U	ug/L	2.1	1	12/17/19 09:34	12/16/19	
Copper	6010C	ND U	ug/L	8.4	1	12/17/19 09:34	12/16/19	
Iron	6010C	ND U	ug/L	21	1	12/17/19 09:34	12/16/19	
Lead	6010C	ND U	ug/L	11	1	12/17/19 09:34	12/16/19	
Magnesium	6010C	**1690**	ug/L	5.3	1	12/17/19 09:34	12/16/19	
Manganese	6010C	**1.7**	ug/L	1.1	1	12/17/19 09:34	12/16/19	
Mercury	7470A	ND U	ug/L	0.20	1	12/17/19 12:55	12/17/19	
Molybdenum	6010C	ND U	ug/L	8.4	1	12/17/19 09:34	12/16/19	
Nickel	6010C	ND U	ug/L	4.2	1	12/17/19 09:34	12/16/19	
Phosphorus	6010C	ND U	ug/L	84	1	12/17/19 09:34	12/16/19	
Potassium	6010C	**2210**	ug/L	420	1	12/17/19 09:34	12/16/19	
Selenium	6010C	ND U	ug/L	21	1	12/17/19 09:34	12/16/19	
Silicon	6010C	**9270**	ug/L	210	1	12/17/19 09:34	12/16/19	
Silver	6010C	ND U	ug/L	8.4	1	12/17/19 13:14	12/16/19	
Sodium	6010C	**4970**	ug/L	210	1	12/17/19 09:34	12/16/19	
Strontium	6010C	**30.2**	ug/L	1.1	1	12/17/19 09:34	12/16/19	
Thallium	6010C	ND U	ug/L	11	1	12/17/19 09:34	12/16/19	
Zinc	6010C	**6.6**	ug/L	4.2	1	12/17/19 09:34	12/16/19	

Analytical Report

Client:	Resolution Copper Mining LLC	**Service Request:**	T1902124
Project:	RCM Soil Survey - STB 18 hr 4:1 Ratio Extraction	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	12/11/19 14:59
Sample Name:	DH19-12	**Basis:**	NA
Lab Code:	T1902124-002		

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Aluminum	6010C	**155**	ug/L	21	1	12/17/19 09:37	12/16/19	
Antimony	6010C	ND U	ug/L	21	1	12/17/19 09:37	12/16/19	
Arsenic	6010C	ND U	ug/L	21	1	12/17/19 09:37	12/16/19	
Barium	6010C	**6.8**	ug/L	4.2	1	12/17/19 09:37	12/16/19	
Beryllium	6010C	ND U	ug/L	1.1	1	12/17/19 09:37	12/16/19	
Boron	6010C	ND U	ug/L	21	1	12/17/19 09:37	12/16/19	
Cadmium	6010C	ND U	ug/L	1.1	1	12/17/19 09:37	12/16/19	
Calcium	6010C	**6310**	ug/L	21	1	12/17/19 09:37	12/16/19	
Chromium	6010C	ND U	ug/L	8.4	1	12/17/19 09:37	12/16/19	
Cobalt	6010C	ND U	ug/L	2.1	1	12/17/19 09:37	12/16/19	
Copper	6010C	ND U	ug/L	8.4	1	12/17/19 09:37	12/16/19	
Iron	6010C	**103**	ug/L	21	1	12/17/19 09:37	12/16/19	
Lead	6010C	ND U	ug/L	11	1	12/17/19 09:37	12/16/19	
Magnesium	6010C	**1220**	ug/L	5.3	1	12/17/19 09:37	12/16/19	
Manganese	6010C	**3.6**	ug/L	1.1	1	12/17/19 09:37	12/16/19	
Mercury	7470A	ND U	ug/L	0.20	1	12/17/19 12:57	12/17/19	
Molybdenum	6010C	ND U	ug/L	8.4	1	12/17/19 09:37	12/16/19	
Nickel	6010C	ND U	ug/L	4.2	1	12/17/19 09:37	12/16/19	
Phosphorus	6010C	ND U	ug/L	84	1	12/17/19 09:37	12/16/19	
Potassium	6010C	**810**	ug/L	420	1	12/17/19 09:37	12/16/19	
Selenium	6010C	ND U	ug/L	21	1	12/17/19 09:37	12/16/19	
Silicon	6010C	**5810**	ug/L	210	1	12/17/19 09:37	12/16/19	
Silver	6010C	ND U	ug/L	8.4	1	12/17/19 13:04	12/16/19	
Sodium	6010C	**2730**	ug/L	210	1	12/17/19 09:37	12/16/19	
Strontium	6010C	**11.5**	ug/L	1.1	1	12/17/19 09:37	12/16/19	
Thallium	6010C	ND U	ug/L	11	1	12/17/19 09:37	12/16/19	
Zinc	6010C	**6.1**	ug/L	4.2	1	12/17/19 09:37	12/16/19	

Analytical Report

Client:	Resolution Copper Mining LLC	**Service Request:**	T1902124
Project:	RCM Soil Survey - STB 18 hr 4:1 Ratio Extraction	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	12/11/19 14:59
Sample Name:	DH19-16	**Basis:**	NA
Lab Code:	T1902124-003		

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Aluminum	6010C	**71**	ug/L	21	1	12/17/19 09:49	12/16/19	
Antimony	6010C	ND U	ug/L	21	1	12/17/19 09:49	12/16/19	
Arsenic	6010C	ND U	ug/L	21	1	12/17/19 09:49	12/16/19	
Barium	6010C	**22.6**	ug/L	4.2	1	12/17/19 09:49	12/16/19	
Beryllium	6010C	ND U	ug/L	1.1	1	12/17/19 09:49	12/16/19	
Boron	6010C	**46**	ug/L	21	1	12/17/19 09:49	12/16/19	
Cadmium	6010C	ND U	ug/L	1.1	1	12/17/19 09:49	12/16/19	
Calcium	6010C	**9920**	ug/L	21	1	12/17/19 09:49	12/16/19	
Chromium	6010C	ND U	ug/L	8.4	1	12/17/19 09:49	12/16/19	
Cobalt	6010C	ND U	ug/L	2.1	1	12/17/19 09:49	12/16/19	
Copper	6010C	ND U	ug/L	8.4	1	12/17/19 09:49	12/16/19	
Iron	6010C	**28**	ug/L	21	1	12/17/19 09:49	12/16/19	
Lead	6010C	ND U	ug/L	11	1	12/17/19 09:49	12/16/19	
Magnesium	6010C	**1800**	ug/L	5.3	1	12/17/19 09:49	12/16/19	
Manganese	6010C	**4.2**	ug/L	1.1	1	12/17/19 09:49	12/16/19	
Mercury	7470A	ND U	ug/L	0.20	1	12/17/19 12:59	12/17/19	
Molybdenum	6010C	**26.8**	ug/L	8.4	1	12/17/19 09:49	12/16/19	
Nickel	6010C	ND U	ug/L	4.2	1	12/17/19 09:49	12/16/19	
Phosphorus	6010C	**124**	ug/L	84	1	12/17/19 09:49	12/16/19	
Potassium	6010C	**520**	ug/L	420	1	12/17/19 09:49	12/16/19	
Selenium	6010C	ND U	ug/L	21	1	12/17/19 09:49	12/16/19	
Silicon	6010C	**9180**	ug/L	210	1	12/17/19 09:49	12/16/19	
Silver	6010C	ND U	ug/L	8.4	1	12/17/19 13:17	12/16/19	
Sodium	6010C	**5040**	ug/L	210	1	12/17/19 09:49	12/16/19	
Strontium	6010C	**34.0**	ug/L	1.1	1	12/17/19 09:49	12/16/19	
Thallium	6010C	ND U	ug/L	11	1	12/17/19 09:49	12/16/19	
Zinc	6010C	**68.6**	ug/L	4.2	1	12/17/19 09:49	12/16/19	

Analytical Report

Client:	Resolution Copper Mining LLC	**Service Request:**	T1902124
Project:	RCM Soil Survey - STB 18 hr 4:1 Ratio Extraction	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	12/11/19 14:59
Sample Name:	TP19-9	**Basis:**	NA
Lab Code:	T1902124-004		

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Aluminum	6010C	**84**	ug/L	21	1	12/17/19 10:08	12/16/19	
Antimony	6010C	ND U	ug/L	21	1	12/17/19 10:08	12/16/19	
Arsenic	6010C	ND U	ug/L	21	1	12/17/19 10:08	12/16/19	
Barium	6010C	**10.4**	ug/L	4.2	1	12/17/19 10:08	12/16/19	
Beryllium	6010C	ND U	ug/L	1.1	1	12/17/19 10:08	12/16/19	
Boron	6010C	**25**	ug/L	21	1	12/17/19 10:08	12/16/19	
Cadmium	6010C	ND U	ug/L	1.1	1	12/17/19 10:08	12/16/19	
Calcium	6010C	**11600**	ug/L	21	1	12/17/19 10:08	12/16/19	
Chromium	6010C	ND U	ug/L	8.4	1	12/17/19 10:08	12/16/19	
Cobalt	6010C	ND U	ug/L	2.1	1	12/17/19 10:08	12/16/19	
Copper	6010C	ND U	ug/L	8.4	1	12/17/19 10:08	12/16/19	
Iron	6010C	**73**	ug/L	21	1	12/17/19 10:08	12/16/19	
Lead	6010C	ND U	ug/L	11	1	12/17/19 10:08	12/16/19	
Magnesium	6010C	**1690**	ug/L	5.3	1	12/17/19 10:08	12/16/19	
Manganese	6010C	**4.2**	ug/L	1.1	1	12/17/19 10:08	12/16/19	
Mercury	7470A	ND U	ug/L	0.20	1	12/17/19 13:05	12/17/19	
Molybdenum	6010C	ND U	ug/L	8.4	1	12/17/19 10:08	12/16/19	
Nickel	6010C	ND U	ug/L	4.2	1	12/17/19 10:08	12/16/19	
Phosphorus	6010C	ND U	ug/L	84	1	12/17/19 10:08	12/16/19	
Potassium	6010C	**2720**	ug/L	420	1	12/17/19 10:08	12/16/19	
Selenium	6010C	ND U	ug/L	21	1	12/17/19 10:08	12/16/19	
Silicon	6010C	**6340**	ug/L	210	1	12/17/19 10:08	12/16/19	
Silver	6010C	ND U	ug/L	8.4	1	12/17/19 13:20	12/16/19	
Sodium	6010C	**1620**	ug/L	210	1	12/17/19 10:08	12/16/19	
Strontium	6010C	**23.0**	ug/L	1.1	1	12/17/19 10:08	12/16/19	
Thallium	6010C	ND U	ug/L	11	1	12/17/19 10:08	12/16/19	
Zinc	6010C	**18.6**	ug/L	4.2	1	12/17/19 10:08	12/16/19	

Analytical Report

Client:	Resolution Copper Mining LLC	**Service Request:**	T1902124
Project:	RCM Soil Survey - STB 18 hr 4:1 Ratio Extraction	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	12/11/19 14:59
Sample Name:	DH18-5 Duplicate	**Basis:**	NA
Lab Code:	T1902124-005		

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Aluminum	6010C	**37**	ug/L	21	1	12/17/19 10:11	12/16/19	
Antimony	6010C	ND U	ug/L	21	1	12/17/19 10:11	12/16/19	
Arsenic	6010C	ND U	ug/L	21	1	12/17/19 10:11	12/16/19	
Barium	6010C	ND U	ug/L	4.2	1	12/17/19 10:11	12/16/19	
Beryllium	6010C	ND U	ug/L	1.1	1	12/17/19 10:11	12/16/19	
Boron	6010C	ND U	ug/L	21	1	12/17/19 10:11	12/16/19	
Cadmium	6010C	ND U	ug/L	1.1	1	12/17/19 10:11	12/16/19	
Calcium	6010C	**11900**	ug/L	21	1	12/17/19 10:11	12/16/19	
Chromium	6010C	ND U	ug/L	8.4	1	12/17/19 10:11	12/16/19	
Cobalt	6010C	ND U	ug/L	2.1	1	12/17/19 10:11	12/16/19	
Copper	6010C	ND U	ug/L	8.4	1	12/17/19 10:11	12/16/19	
Iron	6010C	ND U	ug/L	21	1	12/17/19 10:11	12/16/19	
Lead	6010C	ND U	ug/L	11	1	12/17/19 10:11	12/16/19	
Magnesium	6010C	**1890**	ug/L	5.3	1	12/17/19 10:11	12/16/19	
Manganese	6010C	**3.9**	ug/L	1.1	1	12/17/19 10:11	12/16/19	
Mercury	7470A	ND U	ug/L	0.20	1	12/17/19 13:07	12/17/19	
Molybdenum	6010C	ND U	ug/L	8.4	1	12/17/19 10:11	12/16/19	
Nickel	6010C	ND U	ug/L	4.2	1	12/17/19 10:11	12/16/19	
Phosphorus	6010C	ND U	ug/L	84	1	12/17/19 10:11	12/16/19	
Potassium	6010C	**2040**	ug/L	420	1	12/17/19 10:11	12/16/19	
Selenium	6010C	ND U	ug/L	21	1	12/17/19 10:11	12/16/19	
Silicon	6010C	**9890**	ug/L	210	1	12/17/19 10:11	12/16/19	
Silver	6010C	ND U	ug/L	8.4	1	12/17/19 13:30	12/16/19	
Sodium	6010C	**5370**	ug/L	210	1	12/17/19 10:11	12/16/19	
Strontium	6010C	**32.7**	ug/L	1.1	1	12/17/19 10:11	12/16/19	
Thallium	6010C	ND U	ug/L	11	1	12/17/19 10:11	12/16/19	
Zinc	6010C	**5.4**	ug/L	4.2	1	12/17/19 10:11	12/16/19	

Analytical Report

Client:	Resolution Copper Mining LLC	**Service Request:**	T1902124
Project:	RCM Soil Survey - STB 18 hr 4:1 Ratio Extraction	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	12/11/19 14:59
Sample Name:	Method Blank	**Basis:**	NA
Lab Code:	T1902124-006		

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Aluminum	6010C	ND U	ug/L	21	1	12/17/19 10:13	12/16/19	
Antimony	6010C	ND U	ug/L	21	1	12/17/19 10:13	12/16/19	
Arsenic	6010C	ND U	ug/L	21	1	12/17/19 10:13	12/16/19	
Barium	6010C	ND U	ug/L	4.2	1	12/17/19 10:13	12/16/19	
Beryllium	6010C	ND U	ug/L	1.1	1	12/17/19 10:13	12/16/19	
Boron	6010C	ND U	ug/L	21	1	12/17/19 10:13	12/16/19	
Cadmium	6010C	ND U	ug/L	1.1	1	12/17/19 10:13	12/16/19	
Calcium	6010C	ND U	ug/L	21	1	12/17/19 10:13	12/16/19	
Chromium	6010C	ND U	ug/L	8.4	1	12/17/19 10:13	12/16/19	
Cobalt	6010C	ND U	ug/L	2.1	1	12/17/19 10:13	12/16/19	
Copper	6010C	ND U	ug/L	8.4	1	12/17/19 10:13	12/16/19	
Iron	6010C	ND U	ug/L	21	1	12/17/19 10:13	12/16/19	
Lead	6010C	ND U	ug/L	11	1	12/17/19 10:13	12/16/19	
Magnesium	6010C	ND U	ug/L	5.3	1	12/17/19 10:13	12/16/19	
Manganese	6010C	ND U	ug/L	1.1	1	12/17/19 10:13	12/16/19	
Mercury	7470A	ND U	ug/L	0.20	1	12/17/19 13:12	12/17/19	
Molybdenum	6010C	ND U	ug/L	8.4	1	12/17/19 10:13	12/16/19	
Nickel	6010C	ND U	ug/L	4.2	1	12/17/19 10:13	12/16/19	
Phosphorus	6010C	ND U	ug/L	84	1	12/17/19 10:13	12/16/19	
Potassium	6010C	ND U	ug/L	420	1	12/17/19 10:13	12/16/19	
Selenium	6010C	ND U	ug/L	21	1	12/17/19 10:13	12/16/19	
Silicon	6010C	ND U	ug/L	210	1	12/17/19 10:13	12/16/19	
Silver	6010C	ND U	ug/L	8.4	1	12/17/19 13:32	12/16/19	
Sodium	6010C	ND U	ug/L	210	1	12/17/19 10:13	12/16/19	
Strontium	6010C	ND U	ug/L	1.1	1	12/17/19 10:13	12/16/19	
Thallium	6010C	ND U	ug/L	11	1	12/17/19 10:13	12/16/19	
Zinc	6010C	**6.7**	ug/L	4.2	1	12/17/19 10:13	12/16/19	

Analytical Report

Client:	Resolution Copper Mining LLC	**Service Request:**	T1902124
Project:	RCM Soil Survey - STB 18 hr 4:1 Ratio Extraction	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Method Blank	**Basis:**	NA
Lab Code:	KQ1918469-03		

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Aluminum	6010C	ND U	ug/L	21	1	12/17/19 09:27	12/16/19	
Antimony	6010C	ND U	ug/L	21	1	12/17/19 09:27	12/16/19	
Arsenic	6010C	ND U	ug/L	21	1	12/17/19 09:27	12/16/19	
Barium	6010C	ND U	ug/L	4.2	1	12/17/19 09:27	12/16/19	
Beryllium	6010C	ND U	ug/L	1.1	1	12/17/19 09:27	12/16/19	
Boron	6010C	ND U	ug/L	21	1	12/17/19 09:27	12/16/19	
Cadmium	6010C	ND U	ug/L	1.1	1	12/17/19 09:27	12/16/19	
Calcium	6010C	ND U	ug/L	21	1	12/17/19 09:27	12/16/19	
Chromium	6010C	ND U	ug/L	8.4	1	12/17/19 09:27	12/16/19	
Cobalt	6010C	ND U	ug/L	2.1	1	12/17/19 09:27	12/16/19	
Copper	6010C	ND U	ug/L	8.4	1	12/17/19 09:27	12/16/19	
Iron	6010C	ND U	ug/L	21	1	12/17/19 09:27	12/16/19	
Lead	6010C	ND U	ug/L	11	1	12/17/19 09:27	12/16/19	
Magnesium	6010C	ND U	ug/L	5.3	1	12/17/19 09:27	12/16/19	
Manganese	6010C	ND U	ug/L	1.1	1	12/17/19 09:27	12/16/19	
Molybdenum	6010C	ND U	ug/L	8.4	1	12/17/19 09:27	12/16/19	
Nickel	6010C	ND U	ug/L	4.2	1	12/17/19 09:27	12/16/19	
Phosphorus	6010C	ND U	ug/L	84	1	12/17/19 09:27	12/16/19	
Potassium	6010C	ND U	ug/L	420	1	12/17/19 09:27	12/16/19	
Selenium	6010C	ND U	ug/L	21	1	12/17/19 09:27	12/16/19	
Silicon	6010C	ND U	ug/L	210	1	12/17/19 09:27	12/16/19	
Silver	6010C	ND U	ug/L	8.4	1	12/17/19 12:57	12/16/19	
Sodium	6010C	ND U	ug/L	210	1	12/17/19 09:27	12/16/19	
Strontium	6010C	ND U	ug/L	1.1	1	12/17/19 09:27	12/16/19	
Thallium	6010C	ND U	ug/L	11	1	12/17/19 09:27	12/16/19	
Zinc	6010C	ND U	ug/L	4.2	1	12/17/19 09:27	12/16/19	

Analytical Report

Client:	Resolution Copper Mining LLC	**Service Request:**	T1902124
Project:	RCM Soil Survey - STB 18 hr 4:1 Ratio Extraction	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Method Blank	**Basis:**	NA
Lab Code:	KQ1918470-01		

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Mercury	7470A	ND U	ug/L	0.20	1	12/17/19 12:52	12/17/19	

QA/QC Report

Client:	Resolution Copper Mining LLC	**Service Request:**	T1902124
Project	RCM Soil Survey - STB 18 hr 4:1 Ratio Extraction	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	12/11/19
		Date Analyzed:	12/17/19

Replicate Sample Summary
Total Metals

Sample Name:	DH19-12	**Units:**	ug/L
Lab Code:	T1902124-002	**Basis:**	NA

Analyte Name	Analysis Method	MRL	Sample Result	Duplicate Sample KQ1918469-04 Result	Average	RPD	RPD Limit
Aluminum	6010C	21	155	156	156	<1	20
Antimony	6010C	21	ND U	ND U	ND	-	20
Arsenic	6010C	21	ND U	ND U	ND	-	20
Barium	6010C	4.2	6.8	6.6	6.7	3	20
Beryllium	6010C	1.1	ND U	ND U	ND	-	20
Boron	6010C	21	ND U	ND U	ND	-	20
Cadmium	6010C	1.1	ND U	ND U	ND	-	20
Calcium	6010C	21	6310	6320	6320	<1	20
Chromium	6010C	8.4	ND U	ND U	ND	-	20
Cobalt	6010C	2.1	ND U	ND U	ND	-	20
Copper	6010C	8.4	ND U	ND U	ND	-	20
Iron	6010C	21	103	102	103	<1	20
Lead	6010C	11	ND U	ND U	ND	-	20
Magnesium	6010C	5.3	1220	1210	1220	<1	20
Manganese	6010C	1.1	3.6	3.7	3.7	3	20
Molybdenum	6010C	8.4	ND U	ND U	ND	-	20
Nickel	6010C	4.2	ND U	ND U	ND	-	20
Phosphorus	6010C	84	ND U	ND U	ND	-	20
Potassium	6010C	420	810	840	830	4	20
Selenium	6010C	21	ND U	ND U	ND	-	20
Silicon	6010C	210	5810	5890	5850	1	20
Silver	6010C	8.4	ND U	ND U	ND	-	20
Sodium	6010C	210	2730	2710	2720	<1	20
Strontium	6010C	1.1	11.5	11.6	11.6	<1	20
Thallium	6010C	11	ND U	ND U	ND	-	20
Zinc	6010C	4.2	6.1	5.8	6.0	5	20

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp.

dba ALS Environmental

QA/QC Report

Client:	Resolution Copper Mining LLC	**Service Request:**	T1902124
Project	RCM Soil Survey - STB 18 hr 4:1 Ratio Extraction	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	12/11/19
		Date Analyzed:	12/17/19

Replicate Sample Summary

Total Metals

Sample Name:	DH19-16	**Units:**	ug/L
Lab Code:	T1902124-003	**Basis:**	NA

Analyte Name	Analysis Method	MRL	Sample Result	Duplicate Sample KQ1918470-03 Result	Average	RPD	RPD Limit
Mercury	7470A	0.20	ND U	ND U	ND	-	20

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Printed 12/17/2019 3:33:09 PM Superset Reference:

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QA/QC Report

Client:	Resolution Copper Mining LLC	**Service Request:**	T1902124
Project:	RCM Soil Survey - STB 18 hr 4:1 Ratio Extraction	**Date Collected:**	N/A
Sample Matrix:	Water	**Date Received:**	12/11/19
		Date Analyzed:	12/17/19
		Date Extracted:	12/16/19

Matrix Spike Summary
Total Metals

Sample Name:	DH19-12	**Units:**	ug/L
Lab Code:	T1902124-002	**Basis:**	NA
Analysis Method:	6010C		
Prep Method:	EPA CLP ILM04.0		

Matrix Spike
KQ1918469-05

Analyte Name	Sample Result	Result	Spike Amount	% Rec	% Rec Limits
Aluminum	155	2140	2000	99	75-125
Antimony	ND U	514	500	103	75-125
Arsenic	ND U	1040	1000	104	75-125
Barium	6.8	973	1000	97	75-125
Beryllium	ND U	48.4	50.0	97	75-125
Boron	ND U	508	500	102	75-125
Cadmium	ND U	50.5	50.0	101	75-125
Calcium	6310	15700	10000	94	75-125
Chromium	ND U	195	200	98	75-125
Cobalt	ND U	492	500	98	75-125
Copper	ND U	237	250	95	75-125
Iron	103	1040	1000	93	75-125
Lead	ND U	500	500	100	75-125
Magnesium	1220	11400	10000	102	75-125
Manganese	3.6	505	500	100	75-125
Molybdenum	ND U	1080	1000	108	75-125
Nickel	ND U	511	500	102	75-125
Phosphorus	ND U	10700	10000	107	75-125
Potassium	810	10700	10000	99	75-125
Selenium	ND U	1060	1000	106	75-125
Silver	ND U	49.3	50.0	99	75-125
Sodium	2730	13100	10000	104	75-125
Strontium	11.5	9710	10000	97	75-125
Thallium	ND U	186	200	93	75-125
Zinc	6.1	498	500	98	75-125

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

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QA/QC Report

Client:	Resolution Copper Mining LLC	**Service Request:**	T1902124
Project:	RCM Soil Survey - STB 18 hr 4:1 Ratio Extraction	**Date Collected:**	N/A
Sample Matrix:	Water	**Date Received:**	12/11/19
		Date Analyzed:	12/17/19
		Date Extracted:	12/16/19

Matrix Spike Summary
Total Metals

Sample Name:	DH19-12	**Units:**	ug/L
Lab Code:	T1902124-002	**Basis:**	NA
Analysis Method:	6010C		
Prep Method:	EPA CLP ILM04.0		

Matrix Spike
KQ1918469-06

Analyte Name	Sample Result	Result	Spike Amount	% Rec	% Rec Limits
Silicon	5810	15600	10000	98	75-125

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Printed 12/17/2019 3:33:08 PM Superset Reference:

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QA/QC Report

Client:	Resolution Copper Mining LLC	**Service Request:**	T1902124
Project:	RCM Soil Survey - STB 18 hr 4:1 Ratio Extraction	**Date Collected:**	N/A
Sample Matrix:	Water	**Date Received:**	12/11/19
		Date Analyzed:	12/17/19
		Date Extracted:	12/17/19

Matrix Spike Summary
Total Metals

Sample Name:	DH19-16	**Units:**	ug/L
Lab Code:	T1902124-003	**Basis:**	NA
Analysis Method:	7470A		
Prep Method:	Method		

Matrix Spike
KQ1918470-04

Analyte Name	Sample Result	Result	Spike Amount	% Rec	% Rec Limits
Mercury	ND U	4.76	5.00	95	75-125

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Printed 12/17/2019 3:33:09 PM Superset Reference:

Client: Resolution Copper Mining LLC
Project: RCM Soil Survey - STB 18 hr 4:1 Ratio Extraction
Sample Matrix: Water

Service Request: T1902124
Date Analyzed: 12/17/19

Lab Control Sample Summary
Total Metals

Units:ug/L
Basis:NA

Lab Control Sample
KQ1918469-01

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
Aluminum	6010C	5240	5000	105	80-120
Antimony	6010C	1980	2000	99	80-120
Arsenic	6010C	2430	2500	97	80-120
Barium	6010C	4830	5000	97	80-120
Beryllium	6010C	119	125	95	80-120
Boron	6010C	473	500	95	80-120
Cadmium	6010C	1230	1250	99	80-120
Calcium	6010C	11800	12500	94	80-120
Chromium	6010C	476	500	95	80-120
Cobalt	6010C	1210	1250	97	80-120
Copper	6010C	581	625	93	80-120
Iron	6010C	2310	2500	92	80-120
Lead	6010C	2470	2500	99	80-120
Magnesium	6010C	12600	12500	101	80-120
Manganese	6010C	1240	1250	99	80-120
Molybdenum	6010C	1050	1000	105	80-120
Nickel	6010C	1250	1250	100	80-120
Phosphorus	6010C	10500	10000	105	80-120
Potassium	6010C	12000	12500	96	80-120
Selenium	6010C	2630	2500	105	80-120
Silver	6010C	600	625	96	80-120
Sodium	6010C	12900	12500	104	80-120
Strontium	6010C	9560	10000	96	80-120
Thallium	6010C	2370	2500	95	80-120
Zinc	6010C	1210	1250	96	80-120

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QA/QC Report

Client:	Resolution Copper Mining LLC	**Service Request:**	T1902124
Project:	RCM Soil Survey - STB 18 hr 4:1 Ratio Extraction	**Date Analyzed:**	12/17/19
Sample Matrix:	Water		

Lab Control Sample Summary
Total Metals

Units:ug/L
Basis:NA

Lab Control Sample
KQ1918469-02

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
Silicon	6010C	9620	10000	96	80-120

Client: Resolution Copper Mining LLC
Project: RCM Soil Survey - STB 18 hr 4:1 Ratio Extraction
Sample Matrix: Water

Service Request: T1902124
Date Analyzed: 12/17/19

Lab Control Sample Summary
Total Metals

Units:ug/L
Basis:NA

Lab Control Sample
KQ1918470-02

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
Mercury	7470A	5.00	5.00	100	80-120

APPENDIX VI

Logs

TEST PIT LOG

STARTED: 19-9-24 **FINISHED:** 19-9-24

EXCAVATOR TYPE: Shovel

GROUND ELEV. (ft): 3408.2

COORDINATES (ft): N 791842 E 1010502

DEPTH (feet)	SAMPLE TYPE	SAMPLE No.	SYMBOL	DESCRIPTION OF MATERIALS	INSTRUMENT DETAILS
0	B	1		SAND (SC) fine to coarse, and fine to coarse gravel, clayey, some cobbles up to 7 in, gap graded, loose, subrounded, reddish brown (5YR4/3), dry, homogeneous, clasts are quartzite and chert, no HCl reaction, stage I carbonate development [Quaternary Pediment].	
1				1.00 3407.20 End of Test Pit at 1.00 ft	
2					
3					

Su - ksf: 1 2 3 4

VANE PEAK ◆ FIELD ■ LAB ▲ UC/2 △ P.PEN/2

VANE REMOLD ◇ FIELD □ LAB

★ % FINES

W_P% × – – – – W% ○ – – – – W_L% ×

20 40 60 80

KCB Consultants Ltd.

PROJECT NO.: UM09441A23

PROJECT: Skunk Camp TSF Reclamation Plan

LOCATION: Dripping Springs Wash

LOGGED BY: MO **CHECKED BY:** CK

SHEET 1 OF 1 **TEST PIT NO.:** TPC19-1

171204 KCB LIB PLOG.GLB V4.00 KCBL_TEST_PIT_E UM09441A23.GPJ KCB PLOG.GDT 2020-03-24 8:44:51 AM

TEST PIT LOG

STARTED: 19-9-24 **FINISHED:** 19-9-24

EXCAVATOR TYPE: Shovel

GROUND ELEV. (ft): 3427.0

COORDINATES (ft): N 800300 E 1015504

DEPTH (feet)	SAMPLE TYPE	SAMPLE No.	SYMBOL	DESCRIPTION OF MATERIALS	INSTRUMENT DETAILS
0	B	1		SAND (SC) fine, some coarse sand, some clay, trace fine gravel, well graded, dense, low plasticity, dry, light brown (7.5YR6/4), homogeneous, strong HCl reaction, stage I carbonate development, refusal at 1 ft on cemented layer [Gila Conglomerate].	
1				1.00 / 3426.00 End of Test Pit at 1.00 ft	
2					
3					

Su - ksf: 1 2 3 4

VANE PEAK ◆ FIELD ■ LAB ▲ UC/2 △ P.PEN/2

VANE REMOLD ◇ FIELD □ LAB

★ % FINES

W_P% × — W% ○ — W_L% ×

20 40 60 80

PROJECT NO.: UM09441A23

PROJECT: Skunk Camp TSF Reclamation Plan

LOCATION: Dripping Springs Wash

LOGGED BY: MO **CHECKED BY:** CK

SHEET 1 OF 1 **TEST PIT NO.:** TPC19-2

KCB Consultants Ltd.

171204 KCB LIB PLOG.GLB V4.00 KCBL_TEST_PIT_E UM09441A23.GPJ KCB PLOG.GDT 2020-03-24 8:44:51 AM

TEST PIT LOG

STARTED: 19-9-24 **FINISHED:** 19-9-24

EXCAVATOR TYPE: Shovel

GROUND ELEV. (ft): 3259.8

COORDINATES (ft): N 794956 E 1012034

DEPTH (feet)	SAMPLE TYPE	SAMPLE No.	SYMBOL	DESCRIPTION OF MATERIALS	INSTRUMENT DETAILS
0	Bulk	1		SAND (SC-SM) mostly fine, some medium to coarse sand, gravelly, some clay/silt, trace cobbles, gap graded, compact, low plastic, reddish brown (5YR5/4), dry, homogeneous, earthy odour, no HCl reaction, stage I carbonate development [Quaternary Pediment].	
1.25				3258.55 End of Test Pit at 1.25 ft	

Su - ksf: 1 2 3 4

VANE PEAK ◆ FIELD ■ LAB ▲ UC/2 △ P.PEN/2
REMOLD ◇ □

★ % FINES

W_P% W% W_L%

20 40 60 80

PROJECT NO.: UM09441A23

PROJECT: Skunk Camp TSF Reclamation Plan

LOCATION: Dripping Springs Wash

LOGGED BY: MO **CHECKED BY:** CK

SHEET 1 OF 1 **TEST PIT NO.:** TPC19-3

KCB Consultants Ltd.

171204 KCB LIB PLOG.GLB V4.00 KCBL_TEST_PIT_E UM09441A23.GPJ KCB PLOG.GDT 2020-03-24 8:44:51 AM

TEST PIT LOG

STARTED: 19-9-24 **FINISHED:** 19-9-24

EXCAVATOR TYPE: Shovel

GROUND ELEV. (ft): 3264.8

COORDINATES (ft): N 793286 E 1009074

DEPTH (feet)	SAMPLE TYPE	SAMPLE No.	SYMBOL	DESCRIPTION OF MATERIALS	INSTRUMENT DETAILS
0	Bulk	1		SAND (SM), fine to coarse, some silt, some gravel, gap graded, compact, low plasticity, no dilatancy, brown (7.5YR5/4), homogeneous, no odour, weak HCl reaction, dry, stage I to II carbonate development [Gila Conglomerate].	
1.30 (3263.50)				End of Test Pit at 1.30 ft	

Su - ksf: 1 2 3 4

VANE PEAK ◆ FIELD ■ LAB ▲ UC/2 △ P.PEN/2
REMOLD ◇ □

★ % FINES

W_P% W% W_L%

20 40 60 80

KCB Consultants Ltd.

PROJECT NO.: UM09441A23

PROJECT: Skunk Camp TSF Reclamation Plan

LOCATION: Dripping Springs Wash

LOGGED BY: MO **CHECKED BY:** CK

SHEET 1 OF 1 **TEST PIT NO.:** TPC19-4

171204 KCB LIB PLOG.GLB V4.00 KCBL_TEST_PIT_E UM09441A23.GPJ KCB PLOG.GDT 2020-03-24 8:44:52 AM

TEST PIT LOG

STARTED: 19-9-24 **FINISHED:** 19-9-24

EXCAVATOR TYPE: Shovel

GROUND ELEV. (ft): 3171.9

COORDINATES (ft): N 794121 E 1010848

DEPTH (feet)	SAMPLE TYPE	SAMPLE No.	SYMBOL	DESCRIPTION OF MATERIALS	INSTRUMENT DETAILS
1	Bulk	1		SAND (SC) fine to medium, trace coarse sand, some clay, some coarse gravel, gap graded, loose to compact, low plasticity, brown (7.5YR5/4), low dry strength, dry, strong HCl reaction, stage III carbonate development [Gila Sandstone].	
2				2.00 3169.90 End of Test Pit at 2.00 ft	
3					

Su - ksf: 1 2 3 4

VANE PEAK FIELD ◆ LAB ■ ▲UC/2
REMOLD ◇ □ △P.PEN/2

★ % FINES

W_P% W% W_L%

20 40 60 80

PROJECT NO.: UM09441A23

PROJECT: Skunk Camp TSF Reclamation Plan

LOCATION: Dripping Springs Wash

LOGGED BY: MO **CHECKED BY:** CK

SHEET 1 OF 1 **TEST PIT NO.:** TPC19-5

KCB Consultants Ltd.

171204 KCB LIB PLOG.GLB V4.00 KCBL_TEST_PIT_E_UM09441A23.GPJ KCB PLOG.GDT 2020-03-24 8:44:52 AM

TEST PIT LOG

STARTED: 19-9-24 **FINISHED:** 19-9-24

EXCAVATOR TYPE: Shovel

GROUND ELEV. (ft): 3315.3

COORDINATES (ft): N 798122 E 1015767

DEPTH (feet)	SAMPLE TYPE	SAMPLE No.	SYMBOL	DESCRIPTION OF MATERIALS	INSTRUMENT DETAILS
0	Bulk	1		SAND (SW-SC) fine to coarse, some gravel, trace to some silt, well graded, loose to compact, no plasticity, no dilatancy, brown (7.5YR4/6), homogeneous, quartzite, calcite fragments, some dolomite, weak to moderate dry strength; dry, strong HCl reaction, stage I carbonate development [Quaternary Alluvium].	
1.20				3314.10 End of Test Pit at 1.20 ft	

Su - ksf: 1 2 3 4

VANE PEAK ◆ FIELD ■ LAB ▲ UC/2 △ P.PEN/2

REMOLD ◇ □

★ % FINES

W_P% W% W_L%

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20 40 60 80

KCB Consultants Ltd.

PROJECT NO.: UM09441A23

PROJECT: Skunk Camp TSF Reclamation Plan

LOCATION: Dripping Springs Wash

LOGGED BY: MO **CHECKED BY:** CK

SHEET 1 OF 1 **TEST PIT NO.:** TPC19-6

171204 KCB LIB PLOG.GLB V4.00 KCBL_TEST_PIT_E UM09441A23.GPJ KCB PLOG.GDT 2020-03-24 8:44:53 AM

TEST PIT LOG

STARTED: 19-9-24 **FINISHED:** 19-9-24
EXCAVATOR TYPE: Shovel
GROUND ELEV. (ft): 3316.7
COORDINATES (ft): N 798267 E 1015248

Su - ksf: 1 2 3 4
VANE PEAK / REMOLD — FIELD ◆ ◇ — LAB ■ □ — ▲ UC/2 — △ P.PEN/2
★ % FINES
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DEPTH (feet)	SAMPLE TYPE	SAMPLE No.	SYMBOL	DESCRIPTION OF MATERIALS	INSTRUMENT DETAILS	Su - ksf
	Bulk	1		GRAVEL (GW) fine to coarse, and sand (mostly medium to coarse), trace silt, well graded, very dense, max particle size 2 in, sub-rounded, grayish brown (10YR5/2), matrix supported clasts consist of quartzite, chert, trace granite, dry, strong cementation, strong HCl reaction [Gila Conglomerate].		○★
1				1.00 / 3315.70 End of Test Pit at 1.00 ft		
2						
3						

KCB Consultants Ltd.

PROJECT NO.: UM09441A23
PROJECT: Skunk Camp TSF Reclamation Plan
LOCATION: Dripping Springs Wash
LOGGED BY: MO **CHECKED BY:** CK
SHEET 1 OF 1 **TEST PIT NO.:** TPC19-7

171204 KCB LIB PLOG.GLB V4.00 KCBL_TEST_PIT_E UM09441A23.GPJ KCB PLOG.GDT 2020-03-24 8:44:53 AM

TEST PIT LOG

STARTED: 19-9-24 **FINISHED:** 19-9-24

EXCAVATOR TYPE: Shovel

GROUND ELEV. (ft): 3232.7

COORDINATES (ft): N 796150 E 1009895

DEPTH (feet)	SAMPLE TYPE	SAMPLE No.	SYMBOL	DESCRIPTION OF MATERIALS	INSTRUMENT DETAILS
	Bulk	1		SAND (SP) medium, trace fine, some coarse, some gravel, well graded, very loose, max particle size 1 in, brown (7.5YR5/2), dry, homogeneous, clasts consist of quartzite, schist, mafics, strong HCl reaction [Quaternary Alluvium].	
				0.30 3232.40 End of Test Pit at 0.30 ft	
1					
2					
3					

Su - ksf: 1 2 3 4

VANE PEAK ◆ FIELD ■ LAB ▲ UC/2 △ P.PEN/2
REMOLD ◇ □

★ % FINES

W_P% W% W_L%

20 40 60 80

KCB Consultants Ltd.

PROJECT NO.: UM09441A23

PROJECT: Skunk Camp TSF Reclamation Plan

LOCATION: Dripping Springs Wash

LOGGED BY: MO **CHECKED BY:** CK

SHEET 1 OF 1 **TEST PIT NO.:** TPC19-8

171204 KCB LIB PLOG.GLB V4.00 KCBL_TEST_PIT_E UM09441A23.GPJ KCB PLOG.GDT 2020-03-24 8:44:54 AM

TEST PIT LOG

STARTED: 19-9-24 **FINISHED:** 19-9-24

EXCAVATOR TYPE: Shovel

GROUND ELEV. (ft): 3236.3

COORDINATES (ft): N 796294 E 1008500

DEPTH (feet)	SAMPLE TYPE	SAMPLE No.	SYMBOL	DESCRIPTION OF MATERIALS	INSTRUMENT DETAILS
0	Bulk	1		SAND (SC) fine to coarse, clayey, some gravel, broadly graded, loose, no dilatancy, dark brown (10YR3/3), homogeneous, no cementation, no HCl reaction, dry [Quaternary Alluvium].	
1.50				3234.80 End of Test Pit at 1.50 ft	

Su - ksf: 1 2 3 4

VANE PEAK ◆ FIELD ■ LAB ▲ UC/2 △ P.PEN/2

REMOLD ◇ □

★ % FINES

W_P% W% W_L%

20 40 60 80

PROJECT NO.: UM09441A23

PROJECT: Skunk Camp TSF Reclamation Plan

LOCATION: Dripping Springs Wash

LOGGED BY: MO **CHECKED BY:** CK

SHEET 1 OF 1 **TEST PIT NO.:** TPC19-9

KCB Consultants Ltd.

171204 KCB LIB PLOG.GLB V4.00 KCBL_TEST_PIT_E UM09441A23.GPJ KCB PLOG.GDT 2020-03-24 8:44:54 AM

TEST PIT LOG

STARTED: 19-9-24 **FINISHED:** 19-9-24

EXCAVATOR TYPE: Shovel

GROUND ELEV. (ft): 3345.7

COORDINATES (ft): N 796817 E 1007527

DEPTH (feet)	SAMPLE TYPE	SAMPLE No.	SYMBOL	DESCRIPTION OF MATERIALS	INSTRUMENT DETAILS
0	Bulk	1		GRAVEL (GC) coarse, and cobbles, sandy, clayey, trace boulders, gap graded, rounded, max particle size 12 in, reddish brown (5RY4/4), round, clasts consist of quartzite and gneiss and chert, homogeneous with clay content increasing with depth, no HCl reaction (Quaternary Pediment).	
1.50				3344.20 End of Test Pit at 1.50 ft	

Su - ksf: 1 2 3 4

VANE PEAK ◆ FIELD ■ LAB REMOLD ◇ □ ▲UC/2 △P.PEN/2

★ % FINES

W_P% W% W_L%

20 40 60 80

PROJECT NO.: UM09441A23

PROJECT: Skunk Camp TSF Reclamation Plan

LOCATION: Dripping Springs Wash

LOGGED BY: MO **CHECKED BY:** CK

SHEET 1 OF 1 **TEST PIT NO.:** TPC19-10

KCB Consultants Ltd.

171204 KCB LIB PLOG.GLB V4.00 KCBL_TEST_PIT_E UM09441A23.GPJ KCB PLOG.GDT 2020-03-24 8:44:54 AM

TEST PIT LOG

STARTED: 19-9-24 **FINISHED:** 19-9-24

EXCAVATOR TYPE: Shovel

GROUND ELEV. (ft): 3359.4

COORDINATES (ft): N 799968 E 1006482

DEPTH (feet)	SAMPLE TYPE	SAMPLE No.	SYMBOL	DESCRIPTION OF MATERIALS	INSTRUMENT DETAILS
	Bulk	1		SAND (SP-SM) fine to coarse, some gravel, some silt, sandier with depth, poorly graded, loose, low to non-plastic, brown (7.5YR4/4), dry, no dry strength, no cementation, no HCl reaction, stage I carbonate development (Quaternary Alluvium).	
0.40				3359.00 End of Test Pit at 0.40 ft	
1					
2					
3					

Su - ksf: 1, 2, 3, 4

VANE PEAK ◆ FIELD ■ LAB ▲ UC/2 △ P.PEN/2

REMOLD ◇ □

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20 40 60 80

PROJECT NO.: UM09441A23

PROJECT: Skunk Camp TSF Reclamation Plan

LOCATION: Dripping Springs Wash

LOGGED BY: MO **CHECKED BY:** CK

SHEET 1 OF 1 **TEST PIT NO.:** TPC19-11

KCB Consultants Ltd.

171204 KCB LIB PLOG.GLB V4.00 KCBL_TEST_PIT_E UM09441A23.GPJ KCB PLOG.GDT 2020-03-24 8:44:55 AM

TEST PIT LOG

STARTED: 19-9-24 **FINISHED:** 19-9-24

EXCAVATOR TYPE: Shovel

GROUND ELEV. (ft): 3409.8

COORDINATES (ft): N 799735 E 1005795

DEPTH (feet)	SAMPLE TYPE	SAMPLE No.	SYMBOL	DESCRIPTION OF MATERIALS	INSTRUMENT DETAILS
1	Bulk	1		SAND (SC) fine to medium, trace coarse, and clay, trace fine to coarse gravel, poorly graded, loose to compact, low plasticity, pale olive (5YR6/4), laminated to homogeneous, strong HCl reaction, stage I carbonate development, low to no dry strength (Gila Conglomerate).	
2				2.00 3407.80 End of Test Pit at 2.00 ft	
3					

Su - ksf: 1 2 3 4

VANE PEAK FIELD ◆ LAB ■ ▲UC/2

REMOLD ◇ □ △P.PEN/2

★ % FINES

W_P% W% W_L%

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KCB Consultants Ltd.

PROJECT NO.: UM09441A23

PROJECT: Skunk Camp TSF Reclamation Plan

LOCATION: Dripping Springs Wash

LOGGED BY: MO **CHECKED BY:** CK

SHEET 1 OF 1 **TEST PIT NO.:** TPC19-12

171204 KCB LIB PLOG.GLB V4.00 KCBL_TEST_PIT_E UM09441A23.GPJ KCB PLOG.GDT 2020-03-24 8:44:55 AM

TEST PIT LOG

STARTED: 19-9-24 **FINISHED:** 19-9-24

EXCAVATOR TYPE: Shovel

GROUND ELEV. (ft): 3571.8

COORDINATES (ft): N 802851 E 1010063

DEPTH (feet)	SAMPLE TYPE	SAMPLE No.	SYMBOL	DESCRIPTION OF MATERIALS	INSTRUMENT DETAILS
0	Bulk	1		SAND (SC) clayey, gravelly, broadly graded, compact to dense, max. particle size 2 in, round to planar, low to intermediate plasticity, sensitive, yellowish red (5YR4/6), dry, homogeneous, no dilatancy, low to medium dry strength, clasts consist mostly of quartzite, no HCl reaction, stage III carbonate development (Quaternary Pediment).	
1				1.00 3570.80 End of Test Pit at 1.00 ft	
2					
3					

Su - ksf: 1 2 3 4

VANE PEAK ◆ FIELD ■ LAB ▲ UC/2 △ P.PEN/2
REMOLD ◇ □

★ % FINES

W_P% W% W_L%

20 40 60 80

KCB Consultants Ltd.

PROJECT NO.: UM09441A23

PROJECT: Skunk Camp TSF Reclamation Plan

LOCATION: Dripping Springs Wash

LOGGED BY: MO **CHECKED BY:** CK

SHEET 1 OF 1 **TEST PIT NO.:** TPC19-13

171204 KCB LIB PLOG.GLB V4.00 KCBL_TEST_PIT_E UM09441A23.GPJ KCB PLOG.GDT 2020-03-24 8:44:56 AM

TEST PIT LOG

STARTED: 19-9-24 **FINISHED:** 19-9-24

EXCAVATOR TYPE: Shovel

GROUND ELEV. (ft): 3383.1

COORDINATES (ft): N 801597 E 1010582

DEPTH (feet)	SAMPLE TYPE	SAMPLE No.	SYMBOL	DESCRIPTION OF MATERIALS	INSTRUMENT DETAILS
0	Bulk	1		SAND (SP-SM) medium to coarse, gravelly, some silt, gap graded, sub-rounded, max. particle size 1 in, dark brown (10YR3/3), dry, clasts consist mostly of quartzite, homogeneous, weak to moderate HCl reaction [Quaternary Alluvium].	
1.00				3382.10 End of Test Pit at 1.00 ft	
1					
2					
3					

Su - ksf: 1, 2, 3, 4

VANE PEAK ◆ FIELD ■ LAB ▲ UC/2 △ P.PEN/2

REMOLD ◇ □

★ % FINES

W_P% W% W_L%

20 40 60 80

KCB Consultants Ltd.

PROJECT NO.: UM09441A23

PROJECT: Skunk Camp TSF Reclamation Plan

LOCATION: Dripping Springs Wash

LOGGED BY: MO **CHECKED BY:** CK

SHEET 1 OF 1 **TEST PIT NO.:** TPC19-14

171204 KCB LIB PLOG.GLB V4.00 KCBL_TEST_PIT_E UM09441A23.GPJ KCB PLOG.GDT 2020-03-24 8:44:56 AM

TEST PIT LOG

STARTED: 19-9-24 **FINISHED:** 19-9-24

EXCAVATOR TYPE: Shovel

GROUND ELEV. (ft): 3444.7

COORDINATES (ft): N 801830 E 1009980

DEPTH (feet)	SAMPLE TYPE	SAMPLE No.	SYMBOL	DESCRIPTION OF MATERIALS	INSTRUMENT DETAILS
0	Bulk	1		SAND (SC) gravelly, some clay, poorly graded, compact, dark yellowish brown (10YR4/6), dry, no dilatancy, dry strength weak to moderate, clasts consist of quartzite, slate, granite, strong HCl reaction, stage III carbonate development (Gila Conglomerate).	
1.50				3443.20 End of Test Pit at 1.50 ft	

Su - ksf: 1 2 3 4

VANE PEAK ◆ FIELD ■ LAB ▲ UC/2
REMOLD ◇ □ △ P.PEN/2

★ % FINES

W_P% W% W_L%

20 40 60 80

PROJECT NO.: UM09441A23

PROJECT: Skunk Camp TSF Reclamation Plan

LOCATION: Dripping Springs Wash

LOGGED BY: MO **CHECKED BY:** CK

SHEET 1 OF 1 **TEST PIT NO.:** TPC19-15

KCB Consultants Ltd.

171204 KCB LIB PLOG.GLB V4.00 KCBL_TEST_PIT_E UM09441A23.GPJ KCB PLOG.GDT 2020-03-24 8:44:57 AM

TEST PIT LOG

STARTED: 19-9-24 **FINISHED:** 19-9-24

EXCAVATOR TYPE: Shovel

GROUND ELEV. (ft): 3454.3

COORDINATES (ft): N 803864 E 1005735

DEPTH (feet)	SAMPLE TYPE	SAMPLE No.	SYMBOL	DESCRIPTION OF MATERIALS	INSTRUMENT DETAILS
	Bulk	1		SAND (SM) medium to coarse, gravelly, some silt, dark brown (10YR3/3), dry, earthy odor, homogeneous, no cementation, no HCl reaction, no carbonate development [Quaternary Alluvium].	
1				1.00 3453.30 End of Test Pit at 1.00 ft	
2					
3					

Su - ksf: 1 2 3 4

VANE PEAK ◆ FIELD ■ LAB ▲ UC/2 △ P.PEN/2
REMOLD ◇ □

★ % FINES

W_P% W% W_L%

20 40 60 80

KCB Consultants Ltd.

PROJECT NO.: UM09441A23

PROJECT: Skunk Camp TSF Reclamation Plan

LOCATION: Dripping Springs Wash

LOGGED BY: MO **CHECKED BY:** CK

SHEET 1 OF 1 **TEST PIT NO.:** TPC19-16

171204 KCB LIB PLOG.GLB V4.00 KCBL_TEST_PIT_E UM09441A23.GPJ KCB PLOG.GDT 2020-03-24 8:44:57 AM

TEST PIT LOG

STARTED: 19-9-24 **FINISHED:** 19-9-24
EXCAVATOR TYPE: Shovel
GROUND ELEV. (ft): 3484.9
COORDINATES (ft): N 800585 E 1004587

Su - ksf: 1 2 3 4
VANE PEAK / REMOLD — FIELD ◆ ◇ — LAB ■ □ — ▲ UC/2 — △ P.PEN/2
★ % FINES
W_P% × — W% ○ — W_L% ×
20 40 60 80

DEPTH (feet)	SAMPLE TYPE	SAMPLE No.	SYMBOL	DESCRIPTION OF MATERIALS	INSTRUMENT DETAILS
	Bulk	1		CLAY (CH) sandy, some gravel, intermediate to high plasticity, firm, reddish brown (5YR4/6), gravel consists of quartzite, trace chert, trace mafics, homogeneous, moderate dry strength; weak to moderate HCl reaction, stage I carbonate development [Quaternary Pediment].	
1				1.00 / 3483.90 End of Test Pit at 1.00 ft	
2					
3					

KCB Consultants Ltd.

PROJECT NO.: UM09441A23
PROJECT: Skunk Camp TSF Reclamation Plan
LOCATION: Dripping Springs Wash
LOGGED BY: MO **CHECKED BY:** CK
SHEET 1 OF 1 **TEST PIT NO.:** TPC19-17

171204 KCB LIB PLOG.GLB V4.00 KCBL_TEST_PIT_E UM09441A23.GPJ KCB PLOG.GDT 2020-03-24 8:44:57 AM

TEST PIT LOG

STARTED: 19-9-24 **FINISHED:** 19-9-24

EXCAVATOR TYPE: Shovel

GROUND ELEV. (ft): 3422.6

COORDINATES (ft): N 794045 E 1006602

DEPTH (feet)	SAMPLE TYPE	SAMPLE No.	SYMBOL	DESCRIPTION OF MATERIALS	INSTRUMENT DETAILS
0	Bulk	1		GRAVEL (GC) coarse, and cobbles, some clay, gap graded, loose, subround to subangular, max. particle size 5 in, dark yellowish brown (10YR4/4), clast supported, homogeneous, slight sulfur odor, weak to moderate cementation, nodules present, clasts consist of predominantly grey quartzite and black volcanics, strong HCl reaction, stage III carbonate development [Gila Conglomerate].	
1.70 (3420.90)				End of Test Pit at 1.70 ft	

Su - ksf: 1 2 3 4

VANE PEAK ◆ FIELD ■ LAB ▲ UC/2 △ P.PEN/2

REMOLD ◇ □

★ % FINES

W_P% W% W_L%

20 40 60 80

PROJECT NO.: UM09441A23

PROJECT: Skunk Camp TSF Reclamation Plan

LOCATION: Dripping Springs Wash

LOGGED BY: MO **CHECKED BY:** CK

SHEET 1 OF 1 **TEST PIT NO.:** TPC19-18

KCB Consultants Ltd.

171204 KCB LIB PLOG.GLB V4.00 KCBL_TEST_PIT_E UM09441A23.GPJ KCB PLOG.GDT 2020-03-24 8:44:58 AM

TEST PIT LOG

STARTED: 19-9-24 **FINISHED:** 19-9-24

EXCAVATOR TYPE: Shovel

GROUND ELEV. (ft): 3438.2

COORDINATES (ft): N 799650 E 1014225

DEPTH (feet)	SAMPLE TYPE	SAMPLE No.	SYMBOL	DESCRIPTION OF MATERIALS	INSTRUMENT DETAILS
0	Bulk	1		GRAVEL (GC) and cobbles, some clay, gap graded, loose, subrounded, yellowish red (5YR4/6), homogeneous, earthly odour, clasts consist of quartzite (white/grey), granite, no HCl reaction; no to stage I carbonate development [Quaternary Pediment].	
1				1.00 3437.20 End of Test Pit at 1.00 ft	
2					
3					

Su - ksf: 1 2 3 4

VANE PEAK ◆ FIELD ■ LAB ▲ UC/2 △ P.PEN/2
REMOLD ◇ □

★ % FINES

W_P% W% W_L%

20 40 60 80

KCB Consultants Ltd.

PROJECT NO.: UM09441A23

PROJECT: Skunk Camp TSF Reclamation Plan

LOCATION: Dripping Springs Wash

LOGGED BY: MO **CHECKED BY:** CK

SHEET 1 OF 1 **TEST PIT NO.:** TPC19-19

171204 KCB LIB PLOG.GLB V4.00 KCBL_TEST_PIT_E_UM09441A23.GPJ KCB PLOG.GDT 2020-03-24 8:44:58 AM

TEST PIT LOG

STARTED: 19-9-24 **FINISHED:** 19-9-24

EXCAVATOR TYPE: Shovel

GROUND ELEV. (ft): 3352.3

COORDINATES (ft): N 794975 E 1007839

DEPTH (feet)	SAMPLE TYPE	SAMPLE No.	SYMBOL	DESCRIPTION OF MATERIALS	INSTRUMENT DETAILS
1	Bulk	1		GRAVEL (GC) fine to coarse, and clay to some clay, some coarse sand, trace cobbles, broadly graded, compact, low to intermediate plasticity, clasts consist of sub rounded quartzite; homogeneous; no dilatancy, low dry strength, weak to no HCl reaction, stage I carbonate development [Quaternary Pediment].	
2				2.00 3350.30 End of Test Pit at 2.00 ft	
3					

Su - ksf: 1 2 3 4

VANE PEAK ◆ FIELD ■ LAB ▲ UC/2

REMOLD ◇ FIELD □ LAB △ P.PEN/2

★ % FINES

W_P% W% W_L%

20 40 60 80

PROJECT NO.: UM09441A23

PROJECT: Skunk Camp TSF Reclamation Plan

LOCATION: Dripping Springs Wash

LOGGED BY: MO **CHECKED BY:** CK

SHEET 1 OF 1 **TEST PIT NO.:** TPC19-20

KCB Consultants Ltd.

171204 KCB LIB PLOG.GLB V4.00 KCBL_TEST_PIT_E UM09441A23.GPJ KCB PLOG.GDT 2020-03-24 8:44:59 AM

TEST PIT LOG

STARTED: 19-9-24 **FINISHED:** 19-9-24

EXCAVATOR TYPE: Shovel

GROUND ELEV. (ft): 3384.6

COORDINATES (ft): N 797623 E 1006109

DEPTH (feet)	SAMPLE TYPE	SAMPLE No.	SYMBOL	DESCRIPTION OF MATERIALS	INSTRUMENT DETAILS
0	Bulk	1		SAND (SC) fine to coarse, clayey, gravelly, broadly graded, compact to dense, low to medium plasticity, reddish brown (5YR4/3), dry, homogeneous, dry strength low to medium increasing with depth, weak cementation, weak to no HCl reaction, stage I carbonate development [Quaternary Pediment].	
1				1.00 3383.60 End of Test Pit at 1.00 ft	
2					
3					

Su - ksf: 1 2 3 4

VANE PEAK ◆ FIELD ■ LAB ▲ UC/2
REMOLD ◇ □ △ P.PEN/2

★ % FINES

W_P% W% W_L%

20 40 60 80

KCB Consultants Ltd.

PROJECT NO.: UM09441A23

PROJECT: Skunk Camp TSF Reclamation Plan

LOCATION: Dripping Springs Wash

LOGGED BY: MO **CHECKED BY:** CK

SHEET 1 OF 1 **TEST PIT NO.:** TPC19-21

171204 KCB LIB PLOG.GLB V4.00 KCBL_TEST_PIT_E UM09441A23.GPJ KCB PLOG.GDT 2020-03-24 8:44:59 AM

TEST PIT LOG

STARTED: 19-9-24 **FINISHED:** 19-9-24

EXCAVATOR TYPE: Shovel

GROUND ELEV. (ft): 3305.5

COORDINATES (ft): N 797443 E 1006731

DEPTH (feet)	SAMPLE TYPE	SAMPLE No.	SYMBOL	DESCRIPTION OF MATERIALS	INSTRUMENT DETAILS
0	Bulk	1		SAND (SP-SM) fine to coarse, some fine gravel, trace to some silt, poorly graded, loose to compact, subrounded to angular, max. particle size 3 in, low plasticity, dark brown (10YR3/3), dry, homogeneous, sand consists of quartz, plagioclase and mafic grains, moderate HCl reaction, stage I carbonate development [Quaternary Alluvium].	
1.25				3304.25 End of Test Pit at 1.25 ft	

Su - ksf: 1, 2, 3, 4

VANE PEAK ◆ FIELD ■ LAB ▲ UC/2 △ P.PEN/2

REMOLD ◇ □

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20 40 60 80

KCB Consultants Ltd.

PROJECT NO.: UM09441A23

PROJECT: Skunk Camp TSF Reclamation Plan

LOCATION: Dripping Springs Wash

LOGGED BY: MO **CHECKED BY:** CK

SHEET 1 OF 1 **TEST PIT NO.:** TPC19-22

171204 KCB LIB PLOG.GLB V4.00 KCBL_TEST_PIT_E UM09441A23.GPJ KCB PLOG.GDT 2020-03-24 8:44:59 AM

TEST PIT LOG

STARTED: 19-9-24 **FINISHED:** 19-9-24

EXCAVATOR TYPE: Shovel

GROUND ELEV. (ft): 3272.7

COORDINATES (ft): N 797502 E 1007880

DEPTH (feet)	SAMPLE TYPE	SAMPLE No.	SYMBOL	DESCRIPTION OF MATERIALS	INSTRUMENT DETAILS
0	Bulk	1		SAND (SC) fine to coarse, clayey, some fine gravel, broadly graded, compact, low to intermediate plasticity, reddish brown (5YR4/4), no dilatancy, medium dry strength, clasts consist of quartzite, dolomite [Quaternary Alluvium].	
1.50				3271.20 End of Test Pit at 1.50 ft	

Su - ksf: 1 2 3 4

VANE PEAK ◆ FIELD ■ LAB ▲ UC/2 △ P.PEN/2
REMOLD ◇ □

★ % FINES

W_P% W% W_L%

20 40 60 80

PROJECT NO.: UM09441A23

PROJECT: Skunk Camp TSF Reclamation Plan

LOCATION: Dripping Springs Wash

LOGGED BY: MO **CHECKED BY:** CK

SHEET 1 OF 1 **TEST PIT NO.:** TPC19-23

KCB Consultants Ltd.

171204 KCB LIB PLOG.GLB V4.00 KCBL_TEST_PIT_E UM09441A23.GPJ KCB PLOG.GDT 2020-03-24 8:45:00 AM

TEST PIT LOG

STARTED: 19-9-24 **FINISHED:** 19-9-24

EXCAVATOR TYPE: Shovel

GROUND ELEV. (ft): 3307.0

COORDINATES (ft): N 797533 E 1007494

DEPTH (feet)	SAMPLE TYPE	SAMPLE No.	SYMBOL	DESCRIPTION OF MATERIALS	INSTRUMENT DETAILS
0	Bulk	1		SAND (SC) fine to coarse, some clay, some gravel, broadly graded, compact, no to low plasticity, brown (7.5YR4/4), homogeneous; earthy odour; dry; clasts quartzite, chert, dolomite, moderate HCl reaction, stage I carbonate development [Gila Conglomerate].	
1.25				3305.75 End of Test Pit at 1.25 ft	

Su - ksf: 1 2 3 4

VANE PEAK ◆ FIELD ■ LAB ▲ UC/2 △ P.PEN/2

REMOLD ◇ □

★ % FINES

W_P% W% W_L%

20 40 60 80

PROJECT NO.: UM09441A23

PROJECT: Skunk Camp TSF Reclamation Plan

LOCATION: Dripping Springs Wash

LOGGED BY: MO **CHECKED BY:** CK

SHEET 1 OF 1 **TEST PIT NO.:** TPC19-24

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171204 KCB LIB PLOG.GLB V4.00 KCBL_TEST_PIT_E UM09441A23.GPJ KCB PLOG.GDT 2020-03-24 8:45:00 AM

APPENDIX II

Updated Tailings Staging and Deposition Plan

Appendix II
Updated Tailings Staging and Deposition Plan

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Appendix II-A Tailings Staging Figures

II-1 INTRODUCTION

This appendix presents an update to the tailings staging plan for the Draft Environmental Impact Statement (DEIS) design (KCB 2018) for the Alternative 6 Skunk Camp tailings storage facility (TSF). The original tailings staging plan considered a Mine Plan of Operations (MPO) production case generating approximately 1.37 billion tons (Bton) of tailings with an average daily tailings production rate at peak production of 120,000 tons per day (tpd). The DEIS design outlined an ultimate tailings surface that diverts the TSF catchment post-closure to the north into Mineral Creek. In response to DEIS comments, an alternative ultimate TSF configuration was developed that will divert the TSF catchment south to Dripping Springs Wash post-closure. To achieve this, tailings deposition and staging was updated for the last 11 years of the mine life. Tailings deposition was simulated using MUK3D (MineBridge Software Inc, version 2018.1.4) to forecast the ultimate configuration, embankment raising plans and stage-storage curves.

Structure, assumptions and methodology from the 2018 DEIS tailings staging and deposition plan (KCB 2018) are maintained. Key updates include:

- revised tailings deposition strategy for scavenger tailings in the last 11 years;
- reduced cycloned sand requirements based on updated configuration; and
- revised raising schedule for the Main Embankment.

The structure and text of the 2018 DEIS staging have been kept for this appendix. Changes to the 2018 DEIS deposition plan are highlighted in this appendix with ***bolded and italicized*** text. Figure II-6, II-7, II-8, II-11, II-12 and attached Appendix II-A have also been updated as a result of changes to the depositional strategy.

II-2 DEPOSITION STRATEGY AND STAGING

II-2.1 Deposition Strategy

The key features of the Skunk Camp ultimate layout are as follows:

- Upstream non-contact water will be diverted as much as practical.
- The pyrite tailings will be stored in two pyrite cells within the impoundment; both cells will eventually be encapsulated by the scavenger tailings. The pyrite cells will be contained using cycloned sand downstream embankments with slopes of 2.5H:1V.
- The pyrite cell will include an engineered low-permeability layer for vertical and lateral containment.
- Starter dams will be constructed from locally sourced borrow materials to store the tailings in the scavenger impoundment and Pyrite Cell 1 in early years, prior to sufficient cycloned sand being produced to raise the embankment. Section II-3.5 describes the starter dams sizing assumptions.

- The scavenger tailings will be impounded by a cross-valley, centerline-constructed, cycloned sand embankment (referred to as the Main Embankment) with a downstream slope of 3H:1V.

The tailings and operating pond management strategy are as follows:

- A portion of the scavenger tailings will be cycloned for embankment construction. Total scavenger tailings that bypasses the cyclones and thickened cyclone overflow will be deposited into the impoundment from the Main Embankment crest.
- Scavenger beach will be maintained dry (i.e. no pond). Precipitation runoff from scavenger beach will be temporarily collected in low spots or routed directly to the reclaim tank or the reclaim pond in the pyrite cells.
- Pyrite tailings will be deposited from a floating barge or pipelines subaqueously into the pyrite cells. The pyrite cells will be operated with an average 10 ft water cover over the pyrite tailings to account for pyrite deposition slopes and a minimum 5 ft water cover. Allowances for flood storage and freeboard are also included in sizing assumptions, see Section II-3.
- Water in the pyrite cells (reclaim pond) will be reclaimed from a floating barge to a tank prior to being pumped back to the West Plant, where it will be reintroduced back into the processing circuit. During times of a negative water balance, water will be pumped into the pyrite cells to maintain the required water cover.

II-2.2 Deposition Staging

The tailings deposition strategy is characterized by four stages, further described below and including the tailings tonnages placed during each of these stages as shown in Table II-1. For the location of the catchments and key structures (e.g. general fill dams) described, refer to Figure II-A.1 to Figure II-A.11.

- Stage I – Years 0 to 2 (1% of total tailings volume) – See Figure II-A.2:
  - construction of the scavenger tailings Main Embankment and Pyrite Cell 1 starter dams (prior to Year 0);
  - impounding of water behind the Pyrite Cell 1 starter dam to establish a minimum water cover for the pyrite tailings and to float the pyrite deposition system and reclaim barge;
  - pyrite tailings deposition into Pyrite Cell 1 from the pyrite deposition barge;
  - scavenger tailings deposition from the crest of the Main Embankment. Slurry bleed water that collects on the scavenger tailings surface is collected in low points and pumped to Pyrite Cell 1; and
  - cycloning of scavenger tailings to produce cycloned sand for embankment construction at the main and Pyrite Cell 1 embankments.
- Stage II – Years 3 to 15 (32% of total tailings volume) – See Figure II-A.3 to Figure II-A.5:
  - continued subaqueous pyrite tailings deposition in Pyrite Cell 1;

- continued scavenger tailings deposition within the scavenger beach. Slurry bleed water and runoff that collects on the scavenger tailings surface is collected in low points and pumped to Pyrite Cell 1;
- continued cycloning of scavenger tailings to produce cycloned sand for embankment construction of the main and Pyrite Cell 1 embankments, as well as for the establishment of the starter embankment for Pyrite Cell 2 (starting in Year 5 to contain scavenger tailings in the scavenger beach area); and
- impounding of water behind the Pyrite Cell 2 starter dam to establish a minimum water cover for the pyrite tailings and to float the pyrite deposition system and reclaim barge.

- ***Stage III – Years 16 to 30 (54% of total tailings volume) – See Figure II-A.6 and Figure II-A.7:***
  - pyrite tailings deposition into Pyrite Cell 2 from the pyrite deposition barge;
  - scavenger tailings deposition in Pyrite Cell 1, to cover the pyrite tailings and displace the pond. As the pond is displaced it will be either syphoned or channeled to Pyrite Cell 2;
  - continued scavenger tailings deposition within the main impoundment, eventually inundating Pyrite Cell 1 (between Year 15 and 30, depending on operations). Slurry bleed water and runoff that collects on the scavenger tailings surface is collected in low points and pumped to Pyrite Cell 2; and
  - continued cycloning of scavenger tailings to produce cycloned sand for embankment construction at the main and Pyrite Cell 2 embankments.
- ***Stage IV – Years 31 to 41 (13% of total tailings volume) – See Figure II-A.8 to Figure II-A.11:***
  - pyrite deposition into Pyrite Cell 2 from the pyrite deposition system;
  - ***continued scavenger tailings deposition within the main impoundment, as well as north of Pyrite Cell 2 to form the ultimate tailings surface that slopes to the south-east. The scavenger tailings deposition is subdivided into Stages IV-a to IV-d (summarized below) to re-grade the surface for closure. See Figure II-A.8 to II-A.11 for scavenger tailings spigot locations;***
    - ***a) Year 31: scavenger tailings deposition from northeast extents of TSF footprint;***
    - ***b) Year 32: scavenger tailings deposition from southwest extents of TSF footprint;***
    - ***c) Years 33 to 35: scavenger tailings deposition from north extents of TSF footprint (north of Pyrite Cell 2); and***
    - ***d) Years 36-41: scavenger tailings deposition from southwest extents of TSF footprint;***
  - Slurry bleed water and runoff that collects on the scavenger tailings surface is collected in low points and pumped to Pyrite Cell 2 or the reclaim tank;
  - ***continued cycloning of scavenger tailings to produce cycloned sand for embankment construction at Pyrite Cell 2 embankment; and***

- ***towards the end of Stage IV, scavenger tailings are deposited within Pyrite Cell 2 to cover the pyrite tailings and promote drainage towards TSF low point to the southeast (where a closure channel will be constructed), reducing the area of pyrite tailings that will need to be covered and reclaim pond to be managed at the end of operations.***

Table II-1 Summary of Tailings Tonnages by Stage

Stage	Mine Years	Scavenger Tailings (MTons)						Pyrite Tailings (MTons)	
		Cycloned Sand			Total Scavenger or Overflow				
		Main Emb.	Pyrite Cell 1 Emb.	Pyrite Cell 2 Emb.	Scavenger Beach – Upstream of Main Emb.	Scavenger Beach – North of Pyrite Cells	Pyrite Cells[1]	Pyrite Cell 1	Pyrite Cell 2
I	0 - 2	***1.3***	***1.3***	***0.0***	***9.8***	-	***0.2***	***1.8***	***1.9***
II	3 - 15	***67.8***	***42.2***	***22.4***	***270.2***	-	***8.8***	***77.8***	***84.0***
III	***16 - 30***	***53.0***	***0.0***	***41.6***	***464.2***	-	***11.9***	-	***113.9***
IV	***31 - 41***	***0.0***	***0.0***	***2.9***	***107.3***	***36.9***	***3.0***	-	***26.5***

Notes: 1. A percentage of the overflow tailings are assumed to be deposited in the Pyrite Cells to account for the 15% storage contingency.

II-2.3 Modeling Approach

The staging assessment was carried out in two general phases:

1. **Phase 1** – Confirm ultimate configuration and estimate annual raising using stage storage relationships.
2. **Phase 2** – Three-dimensional (3D) modeling of the TSF for key years during operations to confirm the estimates from Phase 1.

Phase 1

The ultimate TSF configuration (developed in MUK3D) was divided into six regions and stage-storage relationships developed for each: main cycloned sand embankment; the two pyrite cell cycloned sand embankments; scavenger beach (north and south); and the two pyrite tailings cells (see Figure 5.2 from KCB 2018). The forecasted annual tailings production in each region was used to estimate the annual crest/impoundment level, based on the following assumptions:

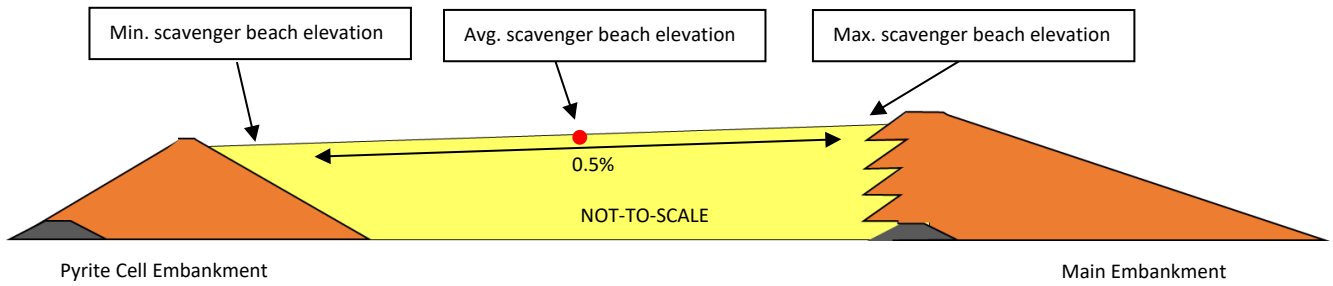
- Pyrite Cell 1 is filled first, the annual embankment elevation is estimated based on the average elevation of the tailings deposited into the cells and the pyrite cell storage requirements outlined in Section II-3.7 and Section II-3.9.
- Pyrite Cell 2 is filled after Pyrite Cell 1 is full and has similar pond depth and storage requirements as Pyrite Cell 1. However, the annual embankment elevation is estimated as the higher of the elevation required to either contain the pyrite tailings or to stop the encroachment of the scavenger tailings beach into Pyrite Cell 2. Based on this constraint, the Pyrite Cell 2 starter dam begins construction in Year 6. This was estimated by assuming the

Pyrite Cell 2 embankment crest elevation needs to be at the same elevation as the scavenger tailings beach adjacent to the Pyrite Cell 2 embankment, assuming:

- distance from Main Embankment to the Pyrite Cell 2 = 6,400 ft;
- beach slope = 0.5%;
- scavenger beach elevation difference over the beach length ≈ 32 ft;
- maximum scavenger beach elevation ≈ average scavenger beach elevation + 16 ft ;
- minimum scavenger beach elevation ≈ average scavenger beach elevation – 16 ft; and
- therefore, the Pyrite Cell 2 embankment crest is estimated as the minimum scavenger beach elevation (Figure II-1).

- The main cycloned sand embankment crest must be at least equal to the estimated maximum elevation of the scavenger beach, which is approximately the average beach elevation plus 16 ft, to account for scavenger beach tailings deposition slopes, which are not considered in the stage storage curves (Figure II-1).
- Scavenger tailings that are not cycloned for embankment construction report to the scavenger beach upstream of the Main Embankment until Year 36, after which it will be deposited north of the pyrite cells.

Figure II-1 Scavenger Minimum, Maximum and Average Beach Elevation



Phase 2

Based on the results of Phase 1, select years were modeled in MUCK3D to confirm the embankment crest elevations and volumes for each section of the TSF.

II-3 MODELING INPUT PARAMETERS AND ASSUMPTIONS

II-3.1 General

The required model input parameters for this assessment are:

- baseline topography;
- discharge locations (i.e. spigots);
- tailings subaerial beach and below water slopes (see Section II-3.4);
- tailings dry density (see Section II-3.4); and
- deposition rate (tons/year) (see Section II-3.3).

Design criteria, basis and assumptions for the TSF are included in the Design Basis Memorandum, included in Appendix I of KCB 2018.

II-3.2 Topography

The baseline topography was provided by Resolution Copper (purchased from NEXTMap). KCB converted the original file which was in NAD83 to Arizona State Plane (the elevation was also converted to feet). The accuracies of the topography are region dependent but NEXTMap specified it as “1.0 m Root mean square error (RMSE) / 1.65 m LE90” (i.e. 90% of the sampling will be within 1.65 m from true vertical elevation). The baseline used for MUK3D modeling was the topography with 40 ft grid cell spacing which is adequate for the terrain.

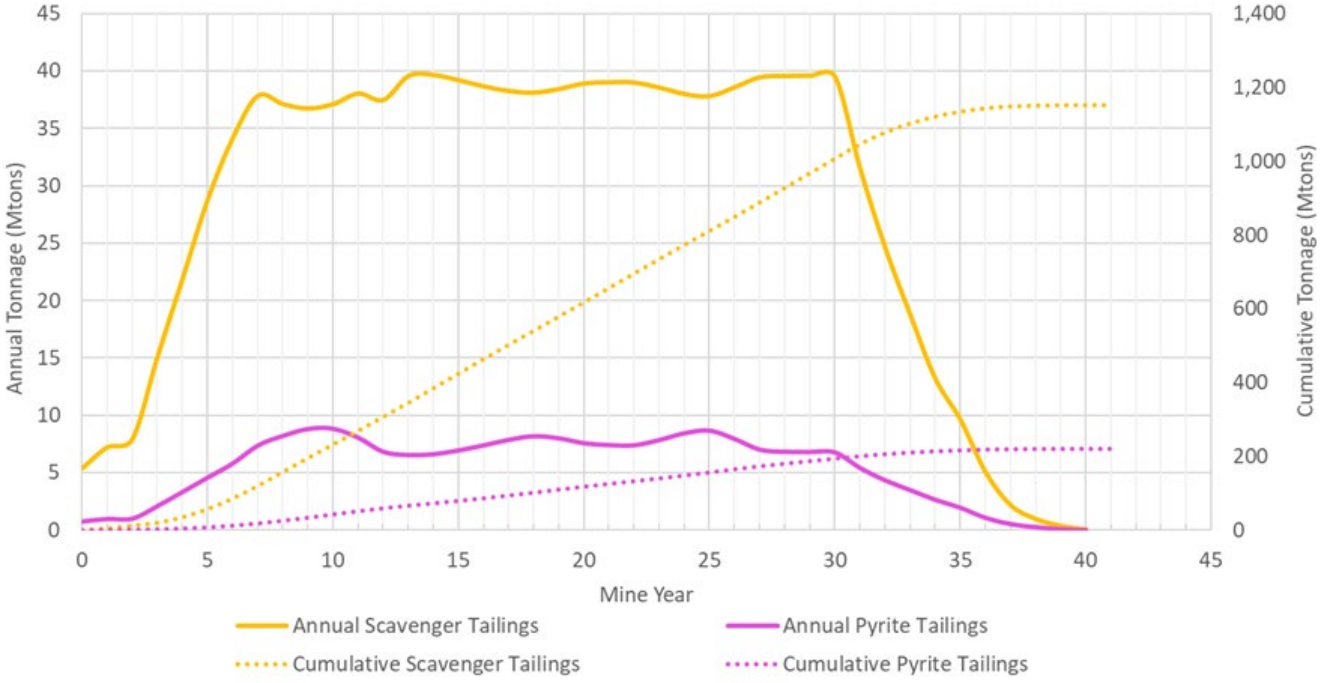
II-3.3 Tailings Production Schedule

Figure II-2 shows the forecasted tailings production schedule provided by RCM. Total tailings production is summarized in Table II-2.

Table II-2 Total Tailings Production Schedule

Item	Production Schedule
Scavenger Tailings	1,151 Mtons (84% of total tailings by weight)
Pyrite Tailings	220 Mtons (16% of total tailings by weight)
Total Tailings (scavenger and pyrite)	1,371 Mtons
Number of Production Years	41

Figure II-2 Tailings Production Schedule



II-3.4 Tailings Properties

Table II-3 summarizes the tailings deposition properties and model inputs for MUK3D tailings deposition simulations, refer to the DBM in Appendix I (KCB 2018) for further details. A lower dry density was assumed for the deposited tailings in first 5 years of operation to account for lower degree of consolidation and elevated rate of rise.

Table II-3 Tailings Deposition Properties

Tailings Stream	Tailings Type	Dry Density (pcf)	Deposition Solids Content (%)	Tailings Slopes (Note 1)	Mine Life Total Tonnage (Mtons)	Total Available Volume (Myd^3) (Note 3)
Scavenger	Total	Years (0-5): 75 Years (6-41): 81	60%	Above Water: 1% for the first 1,500 ft, 0.5% after 1,500 ft.	1150	958
	Cyclone Overflow		60%		544	499
	Cycloned Sand	113	60%		370	243
Pyrite	Total	106	50%	Below Water: 10% for the first 100 ft, 0.5% after 100 ft. Pyrite tailings was modelled assuming horizontal filling and 5 ft depth allowance for pyrite deposition slopes. (Note 2)	220	154

Notes:
1. Scavenger tailings slopes are based on topography and bathymetry surveys from two benchmark projects with large, cycloned sand impoundment beaches and slopes below water. These facilities have long exposed beaches, up to five miles. Pyrite tailings slopes are based on topography and bathymetry surveys of subaqueous disposal of high-pyrite tailings from floating barges.
2. These slopes are preliminary estimates at this stage of design and will be reviewed in future design stages.
3. Volumes given assume all available scavenger tailings is cycloned. Therefore, these are the same as the final staging results presented in Section II-4.

II-3.5 Starter Dams

Starter dams for Pyrite Cell 1 and the Main Embankment will be constructed out of locally sourced borrow materials using the assumptions summarized in Table II-4. It is assumed that the Pyrite Cell 2 starter dam will be constructed of cycloned sand. The borrow material fill volume for the starter dams has been accounted in required cycloned sands estimation.

Table II-4 Starter Dam Sizing Assumptions and Results

Parameter	Scavenger Starter Dam	Pyrite Cell 1 Starter Dam Assumptions
Crest width	50 ft	
Side Slopes	3H:1V	2.5H:1V
Number of years of storage	2 (Note 1)	2 (Note 1)
Tailings storage	12.4 Myd^3	1.4 Myd^3
Design flood storage to contain the PMF (Note 2)	17,223 acre-ft	10,027 acre-ft
Allowance for pyrite deposition slopes and minimum water cover	N/A	10 ft (Note 3)
Minimum "Dry" Freeboard	5 ft	3 ft (Note 4)
Required fill volume/borrow	6.4 Myd^3	5.5 Myd^3
Required Dam Height	146 ft	166 ft
Dam Elevation	3252 ft	3417 ft

Notes:
1. Assuming total scavenger tailings (no cycloning)
2. Based on scavenger and pyrite starter dam catchment areas (with no diversions) of 9,331 acres and 5,432.7 acres, respectively; and PMP-72-hr depth = 22.15 inches (see Appendix I DBM of the DEIS report (KCB 2018)).
3. Underwater pyrite tailings deposition surface was conservatively designed 5 ft above the average pyrite tailings elevation surface to account for possible pyrite tailings slopes. The operating pond above this surface was assumed to maintain a minimum depth of 5 ft considered (see Figure II-5).
4. See Table II-5 for pyrite cell sizing assumptions.

II-3.6 Cycloned Sand Embankment Raise Methodology

Two approaches to constructing the cycloned sand embankments were considered:

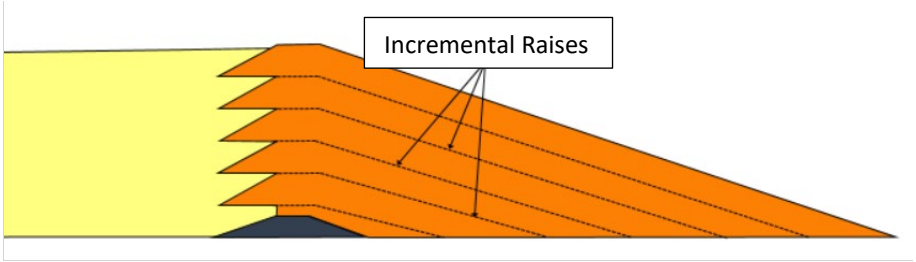
- "Sloped methodology": the downstream slope of the embankment is continuously maintained, refer to Figure II-3a. This represents the minimum amount of cycloned sand that must be placed annually to meet the crest elevation requirement but does not allow for progressive reclamation to begin.
- "Horizontal slice methodology": the embankment is constructed in horizontal slices that extend to the ultimate downstream face, refer to Figure II-3b. This represents the minimum amount of cycloned sand that must be placed annually to meet the crest elevation requirement and establish the downstream slope so that progressive reclamation of the entire exterior embankment slope can be completed shortly after an embankment raise.

The preferred method to raise the cycloned sand Main Embankment is raising it through horizontal lifts which allows for the reclamation of the embankment as it is raised. Due to constraints on cycloned sand availability, and the desire to establish the downstream slope of the embankment as soon as possible to begin progressive reclamation, the actual embankment raising methodology will use a combination of these strategies, refer to Figure II-3c. Hydraulic cell construction and sequencing of construction to balance the rate of rise with the downstream expansion of the cycloned sand shell will be addressed in future design stages.

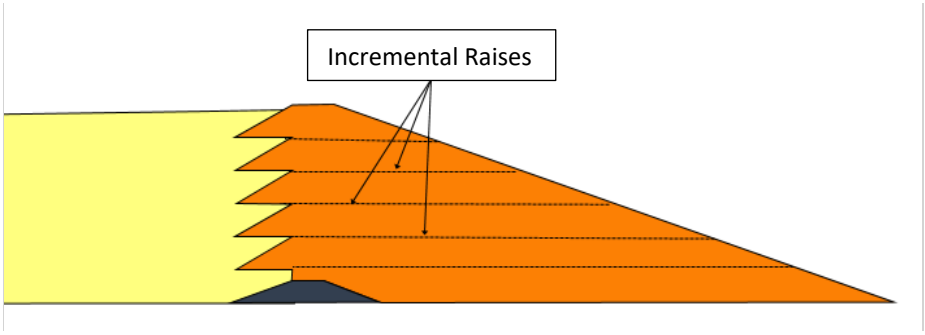
The crest elevation of the cycloned sand embankment was set at the start of each year to be high enough to store all tailings produced that year as well as flood storage.

Section II-4.1 describes the logic of selecting raising methods for pyrite cells and the Main Embankment.

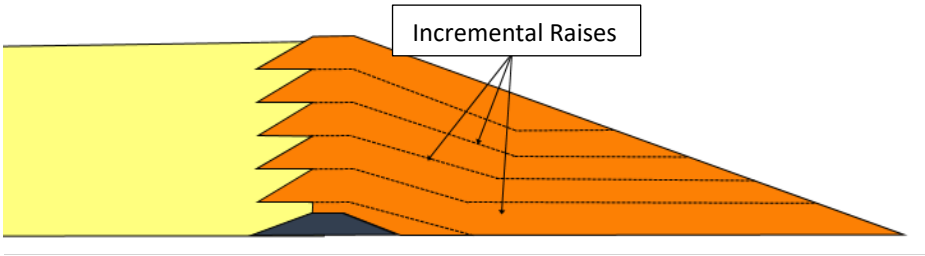
Figure II-3 Cycloned Sand Embankment Raise Methodology



a. Downstream Sloped Embankment Raises



b. Horizontal Slice Embankment Raises

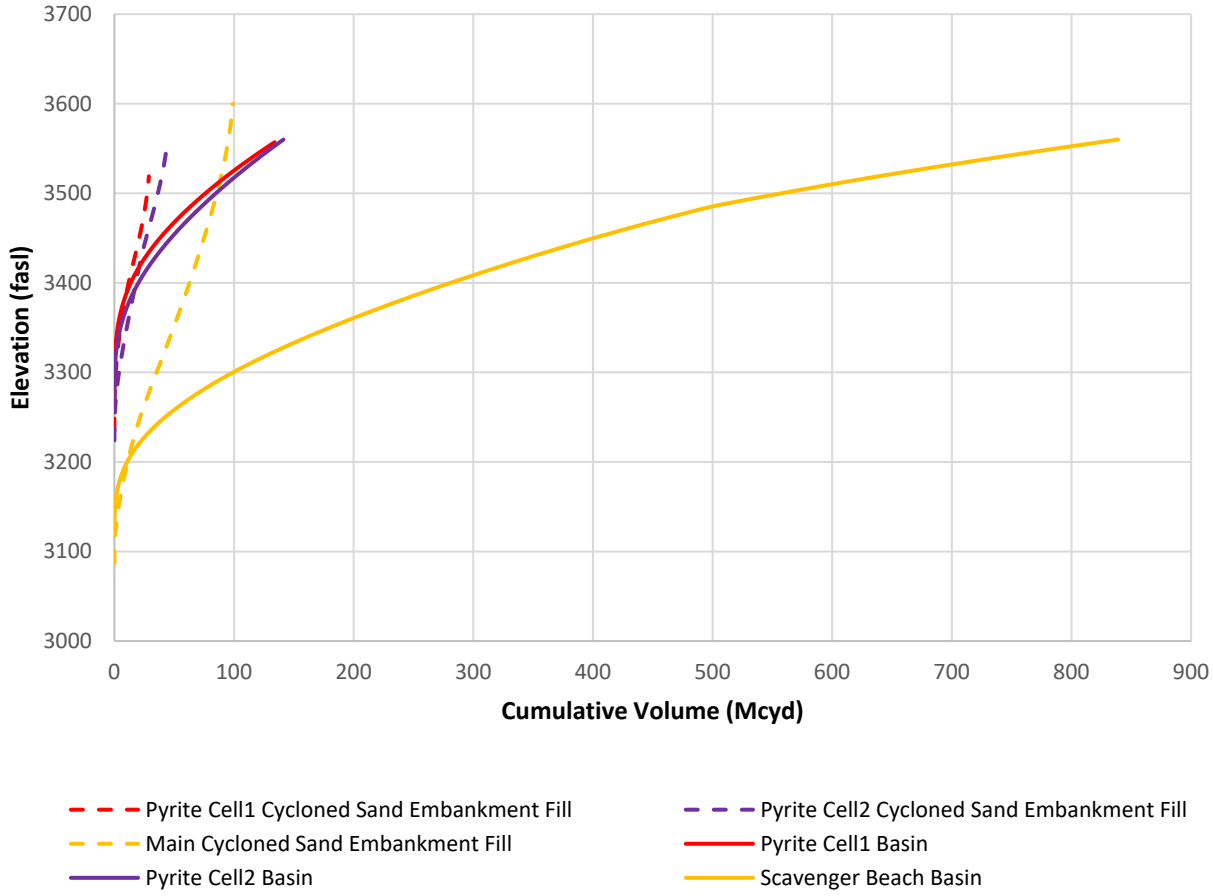


c. Combined Method of Embankment Raises

II-3.7 Stage Storage Curves

Figure II-4 shows the stage-storage curves that were created for the cycloned sand embankment fills and impoundment basins using MUK3D (MineBridge Software Inc, version 2018.1.4) based on the ultimate configuration. These stage-storage curves were input assumptions for Phase 1 modeling.

Figure II-4 TSF Region Horizontal Stage-Storage Curves



II-3.8 Flood Management

The precipitation runoff from the areas of the scavenger beach and upstream catchments will be collected in low points in the impoundment and pumped or routed to the pyrite cells or storage tanks. Internal ditches may be required during interim stages to manage the storm water.

The upstream non-contact water diversions are sized to store or convey the 100-year 24-hour storm event. Therefore, the TSF is required to have the capacity to store the local and upstream catchment for the 72-hour Probable Maximum Flood (PMF), with adequate freeboard or scavenger beach lengths (400 ft) as outlined in the DBM (Appendix I of KCB 2018). If the scavenger beach does not have an adequate beach length, an emergency spillway will be constructed.

II-3.9 Pyrite Cell Sizing

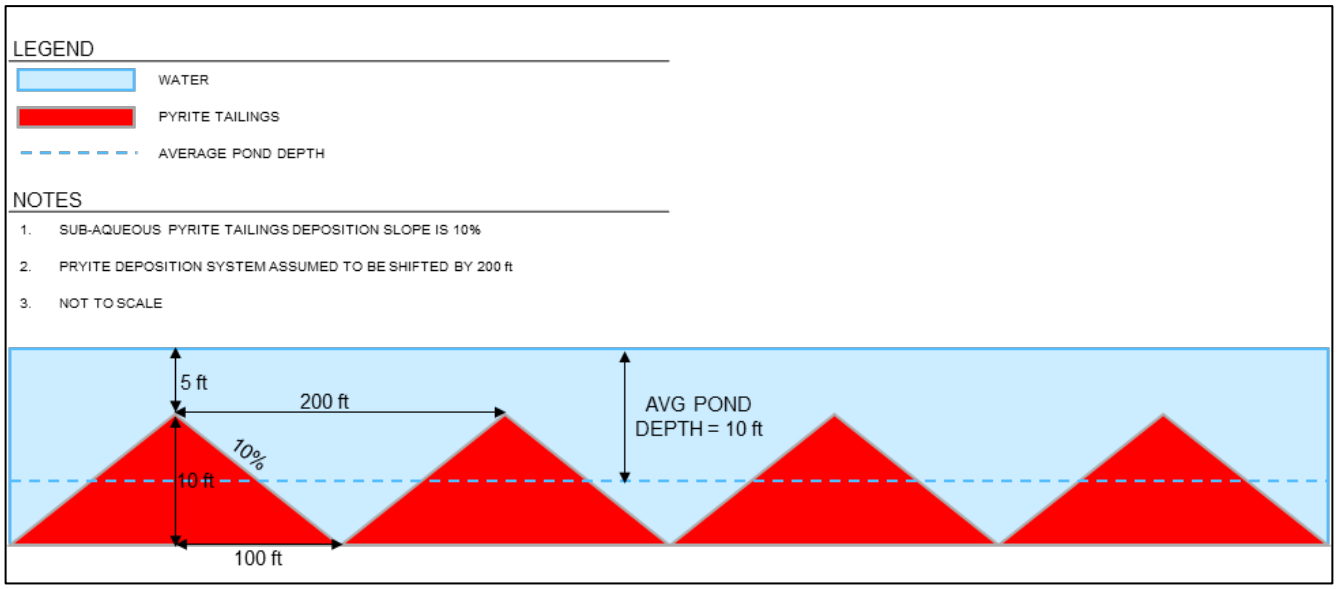
The pyrite cells were sized to store pyrite tailings plus 15% contingency to account for variations in tailings production, tailings slopes and operating pond volumes. Table II-5 shows the assumptions for sizing the Pyrite Cells.

Table II-5 Pyrite Cell Sizing Assumptions

Item	Design Assumptions	Comments
Pyrite Tailings	220 Mt (154 Myd^3)	DBM (Appendix I of KCB 2018)
Contingency Storage in the Pyrite Tailings	23 Myd^3	15% contingency storage volume for pyrite tailings and constructability allowance for developing a scavenger beach.
Depth Allowance for Underwater Deposition Slopes	5 ft	Based on: Subaqueous deposition slope = 10% (see Appendix I of KCB 2018) "Point of Deposition" Spacing[1] = 100 ft Depth between the lowest and highest portions of the pyrite tailings surface = 10 ft (see Figure II-5)
Minimum Depth of Operating Pond	5 ft	Allowance for water cover over the pyrite tailings and floating barge tailings pipeline discharge (see Figure II-5)
Depth Allowance for Storm Storage within Pyrite Cell 1	18 ft to 55 ft	Calculated as the Pyrite Cell 1 upstream catchment area without diversions (5,400 acres) multiplied by the 72-hr PMF (22.15 inches), assuming a runoff coefficient of 1.0. Note: the depth is adjusted throughout the mine life based on the upstream catchment area reporting to the cell and the stage storage relationship.
Depth Allowance for Storm Storage within Pyrite Cell 2	9 ft to 20 ft	Calculated as the Pyrite Cell 1 upstream catchment area without diversions (2,900 acres) multiplied by the 72-hr PMF (22.15 inches), assuming a runoff coefficient of 1.0. Note: the depth is adjusted throughout the mine life based on the upstream catchment area reporting to the cell and the stage storage relationship
Freeboard	3 ft	'dry' freeboard above peak flood level for wind setup and wave runup

Notes: 1. Pyrite tailings will be deposited by a floating barge or from pipelines extended into the pyrite cell. Details will be confirmed in future design stages.

Figure II-5 Pyrite Operating Pond and Subaqueous Tailings Deposition



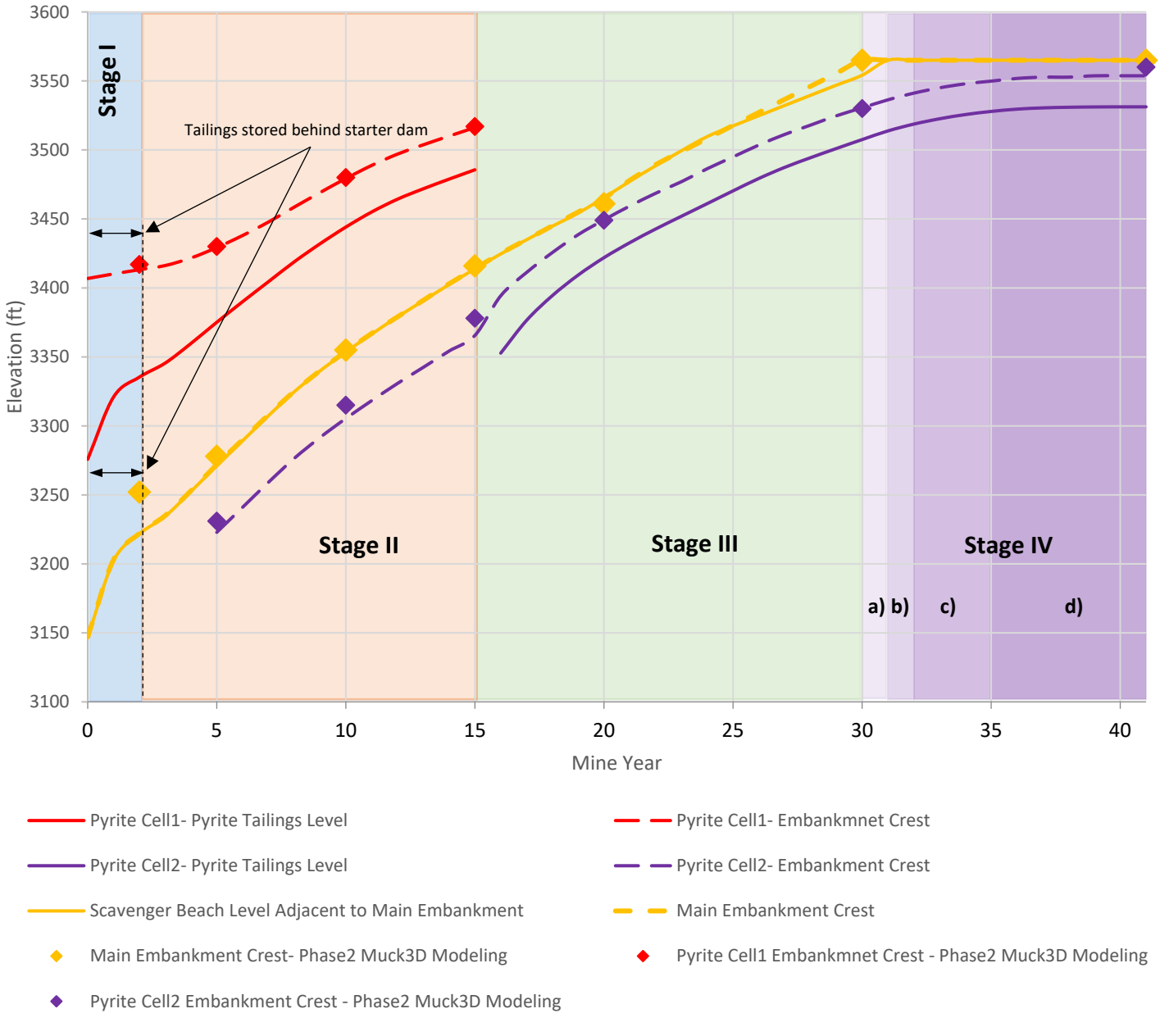
II-4 TAILINGS DEPOSITION RESULTS

II-4.1 General

Phase 1 tailings deposition staging was developed based on the ultimate configuration of the Main Embankment and the pyrite cells, and related stage-storage curves. These were checked in Phase 2 with interim MUK3D layouts. Phase 2 tailings staging figures are provided in Appendix II-A.

Figure II-6 shows the elevations of the scavenger beach, pyrite tailings and the cycloned sand embankment dams through the mine life.

Figure II-6 Elevation vs. Mine Year



Note: Refer to Section II-2.2 for a description of the deposition stages.

II-4.2 Cycloned Sand Usage

Figure II-7 compares the required and available cycloned sand through the mine life. It is predicted that 63% of theoretical cycloned sand available will be used to construct the embankment dams.

Figure II-7 Comparison of Total Cumulative Available and Required Cycloned Sand

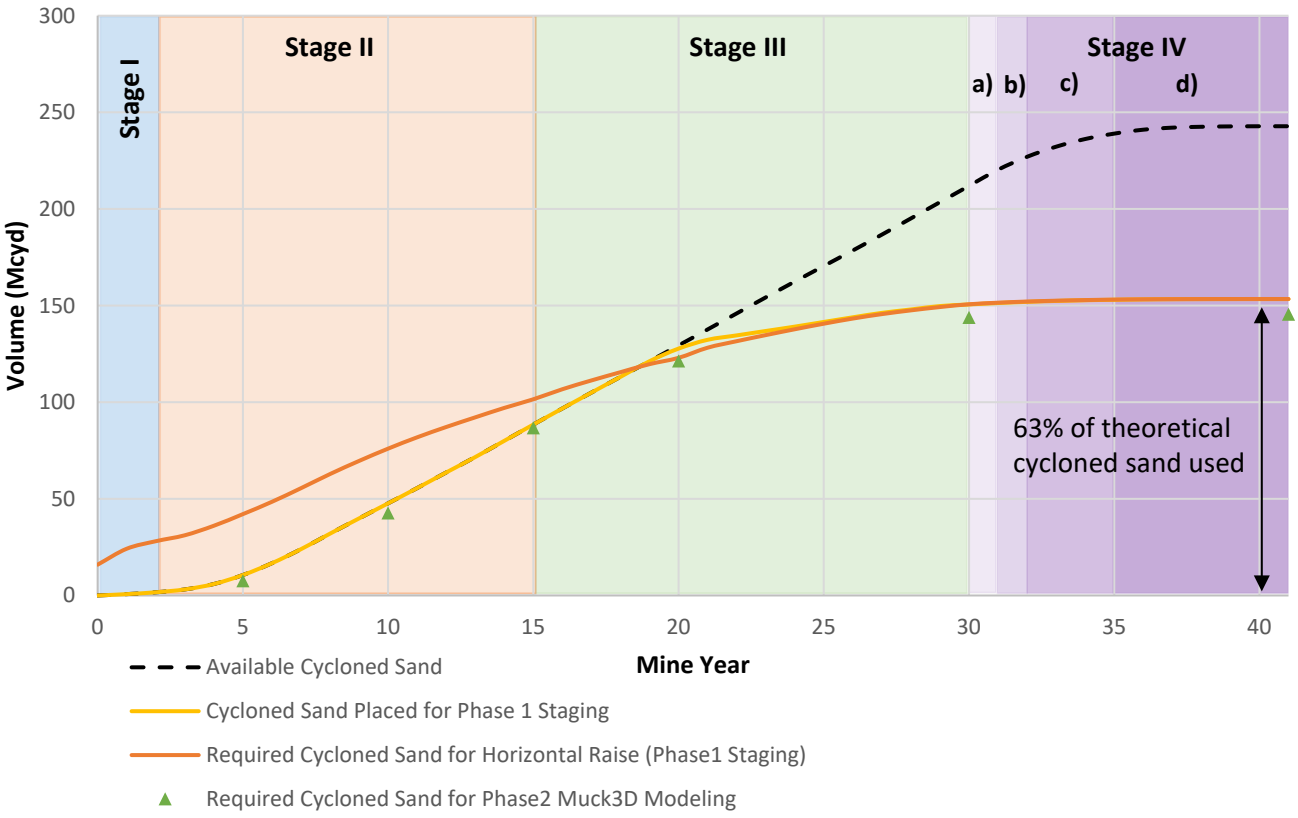


Figure II-8, Figure II-9, and Figure II-10 compare the estimated cumulative cycloned sands to be placed in the dam embankments and cycloned sands for Phase 1 and Phase 2 of the staging modeling. The forecasted available cycloned sand is adequate for sloped raising method of embankment dams. However due to the relative alignment of the pyrite cells and Main Embankment, and to meet the requirements for the minimum height above the tailings surfaces as outlined in Section II-3, KCB proposed the following methodologies for different cycloned sand embankments:

- As shown in Figure II-8, the main cycloned sand embankment could be built using the downstream sloped methodology prior to Year 10, and could be built using the horizontal filling from Year 20 onwards. The combined method could be used to raise the dam between Year 10 and Year 20. ***The Main Embankment reaches ultimate crest elevation at the end of Year 30 and therefore, will not require additional raises after Year 30.***

- As shown in Figure II-9, there is not enough cycloned sand available to raise the Pyrite Cell 1 in horizontal lifts. Therefore, prior to Year 7, it is assumed that embankment could be built using downstream sloped methodology. However, the scavenger tailings deposition extent reaches to the Pyrite Cell 1 ultimate footprint in Year 7, therefore combined raising methodology could be used from Year 7 onwards.
- Scavenger tailings will reach to the Pyrite Cell 2 footprint by the end of Year 4, therefore construction of Pyrite Cell 2 embankment will be launched at this time. The embankment will be to be raised in horizontal lifts. Construction of Pyrite Cell 2 north embankment can be delayed up to Year 16 when construction is required to contain the pyrite tailings.

Figure II-8 Comparison of Cumulative Cycloned Sand for Main Embankment

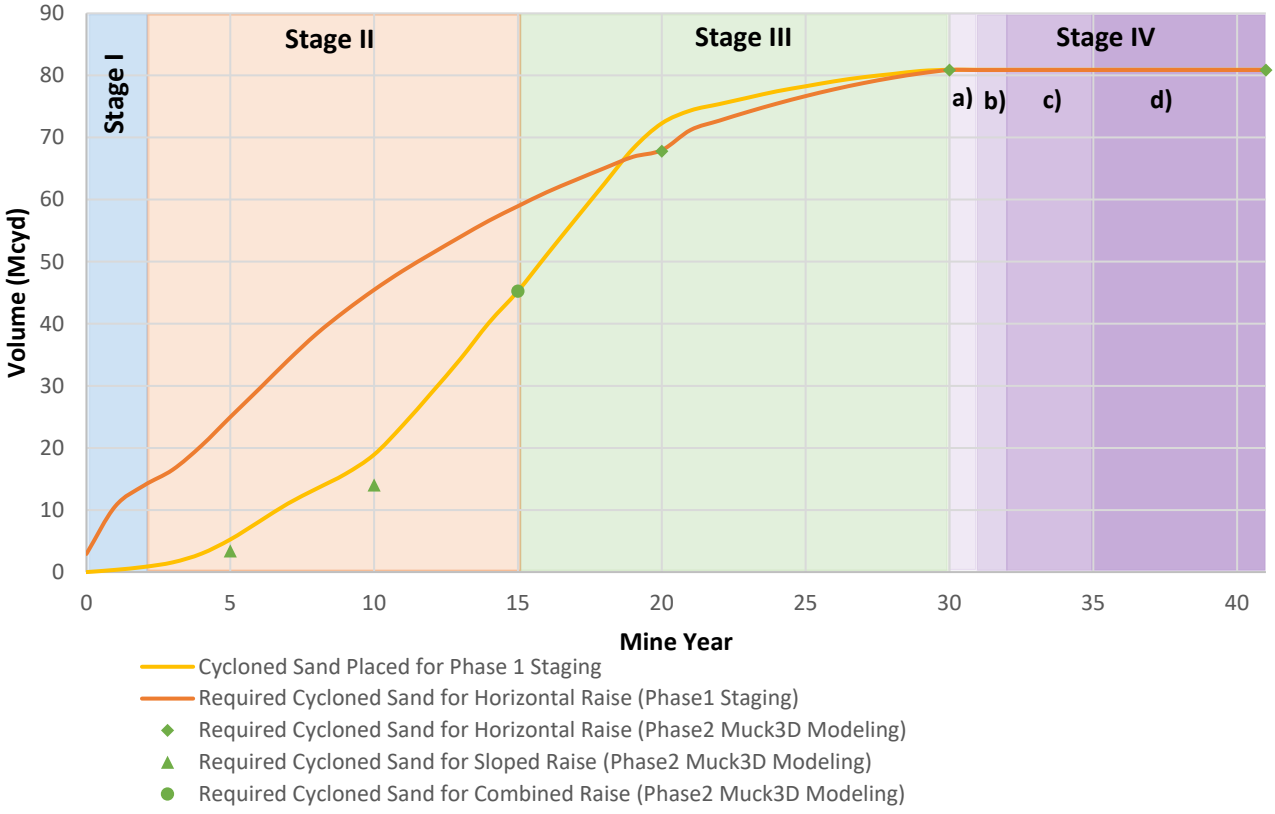


Figure II-9 ***Comparison of Cumulative Cycloned Sand*** **for Pyrite Cell 1 Embankment**

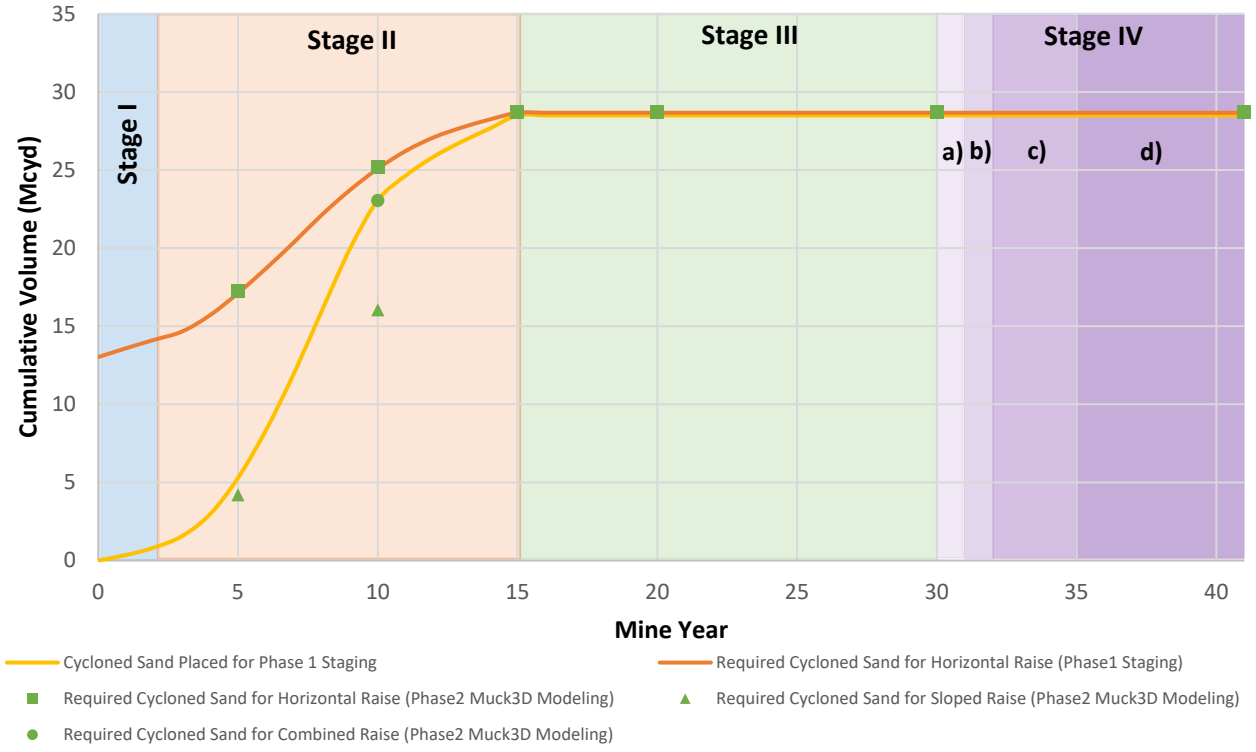


Figure II-10 ***Comparison of Cumulative Cycloned Sand*** **for Pyrite Cell 2 Embankment**

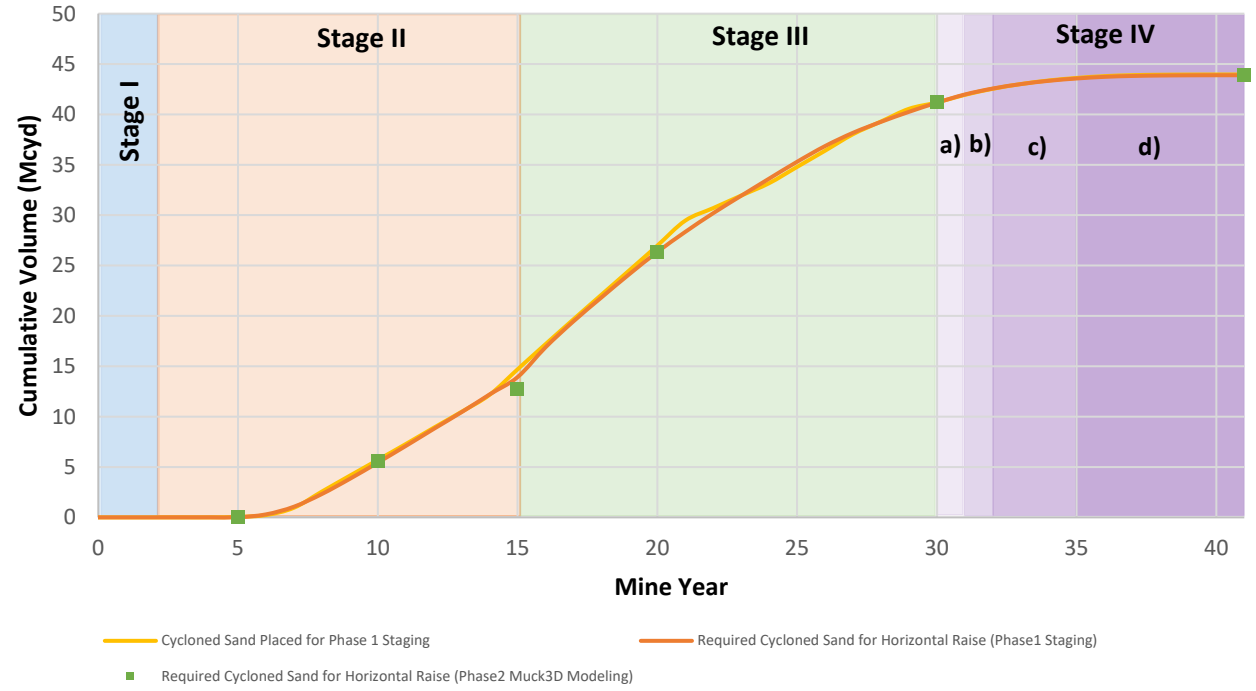
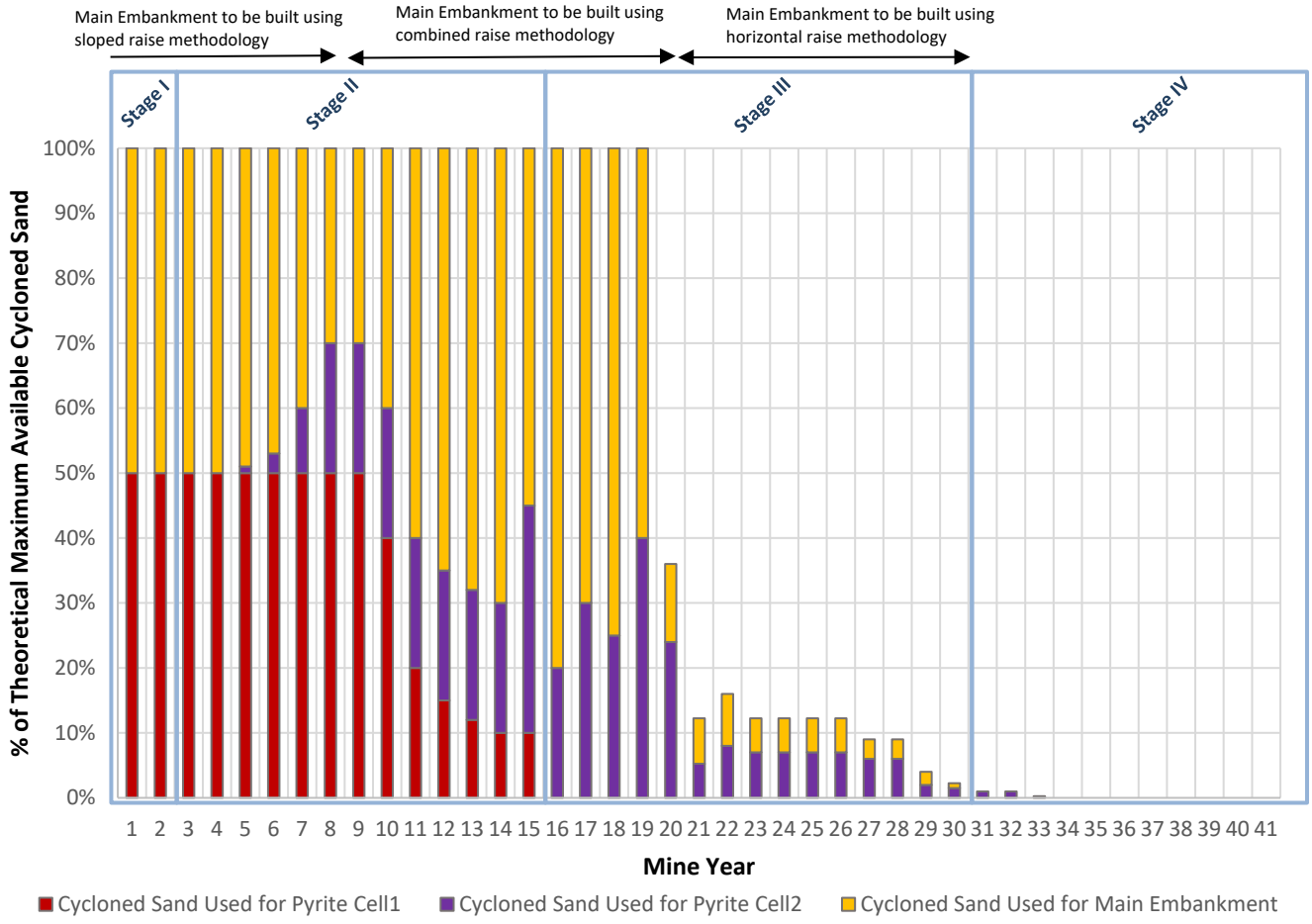


Figure II-11 shows the distribution of cycloned sand used over the mine life.

Figure II-11 Annual Distribution of Available Cycloned Sand Used for Construction*

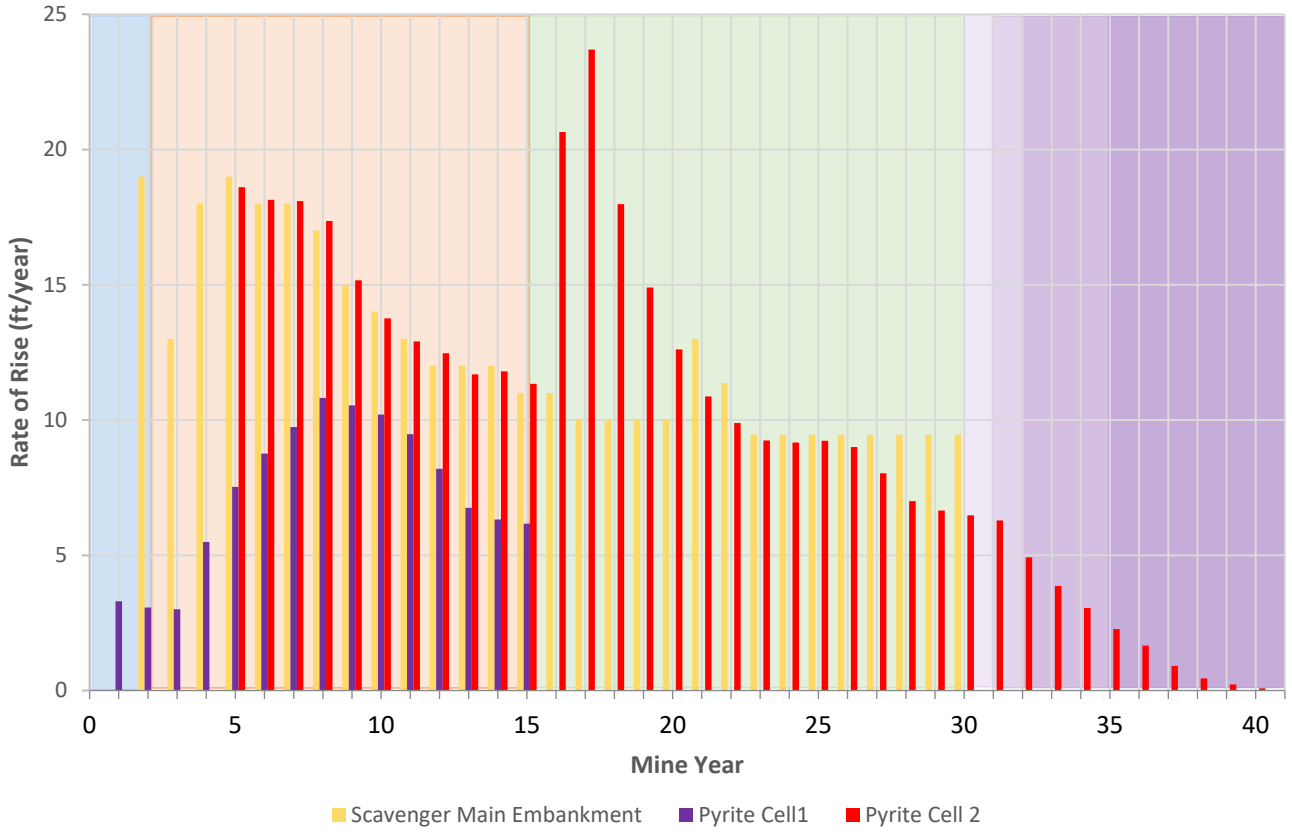


Notes: * See Appendix I of KCB 2018 for assumptions on available cycloned sand quantity and Table II-3 for available cycloned sand quantity. Available cycloned sand represents the theoretical maximum cycloned sand that can be produced based on these assumptions.

II-4.3 Rate of Rise

Figure II-12 shows the rate of rise over the mine life.

Figure II-12 Annual Embankment Rate of Rise*



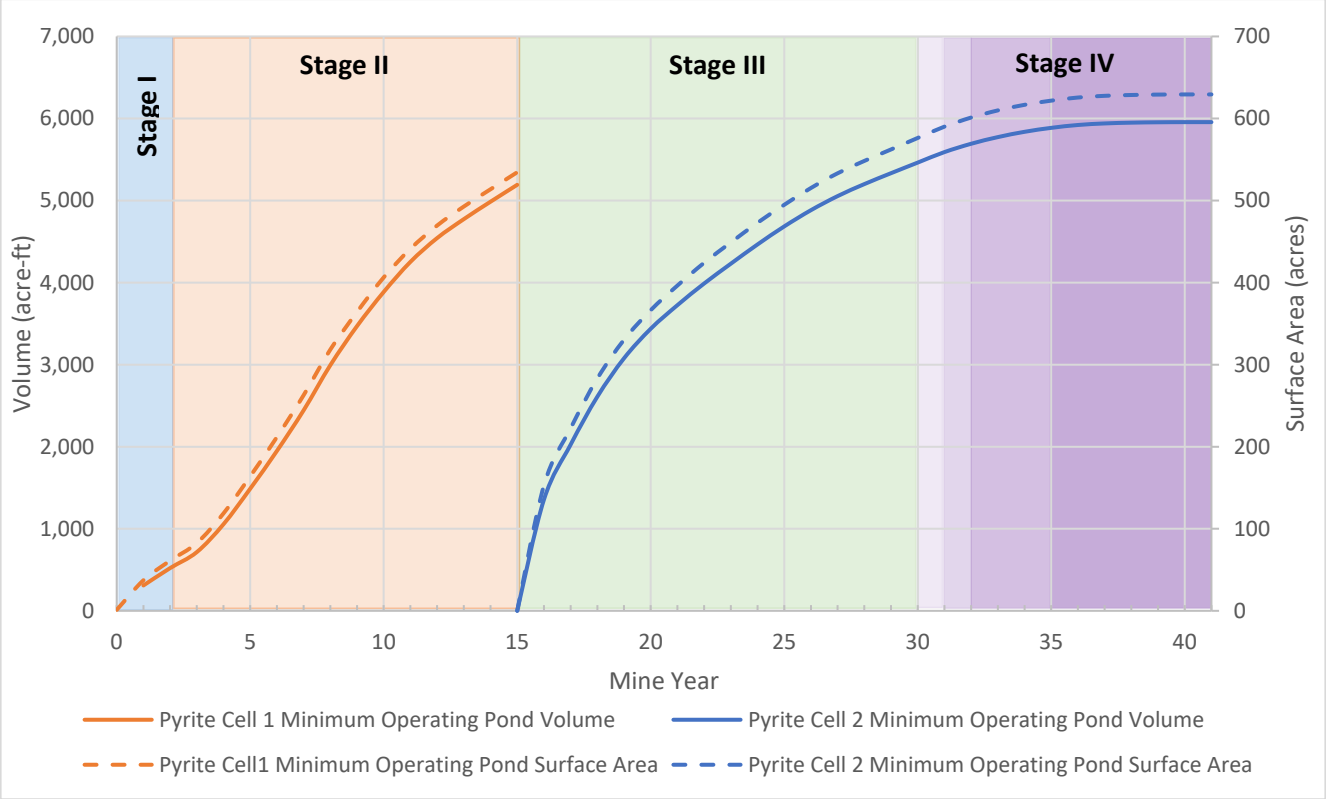
Note: * Annual embankment rates of rise exclude raising of starter dams. Rate of rise is based on embankment elevations estimated in Phase 1 of staging.

II-4.4 Water Management

Pyrite Cells will maintain a permanent operating pond and are sized to store the 72-hr PMF. During the storm event, the storm water collected on scavenger beach will be also pumped to the pyrite cells.

Figure II-13 shows the volumes and surface areas of the operating ponds in pyrite cells. The ultimate pond volume in Pyrite Cell 1 and Pyrite Cell 2 are 5,200 acre-ft and 6,000 acre-ft, respectively.

Figure II-13 Target Operating Pond Volumes and Areas



From start-up through Year 15, the Pyrite Cell 1 accepts flows from the natural catchment between the upstream diversions and the pyrite cell pond. In Year 16, the water will be transferred to Pyrite Cell 2 and/or reclaim tanks and the pyrite tailings in Cell 1 will be covered with scavenger tailings.

Scavenger starter dam will receive the runoff from the upstream catchments until Year 5 when the construction of Pyrite Cell 2 southern embankment begins. The runoff which is collected in the Pyrite Cell 2 area will be pumped to Pyrite Cell 1 and or the storage tanks. *Table II-6* shows the scavenger beach length in the event of a 72-hr PMF. The planned impoundment can store the PMF with a minimum beach length of 400 ft in all years except Year 2 through Year 5. If the design 72hr PMP occurred in that time frame then additional pumps would be mobilized to the TSF to draw down the water level until adequate beaches are re-established.

In the last 11 years of operations, the updated depositional strategy results in reduced storm storage within the TSF impoundment, however, the impoundment still has capacity to store the 72 hr PMF from the entire upstream catchment with the minimum overall beach length reaching 660 ft towards the end of operations. Beach length will gradually decrease from Year 30 but the requirements for a minimum beach of 400 ft will be continuously met.

Table II-6 Scavenger Beach Dry Beach Length During 72-hr Probable Maximum Flood

Mine Year	2	5	10	15	20	30	31	32	35	41
Dry Beach Length (ft)	-	-	840	2400	1100	4300	***3800*** ***(Note 1)***	***2700*** ***(Note 2)***	***1200*** ***(Note 2)***	***660***

Notes: 1. In Year 31, a diversion channel and spillway will be constructed to connect scavenger beach south and north and maintain flood storage capacity of the facility.
2. From years 32 to 35, the channel connecting scavenger beach south and north will need to be re-graded for closure and to maintain flood storage capacity of the facility.

II-4.5 Closure Strategy

In the final years of operations, scavenger tailings will be deposited in Pyrite Cell 2 with a surface grade towards the southeast to both cover the pyrite tailings and reduce the operating pond surface by pushing the water to the south. Ultimately the area of the Pyrite Cell 2 will be fully covered by total scavenger tailings.

Scavenger tailings will also be deposited from the north and east side of the impoundment to shape the ultimate surface such that it drains to the southeast.

The overall elevation of the pyrite tailings is lower than the surrounding scavenger tailings. This can be used to the benefit of placement of enough scavenger tailings with appropriate thickness to limit oxygen and water ingress.

II-5 CONCLUSIONS

Key conclusions from the tailing staging assessment are as follows:

- Pyrite Cell 1 and Scavenger Starter dams require significant borrow fill material, approximately 12 Mcyd. It is expected that the borrow material will be sourced from within the footprint of the TSF to reduce the ground disturbance as little as possible and to provide additional tailings storage capacity.
- The deposition strategy is generally capable of achieving the performance objectives:
  - Pyrite tailings are deposited subaqueously in a segregated cell within the TSF.
  - Scavenger tailings are managed without an operating pond.
  - The impoundment layout is capable of storing the required tailings and flood storage volumes.
  - Long beaches (>400 ft) are maintained during flood conditions for all years except for earlier years. Mobilization of pumps, or modifications to the staging, plan or other methods to remove water may be required during this time to maximize beach length.
  - Rate of embankment crest rise between 10 ft/yr and 20 ft/yr is expected in the first 20 years before leveling out to less than 10 ft/yr for the remainder of **operations**. There is

precedent in industry for hydraulic cell embankment construction at the rates predicted. The potential for static liquefaction resulting from the rate of rise will be managed by compacting the cycloned sand to maintain a dilatant condition.

- The total cycloned sand volume required (***152 Myd^3***) is less than the modeled amount that can be produced (243 Myd^3). This provides a benefit to operational flexibility (i.e. the cyclone plant can have longer periods of downtime and still meet volume requirements) and an opportunity to reduce the period before progressive reclamation of the embankment slopes can begin.

REFERENCES

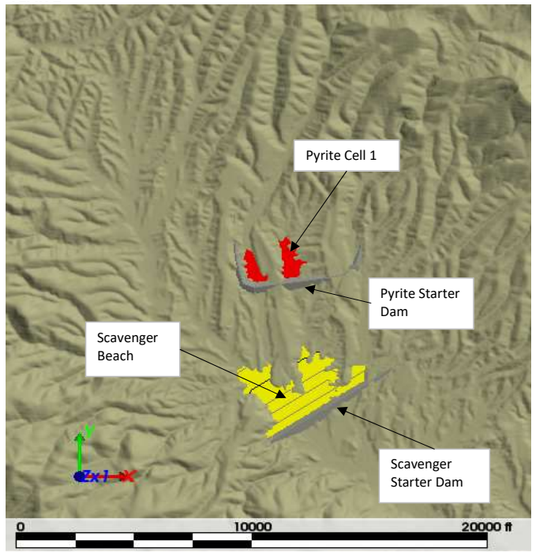
Klohn Crippen Berger Ltd. (KCB). 2018. DEIS Design for Alternative 6 – Skunk Camp. Prepared for Resolution Copper Mining. Doc. # CCC.03-81600-EX-REP-00006 – Rev. 1. August.

MineBridge Software Inc. 2018. MUK3D Ooze Version 1.4. [Computer software].

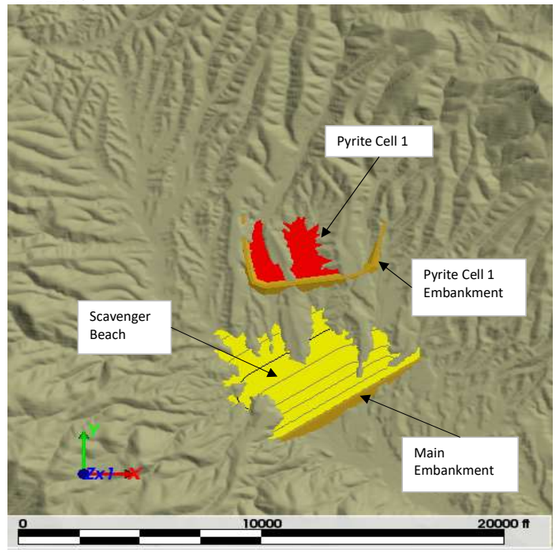
APPENDIX II-A

Tailings Staging Figures

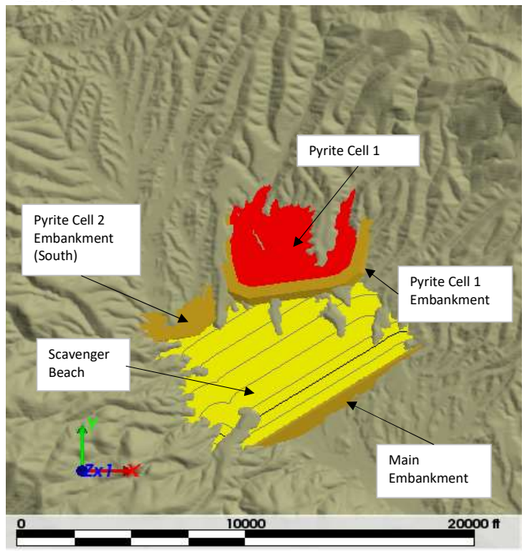
YEAR 2



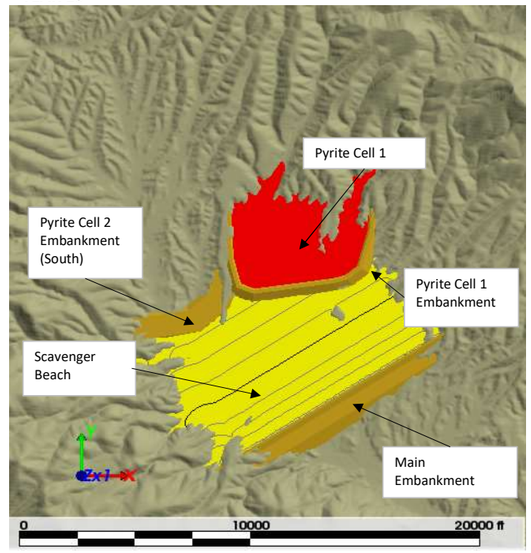
YEAR 5



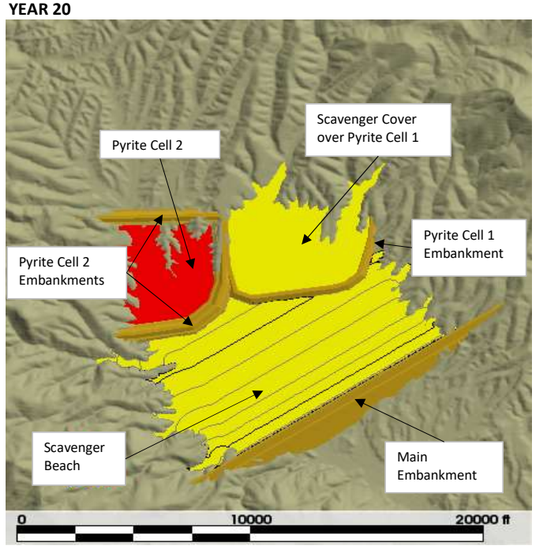
YEAR 10



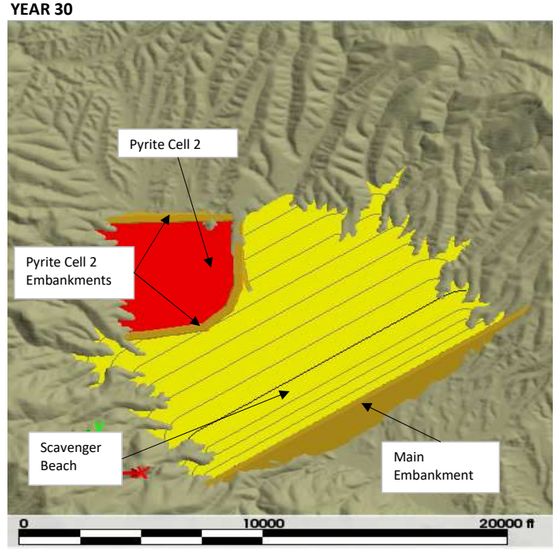
YEAR 15



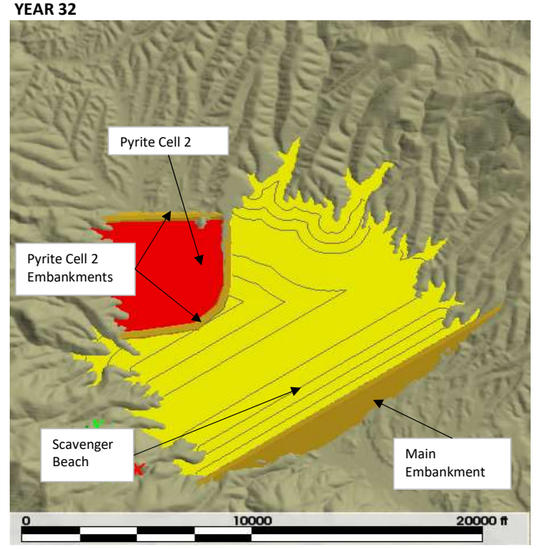
YEAR 20



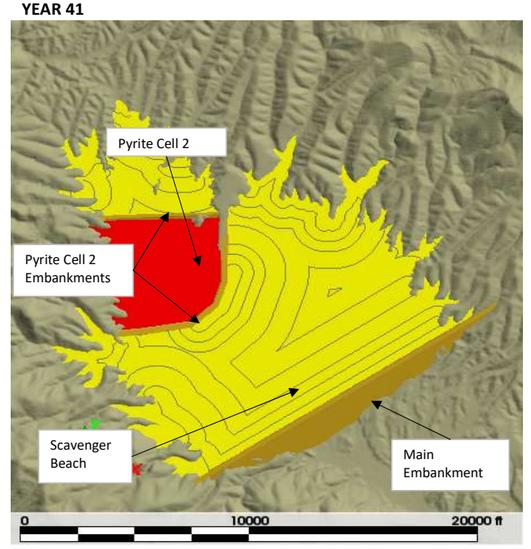
YEAR 30



YEAR 32



YEAR 41



LEGEND

SCAVENGER TAILINGS (CYCLONE OVERFLOW/TOTAL TAILINGS)
PYRITE TAILINGS
STARTER DAM
CYCLONED SAND EMBANKMENT
CONTOURS - 5 FT INTERVALS

NOT FOR CONSTRUCTION

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TITLE: TAILINGS STAGING SUMMARY

PROJECT No. UM09441A23

FIG No. II-A.1

APPENDIX III

Closure Water Management Plan

Appendix III
Closure Surface Water Management Plan

III-1 INTRODUCTION

The closure water management plan presented in the Draft Environmental Impact Statement (DEIS) (KCB 2018) included diverting the Skunk Camp tailings storage facility (TSF) catchment post-closure north to Mineral Creek. To address DEIS comments, the ultimate TSF configuration and closure water management has been updated for the Final Environmental Impact Statement (FEIS) (KCBCL 2019). Appendix II presents the updated operational tailings staging to achieve an ultimate TSF configuration that diverts the catchment south to Dripping Springs Wash post-closure.

This appendix describes an updated closure water management plan following the changes made to the staging and deposition plan. The closure water management plan focuses on the following key aspects:

- Section III-2: closure water management objectives;
- Section III-3: closure water management concept;
- Section III-4: design basis and design criteria;
- Section III-5: site conditions; and
- Section III-6: key closure infrastructure:
  - Closure Diversion Channel
  - Tailings Surface Channels
  - Closure Embankment Bench and Toe Ditches
  - Seepage Collection Pond.

III-2 CLOSURE WATER MANAGEMENT OBJECTIVES

The objectives of the closure water management system are as follows:

- minimize the amount of water ponding on TSF post-closure surface;
- safely convey flood runoff from the tailings surface and upstream natural catchments around the Main Embankment;
- limit the erosion of the closed TSF with minimal maintenance requirements;
- minimize oxidation of the pyrite tailings by limiting water and oxygen ingress into the pyrite tailings; and

- limit the amount of seepage from the TSF that is released to the environment, with a focus on limiting active post-closure water management and compliance with groundwater and surface water standards.

III-3 CLOSURE WATER MANAGEMENT CONCEPT

Figure III-1 shows the closure water management plan, including the ultimate TSF geometry, overall site drainage, and the location of the Seepage Collection Pond (SCP). Figure III-2 to III-4 show supporting cross sections and details of the closure water management plan.

From Mine Years 31 to 41 (i.e., the final 10 years of operations), scavenger tailings will be deposited along the north and west sides of the facility to grade the surface of the TSF toward the Closure Diversion Channel, which will be located on the east abutment of the Main Embankment. The tailings surface will be covered with 2 ft of crushed, processed, soil-like Tertiary conglomerate (Tcg) to limit infiltration and prevent wind and water erosion of the tailings1. Tailings Surface Channels will collect runoff from the natural gullies upstream of the TSF and convey the water at mild gradients over the reclaimed tailings surface.

The Closure Diversion Channel will safely convey surface water from the catchment area upstream of the Main Embankment to Dripping Springs Wash downstream of the SCP. The upper half of the Closure Diversion Channel will be cut through rugged terrain, approximately 60 ft to 300 ft deep into Tertiary conglomerate, a cemented rock unit composed of gravels and cobbles and sized to convey the TSF Inflow Design Flood (IDF). The lower half will follow the alignment of a natural gully between the Main Embankment centerline and Dripping Springs Wash downstream of the SCP. This natural gully will be widened and armored to accommodate the increased flows from the TSF catchment.

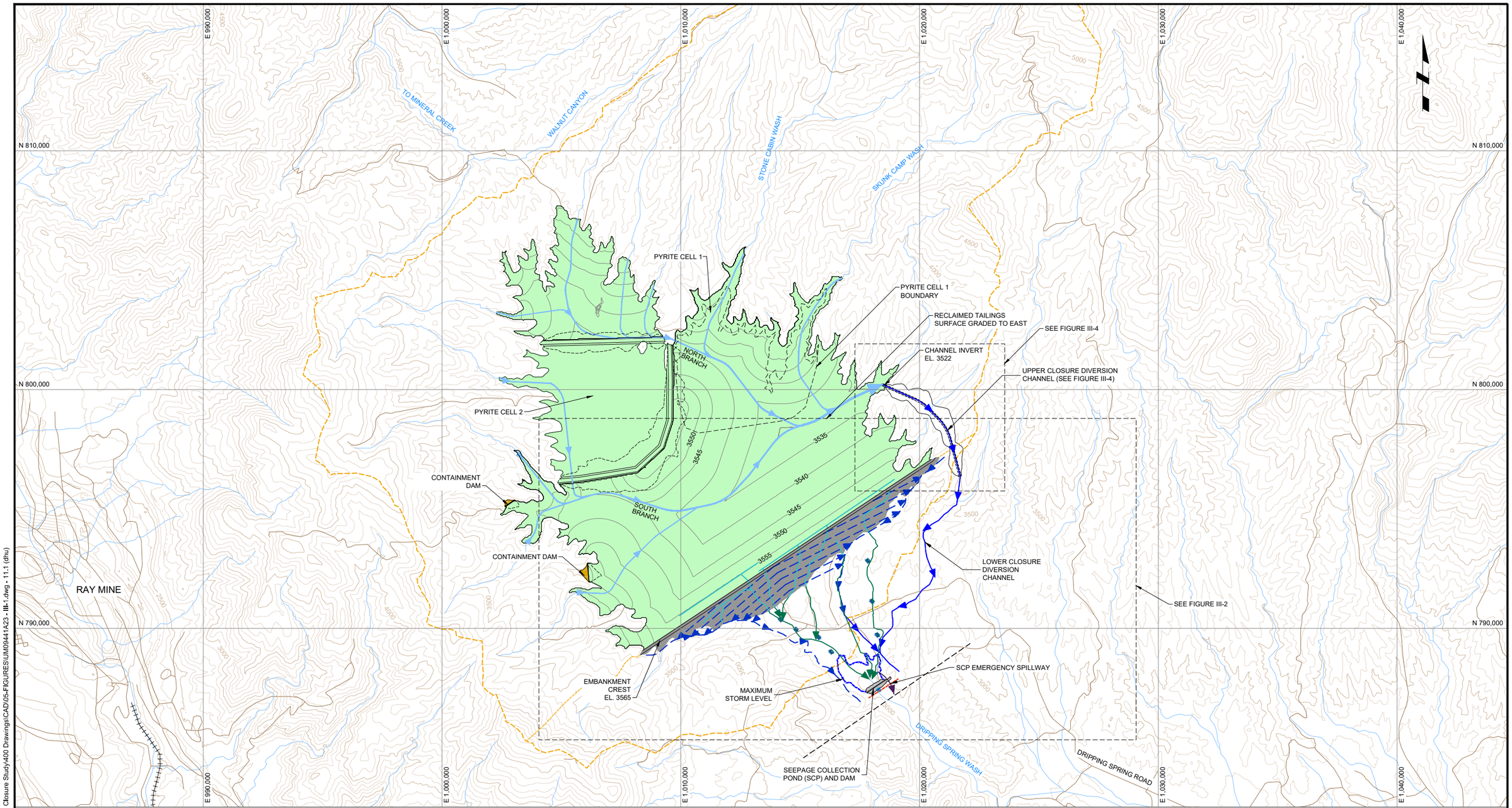
At the end of operations, the Main Embankment will have a maximum height, from crest to downstream toe, in the order of 500 ft, and an overall downstream slope of 3H:1V. The cycloned sand that composes the Main Embankment has a high rate of infiltration but is susceptible to erosion from wind and from concentrated surface water flows during flood events. To manage this erosion risk at closure, the downstream slope of the embankment will be covered with 3 ft of crushed, soil-like Tertiary conglomerate1. Closure Embankment Bench Ditches are proposed at 300 ft horizontal spacing (100 ft vertical spacing) to capture runoff from the embankment surface and convey it to Closure Embankment Toe Ditches (Figure III-2), which will safely route stormwater to Dripping Springs Wash downstream of the SCP. The benches will be 50 ft wide, with inter-bench slope of 2.5H:1V. The crest of the Main Embankment will be graded in towards the tailings at a grade of approximately 2%.

The SCP will be constructed at start-up to collect seepage water from the Main Embankment finger drains, surface runoff from the embankment slope and TSF seepage captured by shallow alluvial pumpback wells. During operations, SCP water will be pumped to the operating Pyrite Cell (see Appendix II). Lined Contact Water Collection Ditches will route the runoff and finger drain seepage to

[1] KCBCL assessed the hydraulic performance of the closure cover material with a near-surface water balance model (Appendix IV) and the geochemical suitability of the material through lab testing (Appendix I).

the SCP. The SCP will be lined to minimize seepage losses, and a grout curtain and shallow alluvial pumpback well will be installed immediately downstream. The Contact Water Collection Ditches and shallow alluvial pumpback wells upstream of the SCP will be decommissioned after the end of operations. The shallow alluvial pumpback well installed immediately downstream of the SCP and grout curtain will be maintained post-closure. Buried Finger Drain Collection Pipes will be installed to route seepage to the SCP post-closure.

The SCP will be maintained post-closure. Refer to Section 9 of the main report for a description of the post-closure phases (Closure Transition Period, Active Care, and Passive Care) and actions associated with the SCP during each phase.



LEGEND

- RECLAIMED EMBANKMENT
- RECLAIMED TAILINGS SURFACE
- TSF CATCHMENT BOUNDARY
- SUB CATCHMENT BOUNDARY
- CONTAINMENT DAM
- 200-YR 24-HR STORM
- RAILWAY
- EXISTING ROAD
- NATURAL DRAINAGE
- 3550 MAJOR CONTOURS 500 FT
- 3550 MINOR CONTOURS 100 FT
- 3550 PROPOSED CONTOURS 5 FT
- PROPOSED DAM FOOTPRINT
- DECOMMISSIONED PUMPBACK WELL
- SHALLOW ALLUVIAL PUMPBACK WELL
- CLOSURE EMBANKMENT BENCH AND TOE DITCH
- TAILINGS SURFACE CHANNEL
- CLOSURE DIVERSION CHANNEL
- SCP EMERGENCY SPILLWAY
- FINGER DRAIN COLLECTION PIPE
- FINGER DRAIN
- POINT OF COMPLIANCE LOCATION
- GROUT CURTAIN

PLAN
SCALE A

NOTES

1. PROJECTION AND DATUM: ARIZONA STATE PLANE CENTRAL NAD 83 - INTERNATIONAL FOOT.
2. TOPOGRAPHY BASED ON INTERMAP NEXTMAP DSM AND DTM ACQUIRED IN 2004.
3. CONTOURS NOT SHOWN ON PYRITE CELL 2, HOWEVER, THE TAILINGS WOULD BE GRADED TO DRAIN TOWARDS THE SOUTH.

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SCALE A 2000 0 2000 FT

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TITLE: CLOSURE WATER MANAGEMENT PLAN

SCALE	PROJECT No.	FIG. No.
AS SHOWN	UM09441A23	III-1

KCB-FIG-DL

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Drawing File: Z:\M\PHX\UM09441A23-RES-Skunk Camp Closure Study\400 Drawings\CAD\05-FIGURES\UM09441A23 - III-1.dwg - 11.1 (dhu)

~RECLAIMED TAILINGS SURFACE
GRADED TO EAST~

4% (TYP.)

CONTAINMENT DAM

DAM CREST EL. 3565

UPPER CLOSURE DIVERSION CHANNEL (SEE FIGURE III-4)

LOWER CLOSURE DIVERSION CHANNEL

SCP EMERGENCY SPILLWAY

MAXIMUM STORM LEVEL

SEEPAGE COLLECTION POND (SCP) AND DAM

DRIPPING SPRING WASH

DRIPPING SPRING ROAD

3 III-3 | 1 III-3 | 2 III-3 | 4 III-3 | 6 III-3 | 7 III-3

E 1,005,000 | E 1,010,000 | E 1,015,000 | E 1,020,000 | E 1,025,000

N 795,000 | N 790,000

PLAN
SCALE A

LEGEND

- RECLAIMED EMBANKMENT
- RECLAIMED TAILINGS SURFACE
- TSF CATCHMENT BOUNDARY
- SUB CATCHMENT BOUNDARY
- EXISTING ROAD
- NATURAL DRAINAGE
- RAILWAY
- 3550 MAJOR CONTOURS 500 FT
- 3550 MINOR CONTOURS 100 FT
- 3550 PROPOSED CONTOURS 5 FT
- PROPOSED DAM FOOTPRINT
- DECOMMISSIONED PUMPBACK WELL
- SHALLOW ALLUVIAL PUMPBACK WELL
- CLOSURE EMBANKMENT BENCH AND TOE DITCH
- TAILINGS SURFACE CHANNEL
- CLOSURE DIVERSION CHANNEL
- SCP EMERGENCY SPILLWAY
- FINGER DRAIN COLLECTION PIPE
- FINGER DRAIN
- POINT OF COMPLIANCE LOCATION
- GROUT CURTAIN

NOTES

1. PROJECTION AND DATUM: ARIZONA STATE PLANE CENTRAL NAD 83 - INTERNATIONAL FOOT.
2. TOPOGRAPHY BASED ON INTERMAP NEXTMAP DSM AND DTM ACQUIRED IN 2004.
3. CONTOURS NOT SHOWN ON PYRITE CELL 2, HOWEVER, THE TAILINGS WOULD BE GRADED TO DRAIN TOWARDS THE SOUTH.

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KCB Consultants Ltd.

PROJECT: RESOLUTION COPPER PROJECT
SKUNK CAMP TSF RECLAMATION PLAN

TITLE: CLOSURE WATER MANAGEMENT
MAIN EMBANKMENT

SCALE	PROJECT No.	FIG. No.
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KCB-FIG-DL

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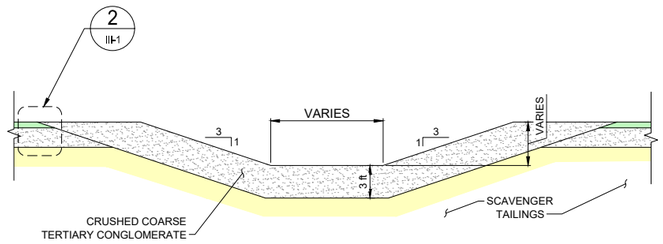
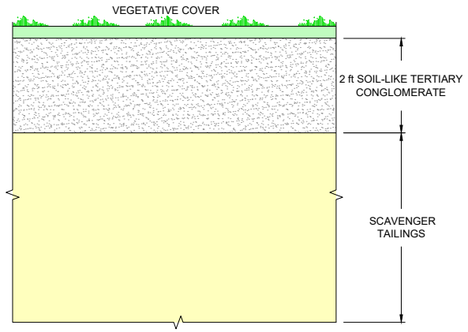
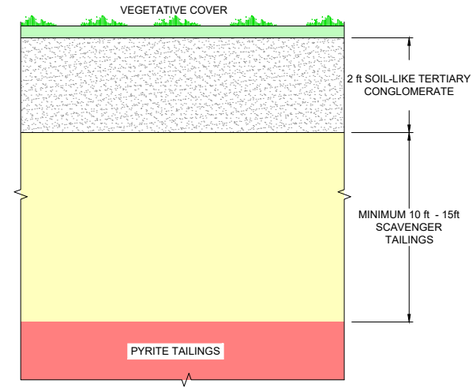


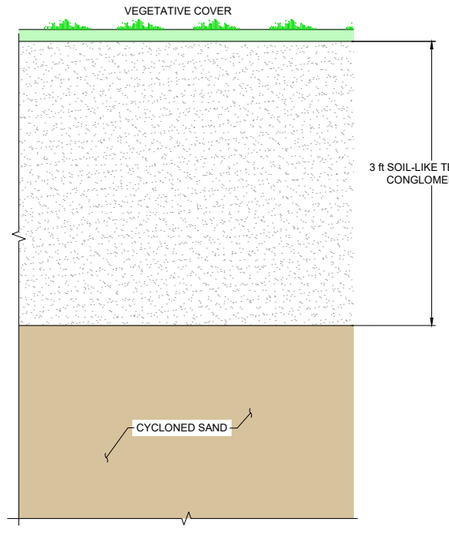
DETAIL 1 (III-1) TYPICAL TAILINGS SURFACE CHANNEL DETAIL



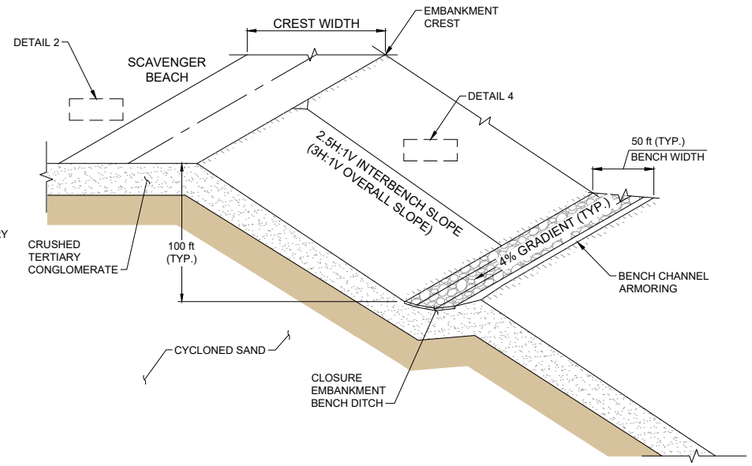
DETAIL 2 (III-1) TYPICAL SCAVENGER BEACH TAILINGS CLOSURE COVER



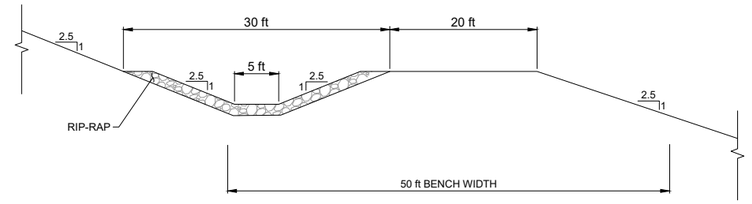
DETAIL 3 (III-1) TYPICAL PYRITE TAILINGS CLOSURE COVER



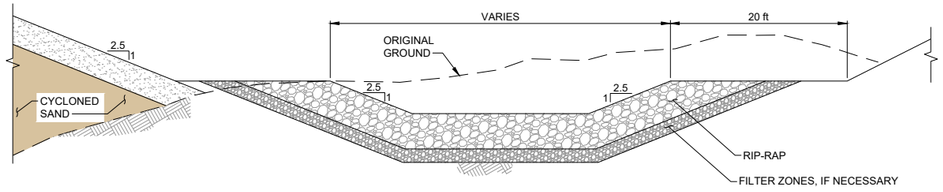
DETAIL 4 (III-1) TYPICAL CYCLONED SAND EMBANKMENT SLOPE CLOSURE COVER



DETAIL 5 (III-1) TYPICAL CLOSURE EMBANKMENT SLOPE AND BENCH DITCH DETAIL
ISOMETRIC VIEW



DETAIL 6 (III-1) TYPICAL CLOSURE EMBANKMENT BENCH DITCH SECTION



DETAIL 7 (III-1) TYPICAL CLOSURE EMBANKMENT TOE DITCH

NOT FOR CONSTRUCTION

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CLIENT: RESOLUTION COPPER

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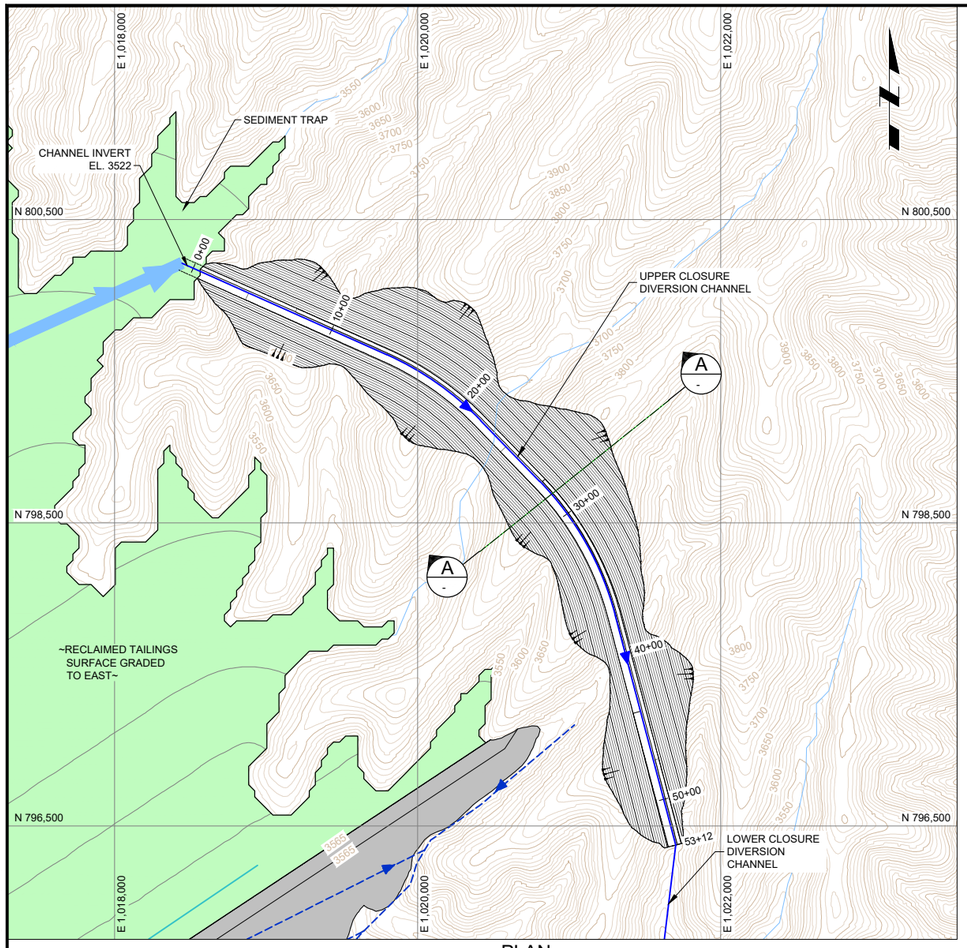
PROJECT: RESOLUTION COPPER PROJECT
SKUNK CAMP TSF RECLAMATION PLAN

TITLE: CLOSURE WATER MANAGEMENT
SECTIONS AND DETAILS

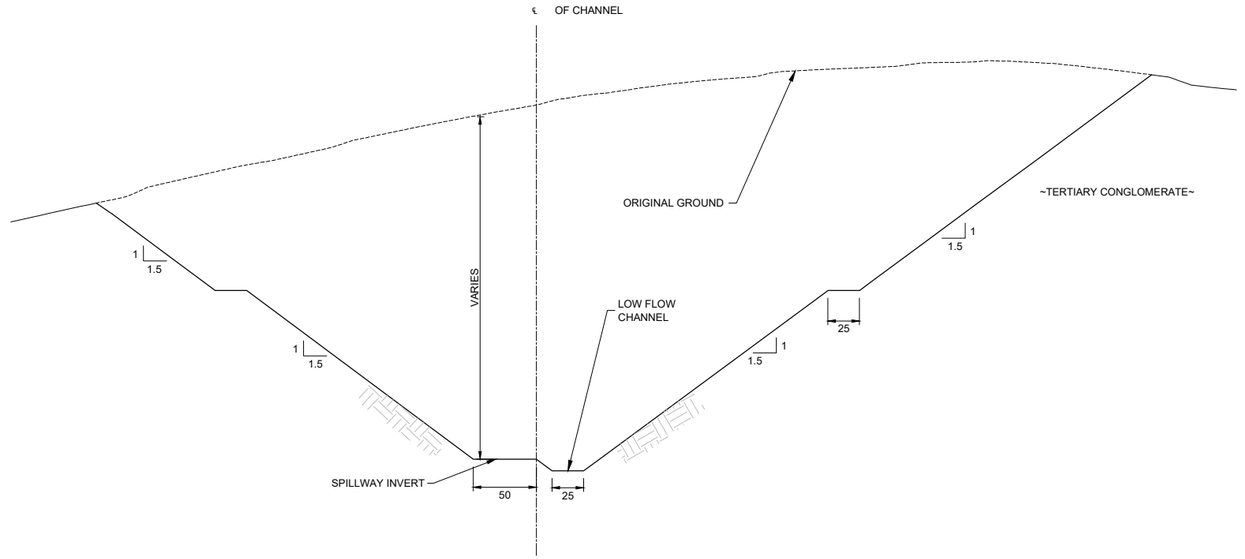
SCALE	PROJECT No.	FIG. No.
NTS	UM09441A23	III-3

KCB-FIG-DL

Date: 2021-04-30 Time: 2:42 PM
Drawing File: Z:\M\PHX\UM09441A23-RES-Skunk Camp Closure Study\400 Drawings\CAD\05-FIGURES\UM09441A23 - III-3.dwg - 11:3 (dhu)



PLAN
SCALE A



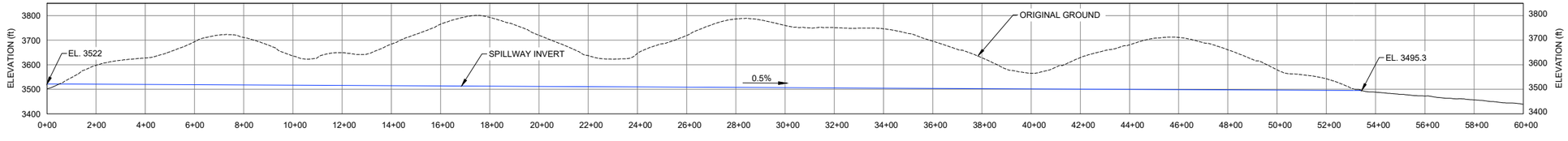
SECTION A - UPPER CLOSURE DIVERSION CHANNEL
SCALE B
TYPICAL SECTION

LEGEND

- RECLAIMED TAILIGNS SURFACE
- CLOSURE EMBANKMENT BENCH AND TOE DITCH
- CLOSURE DIVERSION CHANNEL
- TAILINGS SURFACE CHANNEL
- NATURAL DRAINAGE
- 3550 MAJOR CONTOURS 50 FT
- MINOR CONTOURS 10 FT
- 3550 PROPOSED CONTOURS 5 FT

NOTES

1. THE COORDINATES SYSTEM SHOWN IS IN UTM NAD 83. ELEVATIONS ARE GEODETIC. CONTOURS ARE PROVIDED BY RESOLUTION.
2. ALL DIMENSIONS AND ELEVATIONS ARE IN FEET UNLESS OTHERWISE INDICATED.



PROFILE ALONG UPPER CLOSURE DIVERSION CHANNEL
SCALE C

SCALE A: 500 0 500 FT
SCALE B: 60 0 60 FT
SCALE C: 250 0 250 FT

NOT FOR CONSTRUCTION
TO BE READ WITH KCB CONSULTANTS LTD. REPORT DATED: MAY 2021

CLIENT: RESOLUTION COPPER
KCB Consultants Ltd.

PROJECT: RESOLUTION COPPER PROJECT
SKUNK CAMP TSF RECLAMATION PLAN

TITLE: CLOSURE WATER MANAGEMENT PLAN
CLOSURE DIVERSION CHANNEL

SCALE	PROJECT No.	FIG. No.
AS SHOWN	UM09441A23	III-4

KCB-FIG-DL

Date: 2021-04-30 Time: 2:42 PM
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III-4 DESIGN BASIS AND DESIGN CRITERIA

Table III-1 presents the design basis and adopted criteria for the conceptual design of closure water management features.

Table III-1 Design Basis and Criteria

Element	Design Parameter	Objective	Design Criteria	Reference
Design Flood Events				
Closure Diversion Channel	Design Flow	Based on consequence of TSF failure	Probable Maximum Flood (PMF)	BADCT (ADEQ 2005)
Tailings Surface Channels	Design Flow	Limit erosion of tailings surface	200-year event	
Closure Embankment Bench Ditches	Design Flow	Limit erosion of dam fill	1000-year event	FEMA (2013)
Closure Embankment Toe Ditches	Design Flow	Limit erosion of dam fill	1000-year event	FEMA (2013)
Seepage Collection Pond (SCP)	SCP Emergency Spillway Design Flow	Based on consequence of SCP failure	PMF	BADCT (ADEQ 2005)
	Pond Environmental Design Storage	Limit the release of TSF affected water to the environment	200-year event	
Main Embankment Freeboard				
Main Embankment	Minimum Freeboard (at MRWS[1])	Operational minimum freeboard plus 3 ft	8 ft	
	Minimum beach width (at MRWS[1])	Dam safety	400 ft	Design Basis Memorandum (Appendix I of KCB 2018)
Covers and Surface Drainage				
Tailings Surface	Minimum slope	Set to limit standing water	Tailings deposition slope; estimate 0.5%	
Downstream Main Embankment Slope	Overall slope	Design	3H:1V	
	Slope between benches	Set to limit erosion of dam fill and promote vegetation growth	No steeper than 2.5H:1V	
Embankment Crest	Minimum slope	Set to avoid concentrated drainage flowing onto downstream slope	2% towards impoundment	
Channel Geometry				
Closure Diversion Channel	Average slope	Set to balance erosion risk, sediment accumulation and excavation volumes	Upper: 0.5% Lower: natural gully slope	
	Excavation Side Slopes	Maximum allowed assuming excavation through Tcg by blasting	Maximum of 1.5H:1.0V with 25 ft benches	
	Minimum Bottom Width	To accommodate a low-flow channel and access road	100 ft	
Tailings Surface Channels	Maximum slope	Set by ultimate tailings surface geometry	< 0.5%	
Closure Embankment Bench Ditches	Minimum / Maximum Slope	Set to balance erosion risk and sediment accumulation	2% to 6% (target 4%)	
Closure Embankment Toe Ditches	Minimum / Maximum Slope	Set by ultimate dam geometry	5% to 20%	

Notes: 1. Maximum Reservoir Water Surface (MRWS).
2. Long-term effectiveness of the pyrite cells low permeability layer is accounted for in the long-term seepage rates from the pyrite cells, as described in the Skunk Camp TSF Seepage Assessment report (KCBCL 2020).

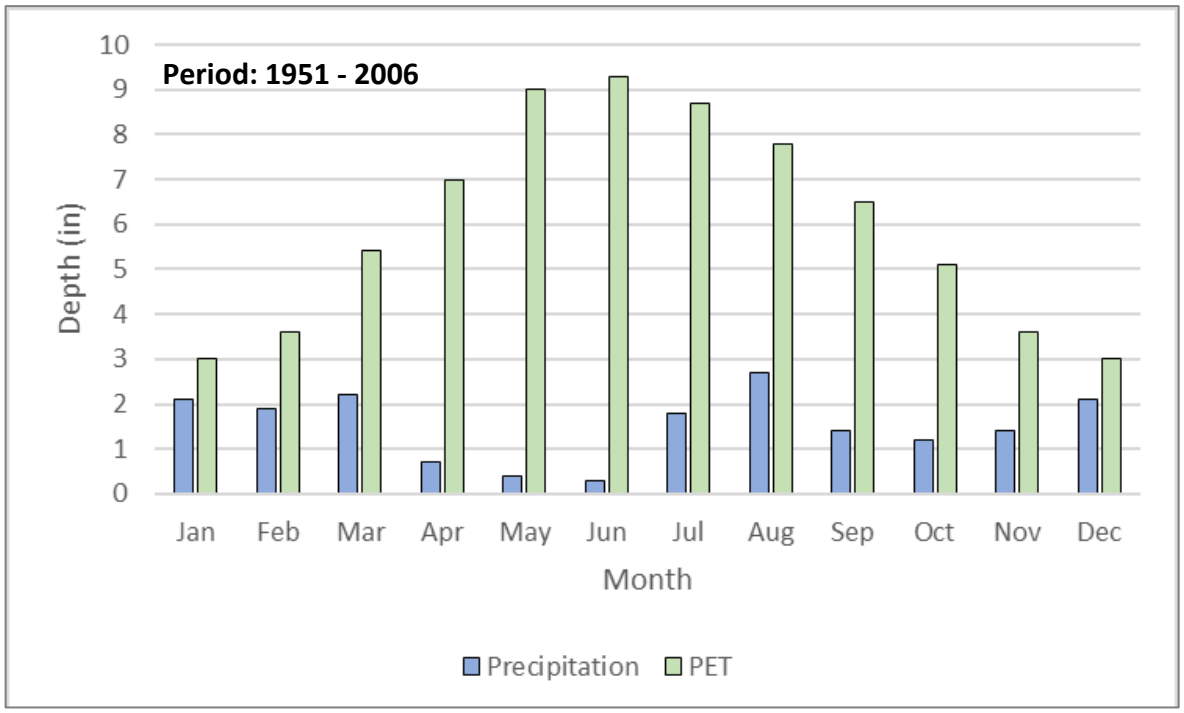
III-5 SITE CONDITIONS

III-5.1 Climate

III-5.1.1 Climate Normals

The Skunk Camp TSF site has a semi-arid climate with low average annual precipitation (~18 inches) and high estimated average annual potential evapotranspiration (PET; ~72 inches). The average monthly temperature range is between an average minimum of 46°F and an average maximum of 87°F. Refer to Appendix IV-A for details on the Skunk Camp TSF site climate.

Figure III-5 Climate Normals



Notes:
1. Average precipitation data for Skunk Camp (Lat. 33.1968° Long. -110.9059°) based on precipitation-elevation relationship of regional climate stations; Superior (ID: 028348), Miami (ID: 025512), Superior 2 ENE (ID: 028349), Superior Smelter (ID: 028351). See Appendix IV-A (Climate Analysis).
2. Average potential evapotranspiration (PET) estimated using Hydrus-1D (Šimůnek et. al. 2009) that measures it on an hourly timestep with the FAO-recommended Penman-Monteith combination equation (Monteith 1981; Monteith and Unsworth 1990; FAO 1990, Allen et al. 1998). The input parameters for the Penman-Monteith equation are minimum and maximum temperature, net solar radiation, relative humidity and wind speed. See Appendix IV.

III-5.1.2 Climate Extremes

The region experiences three seasonable types of precipitation events:

- Winter storms that occur during October through March. These are typically long duration, low intensity events.
- Summer monsoonal storms that occur during June through September. These are typically short duration, high intensity thunderstorms, and are common throughout the monsoon season.
- Tropical storms that occur during August through October. These are rare events but produce the most extreme rainfalls in southern Arizona. They are the residual remains of oceanic storms and typhoons and are typically moderate duration (~24 hours), high intensity events.

The precipitation depths for design flood events of various return periods and durations relevant to the closure water management infrastructure were estimated and are summarized in Table III-2.

Table III-2 Maximum Precipitation Depths

Event	Precipitation Depth				
	30 min	1 hour	6 hours	24 hours	72 hours
200 year (Note 1)	2.4	3.0	3.9	6.1	8.6
1000 year (Note 1)	3.0	3.7	4.8	7.6	11.1
General Winter PMP (Note 2)	-	-	5.2	9.7	14.9
Tropical PMP (Note 2)	-	-	11.8	16.6	22.1
Local PMP (Note 2)	-	-	11.7	-	-

Notes: 1 Estimated from National Oceanic and Atmospheric Administration (NOAA) Atlas 14 (2018).
2. Estimated using PMP estimator by Applied Weather Associates (AWA 2013).

III-5.2 Geomorphology

Geomorphology as it relates to landform evolution at closure includes slope erosion, and sedimentation and sediment transport in watercourses. These are important considerations in the design of closure water management features that are intended to last in perpetuity with minimal maintenance.

Erosion of soil covers on slopes can, if not maintained, lead to rilling and gully formation, which can expose the underlying mine waste. Over time, eroded soil from these slopes can then deposit in low-gradient surface water channels, creating maintenance requirements, or eventually failure if left unmaintained. The key erosion and sedimentation areas of concern in the closure water management plan are summarized in Table III-3.

Table III-3 Erosion and Sedimentation Minimization Measures

Feature	Erosion or Sedimentation	Description of the Concern	Designed Mitigations
Tailings Surface Channels	Sedimentation	Natural gullies upstream of the TSF have relatively steep gradients, between 4% and 10%, and are expected to transport large amounts of sediment during flood events. Tailings Surface Channels have milder gradients, approximately 0.5%, and will therefore limit ability to transport sediment. This is assumed to create a depositional environment (e.g., alluvial fan) at the interface, around the edges of the tailings surface.	▪ Perimeter ditches around the edge of the TSF were avoided ▪ The TSF surface slopes towards the middle of the impoundment, with excess flood storage that will accommodate some sedimentation over time
Upper Closure Diversion Channel	Sedimentation	The inlet of the Closure Diversion Channel is located near the mouth of a natural gully, and therefore in a depositional environment (described above). The Upper Closure Diversion Channel has a 0.5% grade, and therefore has limited ability to clear the channel of accumulated sediment during flood events.	▪ Contingency is built into the channel sizing and includes a low flow channel to assist with transporting sediment
Lower Closure Diversion Channel	Erosion	The Lower Closure Diversion Channel will be located in a small natural gully, see Figure III-1. The additional flows that will be added to the natural gully by the Closure Diversion Channel will require channel widening and armoring to avoid severe erosion.	▪ This natural gully channel will be widened and armored
Main Embankment Cover	Erosion	The Main Embankment is composed of cycloned sand, which is susceptible to erosion from wind and from concentrated surface water flows during flood events. The overall embankment slope is generally steeper and longer than natural hillslopes in the region. Gullying into the cover material over time can expose the cycloned sand, which will erode rapidly under concentrated flows.	▪ Slopes are 2.5H:1V or flatter ▪ 3 ft thick coarse granular cover is provided for erosion protection
Closure Embankment Bench Ditches	Sedimentation	Closure Embankment Bench Ditches are proposed to collect runoff from the Main Embankment slope, but typically have mild gradients and therefore have limited ability to transport all sediment that is eroded from the Main Embankment soil cover.	▪ Ditch gradients are designed to limit sediment in the ditches ▪ Contingency is built into the ditch sizing to accommodate some sedimentation

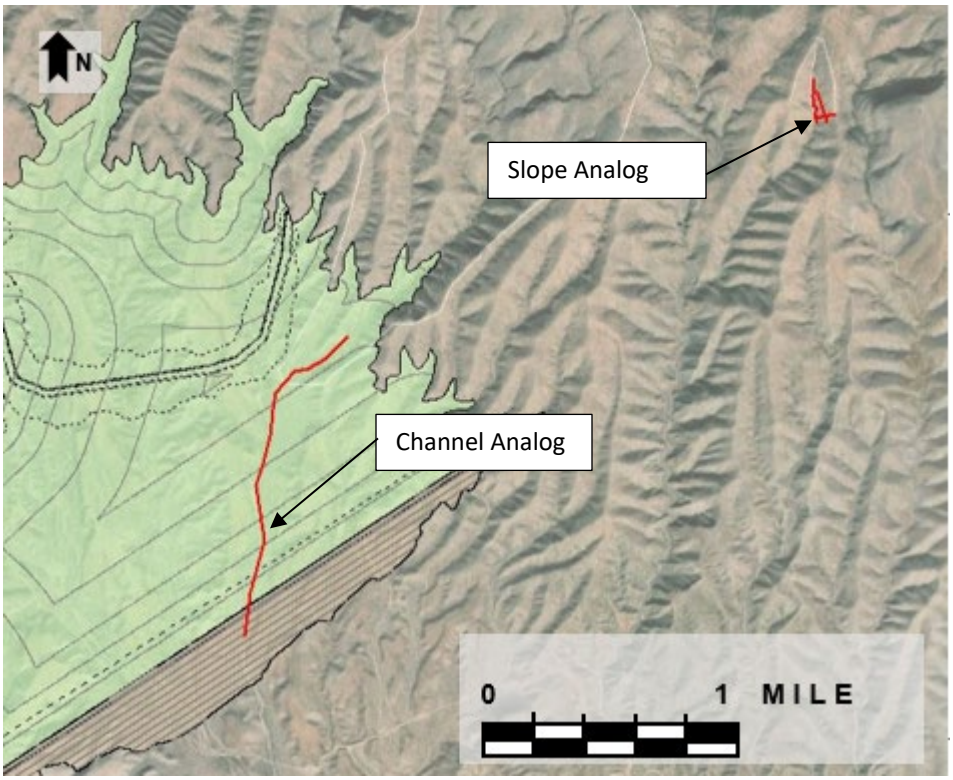
III-5.2.1 Natural Analogs

Natural analogs are existing natural slopes, watercourses or landforms that have reached an equilibrium state in a similar geological and climatic environment as the design feature. Using natural analogs to provide an indication of what potential combinations of slope angles, slope lengths, channel gradients, and cover materials will result in a system that minimizes, and balances, erosion and sedimentation processes. Two natural analogs were identified at this preliminary stage of closure design: one slope feature and one channel feature. They are summarized in Table III-4 and discussed below.

Table III-4 Natural Analogs

Natural Analog	Description	Coordinates	Applicable Closure Feature(s)
Slope Feature	Unnamed	Lat: 33.2070°; Long: -110.8465°; El. 4100 ft	Main Embankment slope; Closure Embankment Bench Ditches
Channel Feature	Skunk Camp Wash	Lat: 33.1904°; Long: -110.8841°; El. 3350 ft	Closure Diversion Channel; Tailings Surface Channels

Figure III-6 Locations of Natural Analogs

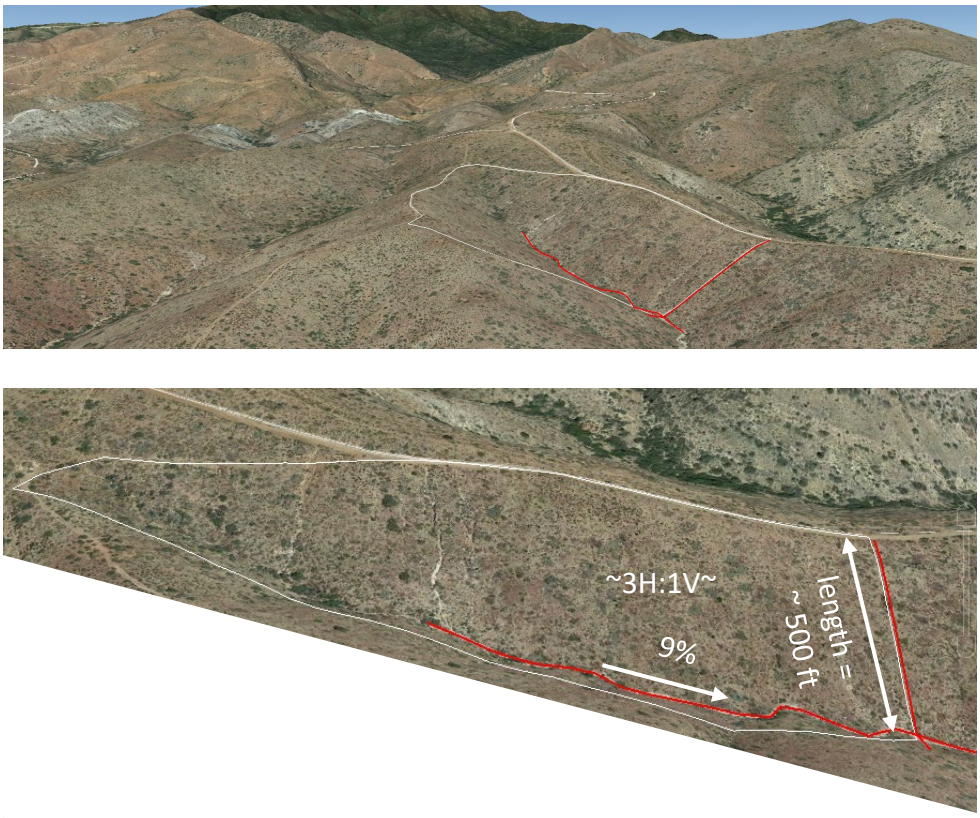


Slope Feature

The identified natural slope feature is shown on Figure III-7 and consists of 24 acre catchment area valley with a small channel running at approximately 9% gradient down the middle. The valley side slopes have an angle of 3H:1V, length of approximately 500 ft, and height of approximately 167 ft. Some small gullying is apparent on the slope from aerial imagery, but it generally appears to be stable with some vegetation. Based on the mapped geology in the region, the slope material is likely Tertiary conglomerate. The slope appears to be natural and in an equilibrium state, with limited erosion of the slope and limited sedimentation in the channel.

This slope feature is an informative analog for the downstream slope of the Main Embankment and the Closure Embankment Bench Ditches, which will also have Tertiary conglomerate as the cover material, providing an indication of an appropriate inter-bench slope length, slope angle, and Closure Embankment Bench Ditch grade. A 9% ditch grade (as identified in the natural slope analog for the embankment slope and ditches along the toe of the embankment) will require erosion protection; a shallower ditch grade may be implemented for the Closure Embankment Bench Ditches to reduce sediment buildup.

Figure III-7 Natural Slope Feature



Imagery and topography source: Google Earth

Channel Feature

The Skunk Camp Wash within the TSF footprint was noted as a typical medium-sized channel feature in the region. The wash has a catchment area of 870 acres (at the location identified), has a bankfull width of approximately 35 ft (but ranging from 25 ft to 45 ft), and a channel grade of 4.0%. A photograph of the channel, taken during a previous site visit by KCBCL in 2018, is shown in Figure III-8. The channel bed material appears to be a mix of sand, gravels and cobbles. The gravel and cobble fraction are the result of channel self-armoring over time, and will be transported downstream only during flood events. The sand fraction will be the result of deposition following flood events or smaller runoff events and overlies the gravel bed.

This channel feature is an informative analog for the Tailings Surface Channels and the Closure Diversion Channel, providing an indication of an appropriate channel grade, base width, and side slope. Based on the TSF impoundment and natural ground geometry, a shallower channel grade (i.e., less than 4%) was selected for the Tailings Surface Channel and Closure Diversion Channel designs, which may result in sedimentation along the channels.

Figure III-8 Natural Channel Feature

Photograph was taken facing upstream and north by KCBCL in 2018.

III-6 KEY CLOSURE INFRASTRUCTURE

III-6.1 Closure Diversion Channel

III-6.1.1 General

Towards the end of the operations, a diversion channel will be constructed that routes runoff around the east abutment of the Main Embankment. The Closure Diversion Channel will convey runoff from the TSF catchment to Dripping Springs Wash and allow passive water management post-closure (Figure III-2). The channel is designed to accept runoff from the ultimate tailings surface and upstream natural catchments. Preliminary dimensions of the channel are given in Section III-6.1.4 and typical cross-sections are shown in Figure III-4.

The deposition strategy during the final 10 years of operation will focus on grading the ultimate tailings surface to concentrate runoff to the invert of the Closure Diversion Channel. Further details on tailings deposition and staging is described in Appendix II.

The Closure Diversion Channel will be excavated into Tertiary conglomerate. Weathering of this rock is controlled by the degree of dissolution of the bonding the rock, but is expected to be relatively resistant to erosion. A side slope of 1.5H:1V was used for the channel to accommodate the slope stability of the Tertiary conglomerate, which is not very competent rock. It is expected that the excavation side slopes will experience erosion and maintenance of the Closure Diversion Channel is required.

III-6.1.2 Design Approach

A hydrologic model was created to estimate the PMF, which delivers the highest peak flow resulting from a range of PMP event durations. PMP event durations considered here ranged from 6 hours to 72 hours, each with an appropriate storm distribution. The 6-hr PMF was determined to be the most appropriate for the design since it exhibited the highest peak flow during the flood routing. The TSF stage-storage curve was estimated based on the closure geometry of the TSF and is shown on Figure III-10. The channel invert was placed at the elevation of the low point of the tailings surface and a discharge-rating curve was developed for the Closure Diversion Channel, assuming a broad-crested weir (Brater et al. 1996). The basis for relevant inputs is detailed in Section III-6.1.3. Assumptions and design basis are detailed in Section III-4.

III-6.1.3 Hydrology

Design flood hydrographs were estimated using the hydrologic modeling software HEC-HMS based on the SCS method (Ponce 1989), which requires the following inputs:

- The lag time - a catchment's response time that depends on topographic characteristics.
- The curve number (CN) – which is a representation of the soil's ability to lose rainwater through deep infiltration, and to temporarily store and release rainwater in its upper horizons (NRCS 1986). A CN of 93 for average moisture conditions is assumed for the upstream catchments based on hydrologic soil type D (for Phoenix, Arizona) and good hydrologic condition on bare ground.
- For the 6-hour storm duration, the SCS Type II distribution was applied to the precipitation depth (recommended for the state of Arizona).
- Sub-catchment areas.

The catchment areas shown in plan on Figure III-9, and the catchment characteristics used for modelling are presented in Table III-5.

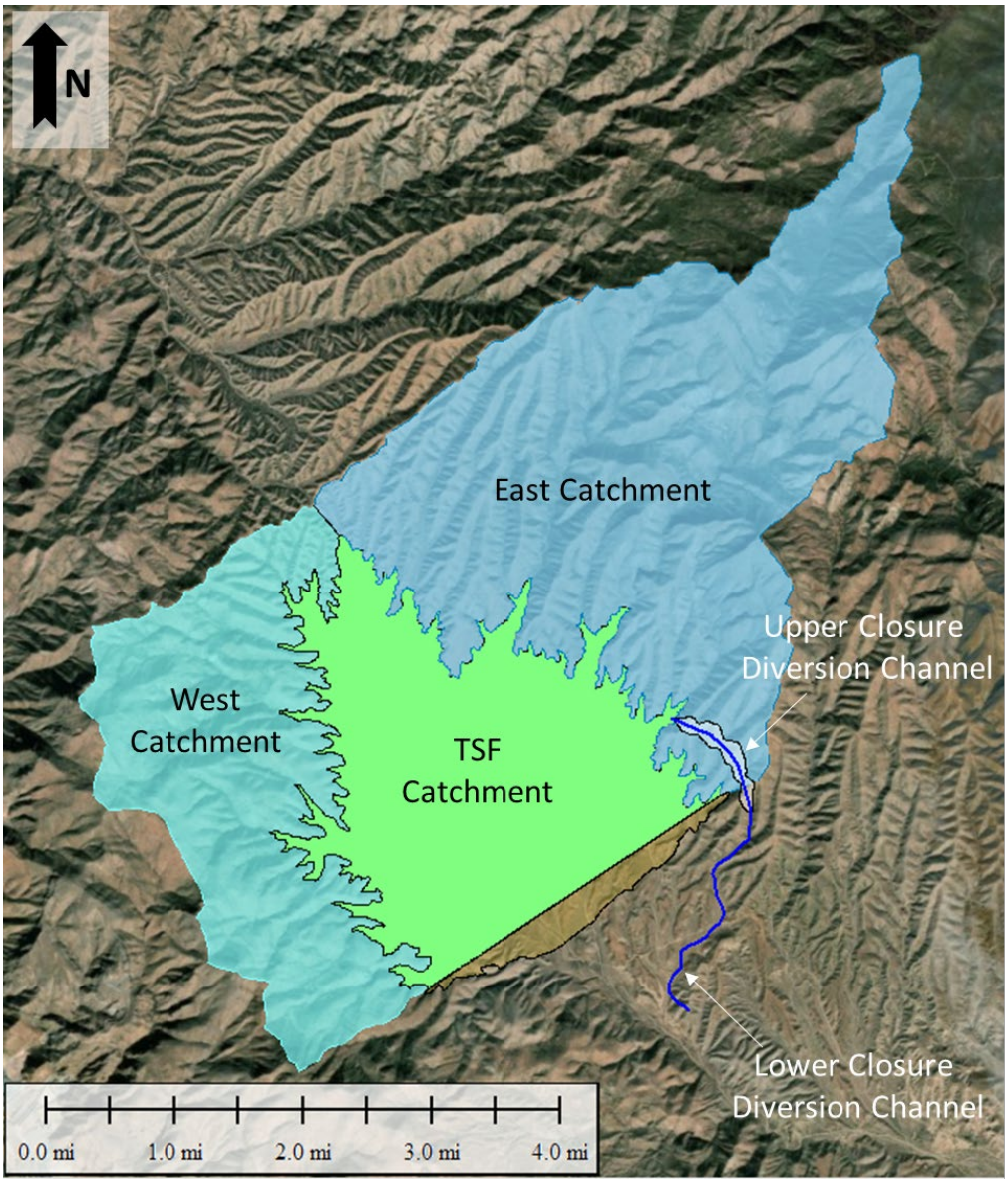
Table III-5 Catchment Characteristics

Catchment ID	Catchment Area (acres)	Average Ground Slope (Note 3) (%)	Curve Number (Note 1)	Lag Time (Note 2) (min)
TSF Surface	3,840	0.5%	93	155
West Catchment	3,530	9%	93	28
East Catchment	7,210	12%	93	49
Total	14,580			

Notes:

1. CN value based on hydrologic soil type D (for Phoenix, Arizona) and good hydrologic condition on bare ground. These would be updated with site specific observations in future design stages. The CN value has been adjusted for PMP condition.
2. The Lag Time was estimated based on a Soil Conservation Service equation (Muzik 1992).
3. Average slope was estimated by dividing the change in elevation by the flow path length.

Figure III-9 Closure Diversion Channel Catchment Areas



III-6.1.4 Results

The flood routing results for the TSF reservoir and Closure Diversion Channel are summarized in Table III-6, and illustrated in Figure III-10 and Figure III-11. The results indicate that 22 ft of freeboard and 1,700 ft of beach width remains in the TSF during the 72 hr PMF, more than the minimum amounts required for dam safety and therefore acceptable for a closure condition. Note, the 6-hr PMF was used to size the Tailings Surface Channels and the Closure Diversion Channel, since it resulted in the highest overall peak flow.

Figure III-10 Stage-storage Curve (Ultimate TSF Surface)

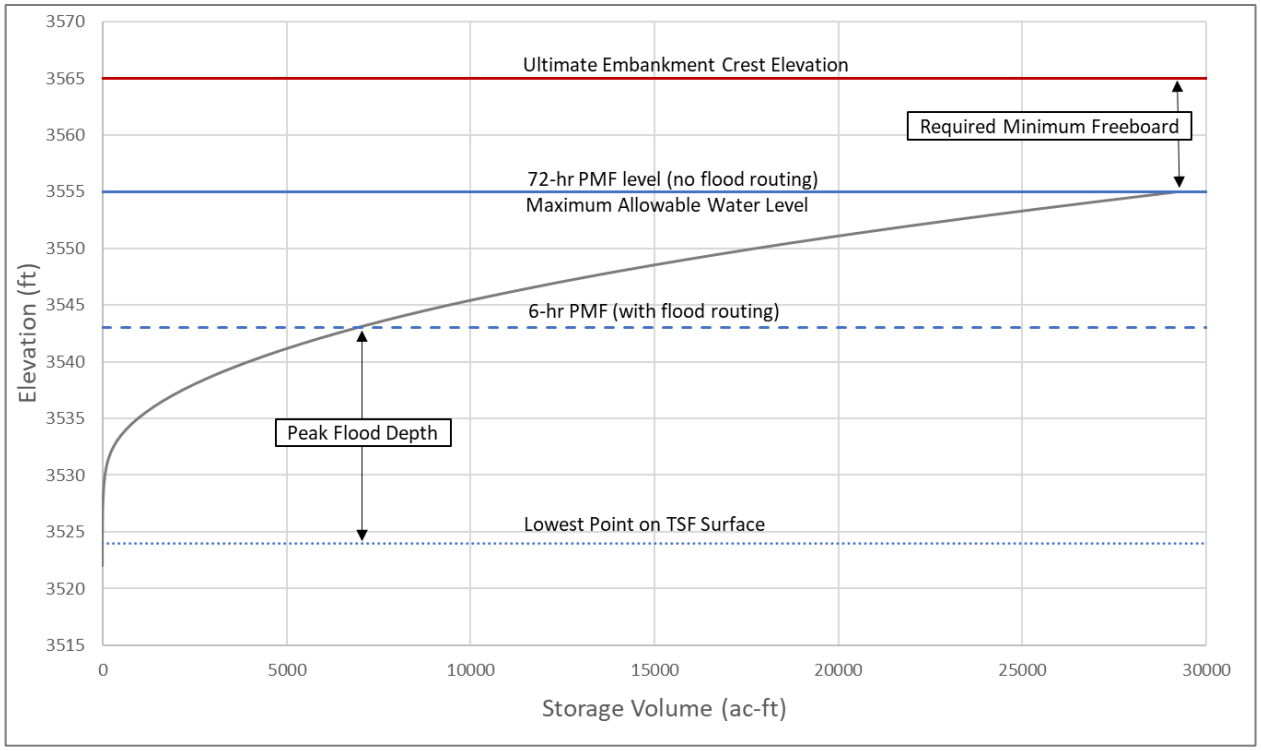


Figure III-11 6-hr PMF Flood Hydrographs and Pond Elevations (Ultimate TSF Surface)

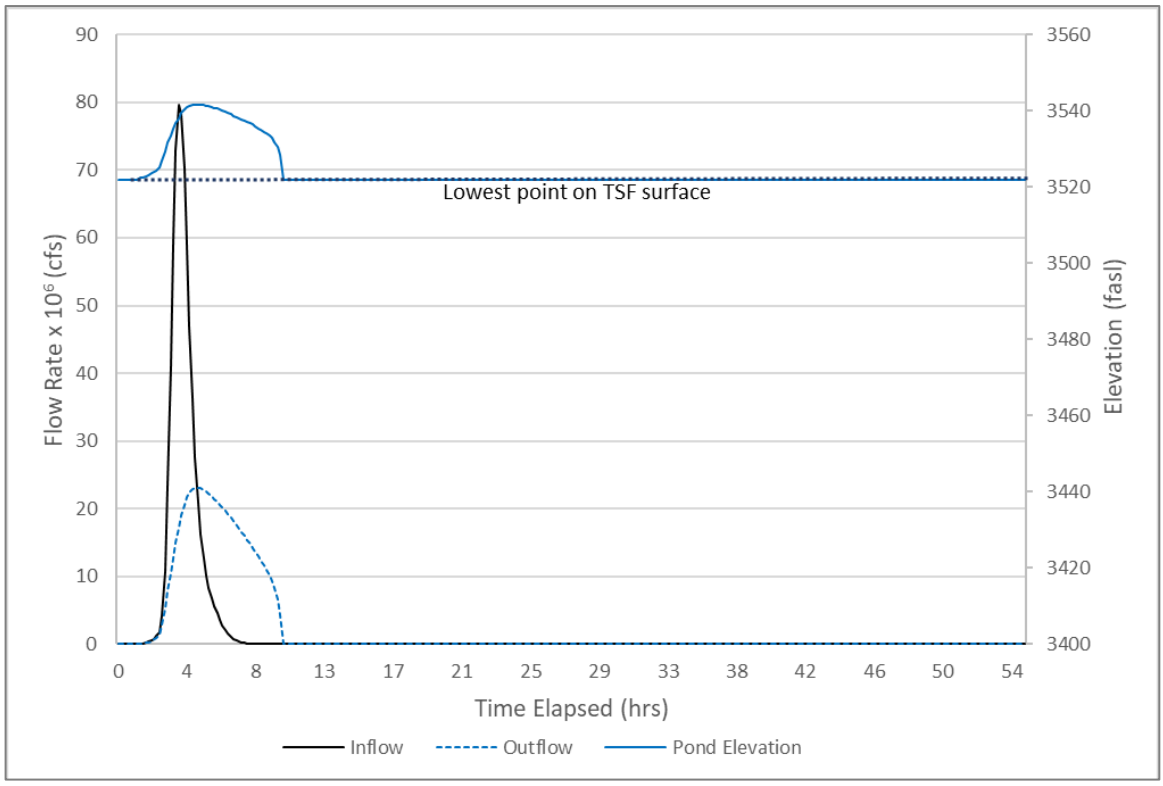


Table III-6 IDF Flood Routing Results

Parameter	Value
Initial Water Level (NOWL) (i.e., lowest Point on TSF Surface for dry condition)	3,522 ft
6-hr PMF Level (with flood routing)	3,543 ft
Additional storage above routed PMF	22,300 acre-ft
72-hr PMF Level (no flood routing) (Note 1)	3,555 ft
72-hr PMF Volume (no flood routing)	29,800 acre-ft
Embankment Crest Elevation	3,565 ft
Available Minimum Freeboard	22 ft
Required Minimum Freeboard	8 ft
Available Minimum Beach Width	1,700 ft
Required Minimum Beach Width	400 ft
TSF Peak Inflow (72-hr PMF)	80,000 cfs
TSF Peak Outflow (72-hr PMF)	17,000 cfs

Note:

1. This water level also corresponds to the maximum allowable water level (MAWL), assuming a 400-ft minimum beach required as defined in Appendix II.

Table III-7 presents the preliminary sizing and dimensions of the Closure Diversion Channel, including channel hydraulics and estimated channel excavation volume. Note, the excavated material will be processed and used for tailings cover material.

Table III-7 Upper Closure Diversion Channel Preliminary Sizing

Flood Event	Design Flow (ft^3/s)	Flow Velocity (ft/s)	Flow Depth (ft)	Length (miles)	Slope (%)	Base Width (Note 1) (ft)	Side Slopes	Minimum Depth (Note 2) (ft)	Channel Excavation (Myd^3)
PMF	17,000	4.4	15	1.13	0.5	100	1.5H:1V	17	13.7

Notes:

1. The Closure Diversion Channel design incorporates a low flow channel with a base width of 25 ft and an access road along the high flow channel base with a width of 50 ft (Figure III-4).
2. Minimum depth includes 2 ft of freeboard
3. A Manning's roughness coefficient of 0.03 was assumed for the base of the channel in the gravelly and cobbly Tertiary conglomerate.

III-6.2 Tailings Surface Channels

Throughout the operating years, scavenger tailings are assumed to be deposited on the beach at a slope of 0.5%. As described in Appendix II, the last 10 years of operations focuses on delivering an ultimate surface that is graded towards the Closure Diversion Channel (Figure III-1). Therefore, it is expected that the slopes along the ultimate surface will be up to 0.5% but may be lower in some sections of the impoundment. The gentle slope angles of the surface may result in sedimentation along the channels as well as increasing the likelihood of temporary ponding in certain areas, which may temporarily increase seepage to the TSF. Earthworks may be required that will primarily involve regrading the tailings surface and construction of perimeter berms to develop the design grades. It is

assumed that a 2-ft thick cover of soil-like Tertiary Conglomerate (Tcg) will be placed across the entire scavenger beach surface on closure.

The Tailings Surface Channels are anticipated to be wide and shallow trapezoidal channels. The channels will be designed to accommodate runoff from the 200-yr 24-hr flood event within the channel cross-section with adequate freeboard. Channels will concentrate flow and be graded towards the Closure Diversion Channel. A preliminary configuration of the surface channels is shown in Figure III-1.

All Tailings Surface Channels will be covered with crushed coarse Tertiary conglomerate (3 ft), which is 1 ft thicker than the cover over the remainder of the tailings surface. This additional thickness will provide some ability for the channels to self-armor. A thicker layer of Tertiary conglomerate may also be required at the edges of the TSF to mitigate erosion from minor run-on from upstream catchments in between the major surface water channels.

III-6.3 Closure Embankment Bench and Toe Ditches

The Main Embankment will be constructed with cycloned sand. At closure, a series of controls are required to mitigate erosion of the Main Embankment downstream slope and toe. The downstream slope will be covered with 3 ft of crushed, soil-like Tertiary conglomerate. To minimize erosion of this cover and the Main Embankment during high-intensity flood events, Closure Embankment Bench Ditches will be required on the downstream slope and will convey water to the Closure Embankment Toe Ditches. The toe ditches will re-direct water around the seepage collection facility and into the Dripping Spring Wash to the south. Two Closure Embankment Toe Ditches will be required at the western and eastern extents of the dam toe.

Closure Embankment Bench and Toe Ditches will be sized to the 1000-year 24-hr flood event. The Closure Embankment Bench Ditches will be spaced to distribute runoff between channels and sloped to meet the Closure Embankment Toe Ditches, located at the toe of the dam. The spacing and grading of the Closure Embankment Bench Ditches should be optimized in future design phases with the objective of reducing potential sedimentation along the channels (Figure III-2).

All Closure Embankment Bench Ditches will be trapezoidal and armored with riprap that is to be sourced from a local quarry. Bench ditches will require only small riprap. The Closure Embankment Toe Ditches will be steeper and convey higher flow rates than the bench ditches, thus requiring considerably larger widths and, where they cannot be constructed in competent bedrock, considerably larger riprap size. A minimum bench of 50 ft is required to construct the Closure Embankment Bench Ditches with an adjacent access road (Figure III-3).

III-6.4 Seepage Collection Pond (SCP)

During operations, the SCP will be used to collect seepage water from the tailings embankment underdrain system and surface runoff from the embankment slope. The size and location of the SCP is shown in Figure III-1. The design criteria for the SCP sizing is included in Appendix I of KCB 2018.

The SCP and downstream shallow alluvial pumpback well and grout curtain will be maintained to manage TSF draindown post-closure. The Closure Embankment Bench and Toe Ditches will convey non-contact surface runoff from the natural catchment and the reclaimed embankment slope around the SCP. Buried Finger Drain Collection Pipes will be installed to route TSF seepage to the SCP. The SCP will be actively managed until approximately Mine Year 120, after which seepage can be managed passively by evaporation (Appendix VI). All seepage collection infrastructure will be decommissioned when seepage from the Main Embankment finger drains ceases and the TSF long-term seepage reporting to the groundwater is low enough that water quality guidelines are met at the Point of Compliance. The regional groundwater model predicts this will occur in Mine Year 286 (M&A 2020). Refer to Section 9 of the main report for details of the reclamation plan schedule.

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APPENDIX IV

Closure Cover Modeling

Appendix IV-A – Climate Analysis
Appendix IV-B – Hydrus-1D Detailed Results

Appendix IV
Closure Cover Modeling

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Appendix IV-A Climate Analysis
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IV-1 INTRODUCTION AND OBJECTIVES

This appendix presents the results of one-dimensional numerical infiltration modeling for the Skunk Camp TSF conceptual closure cover options. The purpose of closure cover modelling is to assess the relative hydraulic performance of different closure cover options for the scavenger and pyrite tailings. The scavenger tailings will be founded on native soil and overburden (including Gila Conglomerate and Alluvium) and will be cycloned for use in dam construction. Pyrite tailings storage is proposed in cells that will include a low-permeability layer at the base of the pyrite tailings to limit basal seepage.

The objective of scavenger beach and cycloned sand closure cover is to limit net infiltration into the underlying tailings and embankment. The proposed closure cover material for the scavenger tailings is Gila Conglomerate. KCBCL developed soil-atmosphere models to predict components of the near-surface water balance for exposed and covered scavenger tailings. The modeling simulates evaporation, plant transpiration, runoff, infiltration, vapor flow and moisture redistribution within the tailings and cover materials. The models also predict near-surface moisture and saturation profiles.

The objective of the pyrite tailings closure cover (comprised of Gila Conglomerate and scavenger tailings) is to limit infiltration, and in conjunction with a low permeability layer, minimize basal seepage. KCBCL developed a one-dimensional unsaturated/saturated seepage model for the pyrite cell with a domain that extends from the top of the cover materials to the base of the low-permeability layer. The model predicts an overall water balance for the pyrite cell that includes evaporation, surface infiltration, water table elevation, material saturation, basal seepage and storage components.

This appendix describes the modeling approach, inputs and results, as summarized below:

- Approach (Section IV-2): describes the numerical models and closure cover scenarios;
- Scavenger Tailings Models (Section IV-3): summarizes the inputs (climate, vegetation, boundary conditions and material properties) and results for the scavenger beach and cycloned sand models;
- Pyrite Tailings Models (Section IV-4): summarizes the model inputs (climate, boundary conditions and material properties) and results for the pyrite tailings models; and
- Conclusions (Section IV-5): summarizes the preferred closure cover options to support future planning and design.

The following closure items are addressed in separate documents:

- Scavenger Beach Seepage-Consolidation modeling: modeling to estimate the time required for impoundment to consolidate and drain down to steady-state conditions; and estimate period required for active seepage management (KCBCL 2020, Appendix II).
- Surface water management design (refer to Appendix III).
- Soil Salvage and Revegetation Plans (refer to Section 8 of the Tetra Tech reclamation report).
- Performance success criteria and monitoring program (refer to Section 11 of the Tetra Tech reclamation report).

IV-2 APPROACH

IV-2.1 Model Conceptualization

KCBCL developed one-dimensional unsaturated flow models for four tailings zones, (as presented in Figure 2.2 of the Main Report):

- Near Dam Scavenger Beach: scavenger beach tailings that are less than 500 ft upstream of the cycloned sand embankment;
- Scavenger Beach: scavenger beach tailings that are more than 500 ft upstream of the cycloned sand embankment;
- Cycloned Sand: tailings that comprise cycloned sand embankment; and
- Pyrite Tailings: tailings in the two pyrite cells.

The scavenger beach was delineated into two zones because the tailings gradation is expected to vary along the length of the beach. Coarser particles will settle out from the depositional stream close to the discharge location (near the embankment crest), while finer particles will settle out further along the slurry flow path as velocity decreases. As such, the Near Dam Scavenger Beach tailings are expected to be coarser and more permeable than the Scavenger Beach tailings.

IV-2.2 Model Type

KCBCL adopted different modeling approaches for the scavenger tailings (Near Dam Scavenger Beach, Scavenger Beach, and Cycloned Sand) and pyrite tailings. The models are summarized on Table IV-1.

Table IV-1 One-Dimensional Water Balance Model Summary

Parameter	Scavenger Tailings	Pyrite Tailings
Closure Cover Objective	Limit net infiltration into the underlying tailings.	Limit basal seepage into the foundation.
Model Domain	Cover Materials and top 10 ft of Near Dam Scavenger Beach, Scavenger Beach or Cycloned Sand tailings.	Cover materials, up to 25 ft of pyrite tailings and low-permeability layer at the base of the pyrite cell.
Water balance Components	Evaporation, transpiration from vegetation, runoff, vapor flow, and unsaturated water flow (infiltration)	Evaporation, runoff, unsaturated water flow, and saturated water flow (infiltration).
Software	Hydrus-1D (Šimůnek et al. 2009)	TOUGH2
Grid Spacing	0.2 inches	0.2 – 12 inches
Climate Input	56 years of climate data, 2.4 hour timestep.	One "typical" year of climate data (see Section IV-4.1.1), repeated for 50 cycles.

The performance objective of the Near Dam Scavenger Beach, Scavenger Beach and Cycloned Sand closure covers is to limit infiltration into the underlying tailings. KCBCL used the software program Hydrus-1D (Šimůnek et al. 2009) to model the near-surface water balance and assess the relative hydraulic performance of different cover systems. Hydrus-1D is an industry-standard model for simulating liquid and vapor flow in a one-dimensional (vertical) column. The software is widely accepted for use in assessing closure cover performance,. KCBCL adopted a similar approach for the Near West TSF cover design models (KCB 2016).

The performance objective of the pyrite tailings closure cover is to limit infiltration through the cover to help limit basal seepage into the foundation. KCBCL used the modeling platform TOUGH2 (Berkeley Labs 2020) to predict the unsaturated and saturated zone conditions for the simulated tailings profile within the pyrite cells. The model domain includes Gila Conglomerate cover, scavenger tailings cover, pyrite tailings and a low-permeability layer at the base of the column. KCBCL selected TOUGH2 one-dimensional (1D) for the simulation of this hydraulic setting because it computes both unsaturated and saturated water flow effectively and supports greater spatial discretization than Hydrus-1D.

The pyrite models differ from the scavenger models in that plant transpiration and vapor flow are not considered. These terms are not expected to significantly impact basal seepage rates from the pyrite cell, and would most likely decrease seepage rates if included based on the scavenger tailings model output (Section IV-3.2).

IV-2.3 Cover Scenarios

The Hydrus-1D cover model scenarios for the scavenger tailings and TOUGH2 model scenarios for the pyrite tailings are presented graphically on Figure IV-1 and Figure IV-2, respectively, and listed on Table IV-3. KCBCL produced models with uncovered tailings for each tailings zone to provide a baseline for assessing cover performance. Given the limitations of unsaturated flow modelling in 1-dimension, the scenarios were developed to evaluate the relative difference between cover configurations and not absolute performance results.

The scavenger cover model scenarios were selected to assess the effects of the following variables on cover performance:

- Hydraulic properties of the cover material: two cover materials were considered – a Soil-Like Gila Conglomerate representative of surficial deposits at the Skunk Camp Site and a Coarse Gila representative of materials expected at depth. Section IV-3.1.3 discusses the characterization of both cover materials.
- Cover thickness: cover thicknesses of 1 ft to 3 ft were modelled.
- Vegetation: models were run with and without plant transpiration.
- Surface slope: models were run with and without ponding. The models without ponding represent a sloped tailings surface – all precipitation that does not infiltrate or evapo-transpirate in a given time step is assumed to runoff.

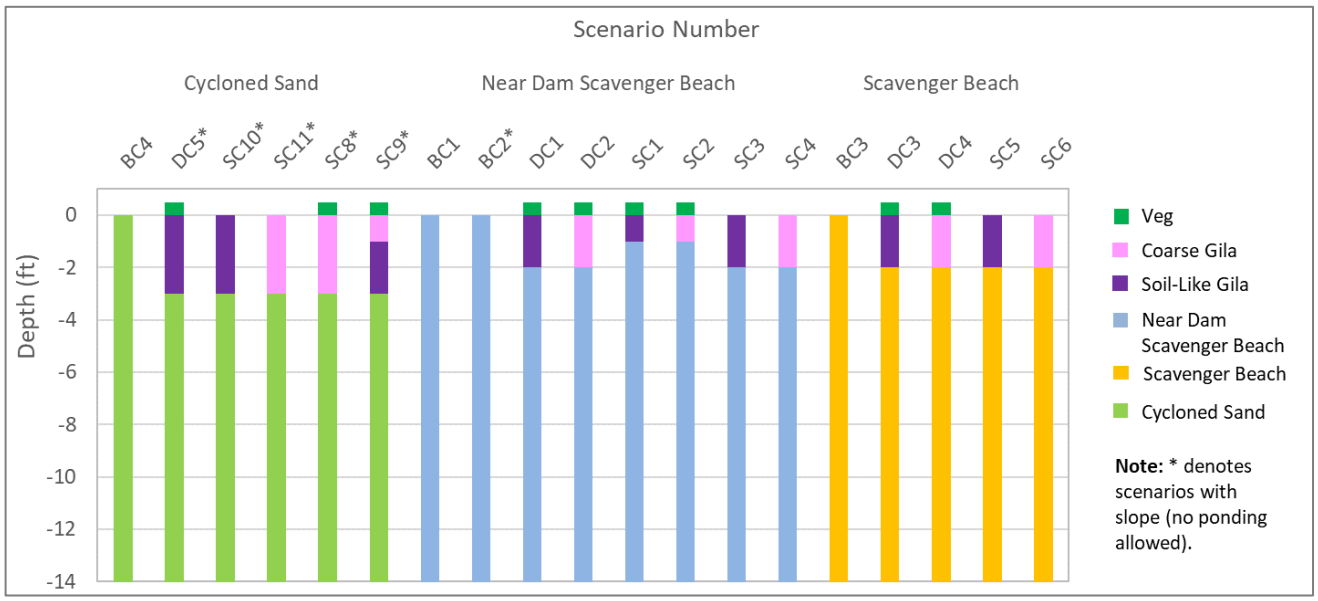
The pyrite cover models assess the effect of hydraulic properties of the cover material selected for the design case. Cover sensitivity and effect of vegetation and thickness are effectively evaluated by the Near Dam Scavenger Beach models as this near surface configuration overlies the pyrite tailings models. The modelling software used to evaluate infiltration and basal seepage on the pyrite tailings is unable to calculate transpiration, so no vegetated scenarios were modelled.

For simplification, scenario names are strings of abbreviations in the ascending order of material within the model column. Abbreviations are summarized in Table IV-2.

Table IV-2 Scenario Name Abbreviations

Abbreviated Name	Explanation
Near Dam Scav	Scavenger beach area less than 500 ft upstream of cycloned sand embankment.
Scav Beach	Scavenger beach area more than 500 ft upstream of cycloned sand embankment.
Cycloned Sand	Cycloned sand embankment.
Pyrite	Pyrite tailings.
Low K Layer	Low-permeability layer below tailings.
Soil-Like Gila	Soil-like gila conglomerate cover material.
Coarse Gila	Coarse gila conglomerate cover material.
Veg	Indicates the run includes the effects of vegetation (plant root uptake).
Sloped	Indicates the run is representing the embankment slope (no ponding allowed).

Figure IV-1 Scavenger Tailings Closure Cover Scenarios (Hydrus-1D models)



BC – Refers to base case (uncovered) models, DC – refers to design case models (cover options being evaluated for closure performance), SC – refers to sensitivity case models (there the effect of other changes to cover design were evaluated).

Figure IV-2 Pyrite Tailings Closure Cover Scenarios (TOUGH2 Models)

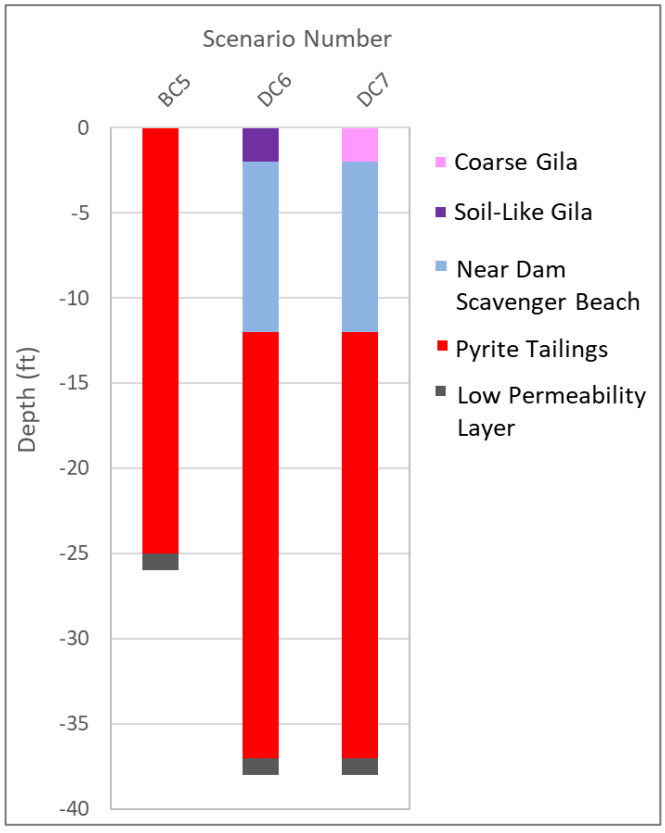


Table IV-3 Modelled Scenarios

Scenario #	Profile (see Table IV-2 for abbreviation definitions)	Objective
Near Dam Scavenger Beach Tailings (Hydrus-1D)		
BC1	BC1: Near Dam Scav	Base Case – uncovered Near Dam Scavenger Beach.
BC2*	BC2: Near Dam Scav, Sloped	Base Case – uncovered Near Dam Scavenger Beach on slope.
DC1	DC1: Near Dam Scav + 2 ft Soil-Like Gila + Veg	Evaluate performance of two cover materials with Near Dam Scavenger Beach.
DC2	DC2: Near Dam Scav + 2 ft Coarse Gila + Veg	
SC1	SC1: Near Dam Scav + 1 ft Coarse Gila + Veg	Assess effect of reduced cover depth on Near Dam Scavenger Beach.
SC2	SC2: Near Dam Scav + 1 ft Soil-Like Gila + Veg	
SC3	SC3: Near Dam Scav + 2 ft Soil-Like Gila	Assess effect of lack of vegetation on the Near Dam Scavenger Beach (as requested by the USFS) and simulate pre-vegetation conditions post-closure.
SC4	SC4: Near Dam Scav + 2 ft Coarse Gila	
Scavenger Beach		
BC3	BC3: Scav Beach	Base Case – uncovered Scavenger Beach.
DC3	DC3: Scav Beach + 2 ft Soil-Like Gila + Veg	Evaluate performance of two cover materials with Scavenger Beach.
DC4	DC4: Scav Beach + 2 ft Coarse Gila + Veg	
SC5	SC5: Scav Beach + 2 ft soil	Assess effect of lack of vegetation on the Scavenger Beach (as requested by the USFS) and simulate pre-vegetation conditions post-closure.
Cycloned Sand		
BC4	BC4: Cycloned Sand	Base Case – uncovered cycloned sand.
DC5*	DC5: Cycloned Sand + 3 ft Soil-Like Gila + Veg, Slope	Evaluate performance of two cover materials with Cycloned Sand.
SC9*	SC9: Cycloned Sand + 2 ft Soil-Like Gila + 1 ft Coarse Gila + Veg, Slope	Evaluate effect of erosion protection layer placed over soil-like gila cover
SC10*	SC10: Cycloned Sand + 3 ft Soil-Like Gila, Slope	Assess effect of lack of vegetation on the Cycloned Sand (as requested by the USFS) and simulate pre-vegetation conditions post-closure.
SC11*	SC11: Cycloned Sand + 3 ft Coarse Gila, Slope	
Pyrite Tailings (TOUGH2)		
BC5	BC6: 25 ft Pyrite, Low K Layer	Base Case – uncovered pyrite tailings.
DC6	DC6: 25 ft pyrite + 10 ft Near Dam Scav Beach + 2 ft Soil-Like Gila, Low K Layer	Evaluate performance of two cover materials and 10 ft of Near Dam Scavenger Beach with the lined pyrite tailings.
DC7	DC7: 25 ft pyrite + 10 ft Near Dam Scav Beach + 2 ft Coarse Gila, Low K Layer	

* Modelled to represent sloped tailings surface. This assumes water cannot pond and that precipitation that does not infiltrate in a given time step will runoff.

IV-3 HYDRUS-1D SCAVENGER AND CYCLONED SAND TAILINGS MODELS

IV-3.1 Model Inputs

IV-3.1.1 Climate Inputs

The climate parameters for the near-surface water balance are precipitation and potential evapotranspiration. Hydrus-1D estimates potential evapotranspiration with the FAO recommended Penman-Monteith combination equation (Monteith 1981; Monteith and Unsworth 1990; FAO 1990, Allen et al. 1998). The Penman-Monteith equation estimates potential evapotranspiration from minimum and maximum temperature, net solar radiation, relative humidity and wind speed. Hydrus-1D calculates net radiation from the latitude, longitude, measured total solar radiation and air temperature.

KCBCL developed a potential evaporation and potential transpiration data set for use in the Hydrus-1D models that include plant transpiration. The potential evapotranspiration output from the base case models (uncovered tailings) was partitioned into potential evaporation and potential transpiration components with Beer's law (Ritchie 1972). Section IV-3.1.2 discusses the Leaf Area Index values used in this calculation.

KCBCL developed an hourly climate data set that represents short- and long-term climate variability at the Skunk Camp Site. The climate data were converted to a 2.4 hour interval for use in the Hydrus-1D models. As no long-term climate data were available for the Skunk Camp Site, KCBCL modified the climate data set previously developed for the Near West Closure Study (KCB 2016) to reflect climatic conditions at Skunk Camp. Appendix IV-A describes this process.

The 56-year simulated Skunk Camp data set includes the following wetter than average (termed "wet") climatic events (return periods are approximate, and years are water years):

- a 100-year wet year in 1992;
- a 50-year 7-day wet winter event in 1993;
- a 200-year 7-day and 14-day wet summer event in 1990 (Tropical depression Diana);
- a 100-year 14-day wet winter event in 1968 and 1993;
- a 100-year 30-day wet winter event in 1993; and
- a 100-year 30-day wet summer event in 1963.

The climate data also include the following and drier than average (termed "dry") climatic events (return periods are approximate, and years are water years):

- a 15-year dry year in 1961 and 1997; and
- a 150-year dry year in 2000 and 2002.

KCBCL assessed surface infiltration from the Near Dam Scavenger Beach base case model (BC1) to identify typical average, wet (high infiltration) and dry (low infiltration) water years, as well as the 10 wettest water years (high infiltration). The time intervals were used to predict cover performance given a range of climate conditions; they are summarized below:

- Average conditions: 1980. The annual rainfall is 20.2 inches.
- Wet conditions: 1992. The annual rainfall is 36.3 inches.
- Dry conditions: 2000. The annual rainfall is 5.4 inches.
- Long-term wet conditions (highest infiltration): 1983 to 1992 (water years). The average annual rainfall is 22.4 inches (ranging from 11.6 inches to 36.3 inches).

IV-3.1.2 Vegetation Parameters

The vegetation inputs required for calculating transpiration in Hydrus-1D are:

- Leaf Area Index (LAI): ratio green leaf area to ground surface area. Hydrus-1D uses LAI to calculate the potential transpiration rate;
- Root Density Function: relationship between root biomass and soil depth. Hydrus-1D uses the root density function to calculate potential transpiration at a given depth in the soil column; and
- Moisture Uptake Function: relates the actual transpiration rate to soil suction.

Leaf Area Index

The LAI values used in the Hydrus-1D models are based on existing native conditions at the Skunk Camp Site, as the TSF will be revegetated with species native to the area. The anticipated soil cover physical properties will likely be better at holding water and allow for greater root penetration (over native soils which can be hard and dry). These factors will likely result in more favorable conditions for the establishment of vegetation and yield higher transpiration rates than represented by the native LAI's. The native LAI's are thus considered conservative.

The National Aeronautics and Space Administration (NASA) measures LAI remotely using imagery data from the Moderate Resolution Imaging Spectroradiometer (MODIS) on the Earth observation system satellite. NASA has recorded these data every 8 days since July 2002. KCBCL retrieved LAI values for the Skunk Camp Site from the Land Processes Distributed Active Archive Center (LP DAAC) for July 2002 to September 2019 on a 500m by 500 grid spacing (Myneni et al. 2015). Table IV-4 lists the monthly average LAI values used in the Hydrus-1D modeling.

Table IV-4 Monthly Leaf Area Index

Month	LAI[1]
January	0.35
February	0.51
March	0.70
April	0.64
May	0.56
June	0.51
July	0.50
August	0.59
September	0.53
October	0.41
November	0.33
December	0.31

1. Per Myneni et al. 2015.

KCBCL undertook a literature review to characterize LAI in semi-arid desert environments, the findings of which are summarized on Table IV-5. The MODIS monthly LAI values are consistent with the literature review findings. They were thus deemed reasonable as input values for the Hydrus-1D models.

Table IV-5 Leaf Area Index – Literature Review

Location	Land Type	LAI	Based On	Reference
Sonoran Desert	Semi-desert	0.1 to 2.5	Outputs from the Mapped Atmosphere-Plant-Soil System (MAPSS) model	(USDI 2012)
Sonoran Desert	Semi-desert	0.5 to 6.0 (accounts for seasonal variation)	Land type as recommended in the manual for the National Center for Atmospheric Research Community Climate Model Version 2 (CCM2)	(Unland et al. 1996)
Sonoran Desert	Semi-desert	1.0	Adjusted from recommended values from CCM2 based on advice from a local ecologist	(Unland et al. 1996)
Chihuahuan Desert	Semi-desert	0.2 to 0.4 (sampling took place from May 22 to May 24, 1997)	Field sampling using: Digital imagery Radiation transmittance with LAI-2000 Plant Canopy Analyzer Radiation transmittance with Ceptometer quantum line sensor Airborne laser altimetry Destructive sampling with LI-3000 leaf area meter and photographic analysis	(White et al. 1999)

Root Density Function

Gale and Grigal (1987) proposed the following equation to calculate cumulative fraction of roots, Y, from the surface to any depth, d, (Equation 1).

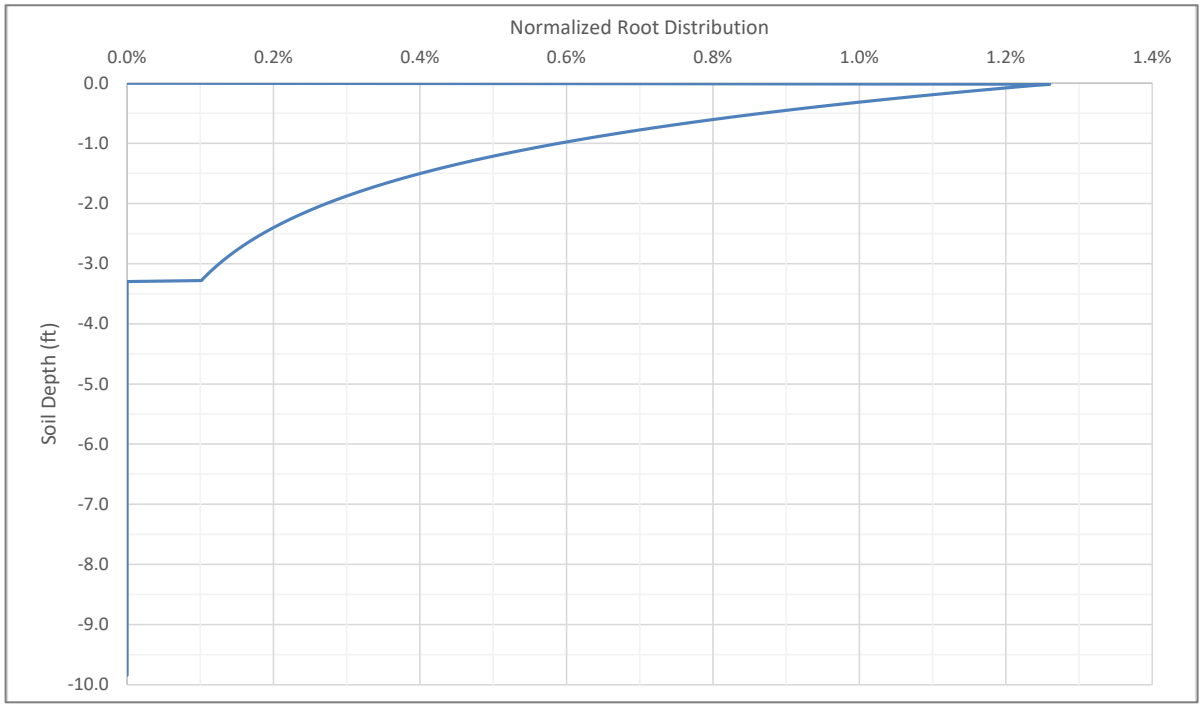
Equation 1 Cumulative Root Density Function based on Gale and Grigal (1987)

$$Y = 1 - \beta^d$$

Where Y: cumulative root fraction from the surface to soil depth, d
d: soil depth (in cm)
β: depth coefficient based on function fit with data for different biomes

The β depth coefficient is approximately 0.975 for desert biomes (Jackson et al. 1996). The cumulative root density distribution was normalized for input to Hydrus-1D and assumed to be truncated at a depth of 3.3 ft, or 1 meter (Figure IV-3). According to Schenk and Jackson (2002), the maximum root depth for desert/semi-desert land type is between 3.3 ft to 6.6 ft. No adjustments were made to this distribution based on material layering or predicted moisture profiles.

Figure IV-3 Normalized Root Density Function based on Gale and Grigal (1987)



Root Water Uptake Function

The Hydrus-1D models calculate the actual transpiration rate based on the Feddes et al. (1978) function (see in Figure IV-4), where rooting depth does not vary with time. The function includes the following parameters:

- h1 – Anaerobiosis Limit: suction head below which transpiration ceases due to anaerobiosis
- h2 - Wet Conditions Limit: suction head below which the actual transpiration rate is less than the potential transpiration rate due to anaerobiosis.
- h3 - Dry Conditions: suction head above which the actual transpiration rate is less than the potential transpiration rate due to dry conditions.
- h4 - Wilting Point: suction head above which plants begin to wilt and transpiration ceases.

Figure IV-4 Root Water Uptake Function (Feddes et al. 1978)

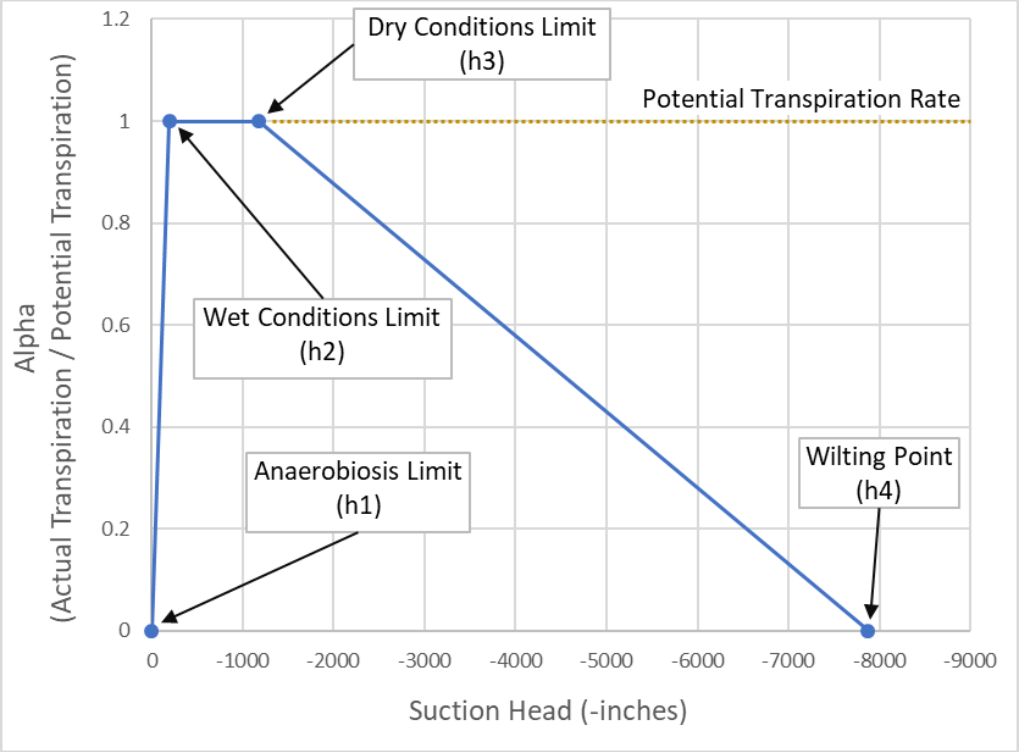


Table IV-6 summarizes the Feddes parameters used in the Hydrus-1D models. Values are based on similar desert vegetation species in the Tyrone Mine closure studies (Golder 2005) and are considered appropriate for this analysis. KCBCL decreased the wilting point for certain cycloned sand models for convergence purposes. This is not expected significantly affect the model results, as the cycloned sand water content is near residual at the adjusted wilting points.

Table IV-6 Hydrus-1D Inputs for Moisture Uptake Function

Parameter	Value
h4 - Wilting Point: suction head above which transpiration ceases	Near Dam Scavenger Beach and Scavenger Beach: 7,874 inches (20,000 cm) Cycloned Sand: 1969 – 3937 inches (5,000 – 10,000 cm)
h3 – Dry Conditions Limit: suction head above which the actual transpiration rate is less than the potential transpiration rate	1,180 inches (3,000 cm)
h2, h1	Not required as a Hydrus-1D input

IV-3.1.3 Material Hydraulic Properties

Table IV-7 summarizes the Hydrus-1D model tailings and cover material hydraulic properties. KCBCL selected tailings properties that are representative of in-situ conditions at shallow depths (less than 10 ft) based on the results of the KCB 2018 tailings testing program (KCB 2018). The Near Dam Scavenger Beach tailings are expected to be coarser and more permeable than the Scavenger Beach tailings due to their proximity to the tailings discharge points. As such, laboratory tests on scavenger total tailings were assumed representative of the Near Dam Scavenger Beach, and tests on scavenger overflow tailings were assumed representative of the Scavenger Beach. Hydraulic properties were selected as follows:

- Saturated Water Content:
  - Near Dam Scavenger Beach: per KCB 2018 scavenger total standpipe settling test.
  - Scavenger Beach: per KCB 2018 oedometer test on scavenger overflow tailings at low effective stresses (10 psf to 100 psf).
  - Cycloned Sand: 98% of maximum standard proctor density.
- Vertical Saturated Hydraulic Conductivity:
  - Near Dam Scavenger Beach: per KCB 2018 oedometer test on scavenger total tailings at low effective stresses (10 psf to 100 psf).
  - Scavenger Beach: per KCB 2018 oedometer test on scavenger overflow tailings at low effective stresses.
  - Cycloned Sand: per KCB 2018 flexible wall permeameter test.
- Van Genuchten Unsaturated Flow Parameters (N, Alpha and Residual Water Content): per KCB 2018 moisture retention tests.

Two Gila Conglomerate cover materials were considered in this assessment: Soil-Like Gila Conglomerate representative of surficial deposits at the Skunk Camp Site and Coarse Gila Conglomerate representative of materials expected at depth. The Soil-Like Gila Conglomerate properties are from the 2019 moisture retention test on Skunk Camp pediment sample TPC19-20. The sampling procedure and laboratory tests are described in Appendix I – Site Investigation and

Laboratory Testing Summary. The Coarse Gila Conglomerate properties are adopted from a 2015 moisture retention test on a reconstituted sample from a Gila Conglomerate borrow stockpile at the Superior Mine. Sample preparation and testing is described in Appendix I of the KCB 2016 Closure Cover Study for the Near West site (KCB 2016).

KCBCL characterized the tailings and cover material hydraulic properties based on laboratory tests carried-out under idealized conditions. Field conditions may differ and vary spatially. However, the purpose of the Hydrus-1D modelling is to provide a basis for comparing the performance of different cover options, and not to predict actual infiltration rates accurately. The hydraulic properties presented on Table IV-7 were thus considered sufficiently representative of field conditions to meet the modelling objectives.

Table IV-7 Material Hydraulic Properties

Material	Vertical Saturated Hydraulic Conductivity K_{sat}	Residual Water Content Θ_r	Saturated Water Content Θ_s	Van Genutchen Parameters	
				α	N
	cm/s	cm^3/cm^3	cm^3/cm^3	1/cm	N/A
TAILINGS					
Near Dam Scavenger Beach	$5x10^{-5}$	0.006	0.47	$7.7x10^{-3}$	1.783
Scavenger Beach	$1x10^{-5}$	0.002	0.55	$6.2x10^{-3}$	1.673
Cycloned Sand	$5x10^{-4}$	0.006	0.41	$2.4x10^{-2}$	2.568
COVER MATERIALS					
Soil-Like Gila	$2x10^{-3}$	0.45	0.027	$2.3x10^{-2}$	1.396
Coarse Gila	0.8	0.32	0.003	7.8	1.177

IV-3.1.4 Boundary Conditions

KCBCL specified the following boundary conditions in the Hydrus-1D models:

- Free draining (unit hydraulic gradient) at the bottom of the scavenger tailings.
- Atmospheric conditions at the surface with a maximum allowable surface soil suction of -328 ft to -6562 ft, depending on model convergence requirements.
- Ponding depths of 0.4 inches to 2.0 inches, where ponding was enabled, depending on model convergence requirements. The ponding depth did not have a large influence on predicted net infiltration. The ponding depth was set to 0 for scenarios with a sloped tailings surface. This assumes all precipitation that does not infiltrate or evapo-transpirate in a given time step will runoff.
- Root water uptake within the root zone (3.3 ft depth) for model scenarios with vegetation.

IV-3.1.5 Initial Conditions

The overall water balance results for the scavenger tailings models are not sensitive to initial moisture content, as the saturation profiles generally stabilize over the first five years of the time series. Initial saturation values of 25% to 50% were selected for ease of model convergence. Early time period results are discarded in the analysis.

IV-3.2 Results

Hydrus-1D calculates a water balance that spans the 56-year climate data set described in Section IV-3.1.1. The following outputs are calculated over each timestep:

- potential evapotranspiration;
- actual evaporation;
- actual transpiration (for model scenarios with vegetation);
- surface runoff;
- net infiltration at the base of the model column (into the underlying tailings); and
- suction head and saturation profiles.

KCBCL assessed these results to evaluate the relative hydraulic performance of different cover systems and the effect of different variables (vegetation, cover hydraulic properties and cover thickness) on hydraulic performance. The objective of the closure cover is to limit infiltration into the tailings. Cover systems that result in lower net infiltration and lower saturation within the tailings are thus expected to be more effective.

High-level water balance results and conclusions are summarized in the following sections. Detailed water balance results are presented in Appendix IV-B for the following climate scenarios:

- annual water balance by water year (October 1 – September 30) for water years 1951 to 2006;
- monthly water balance for 9 consecutive “wet” years with high infiltration rates (1983 to 1991);
- winter season water balance (November-March) for years 1951 to 2006; and
- Monsoon season water balance (July-November) for years 1951 to 2006.

Appendix IV-B includes soil moisture content, suction head and saturation profiles for the months of February, June and August of the following water years:

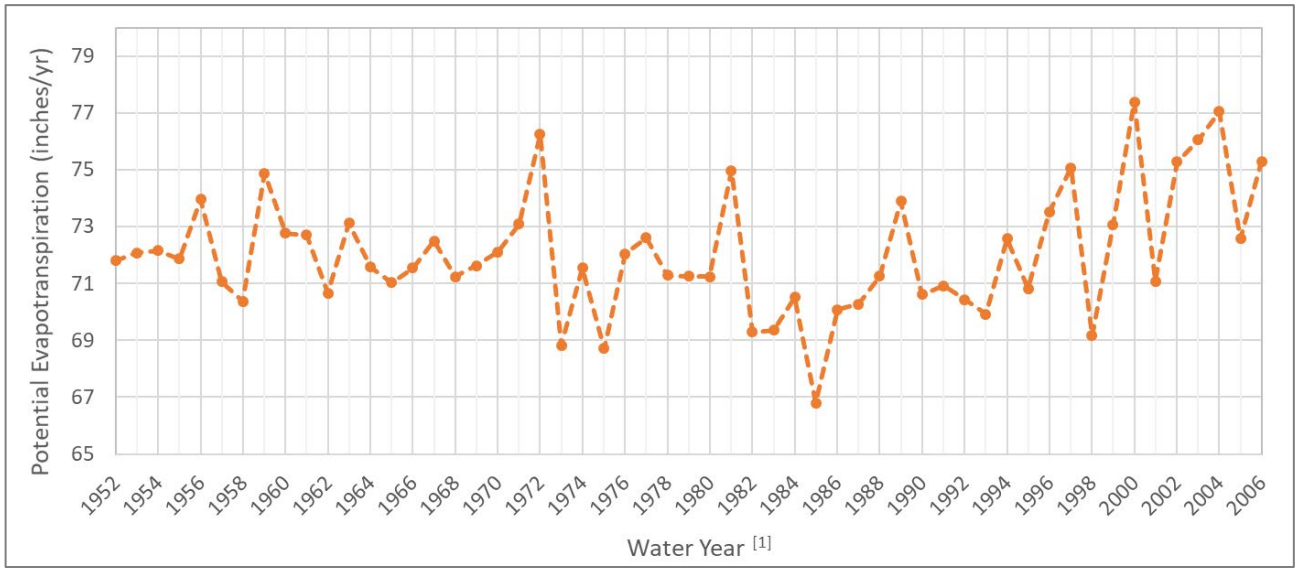
- average hydrologic year (1980);
- dry year (2000); and
- wet year (1992).

Section IV-3.1.1 discusses the rationale for selecting these reporting years.

IV-3.2.1 Potential Evapotranspiration

Hydrus-1D calculates potential evapotranspiration with the Penman-Monteith combined equation based on the climate inputs discussed in Section IV-3.1.1. Figure IV-5 plots the annual potential evapotranspiration output. Actual evapotranspiration differs by model scenario and is discussed in Sections IV-3.2.2 to IV-3.2.4.

Figure IV-5 Calculated Potential Evapotranspiration ETo (water years)



Notes:

1. A water year is defined as October 1st of the previous calendar year to September 30th of the current calendar year.

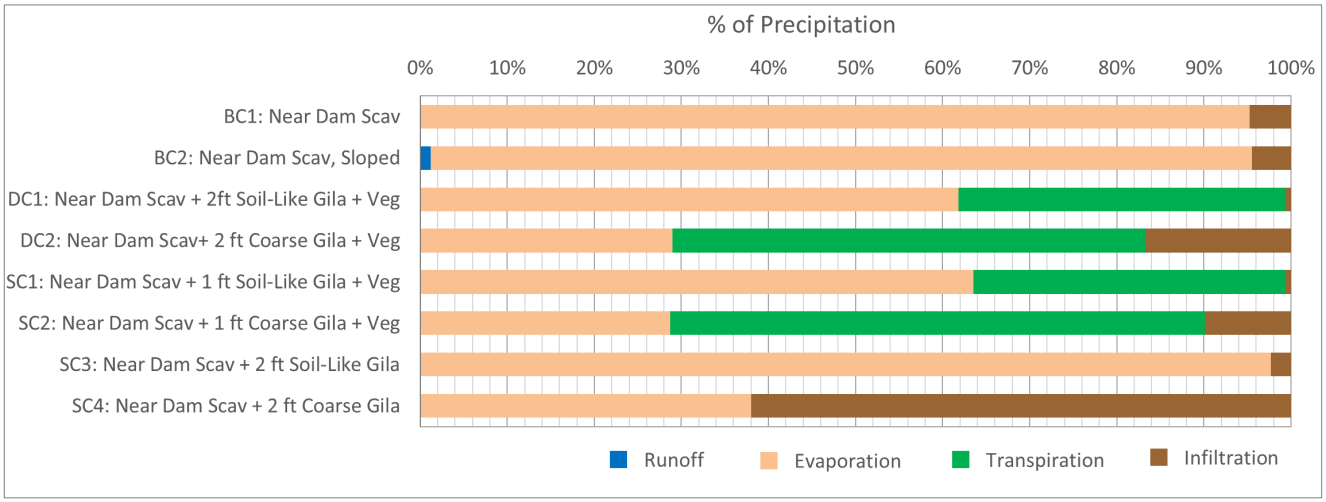
IV-3.2.2 Near Dam Scavenger Beach

Figure IV-6 plots the Near Dam Scavenger Beach overall water balance results (water years 1961 to 2006). Key observations are summarized below:

- The Soil-Like Gila Conglomerate cover reduces infiltration relative to the base case with and without vegetation (scenarios DC1 and SC3).
- Reducing the cover depth from 2 ft to 1 ft has a negligible effect on the water balance results for the Soil-Like Gila Conglomerate cover (scenario SC1).
- The Coarse Gila Conglomerate increases infiltration relative to the base case. This increase is most significant when vegetation is not present (scenarios DC2, SC2 and SC4).
- Adding slope to the base case generates runoff of approximately 2% of precipitation (scenario BC2).

The preferred cover design for the Near Dam Scavenger Beach is vegetated 2 ft of Soil-Like Gila Conglomerate (DC1) (this depth is preferred for constructability, however given the results of the modelling, instances where cover thickness of 2 ft is not explicitly achieved in construction will result in a negligible difference in net infiltration). This option limits infiltration with and without established vegetation. The cover is also effective if the thickness is reduced to 1 ft (e.g. through erosion, construction irregularities etc.). The Coarse Gila Conglomerate cover increases infiltration, particularly without transpiration.

Figure IV-6 Near Dam Scavenger Beach Overall Water Balance Results



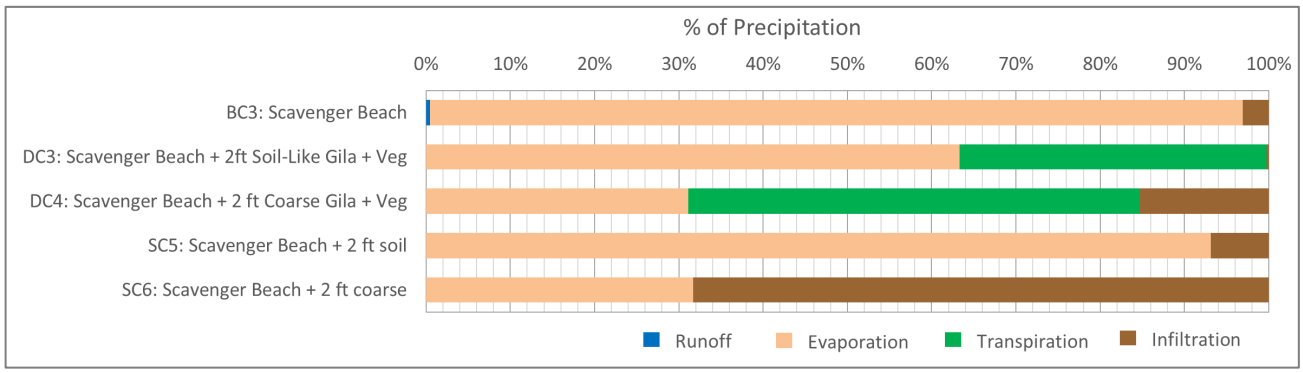
IV-3.2.3 Scavenger Beach

The Scavenger Beach overall water balance results (water years 1961 to 2006) are shown on Figure IV-7. Key observations are summarized below:

- The Soil-Like Gila Conglomerate cover reduces infiltration relative to the base case with vegetation (scenario DC3).
- Removing vegetation from the Soil-Like Gila Conglomerate cover increases infiltration by approximately 5% of precipitation (scenario SC5).
- The Coarse Gila Conglomerate cover increases infiltration relative to the base case. This increase is most significant when vegetation is not present (scenarios DC4 and SC6).

Similar to the Near Dam Scavenger Beach, the preferred cover design for the Scavenger Beach is revegetated 2 ft of Soil-Like Gila (DC3).

Figure IV-7 Scavenger Beach Water Balance Results



IV-3.2.4 Cycloned Sand

The Cycloned Sand overall water balance results (water years 1961 to 2006) are shown on Figure IV-8. The ponding depth was set to 0 for all cycloned sand scenarios except the base case (uncovered tailings) to model the sloped surface of the cycloned sand embankment. The base case was modelled with a ponding depth of 2 inches to facilitate model convergence.

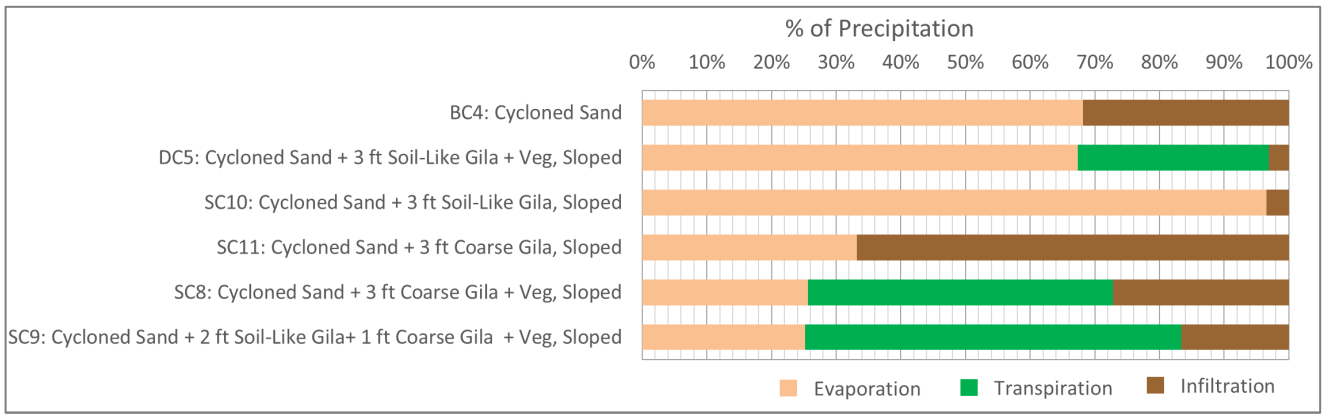
The infiltration rates presented on Figure IV-8 are likely overestimated due to limitations of the one-dimensional water balance model. The models do not predict significant runoff, and given the actual slope of the embankment, runoff at the tailings surface, or as lateral flow between the tailings and cover materials and Gila, is expected to occur in the field. Infiltration, similar to what is predicted could occur on the dam benches where the slope is negligible. The actual infiltration rates are thus expected to be lower than those presented on Figure IV-8, as has been observed at similar facilities. The results of these models have been interpreted as relative changes in performance.

Key observations from the cycloned sand models are summarized below:

- The 3 ft Soil-Like Gila Conglomerate cover reduces infiltration relative to the base case (scenarios DC5 and SC10), with and without vegetation.
- Adding a layer of Coarse Gila Conglomerate on top of the Soil-Like Gila Conglomerate increases infiltration (SC9) relative to the 3 ft Soil-Like Gila Conglomerate cover (DC5).
- The 3 ft Coarse Gila Conglomerate cover produces infiltration rates that are similar to the base case when vegetation is established (SC8). The infiltration is significantly higher when vegetation is not established (SC11).

The preferred cover option for the Cycloned Sand is a 3 ft of Soil-Like Gila Conglomerate (DC5). This option reduces infiltration relative to the base case, with and without vegetation.

Figure IV-8 Cycloned Sand Water Balance Results



IV-3.2.5 Simulation Water Balance Error

The water balance errors reported by Hydrus-1D are small, less than 0.04% for scenarios without vegetation to between 0.3% and 2.3% for scenarios with vegetation. This level of error is low and considered acceptable for the modelling objectives.

IV-4 TOUGH2 PYRITE TAILINGS MODELS

IV-4.1 Model Inputs

IV-4.1.1 Climate Inputs

The climate input for the TOUGH2 pyrite tailings models is precipitation and potential evaporation. The precipitation data are from the Skunk Camp climate analysis (Appendix IV-A), and the potential evaporation data are from the output of the Hydrus-1D base case models (Section IV-3.2.1). KCBCL selected climate data for the “average” water year (1980) described in Section IV-3.1.1 to model typical climate conditions, as TOUGH2 could not model the full 56-year Skunk Camp data set. The TOUGH2 models cyclically repeated the average water year 50 times. TOUGH2 cannot model transpiration, so the models were assumed to be unvegetated.

IV-4.1.2 Material Hydraulic Properties

Table IV-8 summarizes the tailings and cover material hydraulic properties for the TOUGH2 models. Section IV-3.1.3 discusses the basis for the Near Dam Scavenger Beach, Soil-Like Gila Conglomerate and Coarse Gila Conglomerate properties. KCBCL selected pyrite tailings properties based on the results of the KCB 2018 (KCB 2018) tailings testing program and the KCBCL 2019 laboratory testing program (Appendix I):

- Saturated Water Content: per KCB 2018 oedometer test on pyrite tailings at effective stresses of 100 psf to 1000 psf.

- Vertical Saturated Hydraulic Conductivity: per KCB 2018 oedometer test on pyrite tailings at effective stresses of 100 psf to 1000 psf.
- Van Genuchten Unsaturated Flow Parameters (N, Alpha and Residual Water Content): per GSA 2019 moisture retention test (Appendix I).

The proposed pyrite cells include an engineered low-permeability layer. The purpose of the low-permeability layer is to:

- limit basal seepage into the foundation;
- maintain an operating pond above the pyrite tailings; and
- potentially maintain saturation within the pyrite tailings post-closure.

The low-permeability layer properties are based on the results of the SEEP/W axisymmetric analysis (KCBCL 2020, Appendix 3). The SEEP/W analysis assumes the low-permeability layer is a single geomembrane liner. It estimates the layer's effective hydraulic conductivity based on an assumed number of defects per acre and the hydraulic conductivities of the overlying and underlying materials. The axisymmetric analysis predicted an effective hydraulic conductivity of approximately 1×10^{-11} cm/s for the low-permeability layer. KCBCL used a hydraulic permeability of 1×10^{-9} cm/s in TOUGH2 for modelling efficacy. The modelling results indicate that this hydraulic permeability is low enough to limit basal seepage.

Table IV-8 Material Hydraulic Properties

Material	Vertical Saturated Hydraulic Conductivity K_{sat}	Residual Water Content Θ_r	Saturated Water Content Θ_s	Van Genutchen Parameters	
				α	N
	cm/s	cm^3/cm^3	cm^3/cm^3	1/cm	
Pyrite Tailings	$1x10^{-5}$	0.001	0.500	$1x10^{-3}$	2.347
Low Permeability Layer	$1x10^{-9}$	0.001	0.500	$1x10^{-3}$	2.347
Near Dam Scavenger Beach Tailings	$5x10^{-5}$	0.006	0.47	$7.7x10^{-3}$	1.783
Soil-Like Gila	$2x10^{-3}$	0.45	0.027	$2.3x10^{-2}$	1.396
Coarse Gila	0.8	0.32	0.003	7.8	1.177

IV-4.1.3 Boundary Conditions

KCBCL specified the following boundary conditions in the TOUGH2 model:

- upper boundary: precipitation and potential evapotranspiration climate data set (see Section IV-4.1.1).
- lower boundary: free draining (unit hydraulic gradient).

KCBCL assumed that the water table in the underlying geological units would not reach the base of the low-permeability layer. The EIS 3D groundwater model predicts that the water table at the Skunk Camp Site will remain below the TSF (M&A 2020). Positive pore pressures may temporarily develop beneath the low-permeability layer during storm events if groundwater is conveyed upstream along the alluvium traces beneath the TSF. However, the pressures are expected to dissipate rapidly after the storm events, if they develop at all.

The TOUGH2 runoff generation parameters are as follows:

- ponding depth: none
- manning roughness coefficient (n): 0.03 (SI units)
- slope: none
- surface water rill height: 0.2 inches

IV-4.1.4 Initial Conditions

KCBCL specified the following initial saturation values for the TOUGH2 models:

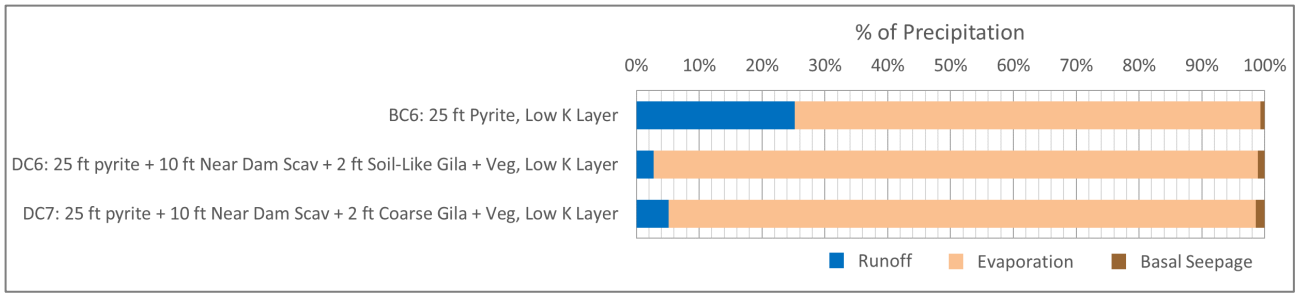
- Soil-Like or Coarse Gila: 50% to 60% saturation.
- Near Dam Scavenger Beach tailings: 60% to 80% saturation.
- Pyrite tailings and low-permeability layer: 100% saturation. The operating strategy for the pyrite cells is to deposit the pyrite tailings sub-aqueously (see Appendix II) and maintain saturation over the life of mine.

IV-4.2 Results

IV-4.2.1 Water Balance

Figure IV-9 summarizes the TOUGH2 water balance results over the last year of the 50-year model run. The results indicate that the low-permeability layer limits infiltration to less than 2% of precipitation for all model scenarios. This suggests that the critical control for basal seepage is the low-permeability layer at the base of the pyrite cells, not the cover material. The cover material properties have a negligible effect on basal seepage rates (net infiltration). The low-permeability layer is required to meet the hydraulic closure objective for the pyrite cells – minimizing basal seepage.

Figure IV-9 Pyrite Model Water Balance Results



Comparison to SEEP/W Pyrite Models

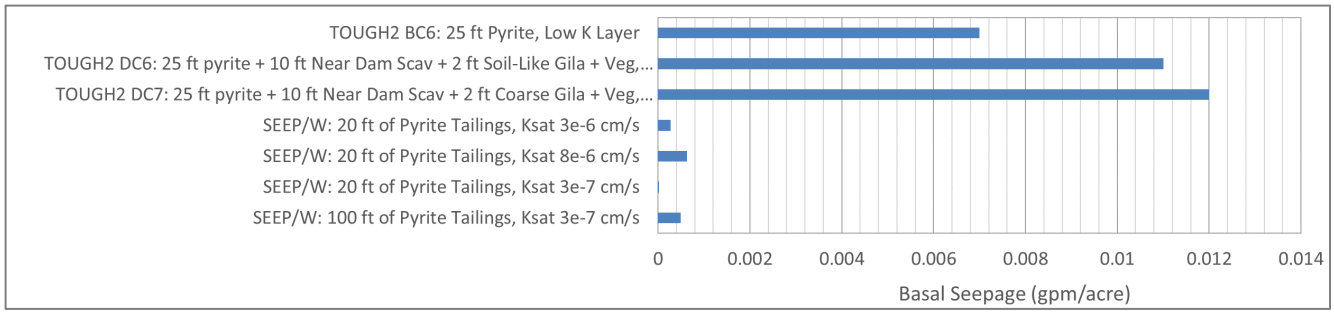
Table IV-9 compares the TOUGH2 pyrite tailings model to the SEEP/W Axisymmetric pyrite model discussed in Appendix 3 of the Environmental Impact Statement Seepage Analysis report (KCBCL 2020). Figure IV-10 plots the both models' predicted basal seepage rates. The SEEP/W seepage rates are approximately 90% lower than the TOUGH2 seepage rates. This is likely due the low-permeability layer's lower hydraulic conductivity in the SEEP/W models. KCBCL used a higher hydraulic conductivity in TOUGH2 for convergence purposes, as discussed in Section IV-4.1.2.

The SEEP/W results indicate that the basal seepage rates shown on Figure IV-9 are likely conservative, as hydraulic conductivity of a geomembrane liner underlying the pyrite tailings would likely be closer to that modelled in SEEP/W. The TOUGH2 results suggest that the low-permeability layer is effective even if its hydraulic conductivity is higher than that predicted by the SEEP/W model.

Table IV-9 TOUGH2 and SEEP/W Model Comparison

Parameter	TOUGH2 Closure Water Balance	SEEP/W Liner Equivalent Permeability Model
Purpose	Assess how different closure cover options affect basal seepage rates.	Estimate the hydraulic conductivity of the low-permeability layer at the base of the pyrite cell.
Geometry	▪ Cover Material: 2 ft ▪ Near Dam Scavenger Beach: 10 ft ▪ Pyrite Tailings: 25 ft ▪ Low-Permeability Layer: 1 ft	▪ Operating Pond: 10 ft ▪ Pyrite Tailings: 20 ft to 10 ft ▪ Low-Permeability Layer: 3 ft ▪ Gila foundation
Pyrite Tailings Hydraulic Conductivity	$1x10^{-5}$ cm/s	$8x10^{-6}$ – $3x10^{-7}$ cm/s
Low-Permeability Layer Hydraulic Conductivity	10^{-9} cm/s	10^{-11} cm/s
Upper Boundary Condition	One "typical" year of climate data (see Section IV-4.1.1), repeated for 50 cycles	Constant total head boundary: 10 ft pond height above pyrite tailings surface
Lower Boundary Condition	Free draining (unit hydraulic gradient)	Constant total head boundary: 70 ft below base of low-permeability layer

Figure IV-10 TOUGH2 and SEEP/W Basal Seepage Rates



IV-5 CONCLUSIONS

Table IV-10 summarizes the closure cover design for the four tailings zones. This assessment considered two cover materials:

- Soil-Like Gila Conglomerate representative of surficial materials at the Skunk Camp Site; and
- Coarse Gila Conglomerate representative of materials expected at depth.

The hydraulic performance objective for the Near Dam Scavenger Beach, Scavenger Beach and Cycloned Sand closure covers is to limit infiltration into the underlying tailings. The Hydrus-1D modelling indicates that the Soil-Like Gila Conglomerate is a suitable cover material, as it limits infiltration with and without vegetation. If insufficient Soil-Like Gila Conglomerate material is available at closure, Coarse Gila Conglomerate will be processed or blended with scavenger tailings to produce a suitable cover material.

The performance objective for the Pyrite Tailings closure cover is to limit basal seepage into the foundation. The TOUGH2 models indicate the critical control for basal seepage is the low-permeability layer at the base of the pyrite cells, not the cover material. The cover material properties have a negligible effect on basal seepage rates. However, the Soil-Like Gila Conglomerate is the preferable cover material for non-hydraulic purposes, which include establishing vegetation.

The TOUGH2 models indicate basal seepage is less than 2% of precipitation. This is likely conservative for the following reasons:

- the low permeability layer models (KCBCL 2020, Appendix III) suggest the equivalent hydraulic conductivity of a geomembrane liner below the pyrite tailings would be two orders of magnitude lower that modelled in TOUGH2;
- the hydraulic conductivity of the pyrite tailings would likely be lower than that considered in the TOUGH2 models due to higher effective stresses and consolidation; and
- the TOUGH2 models do not account for vapor flow and plant transpiration, which would likely reduce net infiltration into the pyrite tailings.

Table IV-10 Cover Design Summary

<table>
<tr><th>Tailings Zone</th><th>Hydraulic Performance Objective</th><th>Cover Design</th><th>Justification</th></tr>
<tr><td>Near Dam Scavenger Beach</td><td rowspan="3">Limit net infiltration into the underlying tailings.</td><td rowspan="2">2 ft of Soil-Like Gila Conglomerate</td><td rowspan="3">Cover limits infiltration into underlying tailings with and without vegetation.</td></tr>
<tr><td>Scavenger Beach</td></tr>
<tr><td>Cycloned Sand</td><td>3 ft of Soil-Like Gila Conglomerate</td></tr>
<tr><td>Pyrite Tailings</td><td>Limit basal seepage into the foundation.</td><td>2 ft Soil-Like Gila Conglomerate & 10 ft Near Dam Scavenger Beach tailings.</td><td>Cover does not impact basal seepage and favors the establishment of vegetation.</td></tr>
</table>

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APPENDIX IV-A

Climate Analysis

Appendix IV-A
Climate Analysis

IV-A-1 INTRODUCTION

Analysis of the performance of a reclamation cover to reduce net infiltration into the tailings depends on the properties of the cover materials and underlying tailings and on local climate conditions. Water balance simulations using numerical modeling require a high quality, detailed, internally consistent data set that represents short and long term climate variability. Required data include precipitation and parameters required to compute potential evapotranspiration (PET). This appendix presents the climate analyses to support the water balance evaluation of covers for the proposed Skunk Camp Tailings Storage Facility (TSF).

PET was estimated using Hydrus-1D (Šimůnek et al. 2009) employing the Food and Agriculture Organization of the United Nations (FAO) recommended Penman-Monteith combination equation (Monteith 1981; Monteith and Unsworth 1990; FAO 1990, Allen et al. 1998). The required inputs for this method are maximum temperature, minimum temperature, net solar radiation, relative humidity, and wind speed. Hydrus-1D was used to compute net radiation using the site's latitude and longitude, measured total solar radiation, and air temperature from the climate data set created for the Skunk Camp Site. A summary of the computed PET and discussion on how it influences the cover performance can be found in Appendix IV.

There is one climate station at the Skunk Camp Site (the Upper Skunk Camp Climate Station (USCCS)) that is being operated and maintained by Resolution Copper Mining Ltd. (RCML). The site location and climate station is shown on Figure IV-A-1 attached. A summary of the USCCS is presented in Table IV-A-1.

Table IV-A-1 Climate Station near the Resolution Skunk Camp TSF Site

Station	Location		Elevation (ft)	Distance from TSF Site (miles)	Years of Record (Recording Frequency)
	Latitude (°)	Longitude (°)			
Upper Skunk Camp	33°13'24.81" N	110°55'49.75" W	3,700	3	2019-04-04 to 2019-09-09 and 2019-09-26 to Present (15 minutes)

The objective of the climate analysis is to develop a consistent, detailed, internally consistent data set that represents short and long term climate variability at the Skunk Camp Site. Based on the lack of long-term data collection at the Skunk Camp Site, KCBCL elected to use the climate data set previously developed for the Near West Site Closure Study (KCB 2016) for the Skunk Camp Site adjusted to site conditions. This appendix summarizes the available data and method of developing a data set for the Skunk Camp Site for water balance modelling.

Data are presented using the convention of water years (WY) beginning October 1. For example, WY 2015 is composed of data from October 2014 through September 2015, inclusive.

Refer to the Draft Environmental Impact Statement (DEIS) design for Skunk Camp (KCB 2018) and the DEIS for the Resolution Copper Project (Forest 2019) for previous climate analyses completed for the Skunk Camp Site.

IV-A-2 SKUNK CAMP SITE CLIMATE

The proposed Skunk Camp TSF is located approximately 14 miles south east of the town of Superior, Arizona, in a semi-arid climate zone. The proposed Skunk Camp TSF is located in a valley, with elevations ranging from 3,215 ft to 3,550 ft.

IV-A-2.1 Monthly Average

The average estimated monthly precipitation and calculated PET is given in Table IV-A-2.

Table IV-A-2 Average Monthly Precipitation and calculated Evapotranspiration (ETo) for Skunk Camp TSF Site

(in inches)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total[4]
Precipitation[1]	2.1	1.9	2.2	0.7	0.4	0.3	1.8	2.7	1.4	1.2	1.4	2.1	18.2
Potential Evapotraspiration[2]	3.0	3.6	5.4	7.0	9.0	9.3	8.7	7.8	6.5	5.1	3.6	3.0	72.1

Notes:

1. Precipitation values are based on data collected at the Superior climate station (ID: 028348) with gaps filled using data from the regional climate stations to create the Near West Modelling Dataset. Values shown were adjusted from the Near West to Skunk Camp Site (see Section IV-A-4.1).
2. Calculated using the Penman-Monteith combined equation in Hydrus-1D based on the Near West Modelling climate data set scaled to the Skunk Camp Site.
3. The DEIS (Forest 2019) reported that Resolution Copper is in a semi-arid climate zone with a mean annual precipitation of 18 inches.

IV-A-2.2 Historic Storm Events

Arizona experiences three types of precipitation events seasonally and very little precipitation occurring from April through June (Applied Weather Associates 2013). Typically, July and August are the wettest months and April to June are the driest. The three types of precipitation seasons are:

1. **Winter Storms (October through March)**

   Large-scale frontal systems which often bring moderate low-intensity rainfall for multiple days.

2. **Tropical Storms (August through October)**

   High moisture episodic storms that come from the coast and have lost their tropical characteristics. These storms obtain their energy source from the Gulf of California and the eastern tropical Pacific. Although they will have lost many of its tropical characteristics by the time they reach Arizona, high residual levels of moisture are associated with these storms; thereby enabling them to produce some of the largest rainfalls on record throughout Arizona (Applied Weather Associates 2013).

3. Local Storms (June through September)

Local Convective Storms (late June through September). Episodic, localized, and often intense thunderstorms that are an almost daily occurrence during the North American Monsoon (NAM) season (late June/early July to September). Most of the storms have a life cycle of less than 3 hours.

Mesoscale Convective Systems (late June through September, most common mid-July through mid-August). Storms that produce extreme amounts of precipitation over a short duration and small area which also occur during the NAM months.

The wettest summer storm on record occurred in August 1990 which was Tropical Depression Diana. The wettest winter storms on record occurred in December 1967 and January 1993.

The Superior Station data set also includes historic tropical storm events. The noted historic storm events in Arizona within the period of record for analysis (1951 to 2006) are given in Table IV-A-3 below. This summary is not a comprehensive list of all tropical storm events within the period of record for analysis.

Table IV-A-3 Summary of Historic Tropical Storm Events Recorded at Superior Station

Date	Storm	Estimated Total Precipitation and Duration Superior Station[3]	Maximum Daily Precipitation Recorded at Superior Station[1,3] (in)
1951-08-03	Unnamed Tropical Storm	0.68 in over 3 days	0.62
1958-10-06	Unnamed Tropical Storm	1.92 in over 2 days	1.80
1962-09-25	Hurricane Claudia	0.83 in over 5 days	0.31
1967-08-29	Hurricane Katrina	0.00[2]	0.00[2]
1972-10-04	Hurricane Joanne	1.85 in over 3 days	1.02
1976-09-10	Hurricane Kathleen	0.21 in over 1 day	0.21
1977-08-13	Hurricane Doreen	1.58 in over 3 days 2.57 in over 8 days	0.86
1983-09-28	Hurricane Octave	3.97 in over 3 days	1.95
1990-08-12	Tropical Depression Diana	8.8 in over 5 days	3.80
1992-08-22	Hurricane Lester	3.25 in over 4 days	1.99
1997-09-25	Hurricane Nora	0.00[2]	0.00[2]

Notes:
1. Maximum daily precipitation over the seven day period around the day of the storm.
2. Miami Station record over the seven day period around the day of the storm, there was no recorded precipitation for the Superior Station over this time.
3. Values not adjusted to the Skunk Camp Site.

IV-A-3 AVAILABLE DATA

IV-A-3.1 Near West Modeling Data Set

In 2016 KCBCL completed a climate analysis for the Near West Tailings Storage Facility Closure Cover Study (KCB 2016). The Near West site is located about 19 miles north-west of the Skunk Camp Site. A data set with an hourly resolution was developed from the long-term Superior daily climate data set, with a combination of data patching and hourly scaling from other nearby stations, which are summarized in Table IV-A-4. It was assumed that the correlation between Superior climate data and the Near West Site was 1:1.

Table IV-A-4 Climate Stations near the Resolution Near West TSF Site

Station	Station ID	Location		Elevation (ft)	Distance from TSF Site (miles)	Years of Record (Recording Frequency)	Correlation to Superior
		Latitude (°)	Longitude (°)				
Superior	028348	33.300	-111.097	3,302	5.6	1920-07-12 to 2006-08-31 (daily)	-
Superior 2 ENE	028349	33.305	-111.067	4,167	7.2	1974-01-01 to 1996-07-31 (daily)	1:1
Superior Smelter	028351	33.300	-111.100	2,792	5.4	1948-09-01 to 1953-09-30 (daily)	1:1
Miami	025512	33.4044	-110.870	3,560	19.9	1914-02-01 to 2019-09-01(daily)-	Based on monthly precipitation and temperature relationships
West Plant	N/A	33.299	-111.102	2,949	5.3	2002-07-12 to 2007-04-11 (hourly) 2012-02-02 to 2015-01-18 (15-min, hourly)	1:1

The Near West Modeling Data Set was developed from January 1951 to December 2006 and included the following climate parameters on an hourly timestep:

- Precipitation
- Temperature (Minimum and Maximum)
- Relative Humidity
- Measured Total Solar Radiation
- Wind Speed

IV-A-3.2 Upper Skunk Camp Climate Station

The USCCS is located 3 miles north of the Skunk Camp TSF Footprint. The station is managed by Airbasics Inc. (Airbasics) and RCML. Data was provided to KCBCL by Airbasics. Almost six months of data was available to KCBCL (April to October 2019) at the time of analysis.

The climate station records the following every 15 minutes:

- Ambient Temperature
- Aspirated Temperature (10 m & 2 m)
- Barometric Pressure
- Wind Direction
- Max 3 sec gust and time
- Panel Temperature
- Relative Humidity
- Wind Direction & Speed
- Solar Radiation

This data set was primarily used to develop scaling factors for different climate parameters from the Near West Modeling Data Set to the Skunk Camp Site.

IV-A-3.3 West Plant Climate Station

The West Plant Climate Station is located 0.3 miles west of the Superior Climate Station and 14 miles northwest of the Skunk Camp Site. The station is managed by Airbasics Inc. (Airbasics) and RCML. Data was provided to KCBCL by Airbasics. Data from April to October, 2019, was available to KCBCL at the time of analysis.

The West Plant Climate Station records the following every 15 minutes:

- Ambient Temperature
- Aspirated Temperature (10 m & 2 m)
- Barometric Pressure
- Wind Direction
- Max 3 sec gust and time
- Panel Temperature
- Relative Humidity
- Wind Direction & Speed
- Solar Radiation
- Precipitation

Measured climate data from the West Plant Climate Station was used to develop the Near West Modeling Data Set (KCB 2016, Table IV-A-4). For this updated climate analysis, the measured climate data at West Plant was used to develop scaling factors for different climate parameters from the Near West Modeling Data Set to the Skunk Camp Site.

IV-A-3.4 Parameter-elevation Regressions on Independent Slopes Model (PRISM)

The PRISM Climate Group (PRISM 2019) gathers climate observations from a wide range of monitoring networks and develops spatial climate data sets with a 4 km spatial resolution. The time

series data can be downloaded for individual locations. The PRISM data includes the following climate parameters on a daily timestep:

- Precipitation
- Temperature (minimum, average, maximum)

PRISM data for the Skunk Camp Site and the Superior Climate Station locations was downloaded for January 1981 to October 2019. This data was used to develop climate scaling factors between the Near West Modeling Data Set and Skunk Camp Site.

IV-A-4 SKUNK CAMP MODELING DATA SET DEVELOPMENT

The Skunk Camp Modeling Data Set was created from the Near West Modeling Data Set, with climate parameters scaled to the Skunk Camp Site as appropriate. A summary of the data sources and factor applied to create the Skunk Camp modeling data set is presented in Table IV-A-5. Section IV-A-4.1 and Section IV-A-4.2 describe how the climate scaling factors were developed for precipitation and PET, respectively.

Table IV-A-5 Summary of Climate Parameter Scaling Factors

Climate Parameter	Scaling Factor	Rationale
Precipitation	Oct to July: $P_{SC} = P_{NW}$ (in) Aug to Sep: $P_{SC} = 0.95 * P_{NW}$ (in)	▪ Compared 26 years of PRISM daily precipitation data estimated at the Superior climate station location and the Skunk Camp Site. ▪ The August to September relationship is reasonable because the Near West Site may experience larger monsoons than the Skunk Camp Site, which is partially protected by its location in a valley. ▪ Refer to Section IV-A-4.1 and Figure IV-A-2.
Temperature	$T_{SC} = T_{NW} – 2$ (°F)	▪ Compared 26 years of PRISM daily minimum, average, and maximum temperature data estimated at the Superior climate station location and the Skunk Camp Site. ▪ This relationship seems reasonable because the Skunk Camp Site has a higher elevation than the Near West site and is expected to be slightly cooler. ▪ Refer to Section IV-A-4.2.1 and Figure IV-A-7.
Relative Humidity	$RH_{SC} = 1.1*RH_{NW} + 3$ (%)	▪ Compared six months of measured relative humidity data measured at West Plant and measured at the USCCS. ▪ Refer to Section IV-A-4.2.2 and Figure IV-A-9.
Measured Total Solar Radiation	$SR_{SC} = SR_{NW} + 9$ (W/m^2)	▪ Compared six months of total solar radiation data measured at West Plant and measured at the USCCS. ▪ This relationship seems reasonable because the Skunk Camp Site is slightly higher elevation than the Near West Site. ▪ Refer to Section IV-A-4.2.3 and Figure IV-A-11.
Wind Speed	Nov to May: $WS_{SC} = WS_{NW}$ (mph) Jun to Aug: $WS_{SC} = 0.8*WS_{NW}$ (mph) Sep to Oct: $WS_{SC} = 0.7*WS_{NW}$ (mph)	▪ Compared six months of wind speed data measured at West Plant and measured at the USCCS. ▪ This relationship seems reasonable because the Skunk Camp Site is located in a valley, whereas the Near West site is not as sheltered. Additionally, the Near West Site is expected to experience higher peak wind speeds due to Monsoons in August and September. ▪ Refer to Section IV-A-4.2.4 and Figure IV-A-13.

IV-A-4.1 Precipitation

Precipitation is not recorded at the USCCS. To compare precipitation at the Superior Climate Station to the Skunk Camp Site, PRISM precipitation data at the two locations was downloaded on a daily timestep (Table IV-A-6).

Table IV-A-6 Summary of PRISM Data Downloaded for Climate Comparison

Location	Location		Climate Station Reported Elevation (ft)	PRISM Elevation (ft)	Years of Record (Recording Frequency)
	Latitude (°)	Longitude (°)			
Superior	33.300	-111.097	3,302	3,497	1981-01-01 to 2006-12-31 (daily)
Skunk Camp	33.192	-110.904	3,700	3,629	

Figure IV-A-2 to Figure IV-A-5 show the comparison of precipitation data between the two sites sorted on a daily, monthly, and annual basis. For the majority of the year, the precipitation reported for Superior and Skunk Camp was of similar magnitude. However, during the months of August and September (i.e., monsoon season), the Superior site consistently had higher reported precipitation values. This can be attributed to the difference in site location. Superior is expected to experience greater magnitude monsoon events based on the open location of the site. The Skunk Camp Site is partially sheltered by a valley and is not expected to experience the same magnitude of events. Table IV-A-7 summarizes the factors developed to scale precipitation from the Near West Modeling Data Set (P_{NW}) to the Skunk Camp Site (P_{SC}).

Table IV-A-7 Precipitation Scaling Factors

Month											
Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
$P_{SC} = P_{NW}$ (in)							$P_{SC} = 0.95 * P_{NW}$ (in)		$P_{SC} = P_{NW}$ (in)		

IV-A-4.2 Potential Evapotranspiration

The parameters required to calculate Potential Evapotranspiration (PET) are:

- temperature (minimum and maximum);
- relative humidity;
- total solar radiation; and
- wind speed.

IV-A-4.2.1 Temperature

Temperature is recorded every 15-minutes at the USCCS, however, measured data is only available from April to October, 2019. To develop a correlation between the Near West Modeling Dataset and Skunk Camp Site, PRISM daily minimum, average, and maximum temperature data was downloaded on a daily timestep for the two locations outlined in Table IV-A-6.

Figure IV-A-6 to Figure IV-A-7 show the comparison of the average daily temperature at the two sites sorted by date and by magnitude, respectively. As shown, there was a strong correlation between the data and the Skunk Camp Site temperature values are slightly cooler than temperature at the Superior climate station. This was an expected result because the Skunk Camp Site is located at a higher elevation than the Superior climate station. A single scaling factor, based on the trendline developed for "Daily Comparison of Average Temperature – Sorted by Magnitude" (Figure IV-A-7) was applied across all data points to scale Near West Modeling Data to the Skunk Camp Site.

Table IV-A-8 Temperature Scaling Factor

Annual
$T_{SC} = T_{NW} - 2$ (°F)

IV-A-4.2.2 Relative Humidity

Relative humidity was measured at the USCCS and the West Plant Climate Station in 15 minute intervals from April to October, 2019. To develop a correlation between the Near West Modeling Dataset and Skunk Camp Site, the 15-minute data was sorted to determine the daily minimum, average, and maximum relative humidity at both stations.

Figure IV-A-8 and Figure IV-A-9 show the comparison of the average daily relative humidity data sorted by date and by magnitude, respectively. A single scaling factor, based on the trendline developed for "Daily Comparison of Average Relative Humidity – Sorted by Magnitude" (Figure IV-A-9) was applied across all data points to scale Near West Modeling Data to the Skunk Camp Site.

Table IV-A-9 Relative Humidity Scaling Factor

Annual
$RH_{SC} = 1.1*RH_{NW} + 3$ (%)

IV-A-4.2.3 Total Solar Radiation

Total solar radiation was measured at the USCCS and the West Plant climate station in 15 minute intervals from April to October, 2019. To develop a correlation between the Near West Modeling Dataset and Skunk Camp Site, the 15-minute data was sorted to determine the daily average solar radiation at both stations.

Figure IV-A-10 and Figure IV-A-11 show the comparison of the average daily relative humidity data sorted by date and by magnitude, respectively. Figure IV-A-12 shows the average monthly measured total solar radiation values for the observation period. As shown, the USCCS consistently reports a higher measured total solar radiation as compared to the West Plant climate station. The monthly average shows this to be consistent across the reporting period. As such, a single factor, based on the trendline developed for "Daily Comparison of Average Total Solar Radiation – Sorted by Magnitude" (Figure IV-A-11) was applied across all data points to scale the Near West Modeling Dataset to the Skunk Camp Site.

Table IV-A-10 Total Solar Radiation Scaling Factor

Annual
$SR_{SC} = SR_{NW} + 9$ (W/m^2)

IV-A-4.2.4 Wind Speed

Wind speed was measured at the USCCS and the West Plant climate station in 15 minute intervals at a height of 10 m from April to October, 2019. To develop a correlation between the Near West Modeling Dataset and the Skunk Camp Site, the 15-minute data was sorted to determine the daily minimum, average, and maximum wind speed at each station. In addition, the average monthly wind speed was plotted for the months with data available (Figure IV-A-13). There was no strong correlation between the two measured wind speeds for the months recorded. As such, a single scaling factor for wind speed would not be appropriate to apply across all months.

To determine a monthly wind speed factor, the average daily wind speed from each station was compared by date and by magnitude for each month (Figure IV-A-14). Note that values for September are not presented as data from the USCCS from September 10 to 25 (inclusive) was not provided.

The monthly comparison plots show that wind speeds recorded at the USCCS are about 70% to 100% of the wind speeds recorded at the West Plant climate station, by magnitude. However, the monthly average wind speeds indicate that skunk camp has, on average, greater wind speeds. These two conflicting results indicate that skunk camp experiences wind more often than West Plant, but with lower peaks.

As noted previously in Section IV-A-4.1, the Skunk Camp Site is not expected to experience the full magnitude of the Monsoon events experienced at the Superior and West Plant climate station locations. While there remains a level of uncertainty in the wind speed scaling factors, based on a lack of data recorded at Skunk Camp, the values developed are expected to reflect average conditions and account for smaller storms during monsoon season.

Table IV-A-11 Wind Speed Scaling Factors

Month											
Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
$WS_{SC} = WS_{NW}$ (mph)					$WS_{SC} = 0.8*WS_{NW}$ (mph)			$WS_{SC} = 0.7*WS_{NW}$ (mph)		$WS_{SC} = WS_{NW}$ (mph)	

IV-A-5 OCEANIC NINO INDEX

Arizona climate is also influenced by the El Niño and La Niña, which are part of the El Niño–Southern Oscillation (ENSO), a natural variation in oceanic sea surface temperatures and surface air pressure between the east and west tropical Pacific Ocean. The combined effect of changes in the jet stream and storms from El Niño events often results in wetter winters and increased rain to Arizona. La Niña events, on the other hand, often bring dry conditions to Arizona. These cycles were identified in this analysis and represented in the climate data set for Superior for use in the water balance modeling.

The Oceanic Nino Index (ONI) is a standard of measure characterized by a 3-month running mean of Sea Surface Temperature (SST) anomalies in the Nino 3.4 region that is above/below the threshold of ±0.5°C for five consecutive 3-month periods (NOAA 2015). The ONI can be compared to 3-month running mean of precipitation values to correlate the trends observed in precipitation (see Figure IV-A-16).

In general, the precipitation trends recorded at the Superior and West Plant climate stations follow those observed for the ONI. Periods that included large tropical storms, such as Hurricane Doreen in 1977 and Hurricane Lester in 1992, may show precipitation trends that deviate from the ONI. These deviations are part of expected climate trends in the area and are included in the climate set used in the Hydrus-1D modeling.

IV-A-6 DISCUSSION ON CLIMATE CHANGE

There is scientific evidence that the climate is changing, and will continue to change, due to the effects of human-caused emissions of greenhouse gases. A report titled *Assessment of Climate Change in the Southwest United States* (Garfin 2013) was completed for the National Climate Assessment and summarizes the observed recent climatic changes and projects future climatic changes in the Southwest. Main observations and predictions of the report are summarized below.

Observed recent climatic changes in the Southwest:

- Average daily temperatures are rising. The period since 1950 has been warmer than any period of comparable length in at least 600 years.
- Recent drought has been unusually severe relative to droughts of the last century. However, some droughts in the paleoclimate records were much more severe.
- Recent streamflows in major drainage basins have been lower than their twentieth century averages.

Projected future climatic changes in the Southwest:

- “Warming will continue, with longer and hotter heat waves in the summer. Surface temperatures in the Southwest will continue to increase substantially over the twenty-first century (high confidence), with more warming in summer and fall and winter and spring (medium-high confidence)”
- “Summer heat waves will become longer and hotter (high confidence). Winter cold snaps will become less frequent but not necessarily less severe (medium-high confidence).”
- Average precipitation will decrease in the southern Southwest (medium-low confidence).
- “Precipitation extremes in winter will become more frequent and more intense (i.e., more precipitation per hour) (medium-high confidence). Precipitation extremes in summer have not been adequately studied.”
- “Declines in river flow and soil moisture will continue” (medium-high confidence).
- “Droughts in parts of the Southwest will become hotter, more severe, and more frequent (high confidence).”

IV-A-7 DATA SET FOR MODELING

The Skunk Camp Modeling Data Set was created from the Near West Modeling Data Set (KCB 2016), with climate parameters scaled to the Skunk Camp Site as developed in Section IV-A-4.

IV-A-7.1 Extreme Events

As part of the Near West Modeling Data Set Development (KCB 2016), frequency analysis was completed for the Superior and West Plant stations to determine the Average Recurrence Interval (ARI) for precipitation (based on water years) recorded at Superior. It was also used to determine if the year was "wet" or "dry". The Generalized Extreme Value (GEV) probability distribution was chosen based on a visual fit with the Superior data set. Given that West Plant has a 1:1 correlation with Superior based on the overlapping records, the GEV fit parameters (k, μ, σ) calculated based on the Superior data were used for the West Plant data as well. Data from 1920 to 2014 were analyzed to determine the ARI for:

- the total water year precipitation;
- the 7-day wet precipitation (winter and summer);
- the 14-day wet precipitation (winter and summer); and
- the 30-day wet precipitation (winter and summer).

Winter was defined as October to March, inclusive. Summer was defined as April to September, inclusive, for the purposes of this analysis. The results of the frequency analysis for years that experienced precipitation amounts similar to the 50, 100, or 200-year wet events are given in Table IV-A-12. This analysis has not been updated from the development of the Near West Modelling Data Set (KCB 2016).

Table IV-A-12 Precipitation Frequency Analyses Results (KCB 2016)

	Average (inch)	50-year Wet (inch)	100-year Wet (inch)	200-year Wet (inch)
Annual (Water Year)	18.2	32.5 *(32.8 in in 1993)*	35.1 *(36.2 in in 1941, 36.6 in in 1992)*	37.4
7-day Winter	3.1	6.7 *(6.9 in in 1993)*	7.5	8.3 *(9.3 in in 1968)*
7-day Summer	2.4	5.9 *(5.7 in in 1931)*	6.9	8.1 *(8.8 in in 1990)*[1]
14-day Winter	3.8	8.4 *(8.4 in in 1966)*	9.5 *(10.0 in in 1968, 10.7 in in 1993)*	10.8
14-day Summer	3.1	7.0 *(6.8 in in 1931)*	8.0 *(8.4 in in 1963)*	9.0 *(9.2 in in 1990)*[1]
30-day Winter	5.0	11.2 *(10.4 in 1966)*	12.7 *(12.1 in in 1968, 13.6 in in 1993)*	14.4
30-day Summer	4.5	9.3	10.4 *(11.0 in in 1963, 10.1 in in 1990*[1]*)*	11.5

Notes:
1. Tropical Depression Diana.
2. Winter is defined as October through March; Summer is defined as April through September
3. Years shown are in water years

IV-A-7.2 Summary of Data

A continuous long-term daily precipitation and temperature data set was developed for the Near West Closure Cover Study (KCB 2016) and was adjusted to the Skunk Camp Site, from January 1, 1951 to December 31, 2006 for use in the water balance modeling (Appendix IV). Earlier data wasn't included due to lack of temperature data and discontinuous precipitation data. The 56 year data set includes a wide range of climatic conditions expected at the site, including wetter than average events (termed "wet") listed below (return periods are approximate, and years are water years, see Figure IV-A-15):

- A 100-year wet year in 1992;
- A 50-year 7-day wet winter event in 1993;
- A 200-year 7-day and 14-day wet summer event in 1990 (Tropical depression Diana);
- A 100-year 14-day wet winter event in 1968 and 1993;
- A 100-year 30-day wet winter event in 1993; and
- A 100-year 30-day wet summer event in 1963.

The climate set also includes the following drier than average years (termed "dry") (return periods are approximate, and years are water years):

- A 15-year dry year in 1961 and 1997; and
- A 150-year dry year in 2000 and 2002.

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FIGURES

Figure IV-A-1 Upper Skunk Camp Climate Station Location

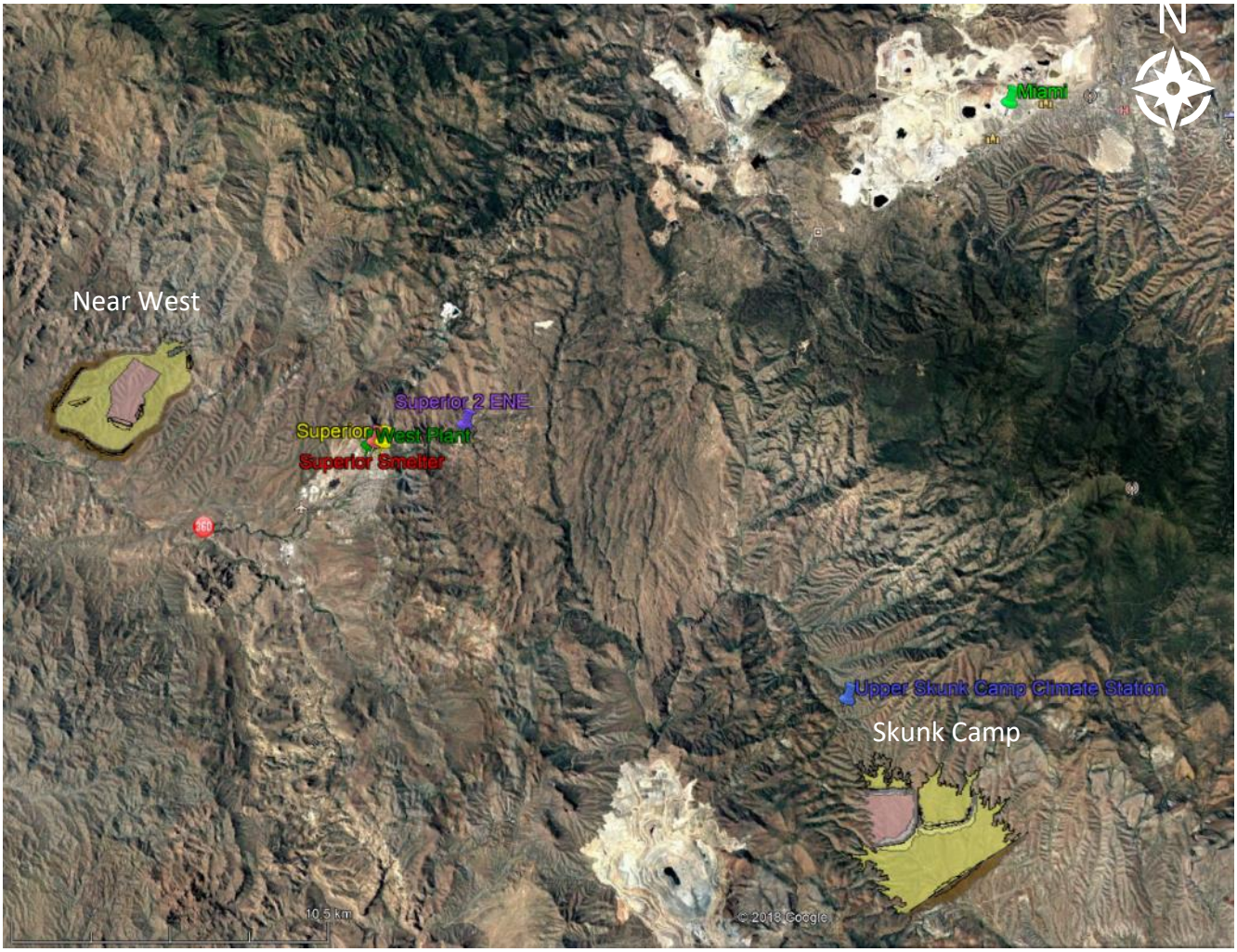


Figure IV-A-2 Average Monthly Precipitation

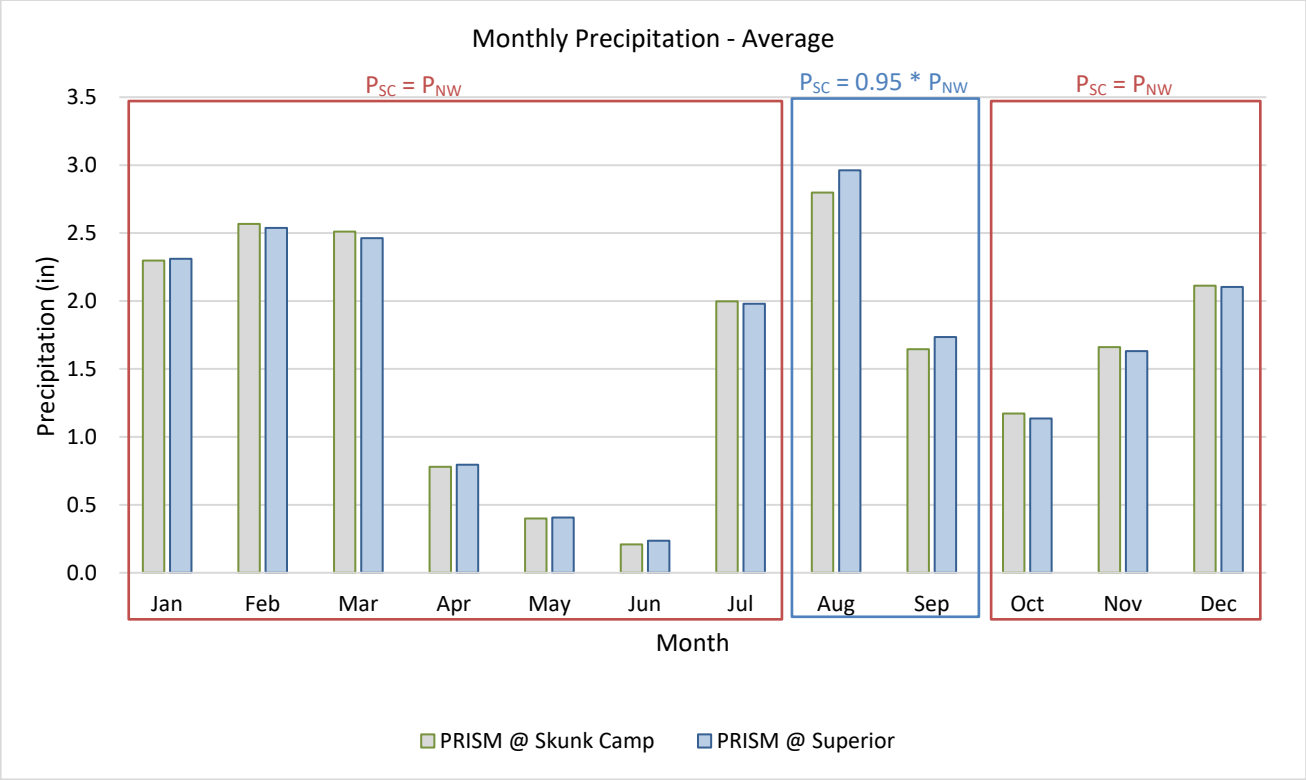


Figure IV-A-3 Total Annual Precipitation

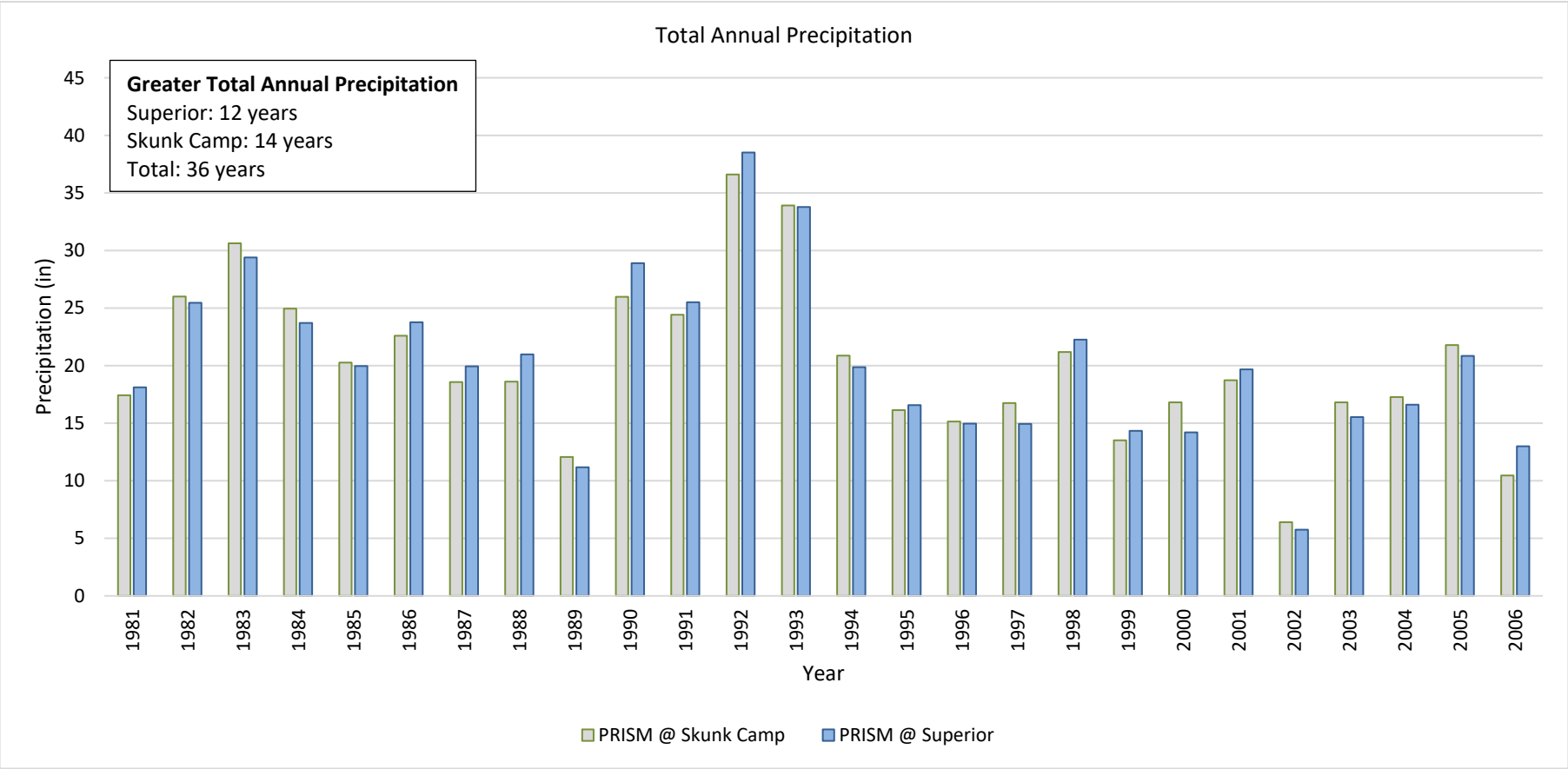


Figure IV-A-4 Daily Comparison of Precipitation – Sorted by Date

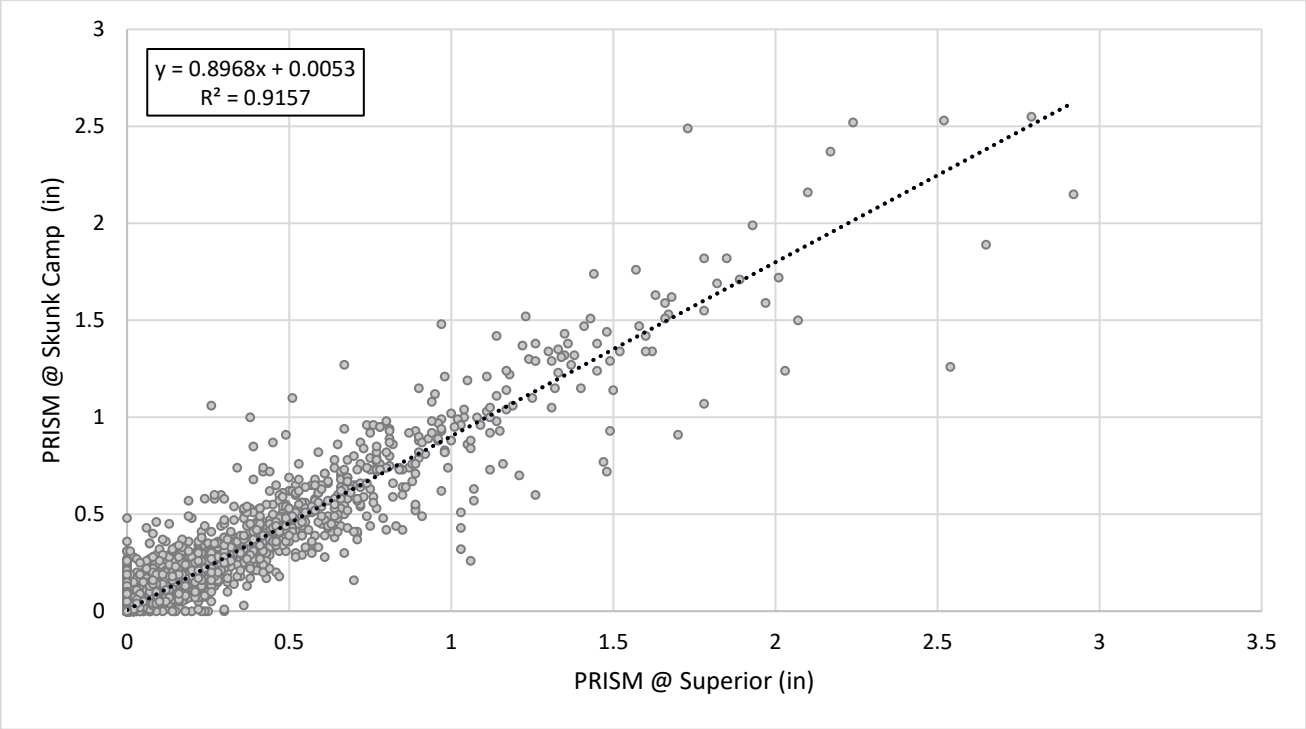


Figure IV-A-5 Daily Comparison of Precipitation – Sorted by Magnitude

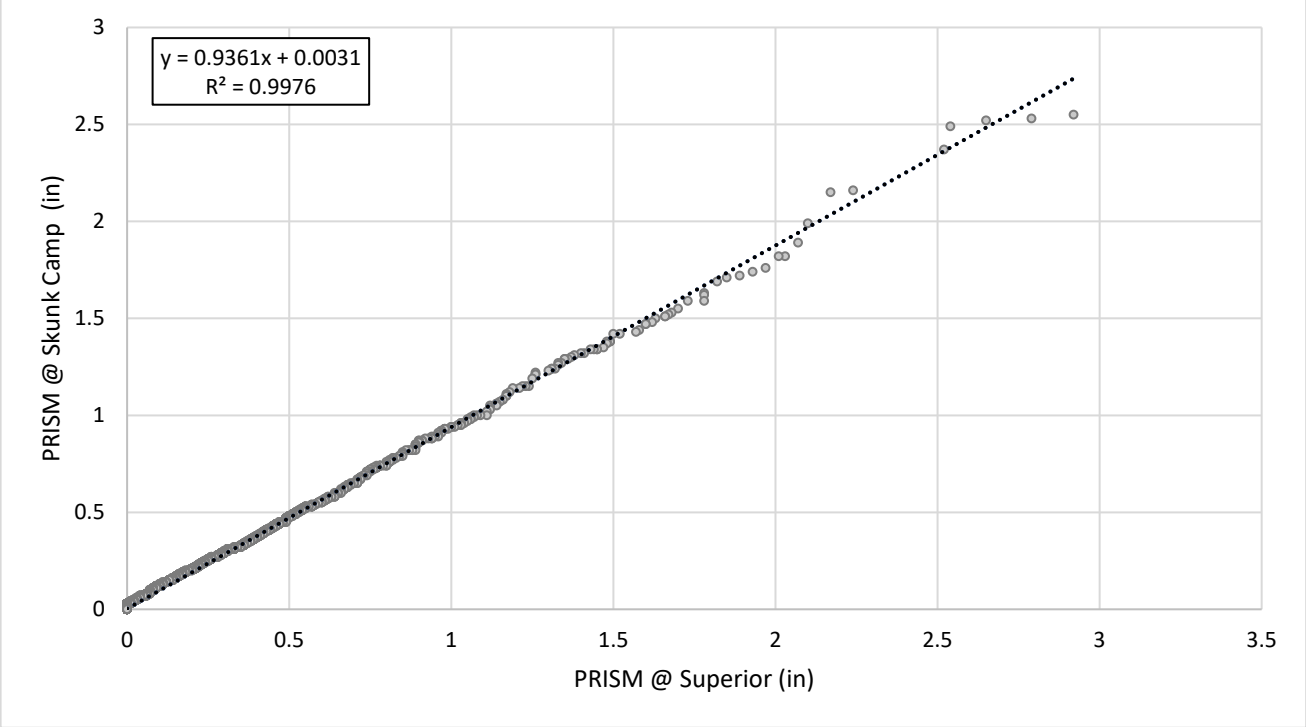


Figure IV-A-6 Daily Comparison of Average Temperature – Sorted by Date

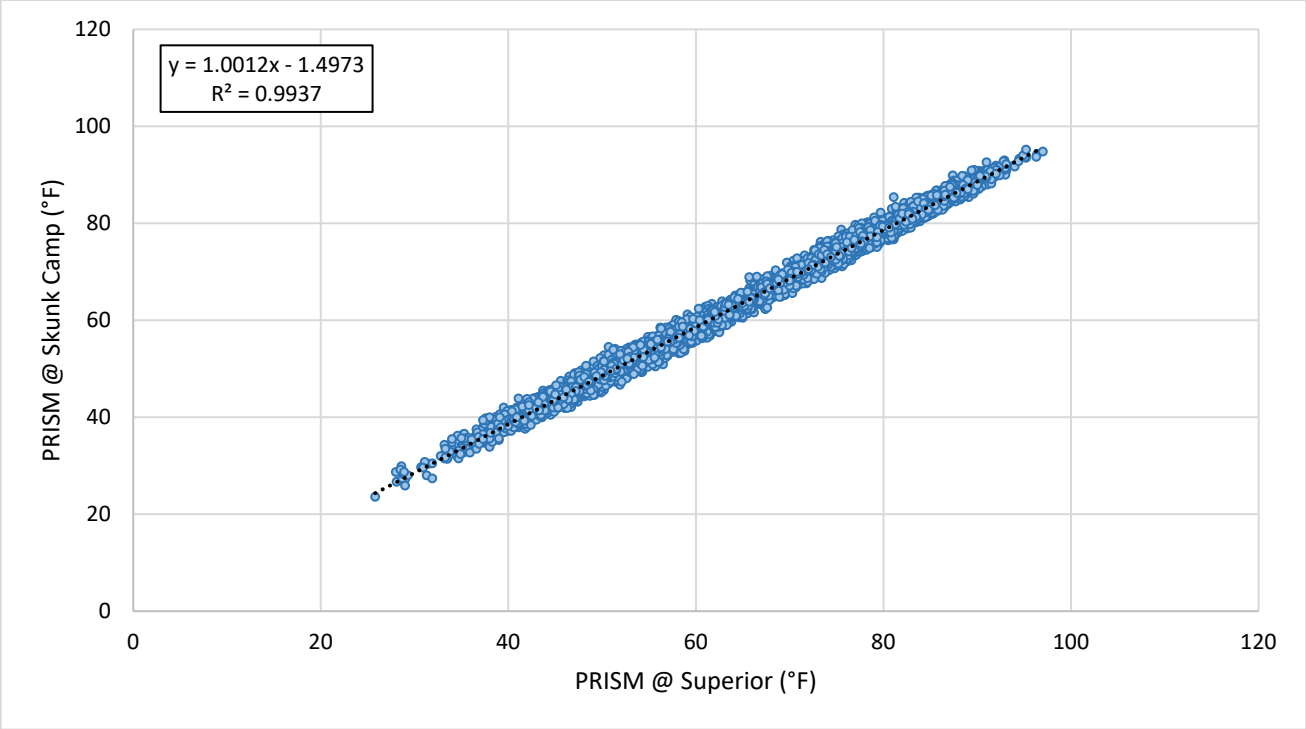


Figure IV-A-7 Daily Comparison of Average Temperature – Sorted by Magnitude

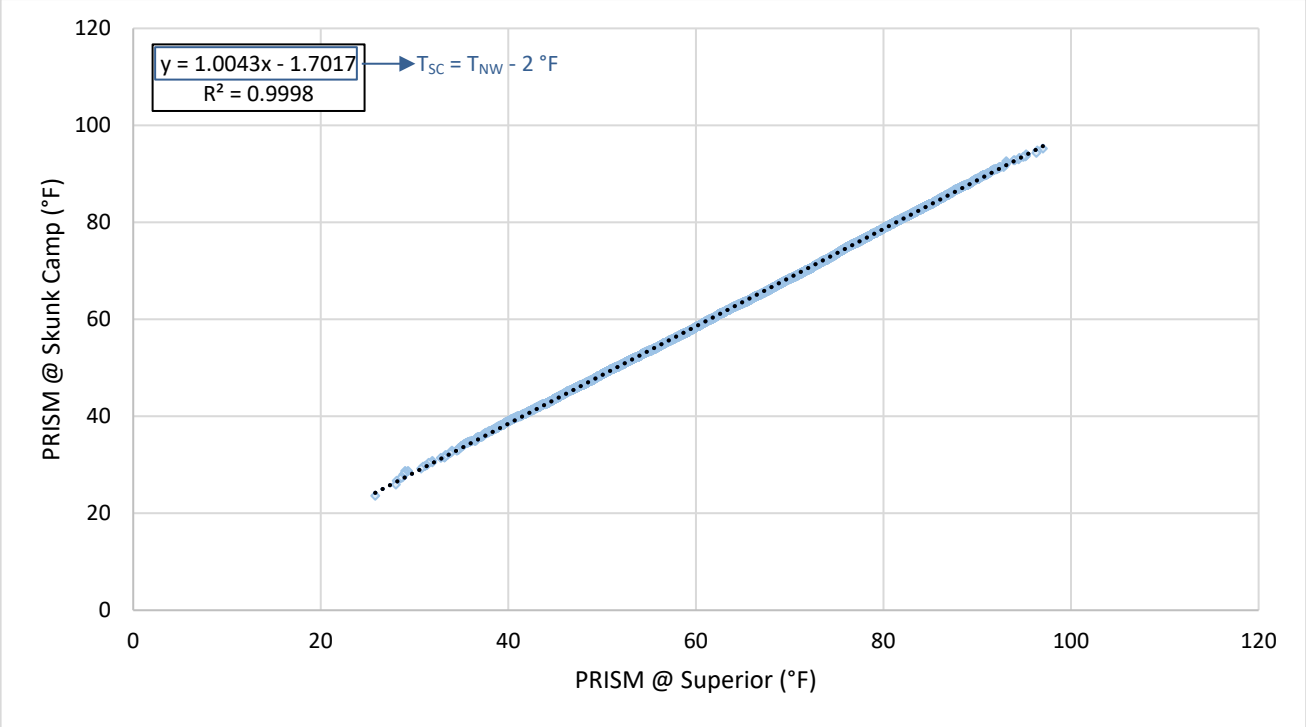


Figure IV-A-8 Daily Comparison of Average Relative Humidity – Sorted by Date

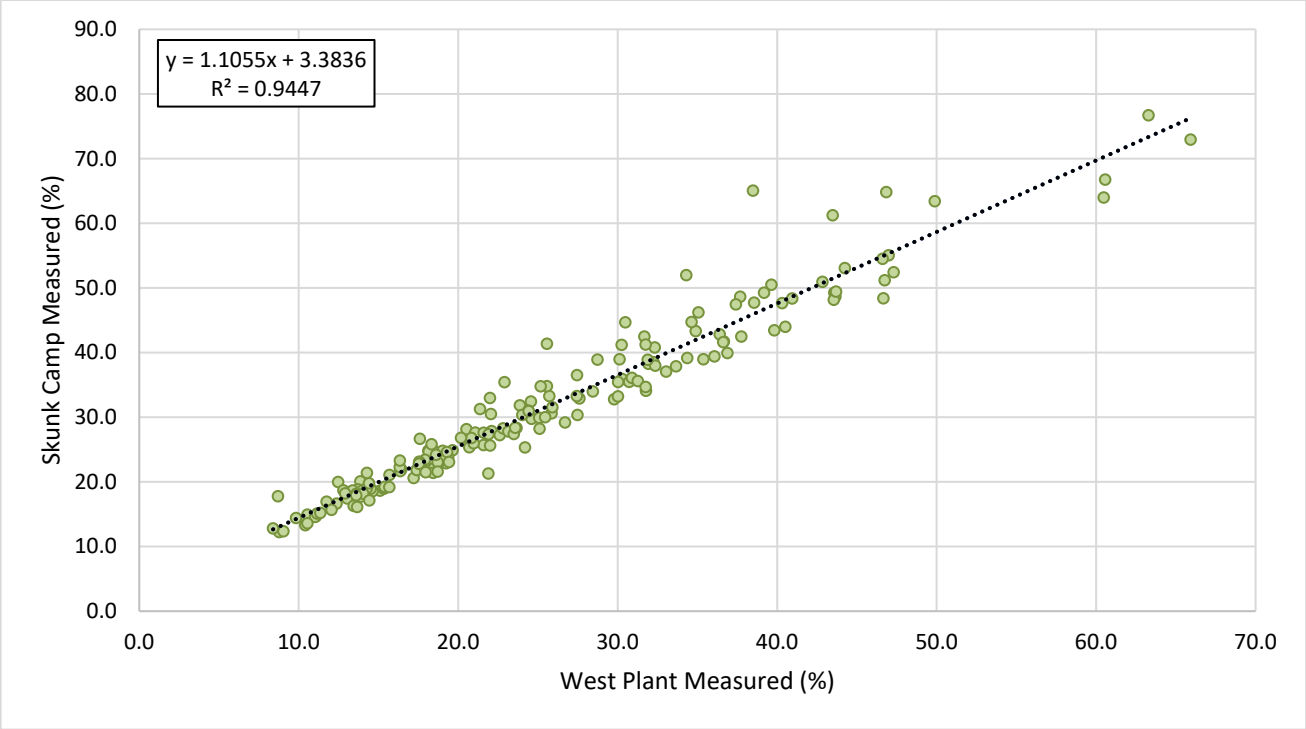


Figure IV-A-9 Daily Comparison of Average Relative Humidity – Sorted by Magnitude

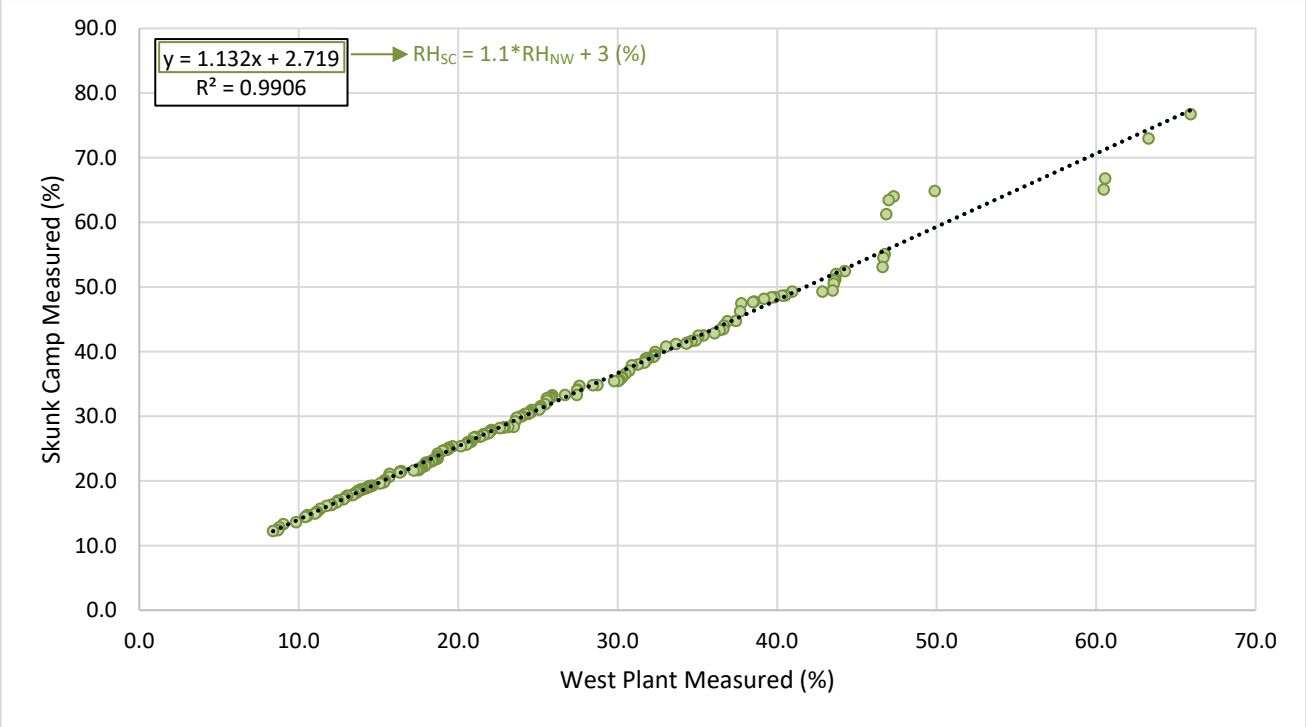


Figure IV-A-10 Daily Comparison of Average Total Solar Radiation – Sorted by Date

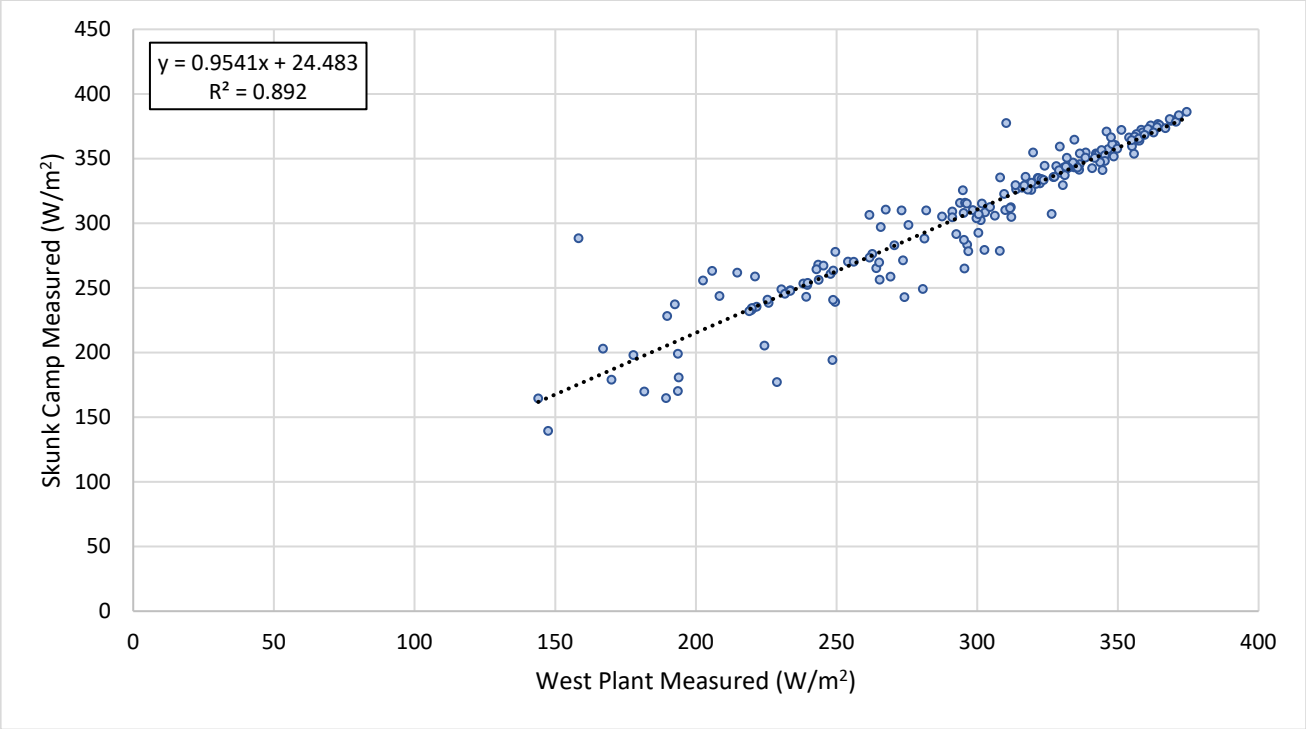


Figure IV-A-11 Daily Comparison of Average Total Solar Radiation – Sorted by Magnitude

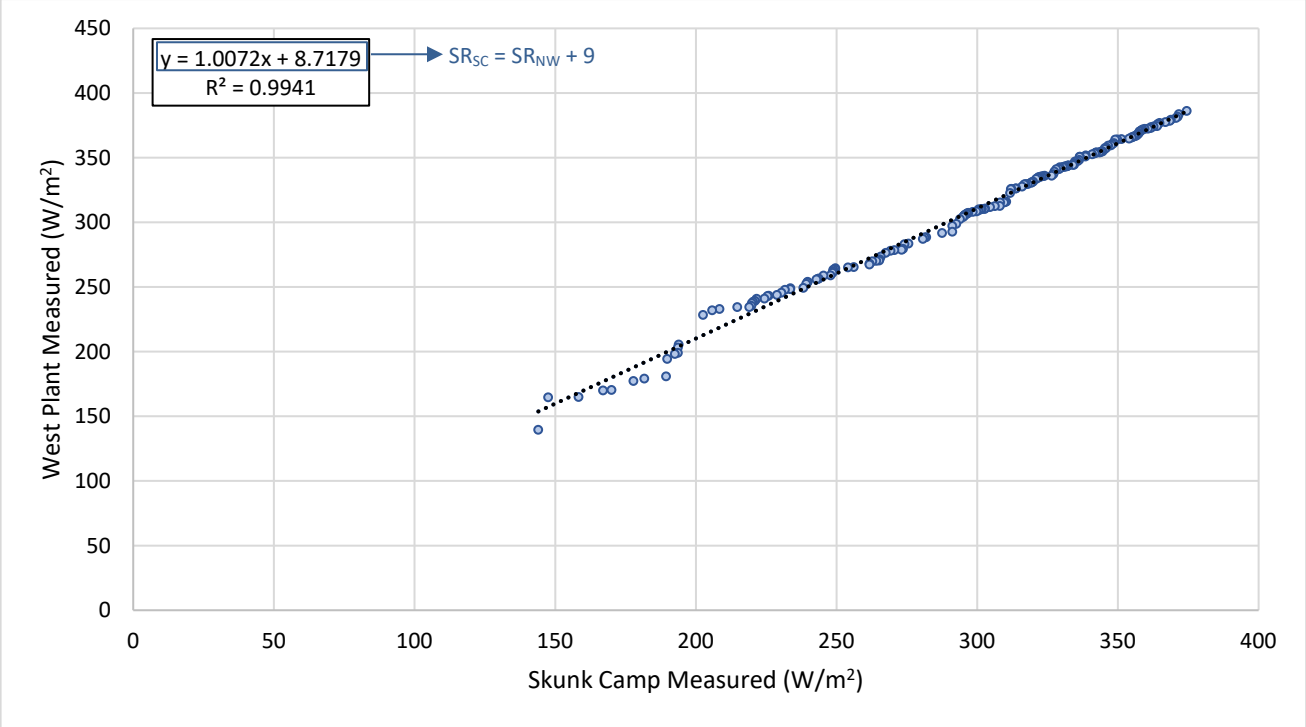


Figure IV-A-12 Average Monthly Total Solar Radiation

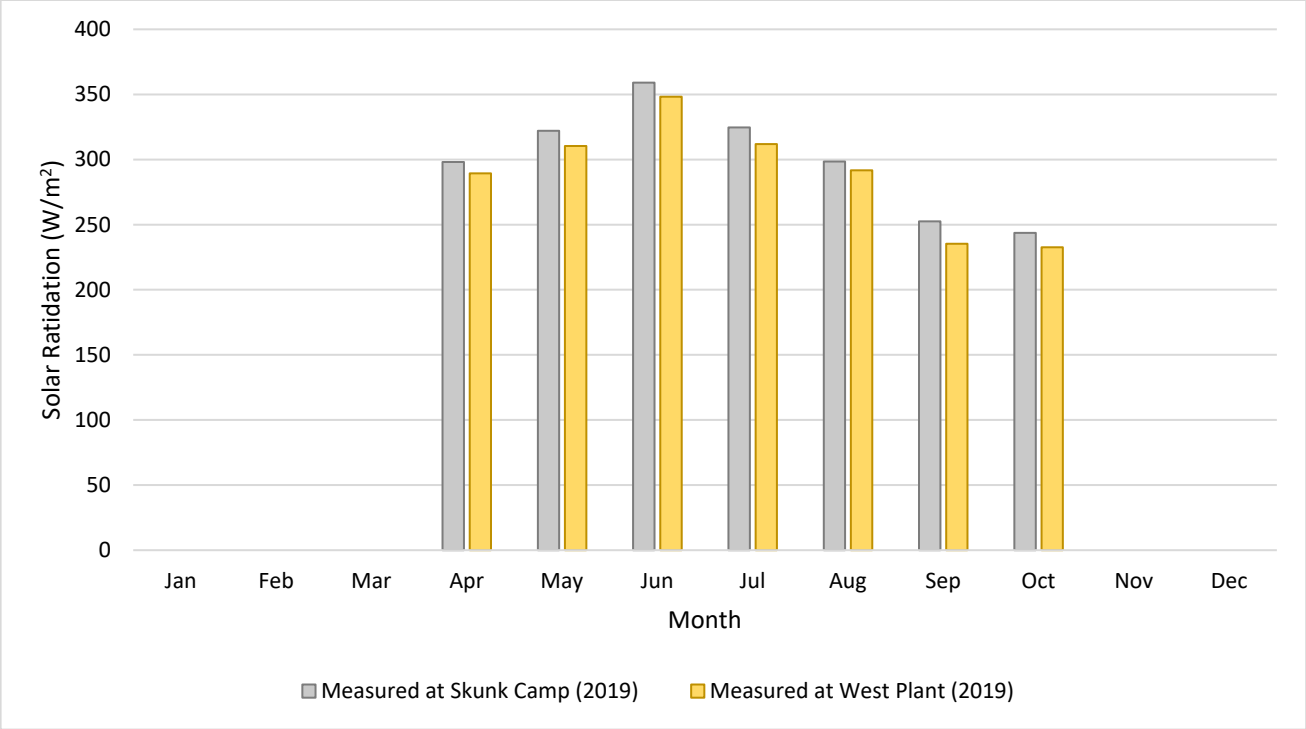


Figure IV-A-13 Average Monthly Wind Speed

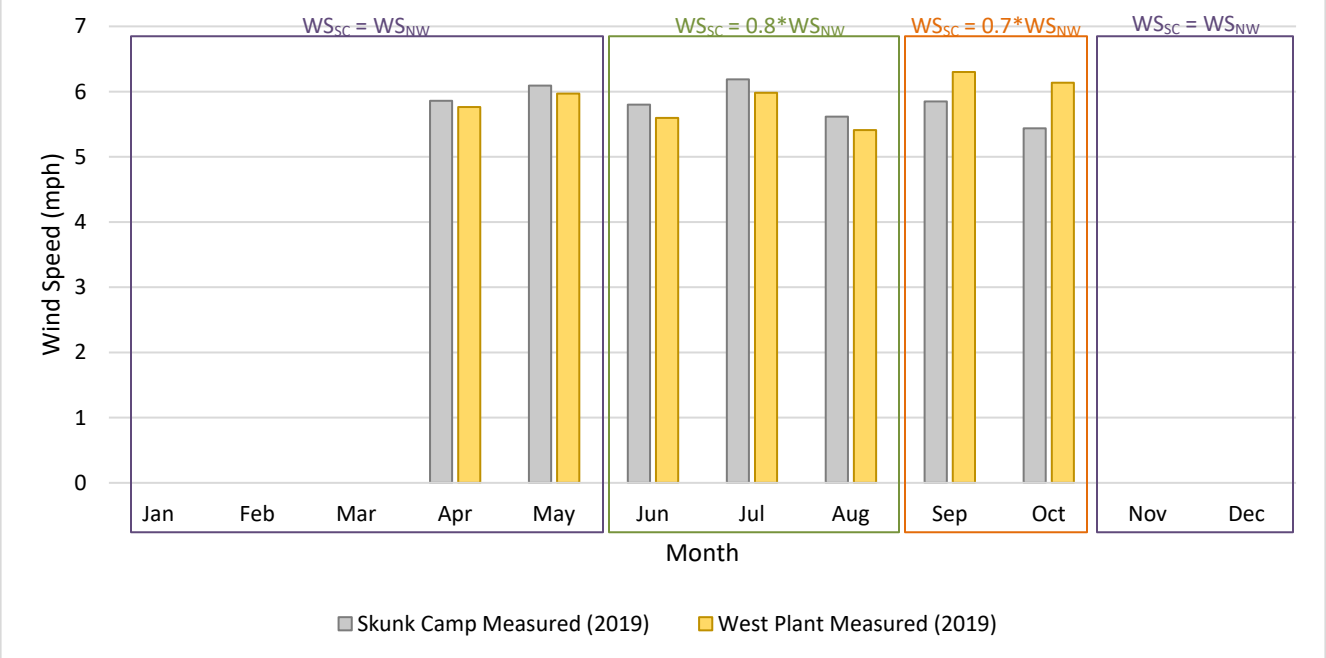
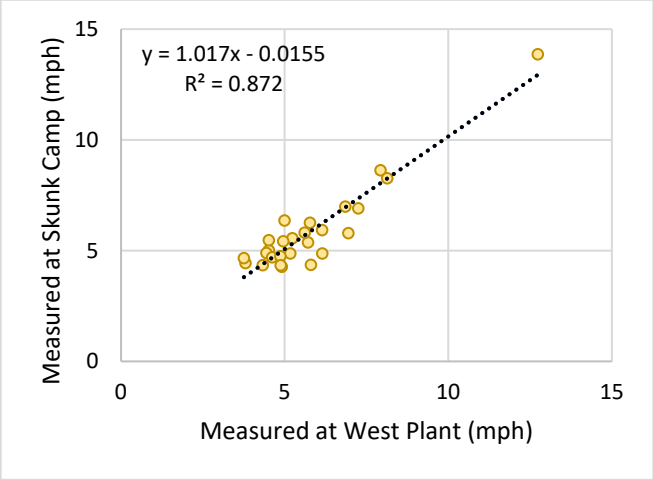
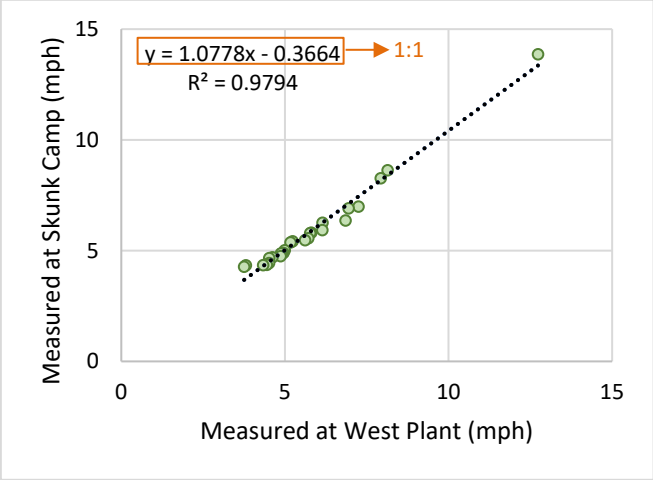


Figure IV-A-14 Daily Average Wind Speed – Sorted By Date and Magnitude

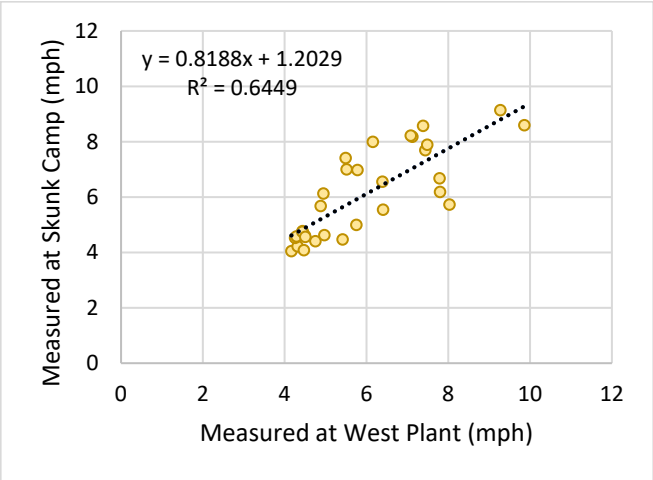
a. April – Sorted By Date



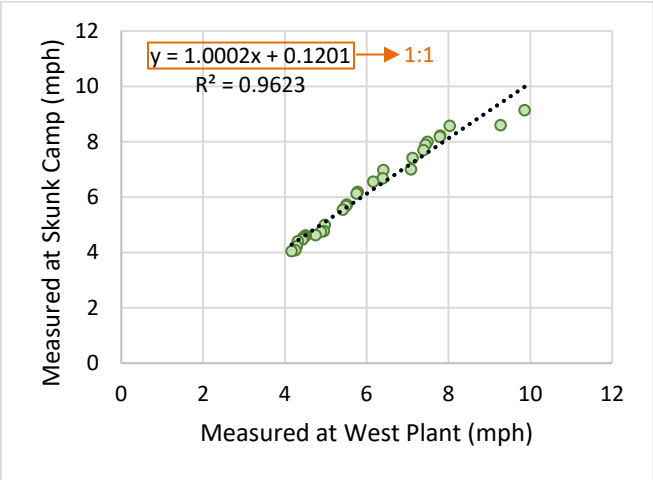
b. April – Sorted By Magnitude



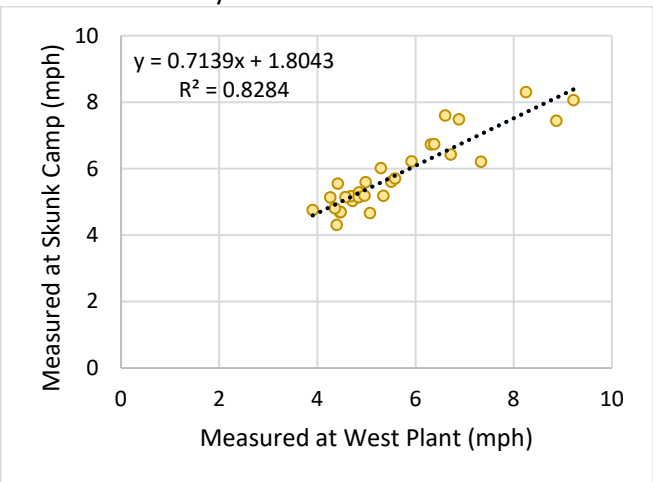
c. May – Sorted By Date



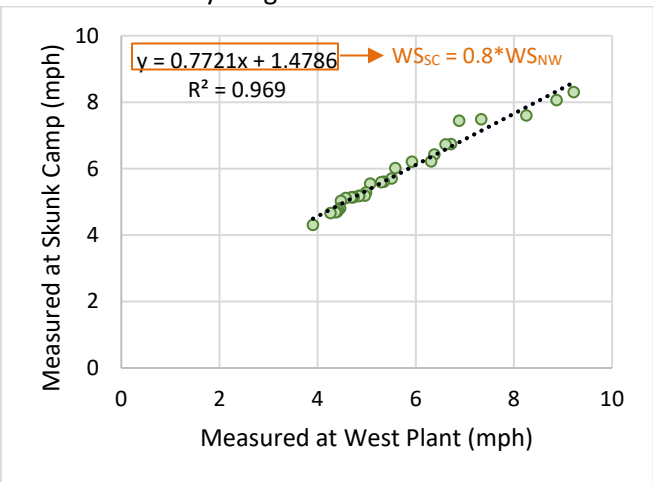
d. May – Sorted By Magnitude



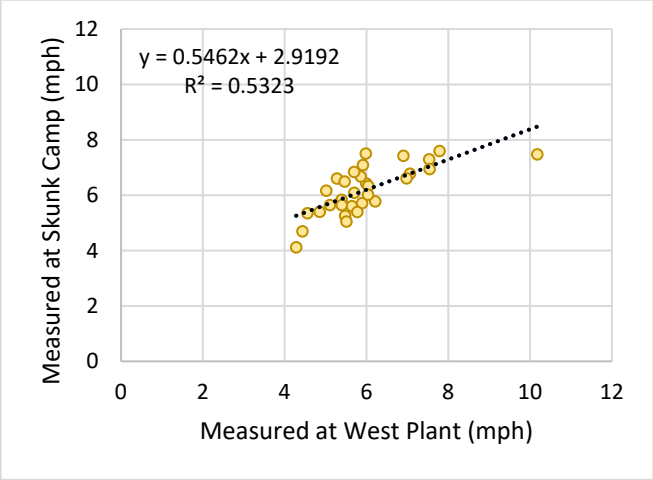
e. June – Sorted By Date



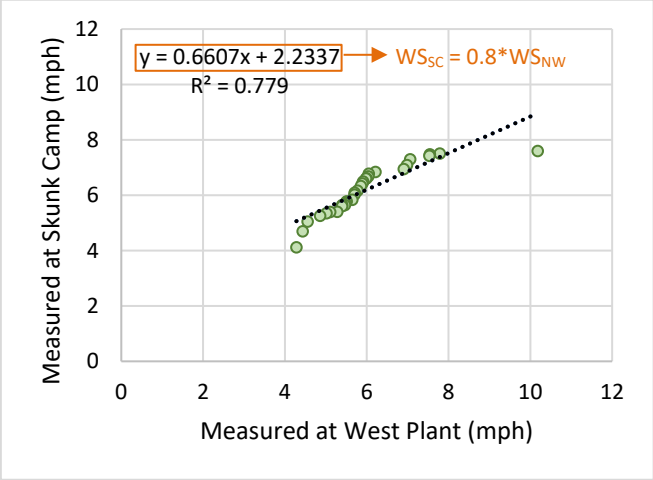
f. June – Sorted By Magnitude



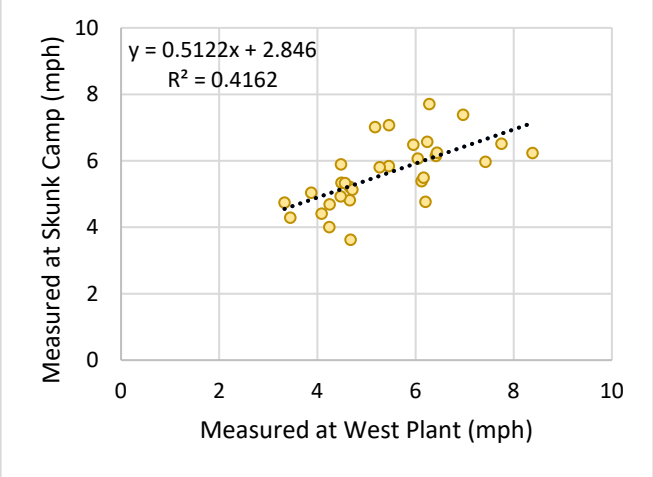
g. July – Sorted By Date



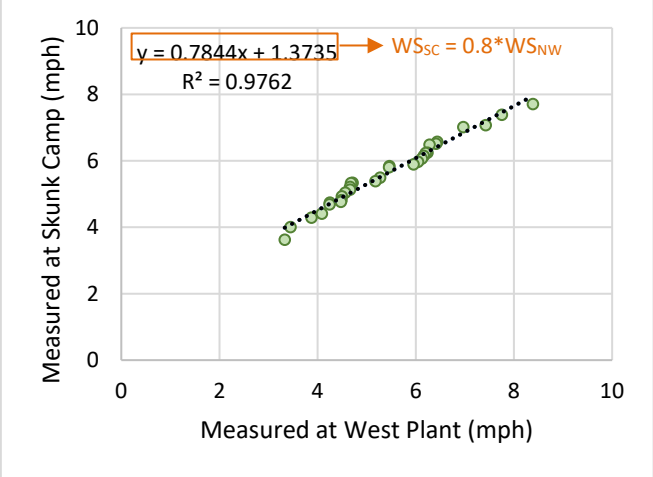
h. July – Sorted By Magnitude



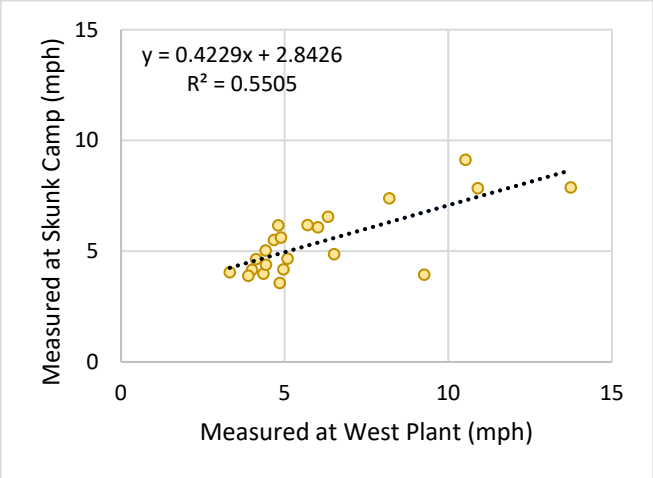
i. August – Sorted By Date



j. August – Sorted By Magnitude



k. October – Sorted By Date



l. October – Sorted By Magnitude

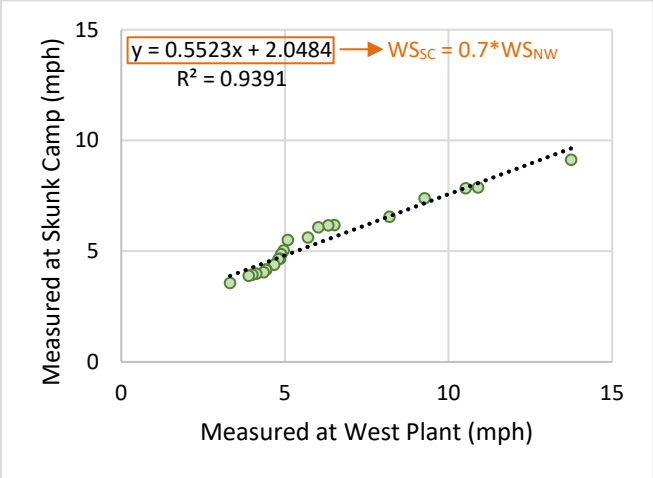
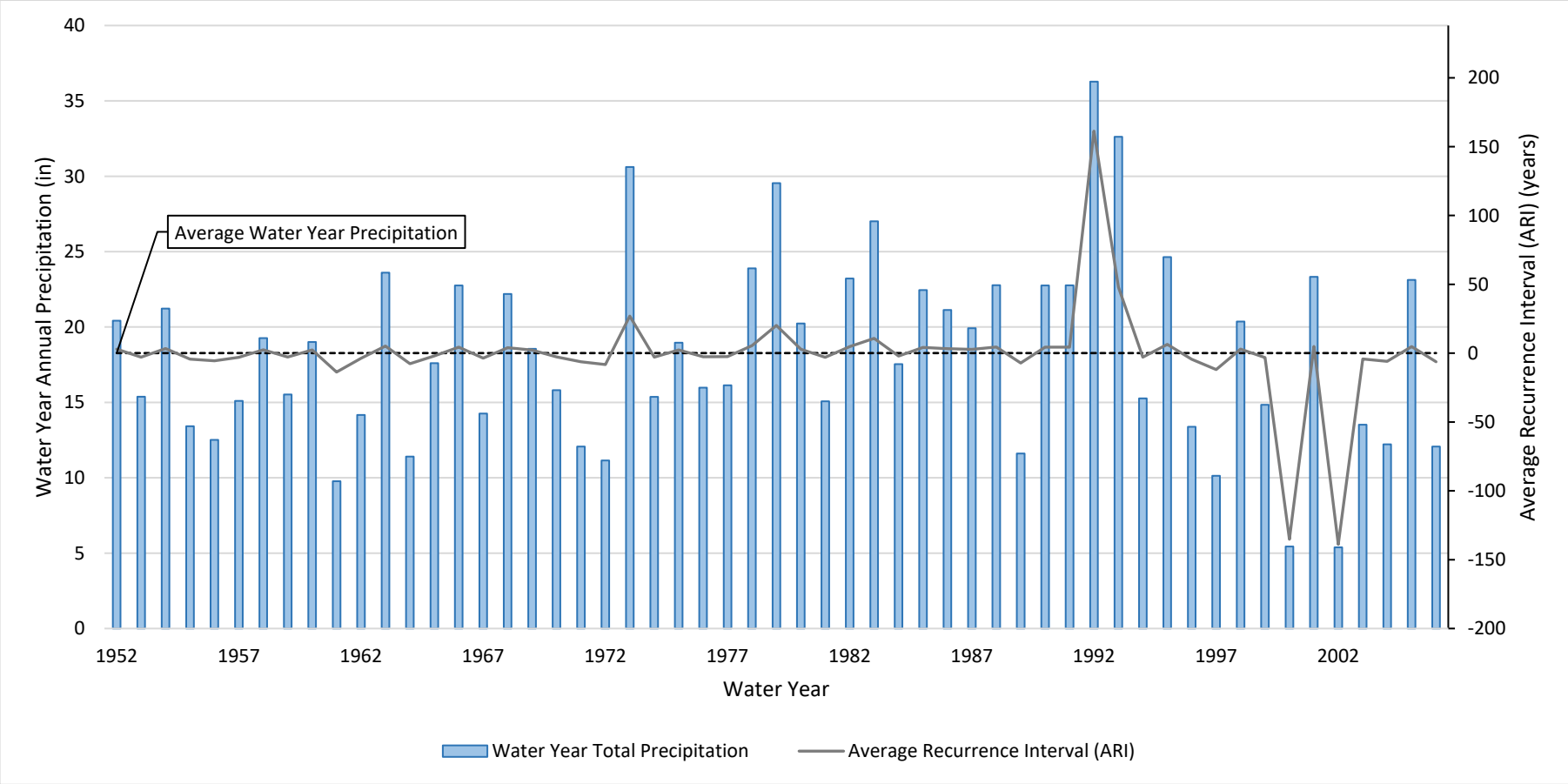


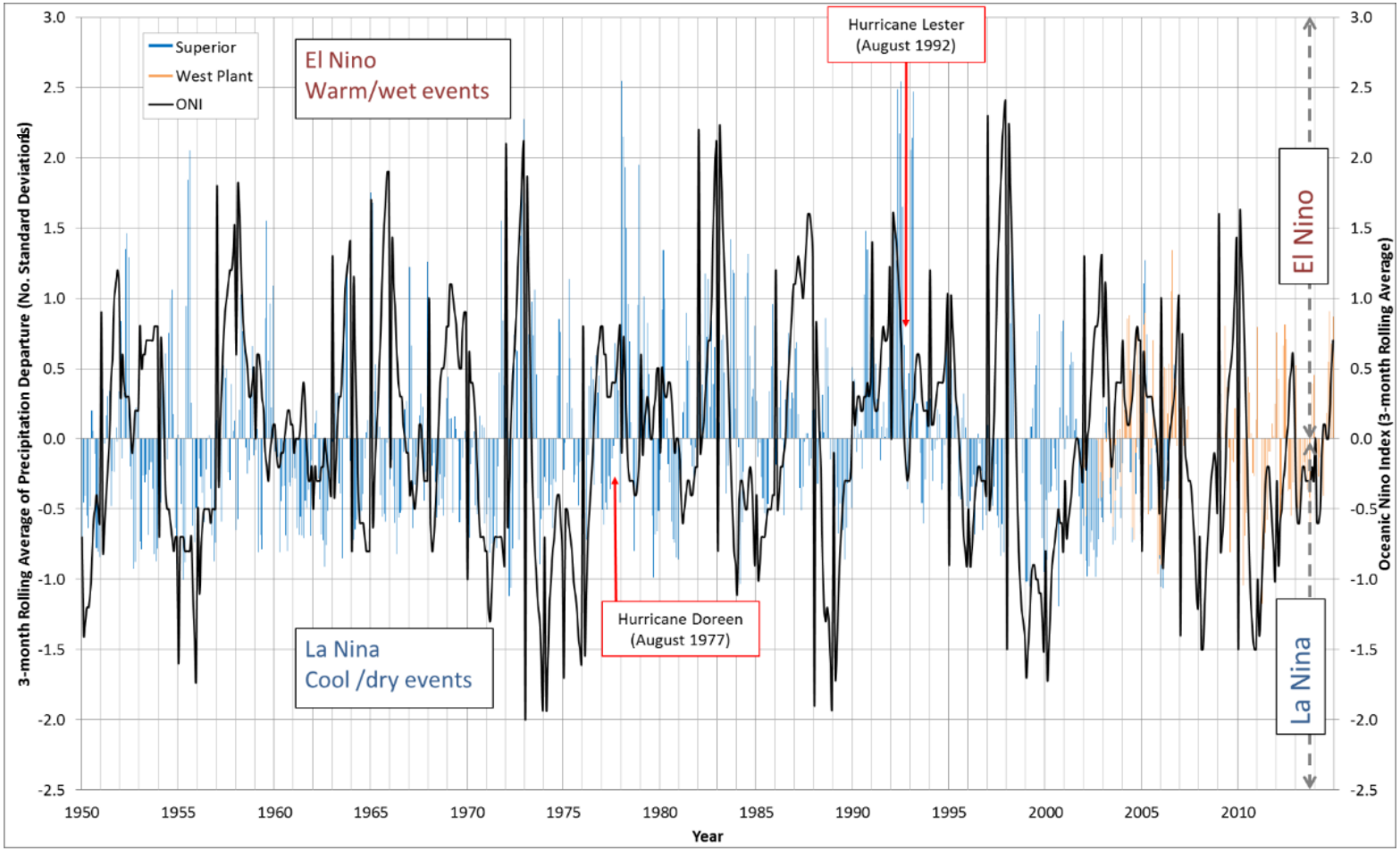
Figure IV-A-15 Average Water Year Precipitation and ARI



Notes:

1. Precipitation from Near West Modelling Dataset scaled to the Skunk Camp Site
2. Mean shown is the Generalized Extreme Value (GEV) distribution location parameter which may vary slightly from the calculated mean.

Figure IV-A-16 Correlation Between Precipitation Recorded at Superior/West Plant and Oceanic Nino Index (Calendar Years Shown)



Notes:

1. Values plotted are the number of standard deviations of the 3-month rolling average of precipitation compared to average precipitation for the period of record.
2. Graph from the *Near West Tailings Storage Facility Closure Cover Study* (KCB 2016). Values are from Superior and West Plant climate stations, not adjusted to the Skunk Camp Site because the data adjusted to Skunk Camp Site would follow the same trends.

APPENDIX IV-B

Hydrus-1D Detailed Results

Table IV-B.1 BC1 Annual Water Balance

Water Year	Result Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
		(in)	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
1951	1951-10-01	14	46	3.8	0	-3.6	0	14	18	60
1952	1952-10-01	0	51	1.3	0	-1.8	0	20	22	72
1953	1953-10-01	15	57	-0.039	0	-1.1	0	15	15	72
1954	1954-10-01	21	51	-1.5	0	-0.68	0	21	20	72
1955	1955-10-01	13	58	0.88	0	-0.62	0	13	14	72
1956	1956-10-01	13	61	0.65	0	-0.49	0	13	13	74
1957	1957-10-01	15	56	-0.078	0	-0.38	0	15	15	71
1958	1958-10-01	19	51	-1.1	0	-0.34	0	19	18	70
1959	1959-10-01	16	59	0.24	0	-0.32	0	16	16	75
1960	1960-10-01	19	54	-2.1	0	-0.55	0	19	17	73
1961	1961-10-01	9.8	63	1.0	0	-0.63	0	9.8	11	73
1962	1962-10-01	14	57	-0.57	0	-0.39	0	14	14	71
1963	1963-10-01	24	49	-3.5	0	-0.38	0	24	20	73
1964	1964-10-01	11	60	2.3	0	-0.53	0	11	14	72
1965	1965-10-01	18	53	-0.34	0	-0.43	0	18	17	71
1966	1966-10-01	23	49	-4.9	0	-1.1	0	23	18	72
1967	1967-10-01	14	58	1.6	0	-1.0	0	14	16	72
1968	1968-10-01	22	49	-3.3	0	-1.3	0	22	19	71
1969	1969-10-01	19	53	-0.28	0	-1.2	0	19	18	72
1970	1970-10-01	16	56	-0.12	0	-0.79	0	16	16	72
1971	1971-10-01	12	61	-1.2	0	-0.52	0	12	11	73
1972	1972-10-01	11	65	2.5	0	-0.41	0	11	14	76
1973	1973-10-01	31	38	-3.3	0	-0.63	0	31	27	69
1974	1974-10-01	15	56	0.060	0	-0.74	0	15	15	72
1975	1975-10-01	19	50	-0.032	0	-0.54	0	19	19	69
1976	1976-10-01	16	56	-1.1	0	-0.48	0	16	15	72
1977	1977-10-01	16	56	0.26	0	-0.37	0	16	16	73
1978	1978-10-01	24	47	-2.7	0	-0.64	0	24	21	71
1979	1979-10-01	30	42	-5.0	0	-2.8	0	30	24	71
1980	1980-10-01	20	51	-0.54	0	-2.0	0	20	20	71
1981	1981-10-01	15	60	0.57	0	-1.1	0	15	16	75
1982	1982-10-01	23	46	-1.1	0	-0.67	0	23	22	69
1983	1983-10-01	27	42	-4.0	0	-0.66	0	27	23	69
1984	1984-10-01	18	53	3.0	0	-0.83	0	18	20	71
1985	1985-10-01	22	44	-2.0	0	-0.83	0	22	20	67
1986	1986-10-01	21	49	0.046	0	-0.78	0	21	21	70
1987	1987-10-01	20	50	-0.065	0	-0.70	0	20	20	70
1988	1988-10-01	23	49	-1.3	0	-0.66	0	23	21	71
1989	1989-10-01	12	62	1.3	0	-0.64	0	12	13	74
1990	1990-10-01	23	48	-4.1	0	-0.43	0	23	19	71
1991	1991-10-01	23	48	0.44	0	-0.81	0	23	23	71
1992	1992-10-01	36	34	-4.3	0	-1.4	0	36	32	70
1993	1993-10-01	33	37	-7.9	0	-6.2	0	33	25	70
1994	1994-10-01	15	57	1.8	0	-2.5	0	15	17	73
1995	1995-10-01	25	46	-2.1	0	-1.2	0	25	22	71
1996	1996-10-01	13	60	1.9	0	-0.83	0	13	15	74
1997	1997-10-01	10	65	1.1	0	-0.49	0	10	11	75
1998	1998-10-01	20	49	-1.6	0	-0.37	0	20	19	69
1999	1999-10-01	15	58	0.084	0	-0.43	0	15	15	73
2000	2000-10-01	5.4	72	1.4	0	-0.33	0	5.4	6.9	77
2001	2001-10-01	23	48	-2.4	0	-0.31	0	23	21	71
2002	2002-10-01	5.4	70	1.4	0	-0.37	0	5.4	6.8	75
2003	2003-10-01	13	63	-0.54	0	-0.26	0	13	13	76
2004	2004-10-01	12	65	-0.092	0	-0.23	0	12	12	77

Table IV-B.1 BC1 Annual Water Balance

Water Year	Result Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
		(in)	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
2005	2005-10-01	24	49	-3.6	0	-0.37	0	24	20	72
2006	2006-10-01	12	63	0.60	0	-0.65	0	12	13	75

Table IV-B.2 BC1 Monthly Water Balance 9 Wet Years (1983 to 1991)

Month	Result Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
		[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
Nov-82	1982-11-30	0.0	5.5	-0.0083	0	-0.097	0	2.5	2.5	8.8
Dec-82	1982-12-30	2.5	0.12	-0.30	0	-0.048	0	2.5	2.2	2.7
Jan-83	1983-01-29	0.71	2.6	0.23	0	-0.048	0	0.71	0.94	3.0
Feb-83	1983-02-28	3.5	-0.16	-1.1	0	-0.049	0	3.5	2.4	2.9
Mar-83	1983-03-30	5.4	-1.5	-2.1	0	-0.048	0	5.4	3.3	4.0
Apr-83	1983-04-29	0.83	5.2	1.7	0	-0.050	0	0.83	2.5	5.3
May-83	1983-05-29	0	8.6	0.69	0	-0.054	0	0	0.71	7.9
Jun-83	1983-06-28	0	9.5	0.45	0	-0.059	0	0	0.43	9.4
Jul-83	1983-07-28	2.1	6.9	-0.41	0	-0.063	0	2.1	1.7	9.6
Aug-83	1983-08-27	3.8	3.5	-0.029	0	-0.065	0	3.8	3.8	7.2
Sep-83	1983-09-26	1.9	5.2	0.31	0	-0.065	0	1.9	2.1	7.5
Oct-83	1983-10-26	4.9	-0.31	-1.8	0	-0.064	0	4.9	3.1	5.1
Nov-83	1983-11-25	1.6	2.2	-0.42	0	-0.063	0	1.6	1.2	4.2
Dec-83	1983-12-25	1.9	0.79	0.34	0	-0.063	0	1.9	2.2	2.6
Jan-84	1984-01-24	1.5	1.2	0.34	0	-0.065	0	1.5	1.9	2.7
Feb-84	1984-02-23	0	4.1	0.61	0	-0.068	0	0	0.63	3.7
Mar-84	1984-03-24	0	5.7	0.41	0	-0.072	0	0	0.39	5.0
Apr-84	1984-04-23	0.87	5.9	0.14	0	-0.075	0	0.87	1.0	6.5
May-84	1984-05-23	0.67	7.4	0.28	0	-0.076	0	0.67	0.94	7.5
Jun-84	1984-06-22	0.039	9.3	0.29	0	-0.073	0	0.039	0.31	9.3
Jul-84	1984-07-22	3.6	4.1	-0.92	0	-0.069	0	3.6	2.7	8.5
Aug-84	1984-08-21	3.9	3.2	0.031	0	-0.065	0	3.9	3.9	6.9
Sep-84	1984-09-20	1.1	5.9	0.53	0	-0.062	0	1.1	1.7	7.0
Oct-84	1984-10-20	2.5	2.4	-0.19	0	-0.059	0	2.5	2.3	5.6
Nov-84	1984-11-19	0	4.3	0.50	0	-0.057	0	0	0.51	4.2
Dec-84	1984-12-19	4.8	-2.3	-2.9	0	-0.055	0	4.8	1.9	3.1
Jan-85	1985-01-18	3.9	-1.5	-1.5	0	-0.053	0	3.9	2.4	2.3
Feb-85	1985-02-17	2.9	-0.35	-0.40	0	-0.052	0	2.9	2.5	2.3
Mar-85	1985-03-19	1.7	2.2	0.81	0	-0.054	0	1.7	2.5	3.6
Apr-85	1985-04-18	0.43	5.7	1.0	0	-0.061	0	0.43	1.5	5.4
May-85	1985-05-18	0.47	6.6	0.49	0	-0.073	0	0.47	0.94	6.7
Jun-85	1985-06-17	0	8.7	0.42	0	-0.083	0	0	0.43	8.6
Jul-85	1985-07-17	0.20	8.2	0.14	0	-0.088	0	0.20	0.35	8.4
Aug-85	1985-08-16	2.1	5.7	-0.015	0	-0.087	0	2.1	2.1	7.8
Sep-85	1985-09-15	2.2	4.9	-0.13	0	-0.085	0	2.2	2.0	7.9
Oct-85	1985-10-15	3.1	2.0	-0.30	0	-0.081	0	3.1	2.9	5.7
Nov-85	1985-11-14	1.4	2.5	-0.21	0	-0.076	0	1.4	1.2	3.9
Dec-85	1985-12-14	2.8	0.16	-0.74	0	-0.071	0	2.8	2.0	3.1
Jan-86	1986-01-13	0	3.3	1.3	0	-0.066	0	0	1.3	3.3
Feb-86	1986-02-12	2.3	0.79	-1.4	0	-0.064	0	2.3	0.91	3.6
Mar-86	1986-03-14	1.9	2.6	0.23	0	-0.062	0	1.9	2.2	3.7
Apr-86	1986-04-13	3.1	2.4	-0.023	0	-0.061	0	3.1	3.1	4.9
May-86	1986-05-13	0	7.8	0.72	0	-0.060	0	0	0.75	7.4
Jun-86	1986-06-12	0	9.4	0.43	0	-0.061	0	0	0.43	9.1
Jul-86	1986-07-12	2.2	6.8	-0.47	0	-0.061	0	2.2	1.7	9.2
Aug-86	1986-08-11	2.8	4.6	-0.0024	0	-0.061	0	2.8	2.8	7.5
Sep-86	1986-09-10	3.0	4.0	-0.65	0	-0.061	0	3.0	2.3	7.3
Oct-86	1986-10-10	0.91	4.8	0.93	0	-0.059	0	0.91	1.8	6.1
Nov-86	1986-11-09	2.8	1.1	-0.64	0	-0.058	0	2.8	2.1	4.6
Dec-86	1986-12-09	2.6	0.67	-1.4	0	-0.057	0	2.6	1.2	3.4
Jan-87	1987-01-08	1.5	1.3	0.74	0	-0.056	0	1.5	2.2	2.7
Feb-87	1987-02-07	3.1	-0.16	-0.53	0	-0.055	0	3.1	2.6	2.9
Mar-87	1987-03-09	2.2	1.9	-0.075	0	-0.055	0	2.2	2.2	3.4
Apr-87	1987-04-08	0.94	4.4	0.78	0	-0.055	0	0.94	1.7	5.0

Table IV-B.2 BC1 Monthly Water Balance 9 Wet Years (1983 to 1991)

Month	Result Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
		[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
May-87	1987-05-08	0.039	7.2	0.54	0	-0.057	0	0.039	0.59	6.8
Jun-87	1987-06-07	0.31	8.1	0.36	0	-0.059	0	0.31	0.67	8.2
Jul-87	1987-07-07	0.20	8.9	0.27	0	-0.060	0	0.20	0.47	9.2
Aug-87	1987-08-06	3.1	5.5	-1.1	0	-0.059	0	3.1	2.0	8.9
Sep-87	1987-09-05	2.4	5.0	0.11	0	-0.058	0	2.4	2.5	7.5
Oct-87	1987-10-05	0.79	5.5	0.70	0	-0.057	0	0.79	1.5	6.7
Nov-87	1987-11-04	1.4	3.5	-0.54	0	-0.055	0	1.4	0.83	5.8
Dec-87	1987-12-04	0.71	3.1	0.76	0	-0.054	0	0.71	1.5	3.8
Jan-88	1988-01-03	4.0	-1.3	-2.2	0	-0.052	0	4.0	1.8	3.0
Feb-88	1988-02-02	3.6	-0.94	-1.1	0	-0.050	0	3.6	2.6	2.4
Mar-88	1988-03-03	0.75	3.5	1.1	0	-0.049	0	0.75	1.9	3.6
Apr-88	1988-04-02	0.12	5.9	0.65	0	-0.049	0	0.12	0.79	5.5
May-88	1988-05-02	2.4	3.7	-0.33	0	-0.052	0	2.4	2.1	6.1
Jun-88	1988-06-01	0	8.7	0.68	0	-0.056	0	0	0.67	8.0
Jul-88	1988-07-01	0.16	8.5	0.36	0	-0.057	0	0.16	0.47	8.9
Aug-88	1988-07-31	2.4	5.8	-0.89	0	-0.057	0	2.4	1.6	8.5
Sep-88	1988-08-30	6.7	0.59	-1.4	0	-0.057	0	6.7	5.2	7.3
Oct-88	1988-10-29	2.0	9.8	1.5	0	-0.11	0	2.0	3.5	13
Nov-88	1988-11-28	1.7	1.9	-0.87	0	-0.054	0	1.7	0.83	4.1
Dec-88	1988-12-28	1.1	1.8	0.66	0	-0.055	0	1.1	1.8	3.1
Jan-89	1989-01-27	2.0	0.75	-0.076	0	-0.054	0	2.0	1.9	2.4
Feb-89	1989-02-26	0.55	3.3	0.53	0	-0.054	0	0.55	1.1	3.3
Mar-89	1989-03-28	1.7	4.1	-1.0	0	-0.054	0	1.7	0.67	5.3
Apr-89	1989-04-27	0	7.6	1.3	0	-0.053	0	0	1.3	6.9
May-89	1989-05-27	0.16	8.4	0.34	0	-0.052	0	0.16	0.51	8.3
Jun-89	1989-06-26	0	9.2	0.26	0	-0.052	0	0	0.24	9.1
Jul-89	1989-07-26	0.079	8.7	0.21	0	-0.050	0	0.079	0.31	9.0
Aug-89	1989-08-25	1.3	6.1	-0.013	0	-0.049	0	1.3	1.3	8.0
Sep-89	1989-09-24	1.5	5.6	-0.14	0	-0.047	0	1.5	1.3	7.3
Oct-89	1989-10-24	1.1	4.5	0.061	0	-0.045	0	1.1	1.1	6.1
Nov-89	1989-11-23	0.28	3.8	0.14	0	-0.043	0	0.28	0.43	4.5
Dec-89	1989-12-23	0	3.3	0.38	0	-0.041	0	0	0.39	3.5
Jan-90	1990-01-22	2.2	0.47	-0.67	0	-0.039	0	2.2	1.5	2.9
Feb-90	1990-02-21	2.5	0.35	-0.61	0	-0.036	0	2.5	1.9	2.5
Mar-90	1990-03-23	0.83	3.9	0.48	0	-0.035	0	0.83	1.3	4.2
Apr-90	1990-04-22	1.0	5.8	0.28	0	-0.033	0	1.0	1.3	6.0
May-90	1990-05-22	1.1	6.9	0.10	0	-0.032	0	1.1	1.2	7.7
Jun-90	1990-06-21	0.39	8.9	0.23	0	-0.031	0	0.39	0.63	9.0
Jul-90	1990-07-21	0.94	7.3	0.049	0	-0.031	0	0.94	0.98	8.6
Aug-90	1990-08-20	9.6	-2.6	-7.1	0	-0.030	0	9.6	2.5	7.8
Sep-90	1990-09-19	2.5	4.8	1.5	0	-0.030	0	2.5	3.9	7.1
Oct-90	1990-10-19	0.39	4.8	2.0	0	-0.030	0	0.39	2.5	5.9
Nov-90	1990-11-18	1.6	2.6	0.076	0	-0.032	0	1.6	1.6	4.2
Dec-90	1990-12-18	2.8	0.28	-1.1	0	-0.038	0	2.8	1.7	3.5
Jan-91	1991-01-17	4.7	-2.3	-2.3	0	-0.046	0	4.7	2.4	2.3
Feb-91	1991-02-16	0.12	3.4	1.9	0	-0.052	0	0.12	2.0	3.3
Mar-91	1991-03-18	3.6	0.91	-1.0	0	-0.057	0	3.6	2.6	4.3
Apr-91	1991-04-17	3.2	2.4	0.32	0	-0.066	0	3.2	3.5	4.8
May-91	1991-05-17	0	7.8	0.90	0	-0.076	0	0	0.91	7.4
Jun-91	1991-06-16	0.71	8.4	0.41	0	-0.087	0	0.71	1.1	8.7
Jul-91	1991-07-16	0.43	8.9	0.41	0	-0.094	0	0.43	0.87	9.4
Aug-91	1991-08-15	3.3	4.8	-0.67	0	-0.096	0	3.3	2.7	8.4
Sep-91	1991-09-14	2.0	4.9	0.31	0	-0.094	0	2.0	2.3	7.5
Oct-91	1991-10-01	0.24	3.2	0.42	0	-0.052	0	0.24	0.67	3.5

Table IV-B.3 BC1 Monsoon Period Water Balance

Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
1951-07-01	0	9.2	0.57	0	-0.36	0	0	0.57	9.2
1951-08-01	1.1	8.4	0.28	0	-0.32	0	1.1	1.3	9.5
1951-09-01	3.6	4.2	-1.8	0	-0.28	0	3.6	1.9	7.8
1951-10-01	0.65	6.0	1.4	0	-0.23	0	0.65	2.0	6.6
1951-11-01	1.6	3.7	-0.38	0	-0.21	0	1.6	1.3	5.4
1951	7.0	32	0.089	0	-1.4	0	7.0	7.1	39
1952-07-01	0.63	8.9	0.54	0	-0.13	0	0.63	1.2	9.6
1952-08-01	0.56	8.3	0.35	0	-0.13	0	0.56	0.91	8.8
1952-09-01	0.45	7.4	0.37	0	-0.13	0	0.45	0.82	7.8
1952-10-01	0.70	6.3	0.20	0	-0.12	0	0.70	0.90	7.0
1952-11-01	0	5.9	0.36	0	-0.11	0	0	0.36	5.9
1952	2.3	37	1.8	0	-0.62	0	2.3	4.2	39
1953-07-01	0	9.1	0.33	0	-0.085	0	0	0.33	9.1
1953-08-01	2.7	5.8	-1.1	0	-0.085	0	2.7	1.6	8.8
1953-09-01	1.8	6.1	0.37	0	-0.083	0	1.8	2.2	7.7
1953-10-01	0	6.8	0.80	0	-0.075	0	0	0.80	6.8
1953-11-01	0.012	5.4	0.34	0	-0.072	0	0.012	0.35	5.5
1953	4.5	33	0.73	0	-0.40	0	4.5	5.3	38
1954-07-01	0.13	8.9	0.41	0	-0.050	0	0.13	0.54	9.0
1954-08-01	4.5	3.2	-1.0	0	-0.052	0	4.5	3.4	7.8
1954-09-01	5.3	2.1	-1.1	0	-0.053	0	5.3	4.2	7.4
1954-10-01	1.3	5.4	0.71	0	-0.051	0	1.3	2.0	6.6
1954-11-01	0	5.6	0.70	0	-0.053	0	0	0.70	5.6
1954	11	25	-0.30	0	-0.26	0	11	11	36
1955-07-01	2.1	7.0	-0.41	0	-0.050	0	2.1	1.7	9.1
1955-08-01	4.5	3.4	-1.7	0	-0.050	0	4.5	2.7	7.9
1955-09-01	2.7	4.4	0.69	0	-0.048	0	2.7	3.4	7.2
1955-10-01	0.12	6.7	0.65	0	-0.045	0	0.12	0.77	6.8
1955-11-01	0.020	5.8	0.37	0	-0.045	0	0.020	0.39	5.9
1955	9.4	27	-0.43	0	-0.24	0	9.4	8.9	37
1956-07-01	0.24	9.2	0.13	0	-0.039	0	0.24	0.37	9.4
1956-08-01	2.8	6.2	-0.46	0	-0.040	0	2.8	2.3	9.0
1956-09-01	1.7	5.7	0.22	0	-0.039	0	1.7	2.0	7.5
1956-10-01	0.075	6.8	0.31	0	-0.037	0	0.075	0.39	6.8
1956-11-01	0.53	4.5	0.043	0	-0.037	0	0.53	0.57	5.2
1956	5.4	32	0.25	0	-0.19	0	5.4	5.6	38
1957-07-01	0.031	9.3	0.33	0	-0.030	0	0.031	0.36	9.3
1957-08-01	1.1	7.4	-0.037	0	-0.031	0	1.1	1.1	8.5
1957-09-01	3.4	4.4	-0.43	0	-0.031	0	3.4	3.0	8.1
1957-10-01	0.57	6.1	0.44	0	-0.030	0	0.57	1.0	6.6
1957-11-01	3.2	1.1	-1.7	0	-0.030	0	3.2	1.6	4.6
1957	8.3	28	-1.4	0	-0.15	0	8.3	7.0	37
1958-07-01	0.70	8.5	0.15	0	-0.027	0	0.70	0.85	9.3
1958-08-01	0.78	8.2	0.096	0	-0.029	0	0.78	0.88	9.1
1958-09-01	0.85	7.2	0.26	0	-0.029	0	0.85	1.1	8.0
1958-10-01	3.0	3.2	-0.92	0	-0.028	0	3.0	2.1	6.4
1958-11-01	1.9	3.2	0.16	0	-0.029	0	1.9	2.1	5.3
1958	7.3	30	-0.25	0	-0.14	0	7.3	7.0	38
1959-07-01	1.0	8.2	-0.050	0	-0.026	0	1.0	0.98	9.1
1959-08-01	3.8	5.8	-1.4	0	-0.027	0	3.8	2.4	9.6
1959-09-01	5.3	2.0	-0.30	0	-0.026	0	5.3	5.0	7.4
1959-10-01	0.047	6.6	0.75	0	-0.024	0	0.047	0.80	6.9
1959-11-01	4.8	0.35	-3.8	0	-0.024	0	4.8	0.97	5.3
1959	15	23	-4.9	0	-0.13	0	15	10	38
1960-07-01	0	9.3	0.37	0	-0.067	0	0	0.37	9.2
1960-08-01	0.74	8.4	0.15	0	-0.074	0	0.74	0.89	9.2
1960-09-01	1.5	6.4	0.14	0	-0.074	0	1.5	1.7	8.1

Table IV-B.3 BC1 Monsoon Period Water Balance

Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
1960-10-01	0.27	6.6	0.32	0	-0.070	0	0.27	0.58	7.0
1960-11-01	2.1	2.8	-0.40	0	-0.069	0	2.1	1.7	5.0
1960	4.6	33	0.57	0	-0.35	0	4.6	5.2	38
1961-07-01	0	9.4	0.17	0	-0.045	0	0	0.18	9.3
1961-08-01	0.67	8.0	0.049	0	-0.044	0	0.67	0.72	8.9
1961-09-01	3.0	5.1	-1.2	0	-0.042	0	3.0	1.7	8.1
1961-10-01	0.50	5.9	1.1	0	-0.038	0	0.50	1.6	6.3
1961-11-01	0.45	4.5	-0.033	0	-0.036	0	0.45	0.42	5.4
1961	4.6	33	0.048	0	-0.21	0	4.6	4.6	38
1962-07-01	0	9.1	0.28	0	-0.032	0	0	0.28	9.1
1962-08-01	0.61	8.2	0.16	0	-0.034	0	0.61	0.77	8.9
1962-09-01	0.50	7.7	0.18	0	-0.034	0	0.50	0.67	8.4
1962-10-01	1.2	5.2	-0.12	0	-0.033	0	1.2	1.1	6.6
1962-11-01	0.87	4.1	0.13	0	-0.034	0	0.87	1.0	5.1
1962	3.2	34	0.63	0	-0.17	0	3.2	3.8	38
1963-07-01	0	9.1	0.32	0	-0.031	0	0	0.31	9.0
1963-08-01	0.079	9.3	0.25	0	-0.033	0	0.079	0.33	9.4
1963-09-01	10	-3.3	-5.8	0	-0.033	0	10	4.7	7.5
1963-10-01	1.0	5.7	2.7	0	-0.033	0	1.0	3.8	6.6
1963-11-01	0.67	4.9	0.66	0	-0.034	0	0.67	1.3	5.8
1963	12	26	-1.9	0	-0.16	0	12	10	38
1964-07-01	0	9.3	0.22	0	-0.047	0	0	0.22	9.4
1964-08-01	1.5	7.2	-0.18	0	-0.048	0	1.5	1.3	8.8
1964-09-01	2.2	5.6	-0.012	0	-0.046	0	2.2	2.2	7.7
1964-10-01	1.6	4.4	0.089	0	-0.043	0	1.6	1.7	6.1
1964-11-01	1.5	4.2	-0.22	0	-0.042	0	1.5	1.3	5.8
1964	6.8	31	-0.10	0	-0.22	0	6.8	6.7	38
1965-07-01	0.10	8.8	0.32	0	-0.034	0	0.10	0.42	8.8
1965-08-01	1.4	7.1	-0.0053	0	-0.037	0	1.4	1.4	8.9
1965-09-01	0.90	7.0	0.23	0	-0.038	0	0.90	1.1	8.0
1965-10-01	1.0	5.5	0.13	0	-0.037	0	1.0	1.2	6.6
1965-11-01	0.46	5.0	0.16	0	-0.038	0	0.46	0.62	5.7
1965	3.9	33	0.83	0	-0.18	0	3.9	4.8	38
1966-07-01	0.18	8.6	0.41	0	-0.15	0	0.18	0.59	9.1
1966-08-01	0.84	7.6	0.23	0	-0.15	0	0.84	1.1	8.3
1966-09-01	1.6	6.3	-0.12	0	-0.14	0	1.6	1.5	8.1
1966-10-01	2.7	3.7	-0.30	0	-0.12	0	2.7	2.4	6.5
1966-11-01	1.4	3.8	0.39	0	-0.12	0	1.4	1.8	5.1
1966	6.7	30	0.61	0	-0.69	0	6.7	7.3	37
1967-07-01	0.079	8.9	0.25	0	-0.069	0	0.079	0.33	9.0
1967-08-01	4.0	4.2	-0.82	0	-0.066	0	4.0	3.1	8.3
1967-09-01	2.5	5.6	0.015	0	-0.063	0	2.5	2.5	8.0
1967-10-01	0.55	5.7	0.41	0	-0.058	0	0.55	0.96	6.5
1967-11-01	0.42	4.8	0.31	0	-0.057	0	0.42	0.73	5.6
1967	7.5	29	0.17	0	-0.31	0	7.5	7.7	37
1968-07-01	0	9.4	0.45	0	-0.16	0	0	0.45	9.3
1968-08-01	1.8	6.9	-0.24	0	-0.16	0	1.8	1.6	8.9
1968-09-01	2.5	4.6	0.26	0	-0.15	0	2.5	2.8	7.3
1968-10-01	0.047	6.7	0.52	0	-0.13	0	0.047	0.57	6.9
1968-11-01	0.39	4.6	0.30	0	-0.12	0	0.39	0.69	5.1
1968	4.8	32	1.3	0	-0.73	0	4.8	6.1	38
1969-07-01	0	9.3	0.44	0	-0.10	0	0	0.44	9.4
1969-08-01	0.33	8.1	0.31	0	-0.10	0	0.33	0.64	8.7
1969-09-01	2.6	5.7	-0.16	0	-0.100	0	2.6	2.4	8.3
1969-10-01	1.2	5.3	0.15	0	-0.092	0	1.2	1.4	6.8
1969-11-01	0.82	4.1	0.11	0	-0.089	0	0.82	0.94	5.2
1969	5.0	33	0.84	0	-0.49	0	5.0	5.8	38

Table IV-B.3 BC1 Monsoon Period Water Balance

Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
1970-07-01	0.079	9.2	0.29	0	-0.057	0	0.079	0.37	9.1
1970-08-01	1.0	7.6	0.14	0	-0.058	0	1.0	1.2	9.1
1970-09-01	1.7	6.5	-0.094	0	-0.057	0	1.7	1.6	8.0
1970-10-01	3.4	3.2	-0.76	0	-0.054	0	3.4	2.6	7.0
1970-11-01	0	5.1	0.54	0	-0.053	0	0	0.54	5.3
1970	6.2	32	0.11	0	-0.28	0	6.2	6.3	39
1971-07-01	0	9.1	0.17	0	-0.039	0	0	0.17	9.0
1971-08-01	0.39	8.7	0.11	0	-0.038	0	0.39	0.50	9.2
1971-09-01	4.7	2.9	-1.2	0	-0.036	0	4.7	3.5	7.8
1971-10-01	3.1	3.7	-1.9	0	-0.033	0	3.1	1.2	7.1
1971-11-01	4.2	0.51	-0.16	0	-0.033	0	4.2	4.1	5.1
1971	12	25	-2.9	0	-0.18	0	12	9.4	38
1972-07-01	1.7	7.8	-0.33	0	-0.035	0	1.7	1.4	9.3
1972-08-01	0.27	9.2	0.38	0	-0.035	0	0.27	0.65	9.5
1972-09-01	2.0	6.0	-0.22	0	-0.035	0	2.0	1.8	8.4
1972-10-01	0.67	6.0	0.32	0	-0.033	0	0.67	0.98	6.8
1972-11-01	8.7	-4.2	-5.0	0	-0.032	0	8.7	3.7	4.9
1972	13	25	-4.9	0	-0.17	0	13	8.4	39
1973-07-01	0.87	8.2	0.43	0	-0.067	0	0.87	1.3	9.0
1973-08-01	2.7	5.7	-0.78	0	-0.076	0	2.7	1.9	8.9
1973-09-01	1.4	6.7	0.88	0	-0.080	0	1.4	2.3	8.1
1973-10-01	0	6.6	0.48	0	-0.078	0	0	0.47	6.7
1973-11-01	0	5.1	0.33	0	-0.078	0	0	0.33	5.6
1973	5.0	32	1.3	0	-0.38	0	5.0	6.3	38
1974-07-01	0	9.5	0.26	0	-0.055	0	0	0.26	9.4
1974-08-01	2.5	6.0	-0.33	0	-0.056	0	2.5	2.1	8.6
1974-09-01	1.4	6.5	0.26	0	-0.054	0	1.4	1.6	8.3
1974-10-01	3.4	2.9	-0.57	0	-0.050	0	3.4	2.8	6.5
1974-11-01	3.4	1.4	-1.8	0	-0.050	0	3.4	1.5	5.3
1974	11	26	-2.2	0	-0.26	0	11	8.4	38
1975-07-01	0	9.5	0.38	0	-0.043	0	0	0.35	9.6
1975-08-01	2.2	5.6	-0.11	0	-0.047	0	2.2	2.1	8.3
1975-09-01	2.0	6.3	0.076	0	-0.048	0	2.0	2.1	8.0
1975-10-01	0.91	5.6	0.30	0	-0.047	0	0.91	1.2	6.8
1975-11-01	0.28	4.8	0.27	0	-0.048	0	0.28	0.51	5.4
1975	5.4	32	0.92	0	-0.23	0	5.4	6.3	38
1976-07-01	0	9.8	0.27	0	-0.036	0	0	0.28	9.7
1976-08-01	2.8	5.2	-0.77	0	-0.035	0	2.8	2.0	8.7
1976-09-01	0.87	7.4	0.34	0	-0.035	0	0.87	1.2	7.9
1976-10-01	4.0	1.9	-1.3	0	-0.032	0	4.0	2.7	6.4
1976-11-01	0.91	3.8	0.68	0	-0.033	0	0.91	1.6	5.1
1976	8.5	28	-0.76	0	-0.17	0	8.5	7.8	38
1977-07-01	0.039	9.5	0.23	0	-0.031	0	0.039	0.28	9.5
1977-08-01	2.5	6.5	-0.58	0	-0.031	0	2.5	2.0	9.4
1977-09-01	2.4	5.6	-0.081	0	-0.031	0	2.4	2.4	8.1
1977-10-01	3.5	2.5	-0.62	0	-0.029	0	3.5	2.8	6.4
1977-11-01	1.3	3.9	0.32	0	-0.030	0	1.3	1.7	5.5
1977	9.8	28	-0.73	0	-0.15	0	9.8	9.1	39
1978-07-01	0.55	8.7	0.38	0	-0.076	0	0.55	0.91	9.4
1978-08-01	0.98	7.9	0.20	0	-0.100	0	0.98	1.2	9.4
1978-09-01	1.1	6.4	0.53	0	-0.11	0	1.1	1.6	7.3
1978-10-01	0.35	5.9	0.32	0	-0.10	0	0.35	0.71	6.6
1978-11-01	1.9	3.5	-0.66	0	-0.10	0	1.9	1.3	5.9
1978	4.9	32	0.77	0	-0.49	0	4.9	5.6	39
1979-07-01	0.35	9.1	0.71	0	-0.37	0	0.35	1.1	9.2
1979-08-01	0.16	8.8	0.53	0	-0.35	0	0.16	0.71	9.3
1979-09-01	1.5	6.1	0.28	0	-0.30	0	1.5	1.8	7.8

Table IV-B.3 BC1 Monsoon Period Water Balance

Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
1979-10-01	0.079	6.7	0.47	0	-0.25	0	0.079	0.55	7.2
1979-11-01	0.71	4.9	0.19	0	-0.22	0	0.71	0.87	5.9
1979	2.8	36	2.2	0	-1.5	0	2.8	5.0	39
1980-07-01	0.16	8.9	0.44	0	-0.18	0	0.16	0.59	9.0
1980-08-01	1.9	6.7	-0.037	0	-0.18	0	1.9	1.9	9.1
1980-09-01	1.3	6.7	0.58	0	-0.17	0	1.3	1.9	7.9
1980-10-01	0.59	6.2	0.38	0	-0.15	0	0.59	0.94	7.0
1980-11-01	0.039	5.3	0.36	0	-0.14	0	0.039	0.39	5.9
1980	4.0	34	1.7	0	-0.83	0	4.0	5.7	39
1981-07-01	0.12	9.2	0.45	0	-0.078	0	0.12	0.55	9.3
1981-08-01	2.2	6.7	-0.83	0	-0.079	0	2.2	1.3	9.3
1981-09-01	2.6	5.7	0.53	0	-0.075	0	2.6	3.1	7.9
1981-10-01	0.51	6.4	0.27	0	-0.069	0	0.51	0.79	7.5
1981-11-01	0.94	3.7	0.31	0	-0.067	0	0.94	1.3	5.2
1981	6.4	32	0.74	0	-0.37	0	6.4	7.1	39
1982-07-01	0.039	9.2	0.37	0	-0.052	0	0.039	0.39	9.1
1982-08-01	2.6	5.5	-0.53	0	-0.053	0	2.6	2.1	8.8
1982-09-01	3.8	3.3	-0.38	0	-0.052	0	3.8	3.4	6.9
1982-10-01	3.0	3.1	-0.27	0	-0.050	0	3.0	2.8	6.7
1982-11-01	0	5.0	0.69	0	-0.051	0	0	0.71	5.4
1982	9.5	26	-0.13	0	-0.26	0	9.5	9.4	37
1983-07-01	0	9.6	0.43	0	-0.059	0	0	0.43	9.4
1983-08-01	2.8	6.1	-0.60	0	-0.065	0	2.8	2.2	9.5
1983-09-01	3.6	4.1	-0.22	0	-0.067	0	3.6	3.4	7.5
1983-10-01	5.1	1.4	-2.8	0	-0.065	0	5.1	2.3	7.3
1983-11-01	1.1	3.3	1.9	0	-0.066	0	1.1	3.0	4.9
1983	13	24	-1.2	0	-0.32	0	13	11	39
1984-07-01	1.3	7.7	-0.47	0	-0.072	0	1.3	0.87	9.3
1984-08-01	3.3	4.6	0.026	0	-0.070	0	3.3	3.3	7.8
1984-09-01	3.3	3.7	0.057	0	-0.065	0	3.3	3.3	7.4
1984-10-01	1.9	4.6	-0.12	0	-0.061	0	1.9	1.8	6.9
1984-11-01	1.3	3.2	0.39	0	-0.060	0	1.3	1.7	4.9
1984	11	24	-0.12	0	-0.33	0	11	11	36
1985-07-01	0	8.2	0.38	0	-0.086	0	0	0.35	8.6
1985-08-01	1.2	7.6	-0.25	0	-0.091	0	1.2	0.98	8.7
1985-09-01	2.1	5.8	0.033	0	-0.089	0	2.1	2.1	8.1
1985-10-01	3.5	2.5	-0.51	0	-0.082	0	3.5	3.1	6.6
1985-11-01	1.2	3.1	0.64	0	-0.081	0	1.2	1.9	4.6
1985	8.1	27	0.28	0	-0.43	0	8.1	8.4	37
1986-07-01	0	9.2	0.36	0	-0.061	0	0	0.35	9.3
1986-08-01	4.8	3.1	-0.86	0	-0.063	0	4.8	3.9	8.5
1986-09-01	2.0	5.6	0.062	0	-0.063	0	2.0	2.1	8.0
1986-10-01	2.1	4.1	0.11	0	-0.060	0	2.1	2.2	6.5
1986-11-01	1.8	3.0	0.049	0	-0.061	0	1.8	1.8	4.8
1986	11	25	-0.28	0	-0.31	0	11	10	37
1987-07-01	0.20	9.1	0.28	0	-0.059	0	0.20	0.47	9.0
1987-08-01	2.0	6.9	-0.45	0	-0.061	0	2.0	1.6	9.0
1987-09-01	2.9	4.9	-0.13	0	-0.060	0	2.9	2.8	8.1
1987-10-01	1.3	5.2	0.27	0	-0.057	0	1.3	1.5	7.1
1987-11-01	0.31	5.2	0.39	0	-0.057	0	0.31	0.71	6.0
1987	6.7	31	0.35	0	-0.30	0	6.7	7.1	39
1988-07-01	0.16	8.5	0.36	0	-0.057	0	0.16	0.47	8.9
1988-08-01	3.4	4.9	-1.7	0	-0.059	0	3.4	1.7	8.8
1988-09-01	5.9	1.8	-0.41	0	-0.059	0	5.9	5.5	7.5
1988-10-01	0.31	6.2	1.3	0	-0.057	0	0.31	1.6	6.9
1988-11-01	1.5	3.7	0.084	0	-0.057	0	1.5	1.6	5.8
1988	11	25	-0.42	0	-0.29	0	11	11	38

Table IV-B.3 BC1 Monsoon Period Water Balance

Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
1989-07-01	0	9.3	0.25	0	-0.052	0	0	0.24	9.2
1989-08-01	0.51	8.2	0.095	0	-0.052	0	0.51	0.59	9.3
1989-09-01	0.91	6.9	0.15	0	-0.050	0	0.91	1.1	7.8
1989-10-01	1.5	5.2	-0.13	0	-0.047	0	1.5	1.4	7.3
1989-11-01	1.1	4.1	0.12	0	-0.046	0	1.1	1.2	5.9
1989	4.0	34	0.49	0	-0.25	0	4.0	4.4	39
1990-07-01	0.31	8.9	0.20	0	-0.031	0	0.31	0.47	9.3
1990-08-01	1.5	6.5	-0.043	0	-0.031	0	1.5	1.5	8.6
1990-09-01	9.0	-1.5	-4.7	0	-0.031	0	9.0	4.3	7.4
1990-10-01	2.8	3.5	0.36	0	-0.030	0	2.8	3.2	6.8
1990-11-01	0.28	4.6	1.1	0	-0.031	0	0.28	1.4	5.3
1990	14	22	-3.1	0	-0.15	0	14	11	37
1991-07-01	0.63	8.8	0.41	0	-0.091	0	0.63	1.0	9.2
1991-08-01	1.7	7.1	-0.32	0	-0.098	0	1.7	1.4	9.3
1991-09-01	2.8	5.2	0.27	0	-0.098	0	2.8	3.0	8.3
1991-10-01	1.6	4.7	0.24	0	-0.092	0	1.6	1.8	6.5
1991-11-01	1.2	4.6	-0.48	0	-0.091	0	1.2	0.75	6.6
1991	7.9	30	0.11	0	-0.47	0	7.9	8.0	40
1992-07-01	1.3	7.9	0.73	0	-0.16	0	1.3	2.0	8.9
1992-08-01	3.3	5.5	-1.1	0	-0.18	0	3.3	2.2	9.3
1992-09-01	5.3	2.1	-0.52	0	-0.18	0	5.3	4.8	7.8
1992-10-01	0.87	5.9	1.2	0	-0.16	0	0.87	2.1	6.7
1992-11-01	1.2	4.1	0.043	0	-0.16	0	1.2	1.3	6.2
1992	12	26	0.37	0	-0.84	0	12	12	39
1993-07-01	0	9.2	0.95	0	-0.80	0	0	0.94	9.3
1993-08-01	0.24	8.5	0.71	0	-0.66	0	0.24	0.94	8.9
1993-09-01	3.4	4.1	-0.54	0	-0.53	0	3.4	2.9	8.5
1993-10-01	0.16	6.3	1.2	0	-0.40	0	0.16	1.4	6.4
1993-11-01	0.79	4.4	0.46	0	-0.36	0	0.79	1.3	6.0
1993	4.6	33	2.8	0	-2.7	0	4.6	7.4	39
1994-07-01	0.39	8.6	0.40	0	-0.16	0	0.39	0.75	8.9
1994-08-01	1.5	7.4	-0.62	0	-0.15	0	1.5	0.87	9.1
1994-09-01	0.71	7.5	0.99	0	-0.13	0	0.71	1.7	8.6
1994-10-01	1.9	4.4	-0.026	0	-0.12	0	1.9	1.9	6.6
1994-11-01	1.9	2.8	-0.35	0	-0.11	0	1.9	1.5	5.3
1994	6.3	31	0.40	0	-0.67	0	6.3	6.7	39
1995-07-01	0	9.3	0.42	0	-0.098	0	0	0.43	9.0
1995-08-01	0.039	9.1	0.34	0	-0.11	0	0.039	0.39	9.3
1995-09-01	3.9	4.3	-0.80	0	-0.10	0	3.9	3.0	8.8
1995-10-01	2.8	3.9	-0.75	0	-0.091	0	2.8	2.0	7.2
1995-11-01	0	5.3	1.3	0	-0.094	0	0	1.3	5.8
1995	6.7	32	0.48	0	-0.49	0	6.7	7.1	40
1996-07-01	0.39	8.6	0.12	0	-0.059	0	0.39	0.55	9.1
1996-08-01	2.4	6.3	-0.21	0	-0.059	0	2.4	2.1	8.9
1996-09-01	1.2	6.6	0.13	0	-0.055	0	1.2	1.4	8.1
1996-10-01	3.0	2.8	-0.24	0	-0.055	0	3.0	2.8	6.7
1996-11-01	0.43	5.1	0.34	0	-0.051	0	0.43	0.75	6.0
1996	7.4	29	0.14	0	-0.28	0	7.4	7.6	39
1997-07-01	0.039	9.1	0.22	0	-0.039	0	0.039	0.24	9.0
1997-08-01	0.12	9.4	0.18	0	-0.035	0	0.12	0.28	9.9
1997-09-01	2.6	5.4	-0.35	0	-0.035	0	2.6	2.2	8.5
1997-10-01	0	7.0	0.35	0	-0.031	0	0	0.35	7.3
1997-11-01	0.75	4.1	0.0087	0	-0.031	0	0.75	0.75	6.0
1997	3.5	35	0.40	0	-0.17	0	3.5	3.9	41
1998-07-01	0	9.2	0.41	0	-0.031	0	0	0.43	9.2
1998-08-01	1.7	7.0	0.012	0	-0.031	0	1.7	1.7	9.1
1998-09-01	2.4	5.4	0.023	0	-0.039	0	2.4	2.4	8.3

Table IV-B.3 BC1 Monsoon Period Water Balance

Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
1998-10-01	1.3	5.3	0.16	0	-0.035	0	1.3	1.5	7.0
1998-11-01	0	5.4	0.34	0	-0.043	0	0	0.35	6.3
1998	5.4	32	0.95	0	-0.18	0	5.4	6.4	40
1999-07-01	0	9.1	0.24	0	-0.031	0	0	0.24	9.1
1999-08-01	5.8	2.1	-1.9	0	-0.031	0	5.8	3.9	8.7
1999-09-01	2.8	4.8	0.10	0	-0.031	0	2.8	3.0	7.8
1999-10-01	1.1	5.4	0.96	0	-0.028	0	1.1	2.0	6.8
1999-11-01	0	5.6	0.41	0	-0.031	0	0	0.43	6.2
1999	9.8	27	-0.18	0	-0.15	0	9.8	9.6	39
2000-07-01	0.79	8.3	0.024	0	-0.024	0	0.79	0.83	9.5
2000-08-01	0.079	9.5	0.23	0	-0.028	0	0.079	0.31	9.5
2000-09-01	0.67	6.9	0.085	0	-0.024	0	0.67	0.75	8.7
2000-10-01	0	6.9	0.18	0	-0.024	0	0	0.16	6.8
2000-11-01	5.3	-0.83	-3.7	0	-0.024	0	5.3	1.7	5.9
2000	6.9	31	-3.2	0	-0.12	0	6.9	3.7	40
2001-07-01	0.039	9.3	0.34	0	-0.028	0	0.039	0.35	9.2
2001-08-01	2.7	6.3	-1.6	0	-0.031	0	2.7	1.1	9.7
2001-09-01	3.4	4.3	0.67	0	-0.035	0	3.4	4.0	7.6
2001-10-01	0.12	6.3	0.54	0	-0.031	0	0.12	0.67	7.3
2001-11-01	0.35	4.5	0.28	0	-0.031	0	0.35	0.67	5.5
2001	6.6	31	0.27	0	-0.16	0	6.6	6.9	39
2002-07-01	0	9.6	0.14	0	-0.031	0	0	0.16	9.2
2002-08-01	0.35	8.9	0.095	0	-0.031	0	0.35	0.43	9.7
2002-09-01	0.43	7.4	0.020	0	-0.028	0	0.43	0.47	8.1
2002-10-01	1.2	5.4	-0.035	0	-0.028	0	1.2	1.1	7.1
2002-11-01	0.12	5.0	0.18	0	-0.028	0	0.12	0.28	6.1
2002	2.1	36	0.41	0	-0.15	0	2.1	2.5	40
2003-07-01	0	10	0.26	0	-0.020	0	0	0.28	10.0
2003-08-01	0.47	8.8	0.17	0	-0.020	0	0.47	0.67	10
2003-09-01	1.3	6.9	-0.084	0	-0.020	0	1.3	1.2	8.5
2003-10-01	1.9	4.9	0.010	0	-0.020	0	1.9	1.9	7.4
2003-11-01	0.079	5.5	0.30	0	-0.024	0	0.079	0.35	6.0
2003	3.8	36	0.66	0	-0.10	0	3.8	4.4	42
2004-07-01	0	10	0.22	0	-0.020	0	0	0.20	10
2004-08-01	0.55	8.8	0.11	0	-0.020	0	0.55	0.67	9.8
2004-09-01	2.1	6.1	-0.20	0	-0.016	0	2.1	1.9	8.6
2004-10-01	1.5	5.6	-0.19	0	-0.020	0	1.5	1.3	7.9
2004-11-01	1.2	3.8	-0.15	0	-0.016	0	1.2	1.1	6.1
2004	5.4	34	-0.20	0	-0.091	0	5.4	5.2	42
2005-07-01	0.079	9.8	0.45	0	-0.043	0	0.079	0.51	9.7
2005-08-01	1.4	7.9	-0.19	0	-0.055	0	1.4	1.2	11
2005-09-01	4.7	3.0	-0.40	0	-0.063	0	4.7	4.3	7.3
2005-10-01	0.079	6.6	0.65	0	-0.059	0	0.079	0.75	7.4
2005-11-01	0.43	4.8	0.31	0	-0.063	0	0.43	0.71	6.1
2005	6.7	32	0.82	0	-0.28	0	6.7	7.5	41
2006-07-01	0.51	9.2	0.098	0	-0.047	0	0.51	0.59	10
2006-08-01	3.2	4.8	-1.9	0	-0.043	0	3.2	1.3	9.2
2006-09-01	2.9	5.1	1.0	0	-0.047	0	2.9	3.9	7.4
2006-10-01	1.1	5.2	0.34	0	-0.043	0	1.1	1.5	6.9
2006-11-01	1.0	3.9	0.23	0	-0.039	0	1.0	1.3	5.9
2006	8.7	28	-0.22	0	-0.22	0	8.7	8.5	40

Table IV-B.4 BC1 Winter Storm Period Water Balance

Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
1951-11-01	0	3.7	-0.38	0	-0.21	0	1.6	1.3	5.4
1951-12-01	1.7	2.0	0.63	0	-0.18	0	1.7	2.3	3.7
1952-01-01	3.0	-0.27	-1.2	0	-0.17	0	3.0	1.8	2.8
1952-02-01	2.8	0.10	0.0065	0	-0.16	0	2.8	2.8	2.9
1952-03-01	0.50	3.3	1.1	0	-0.14	0	0.50	1.6	3.8
1952	8.0	8.9	0.10	0	-0.86	0	9.7	9.8	19
1952-11-01	0	5.9	0.36	0	-0.11	0	0	0.36	5.9
1952-12-01	4.3	-1.0	-2.8	0	-0.10	0	4.3	1.6	3.3
1953-01-01	2.0	0.64	0.40	0	-0.099	0	2.0	2.4	2.7
1953-02-01	0.74	2.7	0.91	0	-0.093	0	0.74	1.6	3.3
1953-03-01	0.60	3.2	0.28	0	-0.080	0	0.60	0.88	3.8
1953	7.6	11	-0.81	0	-0.49	0	7.6	6.8	19
1953-11-01	0.012	5.4	0.34	0	-0.072	0	0.012	0.35	5.5
1953-12-01	0.56	3.4	0.091	0	-0.065	0	0.56	0.65	3.9
1954-01-01	0.19	2.7	0.28	0	-0.064	0	0.19	0.47	2.9
1954-02-01	2.4	0.89	-0.84	0	-0.062	0	2.4	1.6	3.2
1954-03-01	0.72	3.5	0.43	0	-0.053	0	0.72	1.1	4.2
1954	3.9	16	0.30	0	-0.32	0	3.9	4.2	20
1954-11-01	0	5.6	0.70	0	-0.053	0	0	0.70	5.6
1954-12-01	0.091	4.1	0.33	0	-0.052	0	0.091	0.42	4.3
1955-01-01	0.29	3.2	0.31	0	-0.056	0	0.29	0.60	3.5
1955-02-01	3.4	-1.0	-1.5	0	-0.056	0	3.4	2.0	2.4
1955-03-01	0.28	3.3	0.79	0	-0.050	0	0.28	1.1	3.5
1955	4.1	15	0.68	0	-0.27	0	4.1	4.7	19
1955-11-01	0.020	5.8	0.37	0	-0.045	0	0.020	0.39	5.9
1955-12-01	0.96	2.7	-0.033	0	-0.043	0	0.96	0.93	3.7
1956-01-01	1.4	1.8	-0.089	0	-0.044	0	1.4	1.3	3.1
1956-02-01	2.6	0.85	-1.6	0	-0.044	0	2.6	1.0	3.5
1956-03-01	2.0	1.2	0.44	0	-0.040	0	2.0	2.4	3.1
1956	7.0	12	-0.89	0	-0.21	0	7.0	6.1	19
1956-11-01	0.53	4.5	0.043	0	-0.037	0	0.53	0.57	5.2
1956-12-01	0	3.8	0.39	0	-0.034	0	0	0.39	3.8
1957-01-01	0.47	2.7	0.085	0	-0.034	0	0.47	0.55	3.1
1957-02-01	4.8	-2.3	-2.9	0	-0.033	0	4.8	1.9	2.7
1957-03-01	0.73	2.9	1.3	0	-0.029	0	0.73	2.0	3.4
1957	6.5	12	-1.1	0	-0.17	0	6.5	5.4	18
1957-11-01	3.2	1.1	-1.7	0	-0.030	0	3.2	1.6	4.6
1957-12-01	0.61	2.5	1.1	0	-0.029	0	0.61	1.7	3.0
1958-01-01	1.1	2.1	0.18	0	-0.029	0	1.1	1.2	3.2
1958-02-01	0.012	3.4	0.36	0	-0.029	0	0.012	0.37	3.3
1958-03-01	2.5	0.68	-0.80	0	-0.026	0	2.5	1.7	3.2
1958	7.4	9.8	-0.84	0	-0.14	0	7.4	6.6	17
1958-11-01	1.9	3.2	0.16	0	-0.029	0	1.9	2.1	5.3
1958-12-01	1.5	2.2	-0.21	0	-0.028	0	1.5	1.3	3.6
1959-01-01	0	3.5	0.54	0	-0.028	0	0	0.54	3.6
1959-02-01	0.21	3.3	0.27	0	-0.028	0	0.21	0.48	3.5
1959-03-01	1.4	1.9	-0.24	0	-0.025	0	1.4	1.2	3.3
1959	5.1	14	0.54	0	-0.14	0	5.1	5.6	19
1959-11-01	4.8	0.35	-3.8	0	-0.024	0	4.8	0.97	5.3
1959-12-01	0.38	3.4	2.2	0	-0.023	0	0.38	2.6	3.7
1960-01-01	5.2	-2.6	-3.3	0	-0.024	0	5.2	1.9	2.7
1960-02-01	4.2	-1.6	-1.6	0	-0.024	0	4.2	2.5	2.5

Table IV-B.4 BC1 Winter Storm Period Water Balance

Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
1960-03-01	0.87	2.5	1.7	0	-0.025	0	0.87	2.5	3.4
1960	15	2.0	-4.9	0	-0.12	0	15	11	18
1960-11-01	2.1	2.8	-0.40	0	-0.069	0	2.1	1.7	5.0
1960-12-01	0.48	3.1	0.38	0	-0.063	0	0.48	0.87	3.7
1961-01-01	0.47	2.7	0.19	0	-0.062	0	0.47	0.66	3.3
1961-02-01	0.70	2.4	-0.098	0	-0.059	0	0.70	0.60	3.2
1961-03-01	0.23	3.8	0.43	0	-0.052	0	0.23	0.66	3.7
1961	3.9	15	0.50	0	-0.30	0	3.9	4.4	19
1961-11-01	0.45	4.5	-0.033	0	-0.036	0	0.45	0.42	5.4
1961-12-01	0.32	2.9	0.35	0	-0.033	0	0.32	0.67	3.1
1962-01-01	3.9	-1.3	-2.0	0	-0.033	0	3.9	1.9	2.6
1962-02-01	3.2	-0.51	-1.5	0	-0.032	0	3.2	1.7	2.7
1962-03-01	1.7	1.5	0.32	0	-0.028	0	1.7	2.0	3.2
1962	9.5	7.1	-2.8	0	-0.16	0	9.5	6.7	17
1962-11-01	0.87	4.1	0.13	0	-0.034	0	0.87	1.0	5.1
1962-12-01	0.83	3.1	0.023	0	-0.033	0	0.83	0.85	3.9
1963-01-01	1.8	1.3	-0.55	0	-0.033	0	1.8	1.3	3.3
1963-02-01	2.1	0.98	-0.11	0	-0.032	0	2.1	2.0	3.0
1963-03-01	4.2	-0.31	-2.0	0	-0.028	0	4.2	2.2	3.8
1963	9.8	9.2	-2.5	0	-0.16	0	9.8	7.3	19
1963-11-01	0.67	4.9	0.66	0	-0.034	0	0.67	1.3	5.8
1963-12-01	2.3	1.3	-0.28	0	-0.035	0	2.3	2.1	3.6
1964-01-01	0.33	3.0	0.73	0	-0.041	0	0.33	1.1	3.3
1964-02-01	0.58	2.4	0.22	0	-0.046	0	0.58	0.80	3.0
1964-03-01	0	3.7	0.40	0	-0.046	0	0	0.41	3.6
1964	3.9	15	1.7	0	-0.20	0	3.9	5.7	19
1964-11-01	1.5	4.2	-0.22	0	-0.042	0	1.5	1.3	5.8
1964-12-01	1.4	2.1	-0.16	0	-0.038	0	1.4	1.2	3.6
1965-01-01	1.7	1.3	-0.46	0	-0.037	0	1.7	1.2	3.3
1965-02-01	2.9	0	-0.49	0	-0.035	0	2.9	2.4	2.6
1965-03-01	2.8	0.79	-0.69	0	-0.031	0	2.8	2.1	3.4
1965	10	8.4	-2.0	0	-0.18	0	10	8.3	19
1965-11-01	0.46	5.0	0.16	0	-0.038	0	0.46	0.62	5.7
1965-12-01	2.4	1.4	-1.5	0	-0.036	0	2.4	0.87	3.9
1966-01-01	10	-7.9	-8.5	0	-0.035	0	10	2.0	2.7
1966-02-01	1.8	0.94	0.95	0	-0.035	0	1.8	2.8	2.8
1966-03-01	2.0	1.3	0.97	0	-0.035	0	2.0	3.0	3.1
1966	17	0.71	-7.9	0	-0.18	0	17	9.2	18
1966-11-01	1.4	3.8	0.39	0	-0.12	0	1.4	1.8	5.1
1966-12-01	0.88	3.0	0.24	0	-0.11	0	0.88	1.1	4.1
1967-01-01	1.2	1.8	-0.025	0	-0.11	0	1.2	1.2	3.1
1967-02-01	0.79	2.4	0.21	0	-0.100	0	0.79	1.00	2.9
1967-03-01	0	3.9	0.48	0	-0.085	0	0	0.48	3.9
1967	4.3	15	1.3	0	-0.52	0	4.3	5.6	19
1967-11-01	0.42	4.8	0.31	0	-0.057	0	0.42	0.73	5.6
1967-12-01	2.1	1.6	-1.3	0	-0.053	0	2.1	0.81	3.9
1968-01-01	10	-7.6	-8.0	0	-0.053	0	10	2.1	2.3
1968-02-01	0.63	2.5	2.2	0	-0.052	0	0.63	2.9	3.1
1968-03-01	1.9	1.9	0.66	0	-0.061	0	1.9	2.6	3.4
1968	15	3.1	-6.0	0	-0.28	0	15	9.1	18
1968-11-01	0.39	4.6	0.30	0	-0.12	0	0.39	0.69	5.1
1968-12-01	2.5	0.94	-0.67	0	-0.11	0	2.5	1.9	3.8

Table IV-B.4 BC1 Winter Storm Period Water Balance

Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
1969-01-01	3.3	-0.47	-1.9	0	-0.11	0	3.3	1.4	2.9
1969-02-01	4.2	-1.4	-1.8	0	-0.10	0	4.2	2.4	2.6
1969-03-01	1.4	1.8	1.4	0	-0.085	0	1.4	2.8	3.0
1969	12	5.5	-2.6	0	-0.53	0	12	9.1	17
1969-11-01	0.82	4.1	0.11	0	-0.089	0	0.82	0.94	5.2
1969-12-01	2.1	1.2	-0.36	0	-0.081	0	2.1	1.8	3.6
1970-01-01	1.3	1.9	-0.033	0	-0.078	0	1.3	1.3	3.4
1970-02-01	0.50	2.7	0.55	0	-0.072	0	0.50	1.1	2.9
1970-03-01	0.41	3.3	0.29	0	-0.060	0	0.41	0.70	3.6
1970	5.2	13	0.57	0	-0.38	0	5.2	5.7	19
1970-11-01	0	5.1	0.54	0	-0.053	0	0	0.54	5.3
1970-12-01	0.65	3.1	-0.14	0	-0.050	0	0.65	0.50	3.9
1971-01-01	1.2	1.6	0.070	0	-0.050	0	1.2	1.3	3.0
1971-02-01	0.85	2.7	0.27	0	-0.048	0	0.85	1.1	3.1
1971-03-01	0.82	3.0	0.017	0	-0.043	0	0.82	0.83	4.0
1971	3.5	15	0.75	0	-0.24	0	3.5	4.3	19
1971-11-01	4.2	0.51	-0.16	0	-0.033	0	4.2	4.1	5.1
1971-12-01	0.039	3.7	1.1	0	-0.031	0	0.039	1.1	3.7
1972-01-01	2.1	0.75	-0.32	0	-0.032	0	2.1	1.8	3.0
1972-02-01	0	3.3	0.75	0	-0.033	0	0	0.75	3.2
1972-03-01	0	4.6	0.34	0	-0.032	0	0	0.34	4.1
1972	6.4	13	1.7	0	-0.16	0	6.4	8.1	19
1972-11-01	8.7	-4.2	-5.0	0	-0.032	0	8.7	3.7	4.9
1972-12-01	2.8	0.31	0.25	0	-0.030	0	2.8	3.1	3.2
1973-01-01	3.0	-0.31	-0.83	0	-0.031	0	3.0	2.1	2.9
1973-02-01	0.74	2.0	1.5	0	-0.033	0	0.74	2.2	2.6
1973-03-01	3.2	0.079	-0.74	0	-0.035	0	3.2	2.4	2.8
1973	18	-2.0	-4.9	0	-0.16	0	18	14	16
1973-11-01	0	5.1	0.33	0	-0.078	0	0	0.33	5.6
1973-12-01	1.8	1.8	-0.58	0	-0.073	0	1.8	1.2	3.9
1974-01-01	0.094	3.3	0.64	0	-0.071	0	0.094	0.74	3.3
1974-02-01	3.4	-0.55	-1.1	0	-0.067	0	3.4	2.3	2.9
1974-03-01	0.12	3.6	0.63	0	-0.057	0	0.12	0.78	3.3
1974	5.4	13	-0.067	0	-0.35	0	5.4	5.3	19
1974-11-01	3.4	1.4	-1.8	0	-0.050	0	3.4	1.5	5.3
1974-12-01	0.12	3.6	1.7	0	-0.046	0	0.12	1.8	3.6
1975-01-01	0.75	2.0	0.29	0	-0.046	0	0.75	1.0	3.1
1975-02-01	0.43	2.3	0.21	0	-0.045	0	0.43	0.63	2.6
1975-03-01	3.9	-0.35	-1.8	0	-0.040	0	3.9	2.2	3.0
1975	8.6	9.0	-1.5	0	-0.23	0	8.6	7.2	18
1975-11-01	0.28	4.8	0.27	0	-0.048	0	0.28	0.51	5.4
1975-12-01	2.1	1.9	-1.7	0	-0.046	0	2.1	0.43	4.2
1976-01-01	1.3	1.8	0.91	0	-0.046	0	1.3	2.2	3.1
1976-02-01	0.24	2.8	0.54	0	-0.044	0	0.24	0.79	2.9
1976-03-01	1.6	2.3	-0.12	0	-0.040	0	1.6	1.5	3.4
1976	5.5	14	-0.10	0	-0.22	0	5.5	5.4	19
1976-11-01	0.91	3.8	0.68	0	-0.033	0	0.91	1.6	5.1
1976-12-01	0.55	3.2	0.31	0	-0.031	0	0.55	0.87	4.0
1977-01-01	1.8	1.2	-1.1	0	-0.032	0	1.8	0.71	3.1
1977-02-01	1.9	0.87	0.34	0	-0.031	0	1.9	2.2	2.5
1977-03-01	0.079	4.3	0.61	0	-0.028	0	0.079	0.67	4.1
1977	5.2	13	0.81	0	-0.16	0	5.2	6.1	19

Table IV-B.4 BC1 Winter Storm Period Water Balance

Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
1977-11-01	1.3	3.9	0.32	0	-0.030	0	1.3	1.7	5.5
1977-12-01	0.35	3.5	0.52	0	-0.028	0	0.35	0.87	3.9
1978-01-01	0.67	2.5	-0.081	0	-0.029	0	0.67	0.55	3.5
1978-02-01	6.4	-3.7	-4.4	0	-0.029	0	6.4	2.0	2.5
1978-03-01	5.5	-2.2	-2.3	0	-0.026	0	5.5	3.2	2.9
1978	14	3.9	-5.9	0	-0.14	0	14	8.3	18
1978-11-01	1.9	3.5	-0.66	0	-0.10	0	1.9	1.3	5.9
1978-12-01	5.6	-2.4	-3.4	0	-0.095	0	5.6	2.2	3.7
1979-01-01	6.6	-3.9	-3.9	0	-0.093	0	6.6	2.6	2.5
1979-02-01	6.0	-3.9	-3.8	0	-0.091	0	6.0	2.2	2.3
1979-03-01	1.2	2.8	2.4	0	-0.10	0	1.2	3.6	3.3
1979	21	-3.9	-9.4	0	-0.49	0	21	12	18
1979-11-01	0.71	4.9	0.19	0	-0.22	0	0.71	0.87	5.9
1979-12-01	0.67	3.1	0.32	0	-0.19	0	0.67	1.0	4.0
1980-01-01	0.71	2.7	0.076	0	-0.18	0	0.71	0.75	3.7
1980-02-01	4.1	-1.7	-2.3	0	-0.16	0	4.1	1.8	2.4
1980-03-01	6.0	-2.9	-3.3	0	-0.13	0	6.0	2.7	2.4
1980	12	6.1	-5.0	0	-0.88	0	12	7.2	18
1980-11-01	0.039	5.3	0.36	0	-0.14	0	0.039	0.39	5.9
1980-12-01	0	4.1	0.29	0	-0.12	0	0	0.31	4.3
1981-01-01	0.55	3.1	0.18	0	-0.12	0	0.55	0.75	3.5
1981-02-01	1.3	2.0	-0.20	0	-0.11	0	1.3	1.1	3.5
1981-03-01	2.6	1.3	-0.88	0	-0.092	0	2.6	1.8	3.6
1981	4.6	16	-0.24	0	-0.59	0	4.6	4.4	21
1981-11-01	0.94	3.7	0.31	0	-0.067	0	0.94	1.3	5.2
1981-12-01	2.3	1.6	-1.9	0	-0.062	0	2.3	0.43	4.4
1982-01-01	0	3.5	1.6	0	-0.062	0	0	1.6	3.3
1982-02-01	2.7	0	-0.53	0	-0.060	0	2.7	2.2	2.8
1982-03-01	1.8	1.7	0.050	0	-0.052	0	1.8	1.9	3.1
1982	7.8	11	-0.48	0	-0.30	0	7.8	7.4	19
1982-11-01	0	5.0	0.69	0	-0.051	0	0	0.71	5.4
1982-12-01	3.3	-0.28	-1.5	0	-0.048	0	3.3	1.8	3.6
1983-01-01	1.7	1.1	0.59	0	-0.050	0	1.7	2.3	2.7
1983-02-01	1.9	1.3	-0.93	0	-0.050	0	1.9	0.98	3.2
1983-03-01	2.4	0.98	-0.0098	0	-0.046	0	2.4	2.3	2.8
1983	9.3	8.1	-1.1	0	-0.24	0	9.3	8.1	18
1983-11-01	1.1	3.3	1.9	0	-0.066	0	1.1	3.0	4.9
1983-12-01	2.0	1.6	-0.59	0	-0.063	0	2.0	1.5	3.8
1984-01-01	2.5	0.12	-0.30	0	-0.066	0	2.5	2.2	2.7
1984-02-01	0.51	2.8	1.1	0	-0.068	0	0.51	1.6	2.8
1984-03-01	0	4.0	0.51	0	-0.067	0	0	0.47	3.9
1984	6.1	12	2.6	0	-0.33	0	6.1	8.7	18
1984-11-01	1.3	3.2	0.39	0	-0.060	0	1.3	1.7	4.9
1984-12-01	2.1	1.7	-1.2	0	-0.056	0	2.1	0.87	4.2
1985-01-01	5.8	-3.3	-3.5	0	-0.056	0	5.8	2.3	2.5
1985-02-01	2.7	-0.31	-0.32	0	-0.054	0	2.7	2.4	2.5
1985-03-01	1.7	1.2	0.90	0	-0.048	0	1.7	2.6	2.5
1985	14	2.4	-3.7	0	-0.27	0	14	9.8	17
1985-11-01	1.2	3.1	0.64	0	-0.081	0	1.2	1.9	4.6
1985-12-01	2.8	0.39	-1.5	0	-0.073	0	2.8	1.3	3.9
1986-01-01	0.91	2.5	1.2	0	-0.071	0	0.91	2.1	3.1
1986-02-01	0.079	3.7	0.46	0	-0.067	0	0.079	0.55	3.6

Table IV-B.4 BC1 Winter Storm Period Water Balance

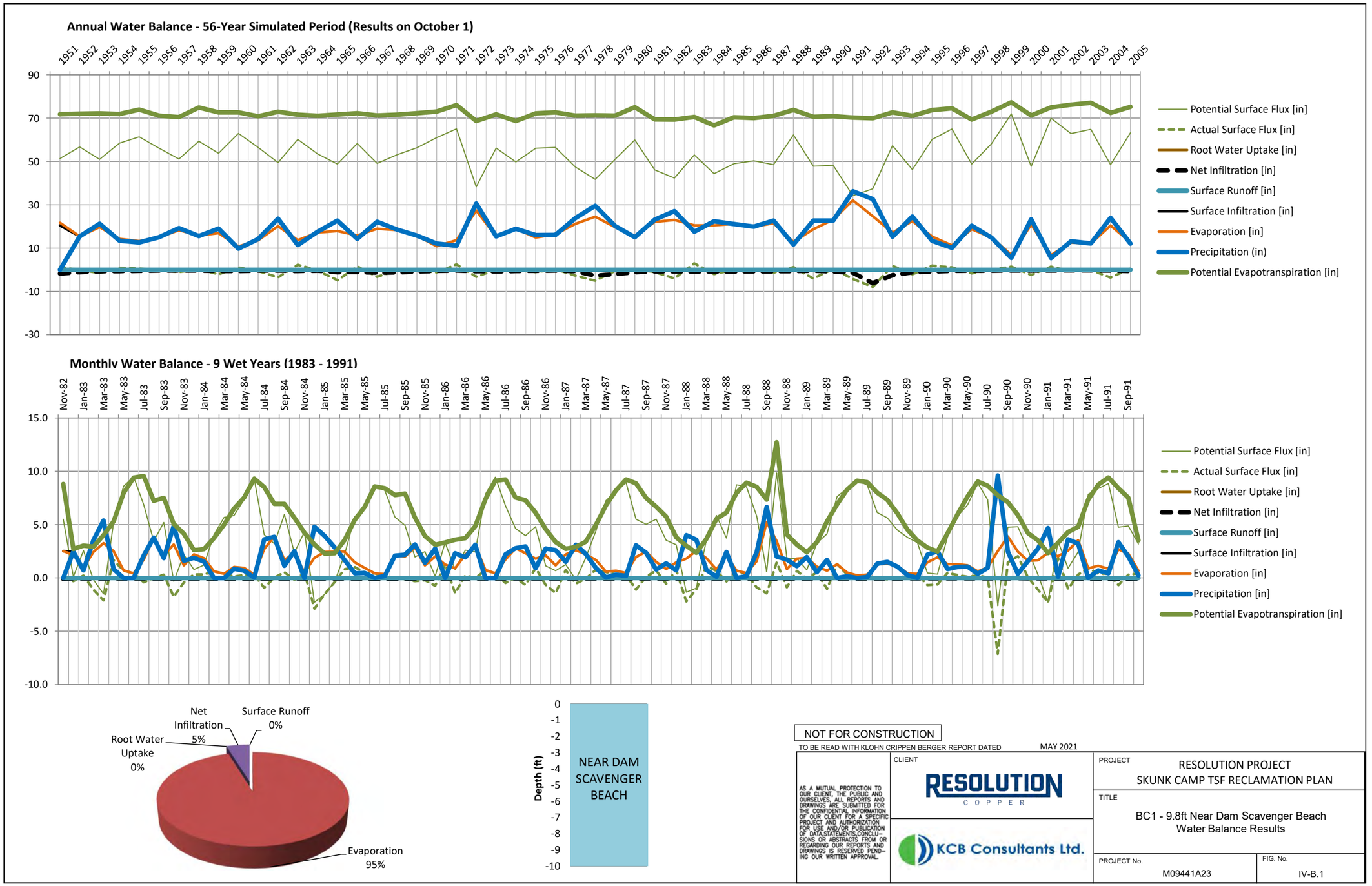
Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
1986-03-01	3.1	0.079	-0.81	0	-0.058	0	3.1	2.2	2.9
1986	8.0	9.8	-0.033	0	-0.35	0	8.0	8.0	18
1986-11-01	1.8	3.0	0.049	0	-0.061	0	1.8	1.8	4.8
1986-12-01	1.4	1.9	0.20	0	-0.057	0	1.4	1.6	3.7
1987-01-01	3.0	-0.20	-0.97	0	-0.058	0	3.0	2.0	2.9
1987-02-01	3.3	-0.35	-1.0	0	-0.058	0	3.3	2.3	2.8
1987-03-01	2.7	0.55	-0.94	0	-0.051	0	2.7	1.7	3.5
1987	12	4.9	-2.7	0	-0.29	0	12	9.5	18
1987-11-01	0.31	5.2	0.39	0	-0.057	0	0.31	0.71	6.0
1987-12-01	1.8	1.9	-0.13	0	-0.054	0	1.8	1.7	3.8
1988-01-01	4.0	-1.1	-2.3	0	-0.054	0	4.0	1.7	3.2
1988-02-01	3.6	-0.87	-0.98	0	-0.052	0	3.6	2.6	2.5
1988-03-01	0.75	3.3	1.2	0	-0.047	0	0.75	1.9	3.4
1988	10	8.5	-1.9	0	-0.27	0	10	8.6	19
1988-11-01	1.5	3.7	0.084	0	-0.057	0	1.5	1.6	5.8
1988-12-01	1.7	1.9	-0.59	0	-0.055	0	1.7	1.1	4.0
1989-01-01	1.1	1.8	0.57	0	-0.057	0	1.1	1.7	3.1
1989-02-01	2.2	0.55	-0.33	0	-0.056	0	2.2	1.9	2.7
1989-03-01	0.31	3.6	0.55	0	-0.050	0	0.31	0.87	3.1
1989	6.9	12	0.29	0	-0.28	0	6.9	7.1	19
1989-11-01	1.1	4.1	0.12	0	-0.046	0	1.1	1.2	5.9
1989-12-01	0.28	3.6	0.18	0	-0.043	0	0.28	0.47	4.2
1990-01-01	0.87	2.5	-0.48	0	-0.042	0	0.87	0.39	3.4
1990-02-01	1.3	1.5	0.26	0	-0.039	0	1.3	1.5	2.7
1990-03-01	2.5	0.67	-0.48	0	-0.033	0	2.5	2.0	2.6
1990	6.0	12	-0.40	0	-0.20	0	6.0	5.6	19
1990-11-01	0.28	4.6	1.1	0	-0.031	0	0.28	1.4	5.3
1990-12-01	2.2	1.5	-0.031	0	-0.034	0	2.2	2.1	4.2
1991-01-01	4.8	-2.3	-3.3	0	-0.043	0	4.8	1.5	3.0
1991-02-01	1.8	1.3	0.99	0	-0.051	0	1.8	2.8	2.6
1991-03-01	0.94	3.2	0.64	0	-0.051	0	0.94	1.6	3.3
1991	10.0	8.3	-0.63	0	-0.21	0	10.0	9.4	18
1991-11-01	1.2	4.6	-0.48	0	-0.091	0	1.2	0.75	6.6
1991-12-01	3.2	0.12	-1.2	0	-0.084	0	3.2	2.0	3.6
1992-01-01	4.0	-1.3	-1.5	0	-0.081	0	4.0	2.5	2.9
1992-02-01	3.0	-0.28	-0.38	0	-0.078	0	3.0	2.6	2.2
1992-03-01	2.8	0.63	-0.18	0	-0.071	0	2.8	2.6	3.0
1992	14	3.7	-3.7	0	-0.41	0	14	10	18
1992-11-01	1.2	4.1	0.043	0	-0.16	0	1.2	1.3	6.2
1992-12-01	0.51	2.8	0.86	0	-0.15	0	0.51	1.4	3.6
1993-01-01	6.3	-4.0	-4.2	0	-0.15	0	6.3	2.1	2.5
1993-02-01	11	-9.1	-9.1	0	-0.14	0	11	2.2	1.9
1993-03-01	6.0	-3.5	-3.5	0	-0.19	0	6.0	2.5	2.7
1993	25	-9.6	-16	0	-0.80	0	25	9.4	17
1993-11-01	0.79	4.4	0.46	0	-0.36	0	0.79	1.3	6.0
1993-12-01	4.2	-0.87	-2.2	0	-0.30	0	4.2	2.0	3.6
1994-01-01	0.31	2.8	1.3	0	-0.26	0	0.31	1.6	3.4
1994-02-01	0.28	3.2	0.63	0	-0.23	0	0.28	0.91	3.3
1994-03-01	2.6	0.59	-0.55	0	-0.20	0	2.6	2.0	3.0
1994	8.1	10	-0.34	0	-1.3	0	8.1	7.8	19
1994-11-01	1.9	2.8	-0.35	0	-0.11	0	1.9	1.5	5.3
1994-12-01	3.4	-0.39	-0.93	0	-0.10	0	3.4	2.4	3.5

Table IV-B.4 BC1 Winter Storm Period Water Balance

Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
1995-01-01	2.6	0.039	-0.61	0	-0.094	0	2.6	2.0	3.0
1995-02-01	3.7	-0.75	-0.87	0	-0.094	0	3.7	2.8	2.6
1995-03-01	2.7	0.75	-0.39	0	-0.079	0	2.7	2.3	3.1
1995	14	2.4	-3.1	0	-0.48	0	14	11	18
1995-11-01	0	5.3	1.3	0	-0.094	0	0	1.3	5.8
1995-12-01	1.3	2.4	0.093	0	-0.083	0	1.3	1.4	3.9
1996-01-01	0.91	2.3	0.088	0	-0.079	0	0.91	0.98	3.5
1996-02-01	0.039	3.5	0.44	0	-0.079	0	0.039	0.43	3.3
1996-03-01	3.1	0.59	-1.1	0	-0.067	0	3.1	2.0	3.6
1996	5.4	14	0.75	0	-0.40	0	5.4	6.1	20
1996-11-01	0.43	5.1	0.34	0	-0.051	0	0.43	0.75	6.0
1996-12-01	1.2	2.4	-0.40	0	-0.047	0	1.2	0.83	3.8
1997-01-01	0.039	3.1	0.73	0	-0.047	0	0.039	0.75	3.2
1997-02-01	2.8	-0.079	-1.1	0	-0.047	0	2.8	1.8	2.7
1997-03-01	1.7	2.1	-0.72	0	-0.039	0	1.7	0.98	3.4
1997	6.2	13	-1.1	0	-0.23	0	6.2	5.1	19
1997-11-01	0.75	4.1	0.0087	0	-0.031	0	0.75	0.75	6.0
1997-12-01	0.79	2.7	0.024	0	-0.031	0	0.79	0.83	3.7
1998-01-01	2.7	-0.039	-0.94	0	-0.031	0	2.7	1.8	3.1
1998-02-01	0.39	2.7	0.64	0	-0.031	0	0.39	0.98	2.4
1998-03-01	6.4	-3.8	-4.1	0	-0.028	0	6.4	2.3	2.9
1998	11	5.6	-4.4	0	-0.15	0	11	6.6	18
1998-11-01	0	5.4	0.34	0	-0.043	0	0	0.35	6.3
1998-12-01	1.1	2.7	-0.62	0	-0.039	0	1.1	0.43	3.9
1999-01-01	0.75	2.5	0.65	0	-0.039	0	0.75	1.4	3.3
1999-02-01	0.039	3.5	0.29	0	-0.039	0	0.039	0.35	3.6
1999-03-01	0.20	4.2	0.17	0	-0.035	0	0.20	0.35	3.6
1999	2.0	18	0.83	0	-0.20	0	2.0	2.9	21
1999-11-01	0	5.6	0.41	0	-0.031	0	0	0.43	6.2
1999-12-01	0	4.3	0.26	0	-0.028	0	0	0.24	4.7
2000-01-01	0.039	3.3	0.17	0	-0.031	0	0.039	0.24	3.7
2000-02-01	0.28	3.5	0.16	0	-0.028	0	0.28	0.43	3.4
2000-03-01	0.71	3.4	-0.017	0	-0.028	0	0.71	0.67	3.9
2000	1.0	20	0.98	0	-0.15	0	1.0	2.0	22
2000-11-01	5.3	-0.63	-3.7	0	-0.024	0	5.3	1.7	6.1
2000-12-01	2.1	1.1	0.53	0	-0.024	0	2.1	2.6	2.9
2001-01-01	0.079	3.4	0.87	0	-0.024	0	0.079	0.94	3.7
2001-02-01	3.4	-0.67	-1.6	0	-0.020	0	3.4	1.8	3.0
2001-03-01	1.8	1.7	0.53	0	-0.020	0	1.8	2.3	2.8
2001	13	4.8	-3.3	0	-0.11	0	13	9.3	19
2001-11-01	0.35	4.7	0.29	0	-0.031	0	0.35	0.67	5.7
2001-12-01	0.31	3.7	0.22	0	-0.035	0	0.31	0.51	4.6
2002-01-01	1.9	0.94	-0.39	0	-0.031	0	1.9	1.5	2.9
2002-02-01	0.20	3.1	0.25	0	-0.035	0	0.20	0.47	3.2
2002-03-01	0	4.3	0.35	0	-0.028	0	0	0.35	3.4
2002	2.7	17	0.74	0	-0.16	0	2.7	3.5	20
2002-11-01	0.12	5.2	0.19	0	-0.031	0	0.12	0.28	6.3
2002-12-01	0.87	3.1	-0.49	0	-0.024	0	0.87	0.39	4.4
2003-01-01	0.98	2.0	0.24	0	-0.024	0	0.98	1.2	3.4
2003-02-01	0.35	3.6	0.27	0	-0.024	0	0.35	0.63	3.1
2003-03-01	5.0	-1.7	-3.5	0	-0.020	0	5.0	1.4	3.6
2003	7.3	12	-3.3	0	-0.12	0	7.3	3.9	21

Table IV-B.4 BC1 Winter Storm Period Water Balance

Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
2003-11-01	0.079	5.7	0.32	0	-0.024	0	0.079	0.35	6.3
2003-12-01	0.87	2.6	-0.076	0	-0.020	0	0.87	0.79	3.9
2004-01-01	0.98	2.3	-0.061	0	-0.020	0	0.98	0.94	3.9
2004-02-01	1.5	1.5	-0.38	0	-0.020	0	1.5	1.1	3.1
2004-03-01	0.67	2.8	0.28	0	-0.020	0	0.67	0.94	3.0
2004	4.1	15	0.076	0	-0.10	0	4.1	4.1	20
2004-11-01	1.2	4.0	-0.12	0	-0.016	0	1.2	1.1	6.4
2004-12-01	0.67	2.4	0.26	0	-0.020	0	0.67	0.91	3.5
2005-01-01	2.8	0.43	-1.5	0	-0.016	0	2.8	1.2	3.0
2005-02-01	4.2	-1.5	-1.8	0	-0.020	0	4.2	2.4	2.7
2005-03-01	7.4	-4.7	-4.9	0	-0.016	0	7.4	2.5	2.7
2005	16	0.71	-8.1	0	-0.087	0	16	8.1	18
2005-11-01	0.43	5.0	0.33	0	-0.063	0	0.43	0.75	6.4
2005-12-01	0	4.1	0.32	0	-0.063	0	0	0.31	4.4
2006-01-01	0	3.3	0.26	0	-0.063	0	0	0.28	3.5
2006-02-01	0	4.0	0.23	0	-0.059	0	0	0.24	3.8
2006-03-01	0.12	4.3	0.17	0	-0.055	0	0.12	0.28	4.1
2006	0.55	21	1.3	0	-0.30	0	0.55	1.9	22


Annual Water Balance - 56-Year Simulated Period (Results on October 1)
Potential Surface Flux [in]
Actual Surface Flux [in]
Root Water Uptake [in]
Net Infiltration [in]
Surface Runoff [in]
Surface Infiltration [in]
Evaporation [in]
Precipitation (in)
Potential Evapotranspiration [in]
Monthly Water Balance - 9 Wet Years (1983 - 1991)
Potential Surface Flux [in]
Actual Surface Flux [in]
Root Water Uptake [in]
Net Infiltration [in]
Surface Runoff [in]
Surface Infiltration [in]
Evaporation [in]
Precipitation [in]
Potential Evapotranspiration [in]
Net Infiltration 5%
Surface Runoff 0%
Root Water Uptake 0%
Evaporation 95%
Depth (ft)
NEAR DAM SCAVENGER BEACH
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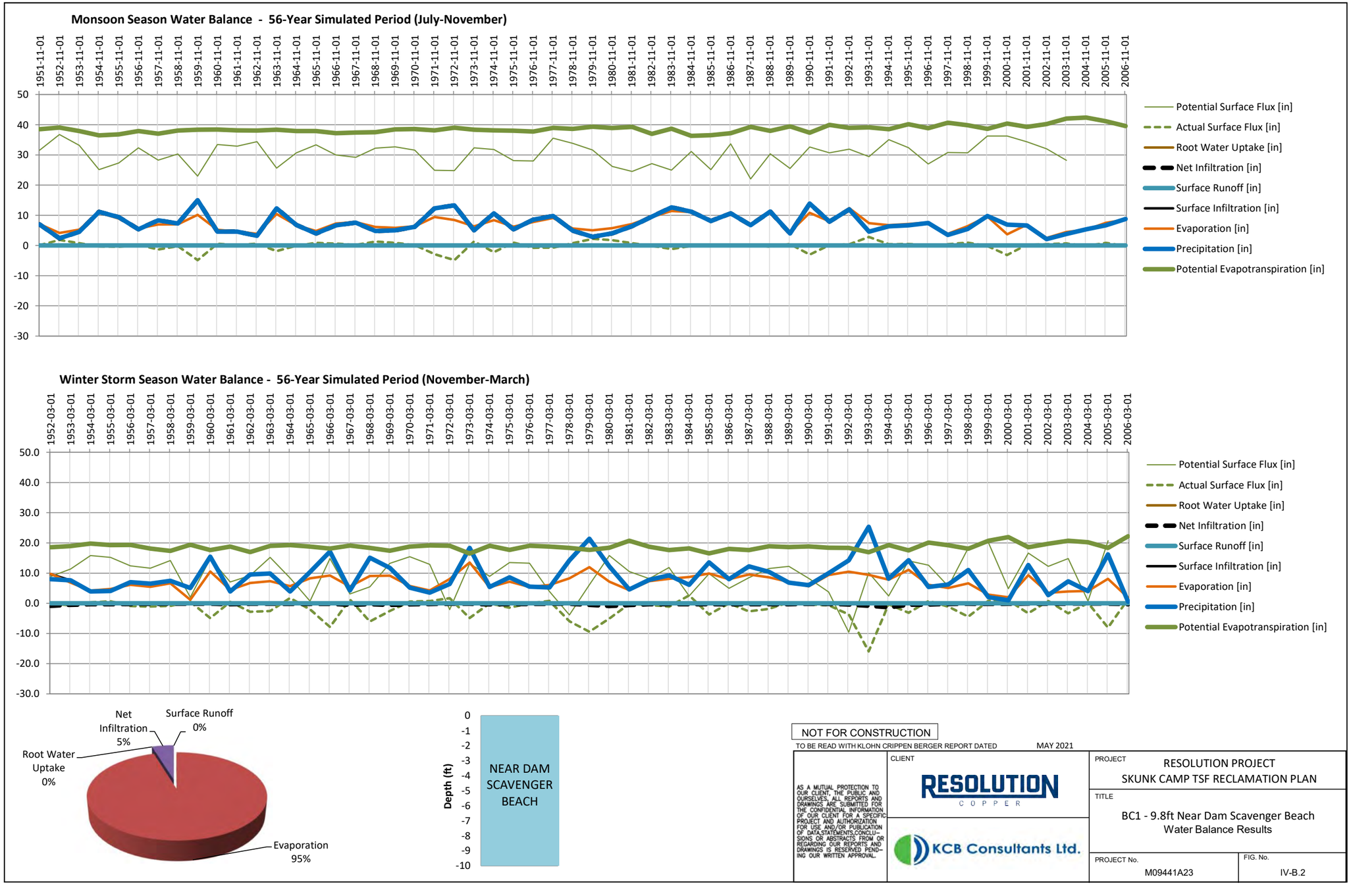
SKUNK CAMP TSF RECLAMATION PLAN
TITLE
BC1 - 9.8ft Near Dam Scavenger Beach
Water Balance Results
PROJECT No.
M09441A23
FIG. No.
IV-B.1


Monsoon Season Water Balance - 56-Year Simulated Period (July-November)
Potential Surface Flux [in]
Actual Surface Flux [in]
Root Water Uptake [in]
Net Infiltration [in]
Surface Runoff [in]
Surface Infiltration [in]
Evaporation [in]
Precipitation [in]
Potential Evapotranspiration [in]
Winter Storm Season Water Balance - 56-Year Simulated Period (November-March)
Net Infiltration 5%
Surface Runoff 0%
Root Water Uptake 0%
Evaporation 95%
Depth (ft)
NEAR DAM SCAVENGER BEACH
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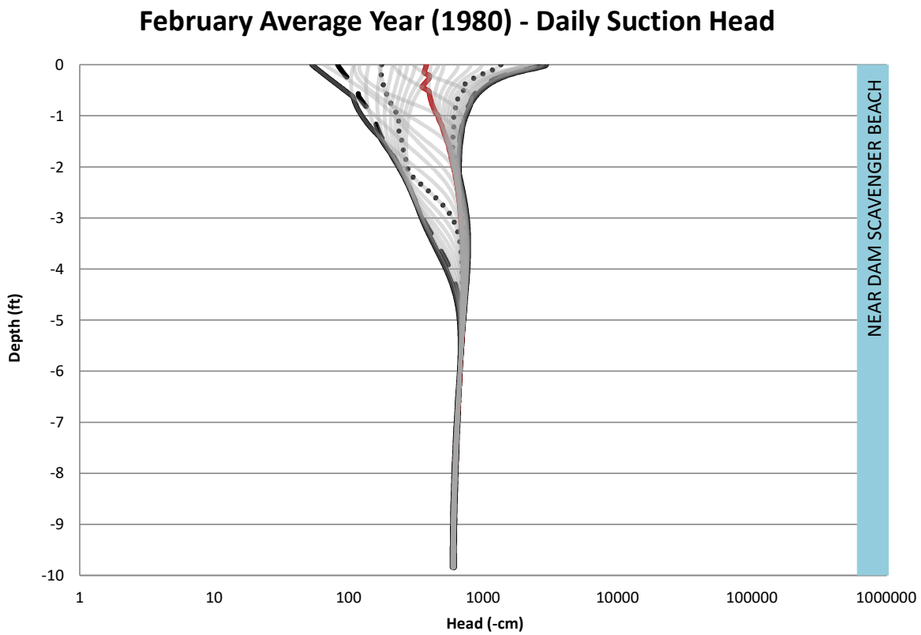
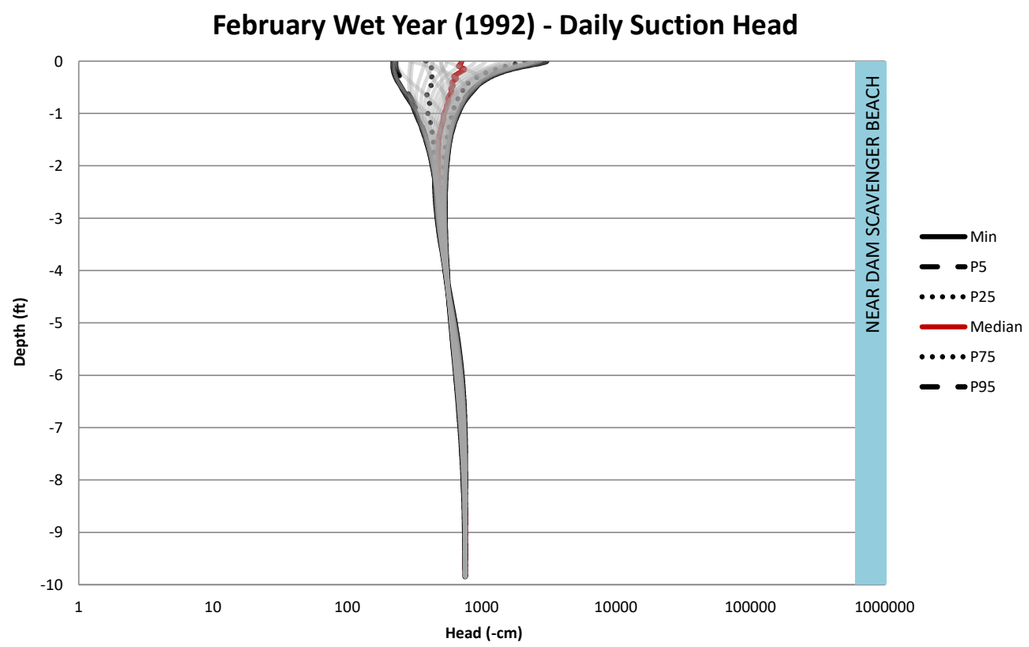
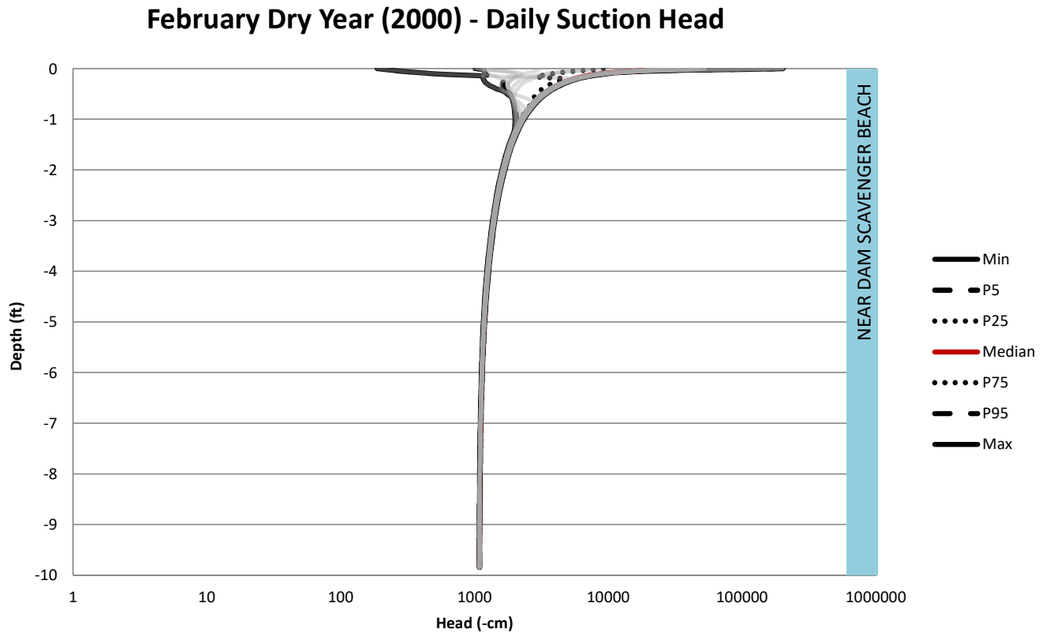
TITLE
BC1 - 9.8ft Near Dam Scavenger Beach
Water Balance Results
PROJECT No.
M09441A23
FIG. No.
IV-B.2







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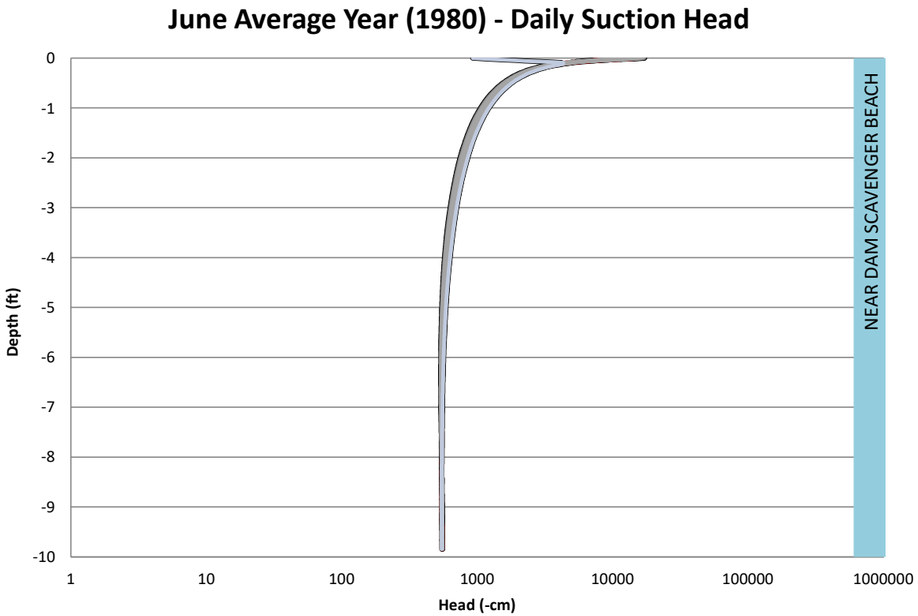
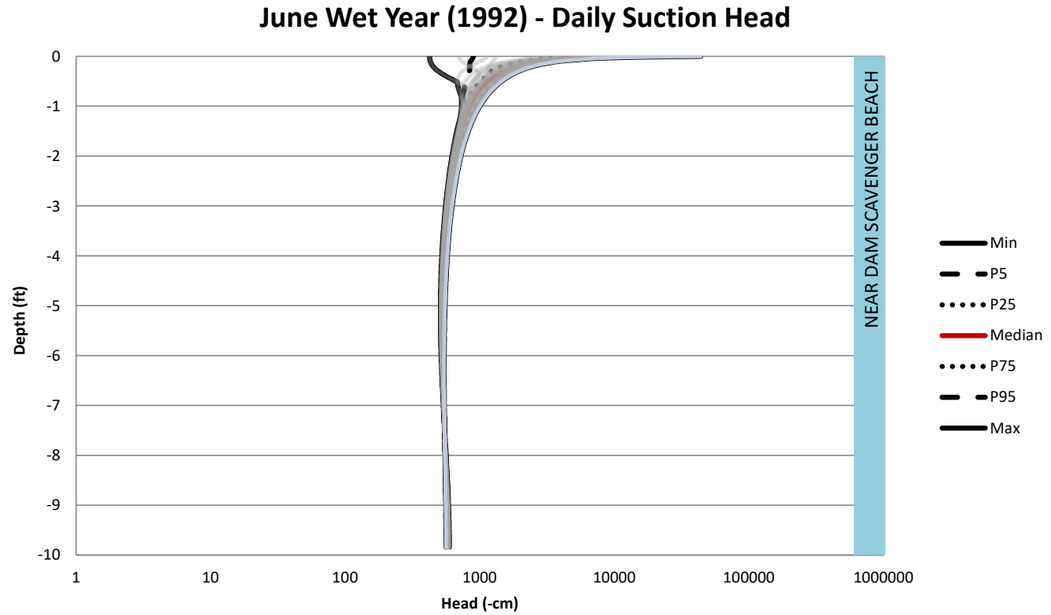
SKUNK CAMP TSF RECLAMATION PLAN

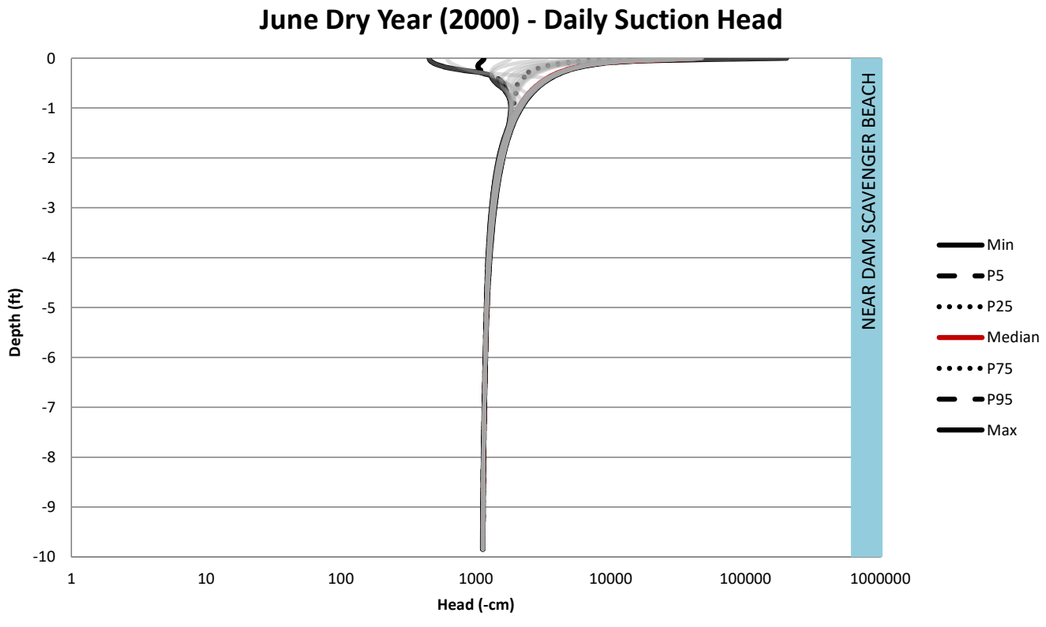
TITLE: BC1 - 9.8ft Near Dam Scavenger Beach Suction Profiles - Winter (February)

PROJECT No. M09441A23

FIG. No. IV-B.3







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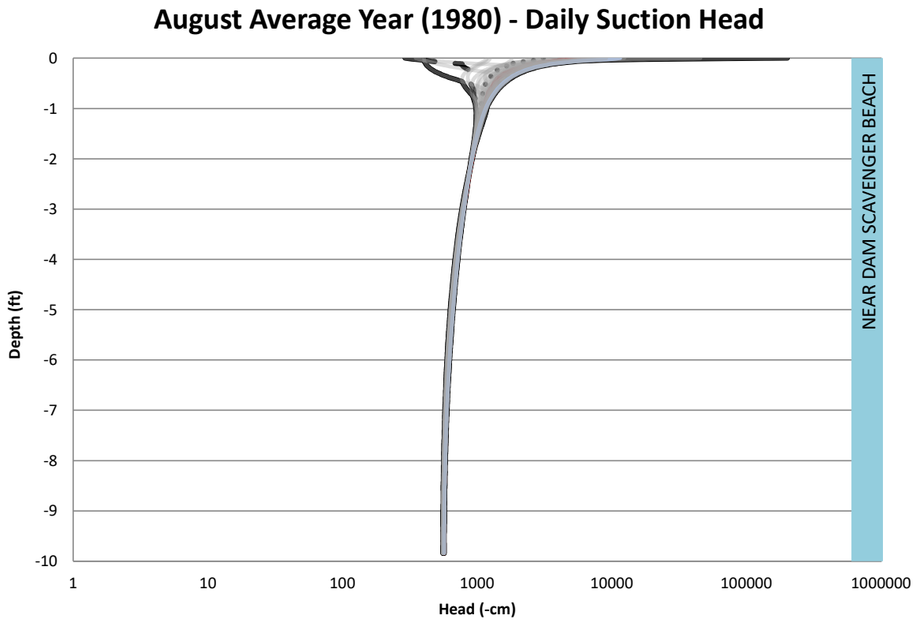
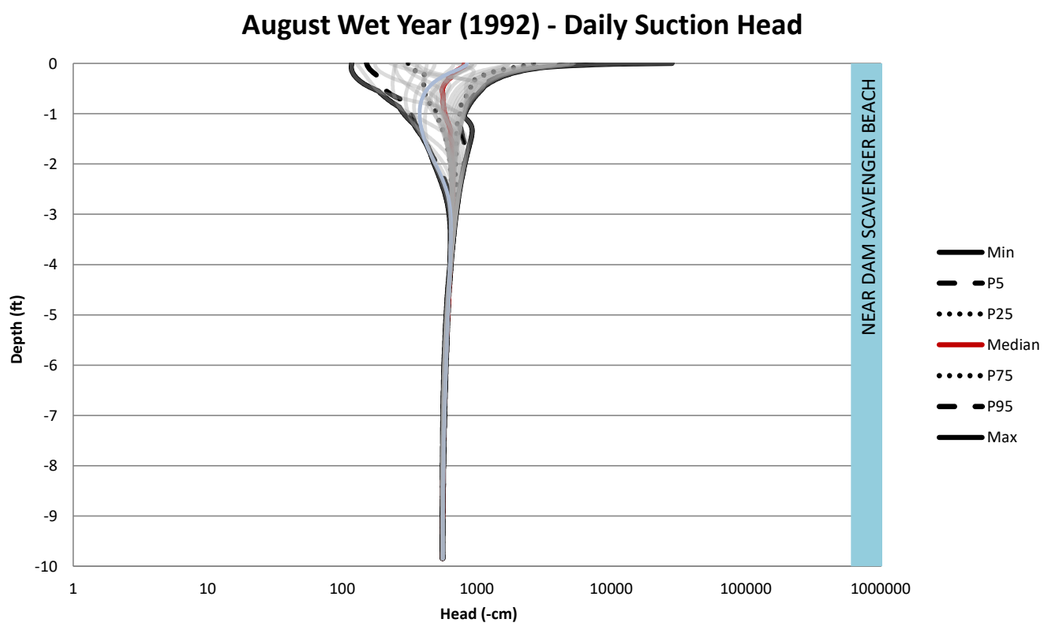
PROJECT: RESOLUTION PROJECT
SKUNK CAMP TSF RECLAMATION PLAN

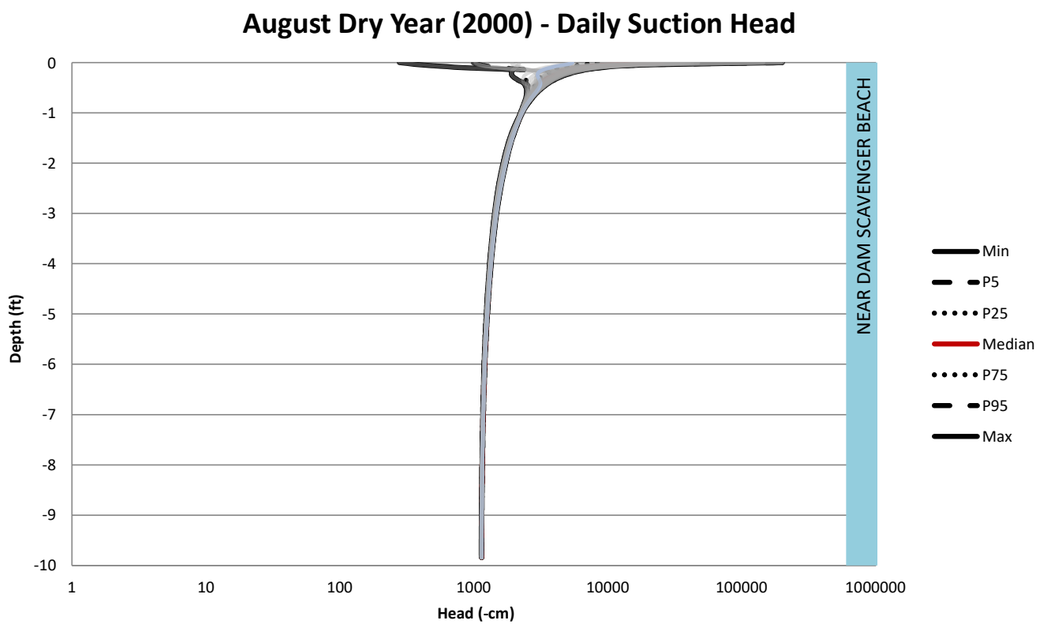
TITLE: BC1 - 9.8ft Near Dam Scavenger Beach
Suction Profiles - Dry Season (June)

PROJECT No. M09441A23

FIG. No. IV-B.4







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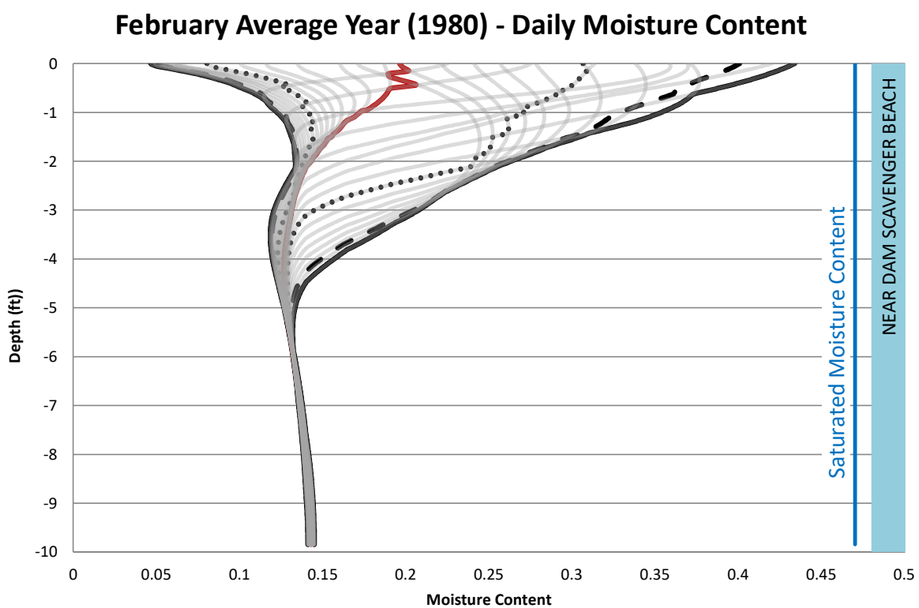
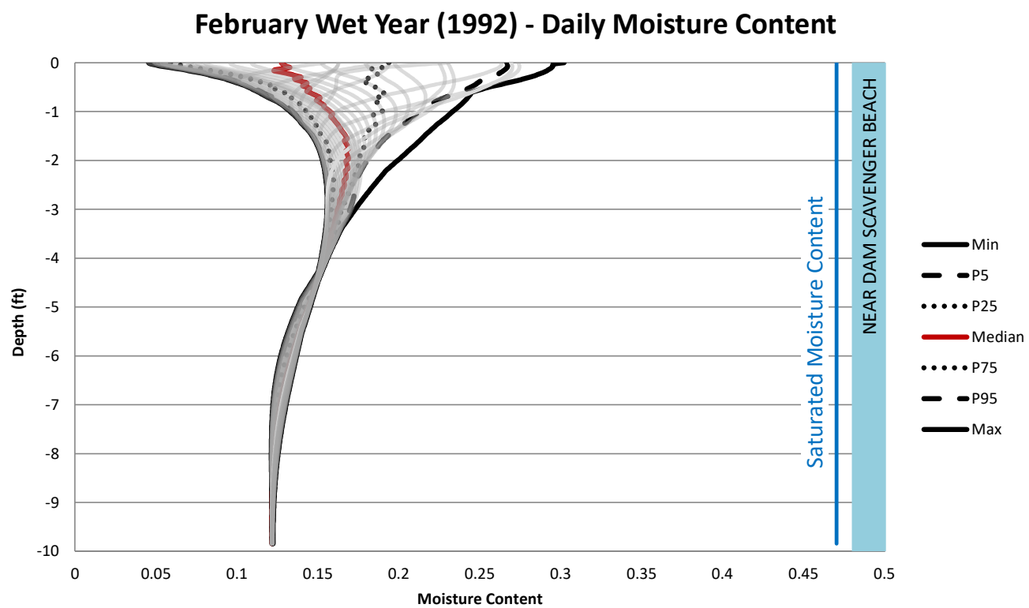
PROJECT: RESOLUTION PROJECT
SKUNK CAMP TSF RECLAMATION PLAN

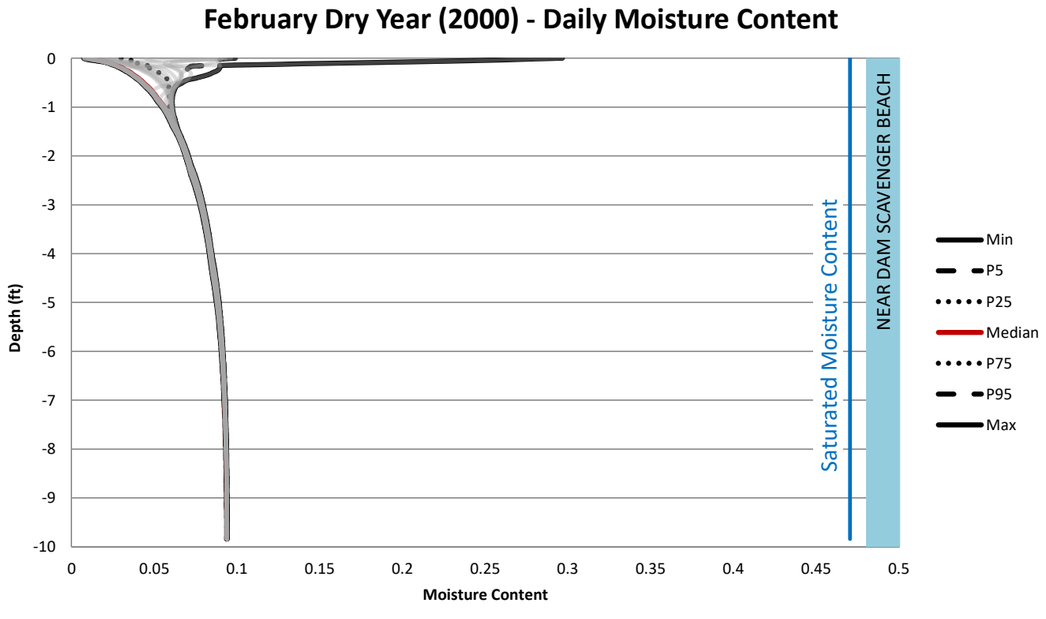
TITLE: BC1 - 9.8ft Near Dam Scavenger Beach
Suction Profiles - Summer Monsoon (August)

PROJECT No. M09441A23

FIG. No. IV-B.5







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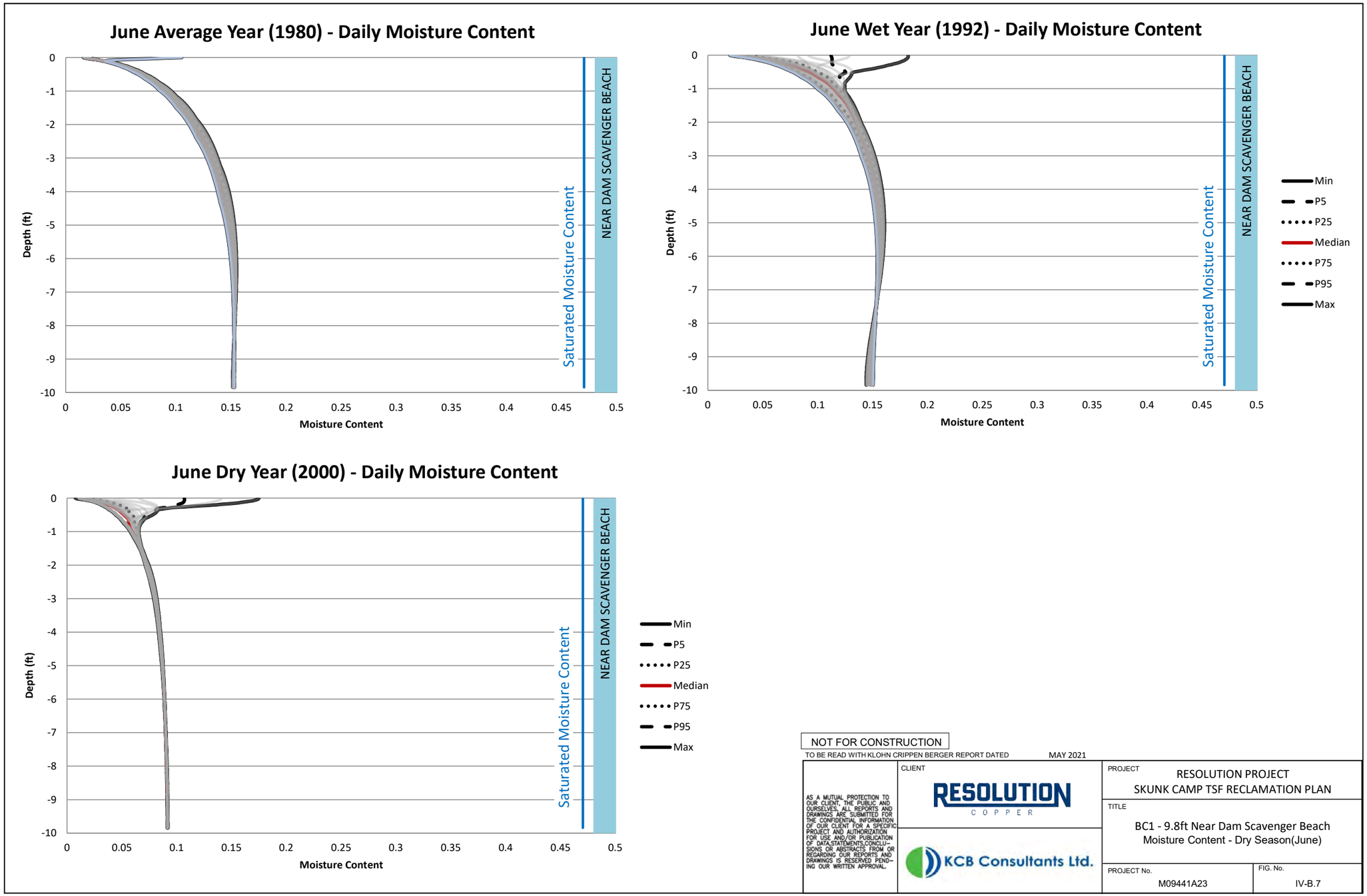
PROJECT: RESOLUTION PROJECT
SKUNK CAMP TSF RECLAMATION PLAN

TITLE: BC1 - 9.8ft Near Dam Scavenger Beach
Moisture Content - Winter (February)

PROJECT No. M09441A23

FIG. No. IV-B.6



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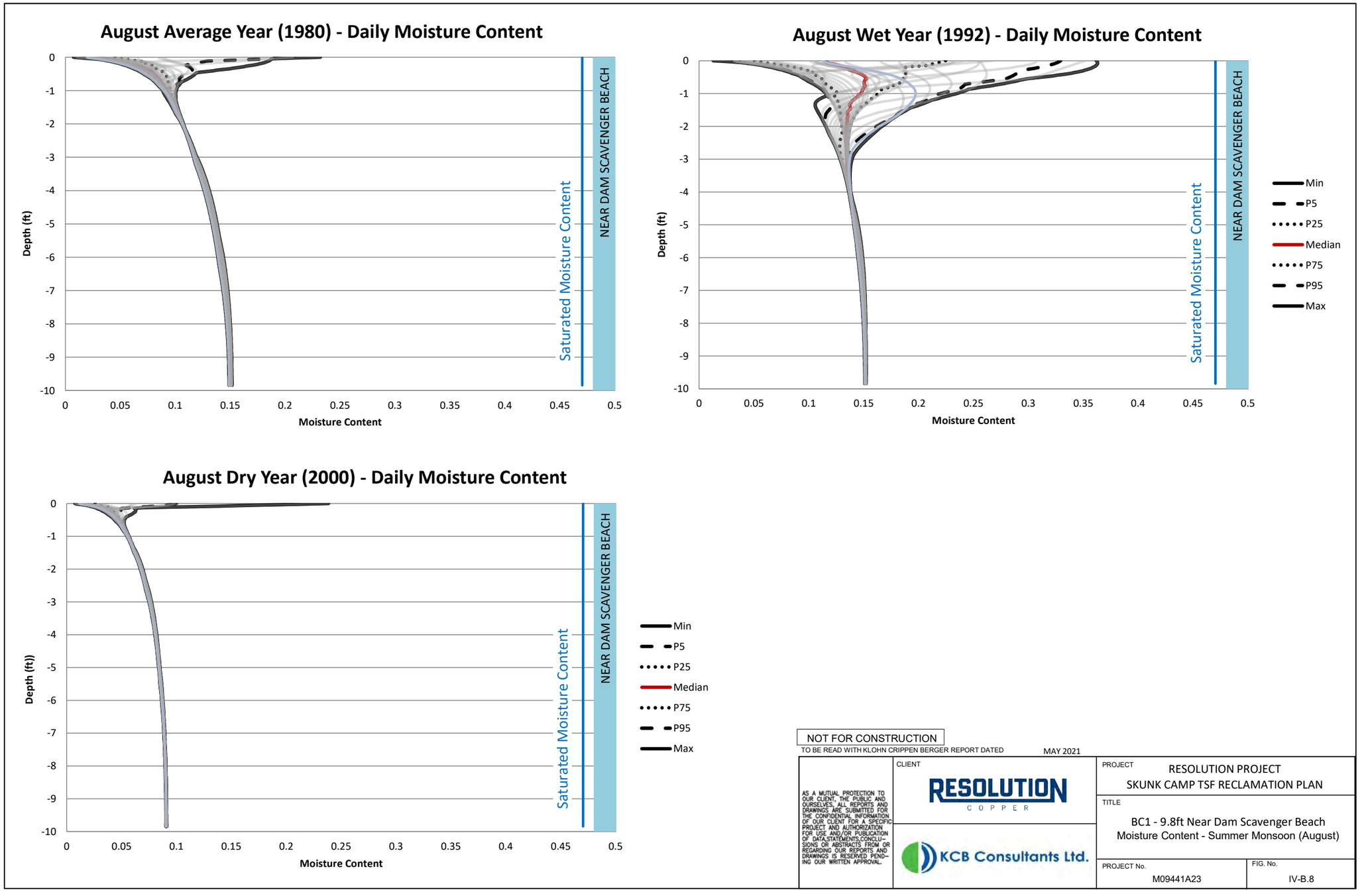
PROJECT: RESOLUTION PROJECT
SKUNK CAMP TSF RECLAMATION PLAN

TITLE: BC1 - 9.8ft Near Dam Scavenger Beach
Moisture Content - Dry Season(June)

PROJECT No. M09441A23

FIG. No. IV-B.7


August Average Year (1980) - Daily Moisture Content
August Wet Year (1992) - Daily Moisture Content
August Dry Year (2000) - Daily Moisture Content
Depth (ft)
Moisture Content
Saturated Moisture Content
NEAR DAM SCAVENGER BEACH
Min
P5
P25
Median
P75
P95
Max
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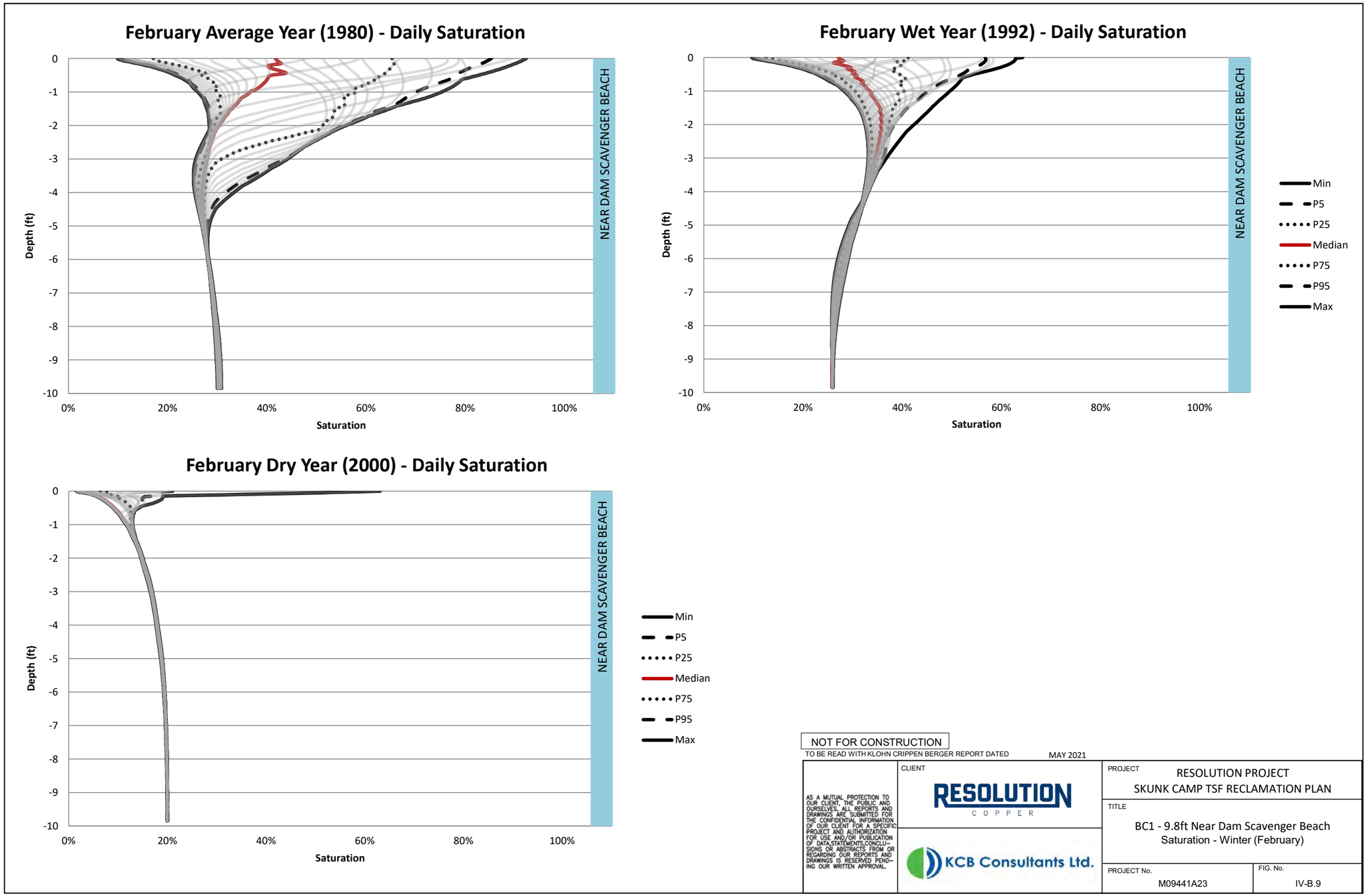
PROJECT
RESOLUTION PROJECT
SKUNK CAMP TSF RECLAMATION PLAN
TITLE
BC1 - 9.8ft Near Dam Scavenger Beach
Moisture Content - Summer Monsoon (August)
PROJECT No.
M09441A23
FIG. No.
IV-B.8



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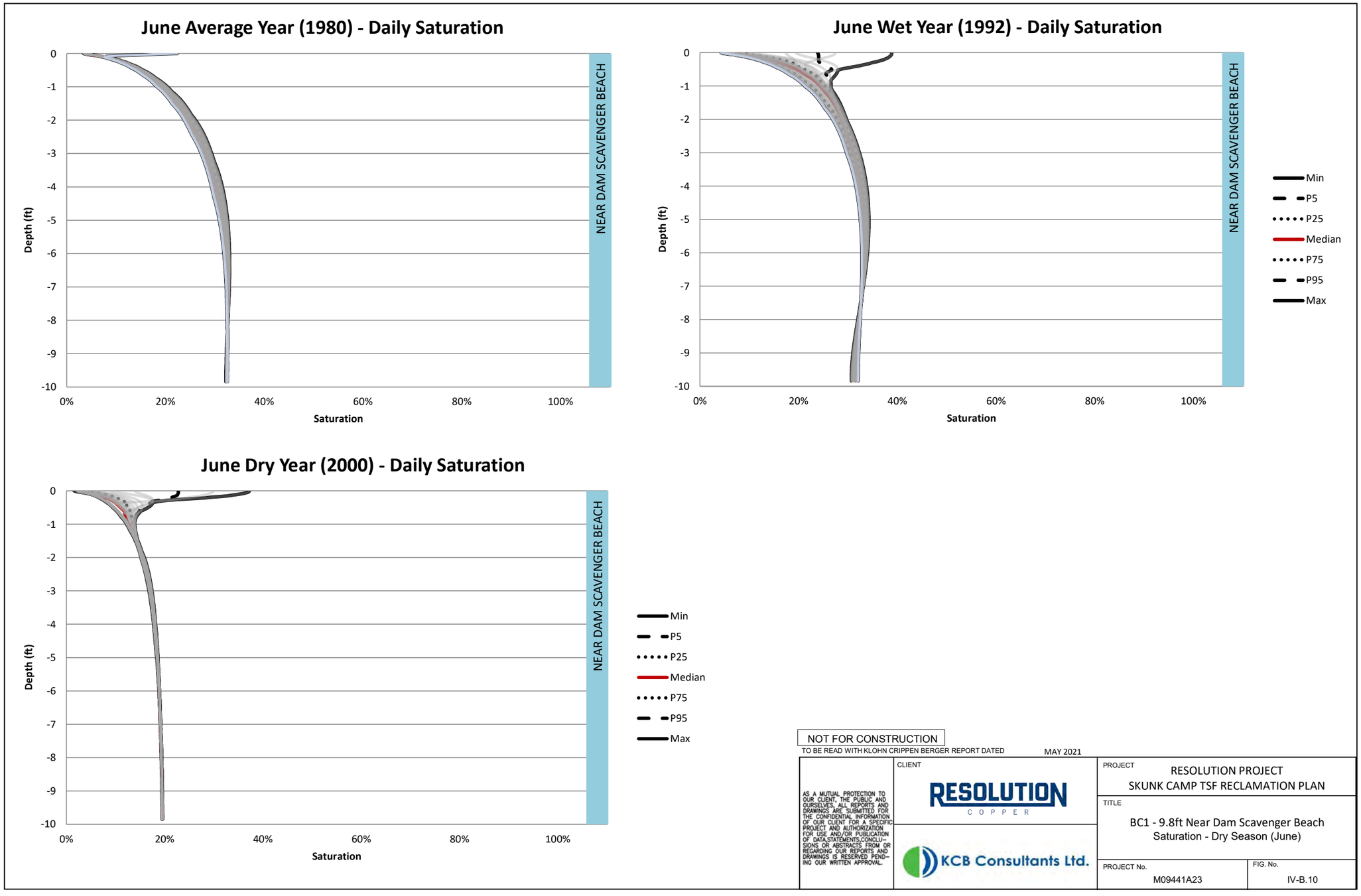
PROJECT: RESOLUTION PROJECT
SKUNK CAMP TSF RECLAMATION PLAN

TITLE: BC1 - 9.8ft Near Dam Scavenger Beach
Saturation - Winter (February)

PROJECT No. M09441A23

FIG. No. IV-B.9


June Average Year (1980) - Daily Saturation
June Wet Year (1992) - Daily Saturation
June Dry Year (2000) - Daily Saturation
Depth (ft)
0
-1
-2
-3
-4
-5
-6
-7
-8
-9
-10
0%
20%
40%
60%
80%
100%
Saturation
NEAR DAM SCAVENGER BEACH
Min
P5
P25
Median
P75
P95
Max
NOT FOR CONSTRUCTION
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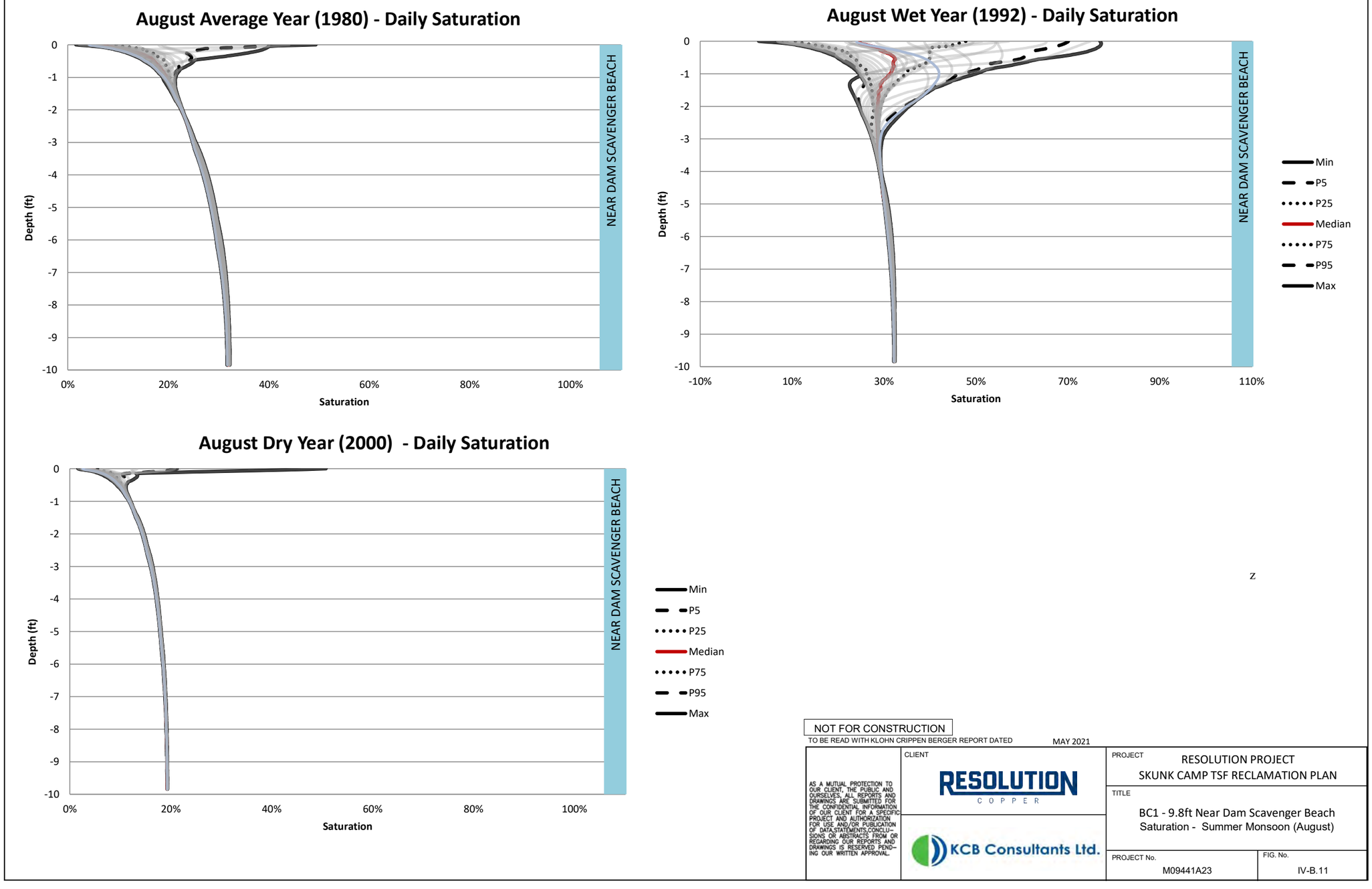
RESOLUTION PROJECT
SKUNK CAMP TSF RECLAMATION PLAN
TITLE
BC1 - 9.8ft Near Dam Scavenger Beach
Saturation - Dry Season (June)
PROJECT No.
M09441A23
FIG. No.
IV-B.10


August Average Year (1980) - Daily Saturation
Depth (ft)
0
-1
-2
-3
-4
-5
-6
-7
-8
-9
-10
0%
20%
40%
60%
80%
100%
Saturation
NEAR DAM SCAVENGER BEACH
August Wet Year (1992) - Daily Saturation
-10%
10%
30%
50%
70%
90%
110%
Min
P5
P25
Median
P75
P95
Max
August Dry Year (2000) - Daily Saturation
z
NOT FOR CONSTRUCTION
TO BE READ WITH KLOHN CRIPPEN BERGER REPORT DATED
MAY 2021
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CLIENT
RESOLUTION COPPER
KCB Consultants Ltd.
PROJECT
RESOLUTION PROJECT
SKUNK CAMP TSF RECLAMATION PLAN
TITLE
BC1 - 9.8ft Near Dam Scavenger Beach
Saturation - Summer Monsoon (August)
PROJECT No.
M09441A23
FIG. No.
IV-B.11

Table IV-B.5 BC2 Annual Water Balance

Water Year	Result Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
		(in)	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
1951	1951-10-01	14	46	3.8	0	-3.6	0.032	14	18	60
1952	1952-10-01	0	51	1.3	0	-1.8	0	20	22	72
1953	1953-10-01	15	57	-0.039	0	-1.1	0	15	15	72
1954	1954-10-01	21	51	-1.4	0	-0.68	0.45	21	19	72
1955	1955-10-01	13	58	0.80	0	-0.60	0	13	14	72
1956	1956-10-01	13	61	0.63	0	-0.47	0	13	13	74
1957	1957-10-01	15	56	-0.089	0	-0.38	0	15	15	71
1958	1958-10-01	19	51	-0.99	0	-0.34	0.14	19	18	70
1959	1959-10-01	16	59	0.23	0	-0.32	0.22	15	16	75
1960	1960-10-01	19	54	-1.7	0	-0.47	0.94	18	16	73
1961	1961-10-01	9.8	63	0.94	0	-0.56	0	9.8	11	73
1962	1962-10-01	14	57	-0.61	0	-0.36	0	14	14	71
1963	1963-10-01	24	50	-3.1	0	-0.36	0.70	23	20	73
1964	1964-10-01	11	60	2.0	0	-0.48	0	11	13	72
1965	1965-10-01	18	53	-0.40	0	-0.39	0	18	17	71
1966	1966-10-01	23	49	-4.8	0	-1.0	0.12	23	18	72
1967	1967-10-01	14	58	1.5	0	-1.00	0.033	14	16	72
1968	1968-10-01	22	49	-3.0	0	-1.2	0.37	22	19	71
1969	1969-10-01	19	53	-0.32	0	-1.2	0	19	18	72
1970	1970-10-01	16	56	0.035	0	-0.77	0.33	15	16	72
1971	1971-10-01	12	61	-0.62	0	-0.50	0.74	11	11	73
1972	1972-10-01	11	65	2.1	0	-0.36	0.69	10	13	76
1973	1973-10-01	31	38	-3.1	0	-0.50	0.69	30	27	69
1974	1974-10-01	15	56	-0.024	0	-0.64	0.087	15	15	72
1975	1975-10-01	19	50	-0.11	0	-0.49	0	19	19	69
1976	1976-10-01	16	56	-1.1	0	-0.45	0.089	16	15	72
1977	1977-10-01	16	56	0.22	0	-0.36	0	16	16	73
1978	1978-10-01	24	47	-2.7	0	-0.63	0	24	21	71
1979	1979-10-01	30	42	-5.0	0	-2.7	0.029	29	24	71
1980	1980-10-01	20	51	-0.55	0	-2.0	0	20	20	71
1981	1981-10-01	15	60	0.57	0	-1.1	0	15	16	75
1982	1982-10-01	23	46	-0.92	0	-0.67	0.37	23	22	69
1983	1983-10-01	27	42	-3.5	0	-0.65	0.66	26	23	69
1984	1984-10-01	18	53	2.5	0	-0.77	0	18	20	71
1985	1985-10-01	22	44	-2.0	0	-0.78	0.069	22	20	67
1986	1986-10-01	21	49	-0.00039	0	-0.76	0	21	21	70
1987	1987-10-01	20	50	-0.081	0	-0.69	0	20	20	70
1988	1988-10-01	23	49	-1.3	0	-0.65	0	23	21	71
1989	1989-10-01	12	62	1.3	0	-0.64	0.0055	12	13	74
1990	1990-10-01	23	48	-2.3	0	-0.43	2.8	20	18	71
1991	1991-10-01	23	48	-0.35	0	-0.55	0	23	22	71
1992	1992-10-01	36	34	-4.4	0	-1.1	0.056	36	32	70
1993	1993-10-01	33	37	-7.9	0	-5.9	0.078	33	25	70
1994	1994-10-01	15	57	1.8	0	-2.5	0	15	17	73
1995	1995-10-01	25	46	-2.0	0	-1.2	0.17	24	22	71
1996	1996-10-01	13	60	1.9	0	-0.82	0	13	15	74
1997	1997-10-01	10	65	1.1	0	-0.49	0	10	11	75
1998	1998-10-01	20	49	-1.6	0	-0.37	0	20	19	69
1999	1999-10-01	15	58	0.082	0	-0.43	0	15	15	73
2000	2000-10-01	5.4	72	1.4	0	-0.32	0	5.4	6.9	77
2001	2001-10-01	23	48	-2.4	0	-0.31	0	23	21	71
2002	2002-10-01	5.4	70	1.4	0	-0.37	0	5.4	6.8	75
2003	2003-10-01	13	63	-0.54	0	-0.26	0	13	13	76
2004	2004-10-01	12	65	-0.093	0	-0.23	0	12	12	77

Table IV-B.5 BC2 Annual Water Balance

Water Year	Result Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
		(in)	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
2005	2005-10-01	24	49	-2.8	0	-0.30	1.5	22	20	72
2006	2006-10-01	12	63	0.44	0	-0.50	0.093	12	12	75

Table IV-B.6 BC2 Monthly Water Balance 9 Wet Years (1983 to 1991)

Month	Result Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
		[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
Nov-82	1982-11-30	0.0	5.5	-0.061	0	-0.097	0	2.5	2.5	8.8
Dec-82	1982-12-30	2.5	0.12	-0.31	0	-0.048	0	2.5	2.2	2.7
Jan-83	1983-01-29	0.67	2.6	0.22	0	-0.048	0	0.67	0.91	3.0
Feb-83	1983-02-28	3.5	-0.16	-1.1	0	-0.048	0	3.5	2.4	2.9
Mar-83	1983-03-30	5.4	-1.5	-2.1	0	-0.048	0	5.4	3.3	4.0
Apr-83	1983-04-29	0.83	5.2	1.7	0	-0.049	0	0.83	2.5	5.3
May-83	1983-05-29	0	8.5	0.69	0	-0.052	0	0	0.71	7.9
Jun-83	1983-06-28	0.039	9.5	0.44	0	-0.058	0	0.039	0.43	9.4
Jul-83	1983-07-28	2.1	6.9	-0.41	0	-0.061	0	2.1	1.7	9.6
Aug-83	1983-08-27	3.8	3.4	-0.031	0	-0.063	0	3.8	3.7	7.2
Sep-83	1983-09-26	1.9	5.2	0.30	0	-0.064	0	1.9	2.2	7.5
Oct-83	1983-10-26	4.9	-0.35	-1.3	0	-0.062	0.66	4.2	2.9	5.1
Nov-83	1983-11-25	1.6	2.2	-0.51	0	-0.062	0	1.6	1.1	4.2
Dec-83	1983-12-25	1.9	0.75	0.30	0	-0.061	0	1.9	2.2	2.6
Jan-84	1984-01-24	1.5	1.2	0.31	0	-0.063	0	1.5	1.8	2.7
Feb-84	1984-02-23	0	4.1	0.58	0	-0.064	0	0	0.59	3.7
Mar-84	1984-03-24	0	5.7	0.39	0	-0.065	0	0	0.39	5.0
Apr-84	1984-04-23	0.87	5.9	0.13	0	-0.067	0	0.87	0.98	6.5
May-84	1984-05-23	0.67	7.4	0.27	0	-0.067	0	0.67	0.94	7.5
Jun-84	1984-06-22	0.039	9.3	0.28	0	-0.065	0	0.039	0.31	9.3
Jul-84	1984-07-22	3.6	4.1	-0.93	0	-0.062	0	3.6	2.7	8.5
Aug-84	1984-08-21	3.9	3.2	0.022	0	-0.060	0	3.9	3.9	6.9
Sep-84	1984-09-20	1.1	5.9	0.52	0	-0.058	0	1.1	1.7	7.0
Oct-84	1984-10-20	2.5	2.4	-0.20	0	-0.055	0	2.5	2.3	5.6
Nov-84	1984-11-19	0	4.3	0.49	0	-0.054	0	0	0.47	4.2
Dec-84	1984-12-19	4.8	-2.3	-2.9	0	-0.052	0	4.8	1.9	3.1
Jan-85	1985-01-18	3.9	-1.5	-1.5	0	-0.050	0.033	3.9	2.4	2.3
Feb-85	1985-02-17	2.9	-0.35	-0.40	0	-0.048	0	2.9	2.5	2.3
Mar-85	1985-03-19	1.7	2.2	0.80	0	-0.050	0	1.7	2.5	3.6
Apr-85	1985-04-18	0.47	5.7	1.0	0	-0.057	0	0.47	1.5	5.4
May-85	1985-05-18	0.47	6.6	0.49	0	-0.067	0	0.47	0.94	6.7
Jun-85	1985-06-17	0	8.7	0.42	0	-0.077	0	0	0.39	8.6
Jul-85	1985-07-17	0.20	8.2	0.14	0	-0.082	0	0.20	0.39	8.4
Aug-85	1985-08-16	2.1	5.7	-0.020	0	-0.083	0	2.1	2.0	7.8
Sep-85	1985-09-15	2.2	4.9	-0.13	0	-0.080	0	2.2	2.0	7.9
Oct-85	1985-10-15	3.1	2.0	-0.29	0	-0.076	0.035	3.1	2.8	5.7
Nov-85	1985-11-14	1.4	2.4	-0.22	0	-0.072	0	1.4	1.2	3.9
Dec-85	1985-12-14	2.8	0.16	-0.74	0	-0.067	0	2.8	2.0	3.1
Jan-86	1986-01-13	0	3.3	1.3	0	-0.064	0	0	1.3	3.3
Feb-86	1986-02-12	2.3	0.79	-1.4	0	-0.061	0	2.3	0.94	3.6
Mar-86	1986-03-14	1.9	2.6	0.23	0	-0.060	0	1.9	2.1	3.7
Apr-86	1986-04-13	3.1	2.4	-0.026	0	-0.059	0	3.1	3.1	4.9
May-86	1986-05-13	0	7.8	0.72	0	-0.059	0	0	0.75	7.4
Jun-86	1986-06-12	0	9.4	0.43	0	-0.059	0	0	0.43	9.1
Jul-86	1986-07-12	2.2	6.8	-0.47	0	-0.059	0	2.2	1.7	9.2
Aug-86	1986-08-11	2.8	4.6	-0.0043	0	-0.060	0	2.8	2.8	7.5
Sep-86	1986-09-10	3.0	3.9	-0.65	0	-0.059	0	3.0	2.3	7.3
Oct-86	1986-10-10	0.91	4.8	0.93	0	-0.058	0	0.91	1.9	6.1
Nov-86	1986-11-09	2.8	1.2	-0.65	0	-0.057	0	2.8	2.1	4.6
Dec-86	1986-12-09	2.6	0.67	-1.4	0	-0.057	0	2.6	1.2	3.4
Jan-87	1987-01-08	1.5	1.3	0.74	0	-0.055	0	1.5	2.2	2.7
Feb-87	1987-02-07	3.1	-0.16	-0.53	0	-0.054	0	3.1	2.6	2.9
Mar-87	1987-03-09	2.3	1.9	-0.077	0	-0.054	0	2.3	2.2	3.4
Apr-87	1987-04-08	0.94	4.4	0.78	0	-0.054	0	0.94	1.7	5.0

Table IV-B.6 BC2 Monthly Water Balance 9 Wet Years (1983 to 1991)

Month	Result Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
		[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
May-87	1987-05-08	0.039	7.2	0.54	0	-0.056	0	0.039	0.55	6.8
Jun-87	1987-06-07	0.31	8.1	0.36	0	-0.057	0	0.31	0.67	8.2
Jul-87	1987-07-07	0.20	8.9	0.27	0	-0.059	0	0.20	0.47	9.2
Aug-87	1987-08-06	3.1	5.5	-1.1	0	-0.059	0	3.1	2.0	8.9
Sep-87	1987-09-05	2.3	5.0	0.11	0	-0.057	0	2.3	2.5	7.5
Oct-87	1987-10-05	0.83	5.5	0.70	0	-0.057	0	0.83	1.5	6.7
Nov-87	1987-11-04	1.4	3.5	-0.55	0	-0.055	0	1.4	0.83	5.8
Dec-87	1987-12-04	0.71	3.1	0.76	0	-0.054	0	0.71	1.5	3.8
Jan-88	1988-01-03	4.0	-1.3	-2.2	0	-0.052	0	4.0	1.9	3.0
Feb-88	1988-02-02	3.6	-0.94	-1.1	0	-0.050	0	3.6	2.5	2.4
Mar-88	1988-03-03	0.75	3.5	1.1	0	-0.048	0	0.75	1.9	3.6
Apr-88	1988-04-02	0.12	5.9	0.65	0	-0.049	0	0.12	0.83	5.5
May-88	1988-05-02	2.4	3.7	-0.33	0	-0.051	0	2.4	2.1	6.1
Jun-88	1988-06-01	0	8.7	0.68	0	-0.055	0	0	0.67	8.0
Jul-88	1988-07-01	0.12	8.5	0.36	0	-0.057	0	0.12	0.51	8.9
Aug-88	1988-07-31	2.5	5.8	-0.89	0	-0.057	0	2.5	1.5	8.5
Sep-88	1988-08-30	6.7	0.59	-1.4	0	-0.057	0	6.7	5.2	7.3
Oct-88	1988-10-29	2.0	9.8	1.5	0	-0.11	0	2.0	3.5	13
Nov-88	1988-11-28	1.7	1.9	-0.87	0	-0.054	0	1.7	0.87	4.1
Dec-88	1988-12-28	1.1	1.8	0.66	0	-0.054	0	1.1	1.8	3.1
Jan-89	1989-01-27	2.0	0.71	-0.076	0	-0.054	0	2.0	1.9	2.4
Feb-89	1989-02-26	0.55	3.3	0.53	0	-0.054	0	0.55	1.1	3.3
Mar-89	1989-03-28	1.7	4.1	-1.0	0	-0.054	0	1.7	0.67	5.3
Apr-89	1989-04-27	0	7.6	1.3	0	-0.053	0	0	1.3	6.9
May-89	1989-05-27	0.16	8.4	0.34	0	-0.052	0	0.16	0.51	8.3
Jun-89	1989-06-26	0	9.2	0.26	0	-0.051	0	0	0.24	9.1
Jul-89	1989-07-26	0.079	8.7	0.21	0	-0.051	0	0.079	0.28	9.0
Aug-89	1989-08-25	1.3	6.1	-0.013	0	-0.048	0	1.3	1.3	8.0
Sep-89	1989-09-24	1.5	5.6	-0.14	0	-0.047	0.0055	1.5	1.3	7.3
Oct-89	1989-10-24	1.1	4.5	0.060	0	-0.045	0	1.1	1.1	6.1
Nov-89	1989-11-23	0.28	3.8	0.14	0	-0.043	0	0.28	0.43	4.5
Dec-89	1989-12-23	0	3.3	0.38	0	-0.041	0	0	0.39	3.5
Jan-90	1990-01-22	2.2	0.47	-0.67	0	-0.039	0	2.2	1.5	2.9
Feb-90	1990-02-21	2.5	0.31	-0.61	0	-0.036	0	2.5	1.9	2.5
Mar-90	1990-03-23	0.79	3.9	0.48	0	-0.034	0	0.79	1.3	4.2
Apr-90	1990-04-22	1.1	5.8	0.28	0	-0.033	0	1.1	1.3	6.0
May-90	1990-05-22	1.1	6.9	0.10	0	-0.032	0	1.1	1.2	7.7
Jun-90	1990-06-21	0.39	8.9	0.23	0	-0.031	0	0.39	0.63	9.0
Jul-90	1990-07-21	0.94	7.3	0.049	0	-0.031	0	0.94	0.98	8.6
Aug-90	1990-08-20	9.6	-2.6	-4.4	0	-0.030	2.7	6.9	2.5	7.8
Sep-90	1990-09-19	2.4	4.7	0.69	0	-0.030	0.11	2.3	3.0	7.1
Oct-90	1990-10-19	0.43	4.8	1.7	0	-0.029	0	0.43	2.2	5.9
Nov-90	1990-11-18	1.5	2.6	-0.080	0	-0.029	0	1.5	1.5	4.2
Dec-90	1990-12-18	2.8	0.31	-1.2	0	-0.030	0	2.8	1.6	3.5
Jan-91	1991-01-17	4.6	-2.3	-2.3	0	-0.032	0	4.6	2.4	2.3
Feb-91	1991-02-16	0.16	3.4	1.8	0	-0.033	0	0.16	1.9	3.3
Mar-91	1991-03-18	3.6	0.87	-1.1	0	-0.035	0	3.6	2.5	4.3
Apr-91	1991-04-17	3.2	2.5	0.27	0	-0.042	0	3.2	3.5	4.8
May-91	1991-05-17	0	7.8	0.86	0	-0.049	0	0	0.87	7.4
Jun-91	1991-06-16	0.71	8.4	0.38	0	-0.056	0	0.71	1.1	8.7
Jul-91	1991-07-16	0.43	8.9	0.38	0	-0.061	0	0.43	0.83	9.4
Aug-91	1991-08-15	3.3	4.7	-0.70	0	-0.063	0	3.3	2.6	8.4
Sep-91	1991-09-14	2.0	4.9	0.29	0	-0.065	0	2.0	2.3	7.5
Oct-91	1991-10-01	0.24	3.2	0.41	0	-0.036	0	0.24	0.63	3.5

Table IV-B.7 BC2 Monsoon Period Water Balance

Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
1951-07-01	0	9.2	0.57	0	-0.36	0	0	0.57	9.2
1951-08-01	1.1	8.4	0.28	0	-0.32	0	1.1	1.3	9.5
1951-09-01	3.6	4.2	-1.7	0	-0.28	0.032	3.6	1.9	7.8
1951-10-01	0.65	6.0	1.4	0	-0.23	0	0.65	2.0	6.6
1951-11-01	1.6	3.7	-0.38	0	-0.21	0	1.6	1.3	5.4
1951	7.0	32	0.10	0	-1.4	0.032	6.9	7.0	39
1952-07-01	0.63	8.9	0.54	0	-0.13	0	0.63	1.2	9.6
1952-08-01	0.56	8.3	0.35	0	-0.13	0	0.56	0.91	8.8
1952-09-01	0.45	7.3	0.37	0	-0.13	0	0.45	0.82	7.8
1952-10-01	0.70	6.3	0.19	0	-0.12	0	0.70	0.90	7.0
1952-11-01	0	5.9	0.36	0	-0.11	0	0	0.36	5.9
1952	2.3	37	1.8	0	-0.61	0	2.3	4.2	39
1953-07-01	0	9.1	0.33	0	-0.085	0	0	0.32	9.1
1953-08-01	2.7	5.8	-1.1	0	-0.085	0	2.7	1.6	8.8
1953-09-01	1.8	6.0	0.37	0	-0.082	0	1.8	2.2	7.7
1953-10-01	0	6.8	0.80	0	-0.075	0	0	0.80	6.8
1953-11-01	0.012	5.4	0.34	0	-0.072	0	0.012	0.35	5.5
1953	4.5	33	0.73	0	-0.40	0	4.5	5.3	38
1954-07-01	0.13	8.9	0.40	0	-0.049	0	0.13	0.53	9.0
1954-08-01	4.5	3.2	-1.0	0	-0.052	0	4.5	3.4	7.8
1954-09-01	5.3	2.1	-0.99	0	-0.052	0.17	5.1	4.1	7.4
1954-10-01	1.3	5.4	0.66	0	-0.050	0	1.3	1.9	6.6
1954-11-01	0	5.6	0.68	0	-0.051	0	0	0.69	5.6
1954	11	25	-0.28	0	-0.25	0.17	11	11	36
1955-07-01	2.1	7.0	-0.41	0	-0.048	0	2.1	1.6	9.1
1955-08-01	4.5	3.4	-1.7	0	-0.048	0	4.5	2.7	7.9
1955-09-01	2.7	4.4	0.69	0	-0.046	0	2.7	3.4	7.2
1955-10-01	0.12	6.7	0.65	0	-0.043	0	0.12	0.77	6.8
1955-11-01	0.020	5.8	0.37	0	-0.043	0	0.020	0.39	5.9
1955	9.4	27	-0.44	0	-0.23	0	9.4	8.9	37
1956-07-01	0.24	9.2	0.13	0	-0.038	0	0.24	0.37	9.4
1956-08-01	2.8	6.2	-0.46	0	-0.039	0	2.8	2.3	9.0
1956-09-01	1.7	5.7	0.22	0	-0.038	0	1.7	2.0	7.5
1956-10-01	0.075	6.8	0.31	0	-0.036	0	0.075	0.39	6.8
1956-11-01	0.53	4.5	0.043	0	-0.036	0	0.53	0.57	5.2
1956	5.4	32	0.25	0	-0.19	0	5.4	5.6	38
1957-07-01	0.031	9.3	0.33	0	-0.030	0	0.031	0.37	9.3
1957-08-01	1.1	7.4	-0.039	0	-0.031	0	1.1	1.1	8.5
1957-09-01	3.4	4.4	-0.43	0	-0.031	0	3.4	3.0	8.1
1957-10-01	0.57	6.1	0.44	0	-0.030	0	0.57	1.0	6.6
1957-11-01	3.2	1.1	-1.7	0	-0.030	0	3.2	1.6	4.6
1957	8.3	28	-1.4	0	-0.15	0	8.3	6.9	37
1958-07-01	0.70	8.5	0.15	0	-0.027	0	0.70	0.85	9.3
1958-08-01	0.78	8.2	0.095	0	-0.028	0	0.78	0.88	9.1
1958-09-01	0.85	7.2	0.26	0	-0.029	0	0.85	1.1	8.0
1958-10-01	3.0	3.2	-0.85	0	-0.028	0.14	2.9	2.0	6.4
1958-11-01	1.9	3.3	0.24	0	-0.029	0.22	1.7	1.9	5.3
1958	7.3	30	-0.10	0	-0.14	0.36	6.9	6.8	38
1959-07-01	1.0	8.2	-0.054	0	-0.026	0	1.0	0.98	9.1
1959-08-01	3.8	5.8	-1.4	0	-0.026	0	3.8	2.4	9.6
1959-09-01	5.3	2.0	-0.31	0	-0.025	0	5.3	5.0	7.4
1959-10-01	0.047	6.6	0.75	0	-0.024	0	0.047	0.80	6.9
1959-11-01	4.8	0.35	-2.9	0	-0.024	0.94	3.9	0.96	5.3
1959	15	23	-3.9	0	-0.12	0.94	14	10	38
1960-07-01	0	9.3	0.36	0	-0.057	0	0	0.35	9.2
1960-08-01	0.74	8.4	0.13	0	-0.062	0	0.74	0.87	9.2
1960-09-01	1.5	6.4	0.13	0	-0.063	0	1.5	1.7	8.1

Table IV-B.7 BC2 Monsoon Period Water Balance

Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
1960-10-01	0.27	6.6	0.30	0	-0.060	0	0.27	0.57	7.0
1960-11-01	2.1	2.8	-0.42	0	-0.060	0	2.1	1.6	5.0
1960	4.6	33	0.51	0	-0.30	0	4.6	5.1	38
1961-07-01	0	9.4	0.17	0	-0.041	0	0	0.17	9.3
1961-08-01	0.67	8.0	0.042	0	-0.040	0	0.67	0.71	8.9
1961-09-01	3.0	5.1	-1.2	0	-0.037	0	3.0	1.7	8.1
1961-10-01	0.50	5.9	1.1	0	-0.034	0	0.50	1.6	6.3
1961-11-01	0.45	4.5	-0.038	0	-0.033	0	0.45	0.41	5.4
1961	4.6	33	0.017	0	-0.18	0	4.6	4.6	38
1962-07-01	0	9.1	0.28	0	-0.030	0	0	0.28	9.1
1962-08-01	0.61	8.2	0.16	0	-0.032	0	0.61	0.76	8.9
1962-09-01	0.50	7.7	0.18	0	-0.033	0	0.50	0.67	8.4
1962-10-01	1.2	5.2	-0.12	0	-0.031	0	1.2	1.1	6.6
1962-11-01	0.87	4.1	0.13	0	-0.033	0	0.87	1.0	5.1
1962	3.2	34	0.62	0	-0.16	0	3.2	3.8	38
1963-07-01	0	9.1	0.31	0	-0.030	0	0	0.31	9.0
1963-08-01	0.079	9.3	0.25	0	-0.031	0	0.079	0.33	9.4
1963-09-01	10	-3.3	-5.1	0	-0.033	0.70	9.8	4.7	7.5
1963-10-01	1.0	5.7	2.5	0	-0.032	0	1.0	3.5	6.6
1963-11-01	0.67	4.9	0.58	0	-0.033	0	0.67	1.2	5.8
1963	12	26	-1.5	0	-0.16	0.70	12	10	38
1964-07-01	0	9.3	0.21	0	-0.042	0	0	0.21	9.4
1964-08-01	1.5	7.2	-0.19	0	-0.042	0	1.5	1.3	8.8
1964-09-01	2.2	5.6	-0.020	0	-0.041	0	2.2	2.2	7.7
1964-10-01	1.6	4.4	0.082	0	-0.037	0	1.6	1.7	6.1
1964-11-01	1.5	4.2	-0.23	0	-0.037	0	1.5	1.3	5.8
1964	6.8	31	-0.14	0	-0.20	0	6.8	6.6	38
1965-07-01	0.10	8.8	0.31	0	-0.032	0	0.10	0.42	8.8
1965-08-01	1.4	7.1	-0.0093	0	-0.034	0	1.4	1.4	8.9
1965-09-01	0.90	7.0	0.23	0	-0.035	0	0.90	1.1	8.0
1965-10-01	1.0	5.4	0.13	0	-0.034	0	1.0	1.2	6.6
1965-11-01	0.46	5.0	0.16	0	-0.035	0	0.46	0.62	5.7
1965	3.9	33	0.81	0	-0.17	0	3.9	4.8	38
1966-07-01	0.18	8.6	0.41	0	-0.14	0	0.18	0.59	9.1
1966-08-01	0.84	7.6	0.23	0	-0.15	0	0.84	1.1	8.3
1966-09-01	1.6	6.3	-0.13	0	-0.14	0	1.6	1.5	8.1
1966-10-01	2.7	3.7	-0.26	0	-0.12	0.079	2.6	2.3	6.5
1966-11-01	1.4	3.8	0.37	0	-0.12	0	1.4	1.7	5.1
1966	6.7	30	0.62	0	-0.66	0.079	6.6	7.2	37
1967-07-01	0.079	8.9	0.25	0	-0.067	0	0.079	0.33	9.0
1967-08-01	4.0	4.2	-0.81	0	-0.065	0.033	3.9	3.1	8.3
1967-09-01	2.5	5.6	0.0082	0	-0.062	0	2.5	2.5	8.0
1967-10-01	0.55	5.7	0.40	0	-0.057	0	0.55	0.96	6.5
1967-11-01	0.42	4.8	0.31	0	-0.056	0	0.42	0.73	5.6
1967	7.5	29	0.17	0	-0.31	0.033	7.5	7.7	37
1968-07-01	0	9.4	0.44	0	-0.15	0	0	0.44	9.3
1968-08-01	1.8	6.9	-0.25	0	-0.15	0	1.8	1.6	8.9
1968-09-01	2.5	4.7	0.25	0	-0.14	0	2.5	2.8	7.3
1968-10-01	0.047	6.7	0.52	0	-0.12	0	0.047	0.56	6.9
1968-11-01	0.39	4.6	0.29	0	-0.12	0	0.39	0.69	5.1
1968	4.8	32	1.2	0	-0.68	0	4.8	6.1	38
1969-07-01	0	9.3	0.44	0	-0.099	0	0	0.43	9.4
1969-08-01	0.33	8.1	0.30	0	-0.10	0	0.33	0.63	8.7
1969-09-01	2.6	5.7	-0.17	0	-0.097	0	2.6	2.4	8.3
1969-10-01	1.2	5.3	0.15	0	-0.089	0	1.2	1.4	6.8
1969-11-01	0.82	4.1	0.11	0	-0.087	0	0.82	0.94	5.2
1969	5.0	33	0.83	0	-0.47	0	5.0	5.8	38

Table IV-B.7 BC2 Monsoon Period Water Balance

Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
1970-07-01	0.079	9.2	0.29	0	-0.057	0	0.079	0.37	9.1
1970-08-01	1.0	7.6	0.13	0	-0.057	0	1.0	1.2	9.1
1970-09-01	1.7	6.5	-0.096	0	-0.056	0	1.7	1.6	8.0
1970-10-01	3.3	3.2	-0.58	0	-0.052	0.33	3.0	2.4	7.0
1970-11-01	0	5.1	0.49	0	-0.053	0	0	0.50	5.3
1970	6.2	32	0.24	0	-0.28	0.33	5.9	6.1	39
1971-07-01	0	9.1	0.17	0	-0.037	0	0	0.17	9.0
1971-08-01	0.39	8.7	0.10	0	-0.037	0	0.39	0.49	9.2
1971-09-01	4.7	2.9	-1.2	0	-0.035	0	4.7	3.5	7.8
1971-10-01	3.1	3.7	-1.2	0	-0.032	0.74	2.3	1.2	7.1
1971-11-01	4.2	0.55	-0.017	0	-0.033	0.69	3.5	3.5	5.1
1971	12	25	-2.1	0	-0.17	1.4	11	8.9	38
1972-07-01	1.7	7.7	-0.35	0	-0.030	0	1.7	1.3	9.3
1972-08-01	0.27	9.2	0.36	0	-0.031	0	0.27	0.63	9.5
1972-09-01	2.0	6.0	-0.24	0	-0.030	0	2.0	1.8	8.4
1972-10-01	0.67	6.0	0.30	0	-0.028	0	0.67	0.97	6.8
1972-11-01	8.7	-4.2	-4.5	0	-0.028	0.69	8.0	3.5	4.9
1972	13	25	-4.4	0	-0.15	0.69	13	8.2	39
1973-07-01	0.87	8.2	0.41	0	-0.053	0	0.87	1.3	9.0
1973-08-01	2.7	5.7	-0.80	0	-0.060	0	2.7	1.9	8.9
1973-09-01	1.4	6.7	0.86	0	-0.063	0	1.4	2.3	8.1
1973-10-01	0	6.6	0.46	0	-0.062	0	0	0.46	6.7
1973-11-01	0	5.1	0.31	0	-0.063	0	0	0.31	5.6
1973	5.0	32	1.3	0	-0.30	0	5.0	6.3	38
1974-07-01	0	9.5	0.26	0	-0.049	0	0	0.26	9.4
1974-08-01	2.5	6.0	-0.34	0	-0.050	0	2.5	2.1	8.6
1974-09-01	1.4	6.5	0.25	0	-0.048	0	1.4	1.6	8.3
1974-10-01	3.4	2.9	-0.54	0	-0.045	0.087	3.3	2.8	6.5
1974-11-01	3.4	1.4	-1.9	0	-0.045	0	3.4	1.5	5.3
1974	11	26	-2.2	0	-0.24	0.087	11	8.3	38
1975-07-01	0	9.5	0.38	0	-0.039	0	0	0.35	9.6
1975-08-01	2.2	5.6	-0.12	0	-0.042	0	2.2	2.1	8.3
1975-09-01	2.0	6.3	0.072	0	-0.044	0	2.0	2.1	8.0
1975-10-01	0.91	5.6	0.30	0	-0.043	0	0.91	1.2	6.8
1975-11-01	0.28	4.8	0.26	0	-0.044	0	0.28	0.51	5.4
1975	5.4	32	0.90	0	-0.21	0	5.4	6.2	38
1976-07-01	0	9.8	0.27	0	-0.034	0	0	0.28	9.7
1976-08-01	2.8	5.3	-0.73	0	-0.034	0.084	2.7	2.0	8.7
1976-09-01	0.87	7.3	0.32	0	-0.034	0	0.87	1.1	7.9
1976-10-01	4.0	1.9	-1.3	0	-0.031	0.0051	4.0	2.7	6.4
1976-11-01	0.91	3.8	0.67	0	-0.032	0	0.91	1.6	5.1
1976	8.5	28	-0.75	0	-0.17	0.089	8.4	7.7	38
1977-07-01	0.079	9.5	0.23	0	-0.030	0	0.079	0.28	9.5
1977-08-01	2.5	6.5	-0.58	0	-0.030	0	2.5	1.9	9.4
1977-09-01	2.4	5.6	-0.083	0	-0.030	0	2.4	2.4	8.1
1977-10-01	3.5	2.4	-0.62	0	-0.028	0	3.5	2.8	6.4
1977-11-01	1.3	3.9	0.32	0	-0.029	0	1.3	1.7	5.5
1977	9.8	28	-0.74	0	-0.15	0	9.8	9.1	39
1978-07-01	0.51	8.7	0.38	0	-0.074	0	0.51	0.91	9.4
1978-08-01	0.98	7.9	0.20	0	-0.098	0	0.98	1.2	9.4
1978-09-01	1.1	6.4	0.53	0	-0.11	0	1.1	1.6	7.3
1978-10-01	0.39	5.9	0.32	0	-0.10	0	0.39	0.71	6.6
1978-11-01	1.9	3.5	-0.66	0	-0.10	0	1.9	1.3	5.9
1978	4.9	32	0.77	0	-0.48	0	4.9	5.6	39
1979-07-01	0.35	9.1	0.71	0	-0.37	0	0.35	1.1	9.2
1979-08-01	0.16	8.8	0.53	0	-0.34	0	0.16	0.67	9.3
1979-09-01	1.5	6.1	0.28	0	-0.30	0	1.5	1.8	7.8

Table IV-B.7 BC2 Monsoon Period Water Balance

Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
1979-10-01	0.079	6.7	0.47	0	-0.25	0	0.079	0.59	7.2
1979-11-01	0.67	4.9	0.19	0	-0.22	0	0.67	0.87	5.9
1979	2.8	36	2.2	0	-1.5	0	2.8	5.0	39
1980-07-01	0.20	8.9	0.44	0	-0.18	0	0.20	0.59	9.0
1980-08-01	1.9	6.7	-0.038	0	-0.18	0	1.9	1.9	9.1
1980-09-01	1.3	6.7	0.58	0	-0.17	0	1.3	1.9	7.9
1980-10-01	0.59	6.2	0.38	0	-0.15	0	0.59	0.98	7.0
1980-11-01	0.039	5.3	0.36	0	-0.14	0	0.039	0.39	5.9
1980	4.1	34	1.7	0	-0.82	0	4.1	5.7	39
1981-07-01	0.12	9.2	0.45	0	-0.078	0	0.12	0.59	9.3
1981-08-01	2.2	6.7	-0.83	0	-0.078	0	2.2	1.3	9.3
1981-09-01	2.6	5.7	0.53	0	-0.075	0	2.6	3.1	7.9
1981-10-01	0.51	6.3	0.27	0	-0.069	0	0.51	0.79	7.5
1981-11-01	0.98	3.8	0.31	0	-0.067	0	0.98	1.3	5.2
1981	6.4	32	0.73	0	-0.37	0	6.4	7.1	39
1982-07-01	0.039	9.1	0.37	0	-0.052	0	0.039	0.39	9.1
1982-08-01	2.6	5.6	-0.53	0	-0.053	0	2.6	2.1	8.8
1982-09-01	3.8	3.3	-0.32	0	-0.052	0.12	3.7	3.4	6.9
1982-10-01	3.0	3.1	-0.18	0	-0.050	0.21	2.8	2.6	6.7
1982-11-01	0	5.0	0.65	0	-0.051	0	0	0.67	5.4
1982	9.5	26	-0.014	0	-0.26	0.33	9.2	9.2	37
1983-07-01	0	9.6	0.43	0	-0.058	0	0	0.43	9.4
1983-08-01	2.8	6.1	-0.60	0	-0.064	0	2.8	2.2	9.5
1983-09-01	3.6	4.0	-0.22	0	-0.065	0	3.6	3.4	7.5
1983-10-01	5.1	1.4	-2.1	0	-0.064	0.66	4.4	2.3	7.3
1983-11-01	1.1	3.3	1.7	0	-0.065	0	1.1	2.8	4.9
1983	13	24	-0.82	0	-0.32	0.66	12	11	39
1984-07-01	1.3	7.7	-0.48	0	-0.065	0	1.3	0.83	9.3
1984-08-01	3.3	4.6	0.016	0	-0.063	0	3.3	3.3	7.8
1984-09-01	3.3	3.7	0.049	0	-0.061	0	3.3	3.3	7.4
1984-10-01	1.9	4.6	-0.13	0	-0.057	0	1.9	1.8	6.9
1984-11-01	1.3	3.2	0.38	0	-0.056	0	1.3	1.7	4.9
1984	11	24	-0.16	0	-0.30	0	11	11	36
1985-07-01	0	8.2	0.37	0	-0.080	0	0	0.39	8.6
1985-08-01	1.2	7.6	-0.26	0	-0.085	0	1.2	0.98	8.7
1985-09-01	2.1	5.8	0.028	0	-0.084	0	2.1	2.1	8.1
1985-10-01	3.6	2.5	-0.50	0	-0.079	0.035	3.5	3.0	6.6
1985-11-01	1.2	3.1	0.62	0	-0.076	0	1.2	1.9	4.6
1985	8.1	27	0.27	0	-0.41	0.035	8.1	8.4	37
1986-07-01	0	9.2	0.35	0	-0.060	0	0	0.35	9.3
1986-08-01	4.8	3.1	-0.86	0	-0.061	0	4.8	3.9	8.5
1986-09-01	2.0	5.6	0.059	0	-0.061	0	2.0	2.1	8.0
1986-10-01	2.1	4.0	0.11	0	-0.058	0	2.1	2.2	6.5
1986-11-01	1.7	3.0	0.047	0	-0.060	0	1.7	1.8	4.8
1986	11	25	-0.29	0	-0.30	0	11	10	37
1987-07-01	0.20	9.1	0.28	0	-0.059	0	0.20	0.51	9.0
1987-08-01	2.0	6.9	-0.45	0	-0.061	0	2.0	1.6	9.0
1987-09-01	2.9	4.9	-0.13	0	-0.059	0	2.9	2.7	8.1
1987-10-01	1.3	5.2	0.27	0	-0.057	0	1.3	1.5	7.1
1987-11-01	0.31	5.2	0.39	0	-0.057	0	0.31	0.75	6.0
1987	6.7	31	0.35	0	-0.29	0	6.7	7.1	39
1988-07-01	0.12	8.5	0.36	0	-0.057	0	0.12	0.51	8.9
1988-08-01	3.4	4.9	-1.7	0	-0.059	0	3.4	1.7	8.8
1988-09-01	5.9	1.7	-0.41	0	-0.059	0	5.9	5.5	7.5
1988-10-01	0.31	6.2	1.3	0	-0.057	0	0.31	1.6	6.9
1988-11-01	1.5	3.7	0.083	0	-0.057	0	1.5	1.6	5.8
1988	11	25	-0.42	0	-0.29	0	11	11	38

Table IV-B.7 BC2 Monsoon Period Water Balance

Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
1989-07-01	0	9.3	0.25	0	-0.051	0	0	0.24	9.2
1989-08-01	0.51	8.2	0.094	0	-0.052	0	0.51	0.59	9.3
1989-09-01	0.91	6.9	0.15	0	-0.050	0	0.91	1.1	7.8
1989-10-01	1.5	5.2	-0.13	0	-0.047	0.0055	1.5	1.4	7.3
1989-11-01	1.1	4.1	0.12	0	-0.046	0	1.1	1.2	5.9
1989	4.0	34	0.49	0	-0.25	0.0055	4.0	4.4	39
1990-07-01	0.31	8.9	0.20	0	-0.031	0	0.31	0.47	9.3
1990-08-01	1.5	6.5	-0.044	0	-0.031	0	1.5	1.4	8.6
1990-09-01	9.0	-1.5	-2.6	0	-0.031	2.7	6.3	3.7	7.4
1990-10-01	2.8	3.5	0.011	0	-0.029	0.11	2.7	2.7	6.8
1990-11-01	0.28	4.6	0.87	0	-0.030	0	0.28	1.1	5.3
1990	14	22	-1.5	0	-0.15	2.8	11	9.5	37
1991-07-01	0.63	8.8	0.38	0	-0.058	0	0.63	1.0	9.2
1991-08-01	1.7	7.1	-0.35	0	-0.065	0	1.7	1.3	9.3
1991-09-01	2.8	5.1	0.24	0	-0.067	0	2.8	3.0	8.3
1991-10-01	1.6	4.7	0.22	0	-0.064	0	1.6	1.8	6.5
1991-11-01	1.2	4.6	-0.50	0	-0.065	0	1.2	0.75	6.6
1991	7.8	30	-0.013	0	-0.32	0	7.8	7.9	40
1992-07-01	1.3	7.9	0.72	0	-0.13	0	1.3	2.0	8.9
1992-08-01	3.3	5.5	-1.1	0	-0.15	0	3.3	2.2	9.3
1992-09-01	5.3	2.1	-0.49	0	-0.16	0.056	5.2	4.7	7.8
1992-10-01	0.87	5.9	1.2	0	-0.15	0	0.87	2.0	6.7
1992-11-01	1.2	4.1	0.030	0	-0.14	0	1.2	1.3	6.2
1992	12	26	0.33	0	-0.73	0.056	12	12	39
1993-07-01	0	9.2	0.95	0	-0.78	0	0	0.94	9.3
1993-08-01	0.24	8.5	0.70	0	-0.65	0	0.24	0.98	8.9
1993-09-01	3.4	4.1	-0.54	0	-0.52	0	3.4	2.9	8.5
1993-10-01	0.16	6.3	1.2	0	-0.40	0	0.16	1.3	6.4
1993-11-01	0.79	4.4	0.46	0	-0.35	0	0.79	1.3	6.0
1993	4.6	33	2.8	0	-2.7	0	4.6	7.4	39
1994-07-01	0.39	8.6	0.40	0	-0.16	0	0.39	0.79	8.9
1994-08-01	1.5	7.4	-0.62	0	-0.15	0	1.5	0.87	9.1
1994-09-01	0.71	7.5	0.99	0	-0.13	0	0.71	1.7	8.6
1994-10-01	1.9	4.4	-0.026	0	-0.12	0	1.9	1.9	6.6
1994-11-01	1.9	2.8	-0.35	0	-0.11	0	1.9	1.5	5.3
1994	6.3	31	0.40	0	-0.67	0	6.3	6.8	39
1995-07-01	0	9.3	0.42	0	-0.10	0	0	0.43	9.0
1995-08-01	0.039	9.1	0.34	0	-0.10	0	0.039	0.39	9.3
1995-09-01	3.8	4.3	-0.74	0	-0.10	0.13	3.7	3.0	8.8
1995-10-01	2.8	3.9	-0.72	0	-0.091	0.045	2.7	2.0	7.2
1995-11-01	0	5.3	1.2	0	-0.094	0	0	1.2	5.8
1995	6.6	32	0.53	0	-0.49	0.17	6.5	7.0	40
1996-07-01	0.39	8.6	0.12	0	-0.059	0	0.39	0.55	9.1
1996-08-01	2.4	6.3	-0.21	0	-0.059	0	2.4	2.1	8.9
1996-09-01	1.2	6.6	0.13	0	-0.055	0	1.2	1.4	8.1
1996-10-01	3.0	2.8	-0.24	0	-0.051	0	3.0	2.8	6.7
1996-11-01	0.43	5.1	0.34	0	-0.051	0	0.43	0.75	6.0
1996	7.4	29	0.13	0	-0.28	0	7.4	7.6	39
1997-07-01	0.039	9.1	0.22	0	-0.035	0	0.039	0.24	9.0
1997-08-01	0.079	9.4	0.18	0	-0.035	0	0.079	0.28	9.9
1997-09-01	2.6	5.4	-0.35	0	-0.035	0	2.6	2.2	8.5
1997-10-01	0	7.0	0.35	0	-0.031	0	0	0.31	7.3
1997-11-01	0.75	4.1	0.0087	0	-0.035	0	0.75	0.75	6.0
1997	3.5	35	0.40	0	-0.17	0	3.5	3.8	41
1998-07-01	0	9.3	0.41	0	-0.031	0	0	0.39	9.2
1998-08-01	1.7	7.0	0.012	0	-0.031	0	1.7	1.7	9.1
1998-09-01	2.4	5.4	0.023	0	-0.039	0	2.4	2.4	8.3

Table IV-B.7 BC2 Monsoon Period Water Balance

Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
1998-10-01	1.3	5.3	0.16	0	-0.035	0	1.3	1.5	7.0
1998-11-01	0	5.4	0.34	0	-0.039	0	0	0.31	6.3
1998	5.5	32	0.95	0	-0.18	0	5.5	6.4	40
1999-07-01	0	9.1	0.24	0	-0.031	0	0	0.24	9.1
1999-08-01	5.8	2.1	-1.9	0	-0.031	0	5.8	3.9	8.7
1999-09-01	2.8	4.8	0.10	0	-0.031	0	2.8	2.9	7.8
1999-10-01	1.1	5.4	0.96	0	-0.031	0	1.1	2.1	6.8
1999-11-01	0	5.6	0.41	0	-0.028	0	0	0.39	6.2
1999	9.8	27	-0.18	0	-0.15	0	9.8	9.6	39
2000-07-01	0.79	8.3	0.024	0	-0.024	0	0.79	0.83	9.5
2000-08-01	0.079	9.5	0.23	0	-0.028	0	0.079	0.31	9.5
2000-09-01	0.67	6.9	0.085	0	-0.024	0	0.67	0.75	8.7
2000-10-01	0	6.9	0.18	0	-0.024	0	0	0.20	6.8
2000-11-01	5.3	-0.87	-3.7	0	-0.024	0	5.3	1.6	5.9
2000	6.9	31	-3.2	0	-0.12	0	6.9	3.7	40
2001-07-01	0.039	9.3	0.34	0	-0.031	0	0.039	0.35	9.2
2001-08-01	2.7	6.2	-1.6	0	-0.031	0	2.7	1.1	9.7
2001-09-01	3.3	4.3	0.67	0	-0.031	0	3.3	4.1	7.6
2001-10-01	0.16	6.4	0.54	0	-0.031	0	0.16	0.63	7.3
2001-11-01	0.35	4.5	0.28	0	-0.031	0	0.35	0.67	5.5
2001	6.6	31	0.27	0	-0.16	0	6.6	6.9	39
2002-07-01	0	9.6	0.14	0	-0.028	0	0	0.12	9.2
2002-08-01	0.31	8.8	0.095	0	-0.031	0	0.31	0.43	9.7
2002-09-01	0.47	7.4	0.020	0	-0.028	0	0.47	0.47	8.1
2002-10-01	1.2	5.4	-0.036	0	-0.028	0	1.2	1.1	7.1
2002-11-01	0.12	5.0	0.18	0	-0.028	0	0.12	0.31	6.1
2002	2.1	36	0.41	0	-0.14	0	2.1	2.5	40
2003-07-01	0	10	0.26	0	-0.020	0	0	0.24	10.0
2003-08-01	0.47	8.8	0.17	0	-0.020	0	0.47	0.67	10
2003-09-01	1.3	6.9	-0.084	0	-0.020	0	1.3	1.2	8.5
2003-10-01	1.9	5.0	0.010	0	-0.020	0	1.9	1.9	7.4
2003-11-01	0.079	5.5	0.30	0	-0.024	0	0.079	0.39	6.0
2003	3.8	36	0.66	0	-0.10	0	3.8	4.4	42
2004-07-01	0	10	0.22	0	-0.020	0	0	0.24	10
2004-08-01	0.55	8.8	0.11	0	-0.020	0	0.55	0.67	9.8
2004-09-01	2.1	6.1	-0.20	0	-0.016	0	2.1	1.9	8.6
2004-10-01	1.5	5.5	-0.19	0	-0.020	0	1.5	1.3	7.9
2004-11-01	1.2	3.8	-0.15	0	-0.016	0	1.2	1.1	6.1
2004	5.4	34	-0.20	0	-0.091	0	5.4	5.2	42
2005-07-01	0.039	9.8	0.39	0	-0.031	0	0.039	0.47	9.7
2005-08-01	1.4	7.9	-0.24	0	-0.035	0	1.4	1.1	11
2005-09-01	4.7	3.0	-0.44	0	-0.043	0	4.7	4.3	7.3
2005-10-01	0.079	6.6	0.62	0	-0.047	0	0.079	0.71	7.4
2005-11-01	0.43	4.8	0.28	0	-0.047	0	0.43	0.71	6.1
2005	6.7	32	0.62	0	-0.20	0	6.7	7.3	41
2006-07-01	0.51	9.2	0.085	0	-0.035	0	0.51	0.59	10
2006-08-01	3.2	4.8	-1.8	0	-0.039	0.090	3.1	1.3	9.2
2006-09-01	2.9	5.0	0.98	0	-0.035	0	2.9	3.9	7.4
2006-10-01	1.1	5.3	0.32	0	-0.031	0	1.1	1.5	6.9
2006-11-01	1.0	3.9	0.21	0	-0.035	0	1.0	1.3	5.9
2006	8.7	28	-0.25	0	-0.18	0.090	8.6	8.4	40

Table IV-B.8 BC2 Winter Storm Period Water Balance

Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
1951-11-01	0	3.7	-0.38	0	-0.21	0	1.6	1.3	5.4
1951-12-01	1.7	2.0	0.63	0	-0.18	0	1.7	2.3	3.7
1952-01-01	3.0	-0.26	-1.2	0	-0.17	0	3.0	1.8	2.8
1952-02-01	2.8	0.10	0.0063	0	-0.16	0	2.8	2.8	2.9
1952-03-01	0.50	3.3	1.1	0	-0.14	0	0.50	1.6	3.8
1952	8.0	8.9	0.096	0	-0.86	0	9.7	9.8	19
1952-11-01	0	5.9	0.36	0	-0.11	0	0	0.36	5.9
1952-12-01	4.3	-1.0	-2.8	0	-0.10	0	4.3	1.6	3.3
1953-01-01	2.0	0.64	0.40	0	-0.099	0	2.0	2.4	2.7
1953-02-01	0.74	2.7	0.91	0	-0.093	0	0.74	1.6	3.3
1953-03-01	0.60	3.2	0.28	0	-0.080	0	0.60	0.88	3.8
1953	7.6	11	-0.81	0	-0.49	0	7.6	6.8	19
1953-11-01	0.012	5.4	0.34	0	-0.072	0	0.012	0.35	5.5
1953-12-01	0.56	3.4	0.091	0	-0.065	0	0.56	0.65	3.9
1954-01-01	0.19	2.7	0.28	0	-0.065	0	0.19	0.47	2.9
1954-02-01	2.4	0.89	-0.84	0	-0.061	0	2.4	1.6	3.2
1954-03-01	0.72	3.5	0.43	0	-0.053	0	0.72	1.1	4.2
1954	3.9	16	0.30	0	-0.32	0	3.9	4.2	20
1954-11-01	0	5.6	0.68	0	-0.051	0	0	0.69	5.6
1954-12-01	0.091	4.1	0.32	0	-0.051	0	0.091	0.41	4.3
1955-01-01	0.29	3.2	0.30	0	-0.054	0	0.29	0.59	3.5
1955-02-01	3.4	-1.0	-1.5	0	-0.054	0	3.4	2.0	2.4
1955-03-01	0.28	3.3	0.78	0	-0.048	0	0.28	1.1	3.5
1955	4.1	15	0.63	0	-0.26	0	4.1	4.7	19
1955-11-01	0.020	5.8	0.37	0	-0.043	0	0.020	0.39	5.9
1955-12-01	0.96	2.7	-0.035	0	-0.041	0	0.96	0.93	3.7
1956-01-01	1.4	1.8	-0.091	0	-0.042	0	1.4	1.3	3.1
1956-02-01	2.6	0.85	-1.6	0	-0.042	0	2.6	1.0	3.5
1956-03-01	2.0	1.2	0.44	0	-0.039	0	2.0	2.4	3.1
1956	7.0	12	-0.90	0	-0.21	0	7.0	6.1	19
1956-11-01	0.53	4.5	0.043	0	-0.036	0	0.53	0.57	5.2
1956-12-01	0	3.8	0.38	0	-0.033	0	0	0.39	3.8
1957-01-01	0.47	2.6	0.085	0	-0.034	0	0.47	0.55	3.1
1957-02-01	4.8	-2.3	-2.9	0	-0.033	0	4.8	1.9	2.7
1957-03-01	0.73	2.9	1.3	0	-0.029	0	0.73	2.0	3.4
1957	6.5	12	-1.1	0	-0.16	0	6.5	5.4	18
1957-11-01	3.2	1.1	-1.7	0	-0.030	0	3.2	1.6	4.6
1957-12-01	0.61	2.5	1.1	0	-0.029	0	0.61	1.7	3.0
1958-01-01	1.1	2.1	0.18	0	-0.029	0	1.1	1.2	3.2
1958-02-01	0.012	3.4	0.36	0	-0.028	0	0.012	0.37	3.3
1958-03-01	2.5	0.68	-0.80	0	-0.026	0	2.5	1.7	3.2
1958	7.4	9.8	-0.85	0	-0.14	0	7.4	6.6	17
1958-11-01	1.9	3.3	0.24	0	-0.029	0.22	1.7	1.9	5.3
1958-12-01	1.5	2.1	-0.24	0	-0.028	0	1.5	1.3	3.6
1959-01-01	0	3.5	0.53	0	-0.028	0	0	0.53	3.6
1959-02-01	0.21	3.3	0.26	0	-0.028	0	0.21	0.48	3.5
1959-03-01	1.4	1.9	-0.24	0	-0.025	0	1.4	1.2	3.3
1959	5.1	14	0.55	0	-0.14	0.22	4.9	5.4	19
1959-11-01	4.8	0.35	-2.9	0	-0.024	0.94	3.9	0.96	5.3
1959-12-01	0.38	3.4	1.9	0	-0.022	0	0.38	2.3	3.7
1960-01-01	5.2	-2.6	-3.4	0	-0.023	0	5.2	1.9	2.7
1960-02-01	4.2	-1.6	-1.6	0	-0.024	0	4.2	2.5	2.5

Table IV-B.8 BC2 Winter Storm Period Water Balance

Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
1960-03-01	0.87	2.5	1.6	0	-0.023	0	0.87	2.5	3.4
1960	15	2.0	-4.4	0	-0.12	0.94	14	10	18
1960-11-01	2.1	2.8	-0.42	0	-0.060	0	2.1	1.6	5.0
1960-12-01	0.48	3.1	0.37	0	-0.056	0	0.48	0.86	3.7
1961-01-01	0.47	2.7	0.18	0	-0.056	0	0.47	0.65	3.3
1961-02-01	0.70	2.4	-0.11	0	-0.054	0	0.70	0.59	3.2
1961-03-01	0.23	3.8	0.42	0	-0.046	0	0.23	0.65	3.7
1961	3.9	15	0.45	0	-0.27	0	3.9	4.4	19
1961-11-01	0.45	4.5	-0.038	0	-0.033	0	0.45	0.41	5.4
1961-12-01	0.32	2.9	0.35	0	-0.031	0	0.32	0.67	3.1
1962-01-01	3.9	-1.3	-2.0	0	-0.031	0	3.9	1.9	2.6
1962-02-01	3.2	-0.51	-1.5	0	-0.030	0	3.2	1.7	2.7
1962-03-01	1.7	1.4	0.32	0	-0.026	0	1.7	2.0	3.2
1962	9.5	7.1	-2.8	0	-0.15	0	9.5	6.7	17
1962-11-01	0.87	4.1	0.13	0	-0.033	0	0.87	1.0	5.1
1962-12-01	0.83	3.1	0.020	0	-0.031	0	0.83	0.85	3.9
1963-01-01	1.8	1.3	-0.56	0	-0.031	0	1.8	1.3	3.3
1963-02-01	2.1	0.98	-0.12	0	-0.030	0	2.1	2.0	3.0
1963-03-01	4.2	-0.31	-2.0	0	-0.027	0	4.2	2.2	3.8
1963	9.8	9.2	-2.6	0	-0.15	0	9.8	7.3	19
1963-11-01	0.67	4.9	0.58	0	-0.033	0	0.67	1.2	5.8
1963-12-01	2.3	1.3	-0.31	0	-0.033	0	2.3	2.0	3.6
1964-01-01	0.34	3.0	0.69	0	-0.037	0	0.34	1.0	3.3
1964-02-01	0.58	2.4	0.20	0	-0.040	0	0.58	0.78	3.0
1964-03-01	0	3.7	0.39	0	-0.040	0	0	0.39	3.6
1964	3.9	15	1.5	0	-0.18	0	3.9	5.5	19
1964-11-01	1.5	4.2	-0.23	0	-0.037	0	1.5	1.3	5.8
1964-12-01	1.4	2.1	-0.17	0	-0.033	0	1.4	1.2	3.6
1965-01-01	1.7	1.3	-0.47	0	-0.034	0	1.7	1.2	3.3
1965-02-01	2.9	0	-0.50	0	-0.032	0	2.9	2.4	2.6
1965-03-01	2.8	0.79	-0.70	0	-0.029	0	2.8	2.1	3.4
1965	10	8.4	-2.1	0	-0.16	0	10	8.3	19
1965-11-01	0.46	5.0	0.16	0	-0.035	0	0.46	0.62	5.7
1965-12-01	2.4	1.5	-1.5	0	-0.033	0	2.4	0.87	3.9
1966-01-01	10	-7.9	-8.4	0	-0.034	0.045	10	2.0	2.7
1966-02-01	1.8	0.94	0.95	0	-0.033	0	1.8	2.8	2.8
1966-03-01	2.0	1.3	0.96	0	-0.033	0	2.0	3.0	3.1
1966	17	0.75	-7.8	0	-0.17	0.045	17	9.2	18
1966-11-01	1.4	3.8	0.37	0	-0.12	0	1.4	1.7	5.1
1966-12-01	0.88	2.9	0.23	0	-0.11	0	0.88	1.1	4.1
1967-01-01	1.3	1.8	-0.029	0	-0.10	0	1.3	1.2	3.1
1967-02-01	0.79	2.4	0.20	0	-0.098	0	0.79	1.00	2.9
1967-03-01	0	3.9	0.47	0	-0.083	0	0	0.47	3.9
1967	4.3	15	1.3	0	-0.51	0	4.3	5.5	19
1967-11-01	0.42	4.8	0.31	0	-0.056	0	0.42	0.73	5.6
1967-12-01	2.1	1.6	-1.3	0	-0.052	0	2.1	0.81	3.9
1968-01-01	10	-7.6	-7.6	0	-0.052	0.37	9.6	2.1	2.3
1968-02-01	0.63	2.5	2.2	0	-0.051	0	0.63	2.8	3.1
1968-03-01	1.9	1.9	0.62	0	-0.057	0	1.9	2.6	3.4
1968	15	3.1	-5.8	0	-0.27	0.37	15	9.0	18
1968-11-01	0.39	4.6	0.29	0	-0.12	0	0.39	0.69	5.1
1968-12-01	2.5	0.94	-0.67	0	-0.11	0	2.5	1.9	3.8

Table IV-B.8 BC2 Winter Storm Period Water Balance

Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
1969-01-01	3.3	-0.47	-1.9	0	-0.10	0	3.3	1.4	2.9
1969-02-01	4.2	-1.4	-1.8	0	-0.096	0	4.2	2.4	2.6
1969-03-01	1.4	1.8	1.4	0	-0.082	0	1.4	2.8	3.0
1969	12	5.5	-2.6	0	-0.51	0	12	9.1	17
1969-11-01	0.82	4.1	0.11	0	-0.087	0	0.82	0.94	5.2
1969-12-01	2.1	1.2	-0.36	0	-0.079	0	2.1	1.8	3.6
1970-01-01	1.3	1.9	-0.035	0	-0.076	0	1.3	1.3	3.4
1970-02-01	0.50	2.7	0.55	0	-0.069	0	0.50	1.0	2.9
1970-03-01	0.41	3.3	0.29	0	-0.059	0	0.41	0.70	3.6
1970	5.2	13	0.56	0	-0.37	0	5.2	5.7	19
1970-11-01	0	5.1	0.49	0	-0.053	0	0	0.50	5.3
1970-12-01	0.65	3.1	-0.16	0	-0.049	0	0.65	0.49	3.9
1971-01-01	1.2	1.6	0.058	0	-0.049	0	1.2	1.3	3.0
1971-02-01	0.85	2.7	0.26	0	-0.047	0	0.85	1.1	3.1
1971-03-01	0.82	2.9	0.0091	0	-0.041	0	0.82	0.83	4.0
1971	3.5	15	0.66	0	-0.24	0	3.5	4.2	19
1971-11-01	4.2	0.55	-0.017	0	-0.033	0.69	3.5	3.5	5.1
1971-12-01	0.039	3.7	0.89	0	-0.030	0	0.039	0.93	3.7
1972-01-01	2.1	0.75	-0.39	0	-0.030	0	2.1	1.7	3.0
1972-02-01	0	3.3	0.69	0	-0.030	0	0	0.69	3.2
1972-03-01	0	4.6	0.30	0	-0.029	0	0	0.30	4.1
1972	6.4	13	1.5	0	-0.15	0.69	5.7	7.1	19
1972-11-01	8.7	-4.2	-4.5	0	-0.028	0.69	8.0	3.5	4.9
1972-12-01	2.8	0.31	0.19	0	-0.027	0	2.8	3.0	3.2
1973-01-01	3.0	-0.31	-0.91	0	-0.026	0	3.0	2.1	2.9
1973-02-01	0.74	2.0	1.4	0	-0.028	0	0.74	2.2	2.6
1973-03-01	3.2	0.079	-0.77	0	-0.028	0	3.2	2.4	2.8
1973	18	-2.1	-4.5	0	-0.14	0.69	18	13	16
1973-11-01	0	5.1	0.31	0	-0.063	0	0	0.31	5.6
1973-12-01	1.8	1.9	-0.59	0	-0.060	0	1.8	1.2	3.9
1974-01-01	0.098	3.2	0.63	0	-0.060	0	0.098	0.72	3.3
1974-02-01	3.4	-0.51	-1.1	0	-0.059	0	3.4	2.3	2.9
1974-03-01	0.15	3.6	0.62	0	-0.051	0	0.15	0.77	3.3
1974	5.4	13	-0.13	0	-0.29	0	5.4	5.3	19
1974-11-01	3.4	1.4	-1.9	0	-0.045	0	3.4	1.5	5.3
1974-12-01	0.12	3.6	1.7	0	-0.042	0	0.12	1.8	3.6
1975-01-01	0.75	2.0	0.28	0	-0.042	0	0.75	1.0	3.1
1975-02-01	0.43	2.3	0.20	0	-0.040	0	0.43	0.59	2.6
1975-03-01	3.9	-0.35	-1.8	0	-0.036	0	3.9	2.2	3.0
1975	8.6	9.0	-1.5	0	-0.20	0	8.6	7.1	18
1975-11-01	0.28	4.8	0.26	0	-0.044	0	0.28	0.51	5.4
1975-12-01	2.1	1.9	-1.7	0	-0.043	0	2.1	0.47	4.2
1976-01-01	1.3	1.8	0.91	0	-0.043	0	1.3	2.2	3.1
1976-02-01	0.24	2.8	0.54	0	-0.042	0	0.24	0.75	2.9
1976-03-01	1.6	2.3	-0.13	0	-0.037	0	1.6	1.5	3.4
1976	5.5	14	-0.12	0	-0.21	0	5.5	5.4	19
1976-11-01	0.91	3.8	0.67	0	-0.032	0	0.91	1.6	5.1
1976-12-01	0.55	3.2	0.30	0	-0.030	0	0.55	0.87	4.0
1977-01-01	1.8	1.2	-1.1	0	-0.031	0	1.8	0.67	3.1
1977-02-01	1.9	0.87	0.34	0	-0.030	0	1.9	2.2	2.5
1977-03-01	0.079	4.3	0.61	0	-0.027	0	0.079	0.71	4.1
1977	5.3	13	0.79	0	-0.15	0	5.3	6.1	19

Table IV-B.8 BC2 Winter Storm Period Water Balance

Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
1977-11-01	1.3	3.9	0.32	0	-0.029	0	1.3	1.7	5.5
1977-12-01	0.35	3.5	0.51	0	-0.028	0	0.35	0.87	3.9
1978-01-01	0.67	2.5	-0.082	0	-0.028	0	0.67	0.55	3.5
1978-02-01	6.4	-3.7	-4.4	0	-0.028	0	6.4	2.0	2.5
1978-03-01	5.5	-2.2	-2.3	0	-0.025	0	5.5	3.1	2.9
1978	14	3.9	-5.9	0	-0.14	0	14	8.3	18
1978-11-01	1.9	3.5	-0.66	0	-0.10	0	1.9	1.3	5.9
1978-12-01	5.6	-2.4	-3.4	0	-0.094	0	5.6	2.2	3.7
1979-01-01	6.6	-3.9	-3.9	0	-0.092	0.029	6.5	2.6	2.5
1979-02-01	6.0	-3.9	-3.8	0	-0.089	0	6.0	2.2	2.3
1979-03-01	1.2	2.8	2.4	0	-0.10	0	1.2	3.6	3.3
1979	21	-3.9	-9.4	0	-0.48	0.029	21	12	18
1979-11-01	0.67	4.9	0.19	0	-0.22	0	0.67	0.87	5.9
1979-12-01	0.71	3.0	0.32	0	-0.19	0	0.71	0.98	4.0
1980-01-01	0.67	2.8	0.075	0	-0.18	0	0.67	0.79	3.7
1980-02-01	4.1	-1.7	-2.3	0	-0.16	0	4.1	1.8	2.4
1980-03-01	6.0	-2.9	-3.3	0	-0.13	0	6.0	2.7	2.4
1980	12	6.1	-5.1	0	-0.88	0	12	7.1	18
1980-11-01	0.039	5.3	0.36	0	-0.14	0	0.039	0.39	5.9
1980-12-01	0	4.1	0.29	0	-0.12	0	0	0.28	4.3
1981-01-01	0.55	3.1	0.18	0	-0.12	0	0.55	0.75	3.5
1981-02-01	1.3	2.0	-0.20	0	-0.11	0	1.3	1.1	3.5
1981-03-01	2.7	1.3	-0.88	0	-0.091	0	2.7	1.8	3.6
1981	4.6	16	-0.24	0	-0.58	0	4.6	4.3	21
1981-11-01	0.98	3.8	0.31	0	-0.067	0	0.98	1.3	5.2
1981-12-01	2.3	1.6	-1.9	0	-0.062	0	2.3	0.43	4.4
1982-01-01	0	3.5	1.6	0	-0.062	0	0	1.6	3.3
1982-02-01	2.7	0	-0.53	0	-0.060	0	2.7	2.2	2.8
1982-03-01	1.8	1.7	0.050	0	-0.052	0	1.8	1.9	3.1
1982	7.8	11	-0.48	0	-0.30	0	7.8	7.3	19
1982-11-01	0	5.0	0.65	0	-0.051	0	0	0.67	5.4
1982-12-01	3.3	-0.28	-1.5	0	-0.048	0	3.3	1.8	3.6
1983-01-01	1.7	1.0	0.58	0	-0.050	0	1.7	2.3	2.7
1983-02-01	1.9	1.4	-0.94	0	-0.050	0	1.9	0.98	3.2
1983-03-01	2.3	0.98	-0.015	0	-0.044	0	2.3	2.3	2.8
1983	9.2	8.1	-1.2	0	-0.24	0	9.2	8.0	18
1983-11-01	1.1	3.3	1.7	0	-0.065	0	1.1	2.8	4.9
1983-12-01	2.0	1.6	-0.65	0	-0.061	0	2.0	1.4	3.8
1984-01-01	2.5	0.12	-0.34	0	-0.063	0	2.5	2.2	2.7
1984-02-01	0.47	2.8	1.0	0	-0.065	0	0.47	1.5	2.8
1984-03-01	0	4.0	0.49	0	-0.063	0	0	0.47	3.9
1984	6.1	12	2.2	0	-0.32	0	6.1	8.4	18
1984-11-01	1.3	3.2	0.38	0	-0.056	0	1.3	1.7	4.9
1984-12-01	2.1	1.7	-1.2	0	-0.053	0	2.1	0.87	4.2
1985-01-01	5.8	-3.3	-3.5	0	-0.053	0.033	5.7	2.3	2.5
1985-02-01	2.7	-0.31	-0.32	0	-0.050	0	2.7	2.4	2.5
1985-03-01	1.7	1.2	0.90	0	-0.045	0	1.7	2.6	2.5
1985	14	2.4	-3.7	0	-0.26	0.033	14	9.8	17
1985-11-01	1.2	3.1	0.62	0	-0.076	0	1.2	1.9	4.6
1985-12-01	2.8	0.39	-1.5	0	-0.069	0	2.8	1.2	3.9
1986-01-01	0.91	2.5	1.2	0	-0.067	0	0.91	2.1	3.1
1986-02-01	0.079	3.7	0.45	0	-0.065	0	0.079	0.55	3.6

Table IV-B.8 BC2 Winter Storm Period Water Balance

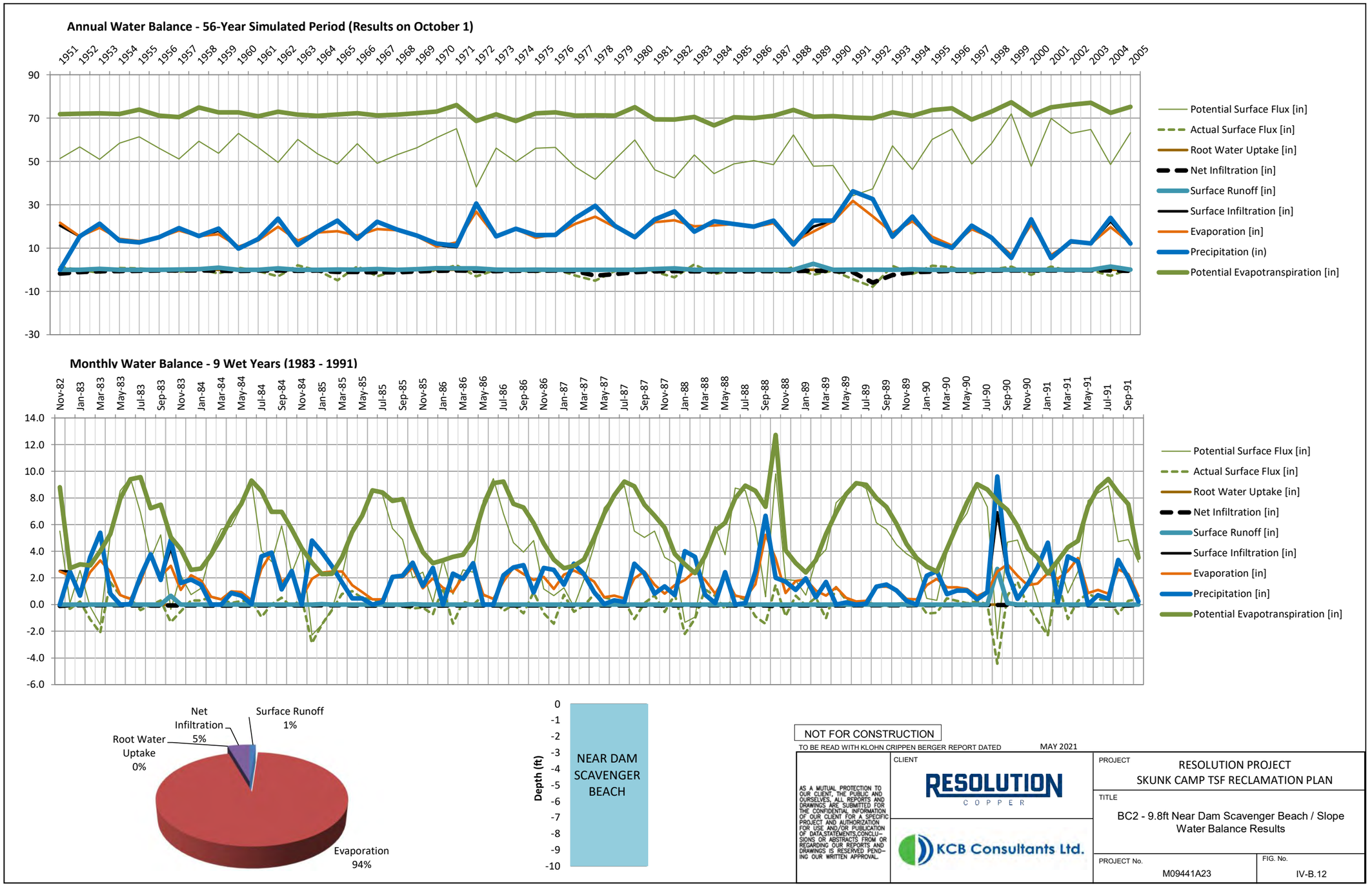
Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
1986-03-01	3.1	0.12	-0.81	0	-0.056	0	3.1	2.2	2.9
1986	8.0	9.8	-0.061	0	-0.33	0	8.0	8.0	18
1986-11-01	1.7	3.0	0.047	0	-0.060	0	1.7	1.8	4.8
1986-12-01	1.4	1.9	0.20	0	-0.056	0	1.4	1.6	3.7
1987-01-01	3.0	-0.16	-0.97	0	-0.057	0	3.0	2.0	2.9
1987-02-01	3.3	-0.35	-1.0	0	-0.056	0	3.3	2.4	2.8
1987-03-01	2.7	0.55	-0.94	0	-0.050	0	2.7	1.7	3.5
1987	12	5.0	-2.7	0	-0.28	0	12	9.5	18
1987-11-01	0.31	5.2	0.39	0	-0.057	0	0.31	0.75	6.0
1987-12-01	1.8	1.9	-0.13	0	-0.054	0	1.8	1.6	3.8
1988-01-01	4.0	-1.1	-2.3	0	-0.053	0	4.0	1.7	3.2
1988-02-01	3.6	-0.87	-0.98	0	-0.052	0	3.6	2.6	2.5
1988-03-01	0.75	3.3	1.2	0	-0.047	0	0.75	1.9	3.4
1988	10	8.5	-1.9	0	-0.26	0	10	8.6	19
1988-11-01	1.5	3.7	0.083	0	-0.057	0	1.5	1.6	5.8
1988-12-01	1.7	1.9	-0.59	0	-0.054	0	1.7	1.1	4.0
1989-01-01	1.1	1.8	0.57	0	-0.056	0	1.1	1.7	3.1
1989-02-01	2.2	0.55	-0.33	0	-0.056	0	2.2	1.9	2.7
1989-03-01	0.31	3.6	0.55	0	-0.050	0	0.31	0.87	3.1
1989	6.9	12	0.29	0	-0.27	0	6.9	7.1	19
1989-11-01	1.1	4.1	0.12	0	-0.046	0	1.1	1.2	5.9
1989-12-01	0.28	3.6	0.18	0	-0.043	0	0.28	0.47	4.2
1990-01-01	0.87	2.5	-0.48	0	-0.042	0	0.87	0.39	3.4
1990-02-01	1.3	1.5	0.26	0	-0.039	0	1.3	1.5	2.7
1990-03-01	2.5	0.67	-0.48	0	-0.033	0	2.5	2.0	2.6
1990	6.0	12	-0.41	0	-0.20	0	6.0	5.6	19
1990-11-01	0.28	4.6	0.87	0	-0.030	0	0.28	1.1	5.3
1990-12-01	2.2	1.5	-0.15	0	-0.030	0	2.2	2.0	4.2
1991-01-01	4.8	-2.3	-3.4	0	-0.032	0	4.8	1.5	3.0
1991-02-01	1.8	1.2	0.93	0	-0.033	0	1.8	2.7	2.6
1991-03-01	0.94	3.3	0.56	0	-0.031	0	0.94	1.5	3.3
1991	10.0	8.3	-1.2	0	-0.16	0	10.0	8.9	18
1991-11-01	1.2	4.6	-0.50	0	-0.065	0	1.2	0.75	6.6
1991-12-01	3.3	0.079	-1.2	0	-0.061	0	3.3	2.0	3.6
1992-01-01	4.0	-1.3	-1.5	0	-0.061	0	4.0	2.5	2.9
1992-02-01	3.0	-0.24	-0.39	0	-0.060	0	3.0	2.6	2.2
1992-03-01	2.8	0.63	-0.20	0	-0.056	0	2.8	2.6	3.0
1992	14	3.7	-3.8	0	-0.30	0	14	10	18
1992-11-01	1.2	4.1	0.030	0	-0.14	0	1.2	1.3	6.2
1992-12-01	0.51	2.8	0.84	0	-0.14	0	0.51	1.3	3.6
1993-01-01	6.3	-4.0	-4.2	0	-0.13	0	6.3	2.1	2.5
1993-02-01	11	-9.0	-9.0	0	-0.13	0.078	11	2.2	1.9
1993-03-01	6.0	-3.5	-3.5	0	-0.17	0	6.0	2.5	2.7
1993	25	-9.6	-16	0	-0.71	0.078	25	9.4	17
1993-11-01	0.79	4.4	0.46	0	-0.35	0	0.79	1.3	6.0
1993-12-01	4.2	-0.87	-2.2	0	-0.30	0	4.2	2.0	3.6
1994-01-01	0.28	2.8	1.3	0	-0.26	0	0.28	1.6	3.4
1994-02-01	0.28	3.2	0.63	0	-0.23	0	0.28	0.91	3.3
1994-03-01	2.6	0.63	-0.55	0	-0.20	0	2.6	2.0	3.0
1994	8.1	10	-0.35	0	-1.3	0	8.1	7.8	19
1994-11-01	1.9	2.8	-0.35	0	-0.11	0	1.9	1.5	5.3
1994-12-01	3.4	-0.35	-0.93	0	-0.10	0	3.4	2.4	3.5

Table IV-B.8 BC2 Winter Storm Period Water Balance

Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
1995-01-01	2.7	0.039	-0.61	0	-0.094	0	2.7	2.0	3.0
1995-02-01	3.7	-0.75	-0.87	0	-0.091	0	3.7	2.8	2.6
1995-03-01	2.7	0.75	-0.39	0	-0.083	0	2.7	2.3	3.1
1995	14	2.5	-3.1	0	-0.48	0	14	11	18
1995-11-01	0	5.3	1.2	0	-0.094	0	0	1.2	5.8
1995-12-01	1.3	2.4	0.085	0	-0.083	0	1.3	1.4	3.9
1996-01-01	0.91	2.3	0.083	0	-0.079	0	0.91	0.98	3.5
1996-02-01	0	3.5	0.43	0	-0.079	0	0	0.47	3.3
1996-03-01	3.2	0.59	-1.1	0	-0.067	0	3.2	2.0	3.6
1996	5.4	14	0.70	0	-0.40	0	5.4	6.1	20
1996-11-01	0.43	5.1	0.34	0	-0.051	0	0.43	0.75	6.0
1996-12-01	1.2	2.4	-0.40	0	-0.051	0	1.2	0.83	3.8
1997-01-01	0	3.1	0.73	0	-0.047	0	0	0.75	3.2
1997-02-01	2.9	-0.079	-1.1	0	-0.043	0	2.9	1.8	2.7
1997-03-01	1.7	2.2	-0.72	0	-0.039	0	1.7	0.94	3.4
1997	6.2	13	-1.1	0	-0.23	0	6.2	5.0	19
1997-11-01	0.75	4.1	0.0087	0	-0.035	0	0.75	0.75	6.0
1997-12-01	0.79	2.6	0.024	0	-0.031	0	0.79	0.87	3.7
1998-01-01	2.7	-0.039	-0.94	0	-0.031	0	2.7	1.7	3.1
1998-02-01	0.35	2.7	0.64	0	-0.028	0	0.35	1.0	2.4
1998-03-01	6.4	-3.8	-4.1	0	-0.028	0	6.4	2.2	2.9
1998	11	5.6	-4.4	0	-0.15	0	11	6.6	18
1998-11-01	0	5.4	0.34	0	-0.039	0	0	0.31	6.3
1998-12-01	1.1	2.7	-0.62	0	-0.043	0	1.1	0.47	3.9
1999-01-01	0.71	2.5	0.65	0	-0.039	0	0.71	1.4	3.3
1999-02-01	0.079	3.5	0.29	0	-0.039	0	0.079	0.31	3.6
1999-03-01	0.20	4.2	0.17	0	-0.031	0	0.20	0.39	3.6
1999	2.0	18	0.83	0	-0.19	0	2.0	2.9	21
1999-11-01	0	5.6	0.41	0	-0.028	0	0	0.39	6.2
1999-12-01	0	4.3	0.26	0	-0.031	0	0	0.28	4.7
2000-01-01	0.039	3.3	0.17	0	-0.028	0	0.039	0.20	3.7
2000-02-01	0.28	3.5	0.16	0	-0.031	0	0.28	0.43	3.4
2000-03-01	0.71	3.4	-0.017	0	-0.024	0	0.71	0.71	3.9
2000	1.0	20	0.98	0	-0.14	0	1.0	2.0	22
2000-11-01	5.3	-0.63	-3.7	0	-0.024	0	5.3	1.6	6.1
2000-12-01	2.1	1.1	0.53	0	-0.024	0	2.1	2.6	2.9
2001-01-01	0.079	3.4	0.87	0	-0.024	0	0.079	0.98	3.7
2001-02-01	3.4	-0.67	-1.6	0	-0.020	0	3.4	1.8	3.0
2001-03-01	1.7	1.7	0.53	0	-0.020	0	1.7	2.3	2.8
2001	13	4.9	-3.3	0	-0.11	0	13	9.3	19
2001-11-01	0.35	4.7	0.29	0	-0.031	0	0.35	0.67	5.7
2001-12-01	0.28	3.6	0.22	0	-0.035	0	0.28	0.51	4.6
2002-01-01	1.9	0.94	-0.39	0	-0.031	0	1.9	1.5	2.9
2002-02-01	0.24	3.1	0.25	0	-0.035	0	0.24	0.47	3.2
2002-03-01	0	4.3	0.35	0	-0.028	0	0	0.35	3.4
2002	2.7	17	0.74	0	-0.16	0	2.7	3.5	20
2002-11-01	0.12	5.2	0.19	0	-0.028	0	0.12	0.31	6.3
2002-12-01	0.83	3.1	-0.49	0	-0.024	0	0.83	0.35	4.4
2003-01-01	0.98	2.0	0.24	0	-0.024	0	0.98	1.2	3.4
2003-02-01	0.39	3.6	0.27	0	-0.024	0	0.39	0.63	3.1
2003-03-01	5.0	-1.7	-3.5	0	-0.020	0	5.0	1.4	3.6
2003	7.3	12	-3.3	0	-0.12	0	7.3	3.9	21

Table IV-B.8 BC2 Winter Storm Period Water Balance

Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
2003-11-01	0.079	5.7	0.32	0	-0.024	0	0.079	0.39	6.3
2003-12-01	0.87	2.5	-0.076	0	-0.020	0	0.87	0.79	3.9
2004-01-01	0.98	2.4	-0.061	0	-0.020	0	0.98	0.91	3.9
2004-02-01	1.4	1.4	-0.38	0	-0.020	0	1.4	1.1	3.1
2004-03-01	0.71	2.8	0.28	0	-0.020	0	0.71	0.94	3.0
2004	4.1	15	0.075	0	-0.10	0	4.1	4.1	20
2004-11-01	1.2	4.0	-0.12	0	-0.016	0	1.2	1.1	6.4
2004-12-01	0.67	2.4	0.26	0	-0.020	0	0.67	0.91	3.5
2005-01-01	2.8	0.39	-1.5	0	-0.016	0	2.8	1.3	3.0
2005-02-01	4.2	-1.5	-1.8	0	-0.020	0.031	4.2	2.4	2.7
2005-03-01	7.4	-4.7	-3.4	0	-0.016	1.5	5.9	2.5	2.7
2005	16	0.67	-6.6	0	-0.087	1.5	15	8.1	18
2005-11-01	0.43	5.0	0.30	0	-0.047	0	0.43	0.75	6.4
2005-12-01	0	4.1	0.30	0	-0.047	0	0	0.28	4.4
2006-01-01	0	3.3	0.24	0	-0.047	0	0	0.24	3.5
2006-02-01	0	4.1	0.21	0	-0.047	0	0	0.24	3.8
2006-03-01	0.12	4.3	0.16	0	-0.043	0	0.12	0.28	4.1
2006	0.55	21	1.2	0	-0.23	0	0.55	1.8	22


Annual Water Balance - 56-Year Simulated Period (Results on October 1)
Potential Surface Flux [in]
Actual Surface Flux [in]
Root Water Uptake [in]
Net Infiltration [in]
Surface Runoff [in]
Surface Infiltration [in]
Evaporation [in]
Precipitation (in)
Potential Evapotranspiration [in]
Monthly Water Balance - 9 Wet Years (1983 - 1991)
Potential Surface Flux [in]
Actual Surface Flux [in]
Root Water Uptake [in]
Net Infiltration [in]
Surface Runoff [in]
Surface Infiltration [in]
Evaporation [in]
Precipitation [in]
Potential Evapotranspiration [in]
Net Infiltration 5%
Surface Runoff 1%
Root Water Uptake 0%
Evaporation 94%
Depth (ft)
NEAR DAM SCAVENGER BEACH
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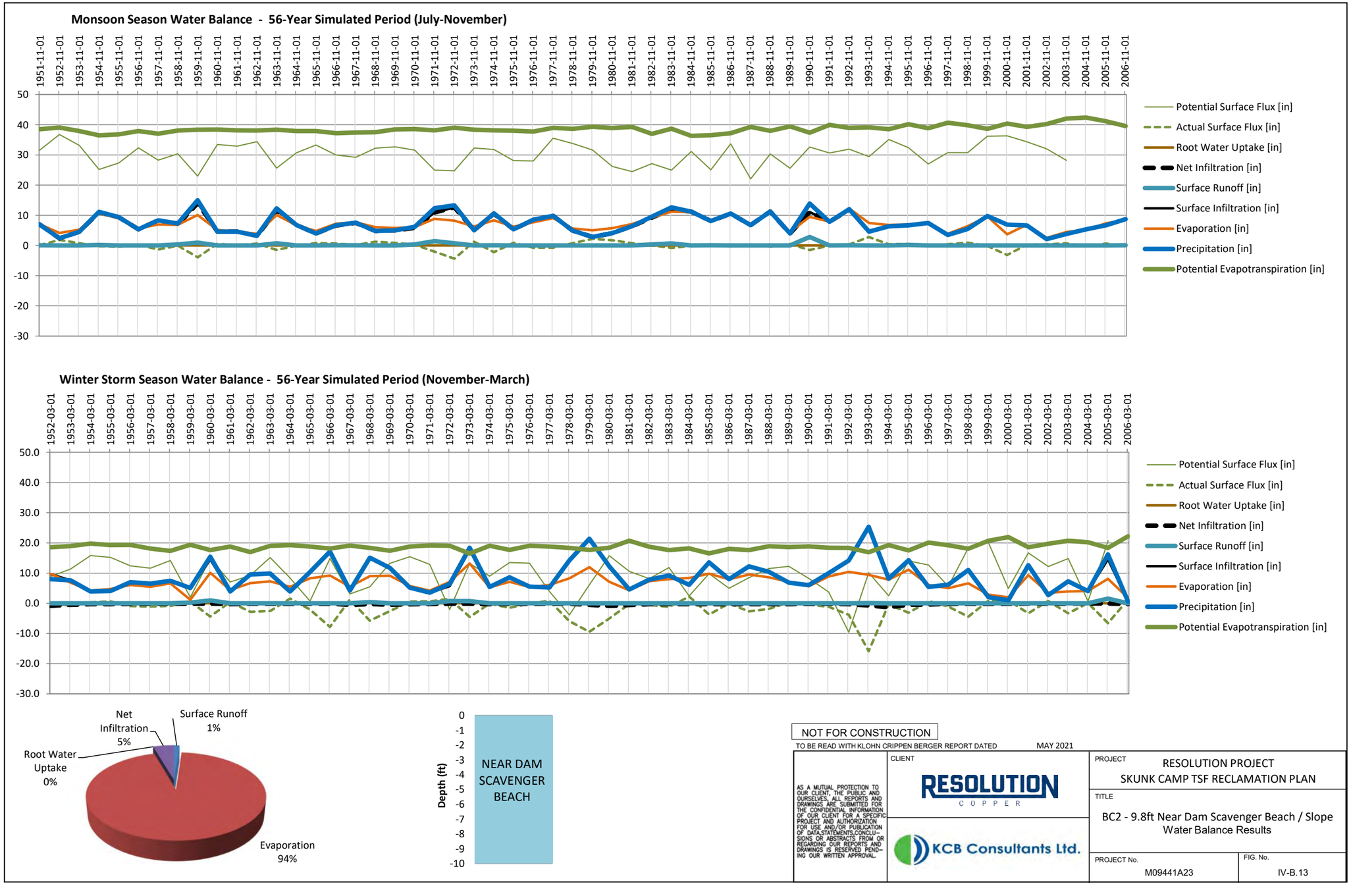
BC2 - 9.8ft Near Dam Scavenger Beach / Slope Water Balance Results
PROJECT No.
M09441A23
FIG. No.
IV-B.12


Monsoon Season Water Balance - 56-Year Simulated Period (July-November)
Potential Surface Flux [in]
Actual Surface Flux [in]
Root Water Uptake [in]
Net Infiltration [in]
Surface Runoff [in]
Surface Infiltration [in]
Evaporation [in]
Precipitation [in]
Potential Evapotranspiration [in]
Winter Storm Season Water Balance - 56-Year Simulated Period (November-March)
Net Infiltration 5%
Surface Runoff 1%
Root Water Uptake 0%
Evaporation 94%
Depth (ft)
NEAR DAM SCAVENGER BEACH
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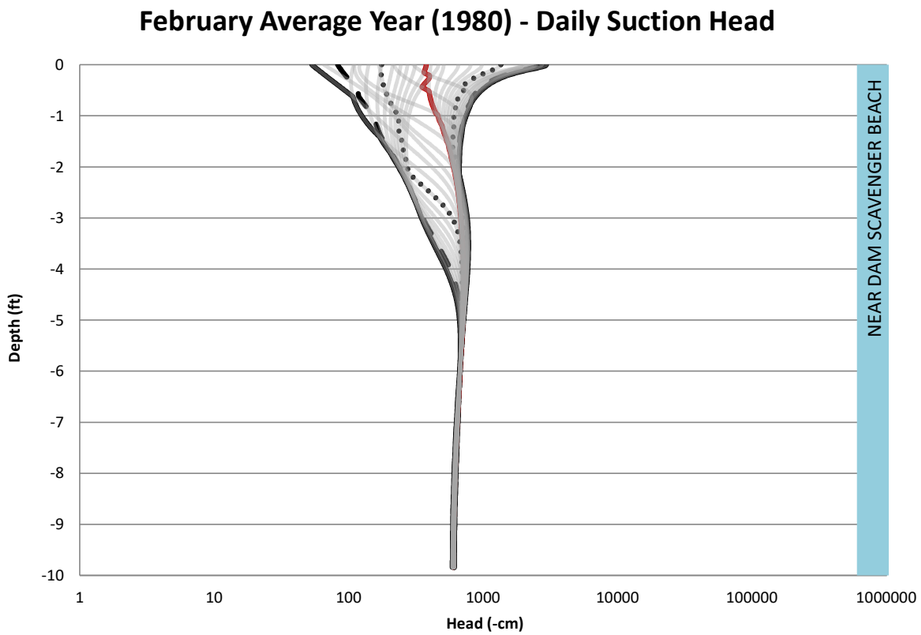
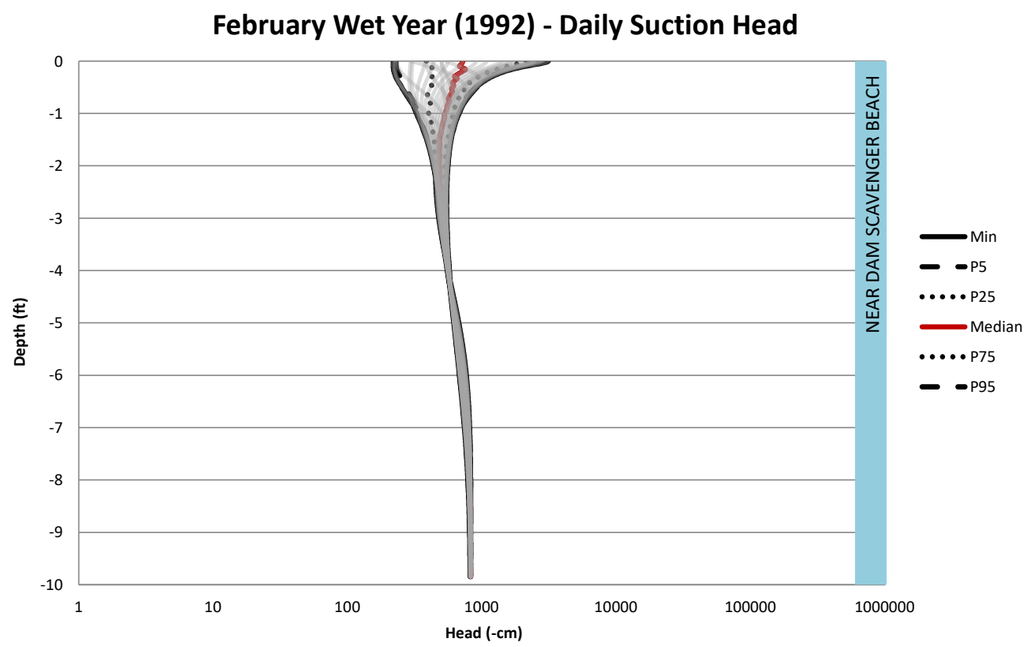
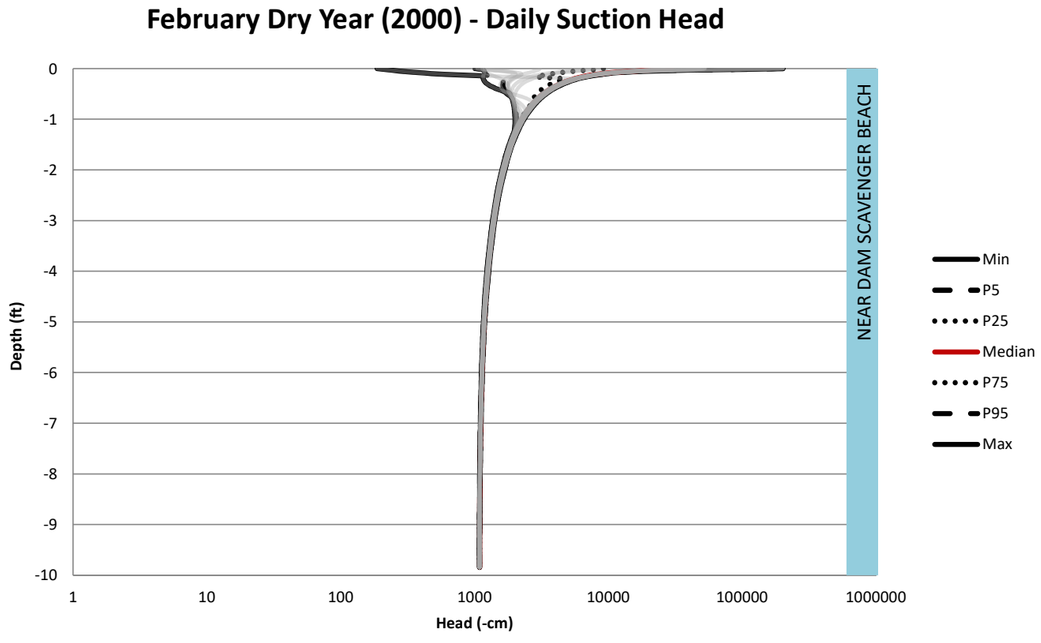
PROJECT No.
M09441A23
FIG. No.
IV-B.13







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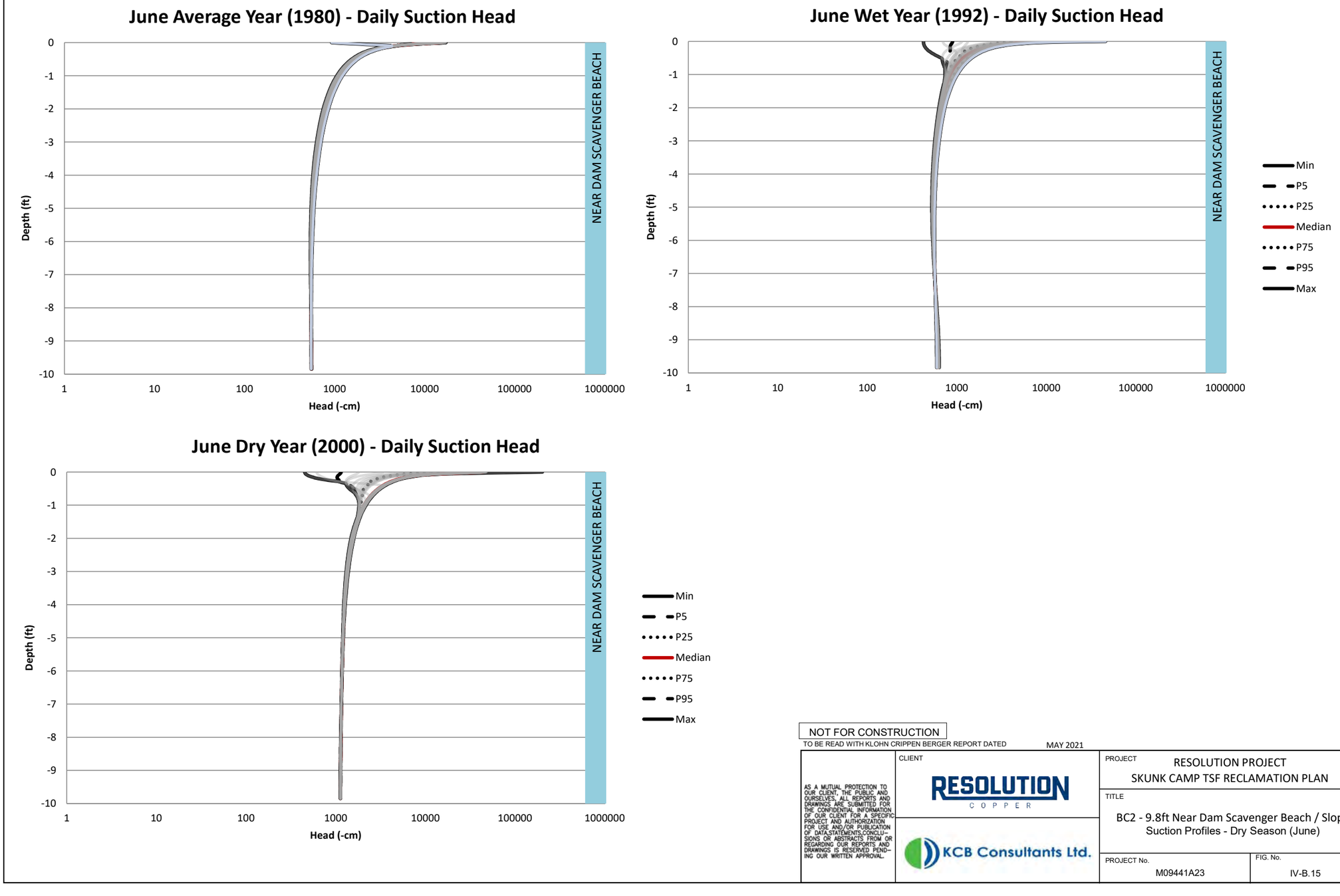
TITLE: BC2 - 9.8ft Near Dam Scavenger Beach / Slope Suction Profiles - Winter (February)

PROJECT No. M09441A23

FIG. No. IV-B.14



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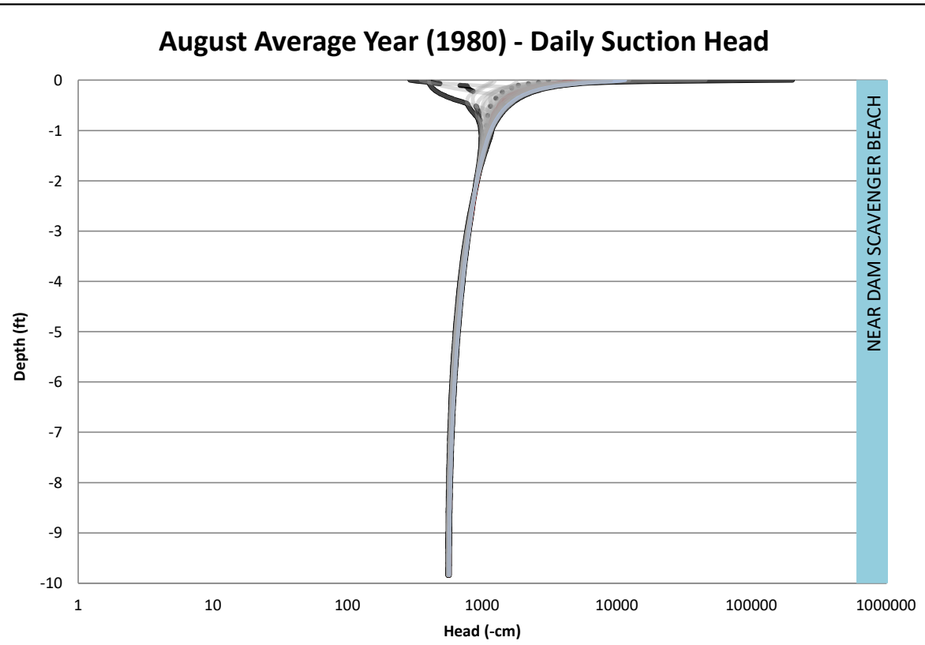
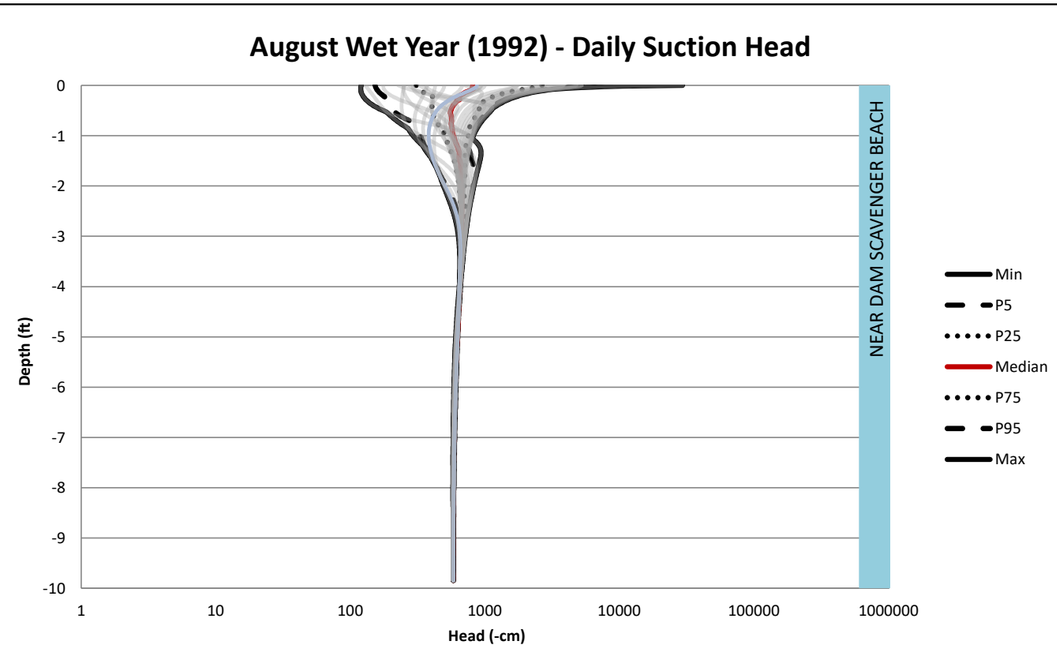
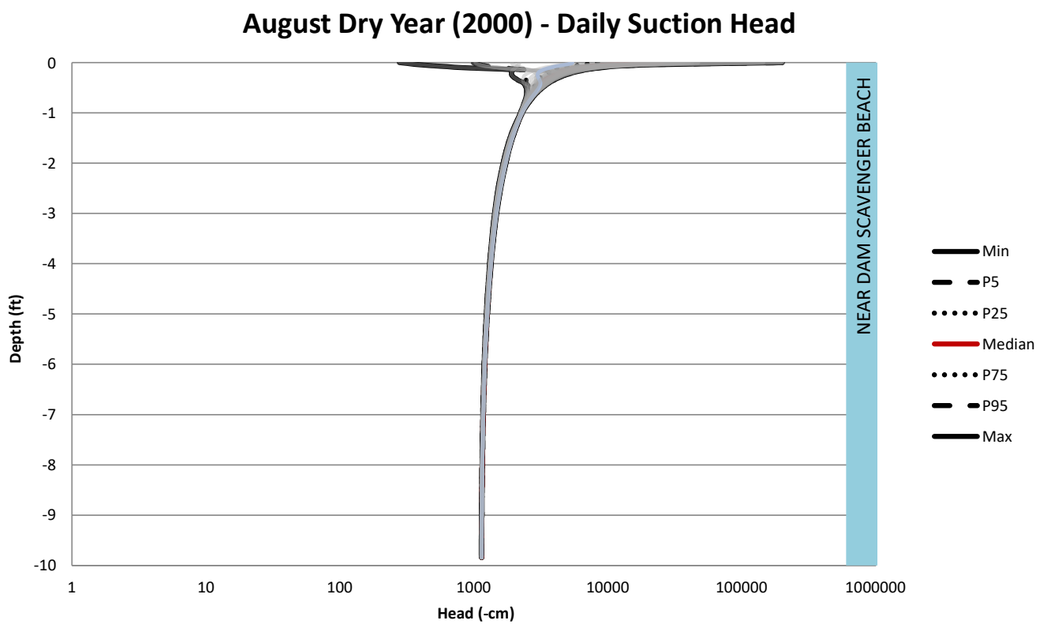
PROJECT No. M09441A23

FIG. No. IV-B.15







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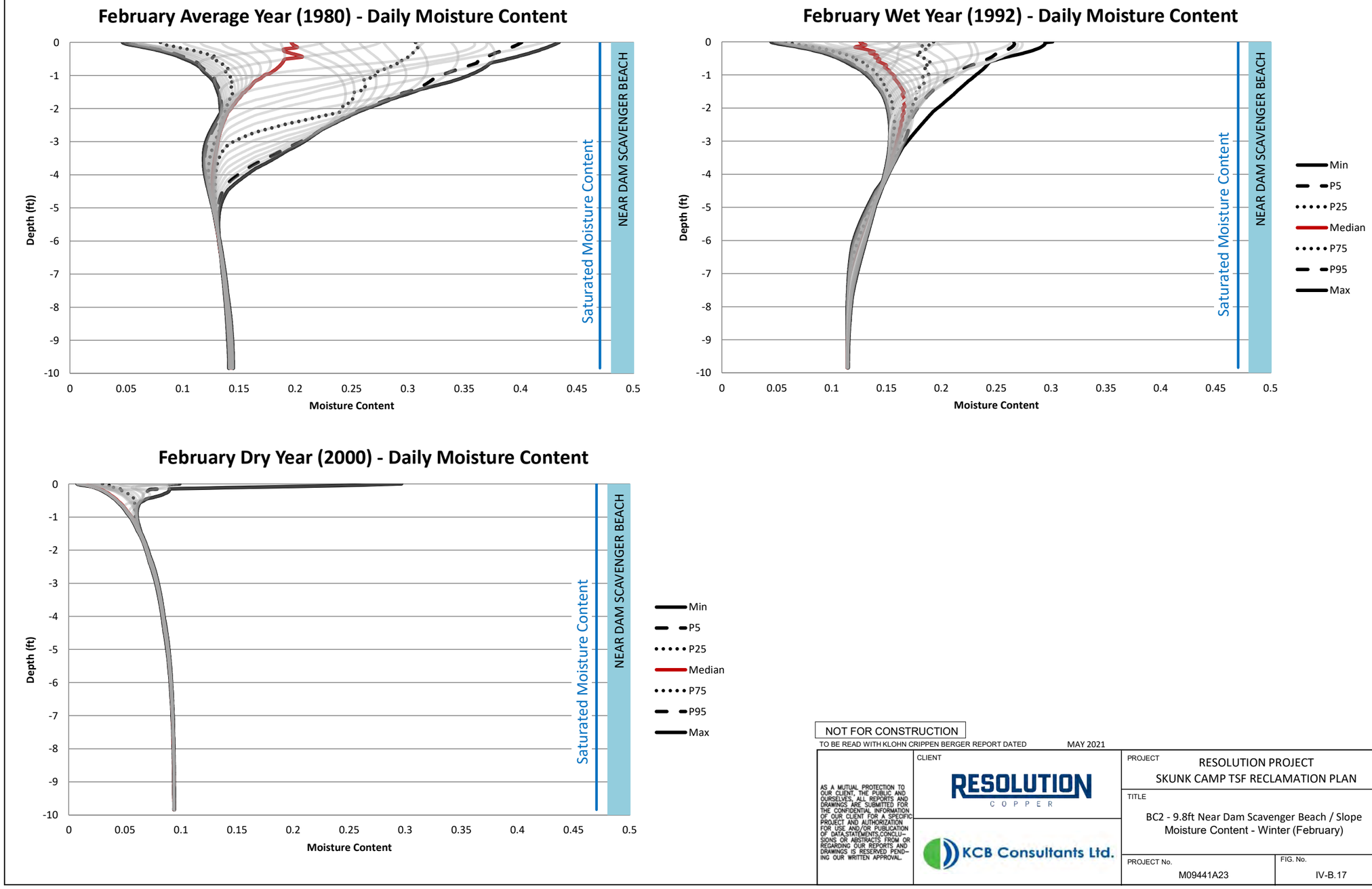
SKUNK CAMP TSF RECLAMATION PLAN

TITLE: BC2 - 9.8ft Near Dam Scavenger Beach / Slope Suction Profiles - Summer Monsoon (August)

PROJECT No. M09441A23

FIG. No. IV-B.16


February Average Year (1980) - Daily Moisture Content
Depth (ft))
Moisture Content
Saturated Moisture Content
NEAR DAM SCAVENGER BEACH
February Wet Year (1992) - Daily Moisture Content
Depth (ft)
Moisture Content
Saturated Moisture Content
NEAR DAM SCAVENGER BEACH
Min
P5
P25
Median
P75
P95
Max
February Dry Year (2000) - Daily Moisture Content
Depth (ft)
Moisture Content
Saturated Moisture Content
NEAR DAM SCAVENGER BEACH
Min
P5
P25
Median
P75
P95
Max
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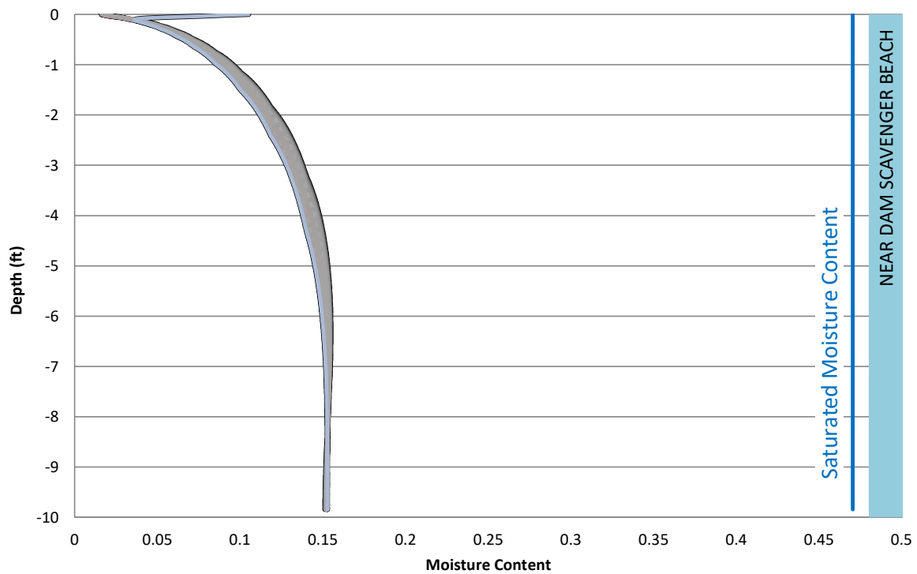
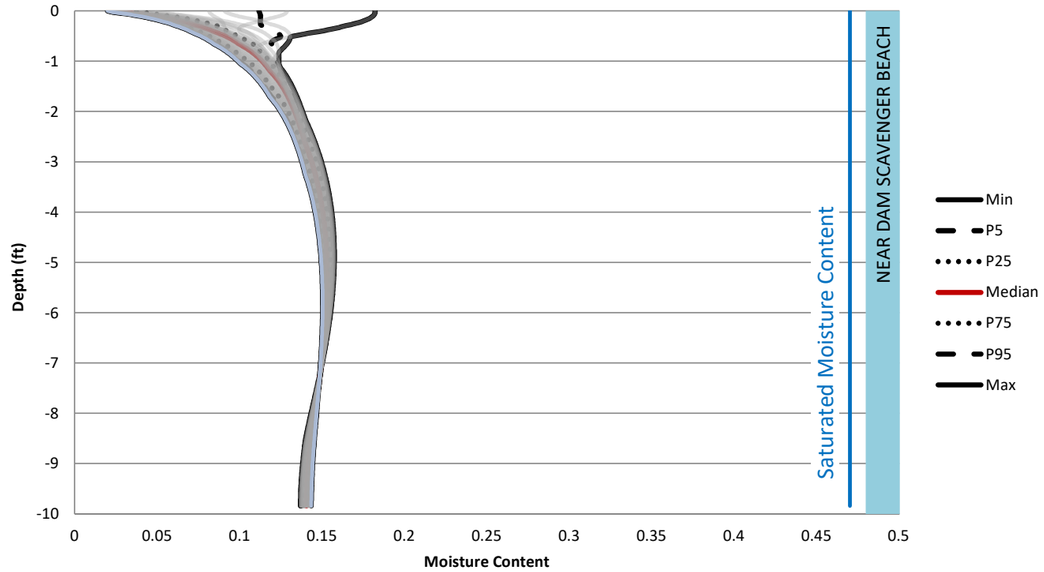
RESOLUTION PROJECT
SKUNK CAMP TSF RECLAMATION PLAN
TITLE
BC2 - 9.8ft Near Dam Scavenger Beach / Slope
Moisture Content - Winter (February)
PROJECT No.
M09441A23
FIG. No.
IV-B.17

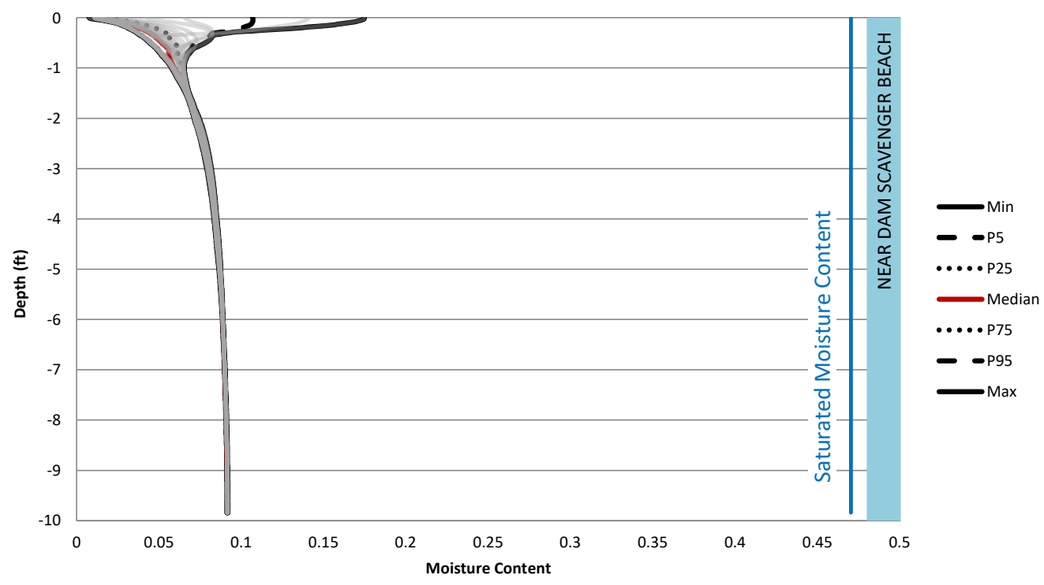
June Average Year (1980) - Daily Moisture Content



June Wet Year (1992) - Daily Moisture Content



June Dry Year (2000) - Daily Moisture Content



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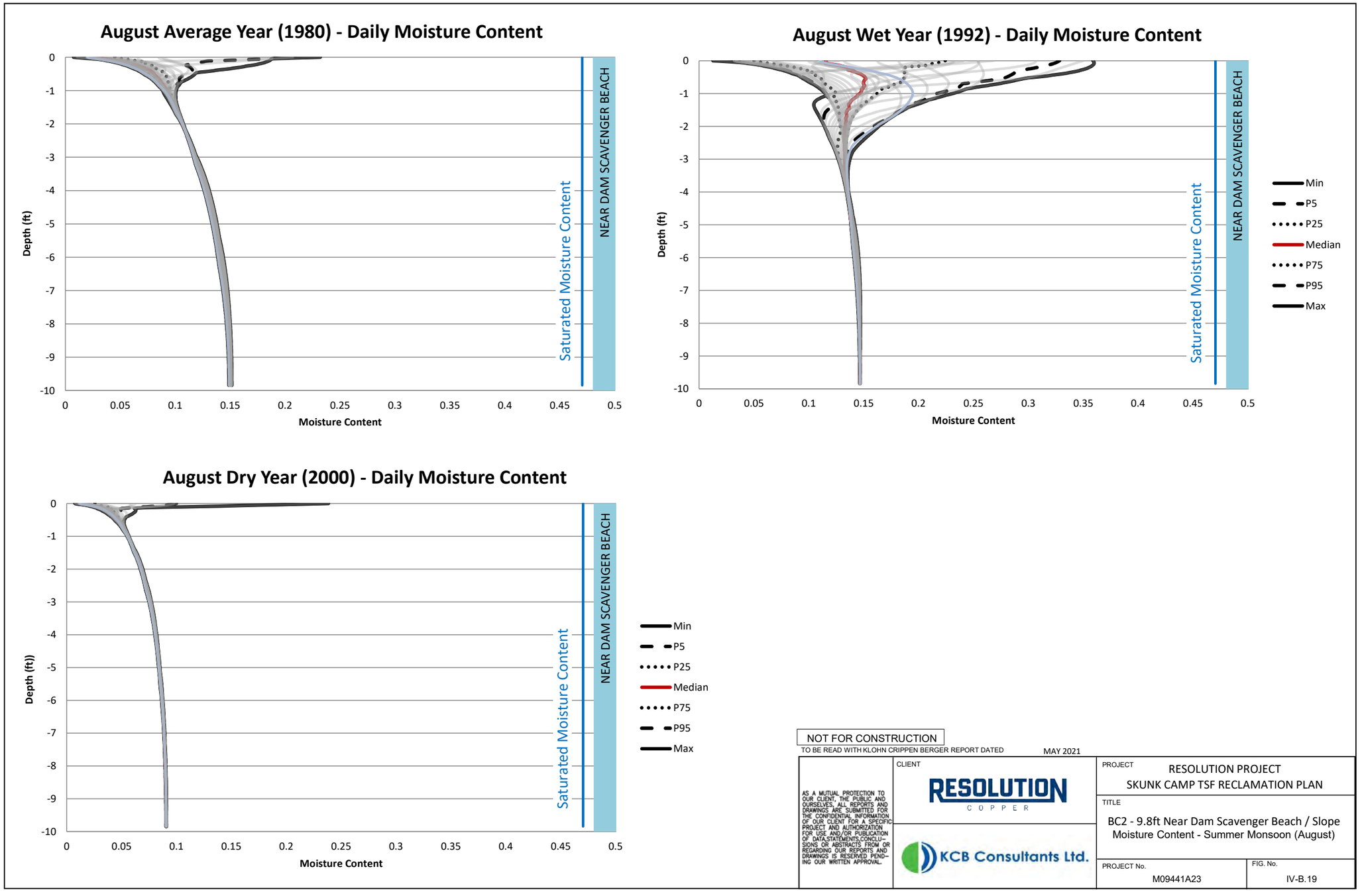
SKUNK CAMP TSF RECLAMATION PLAN

TITLE: BC2 - 9.8ft Near Dam Scavenger Beach / Slope Moisture Content - Dry Season(June)

PROJECT No. M09441A23

FIG. No. IV-B.18



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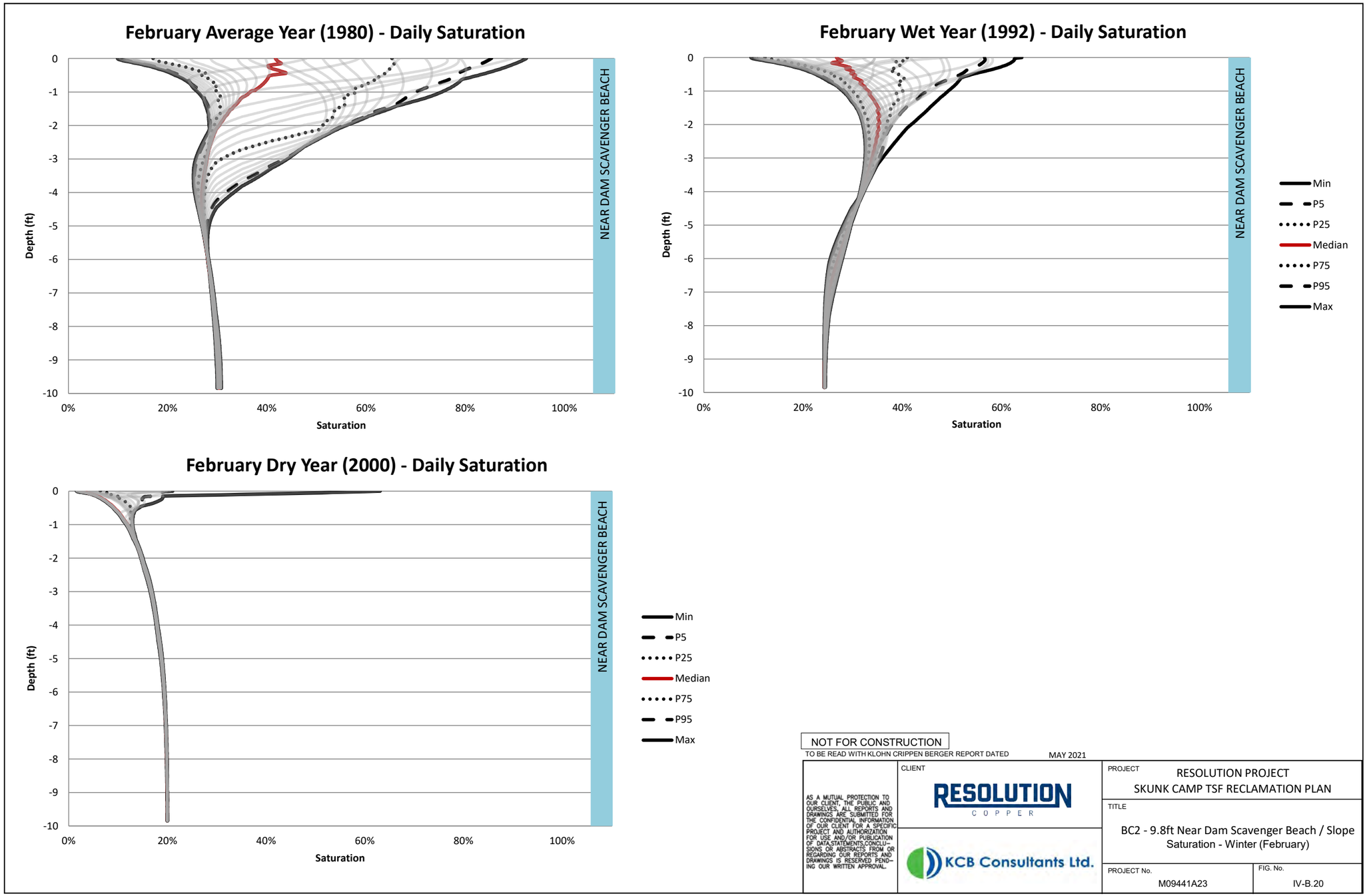
SKUNK CAMP TSF RECLAMATION PLAN

TITLE: BC2 - 9.8ft Near Dam Scavenger Beach / Slope Moisture Content - Summer Monsoon (August)

PROJECT No. M09441A23

FIG. No. IV-B.19


February Average Year (1980) - Daily Saturation
February Wet Year (1992) - Daily Saturation
February Dry Year (2000) - Daily Saturation
Depth (ft)
0
-1
-2
-3
-4
-5
-6
-7
-8
-9
-10
0%
20%
40%
60%
80%
100%
Saturation
NEAR DAM SCAVENGER BEACH
Min
P5
P25
Median
P75
P95
Max
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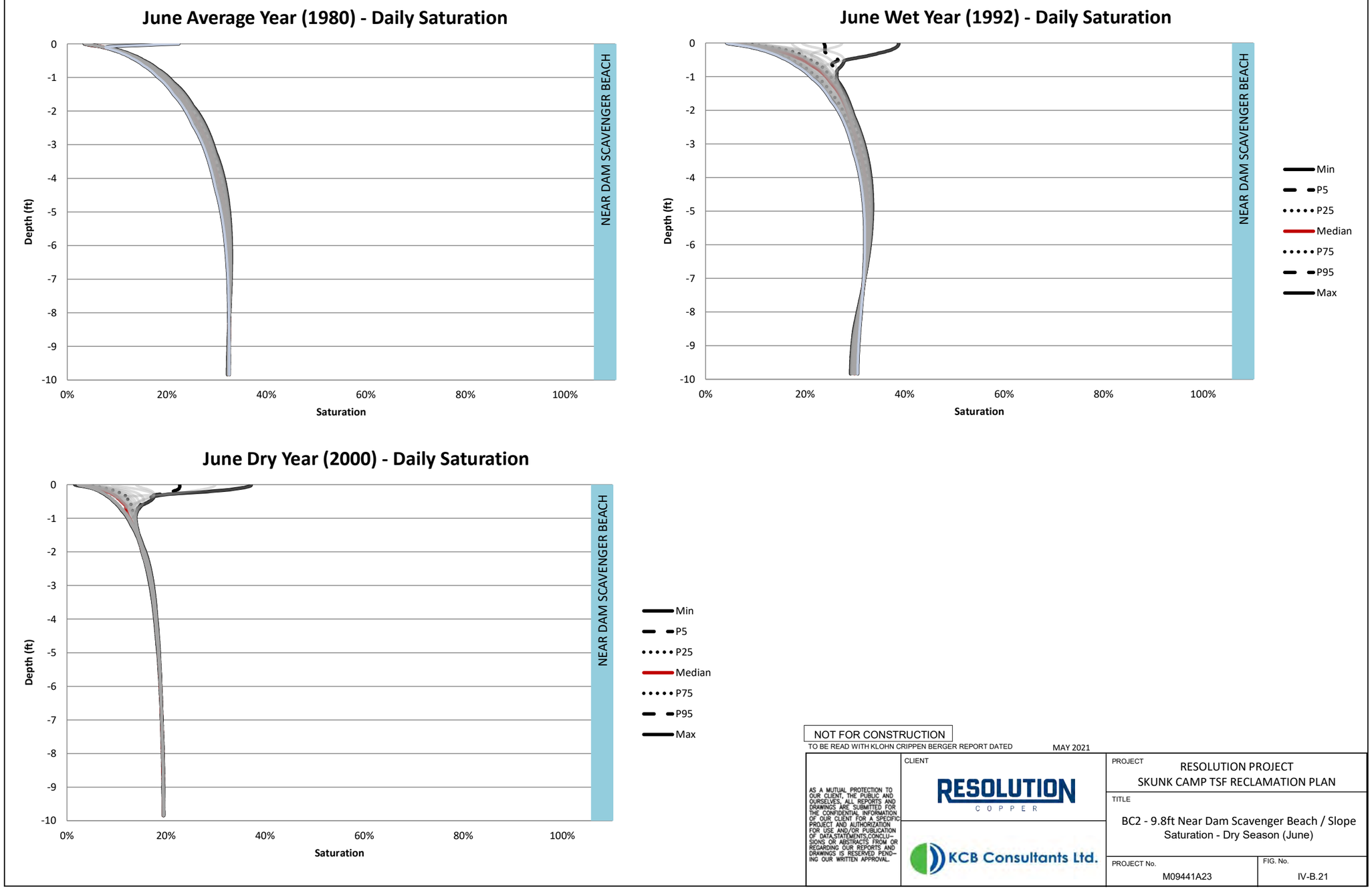
RESOLUTION PROJECT
SKUNK CAMP TSF RECLAMATION PLAN
TITLE
BC2 - 9.8ft Near Dam Scavenger Beach / Slope Saturation - Winter (February)
PROJECT No.
M09441A23
FIG. No.
IV-B.20



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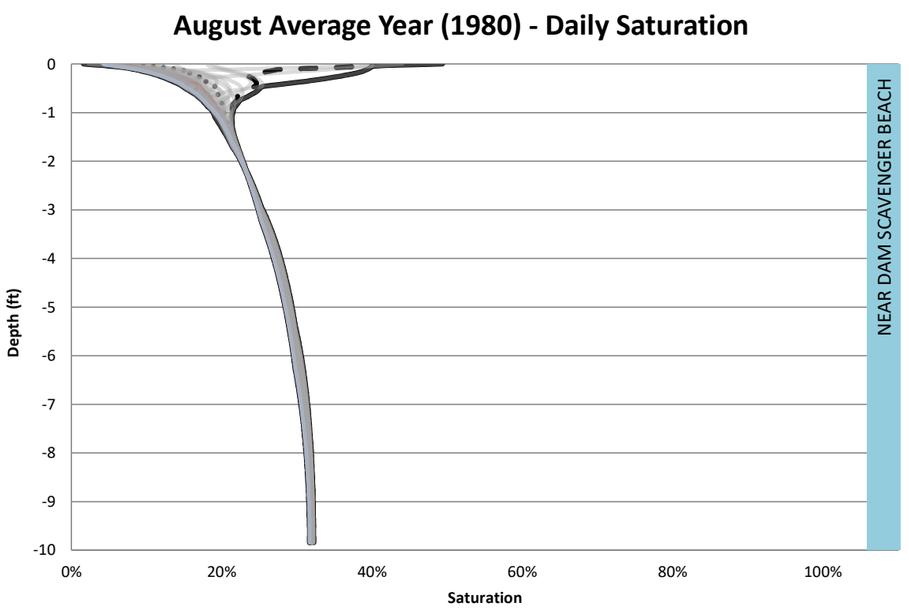
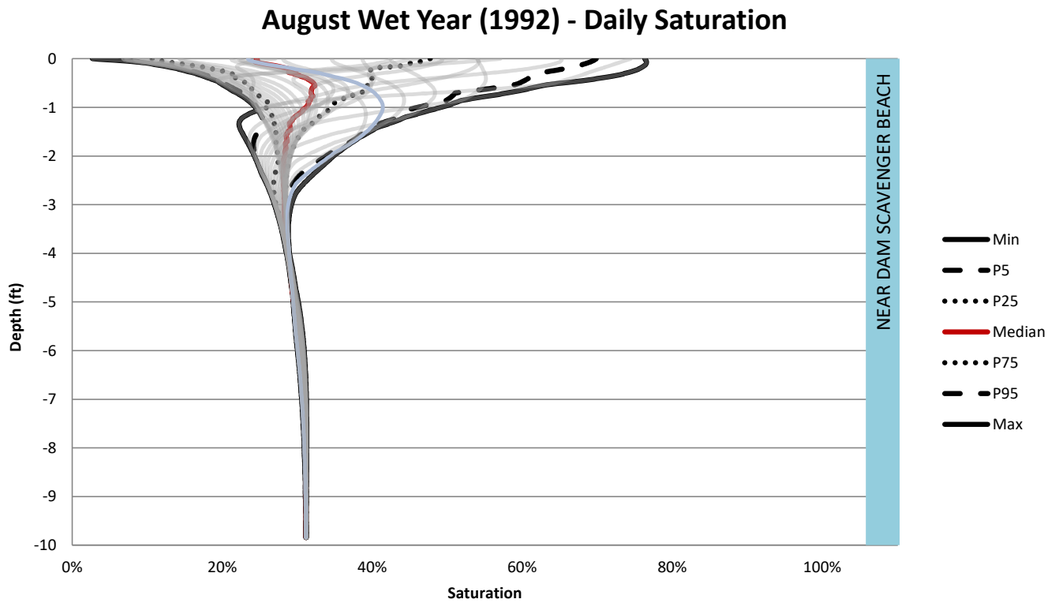
SKUNK CAMP TSF RECLAMATION PLAN

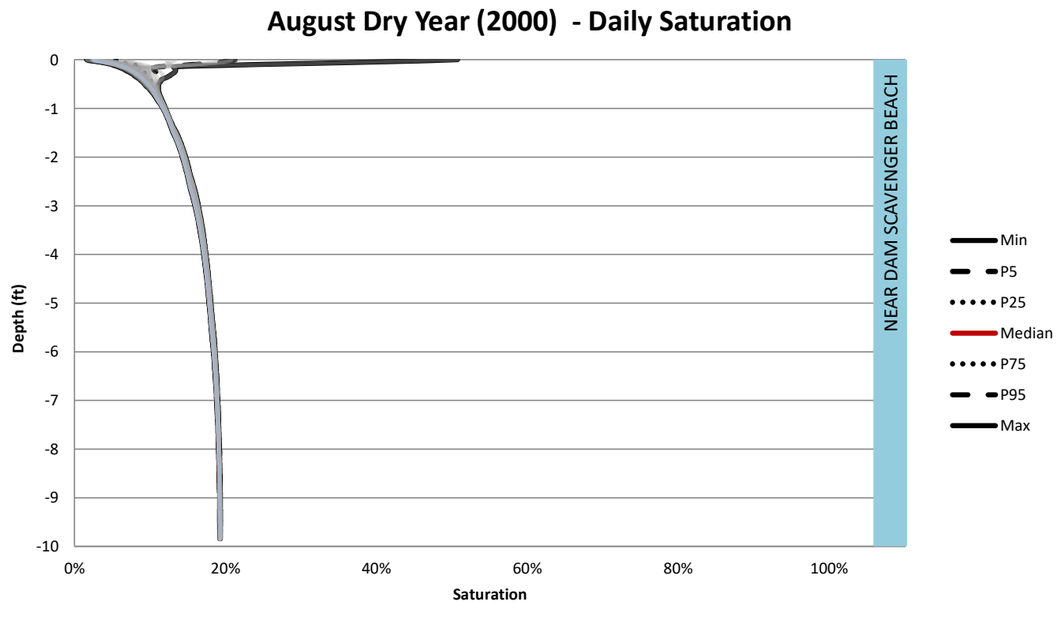
TITLE: BC2 - 9.8ft Near Dam Scavenger Beach / Slope Saturation - Dry Season (June)

PROJECT No. M09441A23

FIG. No. IV-B.21







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SKUNK CAMP TSF RECLAMATION PLAN

TITLE: BC2 - 9.8ft Near Dam Scavenger Beach / Slope Saturation - Summer Monsoon (August)

PROJECT No. M09441A23

FIG. No. IV-B.22

Table IV-B.9 DC1 Annual Water Balance

Water Year	Result Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
		(in)	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
1951	1951-10-01	14	32	0.21	11	-18	0	14	14	60
1952	1952-10-01	0	35	-5.4	9.4	-2.3	0	20	15	72
1953	1953-10-01	15	40	-5.7	7.3	-0.77	0	15	9.6	72
1954	1954-10-01	21	34	-9.3	9.2	-0.36	0	21	12	72
1955	1955-10-01	13	42	-5.1	6.5	-0.20	0	13	8.4	72
1956	1956-10-01	13	45	-4.6	5.2	-0.12	0	13	8.0	74
1957	1957-10-01	15	40	-5.2	5.5	-0.081	0	15	9.8	71
1958	1958-10-01	19	35	-7.2	6.5	-0.054	0	19	12	70
1959	1959-10-01	16	42	-5.4	6.1	-0.041	0	16	10	75
1960	1960-10-01	19	37	-7.6	6.4	-0.031	0	19	11	73
1961	1961-10-01	9.8	46	-3.0	3.5	-0.043	0	9.8	6.8	73
1962	1962-10-01	14	40	-5.0	4.7	-0.042	0	14	9.2	71
1963	1963-10-01	24	33	-10	7.7	-0.032	0	24	13	73
1964	1964-10-01	11	44	-3.0	5.2	-0.029	0	11	8.4	72
1965	1965-10-01	18	37	-6.3	6.5	-0.028	0	18	11	71
1966	1966-10-01	23	32	-11	7.2	-0.032	0	23	12	72
1967	1967-10-01	14	42	-5.0	6.5	-0.096	0	14	9.3	72
1968	1968-10-01	22	33	-9.9	7.7	-0.11	0	22	12	71
1969	1969-10-01	19	37	-6.8	7.1	-0.17	0	19	12	72
1970	1970-10-01	16	40	-6.2	6.1	-0.14	0	16	9.6	72
1971	1971-10-01	12	44	-5.6	4.2	-0.094	0	12	6.5	73
1972	1972-10-01	11	48	-2.1	4.6	-0.063	0	11	9.1	76
1973	1973-10-01	31	22	-11	9.7	-0.050	0	31	20	69
1974	1974-10-01	15	40	-6.0	6.0	-0.063	0	15	9.4	72
1975	1975-10-01	19	34	-7.1	7.6	-0.055	0	19	12	69
1976	1976-10-01	16	40	-6.5	5.2	-0.044	0	16	9.5	72
1977	1977-10-01	16	40	-5.8	6.5	-0.032	0	16	10	73
1978	1978-10-01	24	31	-10	8.8	-0.026	0	24	14	71
1979	1979-10-01	30	25	-13	9.2	-0.12	0	30	17	71
1980	1980-10-01	20	35	-8.1	8.2	-0.36	0	20	12	71
1981	1981-10-01	15	43	-6.2	7.1	-0.30	0	15	8.8	75
1982	1982-10-01	23	31	-9.1	8.8	-0.18	0	23	14	69
1983	1983-10-01	27	27	-12	9.2	-0.11	0	27	15	69
1984	1984-10-01	18	37	-3.8	7.1	-0.084	0	18	14	71
1985	1985-10-01	22	29	-8.6	7.4	-0.069	0	22	14	67
1986	1986-10-01	21	33	-7.9	8.8	-0.070	0	21	13	70
1987	1987-10-01	20	34	-7.3	7.6	-0.057	0	20	13	70
1988	1988-10-01	23	32	-8.6	8.1	-0.046	0	23	14	71
1989	1989-10-01	12	45	-3.9	4.6	-0.040	0	12	7.7	74
1990	1990-10-01	23	32	-10	6.7	-0.030	0	23	12	71
1991	1991-10-01	23	32	-7.6	9.6	-0.028	0	23	15	71
1992	1992-10-01	36	18	-15	12	-0.044	0	36	22	70
1993	1993-10-01	33	21	-17	11	-0.66	0	33	15	70
1994	1994-10-01	15	41	-5.1	7.3	-1.1	0	15	10	73
1995	1995-10-01	25	30	-9.3	8.6	-0.46	0	25	15	71
1996	1996-10-01	13	43	-4.3	6.3	-0.27	0	13	9.0	74
1997	1997-10-01	10	48	-3.4	4.4	-0.15	0	10	6.7	75
1998	1998-10-01	20	33	-8.1	7.8	-0.093	0	20	12	69
1999	1999-10-01	15	42	-5.5	5.9	-0.069	0	15	9.3	73
2000	2000-10-01	5.4	54	-1.8	2.4	-0.053	0	5.4	3.6	77
2001	2001-10-01	23	31	-8.9	8.3	-0.037	0	23	14	71
2002	2002-10-01	5.4	53	-1.4	1.8	-0.033	0	5.4	4.0	75
2003	2003-10-01	13	46	-5.0	5.0	-0.024	0	13	8.1	76
2004	2004-10-01	12	47	-4.6	4.6	-0.020	0	12	7.6	77

Table IV-B.9 DC1 Annual Water Balance

Water Year	Result Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
		(in)	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
2005	2005-10-01	24	32	-11	8.8	-0.016	0	24	13	72
2006	2006-10-01	12	46	-4.7	5.3	-0.028	0	12	7.3	75

Table IV-B.10 DC1 Monthly Water Balance 9 Wet Years (1983 to 1991)

Month	Result Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
		[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
Nov-82	1982-11-30	0	4.1	-0.99	0.83	-0.021	0	2.5	1.6	8.8
Dec-82	1982-12-30	2.5	-0.28	-0.74	0.36	-0.0098	0	2.5	1.8	2.7
Jan-83	1983-01-29	0.67	2.0	-0.13	0.41	-0.0094	0	0.67	0.55	3.0
Feb-83	1983-02-28	3.5	-0.91	-1.7	0.72	-0.0094	0	3.5	1.9	2.9
Mar-83	1983-03-30	5.4	-2.6	-3.1	1.1	-0.0087	0	5.4	2.3	4.0
Apr-83	1983-04-29	0.83	3.5	0.84	1.5	-0.0087	0	0.83	1.7	5.3
May-83	1983-05-29	0	6.5	0.12	0.87	-0.0083	0	0	0.12	7.9
Jun-83	1983-06-28	0	7.3	0.051	0.33	-0.0083	0	0	0.063	9.4
Jul-83	1983-07-28	2.1	4.9	-1.1	0.56	-0.0079	0	2.1	1.1	9.6
Aug-83	1983-08-27	3.8	1.6	-1.2	1.5	-0.0075	0	3.8	2.6	7.2
Sep-83	1983-09-26	1.8	3.5	-0.60	0.97	-0.0075	0	1.8	1.2	7.5
Oct-83	1983-10-26	4.9	-1.2	-2.6	0.75	-0.0075	0	4.9	2.3	5.1
Nov-83	1983-11-25	1.6	1.6	-0.92	0.49	-0.0071	0	1.6	0.69	4.2
Dec-83	1983-12-25	1.9	0.35	-0.083	0.37	-0.0075	0	1.9	1.8	2.6
Jan-84	1984-01-24	1.5	0.79	-0.043	0.40	-0.0071	0	1.5	1.5	2.7
Feb-84	1984-02-23	0	3.2	0.24	0.56	-0.0071	0	0	0.24	3.7
Mar-84	1984-03-24	0	4.1	0.091	0.50	-0.0071	0	0	0.091	5.0
Apr-84	1984-04-23	0.87	4.0	-0.34	0.52	-0.0067	0	0.87	0.52	6.5
May-84	1984-05-23	0.67	5.4	-0.13	0.28	-0.0071	0	0.67	0.54	7.5
Jun-84	1984-06-22	0.039	7.1	0.063	0.11	-0.0067	0	0.039	0.10	9.3
Jul-84	1984-07-22	3.6	2.4	-1.7	0.81	-0.0063	0	3.6	1.9	8.5
Aug-84	1984-08-21	3.9	1.5	-1.1	1.3	-0.0063	0	3.9	2.7	6.9
Sep-84	1984-09-20	1.2	4.3	-0.19	0.85	-0.0067	0	1.2	0.96	7.0
Oct-84	1984-10-20	2.5	1.4	-0.95	0.61	-0.0059	0	2.5	1.6	5.6
Nov-84	1984-11-19	0	3.6	0.14	0.25	-0.0063	0	0	0.14	4.2
Dec-84	1984-12-19	4.8	-2.6	-3.3	0.30	-0.0063	0	4.8	1.5	3.1
Jan-85	1985-01-18	3.9	-1.9	-1.9	0.37	-0.0059	0	3.9	2.0	2.3
Feb-85	1985-02-17	2.9	-0.87	-0.87	0.50	-0.0059	0	2.9	2.0	2.3
Mar-85	1985-03-19	1.7	1.1	0.28	1.0	-0.0055	0	1.7	2.0	3.6
Apr-85	1985-04-18	0.43	4.0	0.28	1.3	-0.0055	0	0.43	0.74	5.4
May-85	1985-05-18	0.47	4.8	-0.091	0.69	-0.0055	0	0.47	0.35	6.7
Jun-85	1985-06-17	0	6.7	0.059	0.31	-0.0051	0	0	0.079	8.6
Jul-85	1985-07-17	0.24	6.3	-0.14	0.19	-0.0055	0	0.24	0.079	8.4
Aug-85	1985-08-16	2.1	3.9	-0.78	0.78	-0.0051	0	2.1	1.3	7.8
Sep-85	1985-09-15	2.2	3.1	-0.88	0.70	-0.0051	0	2.2	1.3	7.9
Oct-85	1985-10-15	3.1	0.91	-1.2	0.89	-0.0055	0	3.1	1.9	5.7
Nov-85	1985-11-14	1.4	1.8	-0.69	0.46	-0.0059	0	1.4	0.71	3.9
Dec-85	1985-12-14	2.7	-0.24	-1.3	0.38	-0.0055	0	2.7	1.5	3.1
Jan-86	1986-01-13	0	2.8	0.84	0.41	-0.0063	0	0	0.87	3.3
Feb-86	1986-02-12	2.3	0.28	-1.8	0.35	-0.0059	0	2.3	0.59	3.6
Mar-86	1986-03-14	1.9	1.5	-0.46	0.99	-0.0063	0	1.9	1.5	3.7
Apr-86	1986-04-13	3.1	0.87	-1.1	1.5	-0.0059	0	3.1	2.0	4.9
May-86	1986-05-13	0	5.7	0.14	0.90	-0.0063	0	0	0.16	7.4
Jun-86	1986-06-12	0	7.2	0.051	0.28	-0.0059	0	0	0.079	9.1
Jul-86	1986-07-12	2.2	4.8	-1.1	0.51	-0.0059	0	2.2	1.1	9.2
Aug-86	1986-08-11	2.8	2.9	-0.98	1.2	-0.0051	0	2.8	1.8	7.5
Sep-86	1986-09-10	3.0	2.2	-1.5	0.90	-0.0055	0	3.0	1.5	7.3
Oct-86	1986-10-10	0.87	3.5	0.11	0.75	-0.0051	0	0.87	1.0	6.1
Nov-86	1986-11-09	2.8	0.47	-1.3	0.55	-0.0051	0	2.8	1.4	4.6
Dec-86	1986-12-09	2.6	0.16	-1.9	0.36	-0.0051	0	2.6	0.71	3.4
Jan-87	1987-01-08	1.5	0.83	0.29	0.39	-0.0051	0	1.5	1.8	2.7
Feb-87	1987-02-07	3.1	-0.63	-1.0	0.50	-0.0051	0	3.1	2.1	2.9
Mar-87	1987-03-09	2.3	0.83	-0.76	0.98	-0.0047	0	2.3	1.5	3.4
Apr-87	1987-04-08	0.94	2.8	0.0039	1.2	-0.0047	0	0.94	0.94	5.0

Table IV-B.10 DC1 Monthly Water Balance 9 Wet Years (1983 to 1991)

Month	Result Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
		[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
May-87	1987-05-08	0	5.3	0.087	0.56	-0.0047	0	0	0.079	6.8
Jun-87	1987-06-07	0.31	6.1	0.016	0.19	-0.0047	0	0.31	0.35	8.2
Jul-87	1987-07-07	0.24	6.9	-0.0039	0.12	-0.0043	0	0.24	0.20	9.2
Aug-87	1987-08-06	3.0	3.5	-1.9	0.87	-0.0043	0	3.0	1.2	8.9
Sep-87	1987-09-05	2.4	3.2	-0.91	1.2	-0.0039	0	2.4	1.5	7.5
Oct-87	1987-10-05	0.79	4.1	0.035	0.55	-0.0043	0	0.79	0.83	6.7
Nov-87	1987-11-04	1.4	2.6	-0.91	0.15	-0.0043	0	1.4	0.47	5.8
Dec-87	1987-12-04	0.71	2.5	0.22	0.38	-0.0039	0	0.71	0.91	3.8
Jan-88	1988-01-03	4.0	-1.7	-2.6	0.30	-0.0039	0	4.0	1.5	3.0
Feb-88	1988-02-02	3.6	-1.4	-1.5	0.43	-0.0039	0	3.6	2.1	2.4
Mar-88	1988-03-03	0.71	2.6	0.63	0.89	-0.0039	0	0.71	1.3	3.6
Apr-88	1988-04-02	0.16	4.1	0.12	0.95	-0.0039	0	0.16	0.28	5.5
May-88	1988-05-02	2.4	2.0	-1.1	0.95	-0.0031	0	2.4	1.3	6.1
Jun-88	1988-06-01	0	6.6	0.15	0.62	-0.0039	0	0	0.16	8.0
Jul-88	1988-07-01	0.12	6.6	0.035	0.13	-0.0035	0	0.12	0.20	8.9
Aug-88	1988-07-31	2.5	4.0	-1.4	0.31	-0.0035	0	2.5	1.1	8.5
Sep-88	1988-08-30	6.7	-1.3	-2.9	1.7	-0.0031	0	6.7	3.7	7.3
Oct-88	1988-10-29	2.0	7.3	-0.035	1.8	-0.0071	0	2.0	2.0	13
Nov-88	1988-11-28	1.7	1.3	-1.3	0.29	-0.0035	0	1.7	0.43	4.1
Dec-88	1988-12-28	1.1	1.4	0.11	0.37	-0.0035	0	1.1	1.2	3.1
Jan-89	1989-01-27	2.0	0.28	-0.53	0.39	-0.0035	0	2.0	1.4	2.4
Feb-89	1989-02-26	0.55	2.5	0.13	0.61	-0.0035	0	0.55	0.67	3.3
Mar-89	1989-03-28	1.7	2.4	-1.4	0.47	-0.0031	0	1.7	0.31	5.3
Apr-89	1989-04-27	0	5.5	0.61	0.88	-0.0035	0	0	0.63	6.9
May-89	1989-05-27	0.16	6.3	0.047	0.087	-0.0031	0	0.16	0.20	8.3
Jun-89	1989-06-26	0	7.0	0.039	0.051	-0.0031	0	0	0.039	9.1
Jul-89	1989-07-26	0.079	6.8	0.016	0.039	-0.0035	0	0.079	0.079	9.0
Aug-89	1989-08-25	1.3	4.3	-0.43	0.30	-0.0028	0	1.3	0.91	8.0
Sep-89	1989-09-24	1.5	4.0	-0.67	0.57	-0.0028	0	1.5	0.83	7.3
Oct-89	1989-10-24	1.1	3.3	-0.35	0.32	-0.0028	0	1.1	0.71	6.1
Nov-89	1989-11-23	0.28	3.2	-0.087	0.075	-0.0028	0	0.28	0.24	4.5
Dec-89	1989-12-23	0	2.8	0.19	0.047	-0.0028	0	0	0.16	3.5
Jan-90	1990-01-22	2.2	0.039	-1.0	0.25	-0.0024	0	2.2	1.1	2.9
Feb-90	1990-02-21	2.5	-0.24	-1.1	0.51	-0.0028	0	2.5	1.5	2.5
Mar-90	1990-03-23	0.83	2.6	-0.047	0.94	-0.0024	0	0.83	0.75	4.2
Apr-90	1990-04-22	1.0	3.9	-0.31	0.76	-0.0028	0	1.0	0.71	6.0
May-90	1990-05-22	1.1	4.9	-0.48	0.52	-0.0024	0	1.1	0.59	7.7
Jun-90	1990-06-21	0.39	6.7	-0.063	0.087	-0.0028	0	0.39	0.35	9.0
Jul-90	1990-07-21	0.94	5.5	-0.30	0.25	-0.0024	0	0.94	0.63	8.6
Aug-90	1990-08-20	9.6	-4.3	-7.9	0.76	-0.0020	0	9.6	1.7	7.8
Sep-90	1990-09-19	2.5	3.0	0.28	1.7	-0.0024	0	2.5	2.7	7.1
Oct-90	1990-10-19	0.43	3.7	1.2	1.00	-0.0024	0	0.43	1.6	5.9
Nov-90	1990-11-18	1.5	1.9	-0.50	0.59	-0.0024	0	1.5	1.1	4.2
Dec-90	1990-12-18	2.8	-0.16	-1.6	0.40	-0.0024	0	2.8	1.2	3.5
Jan-91	1991-01-17	4.7	-2.6	-2.7	0.37	-0.0020	0	4.7	2.0	2.3
Feb-91	1991-02-16	0.16	2.7	1.5	0.66	-0.0024	0	0.16	1.6	3.3
Mar-91	1991-03-18	3.6	-0.31	-1.8	1.1	-0.0016	0	3.6	1.8	4.3
Apr-91	1991-04-17	3.2	0.87	-0.76	1.5	-0.0020	0	3.2	2.4	4.8
May-91	1991-05-17	0	5.8	0.19	1.2	-0.0028	0	0	0.20	7.4
Jun-91	1991-06-16	0.71	6.3	-0.13	0.57	-0.0024	0	0.71	0.59	8.7
Jul-91	1991-07-16	0.47	6.8	-0.083	0.41	-0.0024	0	0.47	0.35	9.4
Aug-91	1991-08-15	3.3	2.8	-1.5	0.81	-0.0024	0	3.3	1.8	8.4
Sep-91	1991-09-14	2.0	3.2	-0.66	1.1	-0.0024	0	2.0	1.3	7.5
Oct-91	1991-10-01	0.24	2.4	0.047	0.39	-0.0016	0	0.24	0.28	3.5

Table IV-B.11 DC1 Monsoon Period Water Balance

Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
1951-07-01	0	7.2	0.11	1.1	-0.98	0	0	0.11	9.2
1951-08-01	1.1	6.3	-0.34	1.1	-0.74	0	1.1	0.71	9.5
1951-09-01	3.6	2.2	-2.5	1.1	-0.59	0	3.6	1.1	7.8
1951-10-01	0.65	4.4	0.50	1.3	-0.45	0	0.65	1.1	6.6
1951-11-01	1.6	2.7	-0.97	0.68	-0.38	0	1.6	0.67	5.4
1951	7.0	23	-3.2	5.3	-3.1	0	7.0	3.7	39
1952-07-01	0.63	6.8	-0.081	0.83	-0.13	0	0.63	0.55	9.6
1952-08-01	0.56	6.3	-0.087	0.41	-0.12	0	0.56	0.47	8.8
1952-09-01	0.45	5.4	-0.026	0.39	-0.11	0	0.45	0.42	7.8
1952-10-01	0.70	4.7	-0.18	0.37	-0.10	0	0.70	0.53	7.0
1952-11-01	0	4.8	0.088	0.20	-0.098	0	0	0.088	5.9
1952	2.3	28	-0.28	2.2	-0.57	0	2.3	2.1	39
1953-07-01	0	7.0	0.040	0.26	-0.052	0	0	0.041	9.1
1953-08-01	2.7	3.9	-1.7	0.61	-0.050	0	2.7	1.0	8.8
1953-09-01	1.8	4.0	-0.50	1.1	-0.048	0	1.8	1.3	7.7
1953-10-01	0	5.2	0.24	0.64	-0.044	0	0	0.24	6.8
1953-11-01	0.012	4.4	0.054	0.12	-0.043	0	0.012	0.065	5.5
1953	4.5	25	-1.8	2.7	-0.24	0	4.5	2.7	38
1954-07-01	0.13	6.8	0.038	0.26	-0.026	0	0.13	0.17	9.0
1954-08-01	4.5	1.5	-2.1	1.1	-0.025	0	4.5	2.4	7.8
1954-09-01	5.3	0.20	-2.5	1.8	-0.023	0	5.3	2.8	7.4
1954-10-01	1.3	3.8	-0.20	1.2	-0.022	0	1.3	1.1	6.6
1954-11-01	0	4.5	0.17	0.49	-0.021	0	0	0.17	5.6
1954	11	17	-4.6	4.8	-0.12	0	11	6.6	36
1955-07-01	2.1	5.0	-1.0	0.78	-0.015	0	2.1	1.0	9.1
1955-08-01	4.5	1.7	-2.5	0.70	-0.015	0	4.5	1.9	7.9
1955-09-01	2.7	2.6	-0.47	1.7	-0.014	0	2.7	2.2	7.2
1955-10-01	0.12	5.1	0.12	0.69	-0.013	0	0.12	0.24	6.8
1955-11-01	0.020	4.7	0.060	0.13	-0.013	0	0.020	0.079	5.9
1955	9.4	19	-3.8	4.0	-0.069	0	9.4	5.5	37
1956-07-01	0.24	7.1	-0.094	0.091	-0.0091	0	0.24	0.15	9.4
1956-08-01	2.8	4.2	-1.1	0.56	-0.0087	0	2.8	1.7	9.0
1956-09-01	1.7	3.8	-0.56	1.0	-0.0087	0	1.7	1.2	7.5
1956-10-01	0.075	5.2	0.0075	0.16	-0.0083	0	0.075	0.083	6.8
1956-11-01	0.53	3.6	-0.19	0.055	-0.0083	0	0.53	0.35	5.2
1956	5.4	24	-1.9	1.9	-0.043	0	5.4	3.4	38
1957-07-01	0.031	7.2	0.067	0.11	-0.0063	0	0.031	0.098	9.3
1957-08-01	1.1	5.5	-0.37	0.17	-0.0059	0	1.1	0.72	8.5
1957-09-01	3.4	2.4	-1.3	0.91	-0.0059	0	3.4	2.1	8.1
1957-10-01	0.57	4.5	-0.059	0.61	-0.0051	0	0.57	0.51	6.6
1957-11-01	3.2	0.30	-2.1	0.30	-0.0055	0	3.2	1.1	4.6
1957	8.3	20	-3.7	2.1	-0.029	0	8.3	4.6	37
1958-07-01	0.70	6.4	-0.26	0.24	-0.0043	0	0.70	0.44	9.3
1958-08-01	0.78	6.2	-0.25	0.14	-0.0043	0	0.78	0.54	9.1
1958-09-01	0.85	5.1	-0.15	0.35	-0.0039	0	0.85	0.70	8.0
1958-10-01	3.0	1.8	-1.6	0.65	-0.0039	0	3.0	1.4	6.4
1958-11-01	1.9	2.3	-0.55	0.78	-0.0039	0	1.9	1.4	5.3
1958	7.3	22	-2.8	2.2	-0.020	0	7.3	4.5	38
1959-07-01	1.0	6.1	-0.37	0.28	-0.0031	0	1.0	0.67	9.1
1959-08-01	3.8	3.7	-2.2	0.80	-0.0028	0	3.8	1.6	9.6
1959-09-01	5.3	0.15	-1.6	1.6	-0.0028	0	5.3	3.7	7.4
1959-10-01	0.051	5.1	0.20	0.87	-0.0028	0	0.051	0.25	6.9
1959-11-01	4.8	-0.60	-4.2	0.34	-0.0028	0	4.8	0.55	5.3
1959	15	14	-8.2	3.9	-0.014	0	15	6.8	38
1960-07-01	0	7.2	0.051	0.24	-0.0024	0	0	0.051	9.2
1960-08-01	0.74	6.4	-0.27	0.31	-0.0028	0	0.74	0.46	9.2
1960-09-01	1.5	4.4	-0.44	0.60	-0.0024	0	1.5	1.1	8.1

Table IV-B.11 DC1 Monsoon Period Water Balance

Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
1960-10-01	0.27	5.0	0.012	0.16	-0.0028	0	0.27	0.28	7.0
1960-11-01	2.1	1.9	-0.93	0.41	-0.0031	0	2.1	1.1	5.0
1960	4.6	25	-1.6	1.7	-0.013	0	4.6	3.0	38
1961-07-01	0	7.2	0.031	0.051	-0.0039	0	0	0.031	9.3
1961-08-01	0.67	6.1	-0.16	0.083	-0.0039	0	0.67	0.51	8.9
1961-09-01	3.0	3.0	-1.7	0.54	-0.0035	0	3.0	1.3	8.1
1961-10-01	0.50	4.4	0.52	0.65	-0.0035	0	0.50	1.0	6.3
1961-11-01	0.45	3.6	-0.24	0.055	-0.0039	0	0.45	0.21	5.4
1961	4.6	24	-1.6	1.4	-0.019	0	4.6	3.0	38
1962-07-01	0	7.0	0.039	0.11	-0.0035	0	0	0.039	9.1
1962-08-01	0.61	6.3	-0.13	0.12	-0.0031	0	0.61	0.48	8.9
1962-09-01	0.49	5.6	-0.087	0.15	-0.0035	0	0.49	0.41	8.4
1962-10-01	1.2	3.7	-0.42	0.19	-0.0028	0	1.2	0.81	6.6
1962-11-01	0.87	3.2	-0.21	0.31	-0.0031	0	0.87	0.67	5.1
1962	3.2	26	-0.81	0.88	-0.016	0	3.2	2.4	38
1963-07-01	0	7.0	0.047	0.11	-0.0024	0	0	0.047	9.0
1963-08-01	0.083	7.2	0.024	0.079	-0.0028	0	0.083	0.10	9.4
1963-09-01	10	-5.1	-7.1	1.2	-0.0024	0	10	3.4	7.5
1963-10-01	1.0	4.1	1.7	1.5	-0.0024	0	1.0	2.7	6.6
1963-11-01	0.67	3.9	-0.031	0.79	-0.0028	0	0.67	0.64	5.8
1963	12	17	-5.3	3.7	-0.013	0	12	6.9	38
1964-07-01	0	7.2	0.039	0.067	-0.0024	0	0	0.039	9.4
1964-08-01	1.5	5.3	-0.57	0.24	-0.0024	0	1.5	0.91	8.8
1964-09-01	2.2	3.6	-0.69	0.81	-0.0024	0	2.2	1.5	7.7
1964-10-01	1.6	3.0	-0.41	0.46	-0.0020	0	1.6	1.2	6.1
1964-11-01	1.5	3.1	-0.72	0.40	-0.0028	0	1.5	0.82	5.8
1964	6.8	22	-2.4	2.0	-0.012	0	6.8	4.4	38
1965-07-01	0.10	6.8	0.031	0.11	-0.0028	0	0.10	0.13	8.8
1965-08-01	1.4	5.2	-0.49	0.33	-0.0020	0	1.4	0.95	8.9
1965-09-01	0.90	5.0	-0.23	0.39	-0.0028	0	0.90	0.67	8.0
1965-10-01	1.0	3.9	-0.29	0.33	-0.0020	0	1.0	0.75	6.6
1965-11-01	0.46	4.0	-0.12	0.11	-0.0028	0	0.46	0.34	5.7
1965	3.9	25	-1.1	1.3	-0.012	0	3.9	2.8	38
1966-07-01	0.18	6.6	-0.0079	0.34	-0.0024	0	0.18	0.17	9.1
1966-08-01	0.84	5.8	-0.24	0.41	-0.0035	0	0.84	0.59	8.3
1966-09-01	1.6	4.3	-0.69	0.55	-0.0043	0	1.6	0.92	8.1
1966-10-01	2.7	2.2	-1.3	1.0	-0.0051	0	2.7	1.4	6.5
1966-11-01	1.4	2.8	-0.33	0.73	-0.0063	0	1.4	1.0	5.1
1966	6.7	22	-2.6	3.1	-0.022	0	6.7	4.1	37
1967-07-01	0.079	6.9	0.031	0.079	-0.0083	0	0.079	0.11	9.0
1967-08-01	4.0	2.4	-1.7	0.96	-0.0083	0	4.0	2.2	8.3
1967-09-01	2.5	3.5	-1.00	1.4	-0.0083	0	2.5	1.5	8.0
1967-10-01	0.56	4.3	-0.11	0.41	-0.0083	0	0.56	0.44	6.5
1967-11-01	0.42	3.8	-0.059	0.17	-0.0083	0	0.42	0.36	5.6
1967	7.5	21	-2.9	3.0	-0.041	0	7.5	4.7	37
1968-07-01	0	7.3	0.043	0.35	-0.0094	0	0	0.043	9.3
1968-08-01	1.8	4.9	-0.87	0.57	-0.011	0	1.8	0.97	8.9
1968-09-01	2.5	2.8	-0.81	1.2	-0.013	0	2.5	1.7	7.3
1968-10-01	0.051	5.1	0.087	0.31	-0.013	0	0.051	0.14	6.9
1968-11-01	0.39	3.7	-0.087	0.17	-0.015	0	0.39	0.30	5.1
1968	4.8	24	-1.6	2.6	-0.061	0	4.8	3.2	38
1969-07-01	0	7.2	0.059	0.24	-0.014	0	0	0.055	9.4
1969-08-01	0.33	6.3	-0.035	0.17	-0.014	0	0.33	0.30	8.7
1969-09-01	2.6	3.6	-1.00	0.92	-0.013	0	2.6	1.6	8.3
1969-10-01	1.2	3.8	-0.45	0.58	-0.013	0	1.2	0.79	6.8
1969-11-01	0.82	3.1	-0.33	0.25	-0.014	0	0.82	0.50	5.2
1969	5.0	24	-1.8	2.2	-0.069	0	5.0	3.2	38

Table IV-B.11 DC1 Monsoon Period Water Balance

Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
1970-07-01	0.079	7.1	0.039	0.11	-0.011	0	0.079	0.12	9.1
1970-08-01	1.0	5.7	-0.29	0.27	-0.010	0	1.0	0.74	9.1
1970-09-01	1.7	4.3	-0.59	0.45	-0.0098	0	1.7	1.1	8.0
1970-10-01	3.3	1.7	-1.7	1.1	-0.0091	0	3.3	1.7	7.0
1970-11-01	0	4.2	0.13	0.43	-0.0094	0	0	0.13	5.3
1970	6.2	23	-2.4	2.4	-0.049	0	6.2	3.8	39
1971-07-01	0	7.1	0.039	0.051	-0.0071	0	0	0.039	9.0
1971-08-01	0.39	6.7	-0.075	0.071	-0.0071	0	0.39	0.31	9.2
1971-09-01	4.7	0.94	-2.1	1.2	-0.0067	0	4.7	2.5	7.8
1971-10-01	3.1	2.1	-2.4	0.81	-0.0063	0	3.1	0.64	7.1
1971-11-01	4.2	-0.31	-1.0	0.85	-0.0063	0	4.2	3.2	5.1
1971	12	16	-5.6	3.0	-0.033	0	12	6.7	38
1972-07-01	1.7	5.6	-0.76	0.42	-0.0047	0	1.7	0.93	9.3
1972-08-01	0.28	7.1	0.028	0.31	-0.0051	0	0.28	0.30	9.5
1972-09-01	2.0	4.0	-0.82	0.63	-0.0043	0	2.0	1.2	8.4
1972-10-01	0.67	4.4	-0.055	0.31	-0.0043	0	0.67	0.61	6.8
1972-11-01	8.7	-5.0	-5.7	0.65	-0.0039	0	8.7	2.9	4.9
1972	13	16	-7.3	2.3	-0.022	0	13	5.9	39
1973-07-01	0.87	6.2	-0.24	0.69	-0.0043	0	0.87	0.63	9.0
1973-08-01	2.7	3.9	-1.5	0.72	-0.0043	0	2.7	1.2	8.9
1973-09-01	1.4	4.6	-0.094	1.2	-0.0043	0	1.4	1.3	8.1
1973-10-01	0	5.0	0.079	0.19	-0.0047	0	0	0.079	6.7
1973-11-01	0	4.2	0.043	0.075	-0.0051	0	0	0.043	5.6
1973	5.0	24	-1.8	2.9	-0.023	0	5.0	3.2	38
1974-07-01	0	7.4	0.035	0.079	-0.0051	0	0	0.035	9.4
1974-08-01	2.4	4.2	-1.0	0.67	-0.0055	0	2.4	1.4	8.6
1974-09-01	1.4	4.5	-0.40	0.71	-0.0055	0	1.4	0.98	8.3
1974-10-01	3.4	1.4	-1.5	1.00	-0.0047	0	3.4	1.9	6.5
1974-11-01	3.4	0.47	-2.4	0.52	-0.0051	0	3.4	0.98	5.3
1974	11	18	-5.3	3.0	-0.026	0	11	5.3	38
1975-07-01	0	7.4	0.051	0.20	-0.0043	0	0	0.047	9.6
1975-08-01	2.2	3.8	-0.74	0.56	-0.0039	0	2.2	1.5	8.3
1975-09-01	2.0	4.2	-0.75	0.87	-0.0043	0	2.0	1.2	8.0
1975-10-01	0.91	4.1	-0.20	0.34	-0.0039	0	0.91	0.70	6.8
1975-11-01	0.28	3.9	0	0.047	-0.0043	0	0.28	0.26	5.4
1975	5.4	23	-1.6	2.0	-0.021	0	5.4	3.7	38
1976-07-01	0	7.6	0.063	0.039	-0.0035	0	0	0.063	9.7
1976-08-01	2.8	3.5	-1.4	0.56	-0.0035	0	2.8	1.4	8.7
1976-09-01	0.83	5.2	-0.23	0.84	-0.0035	0	0.83	0.62	7.9
1976-10-01	4.0	0.55	-2.1	0.83	-0.0028	0	4.0	1.9	6.4
1976-11-01	0.91	2.9	0.016	0.68	-0.0031	0	0.91	0.92	5.1
1976	8.5	20	-3.7	2.9	-0.017	0	8.5	4.9	38
1977-07-01	0.039	7.4	0.035	0.035	-0.0028	0	0.039	0.087	9.5
1977-08-01	2.6	4.5	-1.2	0.56	-0.0024	0	2.6	1.4	9.4
1977-09-01	2.4	3.5	-0.97	1.1	-0.0028	0	2.4	1.5	8.1
1977-10-01	3.5	1.1	-1.5	1.0	-0.0020	0	3.5	1.9	6.4
1977-11-01	1.3	2.9	-0.32	0.63	-0.0024	0	1.3	1.00	5.5
1977	9.8	19	-4.0	3.4	-0.012	0	9.8	5.8	39
1978-07-01	0.55	6.7	-0.23	0.62	-0.0020	0	0.55	0.31	9.4
1978-08-01	0.98	5.9	-0.37	0.51	-0.0020	0	0.98	0.61	9.4
1978-09-01	1.1	4.5	-0.21	0.79	-0.0020	0	1.1	0.85	7.3
1978-10-01	0.39	4.4	-0.091	0.25	-0.0028	0	0.39	0.30	6.6
1978-11-01	1.9	2.5	-1.1	0.28	-0.0028	0	1.9	0.80	5.9
1978	4.9	24	-2.0	2.5	-0.011	0	4.9	2.9	39
1979-07-01	0.35	7.0	0.051	0.74	-0.014	0	0.35	0.40	9.2
1979-08-01	0.16	6.8	0.0079	0.42	-0.020	0	0.16	0.17	9.3
1979-09-01	1.5	4.1	-0.47	0.74	-0.026	0	1.5	1.1	7.8

Table IV-B.11 DC1 Monsoon Period Water Balance

Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
1979-10-01	0.12	5.1	0.063	0.25	-0.029	0	0.12	0.17	7.2
1979-11-01	0.67	3.9	-0.28	0.26	-0.032	0	0.67	0.41	5.9
1979	2.8	27	-0.63	2.4	-0.12	0	2.8	2.2	39
1980-07-01	0.16	6.9	-0.059	0.48	-0.028	0	0.16	0.098	9.0
1980-08-01	1.9	4.8	-0.76	0.65	-0.030	0	1.9	1.2	9.1
1980-09-01	1.3	4.6	-0.29	0.96	-0.030	0	1.3	1.0	7.9
1980-10-01	0.55	4.6	-0.14	0.38	-0.030	0	0.55	0.44	7.0
1980-11-01	0.039	4.3	0.047	0.12	-0.031	0	0.039	0.087	5.9
1980	4.0	25	-1.2	2.6	-0.15	0	4.0	2.8	39
1981-07-01	0.16	7.1	0.067	0.22	-0.022	0	0.16	0.20	9.3
1981-08-01	2.2	4.7	-1.3	0.41	-0.022	0	2.2	0.86	9.3
1981-09-01	2.6	3.5	-0.66	1.5	-0.020	0	2.6	2.0	7.9
1981-10-01	0.51	4.8	-0.19	0.32	-0.019	0	0.51	0.32	7.5
1981-11-01	0.94	2.9	-0.21	0.38	-0.019	0	0.94	0.75	5.2
1981	6.4	23	-2.3	2.8	-0.10	0	6.4	4.1	39
1982-07-01	0.079	7.1	0.024	0.17	-0.013	0	0.079	0.075	9.1
1982-08-01	2.6	3.7	-1.2	0.53	-0.013	0	2.6	1.4	8.8
1982-09-01	3.8	1.5	-1.6	1.5	-0.012	0	3.8	2.2	6.9
1982-10-01	3.1	2.2	-1.3	1.2	-0.012	0	3.1	1.8	6.7
1982-11-01	0	4.1	0.21	0.52	-0.011	0	0	0.25	5.4
1982	9.6	19	-3.9	3.9	-0.061	0	9.6	5.8	37
1983-07-01	0	7.4	0.051	0.31	-0.0083	0	0	0.051	9.4
1983-08-01	2.8	4.1	-1.4	0.70	-0.0083	0	2.8	1.4	9.5
1983-09-01	3.6	2.0	-1.4	1.5	-0.0079	0	3.6	2.2	7.5
1983-10-01	5.1	-0.079	-3.7	0.87	-0.0071	0	5.1	1.4	7.3
1983-11-01	1.1	2.5	1.1	0.79	-0.0079	0	1.1	2.2	4.9
1983	13	16	-5.3	4.2	-0.039	0	13	7.3	39
1984-07-01	1.3	5.6	-0.79	0.17	-0.0067	0	1.3	0.55	9.3
1984-08-01	3.3	2.8	-0.96	1.2	-0.0067	0	3.3	2.4	7.8
1984-09-01	3.3	1.9	-1.0	1.3	-0.0063	0	3.3	2.3	7.4
1984-10-01	1.9	3.1	-0.83	0.63	-0.0063	0	1.9	1.1	6.9
1984-11-01	1.4	2.3	-0.25	0.56	-0.0067	0	1.4	1.1	4.9
1984	11	16	-3.8	3.8	-0.033	0	11	7.4	36
1985-07-01	0	6.3	0.047	0.22	-0.0055	0	0	0.039	8.6
1985-08-01	1.3	5.6	-0.67	0.30	-0.0051	0	1.3	0.59	8.7
1985-09-01	2.1	3.8	-0.80	0.94	-0.0055	0	2.1	1.3	8.1
1985-10-01	3.5	1.1	-1.5	0.91	-0.0055	0	3.5	2.1	6.6
1985-11-01	1.3	2.3	-0.051	0.65	-0.0055	0	1.3	1.2	4.6
1985	8.1	19	-2.9	3.0	-0.027	0	8.1	5.2	37
1986-07-01	0	7.1	0.039	0.15	-0.0063	0	0	0.039	9.3
1986-08-01	4.8	1.4	-2.1	1.3	-0.0055	0	4.8	2.7	8.5
1986-09-01	2.0	3.6	-0.78	1.0	-0.0055	0	2.0	1.3	8.0
1986-10-01	2.0	2.6	-0.78	0.87	-0.0051	0	2.0	1.3	6.5
1986-11-01	1.8	2.1	-0.70	0.62	-0.0055	0	1.8	1.1	4.8
1986	11	17	-4.3	3.9	-0.028	0	11	6.3	37
1987-07-01	0.24	7.0	0	0.13	-0.0043	0	0.24	0.20	9.0
1987-08-01	2.0	4.9	-1.1	0.72	-0.0047	0	2.0	0.94	9.0
1987-09-01	2.9	2.9	-1.2	1.3	-0.0043	0	2.9	1.7	8.1
1987-10-01	1.3	3.7	-0.41	0.60	-0.0043	0	1.3	0.87	7.1
1987-11-01	0.35	4.1	-0.020	0.18	-0.0043	0	0.35	0.31	6.0
1987	6.8	23	-2.8	2.9	-0.022	0	6.8	4.0	39
1988-07-01	0.12	6.6	0.035	0.13	-0.0035	0	0.12	0.20	8.9
1988-08-01	3.4	3.1	-2.3	0.33	-0.0035	0	3.4	1.1	8.8
1988-09-01	5.9	-0.24	-1.9	1.8	-0.0035	0	5.9	4.0	7.5
1988-10-01	0.31	4.7	0.46	1.1	-0.0035	0	0.31	0.75	6.9
1988-11-01	1.5	2.7	-0.58	0.55	-0.0035	0	1.5	0.91	5.8
1988	11	17	-4.3	4.0	-0.018	0	11	7.0	38

Table IV-B.11 DC1 Monsoon Period Water Balance

Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
1989-07-01	0	7.2	0.035	0.047	-0.0035	0	0	0.039	9.2
1989-08-01	0.47	6.3	-0.17	0.083	-0.0031	0	0.47	0.35	9.3
1989-09-01	0.94	4.9	-0.22	0.27	-0.0031	0	0.94	0.67	7.8
1989-10-01	1.5	3.6	-0.68	0.60	-0.0028	0	1.5	0.83	7.3
1989-11-01	1.1	3.1	-0.30	0.30	-0.0028	0	1.1	0.75	5.9
1989	4.0	25	-1.3	1.3	-0.015	0	4.0	2.6	39
1990-07-01	0.28	6.9	-0.047	0.059	-0.0028	0	0.28	0.24	9.3
1990-08-01	1.5	4.8	-0.53	0.45	-0.0024	0	1.5	0.98	8.6
1990-09-01	9.0	-3.4	-5.9	1.4	-0.0024	0	9.0	3.1	7.4
1990-10-01	2.8	2.0	-0.65	1.4	-0.0020	0	2.8	2.2	6.8
1990-11-01	0.28	3.7	0.45	0.76	-0.0028	0	0.28	0.71	5.3
1990	14	14	-6.6	4.0	-0.012	0	14	7.2	37
1991-07-01	0.59	6.7	-0.075	0.44	-0.0024	0	0.59	0.55	9.2
1991-08-01	1.7	5.1	-0.87	0.39	-0.0024	0	1.7	0.83	9.3
1991-09-01	2.8	3.1	-0.87	1.3	-0.0024	0	2.8	1.9	8.3
1991-10-01	1.6	3.3	-0.56	0.83	-0.0028	0	1.6	0.98	6.5
1991-11-01	1.2	3.5	-0.87	0.19	-0.0028	0	1.2	0.35	6.6
1991	7.8	22	-3.2	3.2	-0.013	0	7.8	4.6	40
1992-07-01	1.3	5.8	-0.26	1.2	-0.0035	0	1.3	1.1	8.9
1992-08-01	3.3	3.5	-2.0	0.85	-0.0043	0	3.3	1.3	9.3
1992-09-01	5.3	0.24	-2.1	1.7	-0.0043	0	5.3	3.1	7.8
1992-10-01	0.87	4.3	0.11	1.3	-0.0051	0	0.87	0.98	6.7
1992-11-01	1.3	3.1	-0.63	0.54	-0.0055	0	1.3	0.59	6.2
1992	12	17	-4.9	5.7	-0.023	0	12	7.1	39
1993-07-01	0	7.1	0.11	1.0	-0.11	0	0	0.079	9.3
1993-08-01	0.24	6.6	-0.012	0.69	-0.14	0	0.24	0.28	8.9
1993-09-01	3.5	2.2	-1.6	1.0	-0.15	0	3.5	1.9	8.5
1993-10-01	0.12	4.8	0.36	0.90	-0.14	0	0.12	0.51	6.4
1993-11-01	0.83	3.5	-0.19	0.45	-0.13	0	0.83	0.63	6.0
1993	4.6	24	-1.3	4.1	-0.67	0	4.6	3.3	39
1994-07-01	0.39	6.5	-0.055	0.38	-0.069	0	0.39	0.35	8.9
1994-08-01	1.5	5.5	-1.0	0.27	-0.065	0	1.5	0.43	9.1
1994-09-01	0.71	5.4	0.28	0.82	-0.061	0	0.71	0.98	8.6
1994-10-01	1.9	3.0	-0.79	0.83	-0.056	0	1.9	1.1	6.6
1994-11-01	1.9	1.9	-0.96	0.44	-0.054	0	1.9	0.91	5.3
1994	6.3	22	-2.5	2.7	-0.30	0	6.3	3.8	39
1995-07-01	0	7.2	0.059	0.30	-0.032	0	0	0.079	9.0
1995-08-01	0.039	7.1	0.039	0.21	-0.031	0	0.039	0.079	9.3
1995-09-01	3.9	2.2	-1.8	1.2	-0.031	0	3.9	2.0	8.8
1995-10-01	2.7	2.3	-1.6	1.0	-0.028	0	2.7	1.2	7.2
1995-11-01	0	4.3	0.56	0.63	-0.030	0	0	0.55	5.8
1995	6.6	23	-2.7	3.3	-0.15	0	6.6	3.9	40
1996-07-01	0.39	6.6	-0.16	0.15	-0.019	0	0.39	0.24	9.1
1996-08-01	2.4	4.4	-0.88	0.77	-0.018	0	2.4	1.5	8.9
1996-09-01	1.3	4.6	-0.42	0.56	-0.018	0	1.3	0.83	8.1
1996-10-01	3.0	1.5	-1.1	0.93	-0.017	0	3.0	1.9	6.7
1996-11-01	0.43	4.1	-0.047	0.31	-0.017	0	0.43	0.39	6.0
1996	7.5	21	-2.6	2.7	-0.088	0	7.5	4.8	39
1997-07-01	0.039	7.0	0.051	0.067	-0.011	0	0.039	0.079	9.0
1997-08-01	0.079	7.3	0.0039	0.063	-0.011	0	0.079	0.12	9.9
1997-09-01	2.6	3.4	-1.1	0.83	-0.010	0	2.6	1.5	8.5
1997-10-01	0	5.4	0.094	0.16	-0.0098	0	0	0.12	7.3
1997-11-01	0.75	3.2	-0.25	0.11	-0.0094	0	0.75	0.47	6.0
1997	3.5	26	-1.2	1.2	-0.052	0	3.5	2.3	41
1998-07-01	0	7.1	0.051	0.31	-0.0071	0	0	0.039	9.2
1998-08-01	1.7	5.1	-0.66	0.68	-0.0075	0	1.7	1.1	9.1
1998-09-01	2.4	3.4	-0.89	1.00	-0.0067	0	2.4	1.5	8.3

Table IV-B.11 DC1 Monsoon Period Water Balance

Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
1998-10-01	1.3	3.7	-0.48	0.57	-0.0067	0	1.3	0.83	7.0
1998-11-01	0	4.4	0.063	0.083	-0.0067	0	0	0.079	6.3
1998	5.4	24	-1.9	2.6	-0.035	0	5.4	3.5	40
1999-07-01	0	7.1	0.043	0.055	-0.0055	0	0	0.039	9.1
1999-08-01	5.8	0.35	-2.9	1.1	-0.0051	0	5.8	3.0	8.7
1999-09-01	2.9	2.8	-0.96	1.5	-0.0047	0	2.9	1.9	7.8
1999-10-01	1.1	3.9	0.15	0.94	-0.0047	0	1.1	1.3	6.8
1999-11-01	0	4.5	0.083	0.13	-0.0055	0	0	0.079	6.2
1999	9.8	19	-3.6	3.7	-0.026	0	9.8	6.2	39
2000-07-01	0.79	6.3	-0.28	0.21	-0.0039	0	0.79	0.51	9.5
2000-08-01	0.079	7.4	0.043	0.035	-0.0043	0	0.079	0.12	9.5
2000-09-01	0.67	4.9	-0.13	0.098	-0.0031	0	0.67	0.55	8.7
2000-10-01	0	5.3	0.083	0.028	-0.0035	0	0	0.079	6.8
2000-11-01	5.3	-1.7	-4.0	0.31	-0.0031	0	5.3	1.3	5.9
2000	6.9	22	-4.3	0.68	-0.018	0	6.9	2.5	40
2001-07-01	0.039	7.2	0.051	0.13	-0.0031	0	0.039	0.079	9.2
2001-08-01	2.7	4.3	-2.0	0.25	-0.0028	0	2.7	0.75	9.7
2001-09-01	3.3	2.4	-0.57	1.7	-0.0028	0	3.3	2.8	7.6
2001-10-01	0.16	4.8	0.094	0.51	-0.0031	0	0.16	0.24	7.3
2001-11-01	0.35	3.6	-0.067	0.16	-0.0031	0	0.35	0.31	5.5
2001	6.6	22	-2.5	2.7	-0.015	0	6.6	4.1	39
2002-07-01	0	7.4	0.031	0.031	-0.0024	0	0	0.039	9.2
2002-08-01	0.31	6.8	-0.039	0.039	-0.0024	0	0.31	0.28	9.7
2002-09-01	0.47	5.4	-0.13	0.063	-0.0024	0	0.47	0.35	8.1
2002-10-01	1.2	3.8	-0.39	0.37	-0.0020	0	1.2	0.79	7.1
2002-11-01	0.12	4.1	0.039	0.024	-0.0020	0	0.12	0.16	6.1
2002	2.1	28	-0.48	0.53	-0.011	0	2.1	1.6	40
2003-07-01	0	7.9	0.043	0.091	-0.0020	0	0	0.039	10.0
2003-08-01	0.47	6.7	-0.051	0.055	-0.0020	0	0.47	0.43	10
2003-09-01	1.3	4.8	-0.47	0.28	-0.0020	0	1.3	0.79	8.5
2003-10-01	1.9	3.3	-0.60	0.68	-0.0016	0	1.9	1.3	7.4
2003-11-01	0.079	4.4	0.087	0.059	-0.0020	0	0.079	0.20	6.0
2003	3.8	27	-1.00	1.2	-0.0094	0	3.8	2.8	42
2004-07-01	0	7.8	0.039	0.024	-0.0020	0	0	0.039	10
2004-08-01	0.55	6.7	-0.11	0.059	-0.0016	0	0.55	0.43	9.8
2004-09-01	2.1	4.0	-0.73	0.60	-0.0016	0	2.1	1.3	8.6
2004-10-01	1.5	3.9	-0.67	0.45	-0.0016	0	1.5	0.87	7.9
2004-11-01	1.2	2.9	-0.53	0.29	-0.0012	0	1.2	0.67	6.1
2004	5.4	25	-2.0	1.4	-0.0079	0	5.4	3.3	42
2005-07-01	0.079	7.6	0.035	0.38	-0.0020	0	0.079	0.079	9.7
2005-08-01	1.4	5.8	-0.70	0.36	-0.0016	0	1.4	0.71	11
2005-09-01	4.7	0.98	-1.8	1.7	-0.00079	0	4.7	2.9	7.3
2005-10-01	0.12	5.0	0.11	0.61	-0.0016	0	0.12	0.20	7.4
2005-11-01	0.39	3.8	-0.10	0.20	-0.0020	0	0.39	0.31	6.1
2005	6.7	23	-2.4	3.3	-0.0079	0	6.7	4.2	41
2006-07-01	0.51	7.0	-0.16	0.083	-0.0031	0	0.51	0.35	10
2006-08-01	3.2	3.1	-2.3	0.24	-0.0028	0	3.2	0.87	9.2
2006-09-01	2.9	3.0	-0.18	1.8	-0.0024	0	2.9	2.8	7.4
2006-10-01	1.1	3.8	-0.31	0.79	-0.0028	0	1.1	0.79	6.9
2006-11-01	1.1	3.0	-0.25	0.31	-0.0028	0	1.1	0.79	5.9
2006	8.8	20	-3.2	3.2	-0.014	0	8.8	5.6	40

Table IV-B.12 DC1 Winter Storm Period Water Balance

Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
1951-11-01	0	2.7	-0.97	0.68	-0.38	0	1.6	0.67	5.4
1951-12-01	1.7	1.5	0.067	0.53	-0.31	0	1.7	1.8	3.7
1952-01-01	3.0	-0.66	-1.6	0.38	-0.27	0	3.0	1.5	2.8
1952-02-01	2.8	-0.36	-0.37	0.46	-0.23	0	2.8	2.4	2.9
1952-03-01	0.50	2.4	0.83	0.79	-0.19	0	0.50	1.3	3.8
1952	8.0	5.6	-2.0	2.8	-1.4	0	9.7	7.7	19
1952-11-01	0	4.8	0.088	0.20	-0.098	0	0	0.088	5.9
1952-12-01	4.3	-1.5	-3.1	0.25	-0.087	0	4.3	1.2	3.3
1953-01-01	2.0	0.26	0.058	0.37	-0.083	0	2.0	2.0	2.7
1953-02-01	0.74	2.1	0.60	0.50	-0.074	0	0.74	1.3	3.3
1953-03-01	0.60	2.4	-0.094	0.62	-0.061	0	0.60	0.51	3.8
1953	7.6	8.0	-2.4	1.9	-0.40	0	7.6	5.2	19
1953-11-01	0.012	4.4	0.054	0.12	-0.043	0	0.012	0.065	5.5
1953-12-01	0.56	2.8	-0.22	0.14	-0.038	0	0.56	0.35	3.9
1954-01-01	0.19	2.3	0.044	0.11	-0.036	0	0.19	0.24	2.9
1954-02-01	2.4	0.35	-1.2	0.30	-0.034	0	2.4	1.2	3.2
1954-03-01	0.72	2.5	-0.042	0.72	-0.030	0	0.72	0.68	4.2
1954	3.9	12	-1.4	1.4	-0.18	0	3.9	2.5	20
1954-11-01	0	4.5	0.17	0.49	-0.021	0	0	0.17	5.6
1954-12-01	0.091	3.5	-0.0024	0.15	-0.020	0	0.091	0.091	4.3
1955-01-01	0.29	2.7	0.0075	0.12	-0.019	0	0.29	0.30	3.5
1955-02-01	3.4	-1.4	-1.9	0.32	-0.018	0	3.4	1.5	2.4
1955-03-01	0.28	2.5	0.34	0.63	-0.016	0	0.28	0.61	3.5
1955	4.1	12	-1.4	1.7	-0.094	0	4.1	2.7	19
1955-11-01	0.020	4.7	0.060	0.13	-0.013	0	0.020	0.079	5.9
1955-12-01	0.96	2.1	-0.41	0.18	-0.012	0	0.96	0.55	3.7
1956-01-01	1.4	1.4	-0.54	0.33	-0.012	0	1.4	0.83	3.1
1956-02-01	2.6	0.30	-1.9	0.31	-0.011	0	2.6	0.70	3.5
1956-03-01	2.0	0.49	-0.13	0.70	-0.010	0	2.0	1.9	3.1
1956	7.0	9.0	-2.9	1.7	-0.059	0	7.0	4.0	19
1956-11-01	0.53	3.6	-0.19	0.055	-0.0083	0	0.53	0.35	5.2
1956-12-01	0	3.2	0.18	0.071	-0.0079	0	0	0.18	3.8
1957-01-01	0.47	2.2	-0.13	0.094	-0.0075	0	0.47	0.34	3.1
1957-02-01	4.8	-2.7	-3.2	0.31	-0.0071	0	4.8	1.6	2.7
1957-03-01	0.73	2.1	0.78	0.78	-0.0067	0	0.73	1.5	3.4
1957	6.5	8.4	-2.6	1.3	-0.037	0	6.5	3.9	18
1957-11-01	3.2	0.30	-2.1	0.30	-0.0055	0	3.2	1.1	4.6
1957-12-01	0.61	2.0	0.63	0.41	-0.0051	0	0.61	1.2	3.0
1958-01-01	1.1	1.6	-0.18	0.36	-0.0051	0	1.1	0.88	3.2
1958-02-01	0.012	2.9	0.14	0.24	-0.0047	0	0.012	0.15	3.3
1958-03-01	2.5	-0.039	-1.3	0.57	-0.0043	0	2.5	1.2	3.2
1958	7.4	6.8	-2.8	1.9	-0.025	0	7.4	4.6	17
1958-11-01	1.9	2.3	-0.55	0.78	-0.0039	0	1.9	1.4	5.3
1958-12-01	1.5	1.6	-0.64	0.38	-0.0035	0	1.5	0.89	3.6
1959-01-01	0	3.0	0.24	0.31	-0.0039	0	0	0.24	3.6
1959-02-01	0.21	2.8	0.043	0.20	-0.0035	0	0.21	0.26	3.5
1959-03-01	1.4	1.1	-0.62	0.41	-0.0031	0	1.4	0.80	3.3
1959	5.1	11	-1.5	2.1	-0.018	0	5.1	3.5	19
1959-11-01	4.8	-0.60	-4.2	0.34	-0.0028	0	4.8	0.55	5.3
1959-12-01	0.38	2.8	1.6	0.54	-0.0028	0	0.38	2.0	3.7
1960-01-01	5.2	-3.0	-3.7	0.35	-0.0028	0	5.2	1.6	2.7
1960-02-01	4.2	-2.0	-2.0	0.41	-0.0024	0	4.2	2.1	2.5

Table IV-B.12 DC1 Winter Storm Period Water Balance

Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
1960-03-01	0.87	1.8	1.2	0.74	-0.0024	0	0.87	2.1	3.4
1960	15	-1.1	-7.1	2.4	-0.013	0	15	8.4	18
1960-11-01	2.1	1.9	-0.93	0.41	-0.0031	0	2.1	1.1	5.0
1960-12-01	0.48	2.6	0.012	0.31	-0.0031	0	0.48	0.50	3.7
1961-01-01	0.47	2.2	-0.094	0.17	-0.0035	0	0.47	0.38	3.3
1961-02-01	0.70	1.9	-0.31	0.12	-0.0035	0	0.70	0.39	3.2
1961-03-01	0.23	2.9	0.13	0.31	-0.0035	0	0.23	0.37	3.7
1961	3.9	12	-1.2	1.3	-0.017	0	3.9	2.8	19
1961-11-01	0.45	3.6	-0.24	0.055	-0.0039	0	0.45	0.21	5.4
1961-12-01	0.32	2.4	0.13	0.079	-0.0035	0	0.32	0.45	3.1
1962-01-01	3.9	-1.7	-2.3	0.28	-0.0035	0	3.9	1.6	2.6
1962-02-01	3.2	-0.94	-1.9	0.41	-0.0035	0	3.2	1.3	2.7
1962-03-01	1.7	0.75	-0.094	0.67	-0.0031	0	1.7	1.6	3.2
1962	9.5	4.2	-4.4	1.5	-0.018	0	9.5	5.2	17
1962-11-01	0.87	3.2	-0.21	0.31	-0.0031	0	0.87	0.67	5.1
1962-12-01	0.83	2.5	-0.29	0.22	-0.0028	0	0.83	0.54	3.9
1963-01-01	1.8	0.87	-0.86	0.21	-0.0028	0	1.8	0.95	3.3
1963-02-01	2.1	0.51	-0.55	0.44	-0.0028	0	2.1	1.5	3.0
1963-03-01	4.2	-1.2	-2.6	0.77	-0.0024	0	4.2	1.7	3.8
1963	9.8	5.9	-4.5	2.0	-0.014	0	9.8	5.4	19
1963-11-01	0.67	3.9	-0.031	0.79	-0.0028	0	0.67	0.64	5.8
1963-12-01	2.3	0.71	-0.85	0.48	-0.0020	0	2.3	1.5	3.6
1964-01-01	0.34	2.5	0.29	0.38	-0.0028	0	0.34	0.63	3.3
1964-02-01	0.58	1.9	-0.13	0.30	-0.0024	0	0.58	0.45	3.0
1964-03-01	0	2.8	0.14	0.35	-0.0024	0	0	0.14	3.6
1964	3.9	12	-0.57	2.3	-0.012	0	3.9	3.4	19
1964-11-01	1.5	3.1	-0.72	0.40	-0.0028	0	1.5	0.82	5.8
1964-12-01	1.4	1.6	-0.57	0.33	-0.0024	0	1.4	0.81	3.6
1965-01-01	1.7	0.91	-0.84	0.31	-0.0024	0	1.7	0.85	3.3
1965-02-01	2.9	-0.47	-0.93	0.44	-0.0024	0	2.9	2.0	2.6
1965-03-01	2.8	-0.039	-1.2	0.78	-0.0020	0	2.8	1.6	3.4
1965	10	5.1	-4.3	2.3	-0.012	0	10	6.1	19
1965-11-01	0.46	4.0	-0.12	0.11	-0.0028	0	0.46	0.34	5.7
1965-12-01	2.4	0.87	-1.7	0.11	-0.0020	0	2.4	0.64	3.9
1966-01-01	10	-8.3	-8.9	0.34	-0.0020	0	10	1.6	2.7
1966-02-01	1.8	0.51	0.51	0.44	-0.0020	0	1.8	2.3	2.8
1966-03-01	2.0	0.51	0.45	0.74	-0.0016	0	2.0	2.5	3.1
1966	17	-2.4	-9.7	1.7	-0.010	0	17	7.4	18
1966-11-01	1.4	2.8	-0.33	0.73	-0.0063	0	1.4	1.0	5.1
1966-12-01	0.88	2.3	-0.26	0.38	-0.0071	0	0.88	0.61	4.1
1967-01-01	1.3	1.3	-0.47	0.30	-0.0079	0	1.3	0.78	3.1
1967-02-01	0.79	1.9	-0.20	0.33	-0.0083	0	0.79	0.59	2.9
1967-03-01	0	3.1	0.17	0.39	-0.0075	0	0	0.17	3.9
1967	4.3	11	-1.1	2.1	-0.037	0	4.3	3.2	19
1967-11-01	0.42	3.8	-0.059	0.17	-0.0083	0	0.42	0.36	5.6
1967-12-01	2.1	1.0	-1.6	0.091	-0.0075	0	2.1	0.55	3.9
1968-01-01	10	-8.0	-8.4	0.32	-0.0079	0	10	1.6	2.3
1968-02-01	0.63	2.0	1.8	0.50	-0.0075	0	0.63	2.5	3.1
1968-03-01	1.9	0.98	0.17	0.83	-0.0071	0	1.9	2.1	3.4
1968	15	-0.16	-8.0	1.9	-0.038	0	15	7.1	18
1968-11-01	0.39	3.7	-0.087	0.17	-0.015	0	0.39	0.30	5.1
1968-12-01	2.5	0.39	-1.2	0.35	-0.015	0	2.5	1.3	3.8

Table IV-B.12 DC1 Winter Storm Period Water Balance

Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
1969-01-01	3.3	-0.83	-2.2	0.33	-0.016	0	3.3	1.0	2.9
1969-02-01	4.2	-1.9	-2.2	0.43	-0.015	0	4.2	2.0	2.6
1969-03-01	1.4	1.1	0.91	0.71	-0.014	0	1.4	2.3	3.0
1969	12	2.5	-4.9	2.0	-0.074	0	12	6.9	17
1969-11-01	0.82	3.1	-0.33	0.25	-0.014	0	0.82	0.50	5.2
1969-12-01	2.1	0.75	-0.86	0.35	-0.013	0	2.1	1.3	3.6
1970-01-01	1.3	1.4	-0.44	0.36	-0.013	0	1.3	0.88	3.4
1970-02-01	0.50	2.2	0.15	0.34	-0.013	0	0.50	0.65	2.9
1970-03-01	0.41	2.5	0	0.35	-0.011	0	0.41	0.41	3.6
1970	5.2	10	-1.5	1.6	-0.064	0	5.2	3.7	19
1970-11-01	0	4.2	0.13	0.43	-0.0094	0	0	0.13	5.3
1970-12-01	0.65	2.5	-0.43	0.13	-0.0087	0	0.65	0.22	3.9
1971-01-01	1.2	1.2	-0.29	0.21	-0.0087	0	1.2	0.92	3.0
1971-02-01	0.85	2.1	-0.13	0.39	-0.0087	0	0.85	0.72	3.1
1971-03-01	0.82	2.1	-0.32	0.39	-0.0075	0	0.82	0.50	4.0
1971	3.5	12	-1.0	1.6	-0.043	0	3.5	2.5	19
1971-11-01	4.2	-0.31	-1.0	0.85	-0.0063	0	4.2	3.2	5.1
1971-12-01	0.039	3.1	0.67	0.48	-0.0063	0	0.039	0.70	3.7
1972-01-01	2.1	0.35	-0.73	0.37	-0.0055	0	2.1	1.4	3.0
1972-02-01	0	2.8	0.43	0.39	-0.0059	0	0	0.43	3.2
1972-03-01	0	3.6	0.11	0.40	-0.0051	0	0	0.11	4.1
1972	6.4	9.5	-0.54	2.5	-0.029	0	6.4	5.8	19
1972-11-01	8.7	-5.0	-5.7	0.65	-0.0039	0	8.7	2.9	4.9
1972-12-01	2.8	-0.16	-0.17	0.48	-0.0043	0	2.8	2.7	3.2
1973-01-01	3.0	-0.67	-1.0	0.37	-0.0039	0	3.0	1.9	2.9
1973-02-01	0.73	1.6	1.2	0.44	-0.0047	0	0.73	1.9	2.6
1973-03-01	3.2	-0.67	-1.2	0.70	-0.0035	0	3.2	1.9	2.8
1973	18	-5.0	-7.0	2.6	-0.020	0	18	11	16
1973-11-01	0	4.2	0.043	0.075	-0.0051	0	0	0.043	5.6
1973-12-01	1.8	1.3	-0.91	0.14	-0.0047	0	1.8	0.86	3.9
1974-01-01	0.098	2.8	0.27	0.26	-0.0055	0	0.098	0.36	3.3
1974-02-01	3.4	-1.0	-1.6	0.42	-0.0055	0	3.4	1.8	2.9
1974-03-01	0.16	2.8	0.26	0.61	-0.0047	0	0.16	0.41	3.3
1974	5.4	10.0	-1.9	1.5	-0.026	0	5.4	3.5	19
1974-11-01	3.4	0.47	-2.4	0.52	-0.0051	0	3.4	0.98	5.3
1974-12-01	0.12	3.1	1.1	0.48	-0.0055	0	0.12	1.2	3.6
1975-01-01	0.75	1.6	-0.091	0.30	-0.0047	0	0.75	0.66	3.1
1975-02-01	0.39	1.9	-0.059	0.22	-0.0051	0	0.39	0.35	2.6
1975-03-01	4.0	-1.1	-2.3	0.65	-0.0039	0	4.0	1.6	3.0
1975	8.6	5.9	-3.8	2.2	-0.024	0	8.6	4.8	18
1975-11-01	0.28	3.9	0	0.047	-0.0043	0	0.28	0.26	5.4
1975-12-01	2.1	1.2	-1.9	0.051	-0.0039	0	2.1	0.24	4.2
1976-01-01	1.3	1.3	0.38	0.39	-0.0039	0	1.3	1.6	3.1
1976-02-01	0.24	2.3	0.24	0.33	-0.0035	0	0.24	0.46	2.9
1976-03-01	1.6	1.4	-0.58	0.64	-0.0035	0	1.6	1.0	3.4
1976	5.5	10	-1.9	1.5	-0.019	0	5.5	3.6	19
1976-11-01	0.91	2.9	0.016	0.68	-0.0031	0	0.91	0.92	5.1
1976-12-01	0.55	2.6	-0.067	0.32	-0.0028	0	0.55	0.48	4.0
1977-01-01	1.8	0.75	-1.4	0.20	-0.0031	0	1.8	0.41	3.1
1977-02-01	1.9	0.43	-0.12	0.42	-0.0028	0	1.9	1.8	2.5
1977-03-01	0.079	3.3	0.26	0.63	-0.0024	0	0.079	0.33	4.1
1977	5.2	10	-1.3	2.3	-0.014	0	5.2	3.9	19

Table IV-B.12 DC1 Winter Storm Period Water Balance

Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
1977-11-01	1.3	2.9	-0.32	0.63	-0.0024	0	1.3	1.00	5.5
1977-12-01	0.35	2.9	0.13	0.28	-0.0024	0	0.35	0.48	3.9
1978-01-01	0.63	2.0	-0.33	0.091	-0.0028	0	0.63	0.32	3.5
1978-02-01	6.4	-4.1	-4.8	0.34	-0.0020	0	6.4	1.6	2.5
1978-03-01	5.5	-3.0	-3.0	0.73	-0.0016	0	5.5	2.5	2.9
1978	14	0.75	-8.3	2.1	-0.011	0	14	5.9	18
1978-11-01	1.9	2.5	-1.1	0.28	-0.0028	0	1.9	0.80	5.9
1978-12-01	5.6	-2.9	-3.9	0.44	-0.0028	0	5.6	1.8	3.7
1979-01-01	6.6	-4.3	-4.3	0.38	-0.0031	0	6.6	2.3	2.5
1979-02-01	6.0	-4.2	-4.2	0.35	-0.0039	0	6.0	1.8	2.3
1979-03-01	1.3	1.9	1.7	0.90	-0.0035	0	1.3	3.0	3.3
1979	21	-7.0	-12	2.4	-0.016	0	21	9.6	18
1979-11-01	0.67	3.9	-0.28	0.26	-0.032	0	0.67	0.41	5.9
1979-12-01	0.67	2.5	-0.12	0.26	-0.032	0	0.67	0.56	4.0
1980-01-01	0.71	2.2	-0.28	0.16	-0.033	0	0.71	0.41	3.7
1980-02-01	4.1	-2.1	-2.7	0.32	-0.032	0	4.1	1.4	2.4
1980-03-01	6.1	-3.6	-4.0	0.70	-0.029	0	6.1	2.1	2.4
1980	12	2.9	-7.3	1.7	-0.16	0	12	4.9	18
1980-11-01	0.039	4.3	0.047	0.12	-0.031	0	0.039	0.087	5.9
1980-12-01	0	3.5	0.039	0.083	-0.029	0	0	0.039	4.3
1981-01-01	0.59	2.6	-0.14	0.14	-0.030	0	0.59	0.42	3.5
1981-02-01	1.3	1.5	-0.61	0.29	-0.028	0	1.3	0.71	3.5
1981-03-01	2.7	0.39	-1.5	0.74	-0.025	0	2.7	1.2	3.6
1981	4.6	12	-2.2	1.4	-0.14	0	4.6	2.4	21
1981-11-01	0.94	2.9	-0.21	0.38	-0.019	0	0.94	0.75	5.2
1981-12-01	2.4	1.0	-2.2	0.087	-0.017	0	2.4	0.18	4.4
1982-01-01	0	3.0	1.0	0.42	-0.017	0	0	1.0	3.3
1982-02-01	2.7	-0.43	-0.98	0.41	-0.017	0	2.7	1.8	2.8
1982-03-01	1.8	0.91	-0.47	0.72	-0.015	0	1.8	1.3	3.1
1982	7.8	7.3	-2.8	2.0	-0.083	0	7.8	5.1	19
1982-11-01	0	4.1	0.21	0.52	-0.011	0	0	0.25	5.4
1982-12-01	3.3	-0.79	-2.0	0.31	-0.010	0	3.3	1.3	3.6
1983-01-01	1.7	0.67	0.13	0.38	-0.010	0	1.7	1.8	2.7
1983-02-01	1.9	0.83	-1.3	0.41	-0.0098	0	1.9	0.61	3.2
1983-03-01	2.3	0.24	-0.57	0.72	-0.0083	0	2.3	1.8	2.8
1983	9.3	5.0	-3.5	2.3	-0.050	0	9.3	5.8	18
1983-11-01	1.1	2.5	1.1	0.79	-0.0079	0	1.1	2.2	4.9
1983-12-01	2.0	0.98	-1.0	0.45	-0.0071	0	2.0	0.99	3.8
1984-01-01	2.5	-0.24	-0.71	0.37	-0.0075	0	2.5	1.8	2.7
1984-02-01	0.47	2.2	0.67	0.46	-0.0071	0	0.47	1.1	2.8
1984-03-01	0	3.1	0.17	0.53	-0.0071	0	0	0.17	3.9
1984	6.1	8.6	0.15	2.6	-0.037	0	6.1	6.3	18
1984-11-01	1.4	2.3	-0.25	0.56	-0.0067	0	1.4	1.1	4.9
1984-12-01	2.1	1.1	-1.5	0.20	-0.0059	0	2.1	0.55	4.2
1985-01-01	5.7	-3.7	-3.9	0.35	-0.0063	0	5.7	1.8	2.5
1985-02-01	2.7	-0.67	-0.70	0.38	-0.0063	0	2.7	2.0	2.5
1985-03-01	1.7	0.55	0.42	0.64	-0.0055	0	1.7	2.1	2.5
1985	14	-0.35	-6.0	2.1	-0.031	0	14	7.6	17
1985-11-01	1.3	2.3	-0.051	0.65	-0.0055	0	1.3	1.2	4.6
1985-12-01	2.8	-0.039	-1.9	0.33	-0.0059	0	2.8	0.83	3.9
1986-01-01	0.87	2.0	0.66	0.45	-0.0063	0	0.87	1.5	3.1
1986-02-01	0.12	3.1	0.13	0.37	-0.0063	0	0.12	0.20	3.6

Table IV-B.12 DC1 Winter Storm Period Water Balance

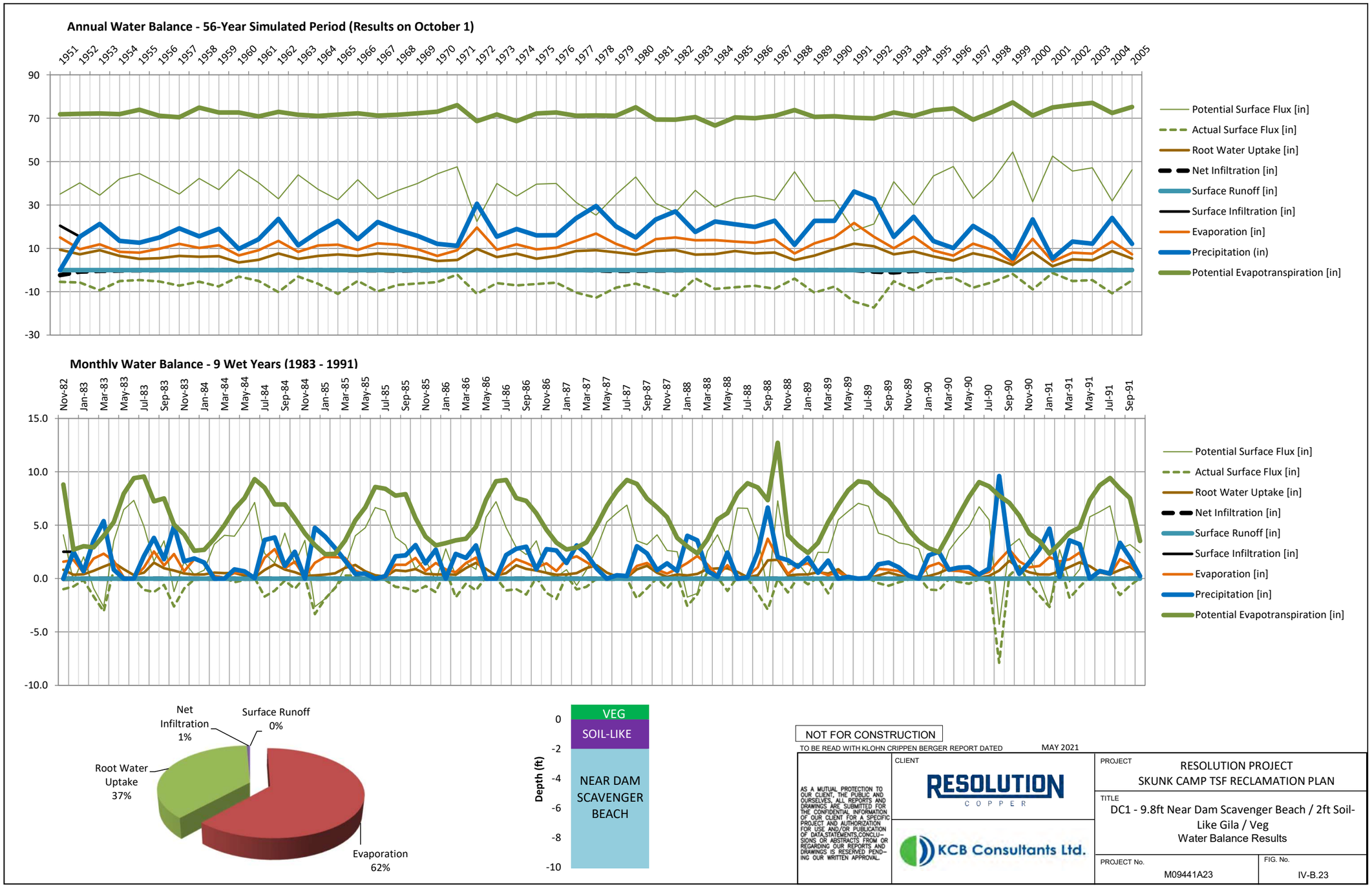
Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
1986-03-01	3.1	-0.63	-1.4	0.68	-0.0055	0	3.1	1.7	2.9
1986	8.1	6.7	-2.6	2.5	-0.030	0	8.1	5.4	18
1986-11-01	1.8	2.1	-0.70	0.62	-0.0055	0	1.8	1.1	4.8
1986-12-01	1.4	1.4	-0.32	0.39	-0.0051	0	1.4	1.1	3.7
1987-01-01	3.0	-0.59	-1.4	0.35	-0.0051	0	3.0	1.6	2.9
1987-02-01	3.3	-0.83	-1.5	0.46	-0.0051	0	3.3	1.9	2.8
1987-03-01	2.7	-0.20	-1.4	0.67	-0.0047	0	2.7	1.2	3.5
1987	12	1.9	-5.3	2.5	-0.026	0	12	6.9	18
1987-11-01	0.35	4.1	-0.020	0.18	-0.0043	0	0.35	0.31	6.0
1987-12-01	1.8	1.4	-0.67	0.37	-0.0039	0	1.8	1.1	3.8
1988-01-01	4.0	-1.5	-2.7	0.29	-0.0043	0	4.0	1.3	3.2
1988-02-01	3.6	-1.3	-1.4	0.43	-0.0039	0	3.6	2.2	2.5
1988-03-01	0.71	2.4	0.70	0.84	-0.0035	0	0.71	1.5	3.4
1988	10	5.1	-4.1	2.1	-0.020	0	10	6.3	19
1988-11-01	1.5	2.7	-0.58	0.55	-0.0035	0	1.5	0.91	5.8
1988-12-01	1.7	1.3	-1.0	0.30	-0.0035	0	1.7	0.75	4.0
1989-01-01	1.1	1.4	0.016	0.37	-0.0035	0	1.1	1.1	3.1
1989-02-01	2.2	0.12	-0.78	0.41	-0.0035	0	2.2	1.5	2.7
1989-03-01	0.31	2.8	0.17	0.60	-0.0035	0	0.31	0.43	3.1
1989	6.9	8.3	-2.2	2.2	-0.018	0	6.9	4.6	19
1989-11-01	1.1	3.1	-0.30	0.30	-0.0028	0	1.1	0.75	5.9
1989-12-01	0.28	3.0	-0.043	0.067	-0.0028	0	0.28	0.28	4.2
1990-01-01	0.87	2.0	-0.65	0.039	-0.0028	0	0.87	0.20	3.4
1990-02-01	1.3	1.0	-0.15	0.33	-0.0028	0	1.3	1.1	2.7
1990-03-01	2.5	-0.079	-0.99	0.65	-0.0024	0	2.5	1.5	2.6
1990	6.0	9.0	-2.1	1.4	-0.013	0	6.0	3.9	19
1990-11-01	0.28	3.7	0.45	0.76	-0.0028	0	0.28	0.71	5.3
1990-12-01	2.2	0.91	-0.62	0.50	-0.0020	0	2.2	1.6	4.2
1991-01-01	4.8	-2.7	-3.7	0.32	-0.0024	0	4.8	1.1	3.0
1991-02-01	1.8	0.79	0.59	0.48	-0.0024	0	1.8	2.4	2.6
1991-03-01	0.98	2.3	0.14	0.85	-0.0020	0	0.98	1.1	3.3
1991	10	5.0	-3.1	2.9	-0.011	0	10	6.9	18
1991-11-01	1.2	3.5	-0.87	0.19	-0.0028	0	1.2	0.35	6.6
1991-12-01	3.3	-0.43	-1.8	0.40	-0.0028	0	3.3	1.5	3.6
1992-01-01	4.0	-1.7	-1.9	0.37	-0.0031	0	4.0	2.1	2.9
1992-02-01	3.0	-0.71	-0.76	0.44	-0.0035	0	3.0	2.2	2.2
1992-03-01	2.8	-0.12	-0.70	0.74	-0.0031	0	2.8	2.1	3.0
1992	14	0.55	-6.0	2.1	-0.015	0	14	8.2	18
1992-11-01	1.3	3.1	-0.63	0.54	-0.0055	0	1.3	0.59	6.2
1992-12-01	0.47	2.3	0.23	0.37	-0.0063	0	0.47	0.71	3.6
1993-01-01	6.3	-4.4	-4.6	0.31	-0.0067	0	6.3	1.8	2.5
1993-02-01	11	-9.4	-9.4	0.36	-0.0075	0	11	1.9	1.9
1993-03-01	6.0	-4.1	-4.1	0.56	-0.0067	0	6.0	2.0	2.7
1993	25	-12	-18	2.1	-0.033	0	25	6.9	17
1993-11-01	0.83	3.5	-0.19	0.45	-0.13	0	0.83	0.63	6.0
1993-12-01	4.2	-1.4	-2.7	0.35	-0.12	0	4.2	1.5	3.6
1994-01-01	0.31	2.3	0.81	0.41	-0.11	0	0.31	1.1	3.4
1994-02-01	0.28	2.6	0.20	0.43	-0.10	0	0.28	0.47	3.3
1994-03-01	2.6	-0.12	-1.1	0.67	-0.088	0	2.6	1.5	3.0
1994	8.2	6.9	-3.0	2.3	-0.56	0	8.2	5.2	19
1994-11-01	1.9	1.9	-0.96	0.44	-0.054	0	1.9	0.91	5.3
1994-12-01	3.4	-0.87	-1.4	0.43	-0.049	0	3.4	1.9	3.5

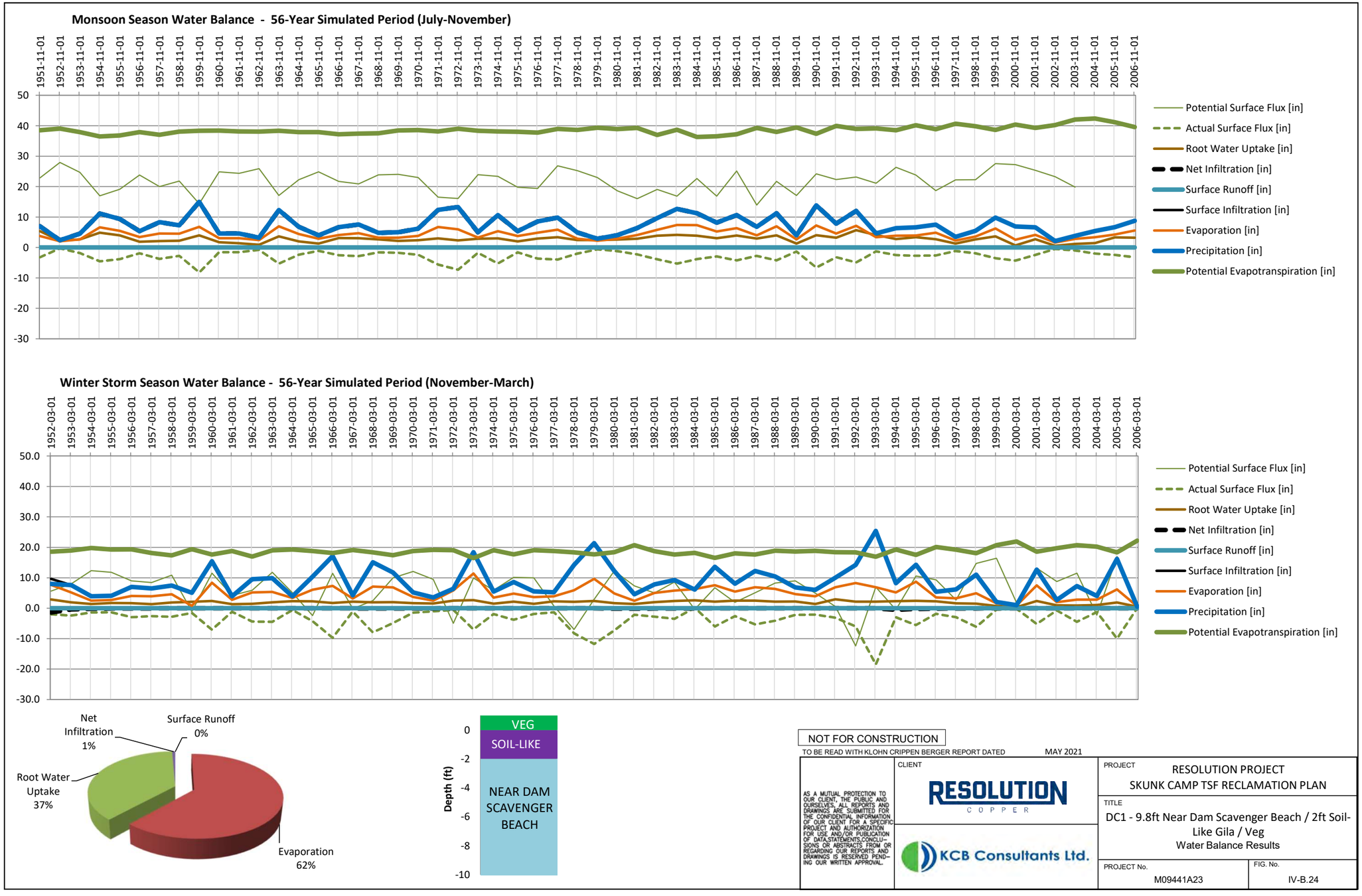
Table IV-B.12 DC1 Winter Storm Period Water Balance

Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
1995-01-01	2.7	-0.31	-1.0	0.37	-0.047	0	2.7	1.7	3.0
1995-02-01	3.7	-1.3	-1.3	0.46	-0.044	0	3.7	2.4	2.6
1995-03-01	2.7	0	-0.88	0.75	-0.037	0	2.7	1.8	3.1
1995	14	-0.51	-5.5	2.5	-0.23	0	14	8.7	18
1995-11-01	0	4.3	0.56	0.63	-0.030	0	0	0.55	5.8
1995-12-01	1.3	1.8	-0.44	0.39	-0.027	0	1.3	0.87	3.9
1996-01-01	0.91	1.9	-0.33	0.26	-0.027	0	0.91	0.59	3.5
1996-02-01	0	2.9	0.15	0.24	-0.026	0	0	0.16	3.3
1996-03-01	3.1	-0.28	-1.8	0.74	-0.023	0	3.1	1.4	3.6
1996	5.4	11	-1.8	2.3	-0.13	0	5.4	3.5	20
1996-11-01	0.43	4.1	-0.047	0.31	-0.017	0	0.43	0.39	6.0
1996-12-01	1.2	1.9	-0.72	0.15	-0.015	0	1.2	0.51	3.8
1997-01-01	0.039	2.6	0.43	0.21	-0.015	0	0.039	0.43	3.2
1997-02-01	2.8	-0.55	-1.5	0.32	-0.014	0	2.8	1.4	2.7
1997-03-01	1.7	1.3	-1.1	0.62	-0.012	0	1.7	0.55	3.4
1997	6.2	9.3	-2.9	1.6	-0.073	0	6.2	3.3	19
1997-11-01	0.75	3.2	-0.25	0.11	-0.0094	0	0.75	0.47	6.0
1997-12-01	0.79	2.1	-0.25	0.19	-0.0087	0	0.79	0.59	3.7
1998-01-01	2.7	-0.43	-1.3	0.30	-0.0083	0	2.7	1.4	3.1
1998-02-01	0.39	2.2	0.33	0.37	-0.0087	0	0.39	0.71	2.4
1998-03-01	6.4	-4.4	-4.7	0.53	-0.0071	0	6.4	1.7	2.9
1998	11	2.7	-6.1	1.5	-0.042	0	11	4.9	18
1998-11-01	0	4.4	0.063	0.083	-0.0067	0	0	0.079	6.3
1998-12-01	1.1	2.2	-0.83	0.047	-0.0067	0	1.1	0.24	3.9
1999-01-01	0.75	2.0	0.23	0.30	-0.0063	0	0.75	0.98	3.3
1999-02-01	0.039	2.9	0.079	0.15	-0.0067	0	0.039	0.12	3.6
1999-03-01	0.20	3.2	0	0.15	-0.0055	0	0.20	0.20	3.6
1999	2.0	15	-0.46	0.73	-0.032	0	2.0	1.6	21
1999-11-01	0	4.5	0.083	0.13	-0.0055	0	0	0.079	6.2
1999-12-01	0	3.7	0.047	0.028	-0.0051	0	0	0.039	4.7
2000-01-01	0.039	2.8	-0.0039	0.020	-0.0051	0	0.039	0.039	3.7
2000-02-01	0.28	2.9	-0.035	0.047	-0.0051	0	0.28	0.24	3.4
2000-03-01	0.71	2.5	-0.23	0.13	-0.0043	0	0.71	0.47	3.9
2000	1.0	16	-0.14	0.35	-0.025	0	1.0	0.87	22
2000-11-01	5.3	-1.5	-4.0	0.31	-0.0031	0	5.3	1.3	6.1
2000-12-01	2.1	0.63	0.17	0.48	-0.0035	0	2.1	2.3	2.9
2001-01-01	0.12	2.9	0.57	0.43	-0.0035	0	0.12	0.67	3.7
2001-02-01	3.4	-1.1	-1.9	0.39	-0.0028	0	3.4	1.5	3.0
2001-03-01	1.7	0.91	0.055	0.74	-0.0028	0	1.7	1.8	2.8
2001	13	1.8	-5.2	2.4	-0.016	0	13	7.5	19
2001-11-01	0.35	3.7	-0.063	0.17	-0.0031	0	0.35	0.31	5.7
2001-12-01	0.28	3.0	-0.020	0.059	-0.0028	0	0.28	0.28	4.6
2002-01-01	1.9	0.55	-0.80	0.25	-0.0031	0	1.9	1.0	2.9
2002-02-01	0.24	2.5	0.0039	0.24	-0.0031	0	0.24	0.24	3.2
2002-03-01	0	3.3	0.16	0.20	-0.0028	0	0	0.16	3.4
2002	2.7	13	-0.72	0.91	-0.015	0	2.7	2.0	20
2002-11-01	0.12	4.2	0.039	0.024	-0.0020	0	0.12	0.16	6.3
2002-12-01	0.83	2.5	-0.61	0.024	-0.0024	0	0.83	0.24	4.4
2003-01-01	0.98	1.6	-0.039	0.20	-0.0024	0	0.98	0.94	3.4
2003-02-01	0.39	2.9	0.067	0.24	-0.0024	0	0.39	0.43	3.1
2003-03-01	5.0	-2.4	-3.9	0.39	-0.0016	0	5.0	1.0	3.6
2003	7.3	8.8	-4.5	0.89	-0.011	0	7.3	2.8	21

Table IV-B.12 DC1 Winter Storm Period Water Balance

Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
2003-11-01	0.079	4.6	0.094	0.071	-0.0024	0	0.079	0.20	6.3
2003-12-01	0.87	2.0	-0.35	0.16	-0.0016	0	0.87	0.51	3.9
2004-01-01	0.98	1.9	-0.34	0.20	-0.0020	0	0.98	0.63	3.9
2004-02-01	1.5	0.98	-0.63	0.20	-0.0012	0	1.5	0.83	3.1
2004-03-01	0.67	2.0	-0.055	0.43	-0.0016	0	0.67	0.63	3.0
2004	4.1	12	-1.3	1.1	-0.0087	0	4.1	2.8	20
2004-11-01	1.2	3.0	-0.52	0.31	-0.0016	0	1.2	0.67	6.4
2004-12-01	0.63	2.0	-0.047	0.22	-0.0016	0	0.63	0.63	3.5
2005-01-01	2.8	-0.039	-1.9	0.31	-0.0012	0	2.8	0.87	3.0
2005-02-01	4.2	-1.9	-2.2	0.43	-0.0012	0	4.2	2.0	2.7
2005-03-01	7.3	-5.3	-5.4	0.59	-0.00079	0	7.3	2.0	2.7
2005	16	-2.2	-10.0	1.9	-0.0063	0	16	6.2	18
2005-11-01	0.39	4.0	-0.10	0.21	-0.0020	0	0.39	0.31	6.4
2005-12-01	0	3.5	0.071	0.079	-0.0016	0	0	0.079	4.4
2006-01-01	0	2.8	0.043	0.055	-0.0020	0	0	0.039	3.5
2006-02-01	0	3.4	0.035	0.067	-0.0024	0	0	0.039	3.8
2006-03-01	0.12	3.3	0	0.087	-0.0024	0	0.12	0.12	4.1
2006	0.51	17	0.047	0.50	-0.010	0	0.51	0.59	22


Annual Water Balance - 56-Year Simulated Period (Results on October 1)
Potential Surface Flux [in]
Actual Surface Flux [in]
Root Water Uptake [in]
Net Infiltration [in]
Surface Runoff [in]
Surface Infiltration [in]
Evaporation [in]
Precipitation (in)
Potential Evapotranspiration [in]
Monthly Water Balance - 9 Wet Years (1983 - 1991)
Potential Surface Flux [in]
Actual Surface Flux [in]
Root Water Uptake [in]
Net Infiltration [in]
Surface Runoff [in]
Surface Infiltration [in]
Evaporation [in]
Precipitation [in]
Potential Evapotranspiration [in]
Net Infiltration 1%
Surface Runoff 0%
Root Water Uptake 37%
Evaporation 62%
VEG
SOIL-LIKE
NEAR DAM SCAVENGER BEACH
Depth (ft)
NOT FOR CONSTRUCTION
TO BE READ WITH KLOHN CRIPPEN BERGER REPORT DATED MAY 2021
AS A MUTUAL PROTECTION TO OUR CLIENT, THE PUBLIC AND OURSELVES, ALL REPORTS AND DRAWINGS ARE SUBMITTED FOR THE CONFIDENTIAL INFORMATION OF OUR CLIENT FOR A SPECIFIC PROJECT AND AUTHORIZATION FOR USE AND/OR PUBLICATION OF DATA,STATEMENTS,CONCLUSIONS OR ABSTRACTS FROM OR REGARDING OUR REPORTS AND DRAWINGS IS RESERVED PENDING OUR WRITTEN APPROVAL.
CLIENT
RESOLUTION COPPER
KCB Consultants Ltd.
PROJECT
RESOLUTION PROJECT
SKUNK CAMP TSF RECLAMATION PLAN
TITLE
DC1 - 9.8ft Near Dam Scavenger Beach / 2ft Soil-Like Gila / Veg
Water Balance Results
PROJECT No.
M09441A23
FIG. No.
IV-B.23


Monsoon Season Water Balance - 56-Year Simulated Period (July-November)
Potential Surface Flux [in]
Actual Surface Flux [in]
Root Water Uptake [in]
Net Infiltration [in]
Surface Runoff [in]
Surface Infiltration [in]
Evaporation [in]
Precipitation [in]
Potential Evapotranspiration [in]
Winter Storm Season Water Balance - 56-Year Simulated Period (November-March)
Net Infiltration 1%
Surface Runoff 0%
Root Water Uptake 37%
Evaporation 62%
VEG
SOIL-LIKE
NEAR DAM SCAVENGER BEACH
Depth (ft)
NOT FOR CONSTRUCTION
TO BE READ WITH KLOHN CRIPPEN BERGER REPORT DATED MAY 2021
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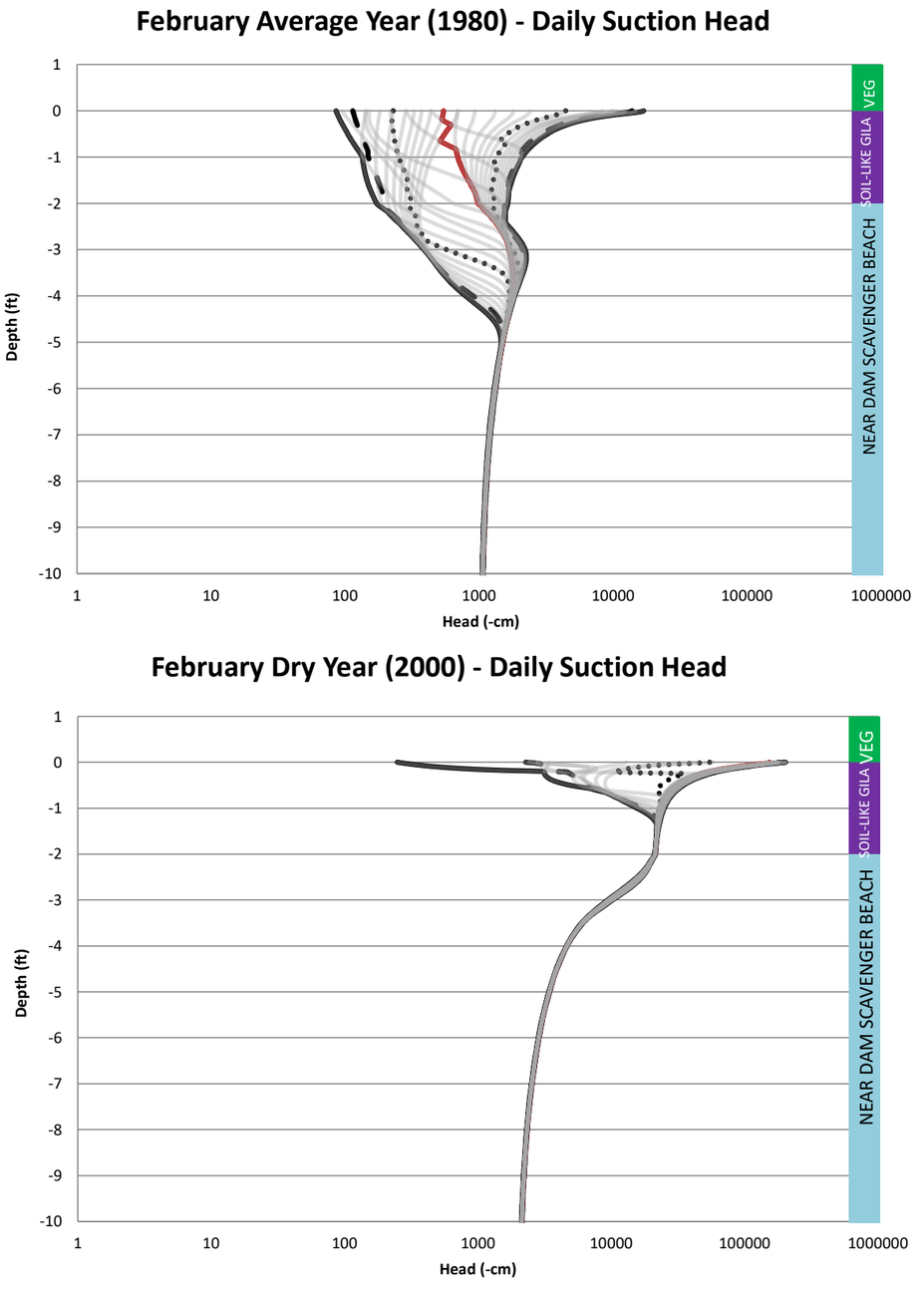
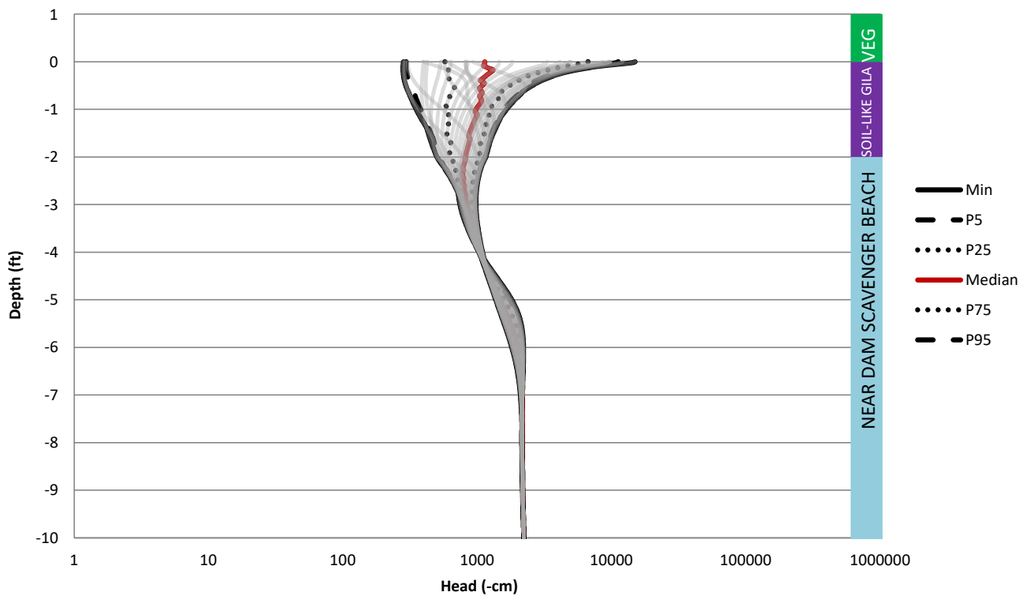
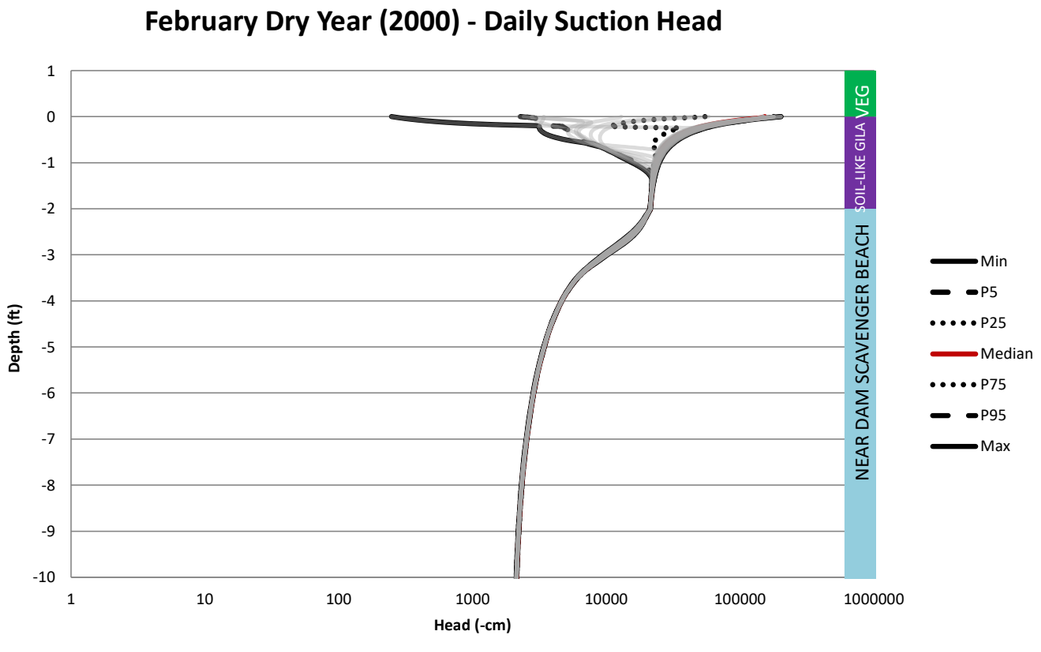
KCB Consultants Ltd.
PROJECT
RESOLUTION PROJECT
SKUNK CAMP TSF RECLAMATION PLAN
TITLE
DC1 - 9.8ft Near Dam Scavenger Beach / 2ft Soil-Like Gila / Veg
Water Balance Results
PROJECT No.
M09441A23
FIG. No.
IV-B.24







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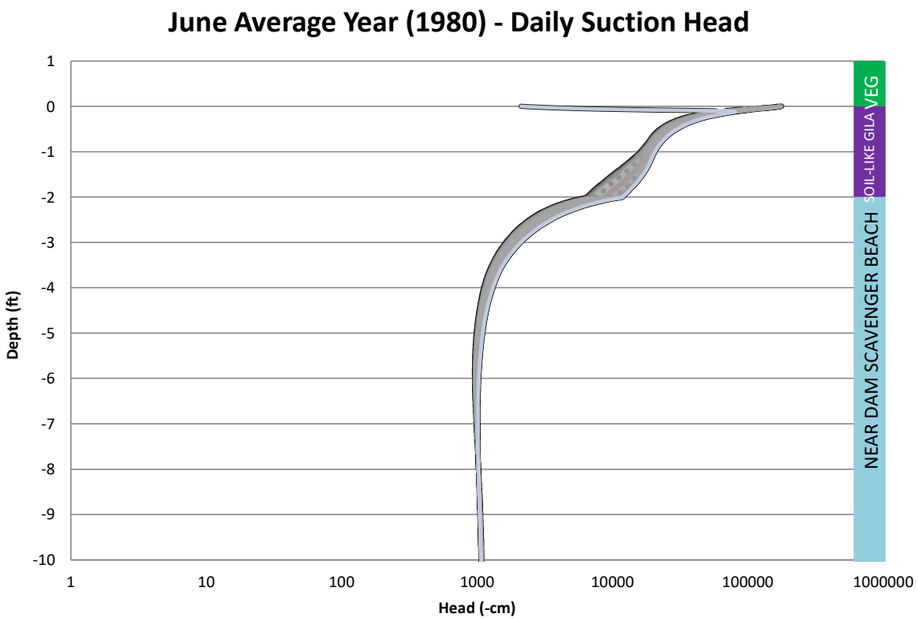
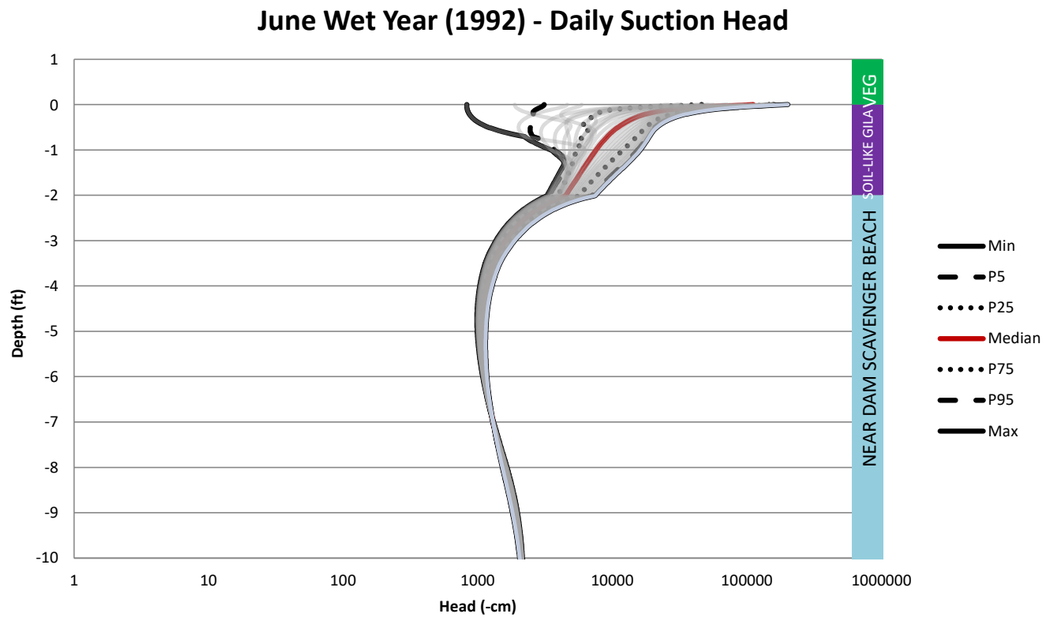
PROJECT: RESOLUTION PROJECT
SKUNK CAMP TSF RECLAMATION PLAN

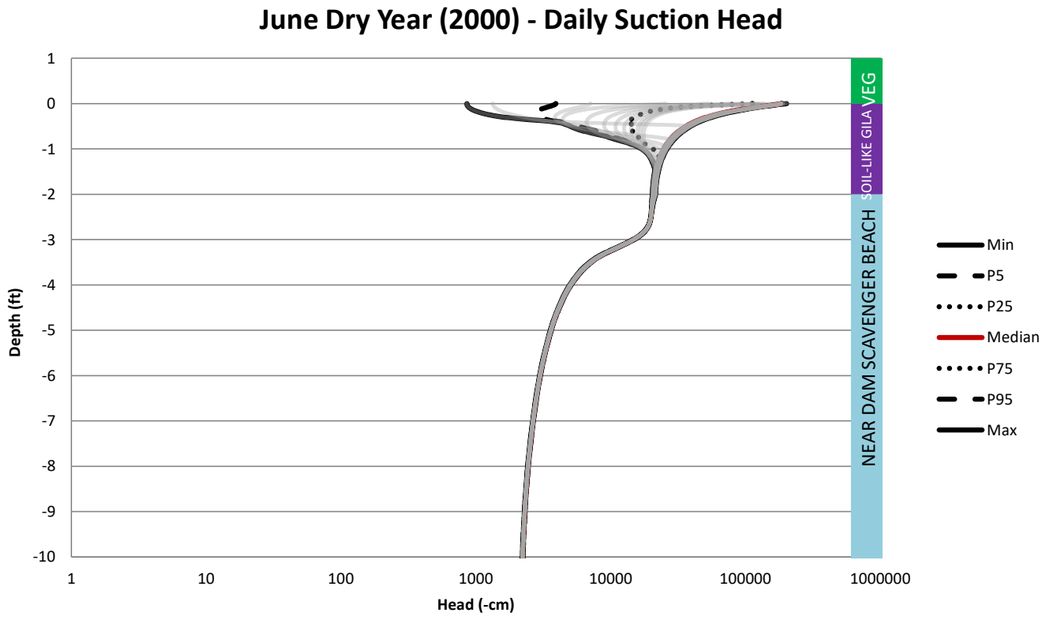
TITLE: DC1 - 9.8ft Near Dam Scavenger Beach / 2ft Soil-Like Gila / Veg
Suction Profiles - Winter (February)

PROJECT No. M09441A23

FIG. No. IV-B-25







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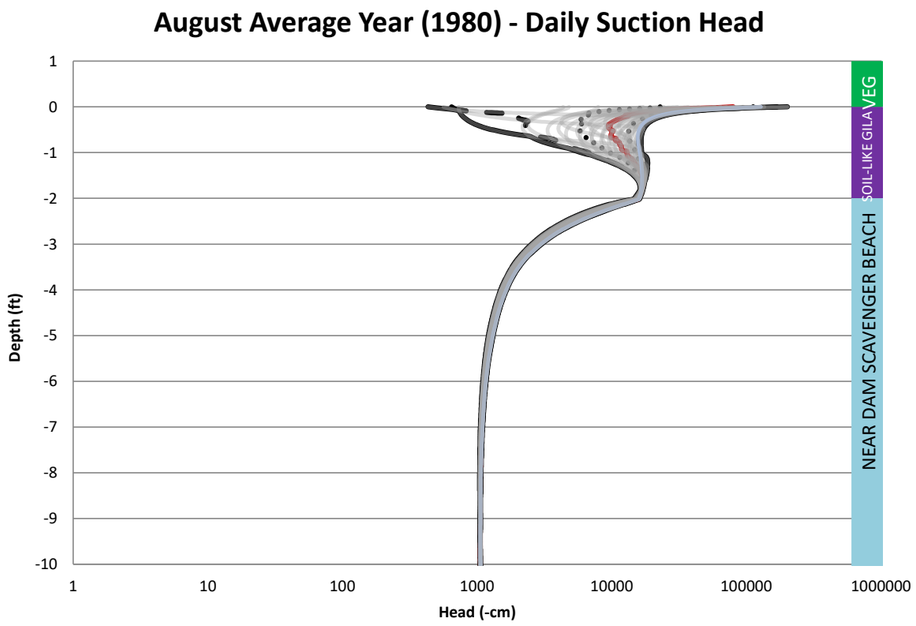
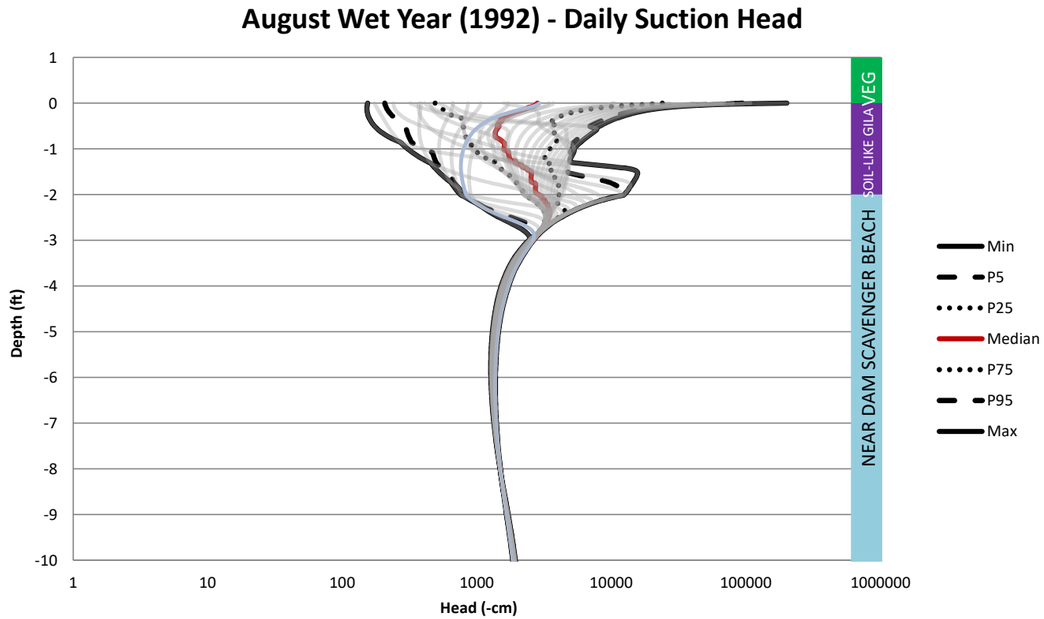
PROJECT: RESOLUTION PROJECT
SKUNK CAMP TSF RECLAMATION PLAN

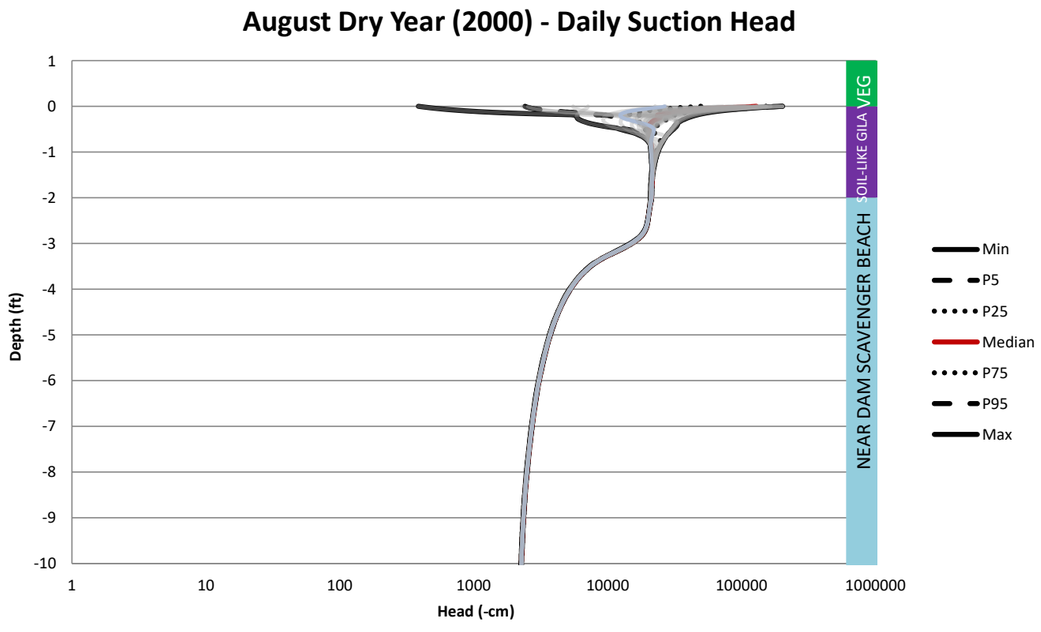
TITLE: DC1 - 9.8ft Near Dam Scavenger Beach / 2ft Soil-Like Gila / Veg
Suction Profiles - Dry Season (June)

PROJECT No. M09441A23

FIG. No. IV-B.26







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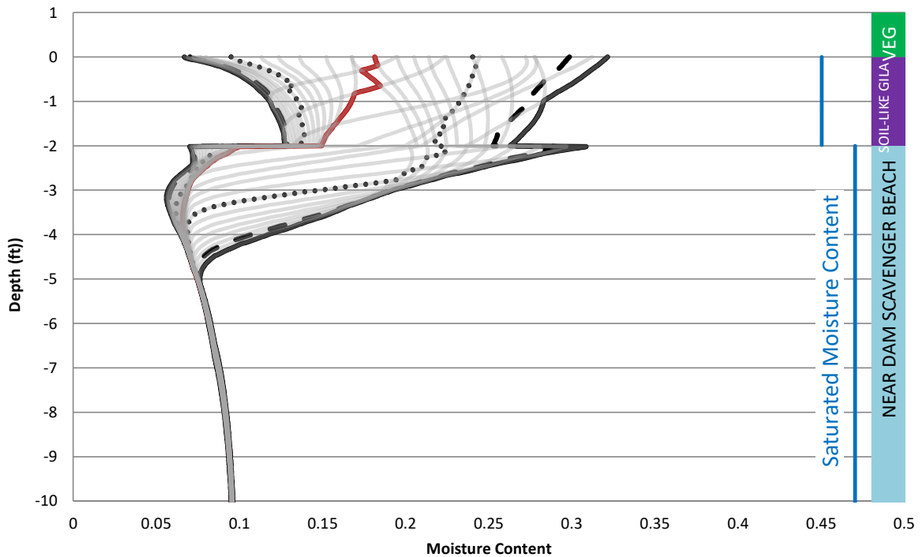
PROJECT: RESOLUTION PROJECT
SKUNK CAMP TSF RECLAMATION PLAN

TITLE: DC1 - 9.8ft Near Dam Scavenger Beach / 2ft Soil-Like Gila / Veg
Suction Profiles - Summer Monsoon (August)

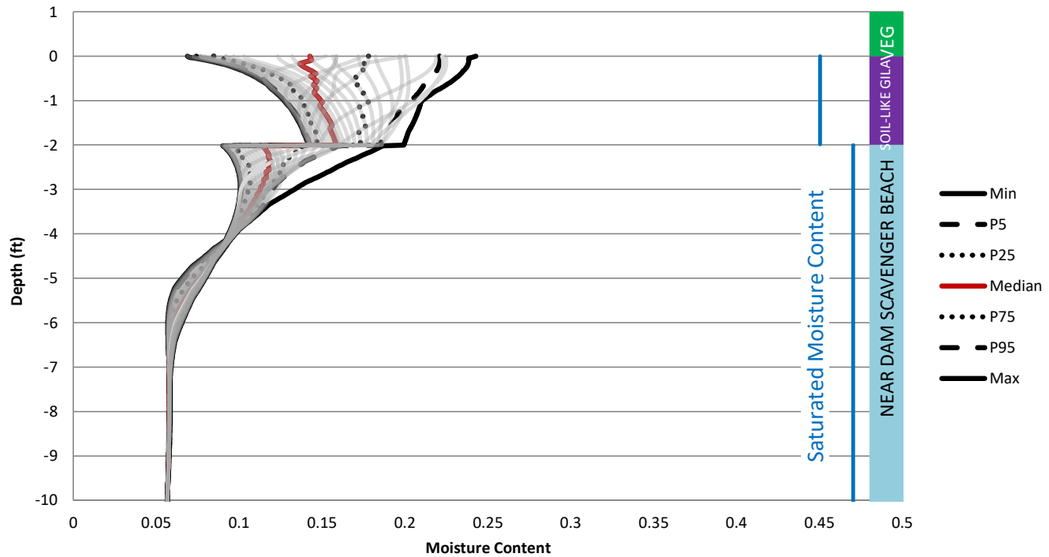
PROJECT No. M09441A23

FIG. No. IV-B.27

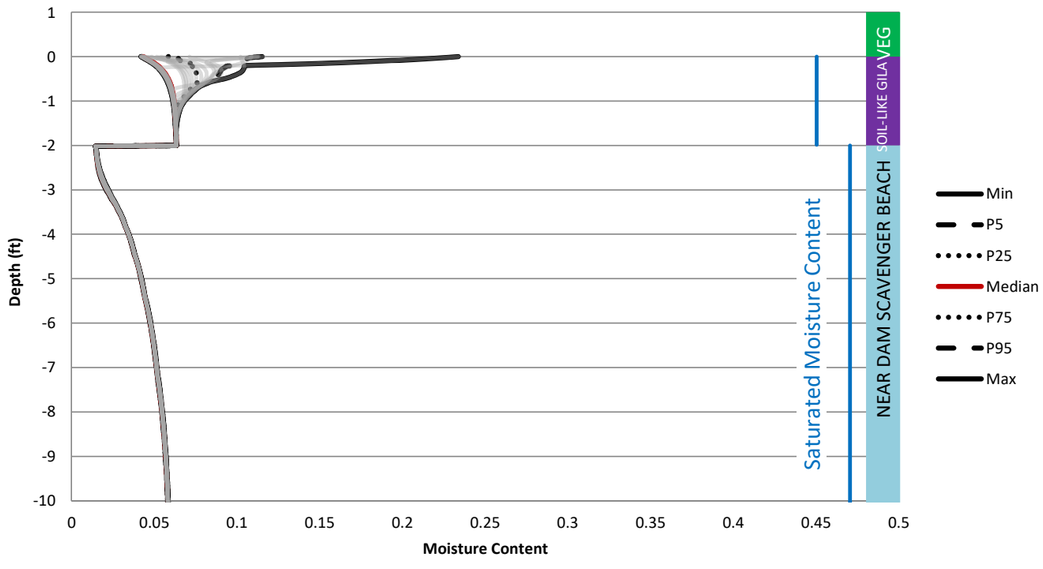
February Average Year (1980) - Daily Moisture Content



February Wet Year (1992) - Daily Moisture Content



February Dry Year (2000) - Daily Moisture Content



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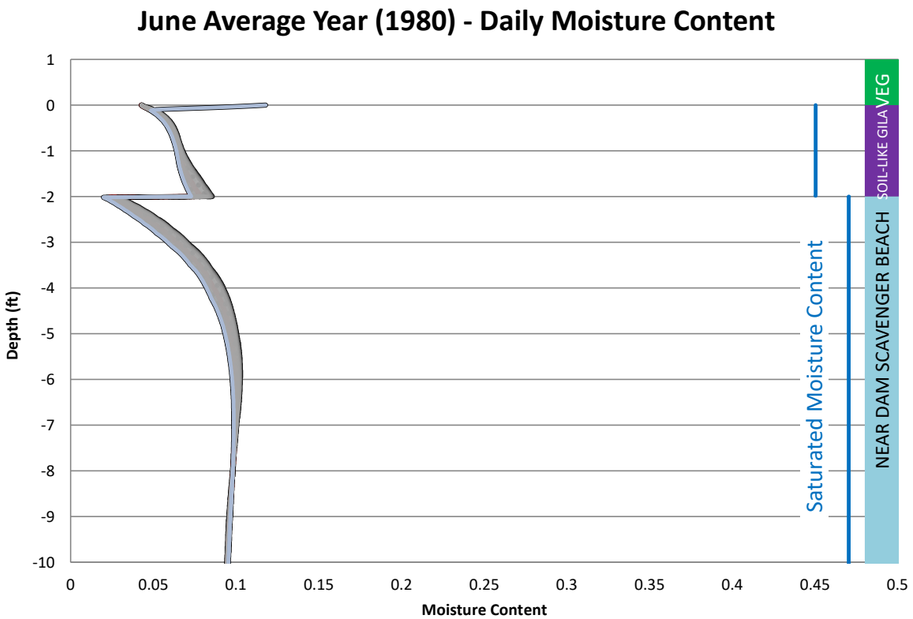
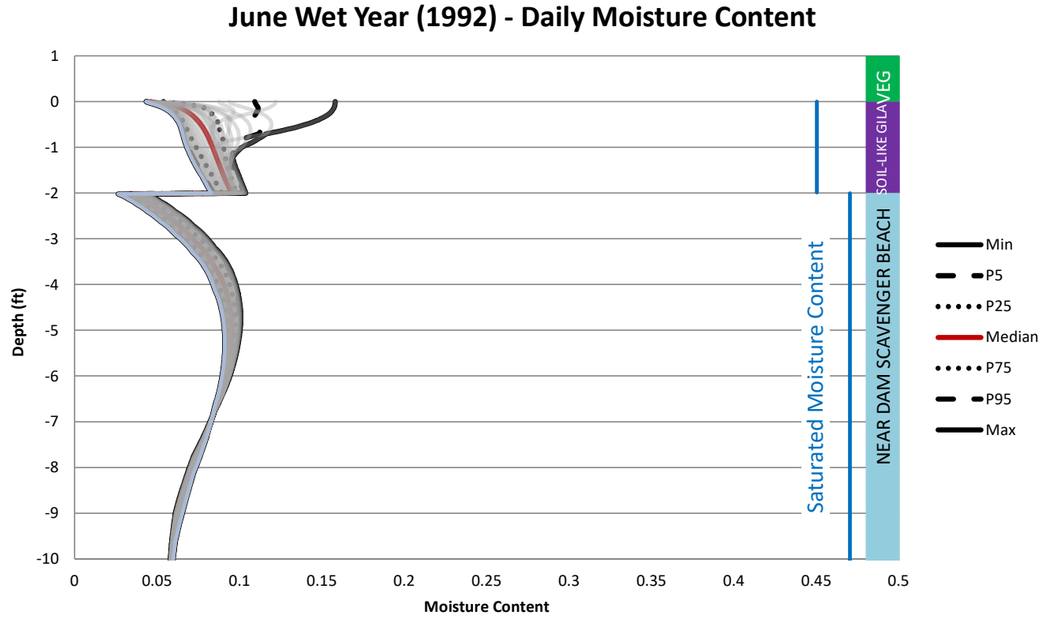
SKUNK CAMP TSF RECLAMATION PLAN

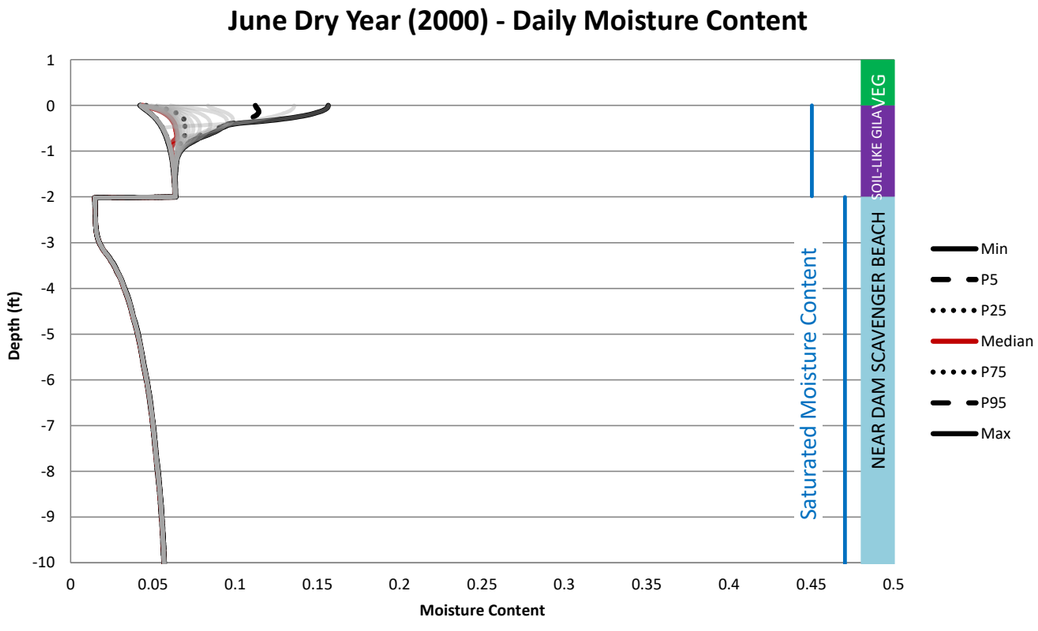
TITLE: DC1 - 9.8ft Near Dam Scavenger Beach / 2ft Soil-Like Gila / Veg
Moisture Content - Winter (February)

PROJECT No. M09441A23

FIG. No. IV-B.28







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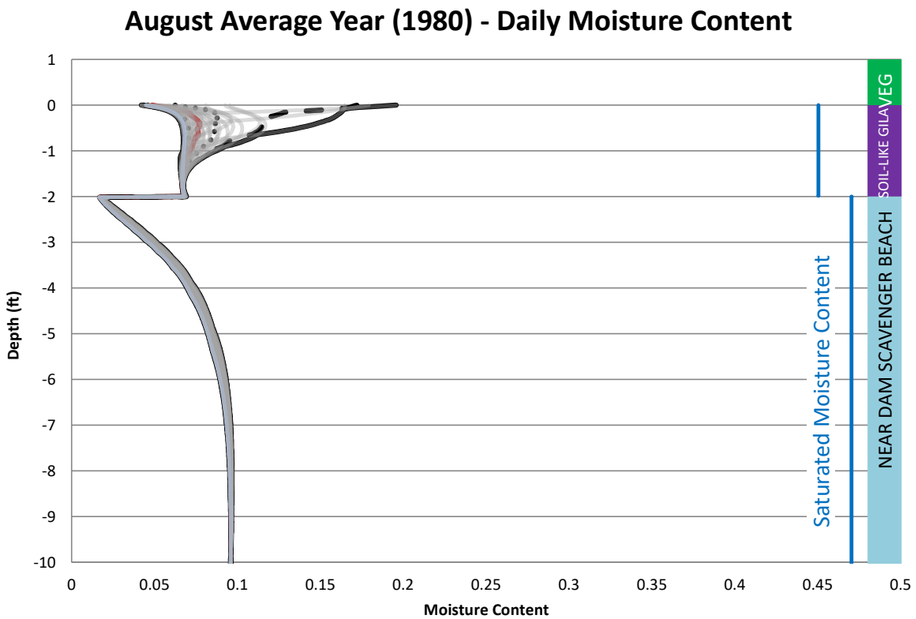
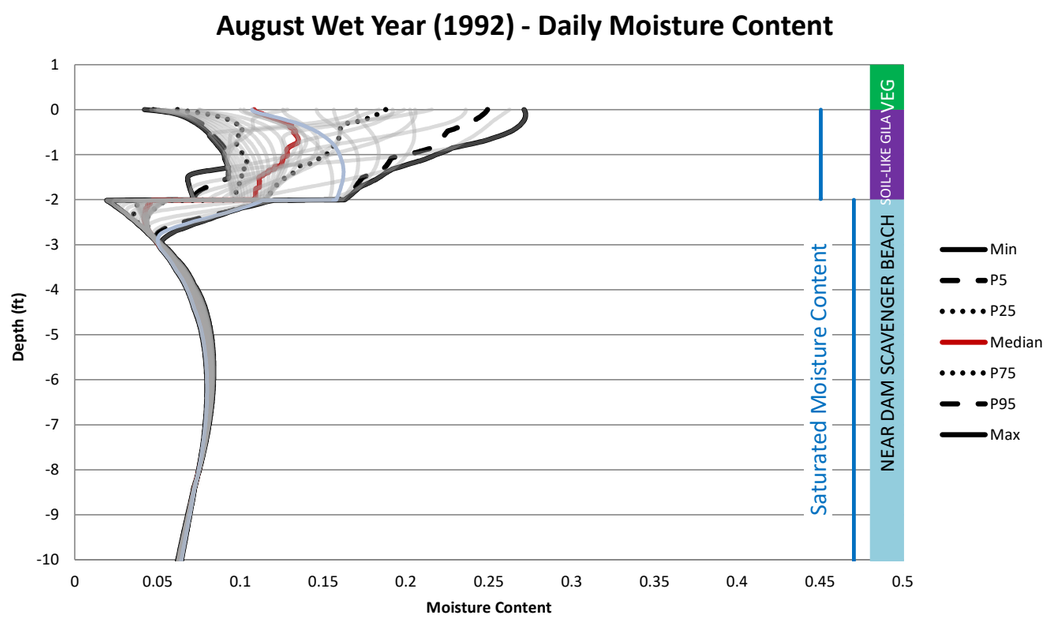
SKUNK CAMP TSF RECLAMATION PLAN

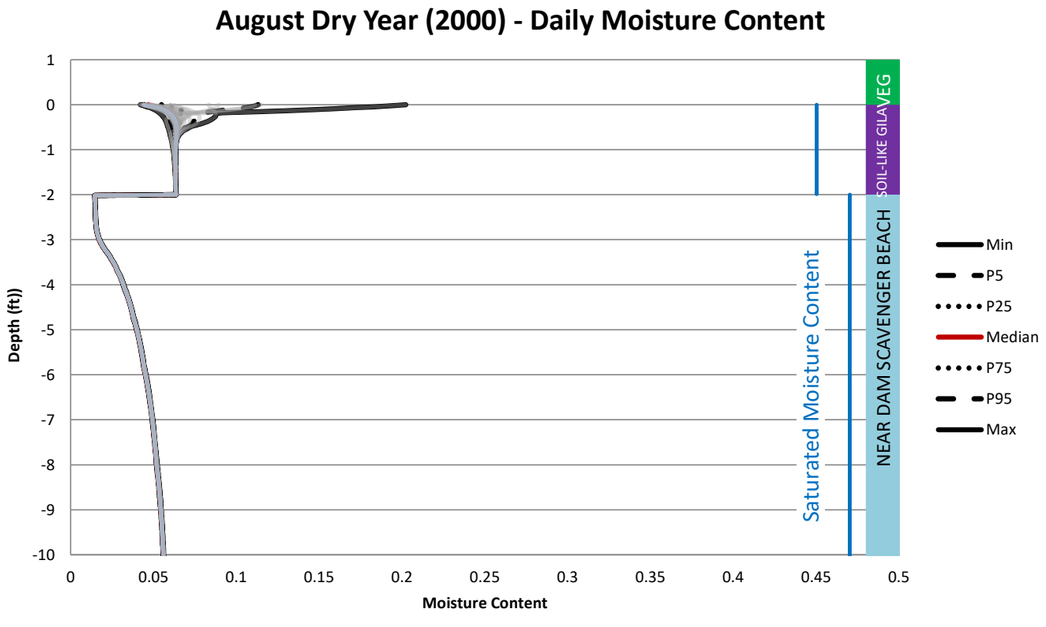
TITLE: DC1 - 9.8ft Near Dam Scavenger Beach / 2ft Soil-Like Gila / Veg
Moisture Content - Dry Season(June)

PROJECT No. M09441A23

FIG. No. IV-B.28







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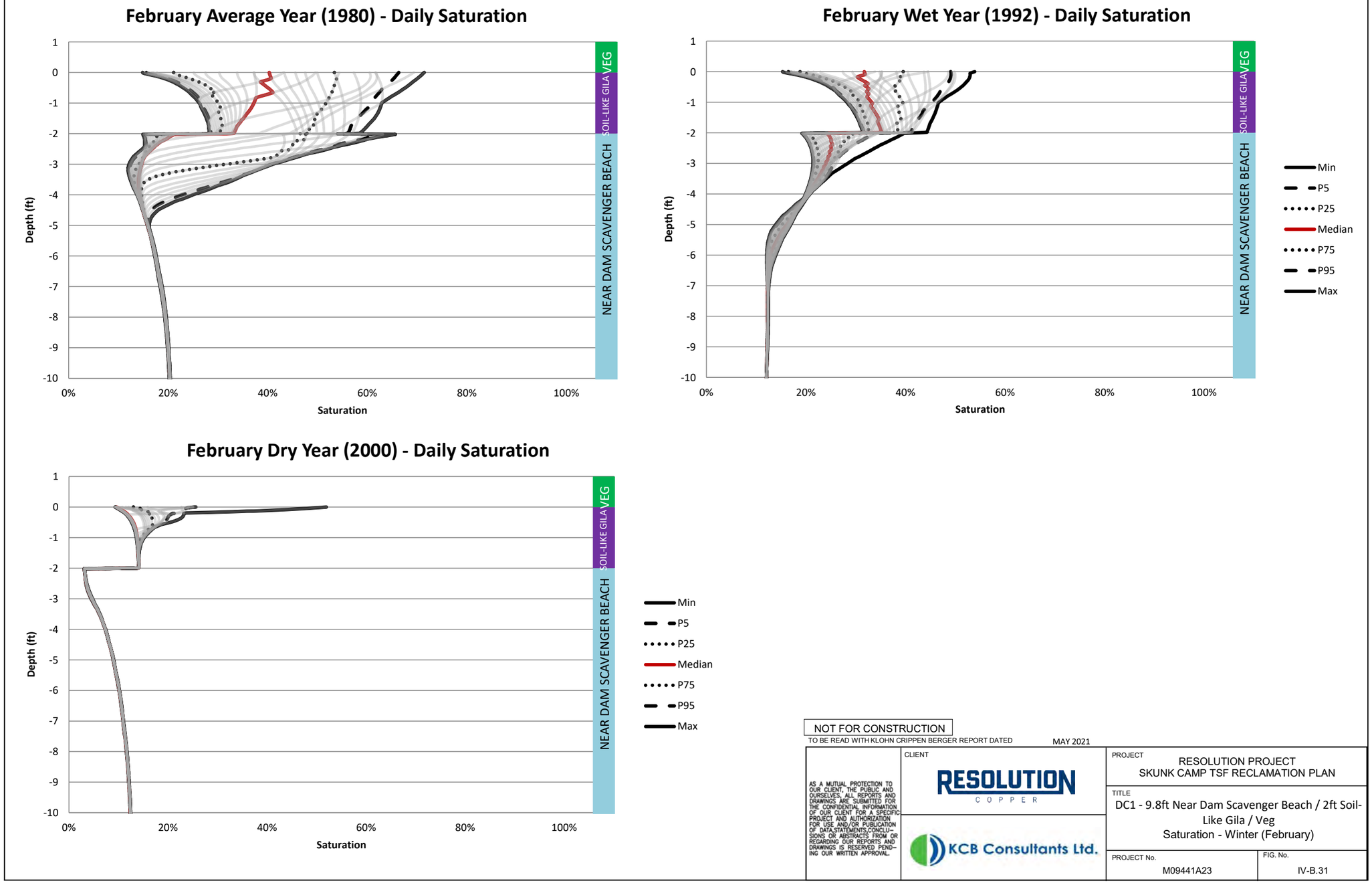
PROJECT: RESOLUTION PROJECT
SKUNK CAMP TSF RECLAMATION PLAN

TITLE: DC1 - 9.8ft Near Dam Scavenger Beach / 2ft Soil-Like Gila / Veg
Moisture Content - Summer Monsoon (August)

PROJECT No. M09441A23

FIG. No. IV-B.30


February Average Year (1980) - Daily Saturation
February Wet Year (1992) - Daily Saturation
February Dry Year (2000) - Daily Saturation
Depth (ft)
Saturation
0%
20%
40%
60%
80%
100%
1
0
-1
-2
-3
-4
-5
-6
-7
-8
-9
-10
VEG
SOIL-LIKE GILA
NEAR DAM SCAVENGER BEACH
Min
P5
P25
Median
P75
P95
Max
NOT FOR CONSTRUCTION
TO BE READ WITH KLOHN CRIPPEN BERGER REPORT DATED
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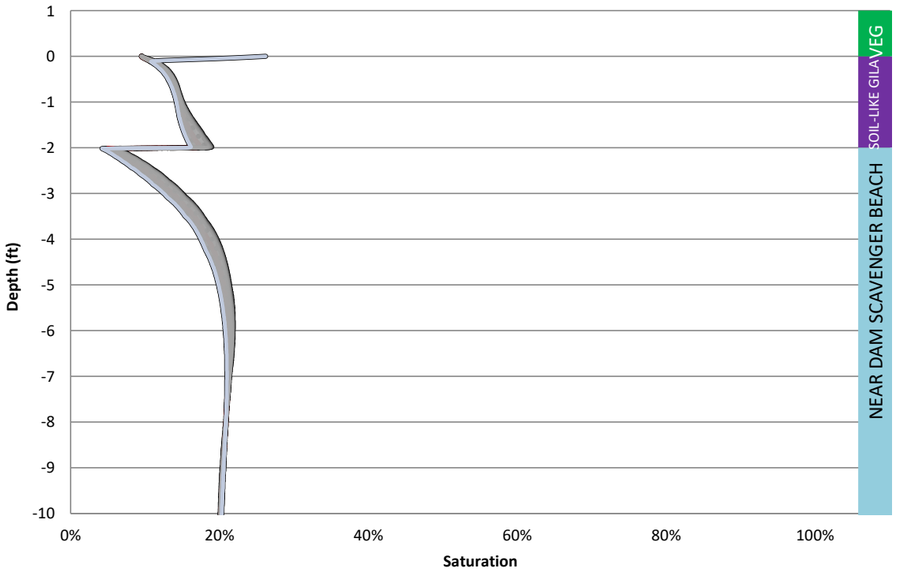
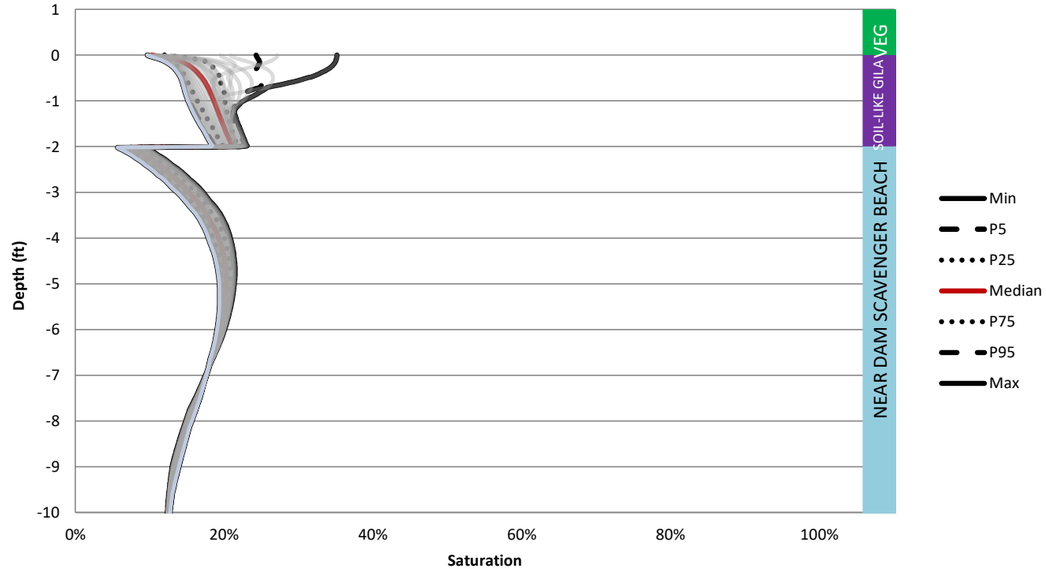
KCB Consultants Ltd.
PROJECT
RESOLUTION PROJECT
SKUNK CAMP TSF RECLAMATION PLAN
TITLE
DC1 - 9.8ft Near Dam Scavenger Beach / 2ft Soil-Like Gila / Veg
Saturation - Winter (February)
PROJECT No.
M09441A23
FIG. No.
IV-B.31

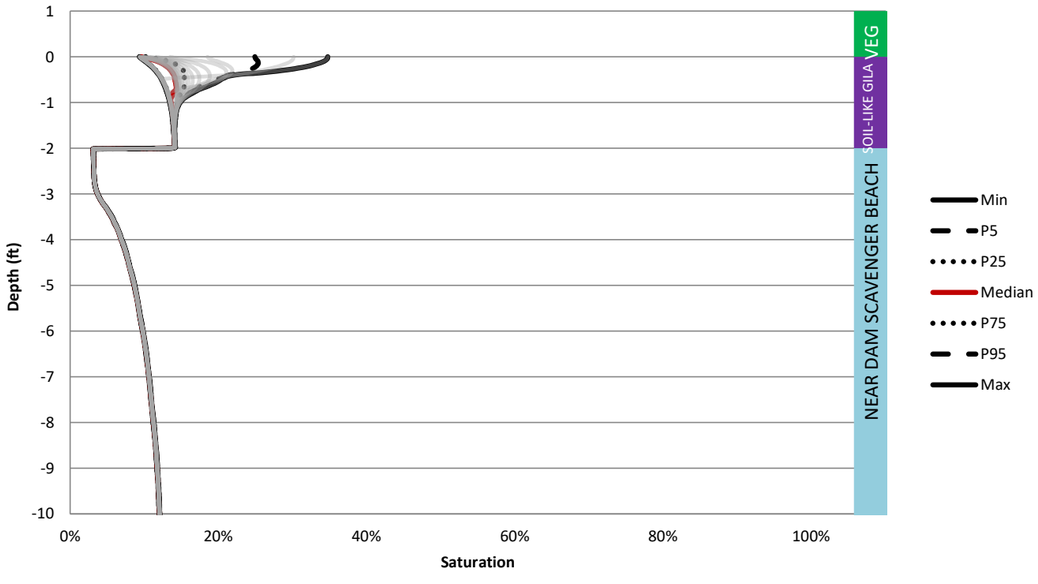
June Average Year (1980) - Daily Saturation



June Wet Year (1992) - Daily Saturation



June Dry Year (2000)- Daily Saturation



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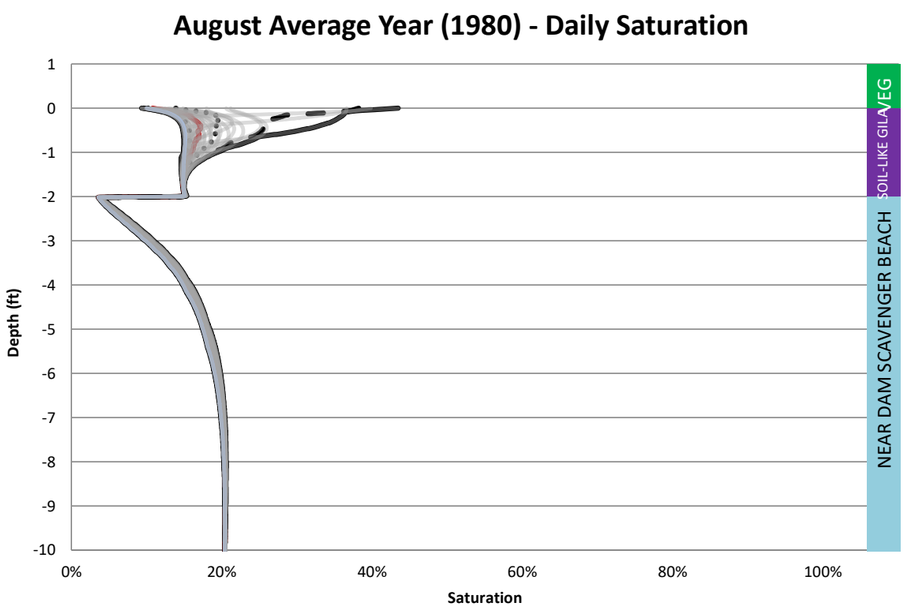
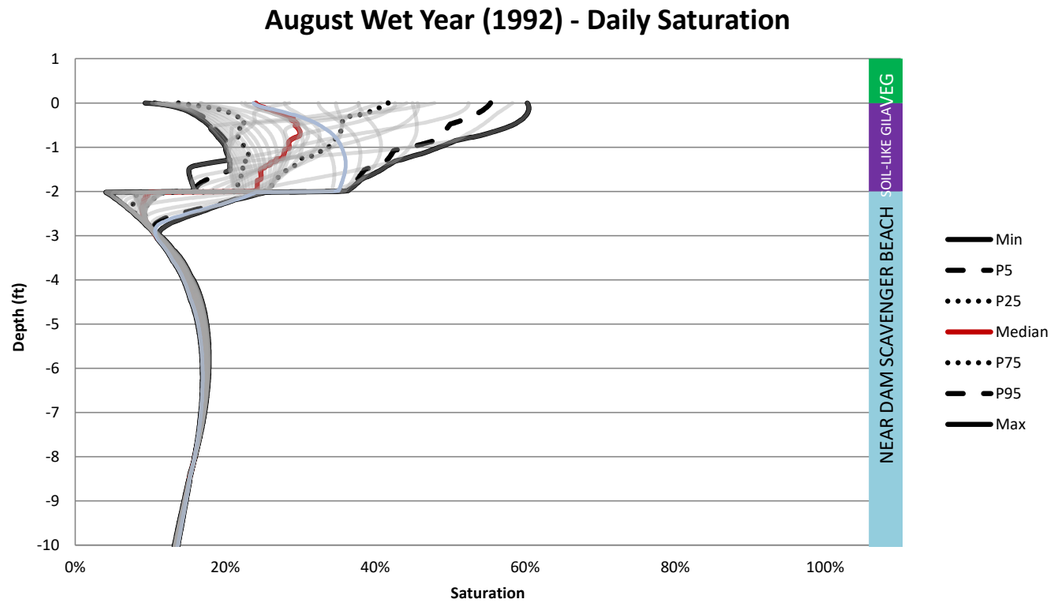
PROJECT: RESOLUTION PROJECT
SKUNK CAMP TSF RECLAMATION PLAN

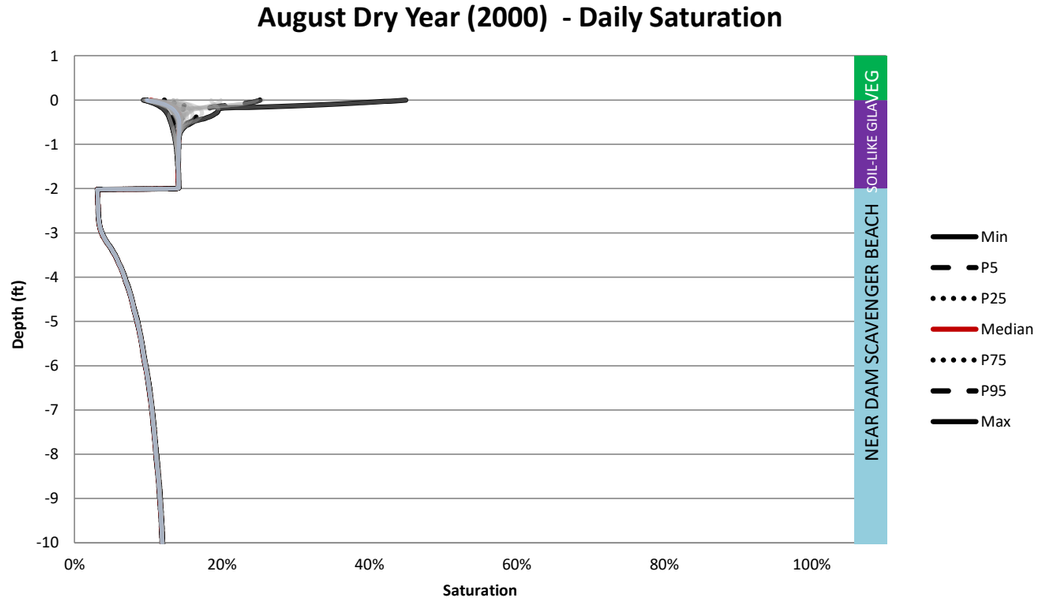
TITLE: DC1 - 9.8ft Near Dam Scavenger Beach / 2ft Soil-Like Gila / Veg
Saturation - Dry Season (June)

PROJECT No. M09441A23

FIG. No. IV-B.32







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SKUNK CAMP TSF RECLAMATION PLAN

TITLE: DC1 - 9.8ft Near Dam Scavenger Beach / 2ft Soil-Like Gila / Veg
Saturation - Summer Monsoon (August)

PROJECT No. M09441A23

FIG. No. IV-B.33

Table IV-B.13 DC2 Annual Water Balance

Water Year	Result Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
		(in)	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
1951	1951-10-01	14	32	-9.3	9.0	-4.6	0	14	4.6	60
1952	1952-10-01	0	35	-14	10	-4.3	0	20	6.4	72
1953	1953-10-01	15	40	-12	9.4	-4.0	0	15	3.8	72
1954	1954-10-01	21	34	-16	11	-2.3	0	21	5.1	72
1955	1955-10-01	13	42	-9.6	10	-2.4	0	13	3.8	72
1956	1956-10-01	13	45	-8.6	9.4	-1.7	0	13	4.0	74
1957	1957-10-01	15	40	-9.8	9.9	-1.1	0	15	5.2	71
1958	1958-10-01	19	35	-13	11	-0.76	0	19	6.6	70
1959	1959-10-01	16	42	-11	10	-0.69	0	16	4.7	75
1960	1960-10-01	19	37	-14	8.1	-2.1	0	19	4.5	73
1961	1961-10-01	9.8	46	-5.5	7.8	-2.0	0	9.8	4.3	73
1962	1962-10-01	14	40	-9.8	7.7	-0.99	0	14	4.3	71
1963	1963-10-01	24	33	-18	10	-1.0	0	24	5.3	73
1964	1964-10-01	11	44	-6.1	9.2	-2.2	0	11	5.3	72
1965	1965-10-01	18	37	-12	10	-1.6	0	18	5.3	71
1966	1966-10-01	23	32	-18	7.6	-4.2	0	23	4.5	72
1967	1967-10-01	14	42	-9.8	12	-3.1	0	14	4.5	72
1968	1968-10-01	22	33	-18	9.6	-4.2	0	22	4.6	71
1969	1969-10-01	19	37	-13	10	-4.1	0	19	5.2	72
1970	1970-10-01	16	40	-11	9.5	-2.5	0	16	5.1	72
1971	1971-10-01	12	44	-8.4	8.4	-1.4	0	12	3.7	73
1972	1972-10-01	11	48	-7.3	8.7	-1.1	0	11	3.9	76
1973	1973-10-01	31	22	-23	12	-3.2	0	31	7.8	69
1974	1974-10-01	15	40	-11	10	-3.2	0	15	4.8	72
1975	1975-10-01	19	34	-13	11	-1.9	0	19	6.2	69
1976	1976-10-01	16	40	-11	10	-1.7	0	16	4.9	72
1977	1977-10-01	16	40	-11	11	-0.90	0	16	5.2	73
1978	1978-10-01	24	31	-18	11	-2.0	0	24	5.7	71
1979	1979-10-01	30	25	-23	9.4	-10	0	30	6.7	71
1980	1980-10-01	20	35	-15	9.5	-6.5	0	20	5.7	71
1981	1981-10-01	15	43	-11	10	-3.6	0	15	4.3	75
1982	1982-10-01	24	30	-16	12	-2.0	0	24	7.4	69
1983	1983-10-01	27	27	-20	11	-3.0	0	27	7.1	69
1984	1984-10-01	18	37	-11	11	-4.7	0	18	6.7	71
1985	1985-10-01	22	29	-16	9.6	-4.3	0	22	6.6	67
1986	1986-10-01	21	33	-15	12	-3.6	0	21	6.4	70
1987	1987-10-01	20	34	-14	11	-3.7	0	20	5.8	70
1988	1988-10-01	23	32	-16	11	-3.1	0	23	6.4	71
1989	1989-10-01	12	45	-7.7	9.0	-3.1	0	12	3.9	74
1990	1990-10-01	23	32	-17	11	-1.6	0	23	6.0	71
1991	1991-10-01	23	32	-16	11	-3.7	0	23	6.4	71
1992	1992-10-01	36	18	-27	13	-8.1	0	36	9.0	70
1993	1993-10-01	33	21	-27	11	-19	0	33	6.0	70
1994	1994-10-01	15	41	-11	10	-5.6	0	15	4.6	73
1995	1995-10-01	25	30	-18	10	-3.9	0	25	6.4	71
1996	1996-10-01	13	43	-8.7	11	-3.0	0	13	4.7	74
1997	1997-10-01	10	48	-6.5	9.4	-1.4	0	10	3.6	75
1998	1998-10-01	20	33	-14	10	-0.83	0	20	6.2	69
1999	1999-10-01	15	41	-9.9	9.9	-1.0	0	15	5.0	73
2000	2000-10-01	5.4	54	-3.4	6.7	-0.58	0	5.4	2.0	77
2001	2001-10-01	23	31	-17	11	-0.43	0	23	6.4	71
2002	2002-10-01	5.4	53	-2.9	5.7	-0.68	0	5.4	2.5	75
2003	2003-10-01	13	46	-8.9	8.2	-0.43	0	13	4.3	76
2004	2004-10-01	12	47	-8.0	8.9	-0.30	0	12	4.2	77

Table IV-B.13 DC2 Annual Water Balance

Water Year	Result Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
		(in)	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
2005	2005-10-01	24	32	-19	9.8	-0.48	0	24	5.3	72
2006	2006-10-01	12	46	-8.3	8.9	-1.4	0	12	3.8	75

Table IV-B.14 DC2 Monthly Water Balance 9 Wet Years (1983 to 1991)

Month	Result Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
		[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
Nov-82	1982-11-30	0	4.1	-1.7	1.3	-0.29	0	2.6	0.83	8.8
Dec-82	1982-12-30	2.5	-0.28	-1.7	0.37	-0.14	0	2.5	0.85	2.7
Jan-83	1983-01-29	0.67	2.0	-0.47	0.51	-0.15	0	0.67	0.20	3.0
Feb-83	1983-02-28	3.5	-0.91	-3.0	0.74	-0.16	0	3.5	0.56	2.9
Mar-83	1983-03-30	5.4	-2.6	-4.4	1.1	-0.17	0	5.4	1.0	4.0
Apr-83	1983-04-29	0.83	3.5	-0.24	1.6	-0.20	0	0.83	0.57	5.3
May-83	1983-05-29	0	6.5	0	0.94	-0.28	0	0	0.024	7.9
Jun-83	1983-06-28	0.039	7.3	0	0.39	-0.37	0	0.039	0.024	9.4
Jul-83	1983-07-28	2.1	4.9	-1.6	0.89	-0.39	0	2.1	0.53	9.6
Aug-83	1983-08-27	3.8	1.6	-2.4	1.7	-0.39	0	3.8	1.4	7.2
Sep-83	1983-09-26	1.9	3.6	-0.98	1.6	-0.38	0	1.9	0.84	7.5
Oct-83	1983-10-26	4.9	-1.2	-4.1	0.87	-0.35	0	4.9	0.76	5.1
Nov-83	1983-11-25	1.6	1.6	-1.3	0.58	-0.33	0	1.6	0.30	4.2
Dec-83	1983-12-25	1.9	0.35	-1.4	0.38	-0.35	0	1.9	0.52	2.6
Jan-84	1984-01-24	1.5	0.79	-0.87	0.42	-0.38	0	1.5	0.65	2.7
Feb-84	1984-02-23	0	3.2	0.039	0.79	-0.42	0	0	0.047	3.7
Mar-84	1984-03-24	0	4.1	0.039	0.91	-0.46	0	0	0.016	5.0
Apr-84	1984-04-23	0.87	4.0	-0.59	0.85	-0.47	0	0.87	0.30	6.5
May-84	1984-05-23	0.67	5.4	-0.28	0.73	-0.44	0	0.67	0.37	7.5
Jun-84	1984-06-22	0.039	7.1	0	0.37	-0.41	0	0.039	0.059	9.3
Jul-84	1984-07-22	3.6	2.4	-2.5	1.2	-0.37	0	3.6	1.2	8.5
Aug-84	1984-08-21	3.9	1.5	-2.2	1.7	-0.35	0	3.9	1.7	6.9
Sep-84	1984-09-20	1.1	4.2	-0.39	1.7	-0.31	0	1.1	0.73	7.0
Oct-84	1984-10-20	2.5	1.4	-1.6	0.99	-0.28	0	2.5	0.96	5.6
Nov-84	1984-11-19	0	3.6	0.039	0.67	-0.26	0	0	0.055	4.2
Dec-84	1984-12-19	4.8	-2.6	-4.1	0.35	-0.23	0	4.8	0.69	3.1
Jan-85	1985-01-18	3.9	-1.9	-3.2	0.37	-0.21	0	3.9	0.75	2.3
Feb-85	1985-02-17	2.9	-0.87	-2.2	0.50	-0.21	0	2.9	0.69	2.3
Mar-85	1985-03-19	1.7	1.1	-0.87	1.0	-0.28	0	1.7	0.80	3.6
Apr-85	1985-04-18	0.43	4.0	-0.039	1.7	-0.39	0	0.43	0.40	5.4
May-85	1985-05-18	0.47	4.8	-0.24	0.70	-0.48	0	0.47	0.22	6.7
Jun-85	1985-06-17	0	6.7	0	0.36	-0.51	0	0	0.016	8.6
Jul-85	1985-07-17	0.24	6.3	-0.16	0.33	-0.49	0	0.24	0.051	8.4
Aug-85	1985-08-16	2.1	3.8	-1.4	1.1	-0.44	0	2.1	0.75	7.8
Sep-85	1985-09-15	2.2	3.2	-1.3	1.4	-0.39	0	2.2	0.88	7.9
Oct-85	1985-10-15	3.1	0.91	-2.1	1.0	-0.36	0	3.1	1.0	5.7
Nov-85	1985-11-14	1.4	1.8	-0.94	0.66	-0.33	0	1.4	0.48	3.9
Dec-85	1985-12-14	2.7	-0.24	-2.0	0.42	-0.30	0	2.7	0.75	3.1
Jan-86	1986-01-13	0	2.8	0.24	0.49	-0.27	0	0	0.26	3.3
Feb-86	1986-02-12	2.3	0.24	-1.9	0.51	-0.25	0	2.3	0.48	3.6
Mar-86	1986-03-14	1.9	1.5	-1.4	1.1	-0.25	0	1.9	0.50	3.7
Apr-86	1986-04-13	3.1	0.87	-2.4	1.6	-0.25	0	3.1	0.68	4.9
May-86	1986-05-13	0	5.7	0.039	1.2	-0.27	0	0	0.024	7.4
Jun-86	1986-06-12	0	7.2	0	0.45	-0.31	0	0	0.024	9.1
Jul-86	1986-07-12	2.2	4.8	-1.7	0.73	-0.33	0	2.2	0.45	9.2
Aug-86	1986-08-11	2.8	2.9	-1.8	1.7	-0.33	0	2.8	0.98	7.5
Sep-86	1986-09-10	3.0	2.2	-2.0	1.7	-0.32	0	3.0	1.0	7.3
Oct-86	1986-10-10	0.91	3.6	-0.43	1.2	-0.30	0	0.91	0.48	6.1
Nov-86	1986-11-09	2.7	0.47	-2.0	0.69	-0.28	0	2.7	0.69	4.6
Dec-86	1986-12-09	2.6	0.16	-2.2	0.48	-0.26	0	2.6	0.43	3.4
Jan-87	1987-01-08	1.5	0.83	-0.67	0.40	-0.24	0	1.5	0.82	2.7
Feb-87	1987-02-07	3.1	-0.63	-2.3	0.51	-0.23	0	3.1	0.81	2.9
Mar-87	1987-03-09	2.3	0.83	-1.8	1.0	-0.24	0	2.3	0.47	3.4
Apr-87	1987-04-08	0.94	2.9	-0.47	1.5	-0.28	0	0.94	0.46	5.0

Table IV-B.14 DC2 Monthly Water Balance 9 Wet Years (1983 to 1991)

Month	Result Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
		[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
May-87	1987-05-08	0.039	5.3	0	1.0	-0.33	0	0.039	0.035	6.8
Jun-87	1987-06-07	0.31	6.1	-0.039	0.44	-0.37	0	0.31	0.24	8.2
Jul-87	1987-07-07	0.20	6.9	-0.079	0.42	-0.38	0	0.20	0.13	9.2
Aug-87	1987-08-06	3.1	3.6	-2.5	1.3	-0.36	0	3.1	0.52	8.9
Sep-87	1987-09-05	2.3	3.1	-1.8	1.8	-0.34	0	2.3	0.60	7.5
Oct-87	1987-10-05	0.79	4.1	-0.24	1.4	-0.32	0	0.79	0.58	6.7
Nov-87	1987-11-04	1.4	2.6	-0.98	0.82	-0.29	0	1.4	0.37	5.8
Dec-87	1987-12-04	0.67	2.5	-0.31	0.53	-0.26	0	0.67	0.41	3.8
Jan-88	1988-01-03	4.1	-1.7	-3.1	0.37	-0.22	0	4.1	0.86	3.0
Feb-88	1988-02-02	3.6	-1.3	-3.0	0.43	-0.20	0	3.6	0.63	2.4
Mar-88	1988-03-03	0.71	2.6	-0.39	0.96	-0.20	0	0.71	0.31	3.6
Apr-88	1988-04-02	0.16	4.1	-0.039	1.2	-0.22	0	0.16	0.098	5.5
May-88	1988-05-02	2.4	2.1	-1.7	0.98	-0.26	0	2.4	0.81	6.1
Jun-88	1988-06-01	0	6.6	0.079	1.3	-0.30	0	0	0.051	8.0
Jul-88	1988-07-01	0.16	6.6	0	0.35	-0.31	0	0.16	0.13	8.9
Aug-88	1988-07-31	2.4	3.9	-1.8	0.56	-0.30	0	2.4	0.70	8.5
Sep-88	1988-08-30	6.7	-1.3	-5.0	1.8	-0.27	0	6.7	1.6	7.3
Oct-88	1988-10-29	2.0	7.3	-1.2	2.4	-0.50	0	2.0	0.82	13
Nov-88	1988-11-28	1.7	1.3	-1.4	0.54	-0.25	0	1.7	0.31	4.1
Dec-88	1988-12-28	1.1	1.4	-0.55	0.43	-0.26	0	1.1	0.54	3.1
Jan-89	1989-01-27	2.0	0.31	-1.3	0.42	-0.26	0	2.0	0.63	2.4
Feb-89	1989-02-26	0.51	2.4	-0.16	0.81	-0.26	0	0.51	0.39	3.3
Mar-89	1989-03-28	1.7	2.4	-1.5	1.1	-0.26	0	1.7	0.24	5.3
Apr-89	1989-04-27	0	5.6	0.16	1.6	-0.27	0	0	0.16	6.9
May-89	1989-05-27	0.16	6.3	0	0.43	-0.27	0	0.16	0.17	8.3
Jun-89	1989-06-26	0	7.0	0	0.35	-0.27	0	0	0.012	9.1
Jul-89	1989-07-26	0.079	6.8	0	0.34	-0.25	0	0.079	0.059	9.0
Aug-89	1989-08-25	1.3	4.3	-0.67	0.76	-0.23	0	1.3	0.67	8.0
Sep-89	1989-09-24	1.5	4.0	-1.2	1.1	-0.21	0	1.5	0.31	7.3
Oct-89	1989-10-24	1.1	3.3	-0.59	0.86	-0.19	0	1.1	0.48	6.1
Nov-89	1989-11-23	0.31	3.1	-0.16	0.41	-0.19	0	0.31	0.14	4.5
Dec-89	1989-12-23	0	2.8	0.079	0.22	-0.17	0	0	0.091	3.5
Jan-90	1990-01-22	2.1	0.039	-1.5	0.29	-0.15	0	2.1	0.70	2.9
Feb-90	1990-02-21	2.6	-0.24	-1.7	0.58	-0.14	0	2.6	0.89	2.5
Mar-90	1990-03-23	0.79	2.6	-0.43	1.3	-0.13	0	0.79	0.36	4.2
Apr-90	1990-04-22	1.0	3.9	-0.51	1.8	-0.11	0	1.0	0.50	6.0
May-90	1990-05-22	1.1	4.8	-0.83	1.4	-0.11	0	1.1	0.26	7.7
Jun-90	1990-06-21	0.39	6.7	-0.20	0.51	-0.11	0	0.39	0.21	9.0
Jul-90	1990-07-21	0.91	5.5	-0.51	0.67	-0.098	0	0.91	0.42	8.6
Aug-90	1990-08-20	9.6	-4.2	-8.6	1.1	-0.091	0	9.6	1.0	7.8
Sep-90	1990-09-19	2.4	3.0	-2.0	1.6	-0.091	0	2.4	0.48	7.1
Oct-90	1990-10-19	0.43	3.7	0.079	1.1	-0.091	0	0.43	0.50	5.9
Nov-90	1990-11-18	1.5	1.9	-1.0	0.71	-0.098	0	1.5	0.50	4.2
Dec-90	1990-12-18	2.8	-0.12	-2.0	0.43	-0.11	0	2.8	0.75	3.5
Jan-91	1991-01-17	4.7	-2.7	-3.7	0.35	-0.14	0	4.7	0.93	2.3
Feb-91	1991-02-16	0.16	2.7	0.039	0.67	-0.17	0	0.16	0.18	3.3
Mar-91	1991-03-18	3.6	-0.28	-2.9	1.1	-0.22	0	3.6	0.71	4.3
Apr-91	1991-04-17	3.3	0.83	-2.5	1.6	-0.31	0	3.3	0.72	4.8
May-91	1991-05-17	0	5.8	0.039	1.2	-0.39	0	0	0.016	7.4
Jun-91	1991-06-16	0.71	6.3	-0.28	0.59	-0.48	0	0.71	0.45	8.7
Jul-91	1991-07-16	0.43	6.8	-0.24	0.71	-0.53	0	0.43	0.19	9.4
Aug-91	1991-08-15	3.3	2.8	-2.4	1.0	-0.51	0	3.3	0.95	8.4
Sep-91	1991-09-14	2.0	3.2	-1.2	1.7	-0.47	0	2.0	0.76	7.5
Oct-91	1991-10-01	0.24	2.4	-0.079	0.79	-0.24	0	0.24	0.16	3.5

Table IV-B.15 DC2 Monsoon Period Water Balance

Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
1951-07-01	0	7.2	0.014	0.36	-0.59	0	0	0.014	9.2
1951-08-01	1.1	6.3	-0.58	0.68	-0.56	0	1.1	0.47	9.5
1951-09-01	3.6	2.2	-2.9	1.1	-0.49	0	3.6	0.69	7.8
1951-10-01	0.65	4.4	-0.33	1.5	-0.41	0	0.65	0.32	6.6
1951-11-01	1.6	2.7	-1.2	0.84	-0.38	0	1.6	0.39	5.4
1951	7.0	23	-5.1	4.5	-2.4	0	7.0	1.9	39
1952-07-01	0.63	6.8	-0.24	0.95	-0.42	0	0.63	0.39	9.6
1952-08-01	0.56	6.3	-0.17	0.43	-0.46	0	0.56	0.39	8.8
1952-09-01	0.45	5.4	-0.16	0.55	-0.45	0	0.45	0.29	7.8
1952-10-01	0.70	4.7	-0.34	0.47	-0.40	0	0.70	0.36	7.0
1952-11-01	0	4.8	0.031	0.35	-0.39	0	0	0.031	5.9
1952	2.3	28	-0.87	2.7	-2.1	0	2.3	1.5	39
1953-07-01	0	7.0	0.0087	0.35	-0.35	0	0	0.0087	9.1
1953-08-01	2.7	3.9	-2.1	0.82	-0.36	0	2.7	0.62	8.8
1953-09-01	1.8	4.0	-1.1	1.8	-0.34	0	1.8	0.67	7.7
1953-10-01	0	5.2	0.062	1.3	-0.30	0	0	0.062	6.8
1953-11-01	0.012	4.4	0.013	0.32	-0.28	0	0.012	0.024	5.5
1953	4.5	25	-3.1	4.5	-1.6	0	4.5	1.4	38
1954-07-01	0.13	6.8	-0.031	0.42	-0.16	0	0.13	0.100	9.0
1954-08-01	4.5	1.5	-3.4	1.3	-0.17	0	4.5	1.1	7.8
1954-09-01	5.3	0.20	-4.3	1.9	-0.17	0	5.3	0.97	7.4
1954-10-01	1.3	3.8	-0.73	1.5	-0.17	0	1.3	0.56	6.6
1954-11-01	0	4.5	0.051	0.93	-0.18	0	0	0.048	5.6
1954	11	17	-8.4	5.9	-0.85	0	11	2.7	36
1955-07-01	2.1	5.0	-1.7	1.2	-0.20	0	2.1	0.36	9.1
1955-08-01	4.5	1.6	-3.5	1.4	-0.20	0	4.5	0.95	7.9
1955-09-01	2.7	2.6	-1.6	1.8	-0.19	0	2.7	1.0	7.2
1955-10-01	0.13	5.1	-0.016	1.4	-0.17	0	0.13	0.11	6.8
1955-11-01	0.020	4.7	0.012	0.44	-0.17	0	0.020	0.034	5.9
1955	9.4	19	-6.9	6.2	-0.92	0	9.4	2.5	37
1956-07-01	0.24	7.1	-0.14	0.37	-0.14	0	0.24	0.10	9.4
1956-08-01	2.8	4.2	-1.8	0.94	-0.14	0	2.8	0.97	9.0
1956-09-01	1.8	3.8	-1.2	1.7	-0.14	0	1.8	0.58	7.5
1956-10-01	0.075	5.2	-0.055	1.1	-0.13	0	0.075	0.022	6.8
1956-11-01	0.53	3.6	-0.28	0.33	-0.12	0	0.53	0.26	5.2
1956	5.4	24	-3.4	4.5	-0.66	0	5.4	1.9	38
1957-07-01	0.031	7.2	0.020	0.55	-0.085	0	0.031	0.049	9.3
1957-08-01	1.1	5.5	-0.59	0.52	-0.087	0	1.1	0.51	8.5
1957-09-01	3.4	2.4	-2.2	1.4	-0.085	0	3.4	1.2	8.1
1957-10-01	0.57	4.5	-0.30	1.4	-0.080	0	0.57	0.27	6.6
1957-11-01	3.2	0.30	-2.4	0.68	-0.079	0	3.2	0.79	4.6
1957	8.3	20	-5.6	4.6	-0.42	0	8.3	2.8	37
1958-07-01	0.70	6.4	-0.45	0.68	-0.056	0	0.70	0.25	9.3
1958-08-01	0.78	6.2	-0.43	0.63	-0.060	0	0.78	0.36	9.1
1958-09-01	0.85	5.1	-0.35	0.94	-0.062	0	0.85	0.50	8.0
1958-10-01	3.0	1.7	-2.3	0.88	-0.061	0	3.0	0.74	6.4
1958-11-01	1.9	2.3	-1.5	0.94	-0.063	0	1.9	0.43	5.3
1958	7.3	22	-5.0	4.1	-0.30	0	7.3	2.3	38
1959-07-01	1.0	6.1	-0.60	0.74	-0.056	0	1.0	0.43	9.1
1959-08-01	3.8	3.7	-3.0	1.3	-0.056	0	3.8	0.80	9.6
1959-09-01	5.3	0.15	-3.7	1.8	-0.054	0	5.3	1.6	7.4
1959-10-01	0.047	5.1	0.028	1.2	-0.052	0	0.047	0.075	6.9
1959-11-01	4.8	-0.59	-4.4	0.69	-0.051	0	4.8	0.37	5.3
1959	15	14	-12	5.8	-0.27	0	15	3.3	38
1960-07-01	0	7.2	0.016	0.36	-0.31	0	0	0.012	9.2
1960-08-01	0.74	6.4	-0.46	0.57	-0.33	0	0.74	0.28	9.2
1960-09-01	1.5	4.4	-0.74	1.1	-0.31	0	1.5	0.80	8.1

Table IV-B.15 DC2 Monsoon Period Water Balance

Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
1960-10-01	0.27	5.0	-0.071	0.50	-0.28	0	0.27	0.20	7.0
1960-11-01	2.1	1.9	-1.4	0.50	-0.26	0	2.1	0.63	5.0
1960	4.6	25	-2.7	3.1	-1.5	0	4.6	1.9	38
1961-07-01	0	7.2	0.0079	0.34	-0.13	0	0	0.0079	9.3
1961-08-01	0.67	6.1	-0.29	0.44	-0.13	0	0.67	0.38	8.9
1961-09-01	3.0	3.0	-2.1	1.1	-0.12	0	3.0	0.83	8.1
1961-10-01	0.50	4.4	0.071	1.3	-0.11	0	0.50	0.57	6.3
1961-11-01	0.45	3.6	-0.31	0.50	-0.10	0	0.45	0.14	5.4
1961	4.6	24	-2.7	3.6	-0.58	0	4.6	1.9	38
1962-07-01	0	7.0	0.0079	0.35	-0.078	0	0	0.0079	9.1
1962-08-01	0.61	6.3	-0.25	0.50	-0.088	0	0.61	0.36	8.9
1962-09-01	0.49	5.6	-0.22	0.57	-0.093	0	0.49	0.27	8.4
1962-10-01	1.2	3.7	-0.61	0.46	-0.092	0	1.2	0.62	6.6
1962-11-01	0.87	3.2	-0.42	0.58	-0.094	0	0.87	0.46	5.1
1962	3.2	26	-1.5	2.5	-0.45	0	3.2	1.7	38
1963-07-01	0	7.0	0.012	0.34	-0.090	0	0	0.012	9.0
1963-08-01	0.083	7.2	-0.020	0.36	-0.10	0	0.083	0.063	9.4
1963-09-01	10	-5.1	-8.7	1.4	-0.10	0	10	1.8	7.5
1963-10-01	1.0	4.1	-0.40	1.5	-0.10	0	1.0	0.65	6.6
1963-11-01	0.67	3.9	-0.41	0.94	-0.11	0	0.67	0.26	5.8
1963	12	17	-9.5	4.6	-0.51	0	12	2.8	38
1964-07-01	0	7.2	0.012	0.35	-0.20	0	0	0.012	9.4
1964-08-01	1.5	5.3	-0.76	0.60	-0.19	0	1.5	0.73	8.8
1964-09-01	2.2	3.5	-1.1	1.3	-0.18	0	2.2	1.1	7.7
1964-10-01	1.6	3.1	-0.69	0.98	-0.16	0	1.6	0.89	6.1
1964-11-01	1.5	3.1	-1.2	0.80	-0.15	0	1.5	0.30	5.8
1964	6.8	22	-3.8	4.1	-0.89	0	6.8	3.0	38
1965-07-01	0.10	6.8	-0.0039	0.39	-0.13	0	0.10	0.098	8.8
1965-08-01	1.4	5.2	-0.75	0.67	-0.15	0	1.4	0.69	8.9
1965-09-01	0.90	5.0	-0.45	1.1	-0.16	0	0.90	0.45	8.0
1965-10-01	1.0	3.9	-0.58	0.86	-0.15	0	1.0	0.46	6.6
1965-11-01	0.46	4.0	-0.26	0.35	-0.15	0	0.46	0.20	5.7
1965	3.9	25	-2.1	3.3	-0.75	0	3.9	1.9	38
1966-07-01	0.18	6.6	-0.051	0.35	-0.60	0	0.18	0.13	9.1
1966-08-01	0.84	5.7	-0.40	0.57	-0.57	0	0.84	0.45	8.3
1966-09-01	1.6	4.3	-1.1	0.78	-0.50	0	1.6	0.52	8.1
1966-10-01	2.7	2.2	-2.1	1.3	-0.42	0	2.7	0.53	6.5
1966-11-01	1.4	2.8	-0.91	0.93	-0.39	0	1.4	0.45	5.1
1966	6.7	22	-4.6	3.9	-2.5	0	6.7	2.1	37
1967-07-01	0.079	6.9	0	0.34	-0.21	0	0.079	0.079	9.0
1967-08-01	4.0	2.4	-3.1	1.2	-0.20	0	4.0	0.91	8.3
1967-09-01	2.5	3.5	-1.9	2.0	-0.19	0	2.5	0.61	8.0
1967-10-01	0.56	4.3	-0.26	1.2	-0.17	0	0.56	0.29	6.5
1967-11-01	0.42	3.8	-0.20	0.63	-0.16	0	0.42	0.21	5.6
1967	7.5	21	-5.4	5.4	-0.92	0	7.5	2.1	37
1968-07-01	0	7.3	0.012	0.37	-0.57	0	0	0.012	9.3
1968-08-01	1.8	4.9	-1.2	0.68	-0.55	0	1.8	0.66	8.9
1968-09-01	2.5	2.8	-1.5	1.6	-0.49	0	2.5	1.0	7.3
1968-10-01	0.051	5.2	0.028	1.1	-0.42	0	0.051	0.075	6.9
1968-11-01	0.39	3.7	-0.21	0.45	-0.39	0	0.39	0.18	5.1
1968	4.8	24	-2.9	4.2	-2.4	0	4.8	1.9	38
1969-07-01	0	7.2	0.012	0.38	-0.40	0	0	0.016	9.4
1969-08-01	0.33	6.3	-0.098	0.40	-0.40	0	0.33	0.23	8.7
1969-09-01	2.6	3.6	-1.6	1.3	-0.37	0	2.6	0.95	8.3
1969-10-01	1.2	3.8	-0.76	1.2	-0.33	0	1.2	0.48	6.8
1969-11-01	0.83	3.1	-0.55	0.62	-0.31	0	0.83	0.28	5.2
1969	5.0	24	-3.0	4.0	-1.8	0	5.0	2.0	38

Table IV-B.15 DC2 Monsoon Period Water Balance

Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
1970-07-01	0.079	7.1	0.0079	0.35	-0.17	0	0.079	0.087	9.1
1970-08-01	1.0	5.7	-0.52	0.78	-0.18	0	1.0	0.52	9.1
1970-09-01	1.7	4.4	-0.95	0.85	-0.17	0	1.7	0.76	8.0
1970-10-01	3.3	1.7	-2.8	1.4	-0.16	0	3.3	0.55	7.0
1970-11-01	0	4.2	0.020	0.72	-0.15	0	0	0.020	5.3
1970	6.2	23	-4.2	4.1	-0.84	0	6.2	1.9	39
1971-07-01	0	7.0	0.0079	0.33	-0.10	0	0	0.0079	9.0
1971-08-01	0.39	6.7	-0.15	0.42	-0.10	0	0.39	0.24	9.2
1971-09-01	4.7	0.94	-3.3	1.5	-0.094	0	4.7	1.4	7.8
1971-10-01	3.1	2.2	-2.6	1.5	-0.087	0	3.1	0.43	7.1
1971-11-01	4.2	-0.35	-3.3	0.87	-0.083	0	4.2	0.88	5.1
1971	12	16	-9.4	4.6	-0.47	0	12	2.9	38
1972-07-01	1.7	5.6	-1.2	0.83	-0.10	0	1.7	0.46	9.3
1972-08-01	0.27	7.1	-0.12	1.2	-0.11	0	0.27	0.16	9.5
1972-09-01	2.0	4.0	-1.3	1.2	-0.10	0	2.0	0.71	8.4
1972-10-01	0.67	4.4	-0.21	0.80	-0.098	0	0.67	0.45	6.8
1972-11-01	8.7	-5.0	-7.5	0.69	-0.087	0	8.7	1.2	4.9
1972	13	16	-10	4.7	-0.50	0	13	3.0	39
1973-07-01	0.87	6.2	-0.49	0.87	-0.44	0	0.87	0.38	9.0
1973-08-01	2.7	3.9	-2.1	0.90	-0.51	0	2.7	0.62	8.9
1973-09-01	1.4	4.6	-0.69	1.8	-0.49	0	1.4	0.74	8.1
1973-10-01	0	5.0	0.028	0.94	-0.43	0	0	0.028	6.7
1973-11-01	0	4.2	0.0079	0.18	-0.41	0	0	0.012	5.6
1973	5.0	24	-3.2	4.7	-2.3	0	5.0	1.8	38
1974-07-01	0	7.3	0.012	0.36	-0.22	0	0	0.012	9.4
1974-08-01	2.4	4.2	-1.7	1.0	-0.22	0	2.4	0.79	8.6
1974-09-01	1.4	4.5	-0.71	1.7	-0.21	0	1.4	0.68	8.3
1974-10-01	3.4	1.4	-2.4	1.3	-0.19	0	3.4	1.0	6.5
1974-11-01	3.4	0.51	-2.7	0.87	-0.18	0	3.4	0.68	5.3
1974	11	18	-7.5	5.3	-1.0	0	11	3.2	38
1975-07-01	0	7.4	0.012	0.46	-0.17	0	0	0.012	9.6
1975-08-01	2.2	3.8	-1.0	0.82	-0.19	0	2.2	1.2	8.3
1975-09-01	2.0	4.2	-1.3	1.6	-0.20	0	2.0	0.71	8.0
1975-10-01	0.91	4.1	-0.35	1.1	-0.19	0	0.91	0.56	6.8
1975-11-01	0.24	3.9	-0.071	0.25	-0.19	0	0.24	0.19	5.4
1975	5.4	23	-2.7	4.1	-0.94	0	5.4	2.6	38
1976-07-01	0	7.6	0.020	0.36	-0.11	0	0	0.016	9.7
1976-08-01	2.8	3.5	-2.1	0.84	-0.12	0	2.8	0.65	8.7
1976-09-01	0.87	5.2	-0.54	1.8	-0.11	0	0.87	0.31	7.9
1976-10-01	4.0	0.59	-3.2	1.3	-0.10	0	4.0	0.84	6.4
1976-11-01	0.91	2.9	-0.51	0.86	-0.098	0	0.91	0.39	5.1
1976	8.5	20	-6.3	5.2	-0.54	0	8.5	2.2	38
1977-07-01	0.079	7.4	0	0.35	-0.067	0	0.079	0.051	9.5
1977-08-01	2.5	4.5	-1.8	0.84	-0.067	0	2.5	0.72	9.4
1977-09-01	2.4	3.5	-1.8	1.9	-0.067	0	2.4	0.67	8.1
1977-10-01	3.5	1.1	-2.5	1.4	-0.059	0	3.5	0.96	6.4
1977-11-01	1.3	2.9	-0.81	0.95	-0.063	0	1.3	0.50	5.5
1977	9.8	19	-6.9	5.4	-0.32	0	9.8	2.9	39
1978-07-01	0.55	6.6	-0.39	0.45	-0.30	0	0.55	0.16	9.4
1978-08-01	0.98	5.9	-0.56	0.73	-0.38	0	0.98	0.42	9.4
1978-09-01	1.0	4.5	-0.57	1.3	-0.38	0	1.0	0.49	7.3
1978-10-01	0.39	4.5	-0.19	0.48	-0.36	0	0.39	0.20	6.6
1978-11-01	1.9	2.5	-1.5	0.35	-0.35	0	1.9	0.42	5.9
1978	4.9	24	-3.2	3.3	-1.8	0	4.9	1.7	39
1979-07-01	0.35	7.0	-0.047	0.58	-1.2	0	0.35	0.30	9.2
1979-08-01	0.16	6.8	-0.047	0.37	-1.1	0	0.16	0.11	9.3
1979-09-01	1.5	4.1	-0.74	0.93	-0.88	0	1.5	0.80	7.8

Table IV-B.15 DC2 Monsoon Period Water Balance

Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
1979-10-01	0.12	5.1	0.0039	0.42	-0.70	0	0.12	0.11	7.2
1979-11-01	0.67	3.9	-0.44	0.31	-0.64	0	0.67	0.24	5.9
1979	2.8	27	-1.3	2.6	-4.5	0	2.8	1.6	39
1980-07-01	0.16	6.9	-0.11	0.37	-0.70	0	0.16	0.055	9.0
1980-08-01	1.9	4.8	-1.1	0.86	-0.69	0	1.9	0.81	9.1
1980-09-01	1.3	4.6	-0.72	1.4	-0.62	0	1.3	0.58	7.9
1980-10-01	0.55	4.6	-0.31	0.87	-0.52	0	0.55	0.27	7.0
1980-11-01	0.079	4.3	0.0079	0.18	-0.47	0	0.079	0.047	5.9
1980	4.1	25	-2.3	3.7	-3.0	0	4.1	1.8	39
1981-07-01	0.16	7.1	-0.012	0.53	-0.25	0	0.16	0.12	9.3
1981-08-01	2.2	4.7	-1.6	0.70	-0.26	0	2.2	0.52	9.3
1981-09-01	2.6	3.5	-1.8	2.0	-0.24	0	2.6	0.85	7.9
1981-10-01	0.51	4.8	-0.31	1.2	-0.22	0	0.51	0.20	7.5
1981-11-01	0.94	2.9	-0.50	0.74	-0.21	0	0.94	0.46	5.2
1981	6.4	23	-4.2	5.2	-1.2	0	6.4	2.1	39
1982-07-01	0.039	7.1	-0.039	0.65	-0.15	0	0.039	0.024	9.1
1982-08-01	2.6	3.7	-1.7	0.86	-0.16	0	2.6	0.93	8.8
1982-09-01	3.8	1.5	-2.8	1.7	-0.16	0	3.8	0.98	6.9
1982-10-01	3.5	1.9	-2.4	1.4	-0.15	0	3.5	1.0	6.7
1982-11-01	0.039	4.1	0.12	0.87	-0.15	0	0.039	0.16	5.4
1982	10	18	-6.9	5.5	-0.77	0	10	3.1	37
1983-07-01	0	7.4	0	0.39	-0.37	0	0	0.012	9.4
1983-08-01	2.8	4.1	-2.0	1.0	-0.41	0	2.8	0.74	9.5
1983-09-01	3.6	2.1	-2.4	1.9	-0.40	0	3.6	1.2	7.5
1983-10-01	5.1	-0.079	-4.0	1.5	-0.37	0	5.1	1.0	7.3
1983-11-01	1.1	2.5	-0.59	0.82	-0.36	0	1.1	0.56	4.9
1983	13	16	-9.1	5.6	-1.9	0	13	3.6	39
1984-07-01	1.3	5.6	-1.0	0.41	-0.40	0	1.3	0.31	9.3
1984-08-01	3.3	2.8	-2.0	1.6	-0.37	0	3.3	1.4	7.8
1984-09-01	3.3	1.9	-1.7	1.8	-0.35	0	3.3	1.6	7.4
1984-10-01	1.9	3.1	-1.2	1.5	-0.30	0	1.9	0.70	6.9
1984-11-01	1.3	2.4	-0.67	0.83	-0.28	0	1.3	0.66	4.9
1984	11	16	-6.6	6.1	-1.7	0	11	4.6	36
1985-07-01	0	6.3	0	0.32	-0.51	0	0	0.012	8.6
1985-08-01	1.2	5.6	-0.87	0.54	-0.48	0	1.2	0.38	8.7
1985-09-01	2.1	3.8	-1.3	1.6	-0.43	0	2.1	0.74	8.1
1985-10-01	3.5	1.1	-2.3	1.2	-0.37	0	3.5	1.2	6.6
1985-11-01	1.3	2.3	-0.55	0.80	-0.35	0	1.3	0.71	4.6
1985	8.1	19	-5.1	4.4	-2.1	0	8.1	3.1	37
1986-07-01	0	7.1	0	0.36	-0.33	0	0	0.024	9.3
1986-08-01	4.8	1.4	-3.4	1.5	-0.34	0	4.8	1.3	8.5
1986-09-01	2.0	3.6	-1.2	1.9	-0.33	0	2.0	0.82	8.0
1986-10-01	2.1	2.6	-1.4	1.4	-0.31	0	2.1	0.71	6.5
1986-11-01	1.7	2.1	-1.3	0.86	-0.30	0	1.7	0.40	4.8
1986	11	17	-7.3	6.0	-1.6	0	11	3.3	37
1987-07-01	0.20	6.9	-0.079	0.43	-0.38	0	0.20	0.13	9.0
1987-08-01	2.0	5.0	-1.7	1.1	-0.38	0	2.0	0.35	9.0
1987-09-01	2.9	2.9	-2.1	1.9	-0.36	0	2.9	0.74	8.1
1987-10-01	1.3	3.7	-0.67	1.5	-0.32	0	1.3	0.60	7.1
1987-11-01	0.35	4.1	-0.12	0.94	-0.30	0	0.35	0.20	6.0
1987	6.7	23	-4.7	5.8	-1.7	0	6.7	2.0	39
1988-07-01	0.16	6.6	0	0.35	-0.31	0	0.16	0.13	8.9
1988-08-01	3.4	3.1	-2.6	0.57	-0.30	0	3.4	0.76	8.8
1988-09-01	5.9	-0.20	-4.2	1.9	-0.28	0	5.9	1.7	7.5
1988-10-01	0.31	4.6	-0.039	1.5	-0.26	0	0.31	0.27	6.9
1988-11-01	1.5	2.8	-1.0	0.85	-0.25	0	1.5	0.46	5.8
1988	11	17	-7.9	5.2	-1.4	0	11	3.3	38

Table IV-B.15 DC2 Monsoon Period Water Balance

Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
1989-07-01	0	7.2	0	0.35	-0.27	0	0	0.012	9.2
1989-08-01	0.51	6.3	-0.24	0.39	-0.25	0	0.51	0.25	9.3
1989-09-01	0.91	4.9	-0.43	0.86	-0.23	0	0.91	0.49	7.8
1989-10-01	1.5	3.6	-1.2	1.2	-0.21	0	1.5	0.30	7.3
1989-11-01	1.1	3.1	-0.55	0.74	-0.20	0	1.1	0.52	5.9
1989	4.0	25	-2.4	3.5	-1.2	0	4.0	1.6	39
1990-07-01	0.28	6.9	-0.16	0.47	-0.10	0	0.28	0.14	9.3
1990-08-01	1.5	4.8	-0.87	0.91	-0.11	0	1.5	0.61	8.6
1990-09-01	9.0	-3.4	-8.1	1.6	-0.091	0	9.0	0.89	7.4
1990-10-01	2.8	2.0	-2.0	1.4	-0.087	0	2.8	0.85	6.8
1990-11-01	0.28	3.7	-0.039	0.87	-0.094	0	0.28	0.20	5.3
1990	14	14	-11	5.2	-0.48	0	14	2.7	37
1991-07-01	0.63	6.7	-0.24	0.63	-0.51	0	0.63	0.40	9.2
1991-08-01	1.7	5.2	-1.2	0.67	-0.54	0	1.7	0.51	9.3
1991-09-01	2.8	3.1	-1.8	1.7	-0.51	0	2.8	0.94	8.3
1991-10-01	1.6	3.2	-0.98	1.5	-0.44	0	1.6	0.58	6.5
1991-11-01	1.2	3.5	-0.94	0.87	-0.41	0	1.2	0.28	6.6
1991	7.9	22	-5.2	5.4	-2.4	0	7.9	2.7	40
1992-07-01	1.3	5.8	-0.63	1.5	-1.2	0	1.3	0.68	8.9
1992-08-01	3.3	3.5	-2.5	0.98	-1.1	0	3.3	0.79	9.3
1992-09-01	5.3	0.24	-4.1	1.8	-0.94	0	5.3	1.2	7.8
1992-10-01	0.87	4.3	-0.59	1.5	-0.76	0	0.87	0.30	6.7
1992-11-01	1.2	3.1	-0.87	0.91	-0.75	0	1.2	0.33	6.2
1992	12	17	-8.6	6.7	-4.7	0	12	3.3	39
1993-07-01	0	7.2	0.039	0.63	-1.7	0	0	0.016	9.3
1993-08-01	0.24	6.6	-0.12	0.47	-1.3	0	0.24	0.13	8.9
1993-09-01	3.4	2.2	-2.2	0.94	-1.1	0	3.4	1.3	8.5
1993-10-01	0.16	4.8	0.079	1.3	-0.83	0	0.16	0.23	6.4
1993-11-01	0.83	3.4	-0.35	0.71	-0.71	0	0.83	0.43	6.0
1993	4.6	24	-2.5	4.1	-5.6	0	4.6	2.1	39
1994-07-01	0.39	6.6	-0.20	0.75	-0.39	0	0.39	0.17	8.9
1994-08-01	1.4	5.5	-1.2	0.47	-0.38	0	1.4	0.29	9.1
1994-09-01	0.71	5.4	-0.20	1.5	-0.35	0	0.71	0.52	8.6
1994-10-01	2.0	2.9	-1.2	1.1	-0.30	0	2.0	0.71	6.6
1994-11-01	1.9	1.9	-1.5	0.71	-0.28	0	1.9	0.35	5.3
1994	6.3	22	-4.3	4.5	-1.7	0	6.3	2.0	39
1995-07-01	0	7.2	0.039	0.35	-0.46	0	0	0.016	9.0
1995-08-01	0.039	7.1	0	0.35	-0.46	0	0.039	0.047	9.3
1995-09-01	3.9	2.2	-2.9	1.3	-0.42	0	3.9	0.96	8.8
1995-10-01	2.8	2.3	-2.2	1.5	-0.37	0	2.8	0.57	7.2
1995-11-01	0	4.3	0.12	0.98	-0.36	0	0	0.12	5.8
1995	6.7	23	-4.9	4.5	-2.1	0	6.7	1.7	40
1996-07-01	0.39	6.6	-0.24	0.39	-0.21	0	0.39	0.17	9.1
1996-08-01	2.4	4.4	-1.5	1.2	-0.21	0	2.4	0.92	8.9
1996-09-01	1.2	4.6	-0.71	1.4	-0.20	0	1.2	0.55	8.1
1996-10-01	3.0	1.5	-2.0	1.2	-0.18	0	3.0	1.1	6.7
1996-11-01	0.43	4.1	-0.16	0.91	-0.18	0	0.43	0.25	6.0
1996	7.4	21	-4.5	5.1	-0.98	0	7.4	2.9	39
1997-07-01	0	7.0	0	0.35	-0.10	0	0	0.035	9.0
1997-08-01	0.12	7.3	-0.039	0.35	-0.094	0	0.12	0.075	9.9
1997-09-01	2.6	3.3	-1.7	1.3	-0.091	0	2.6	0.85	8.5
1997-10-01	0	5.4	0.039	0.91	-0.087	0	0	0.028	7.3
1997-11-01	0.75	3.2	-0.43	0.28	-0.083	0	0.75	0.31	6.0
1997	3.5	26	-2.2	3.2	-0.46	0	3.5	1.3	41
1998-07-01	0	7.2	0	0.39	-0.067	0	0	0.012	9.2
1998-08-01	1.7	5.1	-1.1	1.1	-0.079	0	1.7	0.60	9.1
1998-09-01	2.4	3.5	-1.4	1.6	-0.091	0	2.4	1.00	8.3

Table IV-B.15 DC2 Monsoon Period Water Balance

Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
1998-10-01	1.3	3.7	-0.83	1.1	-0.098	0	1.3	0.47	7.0
1998-11-01	0	4.4	0	0.43	-0.11	0	0	0.016	6.3
1998	5.5	24	-3.3	4.7	-0.44	0	5.5	2.1	40
1999-07-01	0	7.1	0	0.35	-0.079	0	0	0.0079	9.1
1999-08-01	5.8	0.31	-4.3	1.3	-0.063	0	5.8	1.5	8.7
1999-09-01	2.9	2.8	-1.9	1.9	-0.063	0	2.9	0.99	7.8
1999-10-01	1.1	3.9	-0.35	1.5	-0.063	0	1.1	0.76	6.8
1999-11-01	0	4.5	0.039	0.91	-0.059	0	0	0.031	6.2
1999	9.8	19	-6.5	6.0	-0.33	0	9.8	3.3	39
2000-07-01	0.79	6.3	-0.43	0.59	-0.039	0	0.79	0.37	9.5
2000-08-01	0.079	7.4	0	0.39	-0.047	0	0.079	0.067	9.5
2000-09-01	0.67	4.9	-0.28	0.47	-0.039	0	0.67	0.40	8.7
2000-10-01	0	5.3	0.039	0.20	-0.035	0	0	0.028	6.8
2000-11-01	5.4	-1.7	-4.4	0.39	-0.031	0	5.4	0.86	5.9
2000	6.9	22	-5.1	2.0	-0.19	0	6.9	1.7	40
2001-07-01	0.039	7.2	0.039	0.39	-0.043	0	0.039	0.035	9.2
2001-08-01	2.7	4.3	-2.3	0.51	-0.043	0	2.7	0.39	9.7
2001-09-01	3.3	2.4	-2.3	1.9	-0.047	0	3.3	1.0	7.6
2001-10-01	0.12	4.8	-0.039	1.0	-0.055	0	0.12	0.12	7.3
2001-11-01	0.39	3.6	-0.16	0.51	-0.055	0	0.39	0.20	5.5
2001	6.6	22	-4.8	4.3	-0.24	0	6.6	1.8	39
2002-07-01	0	7.4	0	0.35	-0.055	0	0	0.0079	9.2
2002-08-01	0.31	6.8	-0.12	0.35	-0.059	0	0.31	0.23	9.7
2002-09-01	0.47	5.4	-0.20	0.39	-0.055	0	0.47	0.24	8.1
2002-10-01	1.2	3.9	-0.63	0.79	-0.051	0	1.2	0.54	7.1
2002-11-01	0.12	4.1	-0.039	0.28	-0.051	0	0.12	0.079	6.1
2002	2.1	28	-0.98	2.2	-0.27	0	2.1	1.1	40
2003-07-01	0	7.9	0	0.39	-0.031	0	0	0.012	10.0
2003-08-01	0.47	6.7	-0.12	0.35	-0.028	0	0.47	0.39	10
2003-09-01	1.3	4.8	-0.79	0.79	-0.031	0	1.3	0.48	8.5
2003-10-01	1.9	3.3	-1.1	1.1	-0.028	0	1.9	0.91	7.4
2003-11-01	0.079	4.5	0.039	0.59	-0.028	0	0.079	0.094	6.0
2003	3.8	27	-1.9	3.3	-0.15	0	3.8	1.9	42
2004-07-01	0	7.8	0	0.35	-0.024	0	0	0.012	10
2004-08-01	0.55	6.7	-0.24	0.39	-0.024	0	0.55	0.33	9.8
2004-09-01	2.1	4.1	-1.3	0.98	-0.020	0	2.1	0.84	8.6
2004-10-01	1.5	3.9	-1.1	1.0	-0.020	0	1.5	0.45	7.9
2004-11-01	1.2	2.9	-0.79	0.63	-0.020	0	1.2	0.42	6.1
2004	5.4	25	-3.3	3.4	-0.11	0	5.4	2.1	42
2005-07-01	0.079	7.6	0	0.39	-0.051	0	0.079	0.055	9.7
2005-08-01	1.4	5.8	-1.1	0.47	-0.079	0	1.4	0.34	11
2005-09-01	4.7	1.0	-3.5	1.9	-0.098	0	4.7	1.2	7.3
2005-10-01	0.079	5.0	0	1.2	-0.11	0	0.079	0.10	7.4
2005-11-01	0.43	3.8	-0.24	0.47	-0.12	0	0.43	0.18	6.1
2005	6.7	23	-4.8	4.4	-0.46	0	6.7	1.9	41
2006-07-01	0.51	7.0	-0.24	0.35	-0.11	0	0.51	0.28	10
2006-08-01	3.1	3.1	-2.5	0.67	-0.11	0	3.1	0.72	9.2
2006-09-01	2.9	3.0	-1.7	2.0	-0.11	0	2.9	1.2	7.4
2006-10-01	1.1	3.8	-0.63	1.5	-0.098	0	1.1	0.46	6.9
2006-11-01	1.1	2.9	-0.47	0.83	-0.098	0	1.1	0.59	5.9
2006	8.7	20	-5.6	5.3	-0.53	0	8.7	3.2	40

Table IV-B.16 DC2 Winter Storm Period Water Balance

Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
1951-11-01	0	2.7	-1.2	0.84	-0.38	0	1.6	0.39	5.4
1951-12-01	1.7	1.5	-0.98	0.57	-0.34	0	1.7	0.73	3.7
1952-01-01	3.0	-0.66	-2.3	0.40	-0.32	0	3.0	0.68	2.8
1952-02-01	2.8	-0.36	-2.0	0.46	-0.29	0	2.8	0.82	2.9
1952-03-01	0.50	2.4	-0.15	0.84	-0.25	0	0.50	0.35	3.8
1952	8.0	5.6	-6.7	3.1	-1.6	0	9.7	3.0	19
1952-11-01	0	4.8	0.031	0.35	-0.39	0	0	0.031	5.9
1952-12-01	4.3	-1.5	-3.7	0.26	-0.34	0	4.3	0.60	3.3
1953-01-01	2.0	0.26	-1.3	0.37	-0.32	0	2.0	0.71	2.7
1953-02-01	0.74	2.1	-0.33	0.54	-0.30	0	0.74	0.41	3.3
1953-03-01	0.60	2.4	-0.36	0.80	-0.27	0	0.60	0.24	3.8
1953	7.6	8.0	-5.6	2.3	-1.6	0	7.6	2.0	19
1953-11-01	0.012	4.4	0.013	0.32	-0.28	0	0.012	0.024	5.5
1953-12-01	0.56	2.8	-0.34	0.19	-0.24	0	0.56	0.22	3.9
1954-01-01	0.19	2.3	-0.026	0.23	-0.23	0	0.19	0.17	2.9
1954-02-01	2.4	0.35	-1.8	0.36	-0.21	0	2.4	0.59	3.2
1954-03-01	0.72	2.5	-0.40	0.93	-0.18	0	0.72	0.32	4.2
1954	3.9	12	-2.6	2.0	-1.1	0	3.9	1.3	20
1954-11-01	0	4.5	0.051	0.93	-0.18	0	0	0.048	5.6
1954-12-01	0.091	3.5	-0.051	0.25	-0.19	0	0.091	0.039	4.3
1955-01-01	0.29	2.7	-0.098	0.20	-0.21	0	0.29	0.19	3.5
1955-02-01	3.4	-1.4	-2.6	0.32	-0.22	0	3.4	0.79	2.4
1955-03-01	0.28	2.5	-0.039	0.78	-0.20	0	0.28	0.24	3.5
1955	4.1	12	-2.8	2.5	-1.0	0	4.1	1.3	19
1955-11-01	0.020	4.7	0.012	0.44	-0.17	0	0.020	0.034	5.9
1955-12-01	0.96	2.1	-0.65	0.27	-0.16	0	0.96	0.32	3.7
1956-01-01	1.4	1.4	-1.0	0.44	-0.16	0	1.4	0.35	3.1
1956-02-01	2.6	0.30	-2.1	0.54	-0.15	0	2.6	0.48	3.5
1956-03-01	2.0	0.49	-1.3	0.72	-0.14	0	2.0	0.74	3.1
1956	7.0	9.0	-5.1	2.4	-0.77	0	7.0	1.9	19
1956-11-01	0.53	3.6	-0.28	0.33	-0.12	0	0.53	0.26	5.2
1956-12-01	0	3.2	0.083	0.27	-0.11	0	0	0.080	3.8
1957-01-01	0.47	2.2	-0.26	0.22	-0.11	0	0.47	0.21	3.1
1957-02-01	4.8	-2.7	-4.1	0.35	-0.10	0	4.8	0.67	2.7
1957-03-01	0.73	2.1	-0.11	0.82	-0.089	0	0.73	0.62	3.4
1957	6.5	8.4	-4.7	2.0	-0.54	0	6.5	1.8	18
1957-11-01	3.2	0.30	-2.4	0.68	-0.079	0	3.2	0.79	4.6
1957-12-01	0.61	2.0	-0.11	0.47	-0.072	0	0.61	0.51	3.0
1958-01-01	1.1	1.6	-0.56	0.45	-0.069	0	1.1	0.51	3.2
1958-02-01	0.012	2.9	0.051	0.52	-0.065	0	0.012	0.063	3.3
1958-03-01	2.5	-0.039	-1.9	0.71	-0.057	0	2.5	0.60	3.2
1958	7.4	6.8	-5.0	2.8	-0.34	0	7.4	2.5	17
1958-11-01	1.9	2.3	-1.5	0.94	-0.063	0	1.9	0.43	5.3
1958-12-01	1.5	1.6	-1.2	0.54	-0.061	0	1.5	0.36	3.6
1959-01-01	0	3.0	0.067	0.49	-0.061	0	0	0.067	3.6
1959-02-01	0.21	2.8	-0.059	0.54	-0.060	0	0.21	0.15	3.5
1959-03-01	1.4	1.1	-0.93	0.70	-0.054	0	1.4	0.49	3.3
1959	5.1	11	-3.6	3.2	-0.30	0	5.1	1.5	19
1959-11-01	4.8	-0.59	-4.4	0.69	-0.051	0	4.8	0.37	5.3
1959-12-01	0.38	2.8	0.13	0.56	-0.049	0	0.38	0.51	3.7
1960-01-01	5.2	-3.0	-4.6	0.37	-0.050	0	5.2	0.67	2.7
1960-02-01	4.2	-2.0	-3.4	0.41	-0.052	0	4.2	0.74	2.5

Table IV-B.16 DC2 Winter Storm Period Water Balance

Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
1960-03-01	0.87	1.8	-0.39	0.76	-0.057	0	0.87	0.48	3.4
1960	15	-1.1	-13	2.8	-0.26	0	15	2.8	18
1960-11-01	2.1	1.9	-1.4	0.50	-0.26	0	2.1	0.63	5.0
1960-12-01	0.48	2.6	-0.17	0.51	-0.23	0	0.48	0.31	3.7
1961-01-01	0.47	2.2	-0.19	0.43	-0.22	0	0.47	0.28	3.3
1961-02-01	0.70	1.9	-0.38	0.46	-0.20	0	0.70	0.32	3.2
1961-03-01	0.23	2.9	-0.024	0.70	-0.17	0	0.23	0.20	3.7
1961	3.9	12	-2.2	2.6	-1.1	0	3.9	1.7	19
1961-11-01	0.45	3.6	-0.31	0.50	-0.10	0	0.45	0.14	5.4
1961-12-01	0.32	2.4	0	0.23	-0.093	0	0.32	0.32	3.1
1962-01-01	3.9	-1.7	-3.2	0.30	-0.089	0	3.9	0.64	2.6
1962-02-01	3.2	-0.94	-2.7	0.43	-0.080	0	3.2	0.54	2.7
1962-03-01	1.7	0.75	-1.1	0.69	-0.067	0	1.7	0.58	3.2
1962	9.5	4.2	-7.3	2.2	-0.43	0	9.5	2.2	17
1962-11-01	0.87	3.2	-0.42	0.58	-0.094	0	0.87	0.46	5.1
1962-12-01	0.83	2.5	-0.54	0.42	-0.089	0	0.83	0.29	3.9
1963-01-01	1.8	0.87	-1.1	0.36	-0.087	0	1.8	0.66	3.3
1963-02-01	2.1	0.47	-1.5	0.48	-0.083	0	2.1	0.57	3.0
1963-03-01	4.2	-1.1	-3.9	0.87	-0.069	0	4.2	0.33	3.8
1963	9.8	5.9	-7.5	2.7	-0.42	0	9.8	2.3	19
1963-11-01	0.67	3.9	-0.41	0.94	-0.11	0	0.67	0.26	5.8
1963-12-01	2.3	0.67	-1.5	0.54	-0.13	0	2.3	0.85	3.6
1964-01-01	0.34	2.5	-0.047	0.47	-0.17	0	0.34	0.29	3.3
1964-02-01	0.58	1.9	-0.33	0.46	-0.20	0	0.58	0.25	3.0
1964-03-01	0	2.8	0.051	0.77	-0.20	0	0	0.055	3.6
1964	3.9	12	-2.2	3.2	-0.81	0	3.9	1.7	19
1964-11-01	1.5	3.1	-1.2	0.80	-0.15	0	1.5	0.30	5.8
1964-12-01	1.4	1.6	-0.95	0.50	-0.13	0	1.4	0.43	3.6
1965-01-01	1.7	0.87	-1.3	0.43	-0.13	0	1.7	0.44	3.3
1965-02-01	2.9	-0.47	-2.2	0.46	-0.12	0	2.9	0.71	2.6
1965-03-01	2.8	0	-2.4	0.80	-0.099	0	2.8	0.41	3.4
1965	10	5.1	-8.0	3.0	-0.63	0	10	2.3	19
1965-11-01	0.46	4.0	-0.26	0.35	-0.15	0	0.46	0.20	5.7
1965-12-01	2.4	0.87	-2.0	0.27	-0.14	0	2.4	0.37	3.9
1966-01-01	10	-8.3	-9.6	0.35	-0.13	0	10	0.85	2.7
1966-02-01	1.8	0.51	-1.3	0.44	-0.12	0	1.8	0.56	2.8
1966-03-01	2.0	0.51	-1.5	0.74	-0.15	0	2.0	0.55	3.1
1966	17	-2.4	-15	2.2	-0.69	0	17	2.5	18
1966-11-01	1.4	2.8	-0.91	0.93	-0.39	0	1.4	0.45	5.1
1966-12-01	0.88	2.3	-0.57	0.56	-0.35	0	0.88	0.30	4.1
1967-01-01	1.3	1.3	-0.75	0.43	-0.33	0	1.3	0.50	3.1
1967-02-01	0.79	1.9	-0.47	0.50	-0.31	0	0.79	0.32	2.9
1967-03-01	0	3.1	0.071	0.84	-0.26	0	0	0.071	3.9
1967	4.3	11	-2.6	3.3	-1.6	0	4.3	1.6	19
1967-11-01	0.42	3.8	-0.20	0.63	-0.16	0	0.42	0.21	5.6
1967-12-01	2.1	1.0	-1.7	0.19	-0.14	0	2.1	0.42	3.9
1968-01-01	10	-8.0	-9.4	0.33	-0.13	0	10	0.65	2.3
1968-02-01	0.63	2.0	-0.28	0.49	-0.13	0	0.63	0.35	3.1
1968-03-01	1.9	0.98	-1.4	0.85	-0.20	0	1.9	0.54	3.4
1968	15	-0.16	-13	2.5	-0.78	0	15	2.2	18
1968-11-01	0.39	3.7	-0.21	0.45	-0.39	0	0.39	0.18	5.1
1968-12-01	2.5	0.39	-1.9	0.39	-0.34	0	2.5	0.60	3.8

Table IV-B.16 DC2 Winter Storm Period Water Balance

Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
1969-01-01	3.3	-0.83	-2.7	0.40	-0.32	0	3.3	0.56	2.9
1969-02-01	4.2	-1.9	-3.5	0.43	-0.28	0	4.2	0.70	2.6
1969-03-01	1.4	1.1	-0.62	0.71	-0.24	0	1.4	0.74	3.0
1969	12	2.4	-8.9	2.4	-1.6	0	12	2.8	17
1969-11-01	0.83	3.1	-0.55	0.62	-0.31	0	0.83	0.28	5.2
1969-12-01	2.1	0.71	-1.5	0.43	-0.26	0	2.1	0.66	3.6
1970-01-01	1.3	1.5	-0.72	0.46	-0.24	0	1.3	0.60	3.4
1970-02-01	0.50	2.2	-0.083	0.51	-0.22	0	0.50	0.42	2.9
1970-03-01	0.41	2.5	-0.094	0.82	-0.19	0	0.41	0.31	3.6
1970	5.2	10	-2.9	2.8	-1.2	0	5.2	2.3	19
1970-11-01	0	4.2	0.020	0.72	-0.15	0	0	0.020	5.3
1970-12-01	0.65	2.5	-0.53	0.31	-0.14	0	0.65	0.12	3.9
1971-01-01	1.2	1.2	-0.59	0.33	-0.14	0	1.2	0.62	3.0
1971-02-01	0.85	2.1	-0.54	0.56	-0.13	0	0.85	0.31	3.1
1971-03-01	0.82	2.1	-0.52	0.79	-0.11	0	0.82	0.30	4.0
1971	3.5	12	-2.1	2.7	-0.67	0	3.5	1.4	19
1971-11-01	4.2	-0.35	-3.3	0.87	-0.083	0	4.2	0.88	5.1
1971-12-01	0.039	3.1	0.094	0.55	-0.079	0	0.039	0.13	3.7
1972-01-01	2.1	0.35	-1.4	0.40	-0.071	0	2.1	0.76	3.0
1972-02-01	0	2.8	0.15	0.52	-0.079	0	0	0.15	3.2
1972-03-01	0	3.5	0.024	0.85	-0.083	0	0	0.028	4.1
1972	6.4	9.4	-4.4	3.2	-0.39	0	6.4	1.9	19
1972-11-01	8.7	-5.0	-7.5	0.69	-0.087	0	8.7	1.2	4.9
1972-12-01	2.8	-0.20	-2.0	0.47	-0.083	0	2.8	0.81	3.2
1973-01-01	3.0	-0.67	-2.4	0.37	-0.087	0	3.0	0.62	2.9
1973-02-01	0.74	1.6	-0.012	0.44	-0.10	0	0.74	0.72	2.6
1973-03-01	3.2	-0.63	-2.3	0.72	-0.12	0	3.2	0.89	2.8
1973	18	-4.9	-14	2.7	-0.48	0	18	4.2	16
1973-11-01	0	4.2	0.0079	0.18	-0.41	0	0	0.012	5.6
1973-12-01	1.8	1.3	-1.2	0.20	-0.36	0	1.8	0.59	3.9
1974-01-01	0.094	2.8	0.075	0.41	-0.33	0	0.094	0.17	3.3
1974-02-01	3.4	-1.0	-2.6	0.44	-0.31	0	3.4	0.78	2.9
1974-03-01	0.16	2.8	-0.0039	0.82	-0.25	0	0.16	0.15	3.3
1974	5.4	10.0	-3.7	2.1	-1.7	0	5.4	1.7	19
1974-11-01	3.4	0.51	-2.7	0.87	-0.18	0	3.4	0.68	5.3
1974-12-01	0.12	3.0	0.26	0.56	-0.17	0	0.12	0.38	3.6
1975-01-01	0.75	1.7	-0.38	0.39	-0.15	0	0.75	0.37	3.1
1975-02-01	0.43	1.9	-0.15	0.43	-0.14	0	0.43	0.25	2.6
1975-03-01	3.9	-1.2	-3.4	0.80	-0.12	0	3.9	0.57	3.0
1975	8.6	5.9	-6.4	3.0	-0.76	0	8.6	2.3	18
1975-11-01	0.24	3.9	-0.071	0.25	-0.19	0	0.24	0.19	5.4
1975-12-01	2.2	1.2	-2.0	0.15	-0.18	0	2.2	0.19	4.2
1976-01-01	1.3	1.3	-0.56	0.43	-0.17	0	1.3	0.69	3.1
1976-02-01	0.20	2.3	0.020	0.48	-0.16	0	0.20	0.24	2.9
1976-03-01	1.6	1.4	-1.0	0.85	-0.14	0	1.6	0.59	3.4
1976	5.5	10	-3.6	2.2	-0.85	0	5.5	1.9	19
1976-11-01	0.91	2.9	-0.51	0.86	-0.098	0	0.91	0.39	5.1
1976-12-01	0.55	2.6	-0.23	0.56	-0.091	0	0.55	0.32	4.0
1977-01-01	1.8	0.79	-1.5	0.43	-0.087	0	1.8	0.28	3.1
1977-02-01	1.9	0.43	-1.0	0.44	-0.079	0	1.9	0.89	2.5
1977-03-01	0.079	3.3	0.024	0.93	-0.071	0	0.079	0.10	4.1
1977	5.3	10	-3.3	3.2	-0.43	0	5.3	2.0	19

Table IV-B.16 DC2 Winter Storm Period Water Balance

Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
1977-11-01	1.3	2.9	-0.81	0.95	-0.063	0	1.3	0.50	5.5
1977-12-01	0.35	2.9	-0.020	0.58	-0.059	0	0.35	0.33	3.9
1978-01-01	0.67	2.0	-0.44	0.42	-0.055	0	0.67	0.22	3.5
1978-02-01	6.4	-4.2	-5.7	0.42	-0.051	0	6.4	0.75	2.5
1978-03-01	5.5	-3.0	-4.6	0.72	-0.043	0	5.5	0.90	2.9
1978	14	0.71	-12	3.1	-0.27	0	14	2.7	18
1978-11-01	1.9	2.5	-1.5	0.35	-0.35	0	1.9	0.42	5.9
1978-12-01	5.6	-2.9	-4.9	0.48	-0.31	0	5.6	0.71	3.7
1979-01-01	6.6	-4.3	-5.9	0.37	-0.29	0	6.6	0.72	2.5
1979-02-01	6.0	-4.2	-4.8	0.35	-0.32	0	6.0	1.2	2.3
1979-03-01	1.3	1.9	-0.78	0.89	-0.59	0	1.3	0.46	3.3
1979	21	-7.0	-18	2.4	-1.9	0	21	3.5	18
1979-11-01	0.67	3.9	-0.44	0.31	-0.64	0	0.67	0.24	5.9
1979-12-01	0.67	2.5	-0.28	0.37	-0.53	0	0.67	0.39	4.0
1980-01-01	0.71	2.2	-0.41	0.32	-0.47	0	0.71	0.29	3.7
1980-02-01	4.1	-2.1	-3.2	0.33	-0.41	0	4.1	0.87	2.4
1980-03-01	6.0	-3.6	-5.5	0.70	-0.35	0	6.0	0.52	2.4
1980	12	2.9	-9.9	2.0	-2.4	0	12	2.3	18
1980-11-01	0.079	4.3	0.0079	0.18	-0.47	0	0.079	0.047	5.9
1980-12-01	0	3.5	0.012	0.11	-0.39	0	0	0.012	4.3
1981-01-01	0.55	2.6	-0.26	0.24	-0.37	0	0.55	0.30	3.5
1981-02-01	1.3	1.5	-0.94	0.36	-0.33	0	1.3	0.38	3.5
1981-03-01	2.7	0.39	-2.2	0.85	-0.28	0	2.7	0.44	3.6
1981	4.6	12	-3.4	1.7	-1.9	0	4.6	1.2	21
1981-11-01	0.94	2.9	-0.50	0.74	-0.21	0	0.94	0.46	5.2
1981-12-01	2.4	1.0	-2.2	0.34	-0.19	0	2.4	0.14	4.4
1982-01-01	0	3.0	0.22	0.49	-0.19	0	0	0.22	3.3
1982-02-01	2.7	-0.43	-1.8	0.43	-0.18	0	2.7	0.97	2.8
1982-03-01	1.8	0.91	-1.1	0.78	-0.15	0	1.8	0.75	3.1
1982	7.8	7.3	-5.3	2.8	-0.92	0	7.8	2.5	19
1982-11-01	0.039	4.1	0.12	0.87	-0.15	0	0.039	0.16	5.4
1982-12-01	3.3	-0.79	-2.6	0.40	-0.15	0	3.3	0.69	3.6
1983-01-01	1.7	0.67	-0.83	0.39	-0.15	0	1.7	0.85	2.7
1983-02-01	1.9	0.83	-1.6	0.51	-0.15	0	1.9	0.31	3.2
1983-03-01	2.3	0.24	-1.9	0.73	-0.15	0	2.3	0.43	2.8
1983	9.3	5.0	-6.9	2.9	-0.74	0	9.3	2.4	18
1983-11-01	1.1	2.5	-0.59	0.82	-0.36	0	1.1	0.56	4.9
1983-12-01	2.0	1.0	-1.6	0.52	-0.34	0	2.0	0.49	3.8
1984-01-01	2.5	-0.24	-1.9	0.37	-0.37	0	2.5	0.53	2.7
1984-02-01	0.51	2.2	-0.039	0.52	-0.40	0	0.51	0.44	2.8
1984-03-01	0	3.1	0	0.81	-0.41	0	0	0.031	3.9
1984	6.2	8.7	-4.1	3.0	-1.9	0	6.2	2.1	18
1984-11-01	1.3	2.4	-0.67	0.83	-0.28	0	1.3	0.66	4.9
1984-12-01	2.1	1.1	-1.8	0.53	-0.24	0	2.1	0.27	4.2
1985-01-01	5.8	-3.6	-4.9	0.35	-0.23	0	5.8	0.86	2.5
1985-02-01	2.7	-0.67	-2.0	0.37	-0.22	0	2.7	0.74	2.5
1985-03-01	1.7	0.55	-1.0	0.64	-0.21	0	1.7	0.61	2.5
1985	14	-0.31	-10	2.7	-1.2	0	14	3.1	17
1985-11-01	1.3	2.3	-0.55	0.80	-0.35	0	1.3	0.71	4.6
1985-12-01	2.8	-0.079	-2.2	0.47	-0.31	0	2.8	0.51	3.9
1986-01-01	0.87	2.0	-0.28	0.48	-0.29	0	0.87	0.60	3.1
1986-02-01	0.079	3.1	-0.079	0.57	-0.26	0	0.079	0.051	3.6

Table IV-B.16 DC2 Winter Storm Period Water Balance

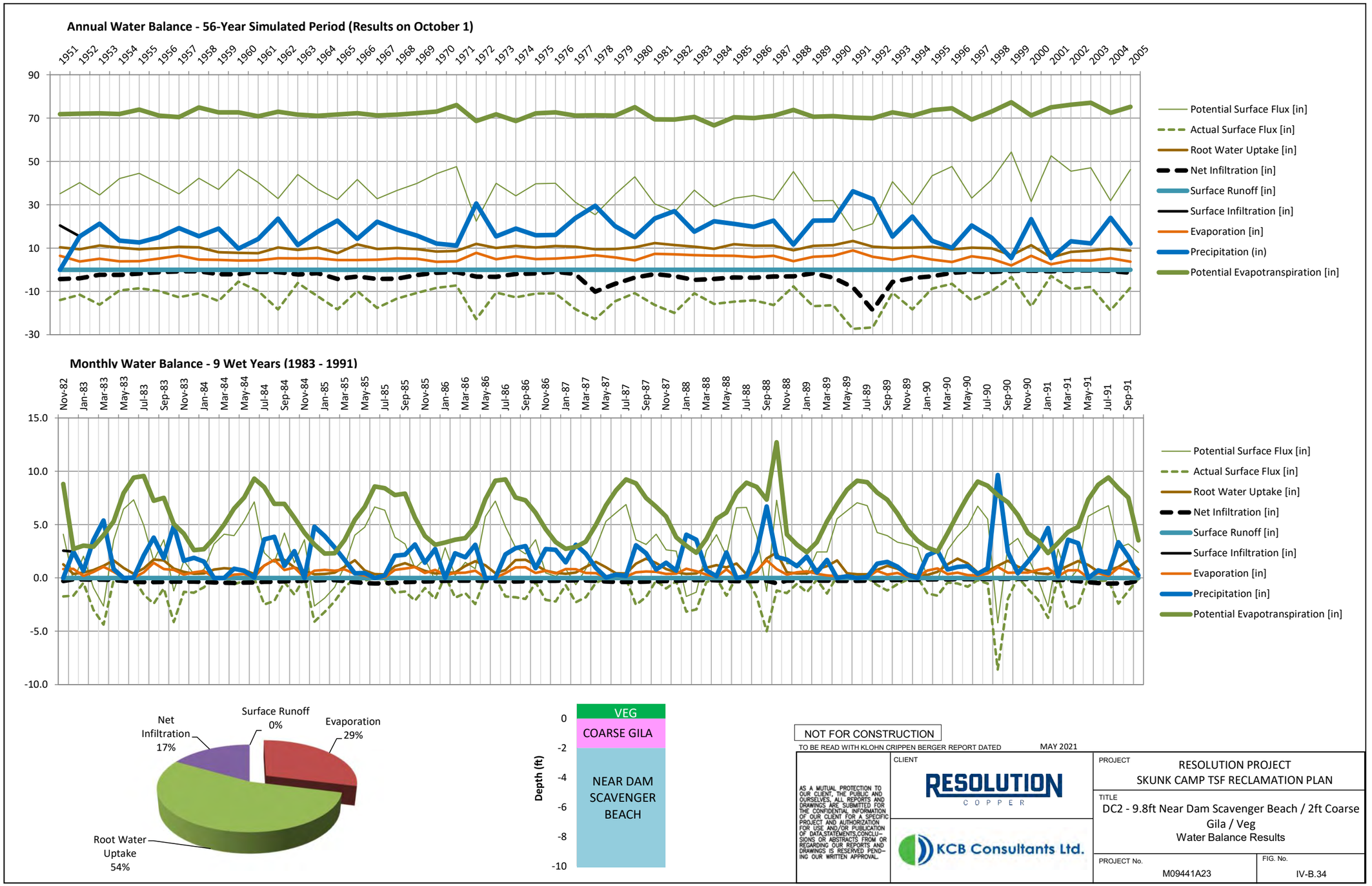
Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
1986-03-01	3.1	-0.63	-2.2	0.70	-0.23	0	3.1	0.80	2.9
1986	8.1	6.7	-5.4	3.0	-1.5	0	8.1	2.7	18
1986-11-01	1.7	2.1	-1.3	0.86	-0.30	0	1.7	0.40	4.8
1986-12-01	1.4	1.4	-0.75	0.50	-0.27	0	1.4	0.70	3.7
1987-01-01	3.0	-0.55	-2.3	0.40	-0.25	0	3.0	0.72	2.9
1987-02-01	3.3	-0.87	-2.6	0.47	-0.24	0	3.3	0.80	2.8
1987-03-01	2.7	-0.20	-2.1	0.71	-0.22	0	2.7	0.56	3.5
1987	12	1.9	-9.1	2.9	-1.3	0	12	3.2	18
1987-11-01	0.35	4.1	-0.12	0.94	-0.30	0	0.35	0.20	6.0
1987-12-01	1.7	1.4	-1.2	0.51	-0.26	0	1.7	0.59	3.8
1988-01-01	4.1	-1.5	-3.1	0.40	-0.23	0	4.1	0.85	3.2
1988-02-01	3.6	-1.3	-3.0	0.43	-0.21	0	3.6	0.66	2.5
1988-03-01	0.71	2.4	-0.39	0.89	-0.20	0	0.71	0.31	3.4
1988	10	5.1	-7.8	3.2	-1.2	0	10	2.6	19
1988-11-01	1.5	2.8	-1.0	0.85	-0.25	0	1.5	0.46	5.8
1988-12-01	1.7	1.3	-1.3	0.53	-0.25	0	1.7	0.39	4.0
1989-01-01	1.1	1.4	-0.51	0.42	-0.27	0	1.1	0.60	3.1
1989-02-01	2.2	0.12	-1.6	0.43	-0.27	0	2.2	0.62	2.7
1989-03-01	0.31	2.8	-0.039	0.86	-0.24	0	0.31	0.25	3.1
1989	6.9	8.3	-4.5	3.1	-1.3	0	6.9	2.3	19
1989-11-01	1.1	3.1	-0.55	0.74	-0.20	0	1.1	0.52	5.9
1989-12-01	0.31	3.0	-0.16	0.33	-0.18	0	0.31	0.15	4.2
1990-01-01	0.87	2.0	-0.67	0.19	-0.17	0	0.87	0.18	3.4
1990-02-01	1.3	1.0	-0.67	0.40	-0.15	0	1.3	0.64	2.7
1990-03-01	2.6	-0.079	-1.7	0.71	-0.12	0	2.6	0.89	2.6
1990	6.1	9.0	-3.7	2.4	-0.82	0	6.1	2.4	19
1990-11-01	0.28	3.7	-0.039	0.87	-0.094	0	0.28	0.20	5.3
1990-12-01	2.2	0.94	-1.3	0.55	-0.11	0	2.2	0.87	4.2
1991-01-01	4.8	-2.7	-4.1	0.35	-0.13	0	4.8	0.77	3.0
1991-02-01	1.8	0.75	-1.3	0.47	-0.16	0	1.8	0.50	2.6
1991-03-01	0.94	2.3	-0.55	0.91	-0.17	0	0.94	0.42	3.3
1991	10	5.0	-7.2	3.1	-0.66	0	10	2.8	18
1991-11-01	1.2	3.5	-0.94	0.87	-0.41	0	1.2	0.28	6.6
1991-12-01	3.2	-0.39	-2.7	0.47	-0.36	0	3.2	0.54	3.6
1992-01-01	4.0	-1.7	-3.1	0.39	-0.34	0	4.0	0.88	2.9
1992-02-01	3.0	-0.71	-2.0	0.39	-0.31	0	3.0	0.95	2.2
1992-03-01	2.8	-0.12	-2.1	0.75	-0.33	0	2.8	0.68	3.0
1992	14	0.55	-11	2.9	-1.7	0	14	3.3	18
1992-11-01	1.2	3.1	-0.87	0.91	-0.75	0	1.2	0.33	6.2
1992-12-01	0.51	2.3	-0.12	0.47	-0.71	0	0.51	0.37	3.6
1993-01-01	6.3	-4.3	-5.4	0.31	-0.69	0	6.3	0.93	2.5
1993-02-01	11	-9.4	-10	0.35	-0.67	0	11	0.90	1.9
1993-03-01	6.0	-4.1	-5.1	0.55	-1.9	0	6.0	0.93	2.7
1993	25	-12	-22	2.6	-4.7	0	25	3.5	17
1993-11-01	0.83	3.4	-0.35	0.71	-0.71	0	0.83	0.43	6.0
1993-12-01	4.2	-1.4	-3.9	0.39	-0.60	0	4.2	0.35	3.6
1994-01-01	0.28	2.4	-0.039	0.43	-0.55	0	0.28	0.23	3.4
1994-02-01	0.28	2.6	-0.12	0.51	-0.51	0	0.28	0.17	3.3
1994-03-01	2.6	-0.16	-2.0	0.71	-0.46	0	2.6	0.57	3.0
1994	8.2	6.9	-6.4	2.8	-2.8	0	8.2	1.7	19
1994-11-01	1.9	1.9	-1.5	0.71	-0.28	0	1.9	0.35	5.3
1994-12-01	3.3	-0.83	-2.5	0.43	-0.23	0	3.3	0.86	3.5

Table IV-B.16 DC2 Winter Storm Period Water Balance

Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
1995-01-01	2.7	-0.31	-2.0	0.39	-0.22	0	2.7	0.65	3.0
1995-02-01	3.7	-1.2	-2.8	0.43	-0.20	0	3.7	0.89	2.6
1995-03-01	2.7	0	-2.2	0.79	-0.20	0	2.7	0.52	3.1
1995	14	-0.43	-11	2.8	-1.1	0	14	3.3	18
1995-11-01	0	4.3	0.12	0.98	-0.36	0	0	0.12	5.8
1995-12-01	1.3	1.8	-0.83	0.51	-0.31	0	1.3	0.46	3.9
1996-01-01	0.91	1.9	-0.63	0.47	-0.30	0	0.91	0.29	3.5
1996-02-01	0	2.9	0.079	0.51	-0.28	0	0	0.075	3.3
1996-03-01	3.2	-0.24	-2.6	0.83	-0.24	0	3.2	0.53	3.6
1996	5.4	11	-3.9	3.3	-1.5	0	5.4	1.5	20
1996-11-01	0.43	4.1	-0.16	0.91	-0.18	0	0.43	0.25	6.0
1996-12-01	1.2	1.9	-0.94	0.47	-0.16	0	1.2	0.31	3.8
1997-01-01	0.039	2.7	0.24	0.43	-0.15	0	0.039	0.25	3.2
1997-02-01	2.8	-0.51	-2.1	0.43	-0.13	0	2.8	0.72	2.7
1997-03-01	1.7	1.3	-1.4	0.87	-0.11	0	1.7	0.28	3.4
1997	6.2	9.3	-4.4	3.1	-0.72	0	6.2	1.8	19
1997-11-01	0.75	3.2	-0.43	0.28	-0.083	0	0.75	0.31	6.0
1997-12-01	0.79	2.1	-0.43	0.31	-0.071	0	0.79	0.37	3.7
1998-01-01	2.7	-0.39	-1.9	0.31	-0.071	0	2.7	0.82	3.1
1998-02-01	0.39	2.2	0	0.51	-0.063	0	0.39	0.39	2.4
1998-03-01	6.4	-4.4	-5.4	0.55	-0.047	0	6.4	1.0	2.9
1998	11	2.8	-8.1	2.0	-0.33	0	11	2.9	18
1998-11-01	0	4.4	0	0.43	-0.11	0	0	0.016	6.3
1998-12-01	1.0	2.1	-0.87	0.12	-0.098	0	1.0	0.19	3.9
1999-01-01	0.75	2.0	-0.16	0.35	-0.10	0	0.75	0.58	3.3
1999-02-01	0.039	2.9	0	0.47	-0.098	0	0.039	0.071	3.6
1999-03-01	0.20	3.2	-0.079	0.55	-0.087	0	0.20	0.12	3.6
1999	2.0	15	-1.1	1.9	-0.49	0	2.0	0.98	21
1999-11-01	0	4.5	0.039	0.91	-0.059	0	0	0.031	6.2
1999-12-01	0	3.7	0.039	0.35	-0.059	0	0	0.012	4.7
2000-01-01	0.039	2.8	-0.039	0.16	-0.055	0	0.039	0.012	3.7
2000-02-01	0.28	2.9	-0.12	0.24	-0.055	0	0.28	0.16	3.4
2000-03-01	0.71	2.5	-0.35	0.28	-0.047	0	0.71	0.37	3.9
2000	1.0	16	-0.43	1.9	-0.28	0	1.0	0.58	22
2000-11-01	5.4	-1.5	-4.4	0.39	-0.031	0	5.4	0.86	6.1
2000-12-01	2.1	0.63	-1.5	0.47	-0.028	0	2.1	0.68	2.9
2001-01-01	0.12	2.9	0.039	0.47	-0.035	0	0.12	0.11	3.7
2001-02-01	3.4	-1.1	-2.5	0.43	-0.024	0	3.4	0.87	3.0
2001-03-01	1.7	0.87	-1.1	0.75	-0.028	0	1.7	0.70	2.8
2001	13	1.8	-9.4	2.5	-0.15	0	13	3.2	19
2001-11-01	0.39	3.7	-0.16	0.51	-0.059	0	0.39	0.20	5.7
2001-12-01	0.28	3.0	-0.12	0.24	-0.055	0	0.28	0.18	4.6
2002-01-01	1.9	0.55	-1.3	0.28	-0.059	0	1.9	0.57	2.9
2002-02-01	0.24	2.6	-0.12	0.51	-0.059	0	0.24	0.13	3.2
2002-03-01	0	3.3	0.079	0.75	-0.055	0	0	0.075	3.4
2002	2.8	13	-1.6	2.3	-0.29	0	2.8	1.1	20
2002-11-01	0.12	4.2	-0.039	0.28	-0.055	0	0.12	0.079	6.3
2002-12-01	0.87	2.5	-0.67	0.16	-0.047	0	0.87	0.18	4.4
2003-01-01	0.98	1.5	-0.35	0.28	-0.043	0	0.98	0.61	3.4
2003-02-01	0.35	3.0	-0.079	0.47	-0.043	0	0.35	0.32	3.1
2003-03-01	5.0	-2.5	-4.5	0.67	-0.031	0	5.0	0.46	3.6
2003	7.3	8.7	-5.6	1.9	-0.22	0	7.3	1.7	21

Table IV-B.16 DC2 Winter Storm Period Water Balance

Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
2003-11-01	0.079	4.6	0.039	0.63	-0.031	0	0.079	0.10	6.3
2003-12-01	0.87	2.0	-0.59	0.28	-0.028	0	0.87	0.28	3.9
2004-01-01	0.98	1.9	-0.55	0.31	-0.031	0	0.98	0.42	3.9
2004-02-01	1.5	0.94	-0.87	0.35	-0.028	0	1.5	0.58	3.1
2004-03-01	0.67	2.0	-0.24	0.71	-0.028	0	0.67	0.43	3.0
2004	4.1	11	-2.2	2.3	-0.15	0	4.1	1.8	20
2004-11-01	1.2	3.1	-0.79	0.67	-0.020	0	1.2	0.43	6.4
2004-12-01	0.67	1.9	-0.28	0.35	-0.020	0	0.67	0.37	3.5
2005-01-01	2.8	0	-2.2	0.39	-0.016	0	2.8	0.54	3.0
2005-02-01	4.2	-2.0	-3.6	0.43	-0.016	0	4.2	0.65	2.7
2005-03-01	7.3	-5.2	-6.4	0.59	-0.012	0	7.3	0.96	2.7
2005	16	-2.2	-13	2.4	-0.083	0	16	2.9	18
2005-11-01	0.43	4.0	-0.24	0.51	-0.13	0	0.43	0.18	6.4
2005-12-01	0	3.5	0.039	0.24	-0.12	0	0	0.028	4.4
2006-01-01	0	2.8	0	0.12	-0.13	0	0	0.012	3.5
2006-02-01	0	3.4	0	0.12	-0.13	0	0	0.0079	3.8
2006-03-01	0.12	3.3	-0.039	0.20	-0.12	0	0.12	0.079	4.1
2006	0.55	17	-0.24	1.2	-0.63	0	0.55	0.31	22


Annual Water Balance - 56-Year Simulated Period (Results on October 1)
Potential Surface Flux [in]
Actual Surface Flux [in]
Root Water Uptake [in]
Net Infiltration [in]
Surface Runoff [in]
Surface Infiltration [in]
Evaporation [in]
Precipitation (in)
Potential Evapotranspiration [in]
Monthly Water Balance - 9 Wet Years (1983 - 1991)
Potential Surface Flux [in]
Actual Surface Flux [in]
Root Water Uptake [in]
Net Infiltration [in]
Surface Runoff [in]
Surface Infiltration [in]
Evaporation [in]
Precipitation [in]
Potential Evapotranspiration [in]
Net Infiltration 17%
Surface Runoff 0%
Evaporation 29%
Root Water Uptake 54%
Depth (ft)
VEG
COARSE GILA
NEAR DAM SCAVENGER BEACH
NOT FOR CONSTRUCTION
TO BE READ WITH KLOHN CRIPPEN BERGER REPORT DATED MAY 2021
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CLIENT
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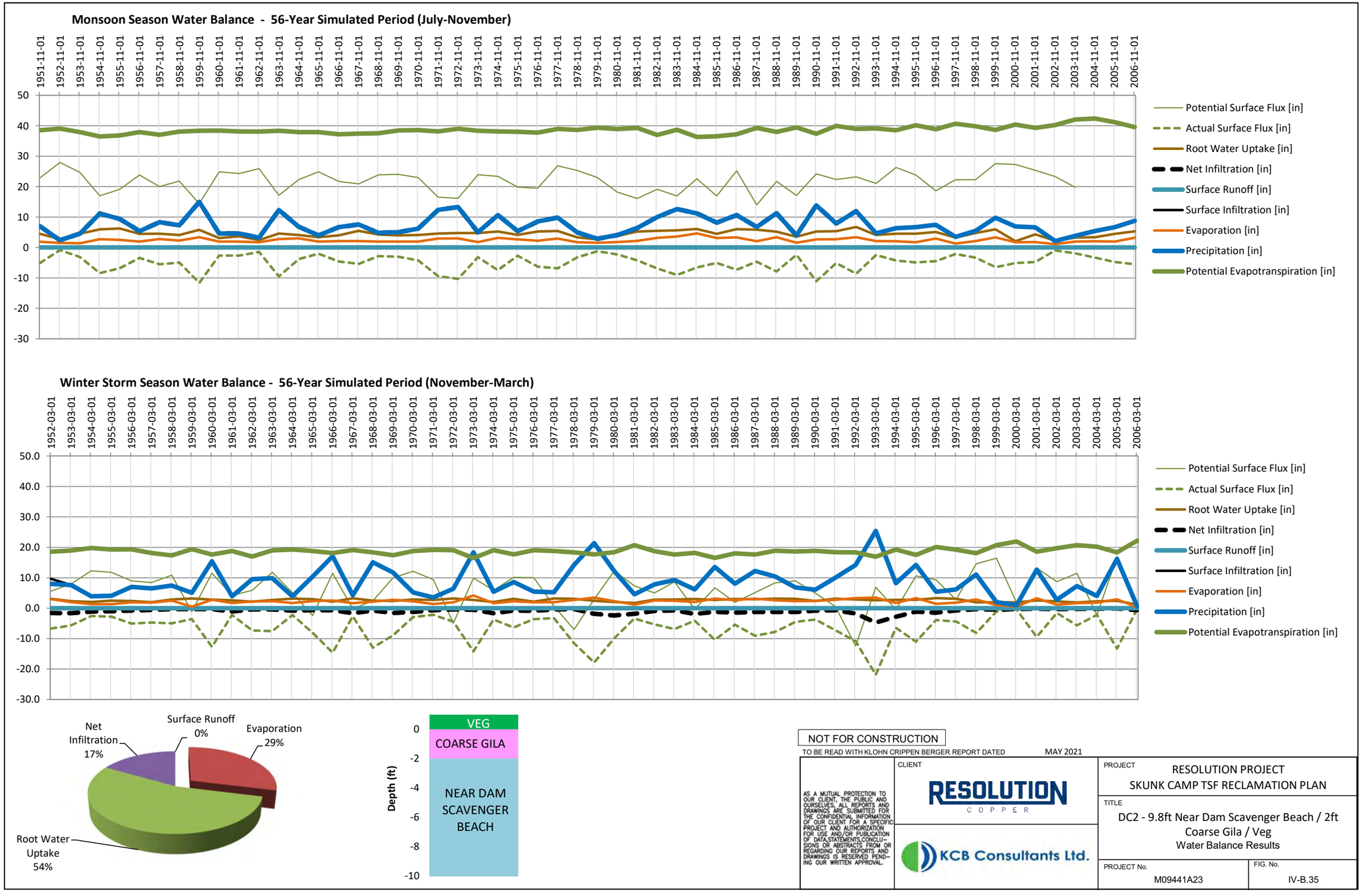
KCB Consultants Ltd.
PROJECT
RESOLUTION PROJECT
SKUNK CAMP TSF RECLAMATION PLAN
TITLE
DC2 - 9.8ft Near Dam Scavenger Beach / 2ft Coarse Gila / Veg
Water Balance Results
PROJECT No.
M09441A23
FIG. No.
IV-B.34


Monsoon Season Water Balance - 56-Year Simulated Period (July-November)
Potential Surface Flux [in]
Actual Surface Flux [in]
Root Water Uptake [in]
Net Infiltration [in]
Surface Runoff [in]
Surface Infiltration [in]
Evaporation [in]
Precipitation [in]
Potential Evapotranspiration [in]
Winter Storm Season Water Balance - 56-Year Simulated Period (November-March)
Net Infiltration 17%
Surface Runoff 0%
Evaporation 29%
Root Water Uptake 54%
VEG
COARSE GILA
NEAR DAM SCAVENGER BEACH
Depth (ft)
NOT FOR CONSTRUCTION
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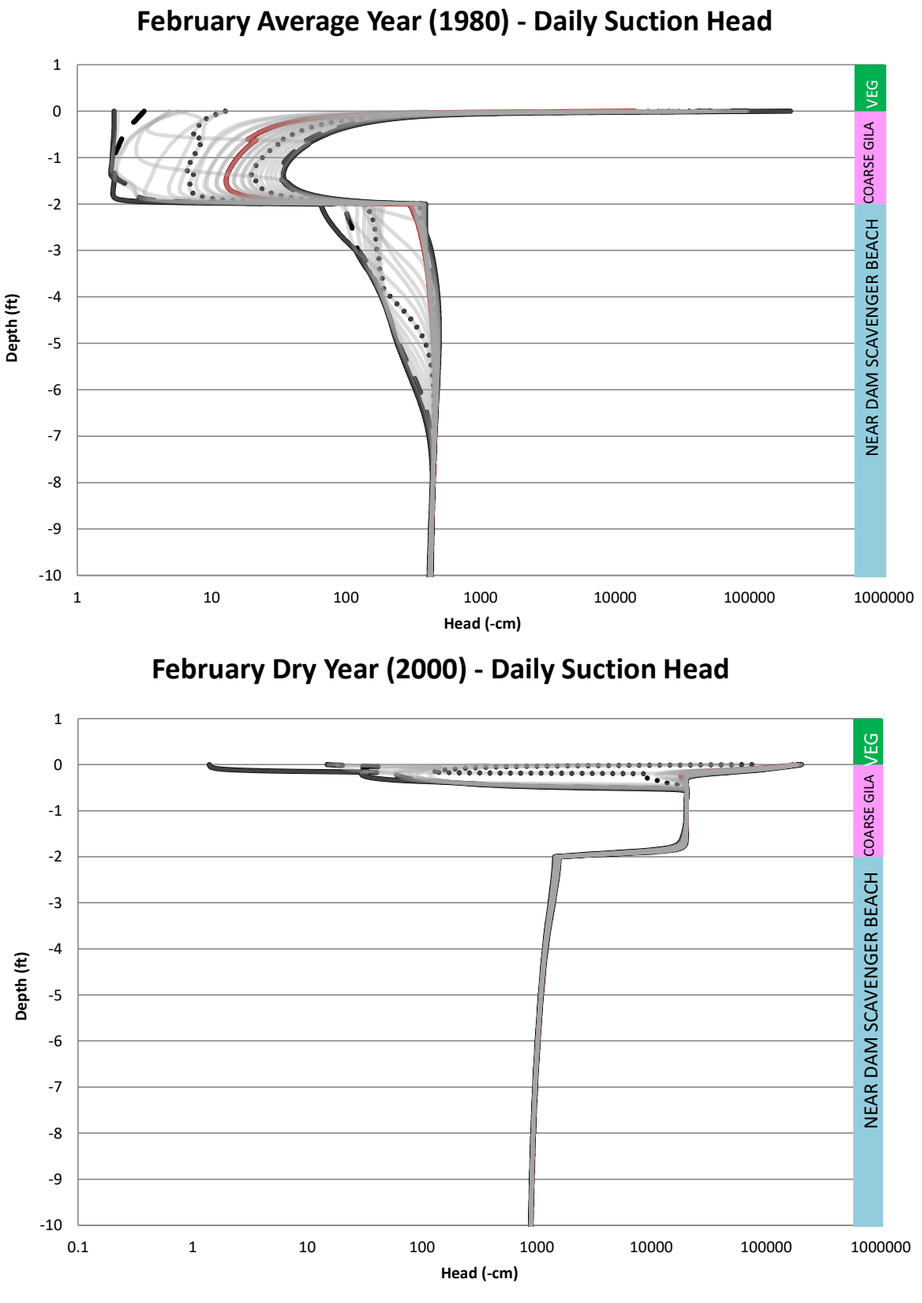
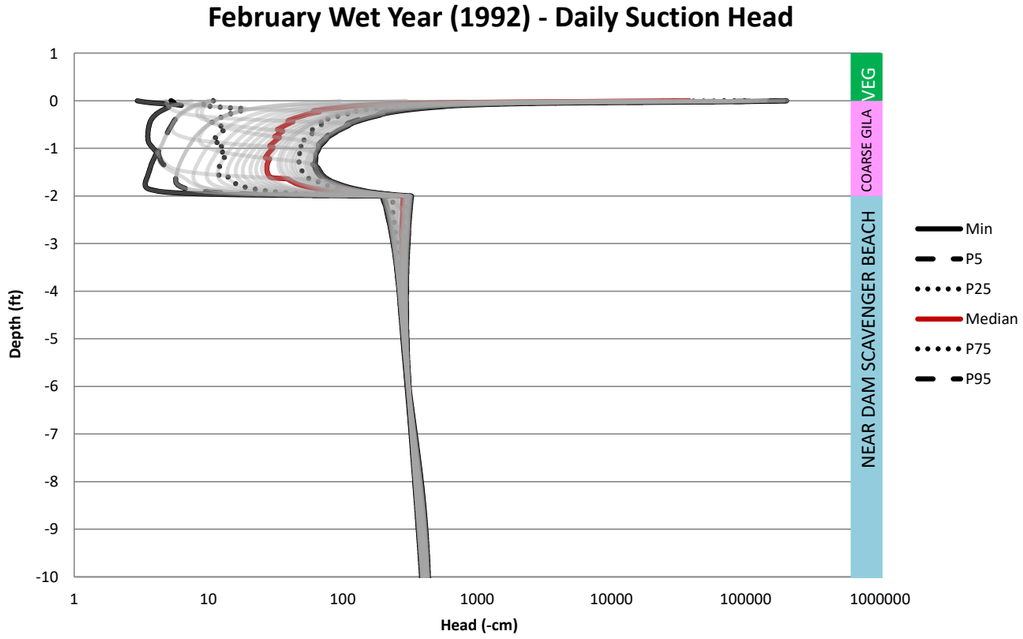
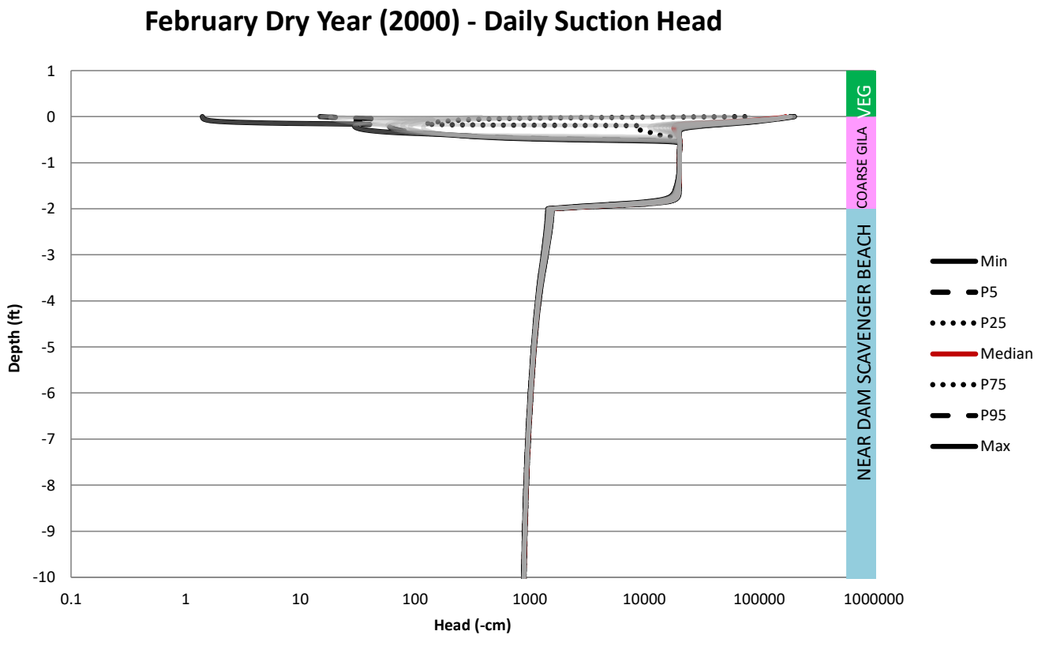
RESOLUTION COPPER
KCB Consultants Ltd.
PROJECT
RESOLUTION PROJECT
SKUNK CAMP TSF RECLAMATION PLAN
TITLE
DC2 - 9.8ft Near Dam Scavenger Beach / 2ft Coarse Gila / Veg
Water Balance Results
PROJECT No.
M09441A23
FIG. No.
IV-B.35







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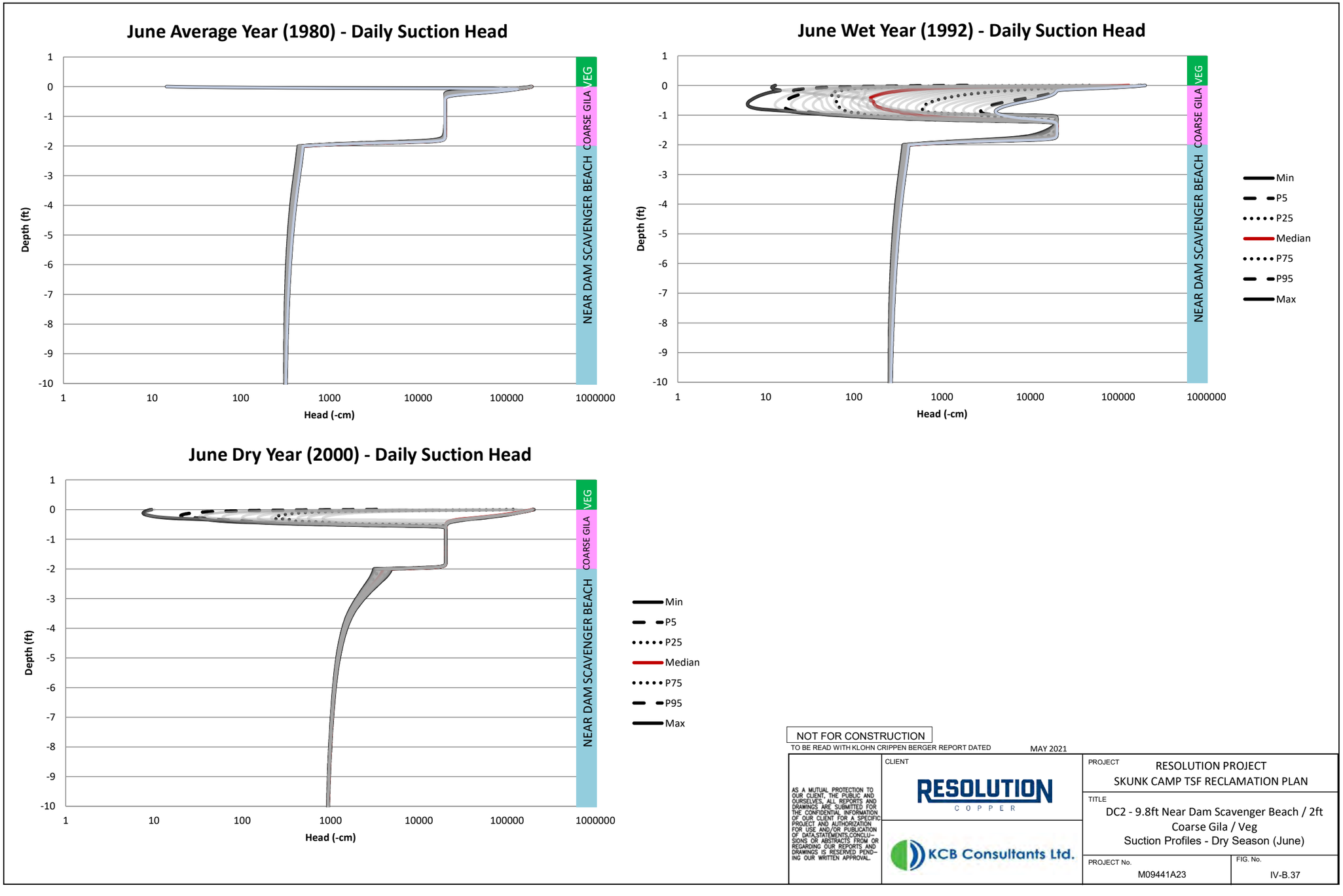
SKUNK CAMP TSF RECLAMATION PLAN

TITLE: DC2 - 9.8ft Near Dam Scavenger Beach / 2ft Coarse Gila / Veg
Suction Profiles - Winter (February)

PROJECT No. M09441A23

FIG. No. IV-B.36



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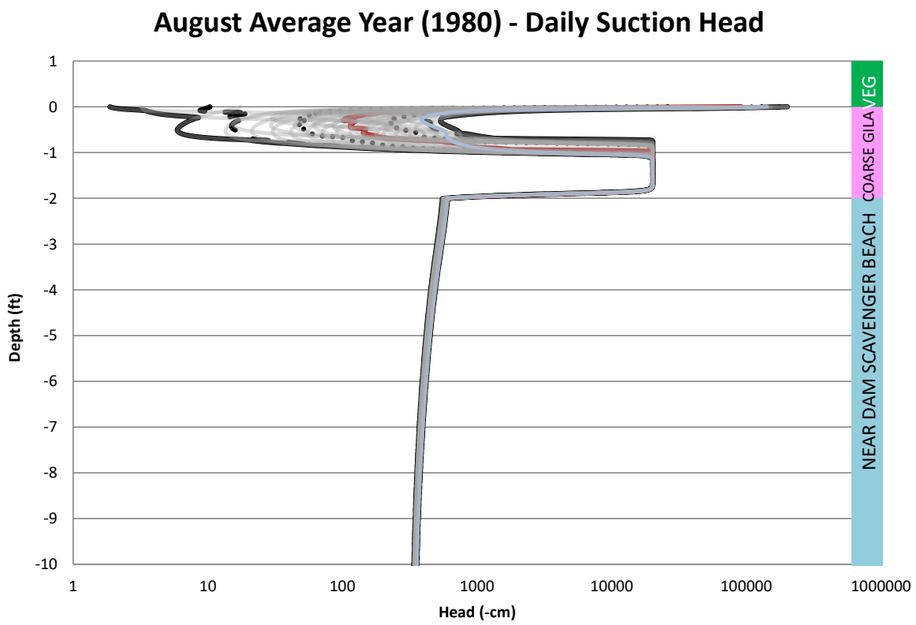
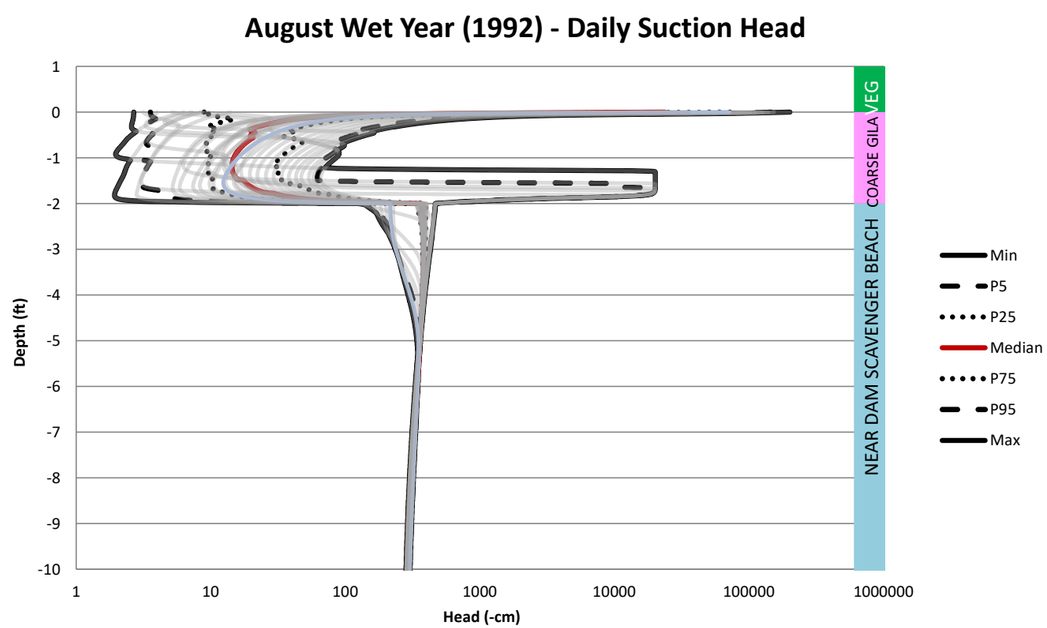
SKUNK CAMP TSF RECLAMATION PLAN

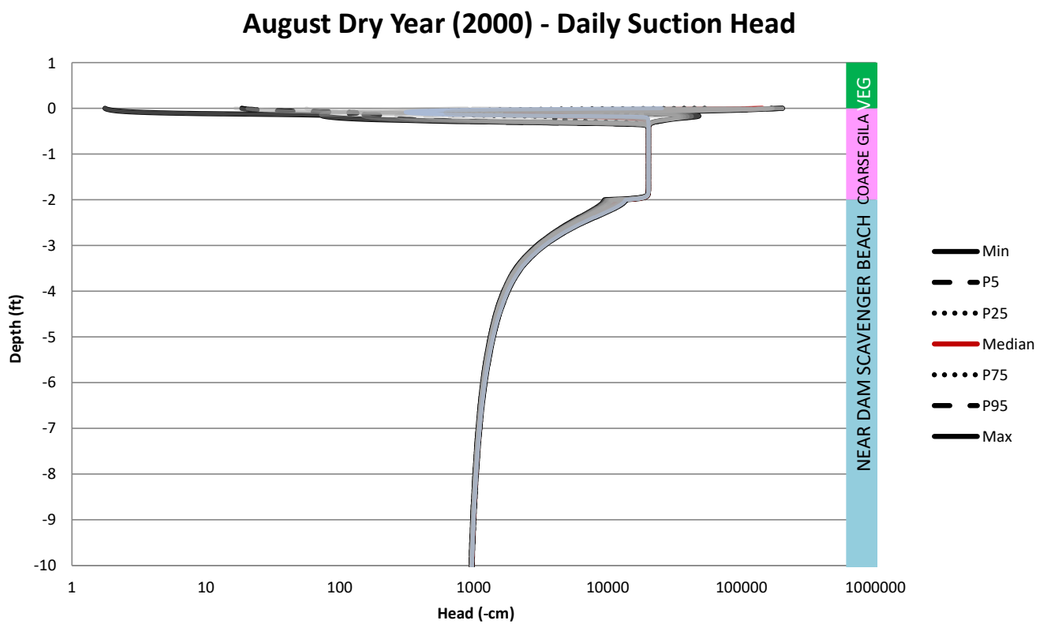
TITLE: DC2 - 9.8ft Near Dam Scavenger Beach / 2ft Coarse Gila / Veg
Suction Profiles - Dry Season (June)

PROJECT No. M09441A23

FIG. No. IV-B.37







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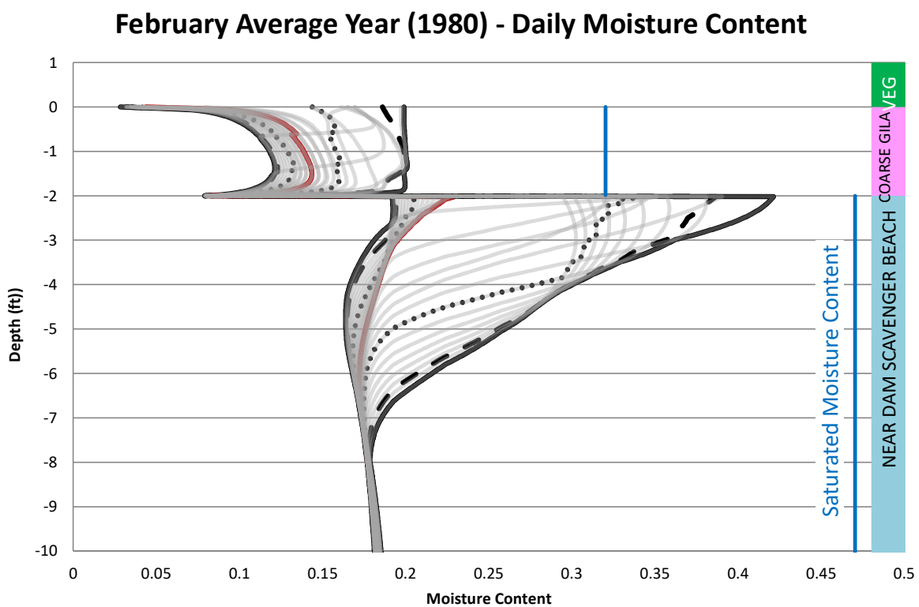
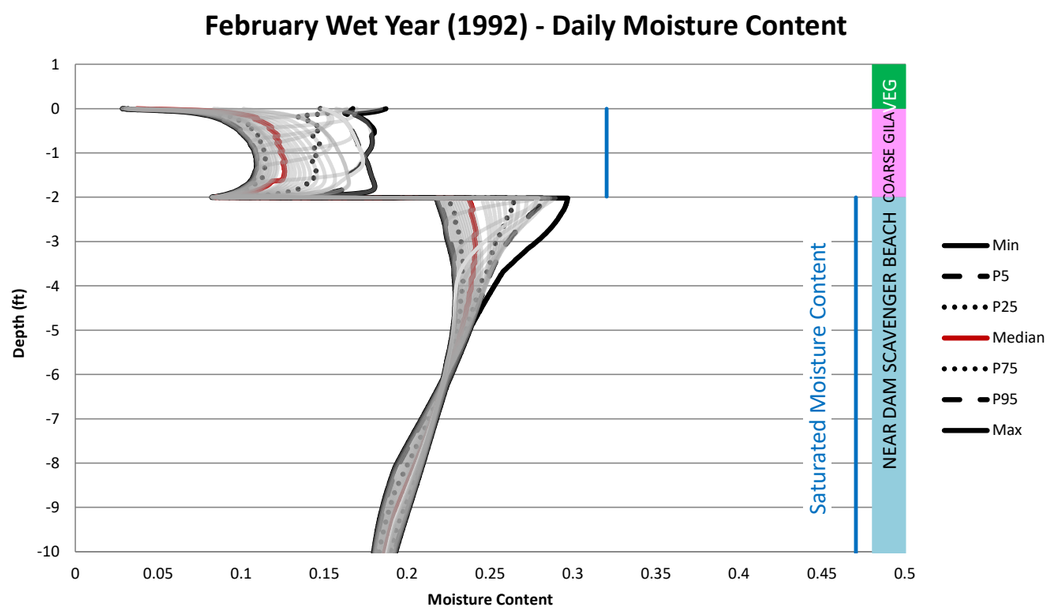
SKUNK CAMP TSF RECLAMATION PLAN

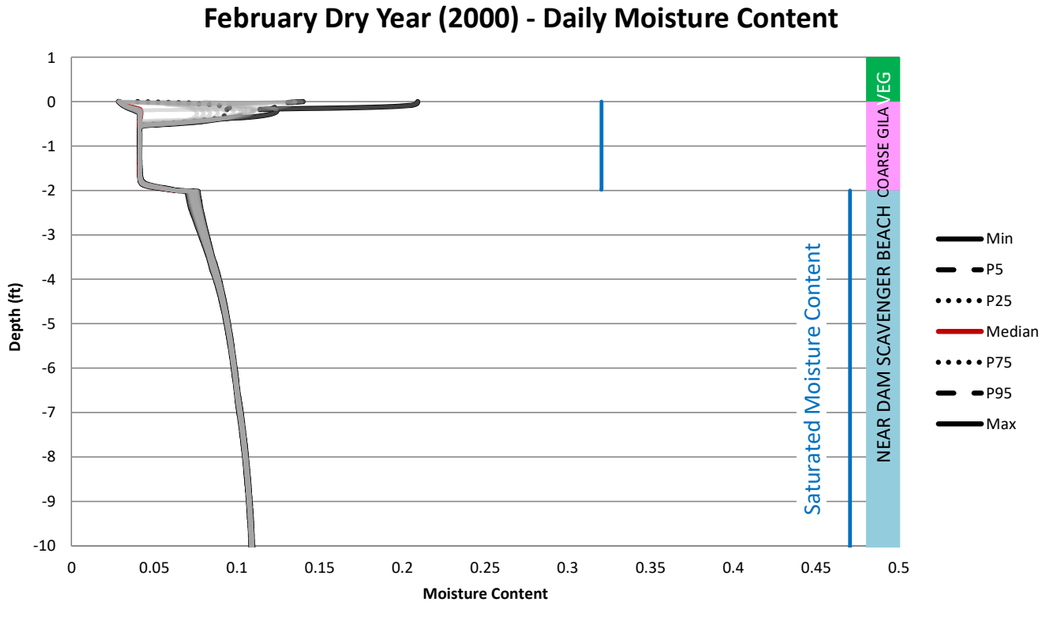
TITLE: DC2 - 9.8ft Near Dam Scavenger Beach / 2ft Coarse Gila / Veg
Suction Profiles - Summer Monsoon (August)

PROJECT No. M09441A23

FIG. No. IV-B.38







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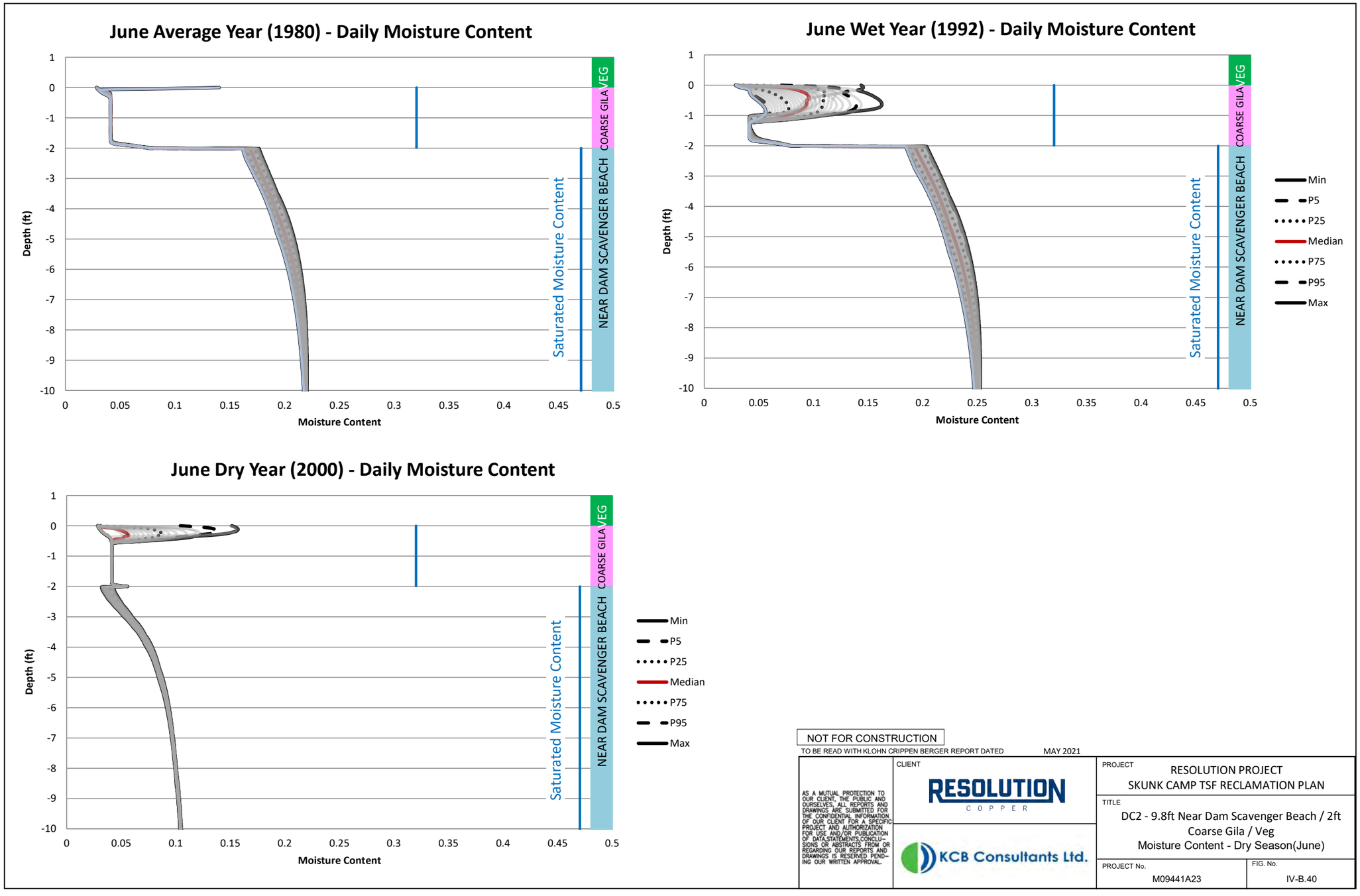
SKUNK CAMP TSF RECLAMATION PLAN

TITLE: DC2 - 9.8ft Near Dam Scavenger Beach / 2ft Coarse Gila / Veg
Moisture Content - Winter (February)

PROJECT No. M09441A23

FIG. No. IV-B.39



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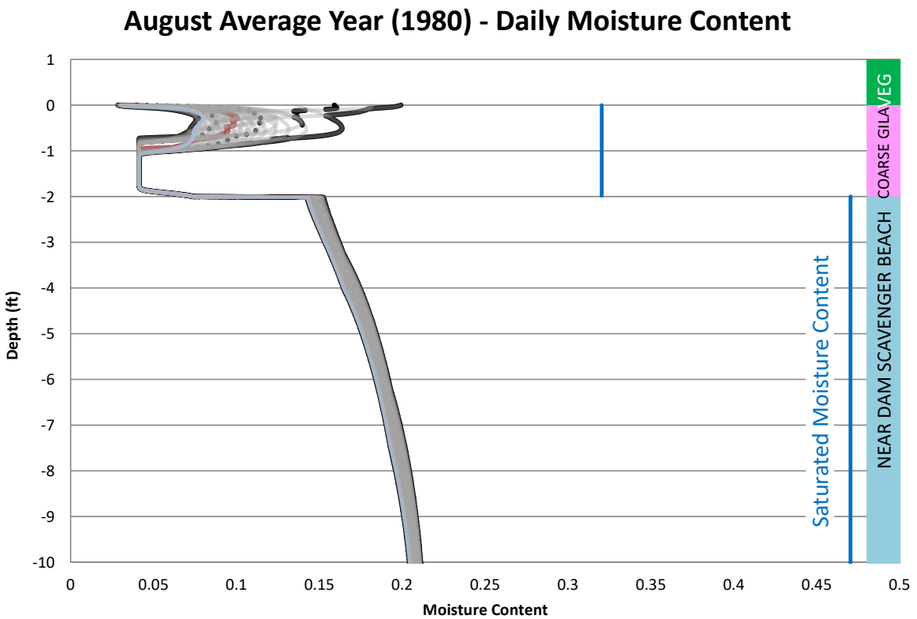
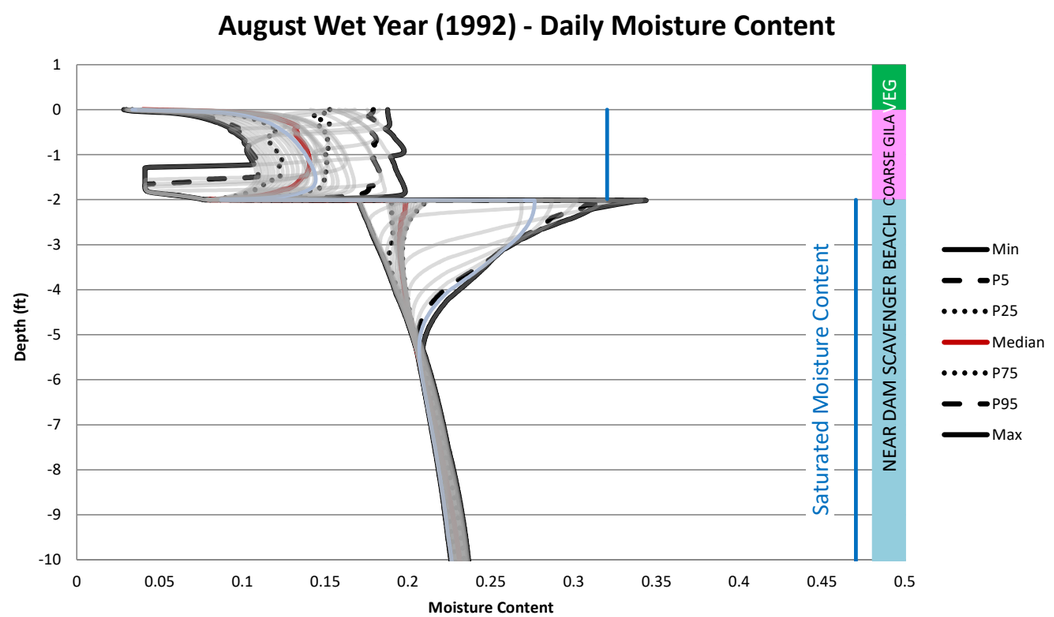
SKUNK CAMP TSF RECLAMATION PLAN

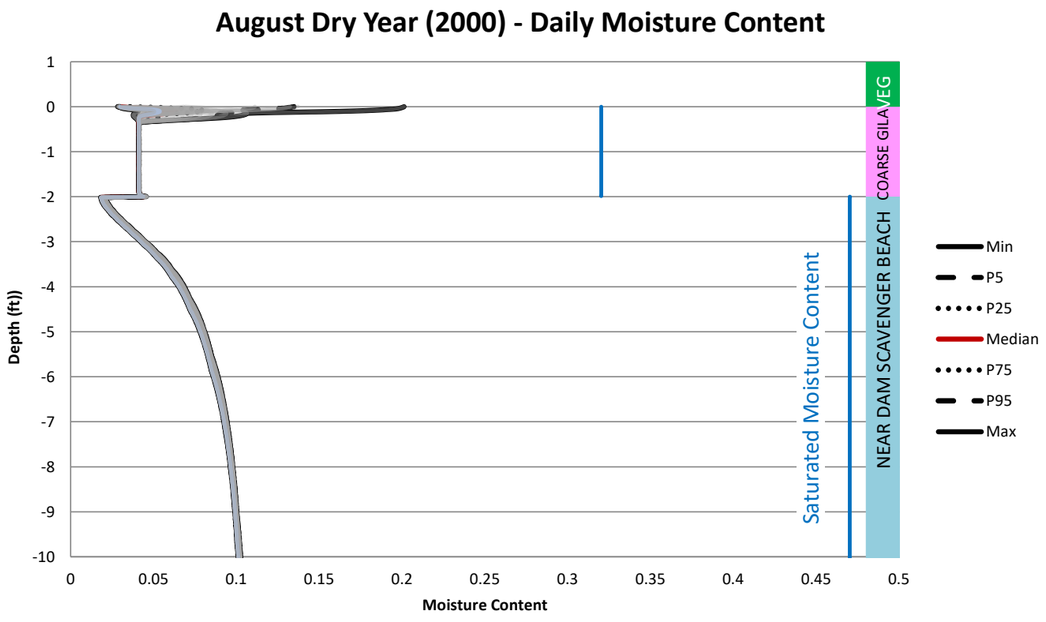
TITLE: DC2 - 9.8ft Near Dam Scavenger Beach / 2ft Coarse Gila / Veg
Moisture Content - Dry Season(June)

PROJECT No. M09441A23

FIG. No. IV-B.40







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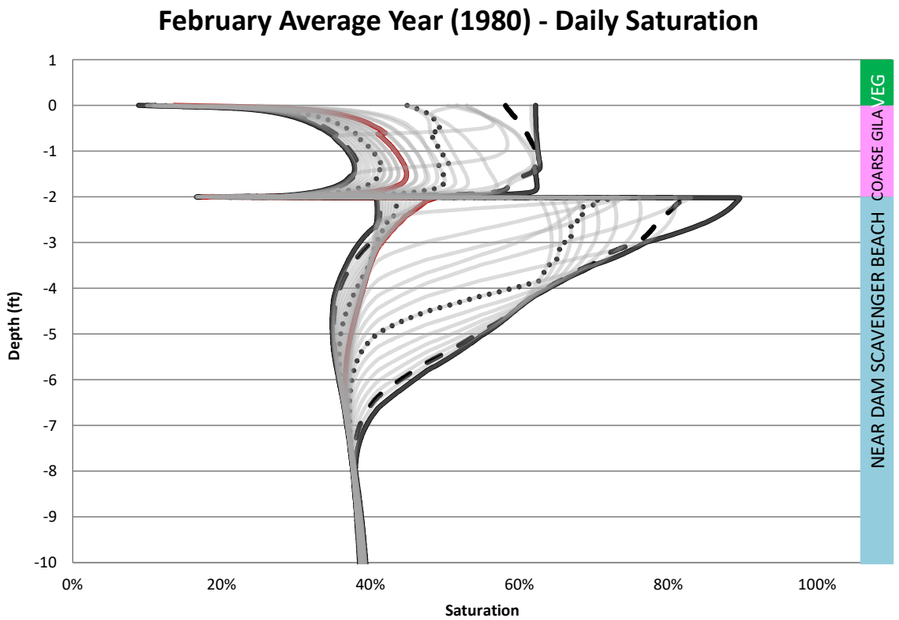
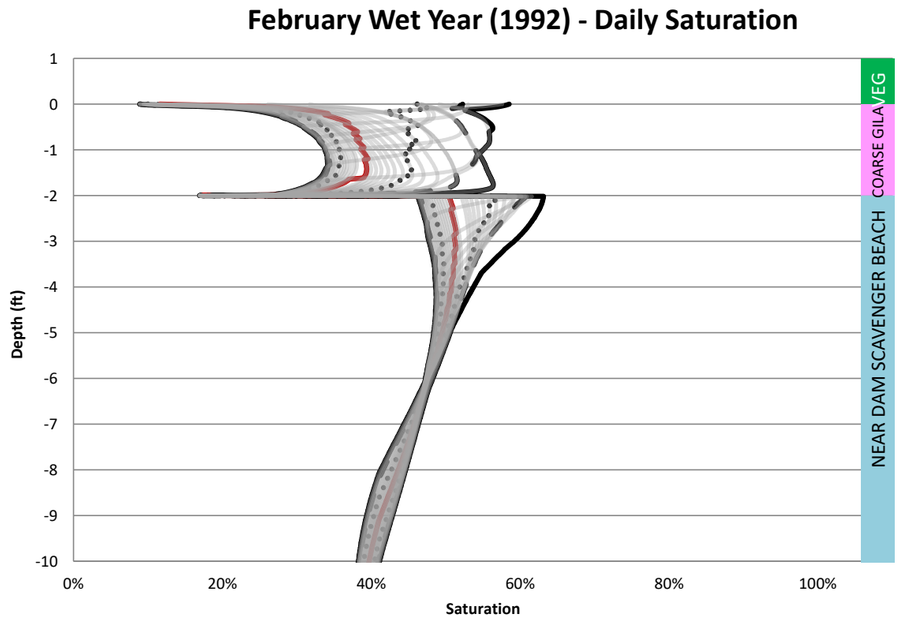
PROJECT: RESOLUTION PROJECT
SKUNK CAMP TSF RECLAMATION PLAN

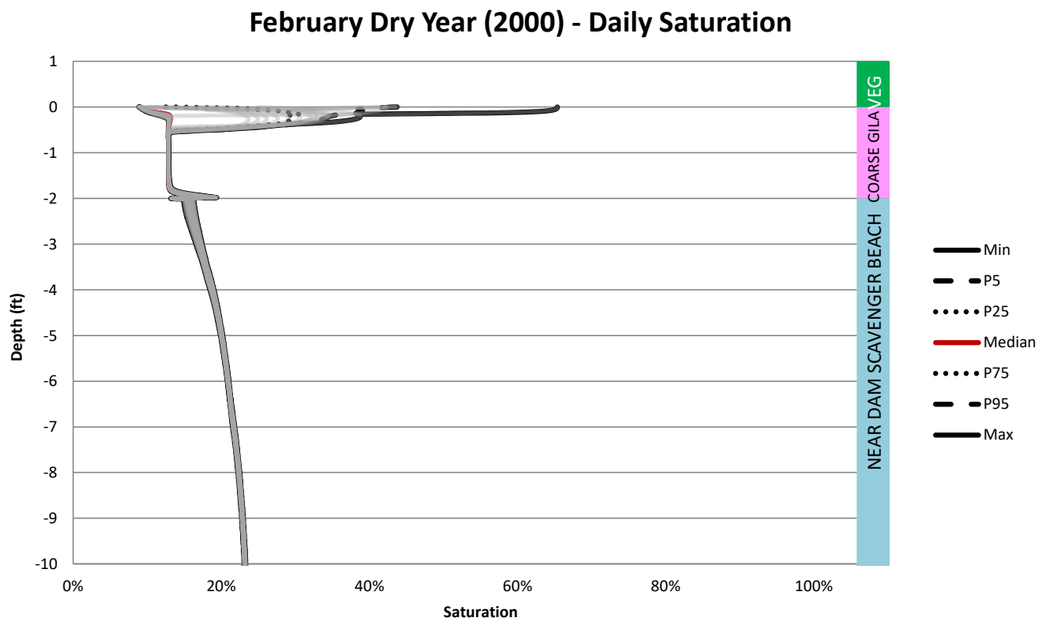
TITLE: DC2 - 9.8ft Near Dam Scavenger Beach / 2ft Coarse Gila / Veg
Moisture Content - Summer Monsoon (August)

PROJECT No. M09441A23

FIG. No. IV-B.41







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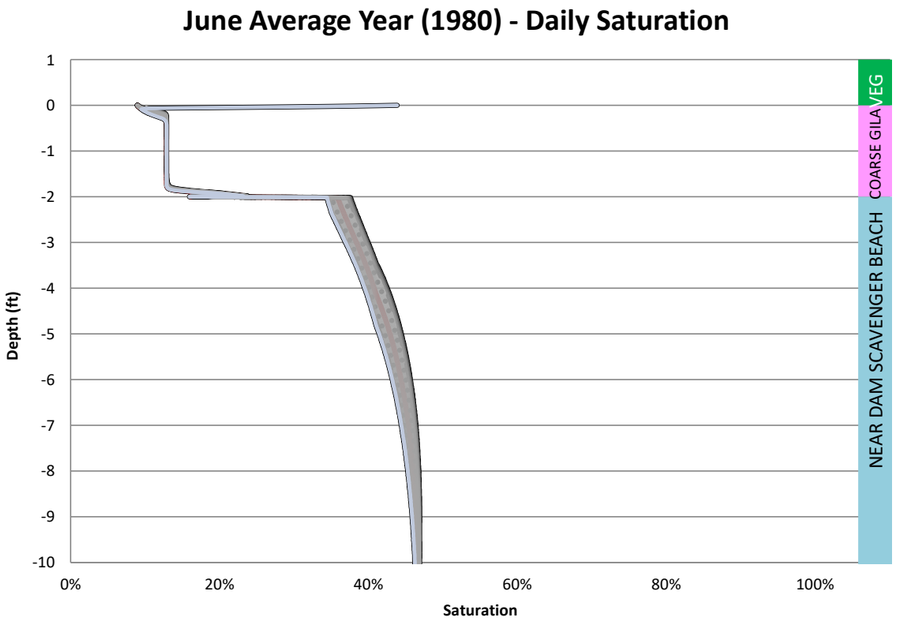
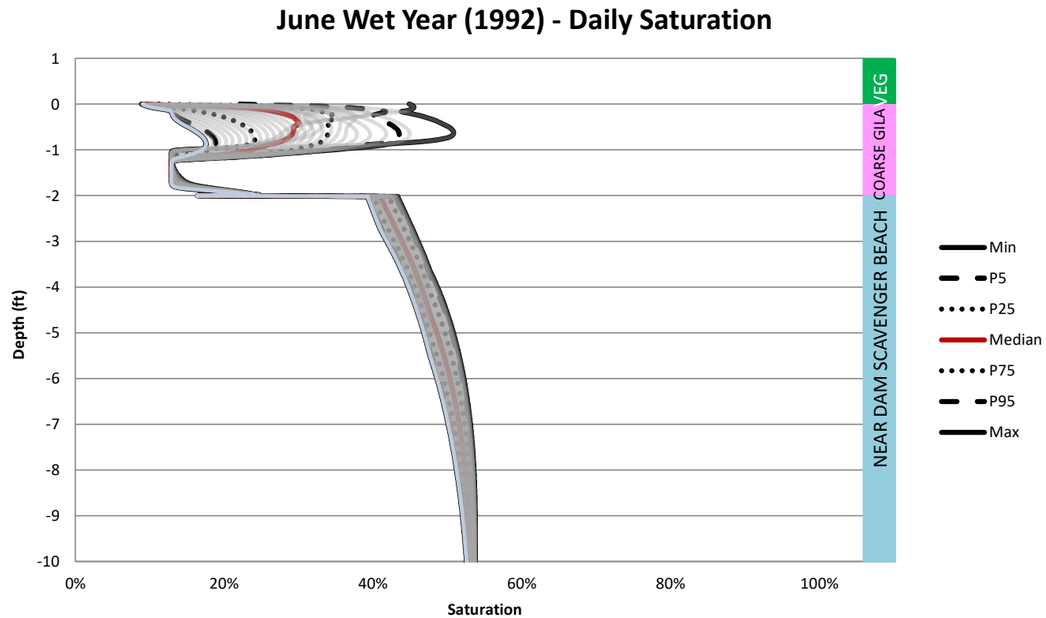
PROJECT: RESOLUTION PROJECT
SKUNK CAMP TSF RECLAMATION PLAN

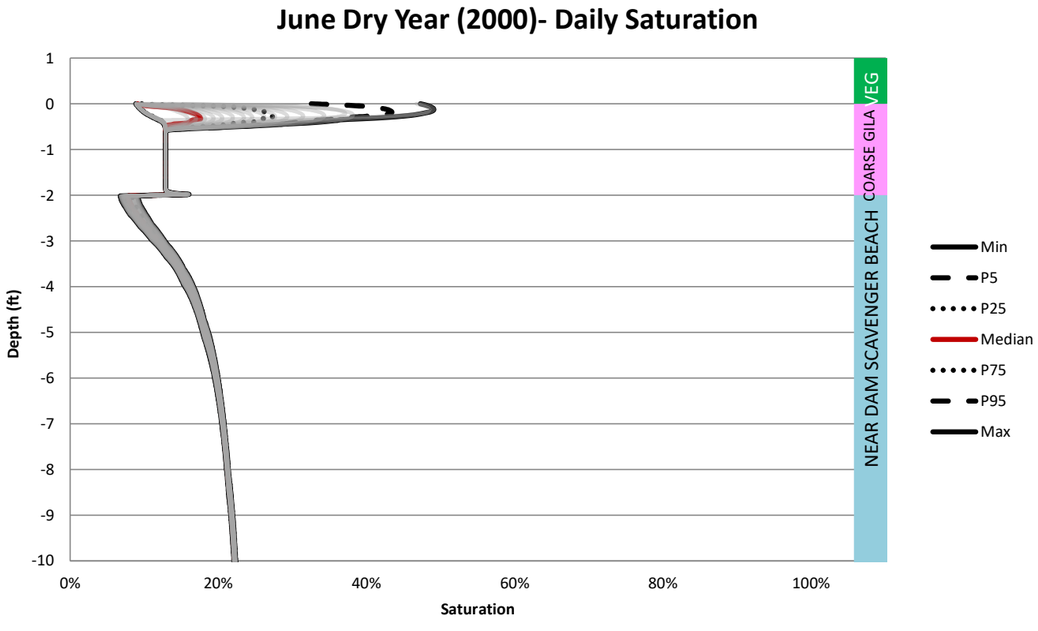
TITLE: DC2 - 9.8ft Near Dam Scavenger Beach / 2ft Coarse Gila / Veg
Saturation - Winter (February)

PROJECT No. M09441A23

FIG. No. IV-B.42







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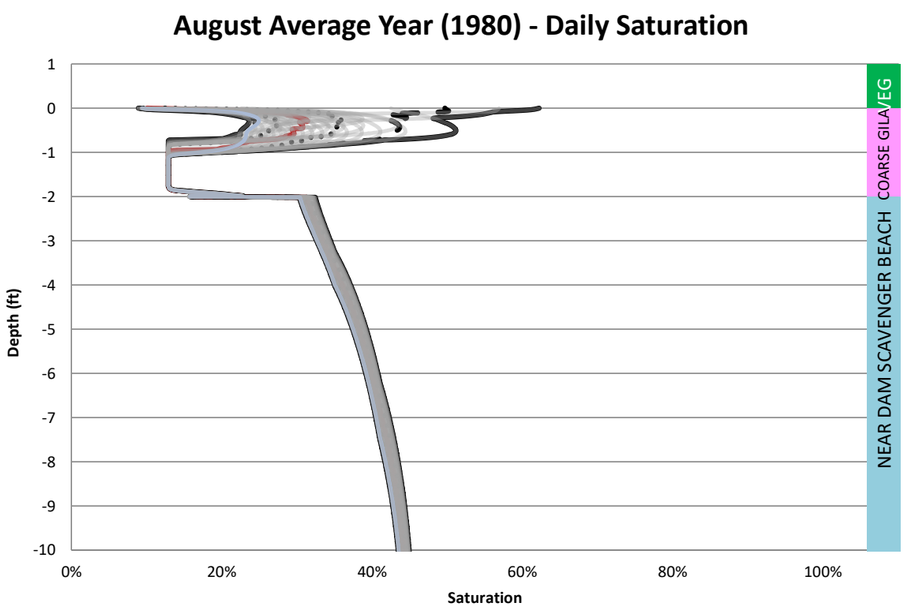
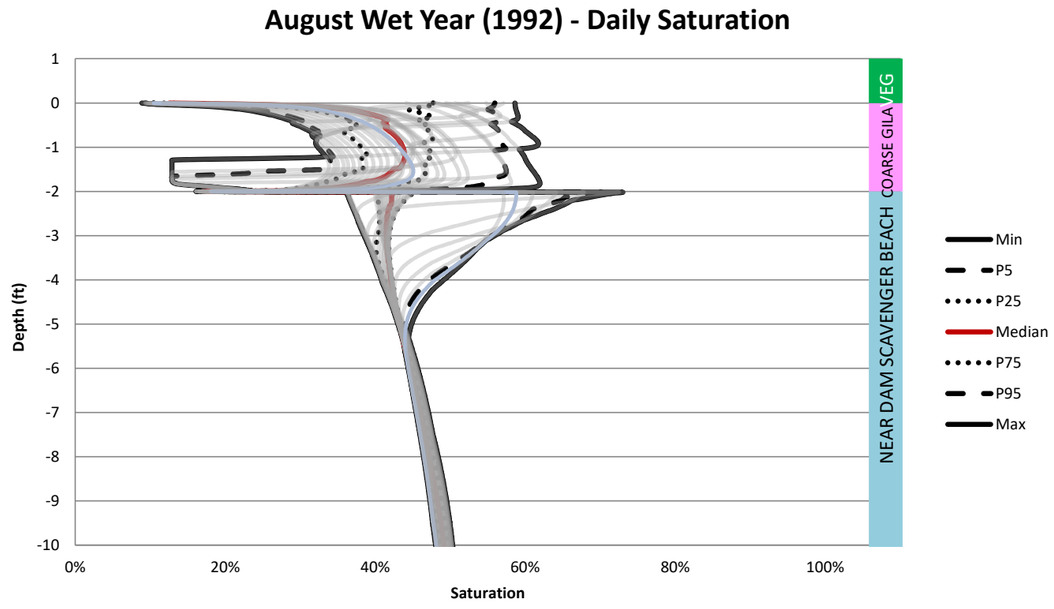
PROJECT: RESOLUTION PROJECT
SKUNK CAMP TSF RECLAMATION PLAN

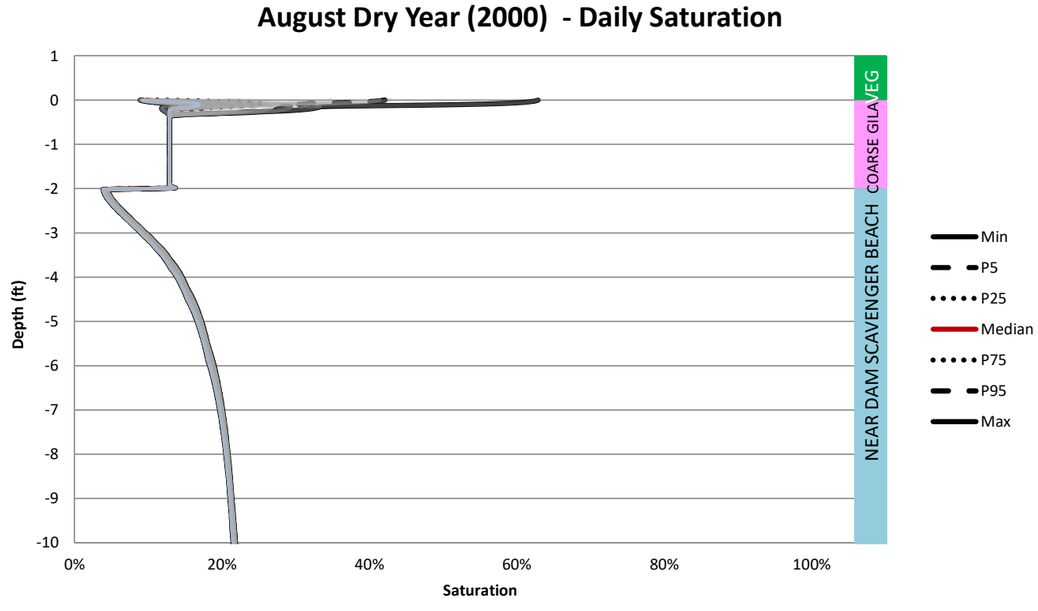
TITLE: DC2 - 9.8ft Near Dam Scavenger Beach / 2ft Coarse Gila / Veg
Saturation - Dry Season (June)

PROJECT No. M09441A23

FIG. No. IV-B.43







NOT FOR CONSTRUCTION

TO BE READ WITH KLOHN CRIPPEN BERGER REPORT DATED MAY 2021

AS A MUTUAL PROTECTION TO OUR CLIENT, THE PUBLIC AND OURSELVES, ALL REPORTS AND DRAWINGS ARE SUBMITTED FOR THE CONFIDENTIAL INFORMATION OF OUR CLIENT FOR A SPECIFIC PROJECT AND AUTHORIZATION FOR USE AND/OR PUBLICATION OF DATA,STATEMENTS,CONCLUSIONS OR ABSTRACTS FROM OR REGARDING OUR REPORTS AND DRAWINGS IS RESERVED PENDING OUR WRITTEN APPROVAL.

CLIENT: RESOLUTION COPPER

KCB Consultants Ltd.

PROJECT: RESOLUTION PROJECT
SKUNK CAMP TSF RECLAMATION PLAN

TITLE: DC2 - 9.8ft Near Dam Scavenger Beach / 2ft Coarse Gila / Veg
Saturation - Summer Monsoon (August)

PROJECT No. M09441A23

FIG. No. IV-B.44

Table IV-B.17 SC1 Annual Water Balance

Water Year	Result Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
		(in)	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
1951	1951-10-01	14	32	-0.36	11	-14	0	14	14	60
1952	1952-10-01	0	35	-5.4	9.2	-1.9	0	20	15	72
1953	1953-10-01	15	40	-5.6	7.1	-0.59	0	15	9.8	72
1954	1954-10-01	21	34	-8.8	8.9	-0.27	0	21	12	72
1955	1955-10-01	13	42	-4.7	5.9	-0.14	0	13	8.8	72
1956	1956-10-01	13	45	-4.3	4.7	-0.081	0	13	8.3	74
1957	1957-10-01	15	40	-4.9	5.2	-0.049	0	15	10	71
1958	1958-10-01	19	35	-6.7	6.0	-0.033	0	19	13	70
1959	1959-10-01	16	42	-4.9	5.6	-0.023	0	16	11	75
1960	1960-10-01	19	37	-7.5	6.3	-0.019	0	19	11	73
1961	1961-10-01	9.8	46	-2.8	3.3	-0.030	0	9.8	6.9	73
1962	1962-10-01	14	40	-4.8	4.5	-0.027	0	14	9.4	71
1963	1963-10-01	24	33	-9.7	7.4	-0.020	0	24	14	73
1964	1964-10-01	11	44	-3.0	5.0	-0.019	0	11	8.4	72
1965	1965-10-01	18	37	-5.9	6.1	-0.018	0	18	12	71
1966	1966-10-01	23	32	-11	7.2	-0.024	0	23	12	72
1967	1967-10-01	14	42	-4.6	6.0	-0.084	0	14	9.7	72
1968	1968-10-01	22	33	-9.7	7.6	-0.093	0	22	12	71
1969	1969-10-01	19	37	-6.6	6.9	-0.15	0	19	12	72
1970	1970-10-01	16	40	-5.7	5.7	-0.11	0	16	10	72
1971	1971-10-01	12	44	-5.3	3.8	-0.069	0	12	6.8	73
1972	1972-10-01	11	48	-1.9	4.4	-0.045	0	11	9.2	76
1973	1973-10-01	31	22	-11	9.5	-0.034	0	31	20	69
1974	1974-10-01	15	40	-5.5	5.6	-0.050	0	15	9.8	72
1975	1975-10-01	19	34	-6.7	7.2	-0.040	0	19	12	69
1976	1976-10-01	16	40	-5.9	4.7	-0.028	0	16	10	72
1977	1977-10-01	16	40	-5.3	6.0	-0.021	0	16	11	73
1978	1978-10-01	24	31	-10	8.6	-0.016	0	24	14	71
1979	1979-10-01	30	25	-13	9.2	-0.13	0	30	17	71
1980	1980-10-01	20	35	-8.0	8.2	-0.35	0	20	12	71
1981	1981-10-01	15	43	-5.8	6.8	-0.26	0	15	9.2	75
1982	1982-10-01	23	31	-8.3	8.2	-0.14	0	23	15	69
1983	1983-10-01	27	27	-12	8.8	-0.078	0	27	15	69
1984	1984-10-01	18	37	-3.5	6.7	-0.054	0	18	14	71
1985	1985-10-01	22	29	-8.4	7.2	-0.045	0	22	14	67
1986	1986-10-01	21	33	-7.3	8.2	-0.049	0	21	14	70
1987	1987-10-01	20	34	-6.8	7.1	-0.038	0	20	13	70
1988	1988-10-01	23	32	-8.1	7.8	-0.028	0	23	15	71
1989	1989-10-01	12	45	-3.6	4.1	-0.023	0	12	8.0	74
1990	1990-10-01	23	32	-9.9	6.3	-0.018	0	23	13	71
1991	1991-10-01	23	32	-7.5	9.4	-0.015	0	23	15	71
1992	1992-10-01	36	18	-14	12	-0.031	0	36	22	70
1993	1993-10-01	33	21	-17	11	-0.73	0	33	15	70
1994	1994-10-01	15	41	-5.1	7.3	-0.96	0	15	10	73
1995	1995-10-01	25	30	-8.9	8.4	-0.38	0	25	16	71
1996	1996-10-01	13	43	-3.9	5.8	-0.20	0	13	9.4	74
1997	1997-10-01	10	48	-3.2	4.0	-0.11	0	10	7.0	75
1998	1998-10-01	20	33	-7.8	7.5	-0.063	0	20	13	69
1999	1999-10-01	15	42	-5.0	5.3	-0.047	0	15	9.8	73
2000	2000-10-01	5.4	54	-1.7	2.1	-0.034	0	5.4	3.7	77
2001	2001-10-01	23	31	-8.4	7.9	-0.022	0	23	15	71
2002	2002-10-01	5.4	53	-1.2	1.5	-0.020	0	5.4	4.1	75
2003	2003-10-01	13	46	-4.7	4.7	-0.018	0	13	8.4	76
2004	2004-10-01	12	47	-4.3	4.2	-0.012	0	12	7.9	77

Table IV-B.17 SC1 Annual Water Balance

Water Year	Result Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
		(in)	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
2005	2005-10-01	24	32	-10	8.6	-0.0098	0	24	14	72
2006	2006-10-01	12	46	-4.4	4.9	-0.022	0	12	7.7	75

Table IV-B.18 SC1 Monthly Water Balance 9 Wet Years (1983 to 1991)

Month	Result Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
		[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
Nov-82	1982-11-30	0	4.1	-0.92	0.74	-0.016	0	2.6	1.6	8.8
Dec-82	1982-12-30	2.5	-0.28	-0.64	0.35	-0.0071	0	2.5	1.8	2.7
Jan-83	1983-01-29	0.67	2.0	-0.14	0.39	-0.0071	0	0.67	0.55	3.0
Feb-83	1983-02-28	3.5	-0.91	-1.6	0.72	-0.0071	0	3.5	1.9	2.9
Mar-83	1983-03-30	5.4	-2.6	-3.0	1.1	-0.0063	0	5.4	2.4	4.0
Apr-83	1983-04-29	0.83	3.5	0.83	1.5	-0.0063	0	0.83	1.7	5.3
May-83	1983-05-29	0	6.5	0.10	0.79	-0.0063	0	0	0.10	7.9
Jun-83	1983-06-28	0.039	7.3	0.047	0.33	-0.0059	0	0.039	0.059	9.4
Jul-83	1983-07-28	2.1	4.9	-1.1	0.53	-0.0051	0	2.1	1.1	9.6
Aug-83	1983-08-27	3.8	1.6	-1.1	1.4	-0.0051	0	3.8	2.7	7.2
Sep-83	1983-09-26	1.9	3.5	-0.57	0.88	-0.0051	0	1.9	1.3	7.5
Oct-83	1983-10-26	4.9	-1.2	-2.5	0.73	-0.0051	0	4.9	2.4	5.1
Nov-83	1983-11-25	1.6	1.6	-0.95	0.48	-0.0047	0	1.6	0.65	4.2
Dec-83	1983-12-25	1.9	0.39	-0.035	0.37	-0.0051	0	1.9	1.9	2.6
Jan-84	1984-01-24	1.5	0.75	-0.047	0.40	-0.0047	0	1.5	1.5	2.7
Feb-84	1984-02-23	0	3.2	0.20	0.50	-0.0043	0	0	0.20	3.7
Mar-84	1984-03-24	0	4.1	0.071	0.45	-0.0047	0	0	0.071	5.0
Apr-84	1984-04-23	0.87	4.0	-0.35	0.52	-0.0043	0	0.87	0.51	6.5
May-84	1984-05-23	0.67	5.4	-0.12	0.27	-0.0043	0	0.67	0.55	7.5
Jun-84	1984-06-22	0.039	7.1	0.063	0.098	-0.0043	0	0.039	0.10	9.3
Jul-84	1984-07-22	3.6	2.4	-1.6	0.79	-0.0039	0	3.6	2.0	8.5
Aug-84	1984-08-21	3.9	1.5	-1.00	1.2	-0.0039	0	3.9	2.9	6.9
Sep-84	1984-09-20	1.2	4.3	-0.16	0.76	-0.0039	0	1.2	0.98	7.0
Oct-84	1984-10-20	2.5	1.4	-0.86	0.57	-0.0039	0	2.5	1.7	5.6
Nov-84	1984-11-19	0	3.6	0.15	0.22	-0.0043	0	0	0.16	4.2
Dec-84	1984-12-19	4.8	-2.6	-3.2	0.28	-0.0039	0	4.8	1.6	3.1
Jan-85	1985-01-18	3.9	-1.9	-1.9	0.37	-0.0039	0	3.9	2.0	2.3
Feb-85	1985-02-17	2.9	-0.87	-0.87	0.50	-0.0035	0	2.9	2.0	2.3
Mar-85	1985-03-19	1.7	1.1	0.27	1.00	-0.0035	0	1.7	1.9	3.6
Apr-85	1985-04-18	0.47	4.0	0.26	1.2	-0.0039	0	0.47	0.71	5.4
May-85	1985-05-18	0.43	4.8	-0.098	0.67	-0.0035	0	0.43	0.35	6.7
Jun-85	1985-06-17	0	6.7	0.055	0.34	-0.0035	0	0	0.079	8.6
Jul-85	1985-07-17	0.24	6.3	-0.15	0.20	-0.0035	0	0.24	0.079	8.4
Aug-85	1985-08-16	2.1	3.9	-0.75	0.77	-0.0035	0	2.1	1.3	7.8
Sep-85	1985-09-15	2.2	3.1	-0.87	0.67	-0.0035	0	2.2	1.3	7.9
Oct-85	1985-10-15	3.1	0.87	-1.1	0.85	-0.0039	0	3.1	2.1	5.7
Nov-85	1985-11-14	1.4	1.8	-0.65	0.44	-0.0039	0	1.4	0.75	3.9
Dec-85	1985-12-14	2.7	-0.24	-1.2	0.37	-0.0039	0	2.7	1.6	3.1
Jan-86	1986-01-13	0	2.8	0.87	0.40	-0.0043	0	0	0.87	3.3
Feb-86	1986-02-12	2.4	0.28	-1.8	0.31	-0.0043	0	2.4	0.55	3.6
Mar-86	1986-03-14	1.9	1.5	-0.36	0.98	-0.0039	0	1.9	1.6	3.7
Apr-86	1986-04-13	3.1	0.87	-1.0	1.5	-0.0043	0	3.1	2.0	4.9
May-86	1986-05-13	0	5.7	0.12	0.77	-0.0039	0	0	0.12	7.4
Jun-86	1986-06-12	0.039	7.2	0.047	0.21	-0.0043	0	0.039	0.079	9.1
Jul-86	1986-07-12	2.2	4.8	-1.1	0.46	-0.0039	0	2.2	1.1	9.2
Aug-86	1986-08-11	2.8	2.9	-0.85	1.2	-0.0039	0	2.8	1.9	7.5
Sep-86	1986-09-10	3.0	2.2	-1.5	0.78	-0.0031	0	3.0	1.5	7.3
Oct-86	1986-10-10	0.91	3.5	0.17	0.69	-0.0039	0	0.91	1.1	6.1
Nov-86	1986-11-09	2.7	0.47	-1.2	0.52	-0.0031	0	2.7	1.5	4.6
Dec-86	1986-12-09	2.6	0.16	-1.9	0.34	-0.0035	0	2.6	0.75	3.4
Jan-87	1987-01-08	1.5	0.87	0.37	0.38	-0.0035	0	1.5	1.9	2.7
Feb-87	1987-02-07	3.1	-0.67	-0.96	0.50	-0.0035	0	3.1	2.2	2.9
Mar-87	1987-03-09	2.3	0.83	-0.72	0.97	-0.0031	0	2.3	1.5	3.4
Apr-87	1987-04-08	0.94	2.9	-0.012	1.2	-0.0035	0	0.94	0.94	5.0

Table IV-B.18 SC1 Monthly Water Balance 9 Wet Years (1983 to 1991)

Month	Result Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
		[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
May-87	1987-05-08	0.039	5.3	0.079	0.43	-0.0031	0	0.039	0.079	6.8
Jun-87	1987-06-07	0.31	6.1	0.0079	0.14	-0.0031	0	0.31	0.35	8.2
Jul-87	1987-07-07	0.20	6.9	-0.0079	0.087	-0.0028	0	0.20	0.20	9.2
Aug-87	1987-08-06	3.1	3.5	-1.8	0.83	-0.0028	0	3.1	1.3	8.9
Sep-87	1987-09-05	2.3	3.2	-0.85	1.1	-0.0024	0	2.3	1.5	7.5
Oct-87	1987-10-05	0.83	4.1	0.043	0.48	-0.0028	0	0.83	0.83	6.7
Nov-87	1987-11-04	1.4	2.6	-0.91	0.13	-0.0024	0	1.4	0.47	5.8
Dec-87	1987-12-04	0.71	2.5	0.31	0.37	-0.0024	0	0.71	1.0	3.8
Jan-88	1988-01-03	4.0	-1.7	-2.6	0.28	-0.0024	0	4.0	1.5	3.0
Feb-88	1988-02-02	3.6	-1.4	-1.4	0.43	-0.0024	0	3.6	2.2	2.4
Mar-88	1988-03-03	0.75	2.6	0.65	0.88	-0.0024	0	0.75	1.4	3.6
Apr-88	1988-04-02	0.12	4.1	0.10	0.89	-0.0024	0	0.12	0.24	5.5
May-88	1988-05-02	2.4	2.0	-1.1	0.95	-0.0024	0	2.4	1.4	6.1
Jun-88	1988-06-01	0	6.6	0.17	0.54	-0.0024	0	0	0.16	8.0
Jul-88	1988-07-01	0.12	6.6	0.035	0.11	-0.0028	0	0.12	0.16	8.9
Aug-88	1988-07-31	2.5	3.9	-1.4	0.29	-0.0016	0	2.5	1.1	8.5
Sep-88	1988-08-30	6.7	-1.3	-2.7	1.6	-0.0020	0	6.7	4.0	7.3
Oct-88	1988-10-29	2.0	7.3	0.098	1.7	-0.0039	0	2.0	2.1	13
Nov-88	1988-11-28	1.7	1.3	-1.3	0.26	-0.0020	0	1.7	0.43	4.1
Dec-88	1988-12-28	1.1	1.4	0.24	0.35	-0.0020	0	1.1	1.3	3.1
Jan-89	1989-01-27	2.0	0.31	-0.46	0.39	-0.0020	0	2.0	1.5	2.4
Feb-89	1989-02-26	0.55	2.4	0.10	0.57	-0.0020	0	0.55	0.63	3.3
Mar-89	1989-03-28	1.7	2.4	-1.4	0.33	-0.0020	0	1.7	0.31	5.3
Apr-89	1989-04-27	0	5.6	0.69	0.77	-0.0020	0	0	0.67	6.9
May-89	1989-05-27	0.16	6.3	0.051	0.043	-0.0020	0	0.16	0.20	8.3
Jun-89	1989-06-26	0	7.0	0.035	0.031	-0.0016	0	0	0.039	9.1
Jul-89	1989-07-26	0.079	6.8	0.012	0.028	-0.0016	0	0.079	0.12	9.0
Aug-89	1989-08-25	1.3	4.3	-0.44	0.28	-0.0016	0	1.3	0.87	8.0
Sep-89	1989-09-24	1.5	3.9	-0.61	0.57	-0.0020	0	1.5	0.91	7.3
Oct-89	1989-10-24	1.1	3.4	-0.34	0.28	-0.0016	0	1.1	0.71	6.1
Nov-89	1989-11-23	0.28	3.1	-0.083	0.059	-0.0016	0	0.28	0.20	4.5
Dec-89	1989-12-23	0	2.8	0.19	0.039	-0.0020	0	0	0.20	3.5
Jan-90	1990-01-22	2.2	0.039	-0.93	0.24	-0.0012	0	2.2	1.2	2.9
Feb-90	1990-02-21	2.5	-0.24	-0.99	0.50	-0.0016	0	2.5	1.5	2.5
Mar-90	1990-03-23	0.79	2.6	0.0079	0.90	-0.0016	0	0.79	0.83	4.2
Apr-90	1990-04-22	1.1	3.9	-0.30	0.61	-0.0016	0	1.1	0.71	6.0
May-90	1990-05-22	1.1	4.8	-0.46	0.48	-0.0016	0	1.1	0.63	7.7
Jun-90	1990-06-21	0.39	6.7	-0.063	0.071	-0.0016	0	0.39	0.31	9.0
Jul-90	1990-07-21	0.94	5.5	-0.30	0.25	-0.0012	0	0.94	0.63	8.6
Aug-90	1990-08-20	9.6	-4.3	-7.9	0.75	-0.0012	0	9.6	1.8	7.8
Sep-90	1990-09-19	2.5	3.0	0.41	1.7	-0.0012	0	2.5	2.9	7.1
Oct-90	1990-10-19	0.43	3.7	1.2	0.99	-0.0016	0	0.43	1.6	5.9
Nov-90	1990-11-18	1.5	1.9	-0.52	0.57	-0.0012	0	1.5	1.0	4.2
Dec-90	1990-12-18	2.8	-0.16	-1.6	0.40	-0.0012	0	2.8	1.2	3.5
Jan-91	1991-01-17	4.7	-2.6	-2.7	0.37	-0.00079	0	4.7	2.0	2.3
Feb-91	1991-02-16	0.16	2.7	1.5	0.66	-0.0012	0	0.16	1.7	3.3
Mar-91	1991-03-18	3.6	-0.31	-1.8	1.1	-0.00079	0	3.6	1.8	4.3
Apr-91	1991-04-17	3.2	0.87	-0.70	1.5	-0.00079	0	3.2	2.5	4.8
May-91	1991-05-17	0	5.8	0.17	1.1	-0.0012	0	0	0.16	7.4
Jun-91	1991-06-16	0.71	6.3	-0.13	0.58	-0.0016	0	0.71	0.55	8.7
Jul-91	1991-07-16	0.47	6.8	-0.083	0.42	-0.0016	0	0.47	0.39	9.4
Aug-91	1991-08-15	3.3	2.8	-1.5	0.80	-0.0012	0	3.3	1.9	8.4
Sep-91	1991-09-14	2.0	3.2	-0.56	1.1	-0.0016	0	2.0	1.4	7.5
Oct-91	1991-10-01	0.24	2.4	0.067	0.36	-0.0012	0	0.24	0.28	3.5

Table IV-B.19 SC1 Monsoon Period Water Balance

Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
1951-07-01	0	7.2	0.086	1.0	-0.75	0	0	0.086	9.2
1951-08-01	1.1	6.3	-0.36	1.1	-0.60	0	1.1	0.70	9.5
1951-09-01	3.6	2.2	-2.5	1.1	-0.46	0	3.6	1.1	7.8
1951-10-01	0.65	4.4	0.61	1.3	-0.36	0	0.65	1.3	6.6
1951-11-01	1.6	2.7	-1.0	0.64	-0.31	0	1.6	0.64	5.4
1951	7.0	23	-3.2	5.1	-2.5	0	7.0	3.8	39
1952-07-01	0.63	6.8	-0.091	0.78	-0.11	0	0.63	0.54	9.6
1952-08-01	0.56	6.3	-0.092	0.44	-0.10	0	0.56	0.47	8.8
1952-09-01	0.45	5.4	-0.030	0.40	-0.094	0	0.45	0.42	7.8
1952-10-01	0.70	4.7	-0.18	0.37	-0.083	0	0.70	0.52	7.0
1952-11-01	0	4.8	0.088	0.20	-0.077	0	0	0.088	5.9
1952	2.3	28	-0.30	2.2	-0.46	0	2.3	2.0	39
1953-07-01	0	7.0	0.034	0.28	-0.039	0	0	0.034	9.1
1953-08-01	2.7	3.9	-1.7	0.61	-0.037	0	2.7	1.0	8.8
1953-09-01	1.8	4.0	-0.42	1.0	-0.035	0	1.8	1.4	7.7
1953-10-01	0	5.2	0.29	0.59	-0.032	0	0	0.29	6.8
1953-11-01	0.012	4.4	0.053	0.098	-0.031	0	0.012	0.065	5.5
1953	4.5	25	-1.7	2.6	-0.17	0	4.5	2.8	38
1954-07-01	0.13	6.8	0.037	0.25	-0.018	0	0.13	0.17	9.0
1954-08-01	4.5	1.5	-2.0	1.1	-0.017	0	4.5	2.5	7.8
1954-09-01	5.3	0.20	-2.3	1.7	-0.016	0	5.3	3.0	7.4
1954-10-01	1.3	3.8	-0.21	1.2	-0.015	0	1.3	1.1	6.6
1954-11-01	0	4.6	0.16	0.43	-0.015	0	0	0.17	5.6
1954	11	17	-4.2	4.7	-0.082	0	11	6.9	36
1955-07-01	2.1	5.0	-0.96	0.76	-0.0098	0	2.1	1.1	9.1
1955-08-01	4.5	1.7	-2.5	0.61	-0.0094	0	4.5	2.0	7.9
1955-09-01	2.7	2.6	-0.26	1.6	-0.0091	0	2.7	2.4	7.2
1955-10-01	0.12	5.1	0.12	0.58	-0.0083	0	0.12	0.24	6.8
1955-11-01	0.020	4.7	0.056	0.083	-0.0087	0	0.020	0.079	5.9
1955	9.4	19	-3.5	3.7	-0.045	0	9.4	5.8	37
1956-07-01	0.24	7.1	-0.096	0.071	-0.0063	0	0.24	0.14	9.4
1956-08-01	2.8	4.2	-1.1	0.53	-0.0055	0	2.8	1.7	9.0
1956-09-01	1.7	3.8	-0.49	0.99	-0.0055	0	1.7	1.3	7.5
1956-10-01	0.079	5.2	0.013	0.11	-0.0055	0	0.079	0.091	6.8
1956-11-01	0.53	3.6	-0.19	0.043	-0.0051	0	0.53	0.34	5.2
1956	5.4	24	-1.9	1.7	-0.028	0	5.4	3.5	38
1957-07-01	0.031	7.2	0.069	0.071	-0.0039	0	0.031	0.10	9.3
1957-08-01	1.1	5.5	-0.37	0.16	-0.0035	0	1.1	0.72	8.5
1957-09-01	3.4	2.4	-1.2	0.88	-0.0035	0	3.4	2.2	8.1
1957-10-01	0.57	4.5	-0.017	0.55	-0.0035	0	0.57	0.55	6.6
1957-11-01	3.2	0.31	-2.1	0.27	-0.0035	0	3.2	1.2	4.6
1957	8.3	20	-3.6	1.9	-0.018	0	8.3	4.8	37
1958-07-01	0.70	6.4	-0.26	0.20	-0.0024	0	0.70	0.44	9.3
1958-08-01	0.78	6.2	-0.25	0.13	-0.0028	0	0.78	0.54	9.1
1958-09-01	0.85	5.1	-0.15	0.35	-0.0024	0	0.85	0.70	8.0
1958-10-01	3.0	1.8	-1.4	0.62	-0.0024	0	3.0	1.6	6.4
1958-11-01	1.9	2.3	-0.40	0.75	-0.0024	0	1.9	1.5	5.3
1958	7.3	22	-2.5	2.0	-0.012	0	7.3	4.8	38
1959-07-01	1.0	6.1	-0.37	0.27	-0.0016	0	1.0	0.66	9.1
1959-08-01	3.8	3.7	-2.1	0.79	-0.0016	0	3.8	1.7	9.6
1959-09-01	5.3	0.15	-1.4	1.6	-0.0016	0	5.3	3.9	7.4
1959-10-01	0.047	5.1	0.20	0.81	-0.0016	0	0.047	0.25	6.9
1959-11-01	4.8	-0.60	-4.2	0.29	-0.0016	0	4.8	0.54	5.3
1959	15	14	-7.9	3.7	-0.0079	0	15	7.0	38
1960-07-01	0	7.2	0.047	0.27	-0.0016	0	0	0.047	9.2
1960-08-01	0.74	6.4	-0.28	0.31	-0.0016	0	0.74	0.46	9.2
1960-09-01	1.5	4.4	-0.44	0.59	-0.0016	0	1.5	1.1	8.1

Table IV-B.19 SC1 Monsoon Period Water Balance

Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
1960-10-01	0.27	5.0	0.012	0.15	-0.0016	0	0.27	0.28	7.0
1960-11-01	2.1	1.9	-0.83	0.39	-0.0020	0	2.1	1.2	5.0
1960	4.6	25	-1.5	1.7	-0.0083	0	4.6	3.1	38
1961-07-01	0	7.3	0.031	0.043	-0.0028	0	0	0.035	9.3
1961-08-01	0.67	6.1	-0.17	0.079	-0.0024	0	0.67	0.50	8.9
1961-09-01	3.0	3.0	-1.7	0.54	-0.0024	0	3.0	1.3	8.1
1961-10-01	0.50	4.4	0.57	0.62	-0.0024	0	0.50	1.1	6.3
1961-11-01	0.45	3.6	-0.24	0.028	-0.0028	0	0.45	0.21	5.4
1961	4.6	24	-1.5	1.3	-0.013	0	4.6	3.1	38
1962-07-01	0	7.0	0.035	0.094	-0.0020	0	0	0.035	9.1
1962-08-01	0.61	6.3	-0.14	0.11	-0.0020	0	0.61	0.47	8.9
1962-09-01	0.50	5.7	-0.091	0.13	-0.0024	0	0.50	0.41	8.4
1962-10-01	1.2	3.7	-0.42	0.19	-0.0016	0	1.2	0.81	6.6
1962-11-01	0.87	3.2	-0.20	0.31	-0.0020	0	0.87	0.68	5.1
1962	3.2	26	-0.81	0.83	-0.0098	0	3.2	2.4	38
1963-07-01	0	7.0	0.043	0.091	-0.0016	0	0	0.047	9.0
1963-08-01	0.079	7.2	0.020	0.059	-0.0020	0	0.079	0.098	9.4
1963-09-01	10	-5.1	-7.1	1.1	-0.0012	0	10	3.4	7.5
1963-10-01	1.0	4.1	1.8	1.5	-0.0012	0	1.0	2.9	6.6
1963-11-01	0.67	3.9	-0.063	0.77	-0.0020	0	0.67	0.60	5.8
1963	12	17	-5.2	3.5	-0.0079	0	12	7.0	38
1964-07-01	0	7.2	0.035	0.059	-0.0016	0	0	0.039	9.4
1964-08-01	1.5	5.3	-0.57	0.23	-0.0016	0	1.5	0.91	8.8
1964-09-01	2.2	3.6	-0.68	0.81	-0.0012	0	2.2	1.5	7.7
1964-10-01	1.6	3.1	-0.40	0.45	-0.0016	0	1.6	1.2	6.1
1964-11-01	1.5	3.1	-0.63	0.38	-0.0016	0	1.5	0.91	5.8
1964	6.8	22	-2.2	1.9	-0.0075	0	6.8	4.5	38
1965-07-01	0.10	6.8	0.028	0.075	-0.0016	0	0.10	0.13	8.8
1965-08-01	1.4	5.2	-0.50	0.31	-0.0016	0	1.4	0.94	8.9
1965-09-01	0.90	5.0	-0.23	0.38	-0.0012	0	0.90	0.67	8.0
1965-10-01	1.0	3.9	-0.29	0.31	-0.0016	0	1.0	0.76	6.6
1965-11-01	0.46	4.0	-0.12	0.11	-0.0016	0	0.46	0.34	5.7
1965	3.9	25	-1.1	1.2	-0.0075	0	3.9	2.8	38
1966-07-01	0.18	6.6	-0.012	0.40	-0.0020	0	0.18	0.17	9.1
1966-08-01	0.84	5.7	-0.26	0.43	-0.0028	0	0.84	0.59	8.3
1966-09-01	1.6	4.3	-0.69	0.55	-0.0039	0	1.6	0.93	8.1
1966-10-01	2.7	2.2	-1.1	1.0	-0.0047	0	2.7	1.6	6.5
1966-11-01	1.4	2.8	-0.27	0.72	-0.0059	0	1.4	1.1	5.1
1966	6.7	22	-2.3	3.1	-0.019	0	6.7	4.3	37
1967-07-01	0.079	6.9	0.031	0.071	-0.0071	0	0.079	0.11	9.0
1967-08-01	4.0	2.4	-1.6	0.91	-0.0071	0	4.0	2.4	8.3
1967-09-01	2.5	3.5	-0.89	1.3	-0.0071	0	2.5	1.6	8.0
1967-10-01	0.56	4.3	-0.11	0.29	-0.0067	0	0.56	0.44	6.5
1967-11-01	0.42	3.8	-0.059	0.15	-0.0067	0	0.42	0.36	5.6
1967	7.5	21	-2.6	2.8	-0.035	0	7.5	4.9	37
1968-07-01	0	7.3	0.039	0.41	-0.0087	0	0	0.039	9.3
1968-08-01	1.8	5.0	-0.87	0.59	-0.010	0	1.8	0.96	8.9
1968-09-01	2.5	2.8	-0.74	1.2	-0.012	0	2.5	1.8	7.3
1968-10-01	0.047	5.2	0.098	0.26	-0.013	0	0.047	0.15	6.9
1968-11-01	0.39	3.7	-0.091	0.17	-0.014	0	0.39	0.30	5.1
1968	4.8	24	-1.6	2.7	-0.058	0	4.8	3.2	38
1969-07-01	0	7.2	0.055	0.22	-0.012	0	0	0.055	9.4
1969-08-01	0.33	6.3	-0.035	0.16	-0.012	0	0.33	0.30	8.7
1969-09-01	2.6	3.6	-0.95	0.91	-0.012	0	2.6	1.6	8.3
1969-10-01	1.2	3.8	-0.43	0.54	-0.011	0	1.2	0.81	6.8
1969-11-01	0.83	3.1	-0.32	0.22	-0.011	0	0.83	0.51	5.2
1969	5.0	24	-1.7	2.1	-0.057	0	5.0	3.3	38

Table IV-B.19 SC1 Monsoon Period Water Balance

Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
1970-07-01	0.079	7.1	0.039	0.091	-0.0083	0	0.079	0.11	9.1
1970-08-01	1.0	5.7	-0.30	0.26	-0.0083	0	1.0	0.74	9.1
1970-09-01	1.7	4.4	-0.60	0.44	-0.0075	0	1.7	1.1	8.0
1970-10-01	3.4	1.7	-1.5	1.1	-0.0071	0	3.4	1.8	7.0
1970-11-01	0	4.2	0.12	0.38	-0.0075	0	0	0.12	5.3
1970	6.2	23	-2.2	2.3	-0.039	0	6.2	3.9	39
1971-07-01	0	7.1	0.035	0.043	-0.0051	0	0	0.035	9.0
1971-08-01	0.39	6.7	-0.079	0.063	-0.0051	0	0.39	0.31	9.2
1971-09-01	4.7	0.98	-2.0	1.1	-0.0043	0	4.7	2.7	7.8
1971-10-01	3.1	2.1	-2.4	0.75	-0.0043	0	3.1	0.67	7.1
1971-11-01	4.2	-0.35	-0.89	0.85	-0.0039	0	4.2	3.3	5.1
1971	12	16	-5.3	2.9	-0.023	0	12	7.0	38
1972-07-01	1.7	5.6	-0.75	0.41	-0.0035	0	1.7	0.93	9.3
1972-08-01	0.27	7.1	0.035	0.30	-0.0039	0	0.27	0.31	9.5
1972-09-01	2.0	4.0	-0.80	0.61	-0.0031	0	2.0	1.2	8.4
1972-10-01	0.67	4.4	-0.055	0.30	-0.0031	0	0.67	0.61	6.8
1972-11-01	8.7	-5.0	-5.6	0.63	-0.0028	0	8.7	3.0	4.9
1972	13	16	-7.2	2.2	-0.017	0	13	6.1	39
1973-07-01	0.87	6.2	-0.25	0.68	-0.0028	0	0.87	0.62	9.0
1973-08-01	2.7	3.9	-1.5	0.73	-0.0031	0	2.7	1.2	8.9
1973-09-01	1.4	4.6	-0.055	1.1	-0.0031	0	1.4	1.4	8.1
1973-10-01	0	5.0	0.083	0.15	-0.0039	0	0	0.083	6.7
1973-11-01	0	4.2	0.039	0.071	-0.0039	0	0	0.043	5.6
1973	5.0	24	-1.7	2.8	-0.017	0	5.0	3.3	38
1974-07-01	0	7.4	0.031	0.063	-0.0043	0	0	0.031	9.4
1974-08-01	2.4	4.2	-0.97	0.66	-0.0039	0	2.4	1.5	8.6
1974-09-01	1.4	4.5	-0.37	0.66	-0.0043	0	1.4	1.0	8.3
1974-10-01	3.4	1.4	-1.3	0.95	-0.0035	0	3.4	2.1	6.5
1974-11-01	3.4	0.47	-2.4	0.47	-0.0039	0	3.4	1.0	5.3
1974	11	18	-5.0	2.8	-0.020	0	11	5.6	38
1975-07-01	0	7.4	0.043	0.15	-0.0035	0	0	0.043	9.6
1975-08-01	2.2	3.8	-0.73	0.53	-0.0028	0	2.2	1.5	8.3
1975-09-01	2.0	4.2	-0.71	0.83	-0.0028	0	2.0	1.3	8.0
1975-10-01	0.91	4.1	-0.20	0.31	-0.0028	0	0.91	0.71	6.8
1975-11-01	0.28	3.9	0	0.031	-0.0028	0	0.28	0.26	5.4
1975	5.4	23	-1.6	1.8	-0.015	0	5.4	3.8	38
1976-07-01	0	7.6	0.059	0.028	-0.0024	0	0	0.059	9.7
1976-08-01	2.8	3.5	-1.3	0.53	-0.0024	0	2.8	1.5	8.7
1976-09-01	0.87	5.3	-0.20	0.74	-0.0020	0	0.87	0.64	7.9
1976-10-01	4.0	0.51	-2.0	0.79	-0.0016	0	4.0	2.0	6.4
1976-11-01	0.91	2.9	0.11	0.66	-0.0024	0	0.91	1.0	5.1
1976	8.5	20	-3.3	2.7	-0.011	0	8.5	5.2	38
1977-07-01	0.079	7.4	0.031	0.024	-0.0016	0	0.079	0.083	9.5
1977-08-01	2.5	4.5	-1.1	0.54	-0.0016	0	2.5	1.4	9.4
1977-09-01	2.4	3.5	-0.85	1.1	-0.0016	0	2.4	1.6	8.1
1977-10-01	3.5	1.1	-1.4	0.97	-0.0016	0	3.5	2.0	6.4
1977-11-01	1.3	2.9	-0.28	0.58	-0.0016	0	1.3	1.0	5.5
1977	9.8	19	-3.7	3.2	-0.0079	0	9.8	6.1	39
1978-07-01	0.55	6.6	-0.24	0.66	-0.0012	0	0.55	0.30	9.4
1978-08-01	0.98	5.9	-0.37	0.54	-0.0012	0	0.98	0.61	9.4
1978-09-01	1.1	4.4	-0.19	0.80	-0.0016	0	1.1	0.86	7.3
1978-10-01	0.35	4.4	-0.091	0.24	-0.0016	0	0.35	0.30	6.6
1978-11-01	1.9	2.5	-1.1	0.28	-0.0020	0	1.9	0.87	5.9
1978	4.9	24	-1.9	2.5	-0.0075	0	4.9	2.9	39
1979-07-01	0.35	7.0	0.047	0.76	-0.017	0	0.35	0.40	9.2
1979-08-01	0.16	6.8	0	0.48	-0.025	0	0.16	0.17	9.3
1979-09-01	1.5	4.1	-0.47	0.77	-0.030	0	1.5	1.1	7.8

Table IV-B.19 SC1 Monsoon Period Water Balance

Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
1979-10-01	0.12	5.1	0.063	0.27	-0.032	0	0.12	0.17	7.2
1979-11-01	0.67	3.9	-0.28	0.28	-0.033	0	0.67	0.41	5.9
1979	2.8	27	-0.64	2.6	-0.14	0	2.8	2.2	39
1980-07-01	0.16	6.9	-0.063	0.52	-0.026	0	0.16	0.094	9.0
1980-08-01	1.9	4.8	-0.77	0.68	-0.027	0	1.9	1.2	9.1
1980-09-01	1.3	4.6	-0.28	0.98	-0.028	0	1.3	1.0	7.9
1980-10-01	0.55	4.6	-0.14	0.37	-0.027	0	0.55	0.44	7.0
1980-11-01	0.039	4.3	0.051	0.12	-0.028	0	0.039	0.091	5.9
1980	4.0	25	-1.2	2.7	-0.14	0	4.0	2.8	39
1981-07-01	0.12	7.1	0.067	0.20	-0.018	0	0.12	0.20	9.3
1981-08-01	2.2	4.7	-1.3	0.40	-0.017	0	2.2	0.87	9.3
1981-09-01	2.6	3.6	-0.52	1.4	-0.017	0	2.6	2.1	7.9
1981-10-01	0.51	4.8	-0.19	0.22	-0.015	0	0.51	0.32	7.5
1981-11-01	0.94	2.9	-0.18	0.37	-0.015	0	0.94	0.78	5.2
1981	6.4	23	-2.1	2.6	-0.082	0	6.4	4.3	39
1982-07-01	0.079	7.1	0.024	0.091	-0.0094	0	0.079	0.075	9.1
1982-08-01	2.6	3.7	-1.2	0.51	-0.0091	0	2.6	1.4	8.8
1982-09-01	3.8	1.5	-1.4	1.4	-0.0087	0	3.8	2.4	6.9
1982-10-01	3.1	2.2	-1.2	1.2	-0.0083	0	3.1	1.9	6.7
1982-11-01	0.039	4.1	0.19	0.46	-0.0083	0	0.039	0.23	5.4
1982	9.7	19	-3.6	3.6	-0.044	0	9.7	6.1	37
1983-07-01	0	7.4	0.043	0.30	-0.0055	0	0	0.043	9.4
1983-08-01	2.8	4.1	-1.4	0.66	-0.0055	0	2.8	1.5	9.5
1983-09-01	3.6	2.0	-1.2	1.4	-0.0051	0	3.6	2.4	7.5
1983-10-01	5.1	-0.079	-3.7	0.78	-0.0051	0	5.1	1.4	7.3
1983-11-01	1.1	2.5	1.2	0.78	-0.0051	0	1.1	2.3	4.9
1983	13	16	-5.0	3.9	-0.026	0	13	7.6	39
1984-07-01	1.3	5.6	-0.79	0.15	-0.0043	0	1.3	0.55	9.3
1984-08-01	3.3	2.8	-0.85	1.1	-0.0039	0	3.3	2.5	7.8
1984-09-01	3.3	1.9	-0.91	1.2	-0.0043	0	3.3	2.4	7.4
1984-10-01	1.9	3.1	-0.82	0.54	-0.0039	0	1.9	1.1	6.9
1984-11-01	1.4	2.3	-0.15	0.53	-0.0043	0	1.4	1.2	4.9
1984	11	16	-3.5	3.6	-0.021	0	11	7.7	36
1985-07-01	0	6.3	0.043	0.25	-0.0039	0	0	0.039	8.6
1985-08-01	1.3	5.6	-0.68	0.29	-0.0035	0	1.3	0.55	8.7
1985-09-01	2.1	3.8	-0.76	0.91	-0.0035	0	2.1	1.4	8.1
1985-10-01	3.5	1.1	-1.4	0.88	-0.0035	0	3.5	2.2	6.6
1985-11-01	1.3	2.3	0.047	0.63	-0.0043	0	1.3	1.3	4.6
1985	8.1	19	-2.7	3.0	-0.019	0	8.1	5.4	37
1986-07-01	0.039	7.1	0.035	0.10	-0.0043	0	0.039	0.039	9.3
1986-08-01	4.7	1.4	-1.9	1.2	-0.0035	0	4.7	2.9	8.5
1986-09-01	2.0	3.6	-0.76	0.87	-0.0039	0	2.0	1.3	8.0
1986-10-01	2.1	2.6	-0.72	0.81	-0.0035	0	2.1	1.3	6.5
1986-11-01	1.7	2.1	-0.56	0.58	-0.0035	0	1.7	1.2	4.8
1986	11	17	-3.9	3.6	-0.019	0	11	6.7	37
1987-07-01	0.20	6.9	-0.0039	0.094	-0.0028	0	0.20	0.20	9.0
1987-08-01	2.0	4.9	-1.0	0.68	-0.0031	0	2.0	1.0	9.0
1987-09-01	2.9	2.9	-1.2	1.2	-0.0024	0	2.9	1.7	8.1
1987-10-01	1.3	3.7	-0.40	0.53	-0.0028	0	1.3	0.87	7.1
1987-11-01	0.31	4.2	-0.012	0.15	-0.0028	0	0.31	0.31	6.0
1987	6.7	23	-2.6	2.6	-0.014	0	6.7	4.1	39
1988-07-01	0.12	6.6	0.035	0.11	-0.0028	0	0.12	0.16	8.9
1988-08-01	3.4	3.1	-2.3	0.31	-0.0016	0	3.4	1.1	8.8
1988-09-01	5.9	-0.24	-1.7	1.7	-0.0020	0	5.9	4.2	7.5
1988-10-01	0.31	4.7	0.54	1.1	-0.0020	0	0.31	0.87	6.9
1988-11-01	1.5	2.8	-0.55	0.49	-0.0020	0	1.5	0.94	5.8
1988	11	17	-3.9	3.8	-0.010	0	11	7.3	38

Table IV-B.19 SC1 Monsoon Period Water Balance

Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
1989-07-01	0	7.2	0.035	0.031	-0.0020	0	0	0	9.2
1989-08-01	0.47	6.3	-0.17	0.075	-0.0016	0	0.47	0.35	9.3
1989-09-01	0.94	4.9	-0.22	0.26	-0.0016	0	0.94	0.67	7.8
1989-10-01	1.5	3.7	-0.62	0.58	-0.0020	0	1.5	0.87	7.3
1989-11-01	1.1	3.1	-0.29	0.27	-0.0016	0	1.1	0.79	5.9
1989	4.0	25	-1.3	1.2	-0.0087	0	4.0	2.7	39
1990-07-01	0.31	6.9	-0.047	0.047	-0.0016	0	0.31	0.24	9.3
1990-08-01	1.5	4.8	-0.52	0.45	-0.0016	0	1.5	0.94	8.6
1990-09-01	9.0	-3.4	-5.7	1.3	-0.00079	0	9.0	3.2	7.4
1990-10-01	2.8	2.0	-0.58	1.4	-0.0016	0	2.8	2.3	6.8
1990-11-01	0.28	3.7	0.41	0.73	-0.0016	0	0.28	0.63	5.3
1990	14	14	-6.5	4.0	-0.0071	0	14	7.3	37
1991-07-01	0.63	6.7	-0.083	0.45	-0.0016	0	0.63	0.51	9.2
1991-08-01	1.7	5.2	-0.87	0.40	-0.0016	0	1.7	0.83	9.3
1991-09-01	2.8	3.1	-0.78	1.3	-0.0016	0	2.8	2.0	8.3
1991-10-01	1.6	3.3	-0.50	0.77	-0.0016	0	1.6	1.1	6.5
1991-11-01	1.2	3.5	-0.87	0.13	-0.0020	0	1.2	0.35	6.6
1991	7.9	22	-3.1	3.1	-0.0083	0	7.9	4.7	40
1992-07-01	1.3	5.8	-0.26	1.3	-0.0028	0	1.3	1.1	8.9
1992-08-01	3.3	3.5	-2.0	0.85	-0.0028	0	3.3	1.3	9.3
1992-09-01	5.3	0.28	-1.9	1.8	-0.0031	0	5.3	3.4	7.8
1992-10-01	0.87	4.3	0.12	1.3	-0.0039	0	0.87	0.98	6.7
1992-11-01	1.2	3.1	-0.65	0.48	-0.0047	0	1.2	0.55	6.2
1992	12	17	-4.7	5.6	-0.017	0	12	7.3	39
1993-07-01	0	7.1	0.10	0.97	-0.13	0	0	0.12	9.3
1993-08-01	0.24	6.6	-0.020	0.71	-0.16	0	0.24	0.24	8.9
1993-09-01	3.4	2.2	-1.6	1.1	-0.16	0	3.4	1.9	8.5
1993-10-01	0.16	4.8	0.44	0.92	-0.14	0	0.16	0.59	6.4
1993-11-01	0.83	3.5	-0.19	0.43	-0.13	0	0.83	0.63	6.0
1993	4.6	24	-1.2	4.1	-0.71	0	4.6	3.4	39
1994-07-01	0.39	6.5	-0.051	0.41	-0.060	0	0.39	0.31	8.9
1994-08-01	1.5	5.5	-1.0	0.29	-0.058	0	1.5	0.43	9.1
1994-09-01	0.67	5.4	0.30	0.82	-0.054	0	0.67	1.0	8.6
1994-10-01	2.0	3.0	-0.73	0.82	-0.048	0	2.0	1.2	6.6
1994-11-01	1.9	1.9	-0.85	0.42	-0.046	0	1.9	1.0	5.3
1994	6.4	22	-2.3	2.8	-0.27	0	6.4	4.0	39
1995-07-01	0	7.2	0.059	0.31	-0.026	0	0	0.039	9.0
1995-08-01	0.039	7.1	0.035	0.22	-0.026	0	0.039	0.079	9.3
1995-09-01	3.9	2.2	-1.7	1.1	-0.025	0	3.9	2.2	8.8
1995-10-01	2.8	2.3	-1.5	0.99	-0.023	0	2.8	1.2	7.2
1995-11-01	0	4.3	0.64	0.59	-0.023	0	0	0.63	5.8
1995	6.7	23	-2.5	3.2	-0.12	0	6.7	4.2	40
1996-07-01	0.39	6.6	-0.16	0.13	-0.015	0	0.39	0.24	9.1
1996-08-01	2.4	4.4	-0.85	0.75	-0.014	0	2.4	1.5	8.9
1996-09-01	1.2	4.6	-0.41	0.52	-0.014	0	1.2	0.87	8.1
1996-10-01	3.0	1.5	-0.99	0.90	-0.012	0	3.0	2.0	6.7
1996-11-01	0.43	4.1	-0.043	0.25	-0.012	0	0.43	0.39	6.0
1996	7.4	21	-2.5	2.6	-0.066	0	7.4	5.0	39
1997-07-01	0.039	7.0	0.051	0.055	-0.0079	0	0.039	0.079	9.0
1997-08-01	0.12	7.3	0	0.055	-0.0079	0	0.12	0.12	9.9
1997-09-01	2.6	3.3	-1.1	0.83	-0.0071	0	2.6	1.5	8.5
1997-10-01	0	5.4	0.094	0.14	-0.0071	0	0	0.079	7.3
1997-11-01	0.71	3.2	-0.25	0.11	-0.0067	0	0.71	0.51	6.0
1997	3.5	26	-1.2	1.2	-0.037	0	3.5	2.3	41
1998-07-01	0	7.2	0.043	0.31	-0.0043	0	0	0.079	9.2
1998-08-01	1.7	5.1	-0.65	0.65	-0.0047	0	1.7	1.0	9.1
1998-09-01	2.4	3.4	-0.85	0.95	-0.0039	0	2.4	1.6	8.3

Table IV-B.19 SC1 Monsoon Period Water Balance

Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
1998-10-01	1.3	3.8	-0.45	0.54	-0.0043	0	1.3	0.87	7.0
1998-11-01	0	4.4	0.067	0.059	-0.0047	0	0	0.079	6.3
1998	5.4	24	-1.8	2.5	-0.022	0	5.4	3.6	40
1999-07-01	0	7.1	0.039	0.043	-0.0035	0	0	0.039	9.1
1999-08-01	5.8	0.31	-2.7	1.0	-0.0035	0	5.8	3.1	8.7
1999-09-01	2.8	2.9	-0.83	1.4	-0.0035	0	2.8	2.0	7.8
1999-10-01	1.1	3.9	0.20	0.83	-0.0035	0	1.1	1.3	6.8
1999-11-01	0	4.5	0.087	0.067	-0.0035	0	0	0.12	6.2
1999	9.8	19	-3.2	3.3	-0.018	0	9.8	6.5	39
2000-07-01	0.83	6.3	-0.28	0.20	-0.0024	0	0.83	0.51	9.5
2000-08-01	0.039	7.4	0.047	0.031	-0.0028	0	0.039	0.12	9.5
2000-09-01	0.71	4.9	-0.13	0.091	-0.0024	0	0.71	0.55	8.7
2000-10-01	0	5.3	0.079	0.024	-0.0028	0	0	0.079	6.8
2000-11-01	5.3	-1.7	-4.0	0.30	-0.0020	0	5.3	1.3	5.9
2000	6.9	22	-4.3	0.64	-0.012	0	6.9	2.5	40
2001-07-01	0.039	7.2	0.047	0.11	-0.0016	0	0.039	0.079	9.2
2001-08-01	2.7	4.2	-2.0	0.24	-0.0016	0	2.7	0.75	9.7
2001-09-01	3.4	2.4	-0.33	1.6	-0.0016	0	3.4	3.0	7.6
2001-10-01	0.12	4.8	0.087	0.42	-0.0020	0	0.12	0.20	7.3
2001-11-01	0.35	3.6	-0.071	0.11	-0.0016	0	0.35	0.31	5.5
2001	6.6	22	-2.2	2.5	-0.0083	0	6.6	4.4	39
2002-07-01	0	7.4	0.028	0.028	-0.0020	0	0	0.039	9.2
2002-08-01	0.31	6.8	-0.043	0.035	-0.0016	0	0.31	0.28	9.7
2002-09-01	0.47	5.4	-0.13	0.055	-0.0020	0	0.47	0.31	8.1
2002-10-01	1.2	3.8	-0.38	0.39	-0.0012	0	1.2	0.83	7.1
2002-11-01	0.12	4.1	0.039	0.020	-0.0020	0	0.12	0.12	6.1
2002	2.1	28	-0.48	0.52	-0.0087	0	2.1	1.6	40
2003-07-01	0	7.9	0.035	0.063	-0.0016	0	0	0.039	10.0
2003-08-01	0.47	6.7	-0.055	0.043	-0.0016	0	0.47	0.43	10
2003-09-01	1.3	4.8	-0.48	0.25	-0.00079	0	1.3	0.79	8.5
2003-10-01	1.9	3.3	-0.58	0.68	-0.0012	0	1.9	1.4	7.4
2003-11-01	0.079	4.4	0.091	0.043	-0.0012	0	0.079	0.16	6.0
2003	3.8	27	-0.98	1.1	-0.0063	0	3.8	2.8	42
2004-07-01	0	7.8	0.035	0.016	-0.00079	0	0	0	10
2004-08-01	0.59	6.7	-0.12	0.051	-0.0012	0	0.59	0.47	9.8
2004-09-01	2.1	4.1	-0.71	0.60	-0.00079	0	2.1	1.4	8.6
2004-10-01	1.5	3.9	-0.61	0.42	-0.00079	0	1.5	0.91	7.9
2004-11-01	1.2	2.9	-0.52	0.26	-0.00079	0	1.2	0.67	6.1
2004	5.4	25	-1.9	1.4	-0.0043	0	5.4	3.4	42
2005-07-01	0.079	7.6	0.031	0.44	-0.00079	0	0.079	0.079	9.7
2005-08-01	1.4	5.8	-0.70	0.38	-0.00079	0	1.4	0.67	11
2005-09-01	4.7	1.0	-1.6	1.7	-0.00079	0	4.7	3.1	7.3
2005-10-01	0.079	5.0	0.12	0.51	-0.00079	0	0.079	0.20	7.4
2005-11-01	0.43	3.8	-0.11	0.15	-0.0012	0	0.43	0.31	6.1
2005	6.7	23	-2.2	3.2	-0.0043	0	6.7	4.4	41
2006-07-01	0.51	7.0	-0.16	0.071	-0.0020	0	0.51	0.35	10
2006-08-01	3.1	3.1	-2.3	0.22	-0.0020	0	3.1	0.87	9.2
2006-09-01	2.9	3.0	0.059	1.7	-0.0020	0	2.9	3.0	7.4
2006-10-01	1.1	3.8	-0.31	0.71	-0.0020	0	1.1	0.79	6.9
2006-11-01	1.0	2.9	-0.25	0.25	-0.0020	0	1.0	0.79	5.9
2006	8.7	20	-3.0	3.0	-0.0098	0	8.7	5.7	40

Table IV-B.20 SC1 Winter Storm Period Water Balance

Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
1951-11-01	0	2.7	-1.0	0.64	-0.31	0	1.6	0.64	5.4
1951-12-01	1.7	1.5	0.12	0.53	-0.24	0	1.7	1.8	3.7
1952-01-01	3.0	-0.66	-1.6	0.38	-0.21	0	3.0	1.5	2.8
1952-02-01	2.8	-0.36	-0.36	0.46	-0.19	0	2.8	2.4	2.9
1952-03-01	0.50	2.4	0.79	0.78	-0.15	0	0.50	1.3	3.8
1952	8.0	5.6	-2.0	2.8	-1.1	0	9.7	7.6	19
1952-11-01	0	4.8	0.088	0.20	-0.077	0	0	0.088	5.9
1952-12-01	4.3	-1.5	-3.1	0.25	-0.066	0	4.3	1.2	3.3
1953-01-01	2.0	0.26	0.12	0.37	-0.063	0	2.0	2.1	2.7
1953-02-01	0.74	2.1	0.59	0.50	-0.057	0	0.74	1.3	3.3
1953-03-01	0.60	2.4	-0.14	0.58	-0.048	0	0.60	0.46	3.8
1953	7.6	8.0	-2.4	1.9	-0.31	0	7.6	5.2	19
1953-11-01	0.012	4.4	0.053	0.098	-0.031	0	0.012	0.065	5.5
1953-12-01	0.56	2.8	-0.22	0.13	-0.029	0	0.56	0.34	3.9
1954-01-01	0.19	2.3	0.046	0.10	-0.028	0	0.19	0.24	2.9
1954-02-01	2.4	0.35	-1.2	0.29	-0.026	0	2.4	1.2	3.2
1954-03-01	0.72	2.5	0.011	0.73	-0.022	0	0.72	0.73	4.2
1954	3.9	12	-1.3	1.3	-0.14	0	3.9	2.6	20
1954-11-01	0	4.6	0.16	0.43	-0.015	0	0	0.17	5.6
1954-12-01	0.091	3.5	-0.011	0.10	-0.014	0	0.091	0.079	4.3
1955-01-01	0.29	2.7	-0.0043	0.088	-0.014	0	0.29	0.29	3.5
1955-02-01	3.4	-1.4	-1.8	0.31	-0.013	0	3.4	1.6	2.4
1955-03-01	0.28	2.5	0.36	0.62	-0.011	0	0.28	0.64	3.5
1955	4.1	12	-1.3	1.5	-0.068	0	4.1	2.8	19
1955-11-01	0.020	4.7	0.056	0.083	-0.0087	0	0.020	0.079	5.9
1955-12-01	0.96	2.1	-0.40	0.17	-0.0079	0	0.96	0.56	3.7
1956-01-01	1.4	1.4	-0.42	0.33	-0.0079	0	1.4	0.95	3.1
1956-02-01	2.6	0.30	-1.9	0.27	-0.0071	0	2.6	0.70	3.5
1956-03-01	2.0	0.48	-0.0067	0.69	-0.0067	0	2.0	2.0	3.1
1956	7.0	9.0	-2.7	1.5	-0.038	0	7.0	4.3	19
1956-11-01	0.53	3.6	-0.19	0.043	-0.0051	0	0.53	0.34	5.2
1956-12-01	0	3.2	0.18	0.067	-0.0047	0	0	0.18	3.8
1957-01-01	0.47	2.2	-0.12	0.091	-0.0043	0	0.47	0.35	3.1
1957-02-01	4.8	-2.7	-3.1	0.31	-0.0043	0	4.8	1.6	2.7
1957-03-01	0.73	2.1	0.85	0.78	-0.0039	0	0.73	1.6	3.4
1957	6.5	8.4	-2.4	1.3	-0.022	0	6.5	4.1	18
1957-11-01	3.2	0.31	-2.1	0.27	-0.0035	0	3.2	1.2	4.6
1957-12-01	0.61	2.0	0.76	0.39	-0.0031	0	0.61	1.4	3.0
1958-01-01	1.1	1.6	-0.17	0.35	-0.0031	0	1.1	0.89	3.2
1958-02-01	0.012	2.9	0.12	0.21	-0.0031	0	0.012	0.14	3.3
1958-03-01	2.5	-0.035	-1.2	0.54	-0.0024	0	2.5	1.3	3.2
1958	7.4	6.8	-2.6	1.8	-0.015	0	7.4	4.9	17
1958-11-01	1.9	2.3	-0.40	0.75	-0.0024	0	1.9	1.5	5.3
1958-12-01	1.5	1.6	-0.59	0.35	-0.0024	0	1.5	0.94	3.6
1959-01-01	0	3.0	0.24	0.28	-0.0024	0	0	0.24	3.6
1959-02-01	0.22	2.8	0.028	0.14	-0.0020	0	0.22	0.24	3.5
1959-03-01	1.4	1.1	-0.59	0.37	-0.0020	0	1.4	0.83	3.3
1959	5.1	11	-1.3	1.9	-0.011	0	5.1	3.8	19
1959-11-01	4.8	-0.60	-4.2	0.29	-0.0016	0	4.8	0.54	5.3
1959-12-01	0.38	2.8	1.7	0.54	-0.0016	0	0.38	2.1	3.7
1960-01-01	5.2	-3.0	-3.7	0.35	-0.0016	0	5.2	1.6	2.7
1960-02-01	4.2	-2.0	-2.0	0.41	-0.0016	0	4.2	2.1	2.5

Table IV-B.20 SC1 Winter Storm Period Water Balance

Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
1960-03-01	0.87	1.8	1.2	0.74	-0.0012	0	0.87	2.1	3.4
1960	15	-1.1	-7.0	2.3	-0.0075	0	15	8.5	18
1960-11-01	2.1	1.9	-0.83	0.39	-0.0020	0	2.1	1.2	5.0
1960-12-01	0.48	2.6	0.043	0.31	-0.0024	0	0.48	0.52	3.7
1961-01-01	0.47	2.2	-0.098	0.15	-0.0024	0	0.47	0.37	3.3
1961-02-01	0.70	1.9	-0.31	0.087	-0.0028	0	0.70	0.39	3.2
1961-03-01	0.23	2.9	0.14	0.28	-0.0024	0	0.23	0.37	3.7
1961	3.9	11	-1.1	1.2	-0.012	0	3.9	2.9	19
1961-11-01	0.45	3.6	-0.24	0.028	-0.0028	0	0.45	0.21	5.4
1961-12-01	0.32	2.4	0.13	0.075	-0.0028	0	0.32	0.45	3.1
1962-01-01	3.9	-1.7	-2.2	0.27	-0.0024	0	3.9	1.7	2.6
1962-02-01	3.2	-0.94	-1.8	0.41	-0.0024	0	3.2	1.4	2.7
1962-03-01	1.7	0.75	-0.051	0.66	-0.0020	0	1.7	1.6	3.2
1962	9.5	4.1	-4.2	1.4	-0.012	0	9.5	5.3	17
1962-11-01	0.87	3.2	-0.20	0.31	-0.0020	0	0.87	0.68	5.1
1962-12-01	0.83	2.5	-0.26	0.22	-0.0024	0	0.83	0.57	3.9
1963-01-01	1.8	0.83	-0.84	0.20	-0.0016	0	1.8	0.97	3.3
1963-02-01	2.1	0.51	-0.37	0.43	-0.0016	0	2.1	1.7	3.0
1963-03-01	4.2	-1.2	-2.5	0.76	-0.0016	0	4.2	1.7	3.8
1963	9.8	5.9	-4.2	1.9	-0.0091	0	9.8	5.7	19
1963-11-01	0.67	3.9	-0.063	0.77	-0.0020	0	0.67	0.60	5.8
1963-12-01	2.3	0.67	-0.81	0.48	-0.0012	0	2.3	1.5	3.6
1964-01-01	0.34	2.5	0.31	0.37	-0.0020	0	0.34	0.65	3.3
1964-02-01	0.58	1.9	-0.16	0.28	-0.0016	0	0.58	0.42	3.0
1964-03-01	0	2.8	0.13	0.32	-0.0016	0	0	0.13	3.6
1964	3.9	12	-0.59	2.2	-0.0083	0	3.9	3.3	19
1964-11-01	1.5	3.1	-0.63	0.38	-0.0016	0	1.5	0.91	5.8
1964-12-01	1.4	1.6	-0.49	0.32	-0.0016	0	1.4	0.89	3.6
1965-01-01	1.7	0.87	-0.78	0.30	-0.0016	0	1.7	0.91	3.3
1965-02-01	2.9	-0.47	-0.81	0.43	-0.0016	0	2.9	2.1	2.6
1965-03-01	2.8	0	-1.2	0.78	-0.0012	0	2.8	1.7	3.4
1965	10	5.1	-3.9	2.2	-0.0075	0	10	6.5	19
1965-11-01	0.46	4.0	-0.12	0.11	-0.0016	0	0.46	0.34	5.7
1965-12-01	2.4	0.87	-1.7	0.098	-0.0016	0	2.4	0.64	3.9
1966-01-01	10	-8.3	-8.7	0.33	-0.0012	0	10	1.7	2.7
1966-02-01	1.8	0.51	0.51	0.45	-0.0012	0	1.8	2.3	2.8
1966-03-01	2.0	0.55	0.48	0.74	-0.0012	0	2.0	2.5	3.1
1966	17	-2.4	-9.6	1.7	-0.0067	0	17	7.5	18
1966-11-01	1.4	2.8	-0.27	0.72	-0.0059	0	1.4	1.1	5.1
1966-12-01	0.88	2.4	-0.26	0.35	-0.0067	0	0.88	0.61	4.1
1967-01-01	1.2	1.3	-0.47	0.28	-0.0071	0	1.2	0.78	3.1
1967-02-01	0.79	1.9	-0.20	0.31	-0.0075	0	0.79	0.59	2.9
1967-03-01	0	3.0	0.18	0.33	-0.0067	0	0	0.18	3.9
1967	4.3	11	-1.0	2.0	-0.034	0	4.3	3.3	19
1967-11-01	0.42	3.8	-0.059	0.15	-0.0067	0	0.42	0.36	5.6
1967-12-01	2.1	1.0	-1.6	0.083	-0.0063	0	2.1	0.55	3.9
1968-01-01	10	-8.0	-8.3	0.31	-0.0059	0	10	1.7	2.3
1968-02-01	0.63	2.0	1.9	0.50	-0.0059	0	0.63	2.5	3.1
1968-03-01	1.9	1.0	0.19	0.83	-0.0051	0	1.9	2.1	3.4
1968	15	-0.12	-7.8	1.9	-0.030	0	15	7.3	18
1968-11-01	0.39	3.7	-0.091	0.17	-0.014	0	0.39	0.30	5.1
1968-12-01	2.5	0.43	-1.1	0.34	-0.013	0	2.5	1.4	3.8

Table IV-B.20 SC1 Winter Storm Period Water Balance

Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
1969-01-01	3.3	-0.87	-2.2	0.33	-0.014	0	3.3	1.0	2.9
1969-02-01	4.2	-1.9	-2.1	0.43	-0.014	0	4.2	2.0	2.6
1969-03-01	1.4	1.1	0.92	0.71	-0.012	0	1.4	2.3	3.0
1969	12	2.5	-4.6	2.0	-0.067	0	12	7.1	17
1969-11-01	0.83	3.1	-0.32	0.22	-0.011	0	0.83	0.51	5.2
1969-12-01	2.1	0.71	-0.73	0.34	-0.010	0	2.1	1.4	3.6
1970-01-01	1.3	1.5	-0.39	0.36	-0.011	0	1.3	0.93	3.4
1970-02-01	0.50	2.2	0.15	0.32	-0.0098	0	0.50	0.65	2.9
1970-03-01	0.41	2.4	-0.0079	0.28	-0.0091	0	0.41	0.39	3.6
1970	5.2	10.0	-1.3	1.5	-0.051	0	5.2	3.9	19
1970-11-01	0	4.2	0.12	0.38	-0.0075	0	0	0.12	5.3
1970-12-01	0.65	2.5	-0.44	0.11	-0.0067	0	0.65	0.20	3.9
1971-01-01	1.2	1.2	-0.26	0.19	-0.0067	0	1.2	0.95	3.0
1971-02-01	0.85	2.1	-0.031	0.39	-0.0067	0	0.85	0.82	3.1
1971-03-01	0.82	2.0	-0.32	0.33	-0.0055	0	0.82	0.49	4.0
1971	3.5	12	-0.94	1.4	-0.033	0	3.5	2.6	19
1971-11-01	4.2	-0.35	-0.89	0.85	-0.0039	0	4.2	3.3	5.1
1971-12-01	0.039	3.1	0.67	0.47	-0.0043	0	0.039	0.71	3.7
1972-01-01	2.1	0.35	-0.72	0.37	-0.0039	0	2.1	1.4	3.0
1972-02-01	0	2.8	0.41	0.37	-0.0043	0	0	0.41	3.2
1972-03-01	0	3.5	0.083	0.34	-0.0035	0	0	0.087	4.1
1972	6.4	9.4	-0.44	2.4	-0.020	0	6.4	5.9	19
1972-11-01	8.7	-5.0	-5.6	0.63	-0.0028	0	8.7	3.0	4.9
1972-12-01	2.8	-0.20	-0.17	0.48	-0.0028	0	2.8	2.7	3.2
1973-01-01	3.0	-0.67	-1.0	0.37	-0.0028	0	3.0	2.0	2.9
1973-02-01	0.74	1.6	1.2	0.44	-0.0028	0	0.74	1.9	2.6
1973-03-01	3.2	-0.63	-1.2	0.70	-0.0024	0	3.2	2.0	2.8
1973	18	-4.9	-6.8	2.6	-0.013	0	18	12	16
1973-11-01	0	4.2	0.039	0.071	-0.0039	0	0	0.043	5.6
1973-12-01	1.8	1.3	-0.90	0.14	-0.0039	0	1.8	0.87	3.9
1974-01-01	0.098	2.8	0.33	0.26	-0.0043	0	0.098	0.43	3.3
1974-02-01	3.4	-1.0	-1.5	0.42	-0.0039	0	3.4	1.9	2.9
1974-03-01	0.16	2.8	0.25	0.58	-0.0043	0	0.16	0.40	3.3
1974	5.4	10.0	-1.8	1.5	-0.020	0	5.4	3.7	19
1974-11-01	3.4	0.47	-2.4	0.47	-0.0039	0	3.4	1.0	5.3
1974-12-01	0.12	3.1	1.2	0.47	-0.0035	0	0.12	1.3	3.6
1975-01-01	0.75	1.6	-0.10	0.29	-0.0039	0	0.75	0.65	3.1
1975-02-01	0.39	1.9	-0.075	0.19	-0.0035	0	0.39	0.33	2.6
1975-03-01	3.9	-1.2	-2.3	0.61	-0.0031	0	3.9	1.7	3.0
1975	8.6	5.9	-3.6	2.0	-0.018	0	8.6	5.0	18
1975-11-01	0.28	3.9	0	0.031	-0.0028	0	0.28	0.26	5.4
1975-12-01	2.1	1.2	-1.9	0.043	-0.0024	0	2.1	0.25	4.2
1976-01-01	1.3	1.3	0.58	0.39	-0.0024	0	1.3	1.8	3.1
1976-02-01	0.24	2.3	0.24	0.32	-0.0028	0	0.24	0.47	2.9
1976-03-01	1.6	1.4	-0.54	0.62	-0.0024	0	1.6	1.1	3.4
1976	5.5	10	-1.6	1.4	-0.013	0	5.5	3.9	19
1976-11-01	0.91	2.9	0.11	0.66	-0.0024	0	0.91	1.0	5.1
1976-12-01	0.55	2.6	-0.067	0.30	-0.0020	0	0.55	0.48	4.0
1977-01-01	1.9	0.75	-1.4	0.16	-0.0016	0	1.9	0.40	3.1
1977-02-01	1.9	0.43	0.016	0.41	-0.0020	0	1.9	1.9	2.5
1977-03-01	0.079	3.3	0.26	0.60	-0.0016	0	0.079	0.34	4.1
1977	5.3	10	-1.1	2.1	-0.0094	0	5.3	4.2	19

Table IV-B.20 SC1 Winter Storm Period Water Balance

Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
1977-11-01	1.3	2.9	-0.28	0.58	-0.0016	0	1.3	1.0	5.5
1977-12-01	0.35	2.9	0.14	0.23	-0.0016	0	0.35	0.49	3.9
1978-01-01	0.67	2.0	-0.33	0.051	-0.0016	0	0.67	0.32	3.5
1978-02-01	6.4	-4.2	-4.8	0.32	-0.0012	0	6.4	1.6	2.5
1978-03-01	5.5	-3.0	-3.0	0.73	-0.0012	0	5.5	2.5	2.9
1978	14	0.75	-8.2	1.9	-0.0071	0	14	6.0	18
1978-11-01	1.9	2.5	-1.1	0.28	-0.0020	0	1.9	0.87	5.9
1978-12-01	5.6	-2.8	-3.8	0.45	-0.0024	0	5.6	1.8	3.7
1979-01-01	6.6	-4.3	-4.3	0.38	-0.0028	0	6.6	2.3	2.5
1979-02-01	6.0	-4.2	-4.2	0.35	-0.0028	0	6.0	1.8	2.3
1979-03-01	1.2	1.9	1.8	0.90	-0.0035	0	1.2	3.0	3.3
1979	21	-7.0	-12	2.4	-0.013	0	21	9.8	18
1979-11-01	0.67	3.9	-0.28	0.28	-0.033	0	0.67	0.41	5.9
1979-12-01	0.67	2.5	-0.11	0.27	-0.032	0	0.67	0.56	4.0
1980-01-01	0.71	2.2	-0.28	0.15	-0.032	0	0.71	0.41	3.7
1980-02-01	4.1	-2.1	-2.7	0.32	-0.031	0	4.1	1.4	2.4
1980-03-01	6.0	-3.6	-3.9	0.70	-0.028	0	6.0	2.1	2.4
1980	12	2.9	-7.2	1.7	-0.16	0	12	5.0	18
1980-11-01	0.039	4.3	0.051	0.12	-0.028	0	0.039	0.091	5.9
1980-12-01	0	3.5	0.035	0.091	-0.026	0	0	0.035	4.3
1981-01-01	0.55	2.6	-0.15	0.13	-0.026	0	0.55	0.41	3.5
1981-02-01	1.3	1.5	-0.54	0.30	-0.025	0	1.3	0.78	3.5
1981-03-01	2.7	0.39	-1.4	0.74	-0.021	0	2.7	1.3	3.6
1981	4.6	12	-2.0	1.4	-0.13	0	4.6	2.6	21
1981-11-01	0.94	2.9	-0.18	0.37	-0.015	0	0.94	0.78	5.2
1981-12-01	2.3	0.98	-2.1	0.067	-0.014	0	2.3	0.18	4.4
1982-01-01	0	3.0	1.2	0.41	-0.014	0	0	1.2	3.3
1982-02-01	2.8	-0.43	-0.90	0.41	-0.013	0	2.8	1.8	2.8
1982-03-01	1.8	0.91	-0.43	0.71	-0.011	0	1.8	1.4	3.1
1982	7.8	7.3	-2.5	2.0	-0.067	0	7.8	5.4	19
1982-11-01	0.039	4.1	0.19	0.46	-0.0083	0	0.039	0.23	5.4
1982-12-01	3.3	-0.79	-1.9	0.29	-0.0075	0	3.3	1.4	3.6
1983-01-01	1.7	0.67	0.22	0.38	-0.0079	0	1.7	1.9	2.7
1983-02-01	1.9	0.83	-1.3	0.39	-0.0071	0	1.9	0.59	3.2
1983-03-01	2.3	0.24	-0.53	0.72	-0.0063	0	2.3	1.8	2.8
1983	9.3	5.0	-3.3	2.2	-0.037	0	9.3	6.0	18
1983-11-01	1.1	2.5	1.2	0.78	-0.0051	0	1.1	2.3	4.9
1983-12-01	2.0	1.0	-1.1	0.44	-0.0051	0	2.0	0.96	3.8
1984-01-01	2.5	-0.28	-0.67	0.37	-0.0047	0	2.5	1.8	2.7
1984-02-01	0.47	2.2	0.65	0.45	-0.0051	0	0.47	1.1	2.8
1984-03-01	0	3.1	0.14	0.47	-0.0043	0	0	0.13	3.9
1984	6.1	8.6	0.23	2.5	-0.024	0	6.1	6.4	18
1984-11-01	1.4	2.3	-0.15	0.53	-0.0043	0	1.4	1.2	4.9
1984-12-01	2.1	1.1	-1.5	0.17	-0.0039	0	2.1	0.55	4.2
1985-01-01	5.8	-3.7	-3.8	0.34	-0.0039	0	5.8	2.0	2.5
1985-02-01	2.7	-0.67	-0.70	0.38	-0.0039	0	2.7	2.0	2.5
1985-03-01	1.7	0.55	0.43	0.64	-0.0035	0	1.7	2.1	2.5
1985	14	-0.35	-5.8	2.1	-0.020	0	14	7.8	17
1985-11-01	1.3	2.3	0.047	0.63	-0.0043	0	1.3	1.3	4.6
1985-12-01	2.8	-0.039	-1.9	0.31	-0.0039	0	2.8	0.83	3.9
1986-01-01	0.87	2.0	0.78	0.44	-0.0043	0	0.87	1.7	3.1
1986-02-01	0.12	3.1	0.098	0.33	-0.0043	0	0.12	0.20	3.6

Table IV-B.20 SC1 Winter Storm Period Water Balance

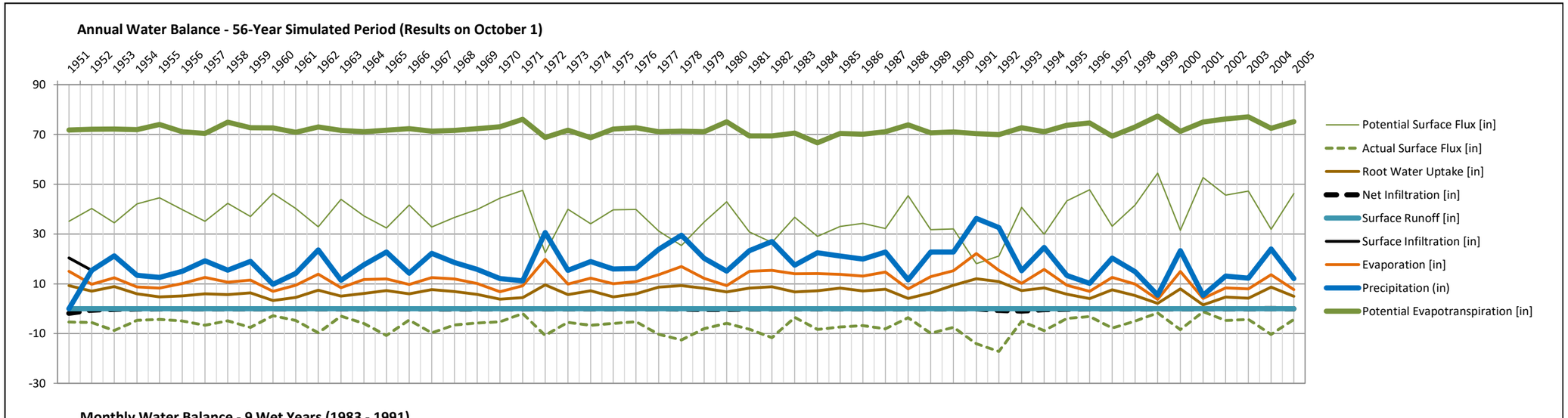
Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
1986-03-01	3.1	-0.59	-1.3	0.67	-0.0039	0	3.1	1.8	2.9
1986	8.1	6.7	-2.3	2.4	-0.021	0	8.1	5.8	18
1986-11-01	1.7	2.1	-0.56	0.58	-0.0035	0	1.7	1.2	4.8
1986-12-01	1.4	1.4	-0.28	0.38	-0.0035	0	1.4	1.1	3.7
1987-01-01	3.0	-0.59	-1.3	0.34	-0.0035	0	3.0	1.7	2.9
1987-02-01	3.3	-0.87	-1.4	0.46	-0.0035	0	3.3	1.9	2.8
1987-03-01	2.7	-0.20	-1.4	0.66	-0.0031	0	2.7	1.3	3.5
1987	12	1.9	-5.0	2.4	-0.017	0	12	7.2	18
1987-11-01	0.31	4.2	-0.012	0.15	-0.0028	0	0.31	0.31	6.0
1987-12-01	1.8	1.3	-0.57	0.36	-0.0024	0	1.8	1.2	3.8
1988-01-01	4.0	-1.5	-2.7	0.28	-0.0024	0	4.0	1.3	3.2
1988-02-01	3.6	-1.3	-1.4	0.43	-0.0024	0	3.6	2.2	2.5
1988-03-01	0.75	2.4	0.73	0.84	-0.0024	0	0.75	1.5	3.4
1988	10	5.1	-3.9	2.1	-0.012	0	10	6.5	19
1988-11-01	1.5	2.8	-0.55	0.49	-0.0020	0	1.5	0.94	5.8
1988-12-01	1.7	1.3	-1.00	0.27	-0.0020	0	1.7	0.71	4.0
1989-01-01	1.1	1.4	0.14	0.35	-0.0024	0	1.1	1.3	3.1
1989-02-01	2.2	0.12	-0.71	0.40	-0.0020	0	2.2	1.5	2.7
1989-03-01	0.31	2.8	0.15	0.55	-0.0020	0	0.31	0.43	3.1
1989	6.9	8.3	-2.0	2.1	-0.010	0	6.9	4.8	19
1989-11-01	1.1	3.1	-0.29	0.27	-0.0016	0	1.1	0.79	5.9
1989-12-01	0.28	3.0	-0.043	0.047	-0.0016	0	0.28	0.24	4.2
1990-01-01	0.87	2.0	-0.65	0.031	-0.0020	0	0.87	0.24	3.4
1990-02-01	1.3	1.0	-0.024	0.33	-0.0016	0	1.3	1.3	2.7
1990-03-01	2.5	-0.079	-0.88	0.63	-0.0012	0	2.5	1.7	2.6
1990	6.1	9.0	-1.9	1.3	-0.0079	0	6.1	4.2	19
1990-11-01	0.28	3.7	0.41	0.73	-0.0016	0	0.28	0.63	5.3
1990-12-01	2.2	0.94	-0.61	0.51	-0.00079	0	2.2	1.6	4.2
1991-01-01	4.8	-2.7	-3.7	0.32	-0.0012	0	4.8	1.2	3.0
1991-02-01	1.8	0.75	0.61	0.48	-0.00079	0	1.8	2.4	2.6
1991-03-01	0.94	2.3	0.083	0.84	-0.0012	0	0.94	1.0	3.3
1991	10	5.0	-3.2	2.9	-0.0055	0	10	6.8	18
1991-11-01	1.2	3.5	-0.87	0.13	-0.0020	0	1.2	0.35	6.6
1991-12-01	3.3	-0.39	-1.7	0.39	-0.0020	0	3.3	1.6	3.6
1992-01-01	4.0	-1.7	-1.8	0.37	-0.0024	0	4.0	2.1	2.9
1992-02-01	3.0	-0.67	-0.74	0.44	-0.0024	0	3.0	2.3	2.2
1992-03-01	2.8	-0.16	-0.68	0.74	-0.0024	0	2.8	2.1	3.0
1992	14	0.55	-5.8	2.1	-0.011	0	14	8.5	18
1992-11-01	1.2	3.1	-0.65	0.48	-0.0047	0	1.2	0.55	6.2
1992-12-01	0.51	2.3	0.26	0.37	-0.0051	0	0.51	0.79	3.6
1993-01-01	6.3	-4.4	-4.6	0.31	-0.0051	0	6.3	1.8	2.5
1993-02-01	11	-9.4	-9.4	0.36	-0.0059	0	11	1.9	1.9
1993-03-01	6.0	-4.1	-4.1	0.56	-0.0055	0	6.0	1.9	2.7
1993	25	-12	-18	2.1	-0.026	0	25	6.9	17
1993-11-01	0.83	3.5	-0.19	0.43	-0.13	0	0.83	0.63	6.0
1993-12-01	4.2	-1.3	-2.6	0.35	-0.11	0	4.2	1.5	3.6
1994-01-01	0.28	2.3	0.80	0.40	-0.11	0	0.28	1.1	3.4
1994-02-01	0.28	2.6	0.15	0.41	-0.096	0	0.28	0.39	3.3
1994-03-01	2.6	-0.12	-1.0	0.66	-0.079	0	2.6	1.6	3.0
1994	8.1	7.0	-2.9	2.3	-0.52	0	8.1	5.2	19
1994-11-01	1.9	1.9	-0.85	0.42	-0.046	0	1.9	1.0	5.3
1994-12-01	3.3	-0.87	-1.3	0.43	-0.041	0	3.3	2.0	3.5

Table IV-B.20 SC1 Winter Storm Period Water Balance

Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
1995-01-01	2.7	-0.31	-0.97	0.38	-0.038	0	2.7	1.7	3.0
1995-02-01	3.7	-1.2	-1.2	0.46	-0.035	0	3.7	2.4	2.6
1995-03-01	2.7	-0.039	-0.89	0.75	-0.030	0	2.7	1.8	3.1
1995	14	-0.51	-5.3	2.4	-0.19	0	14	9.0	18
1995-11-01	0	4.3	0.64	0.59	-0.023	0	0	0.63	5.8
1995-12-01	1.3	1.8	-0.41	0.35	-0.021	0	1.3	0.91	3.9
1996-01-01	0.91	1.9	-0.31	0.23	-0.020	0	0.91	0.59	3.5
1996-02-01	0	2.9	0.15	0.21	-0.019	0	0	0.16	3.3
1996-03-01	3.2	-0.24	-1.7	0.73	-0.017	0	3.2	1.5	3.6
1996	5.4	11	-1.6	2.1	-0.10	0	5.4	3.8	20
1996-11-01	0.43	4.1	-0.043	0.25	-0.012	0	0.43	0.39	6.0
1996-12-01	1.2	1.9	-0.71	0.12	-0.011	0	1.2	0.51	3.8
1997-01-01	0.039	2.6	0.46	0.20	-0.011	0	0.039	0.47	3.2
1997-02-01	2.8	-0.51	-1.4	0.30	-0.0094	0	2.8	1.5	2.7
1997-03-01	1.7	1.3	-1.1	0.60	-0.0087	0	1.7	0.59	3.4
1997	6.2	9.3	-2.7	1.5	-0.052	0	6.2	3.5	19
1997-11-01	0.71	3.2	-0.25	0.11	-0.0067	0	0.71	0.51	6.0
1997-12-01	0.83	2.1	-0.22	0.19	-0.0063	0	0.83	0.55	3.7
1998-01-01	2.7	-0.43	-1.2	0.28	-0.0063	0	2.7	1.5	3.1
1998-02-01	0.39	2.2	0.41	0.37	-0.0055	0	0.39	0.79	2.4
1998-03-01	6.4	-4.4	-4.7	0.52	-0.0051	0	6.4	1.7	2.9
1998	11	2.7	-5.9	1.5	-0.030	0	11	5.1	18
1998-11-01	0	4.4	0.067	0.059	-0.0047	0	0	0.079	6.3
1998-12-01	1.1	2.1	-0.83	0.043	-0.0039	0	1.1	0.24	3.9
1999-01-01	0.75	2.0	0.31	0.29	-0.0043	0	0.75	1.0	3.3
1999-02-01	0.039	2.9	0.087	0.13	-0.0043	0	0.039	0.16	3.6
1999-03-01	0.20	3.2	-0.0039	0.094	-0.0039	0	0.20	0.20	3.6
1999	2.0	15	-0.37	0.61	-0.021	0	2.0	1.7	21
1999-11-01	0	4.5	0.087	0.067	-0.0035	0	0	0.12	6.2
1999-12-01	0	3.7	0.043	0.020	-0.0035	0	0	0.039	4.7
2000-01-01	0.039	2.8	-0.0079	0.020	-0.0031	0	0.039	0.039	3.7
2000-02-01	0.28	2.9	-0.039	0.039	-0.0031	0	0.28	0.24	3.4
2000-03-01	0.71	2.5	-0.24	0.12	-0.0024	0	0.71	0.43	3.9
2000	1.0	16	-0.15	0.26	-0.016	0	1.0	0.87	22
2000-11-01	5.3	-1.5	-4.0	0.30	-0.0020	0	5.3	1.3	6.1
2000-12-01	2.1	0.59	0.25	0.48	-0.0024	0	2.1	2.4	2.9
2001-01-01	0.12	2.9	0.54	0.42	-0.0024	0	0.12	0.63	3.7
2001-02-01	3.4	-1.1	-1.9	0.39	-0.0016	0	3.4	1.5	3.0
2001-03-01	1.7	0.91	0.13	0.74	-0.0020	0	1.7	1.9	2.8
2001	13	1.8	-5.0	2.3	-0.010	0	13	7.7	19
2001-11-01	0.35	3.7	-0.067	0.12	-0.0016	0	0.35	0.31	5.7
2001-12-01	0.31	3.1	-0.020	0.039	-0.0020	0	0.31	0.28	4.6
2002-01-01	1.9	0.55	-0.69	0.25	-0.0016	0	1.9	1.1	2.9
2002-02-01	0.20	2.5	0.020	0.22	-0.0020	0	0.20	0.24	3.2
2002-03-01	0	3.3	0.16	0.13	-0.0016	0	0	0.16	3.4
2002	2.7	13	-0.60	0.75	-0.0087	0	2.7	2.1	20
2002-11-01	0.12	4.2	0.043	0.024	-0.0020	0	0.12	0.12	6.3
2002-12-01	0.87	2.5	-0.61	0.020	-0.0016	0	0.87	0.28	4.4
2003-01-01	0.98	1.6	-0.020	0.20	-0.0016	0	0.98	0.94	3.4
2003-02-01	0.35	2.9	0.094	0.23	-0.0020	0	0.35	0.47	3.1
2003-03-01	5.0	-2.4	-3.8	0.36	-0.0012	0	5.0	1.1	3.6
2003	7.3	8.8	-4.3	0.83	-0.0083	0	7.3	3.0	21

Table IV-B.20 SC1 Winter Storm Period Water Balance

Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
2003-11-01	0.079	4.6	0.10	0.055	-0.0012	0	0.079	0.16	6.3
2003-12-01	0.87	2.0	-0.33	0.16	-0.0012	0	0.87	0.55	3.9
2004-01-01	0.98	1.9	-0.32	0.20	-0.00079	0	0.98	0.63	3.9
2004-02-01	1.5	0.94	-0.59	0.19	-0.0012	0	1.5	0.87	3.1
2004-03-01	0.67	2.0	-0.0039	0.41	-0.0012	0	0.67	0.67	3.0
2004	4.1	12	-1.1	1.0	-0.0055	0	4.1	2.9	20
2004-11-01	1.2	3.0	-0.50	0.29	-0.00079	0	1.2	0.71	6.4
2004-12-01	0.67	2.0	-0.024	0.22	-0.0012	0	0.67	0.63	3.5
2005-01-01	2.8	-0.039	-1.8	0.29	-0.00079	0	2.8	0.98	3.0
2005-02-01	4.2	-1.9	-2.1	0.43	-0.00079	0	4.2	2.1	2.7
2005-03-01	7.4	-5.3	-5.3	0.59	-0.00039	0	7.4	2.0	2.7
2005	16	-2.2	-9.8	1.8	-0.0039	0	16	6.5	18
2005-11-01	0.43	4.0	-0.11	0.16	-0.0012	0	0.43	0.31	6.4
2005-12-01	0	3.5	0.071	0.063	-0.0016	0	0	0.079	4.4
2006-01-01	0	2.8	0.039	0.047	-0.0016	0	0	0.039	3.5
2006-02-01	0	3.4	0.031	0.067	-0.0016	0	0	0.039	3.8
2006-03-01	0.12	3.3	-0.0079	0.083	-0.0020	0	0.12	0.079	4.1
2006	0.55	17	0.028	0.42	-0.0079	0	0.55	0.55	22


Annual Water Balance - 56-Year Simulated Period (Results on October 1)
Potential Surface Flux [in]
Actual Surface Flux [in]
Root Water Uptake [in]
Net Infiltration [in]
Surface Runoff [in]
Surface Infiltration [in]
Evaporation [in]
Precipitation (in)
Potential Evapotranspiration [in]
Monthly Water Balance - 9 Wet Years (1983 - 1991)
Potential Surface Flux [in]
Actual Surface Flux [in]
Root Water Uptake [in]
Net Infiltration [in]
Surface Runoff [in]
Surface Infiltration [in]
Evaporation [in]
Precipitation [in]
Potential Evapotranspiration [in]
Net Infiltration 1%
Surface Runoff 0%
Root Water Uptake 36%
Evaporation 63%
Depth (ft)
VEG
SOIL-LIKE GILA
NEAR DAM SCAVENGER BEACH
NOT FOR CONSTRUCTION
TO BE READ WITH KLOHN CRIPPEN BERGER REPORT DATED MAY 2021
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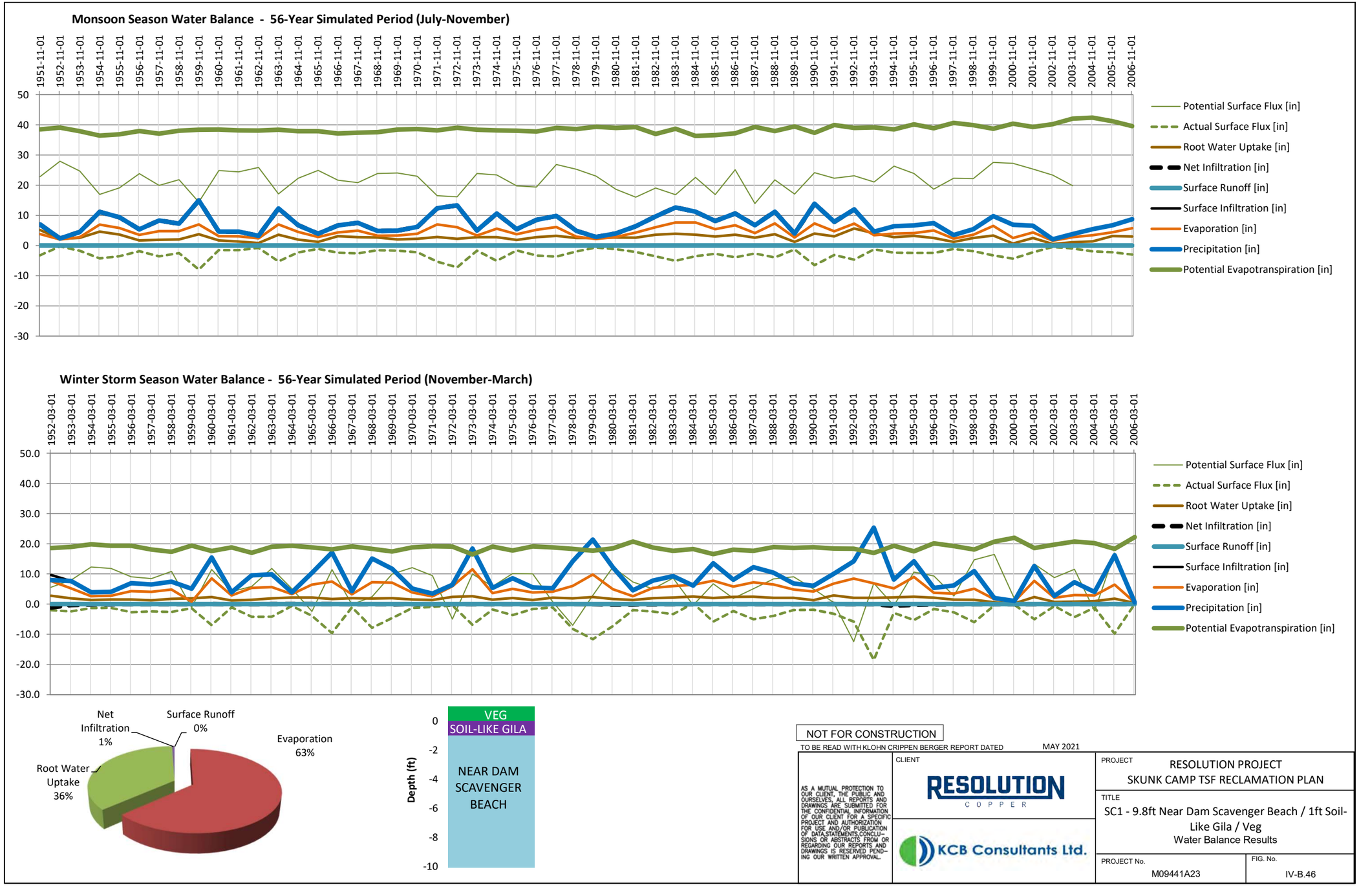
PROJECT
RESOLUTION PROJECT
SKUNK CAMP TSF RECLAMATION PLAN
TITLE
SC1 - 9.8ft Near Dam Scavenger Beach / 1ft Soil-Like Gila / Veg
Water Balance Results
PROJECT No.
M09441A23
FIG. No.
IV-B.45


Monsoon Season Water Balance - 56-Year Simulated Period (July-November)
Winter Storm Season Water Balance - 56-Year Simulated Period (November-March)
Potential Surface Flux [in]
Actual Surface Flux [in]
Root Water Uptake [in]
Net Infiltration [in]
Surface Runoff [in]
Surface Infiltration [in]
Evaporation [in]
Precipitation [in]
Potential Evapotranspiration [in]
Net Infiltration 1%
Surface Runoff 0%
Evaporation 63%
Root Water Uptake 36%
Depth (ft)
VEG
SOIL-LIKE GILA
NEAR DAM SCAVENGER BEACH
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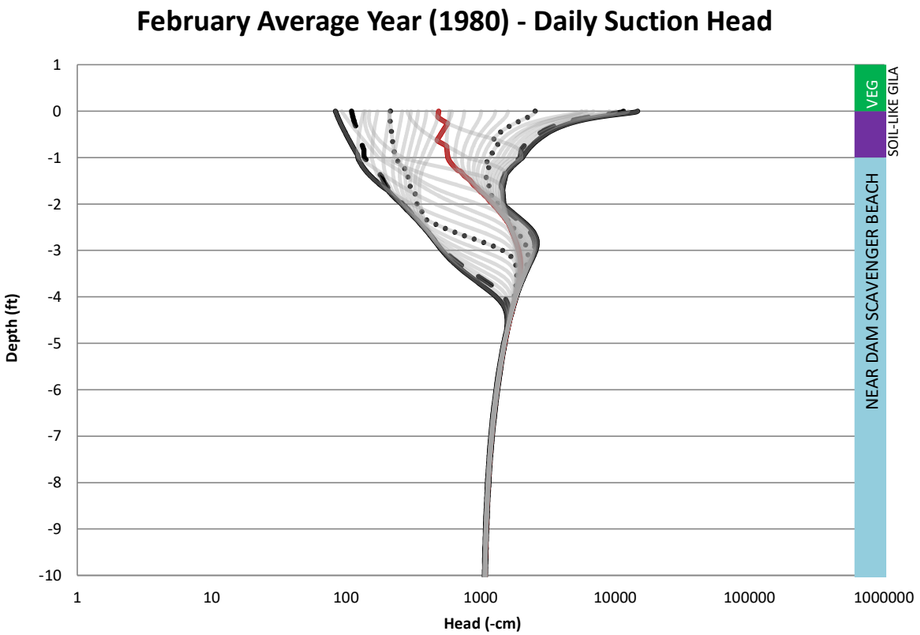
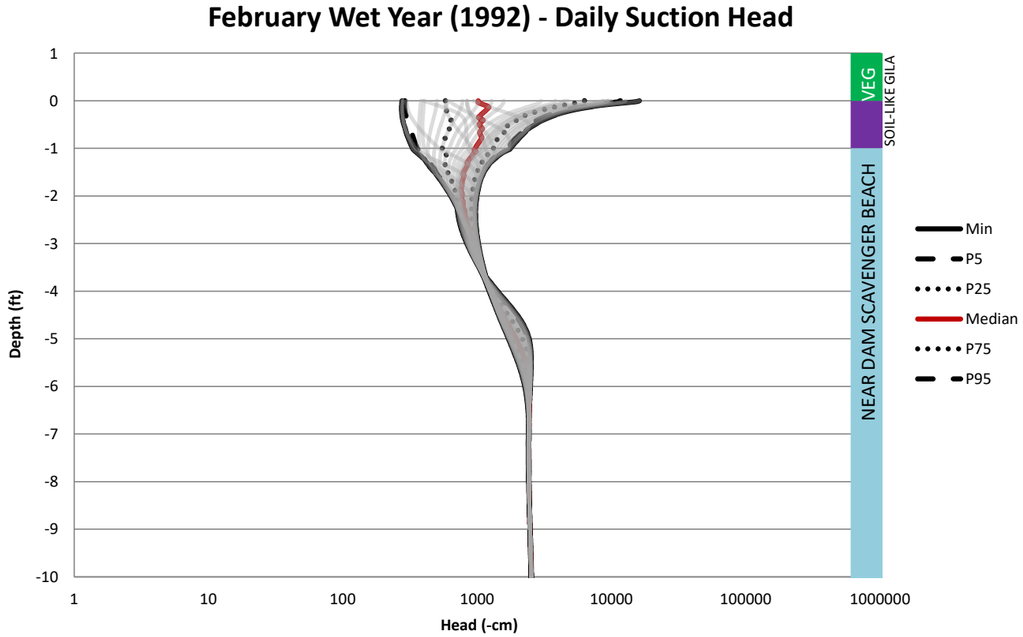
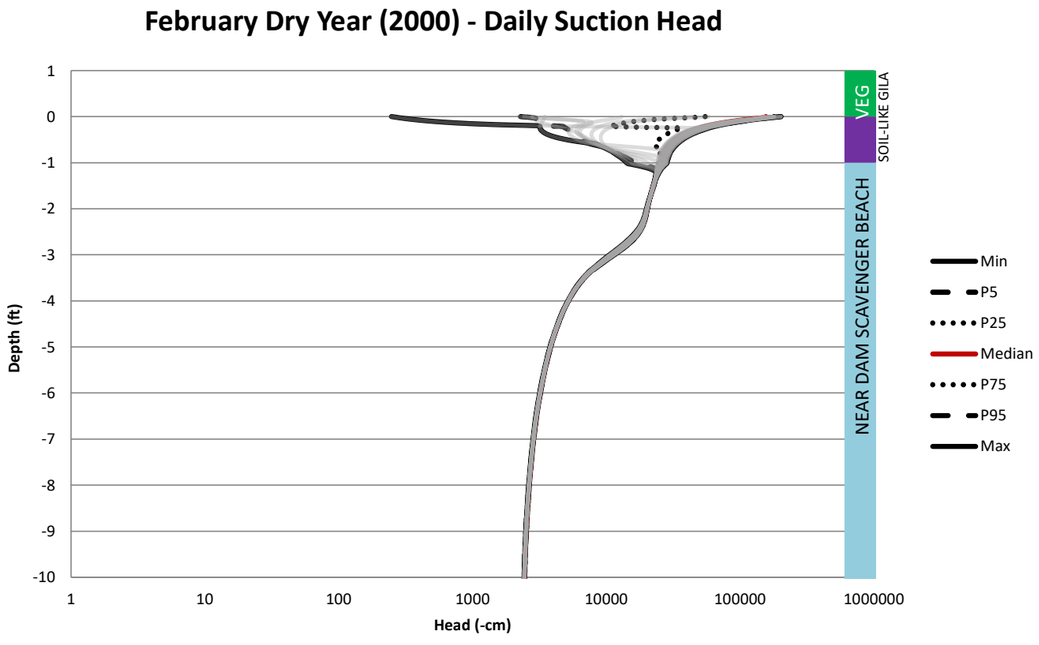
SKUNK CAMP TSF RECLAMATION PLAN
TITLE
SC1 - 9.8ft Near Dam Scavenger Beach / 1ft Soil-Like Gila / Veg
Water Balance Results
PROJECT No.
M09441A23
FIG. No.
IV-B.46







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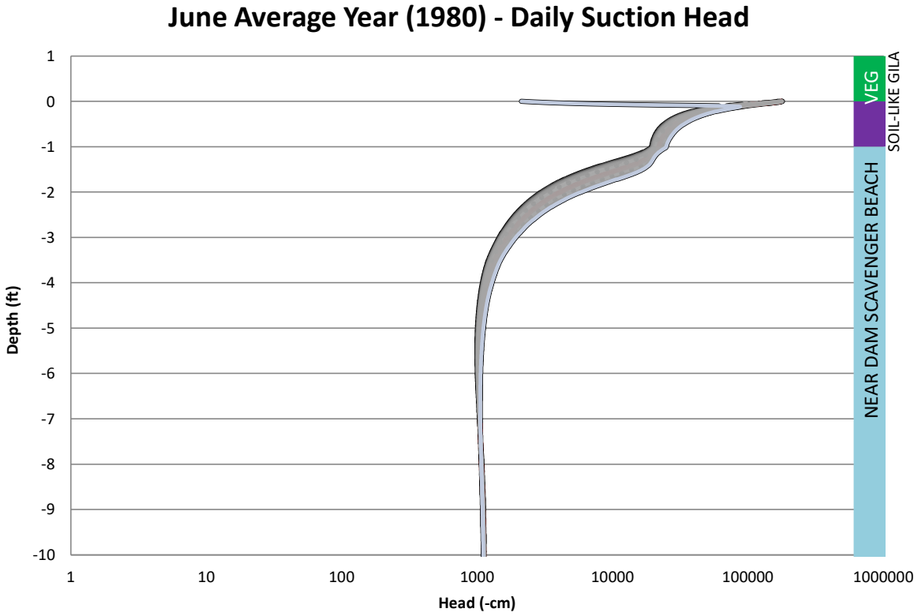
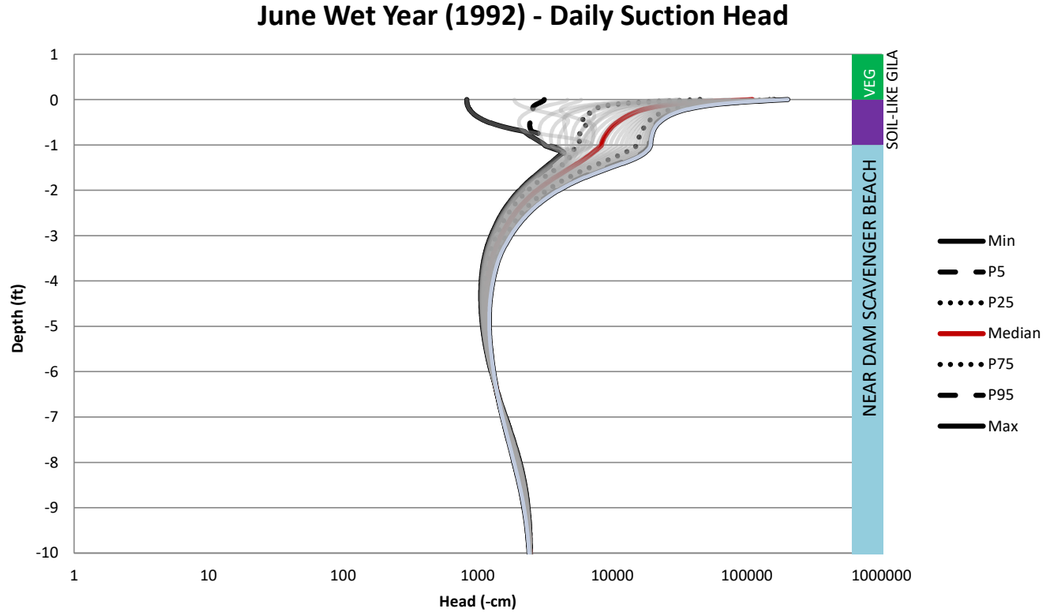
SKUNK CAMP TSF RECLAMATION PLAN

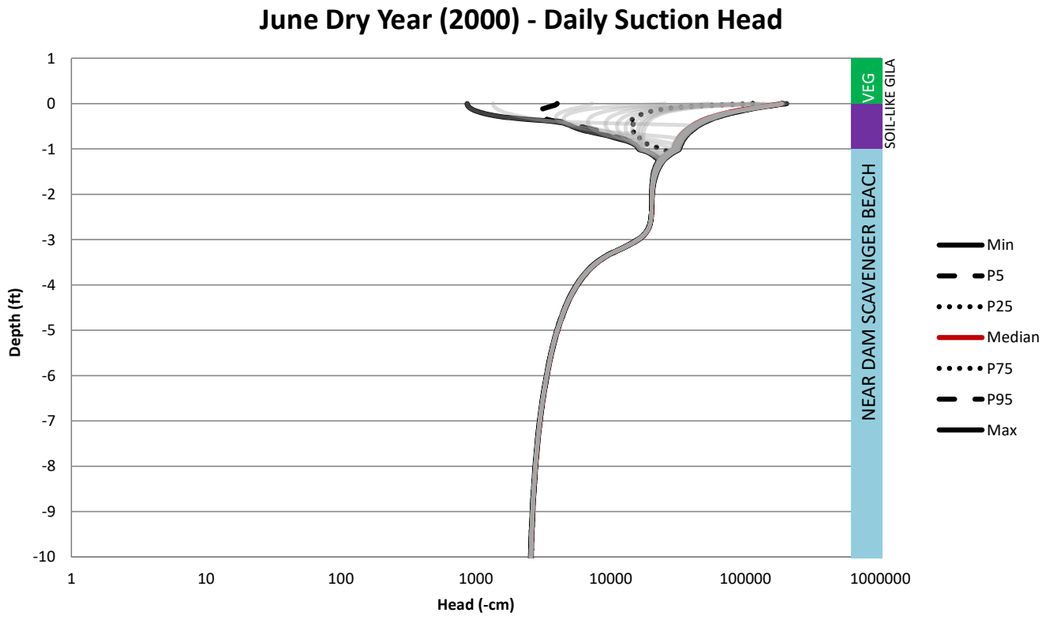
TITLE: SC1 - 9.8ft Near Dam Scavenger Beach / 1ft Soil-Like Gila / Veg
Suction Profiles - Winter (February)

PROJECT No. M09441A23

FIG. No. IV-B.47







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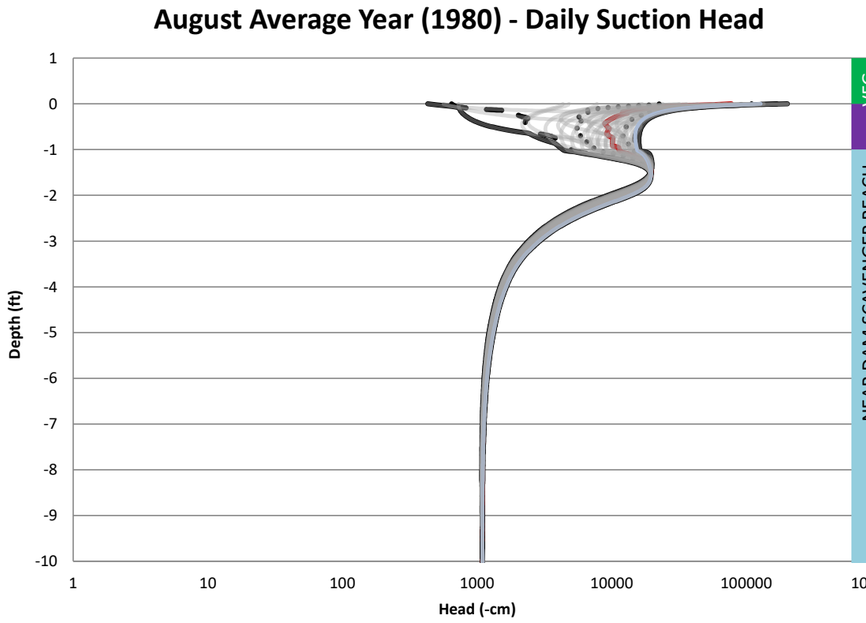
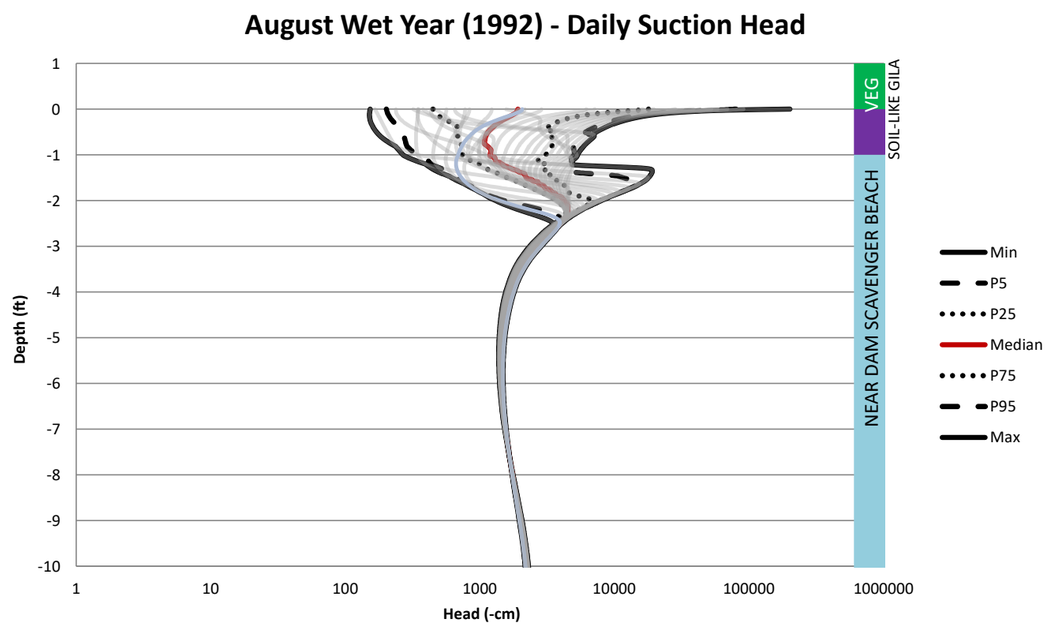
SKUNK CAMP TSF RECLAMATION PLAN

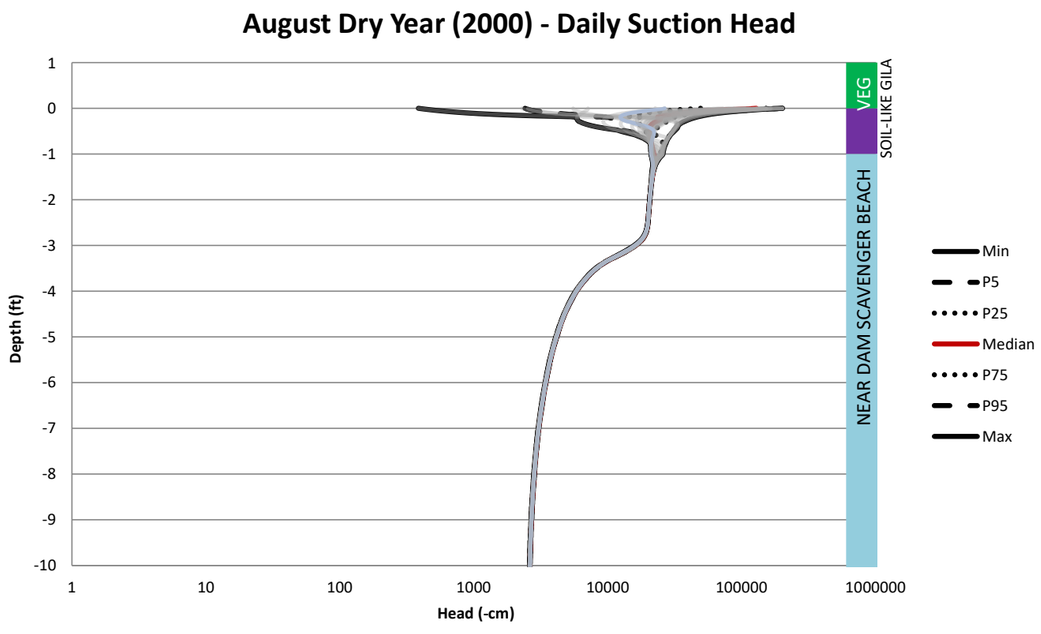
TITLE: SC1 - 9.8ft Near Dam Scavenger Beach / 1ft Soil-Like Gila / Veg
Suction Profiles - Dry Season (June)

PROJECT No. M09441A23

FIG. No. IV-B.48







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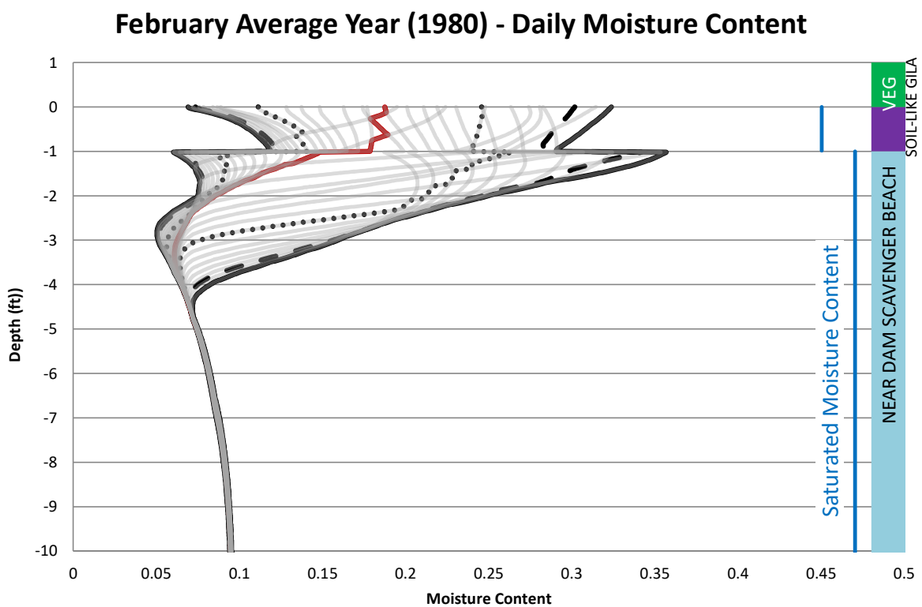
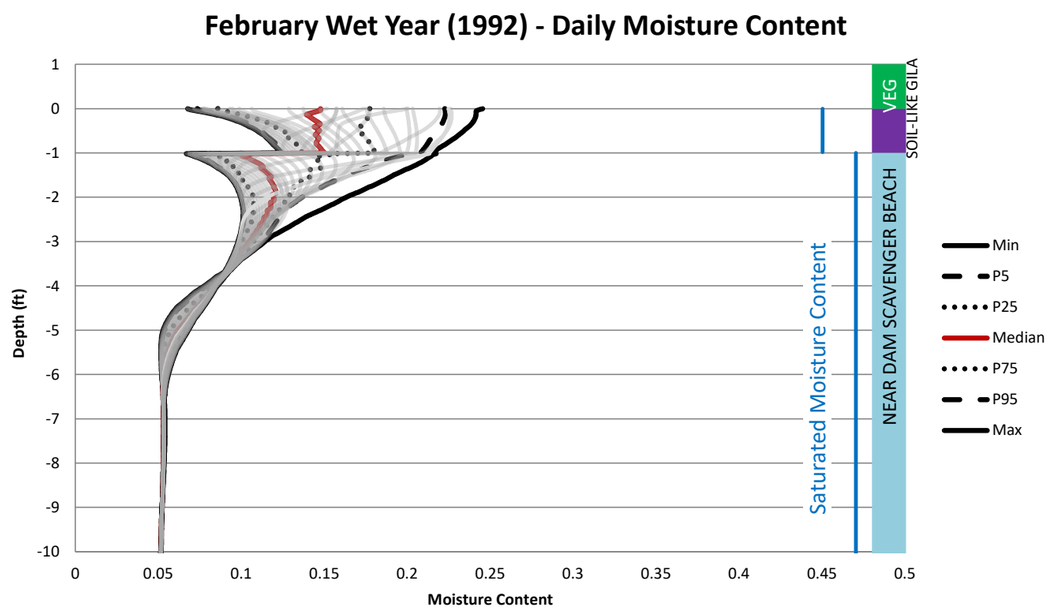
SKUNK CAMP TSF RECLAMATION PLAN

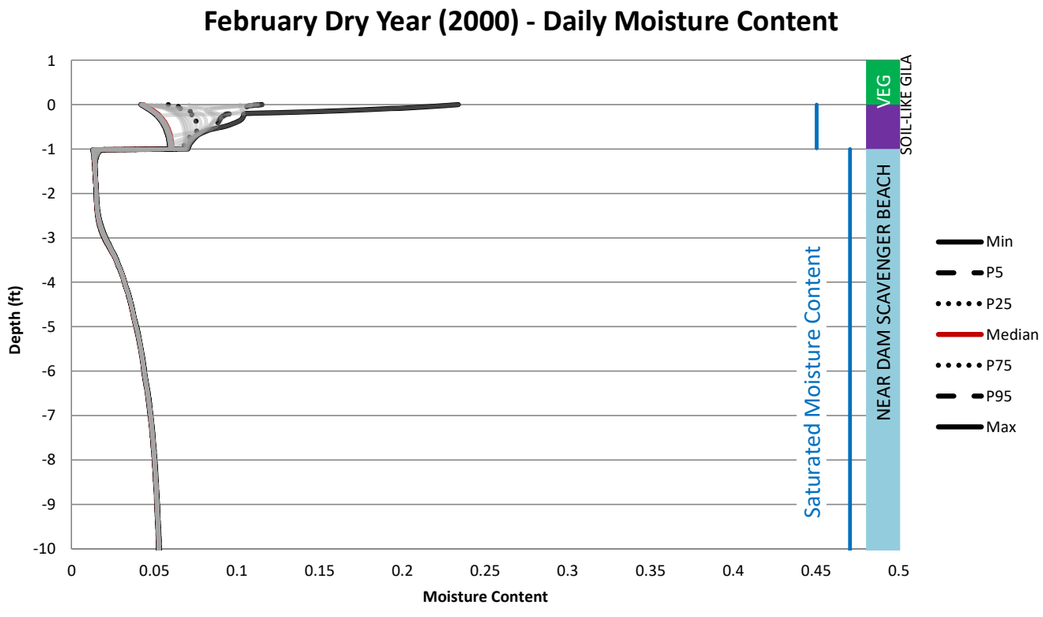
TITLE: SC1 - 9.8ft Near Dam Scavenger Beach / 1ft Soil-Like Gila / Veg
Suction Profiles - Summer Monsoon (August)

PROJECT No. M09441A23

FIG. No. IV-B.49







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CLIENT: RESOLUTION COPPER

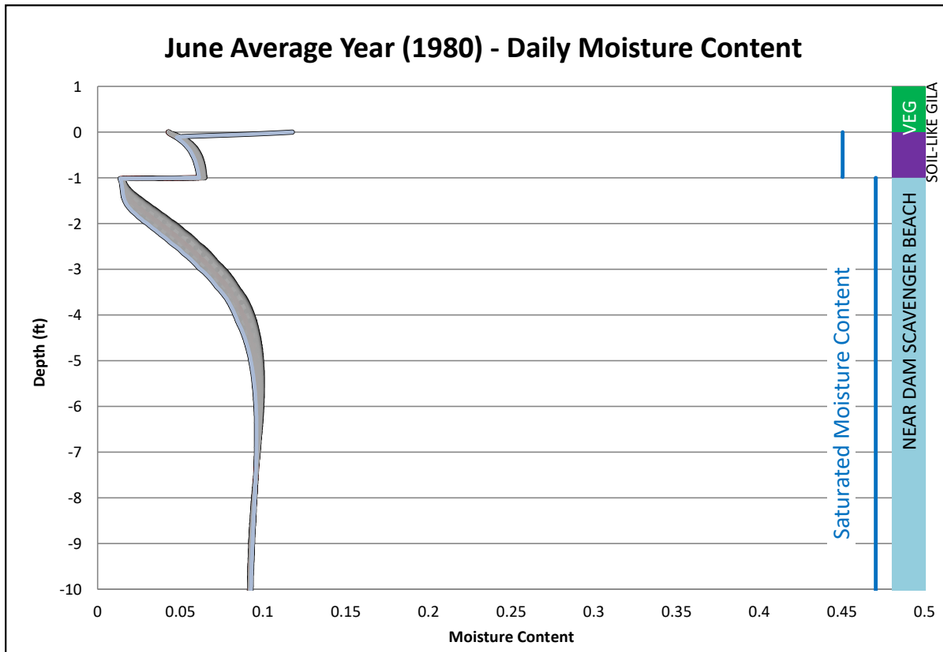
KCB Consultants Ltd.

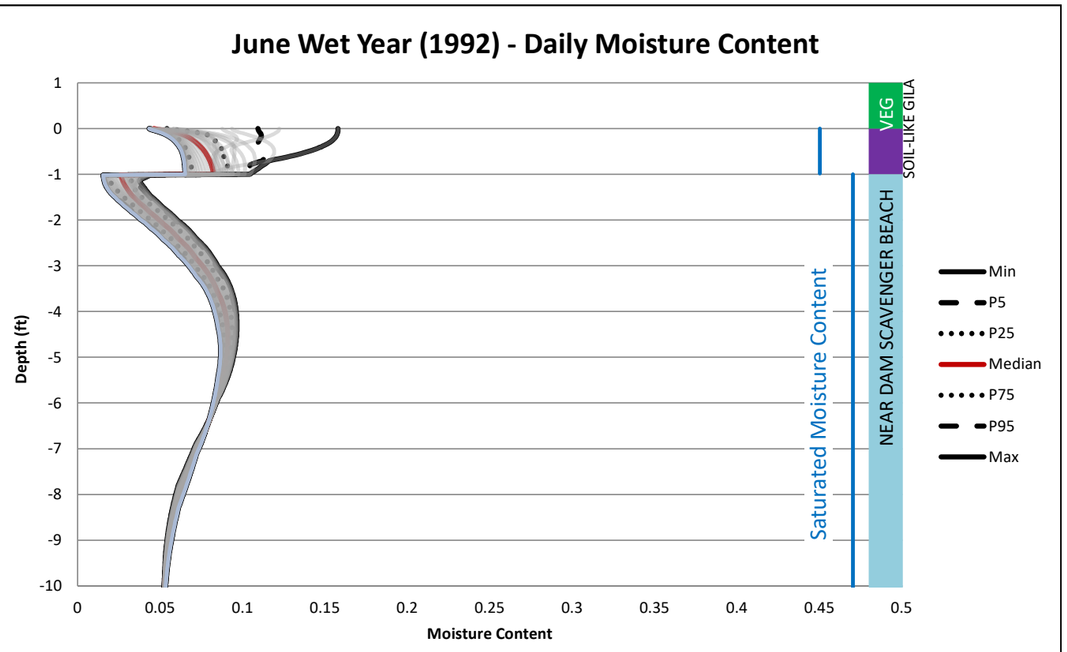
PROJECT: RESOLUTION PROJECT
SKUNK CAMP TSF RECLAMATION PLAN

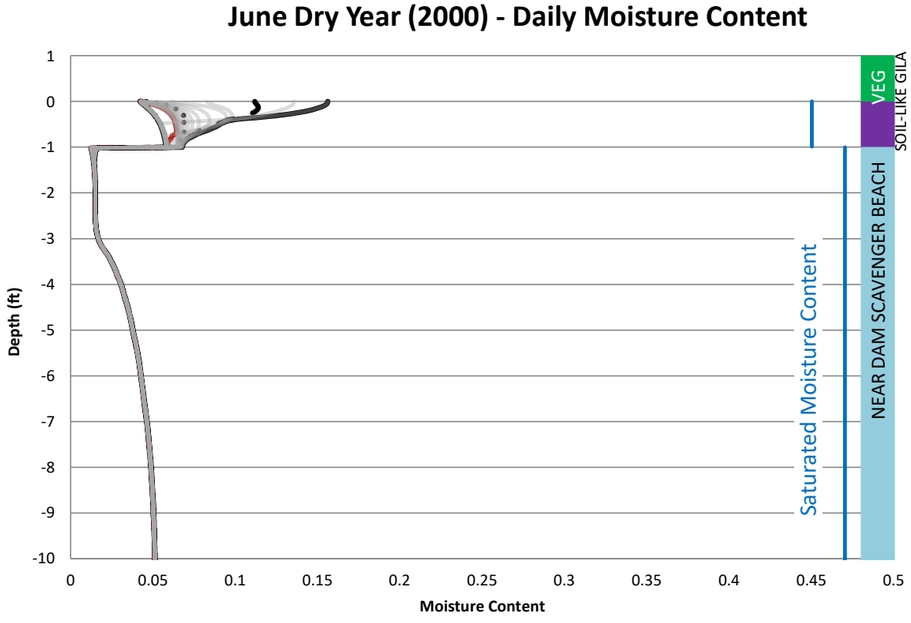
TITLE: SC1 - 9.8ft Near Dam Scavenger Beach / 1ft Soil-Like Gila / Veg
Moisture Content - Winter (February)

PROJECT No. M09441A23

FIG. No. IV-B.50







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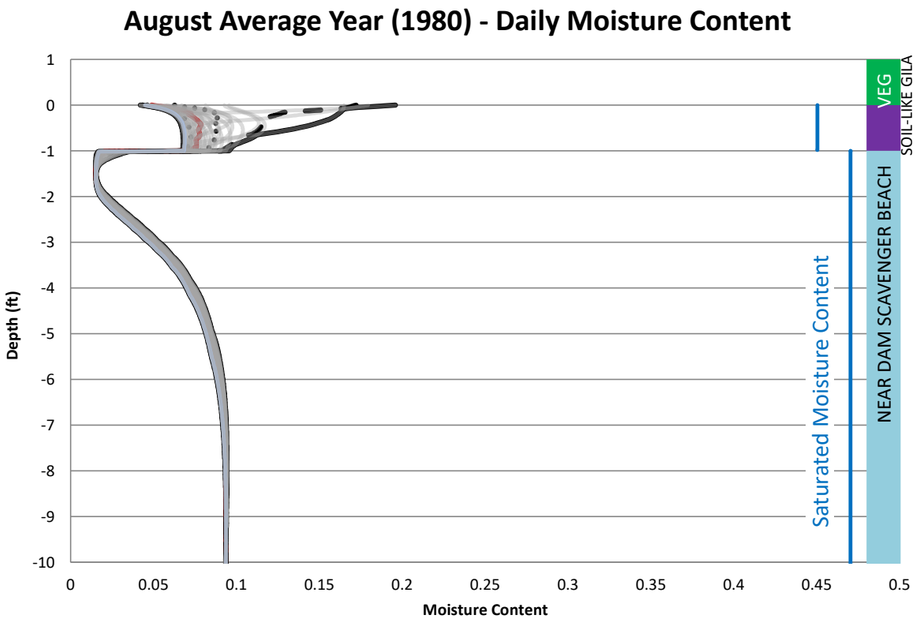
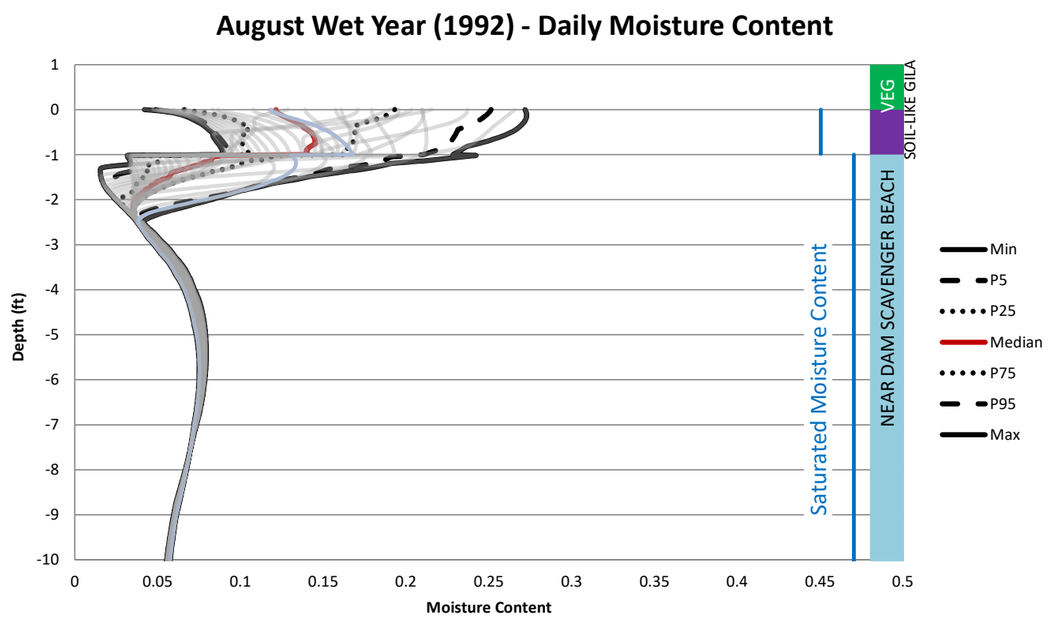
PROJECT: RESOLUTION PROJECT
SKUNK CAMP TSF RECLAMATION PLAN

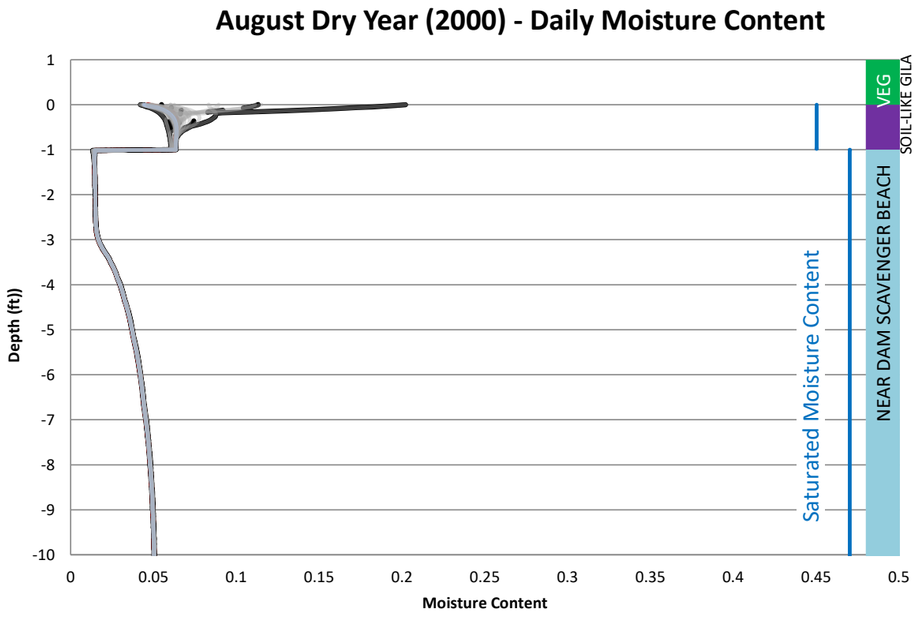
TITLE: SC1 - 9.8ft Near Dam Scavenger Beach / 1ft Soil-Like Gila / Veg
Moisture Content - Dry Season(June)

PROJECT No. M09441A23

FIG. No. IV-B.51







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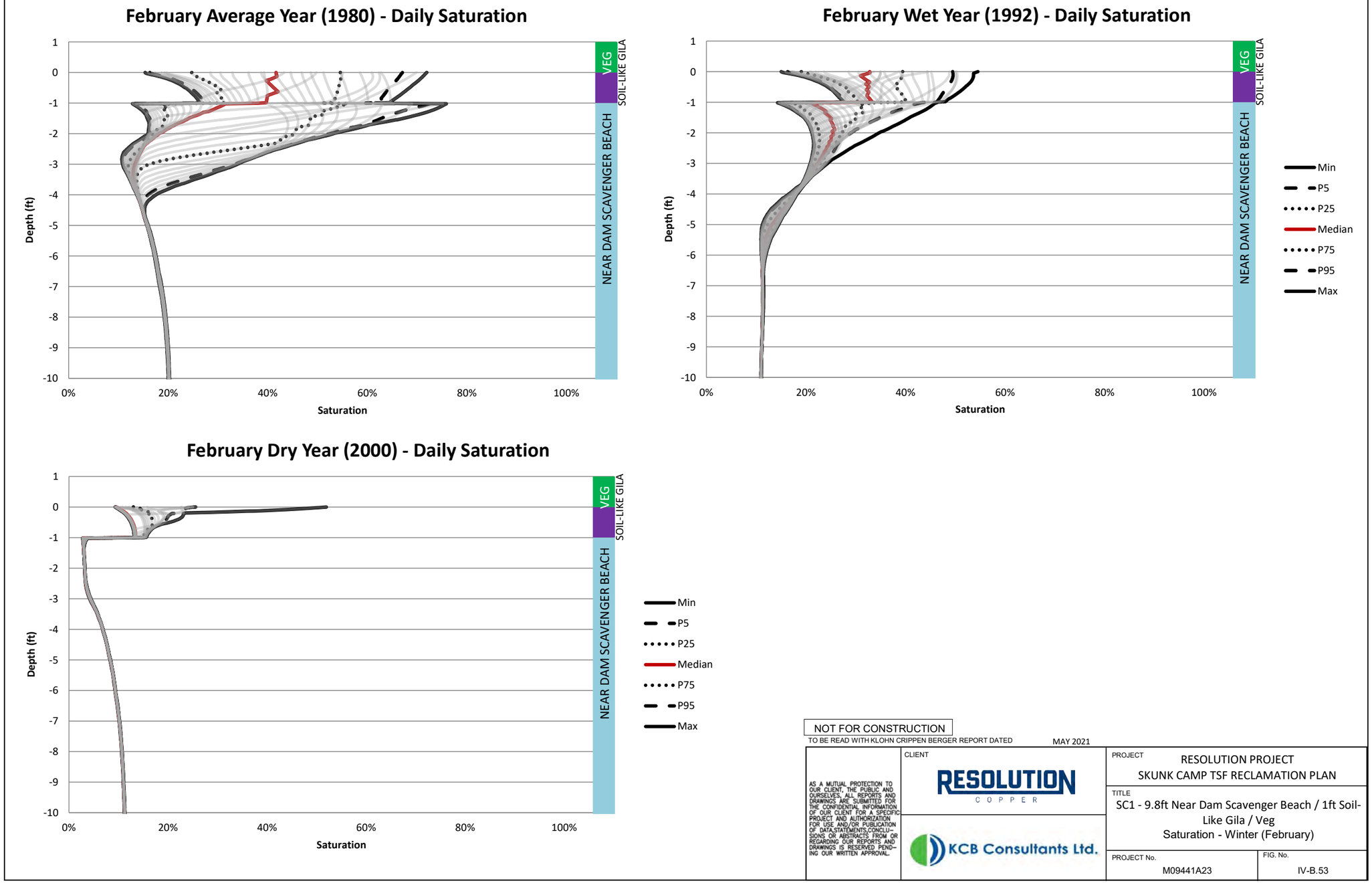
PROJECT: RESOLUTION PROJECT
SKUNK CAMP TSF RECLAMATION PLAN

TITLE: SC1 - 9.8ft Near Dam Scavenger Beach / 1ft Soil-Like Gila / Veg
Moisture Content - Summer Monsoon (August)

PROJECT No. M09441A23

FIG. No. IV-B.52



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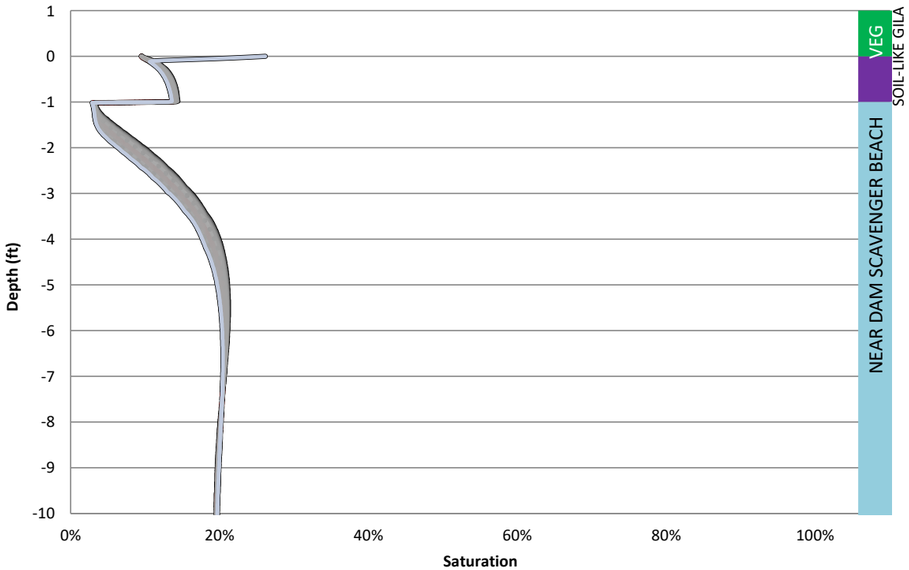
PROJECT: RESOLUTION PROJECT
SKUNK CAMP TSF RECLAMATION PLAN

TITLE: SC1 - 9.8ft Near Dam Scavenger Beach / 1ft Soil-Like Gila / Veg
Saturation - Winter (February)

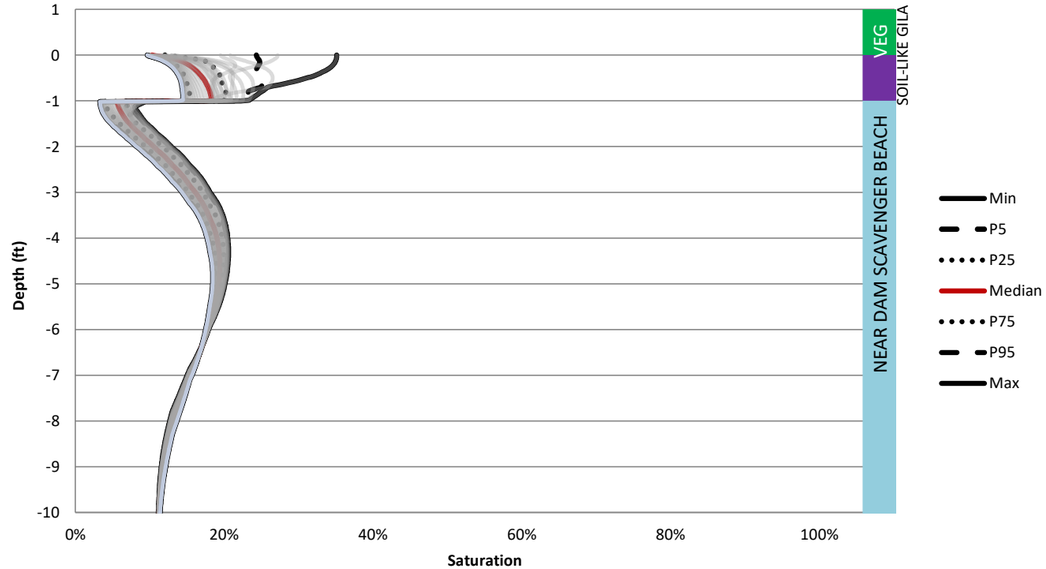
PROJECT No. M09441A23

FIG. No. IV-B.53

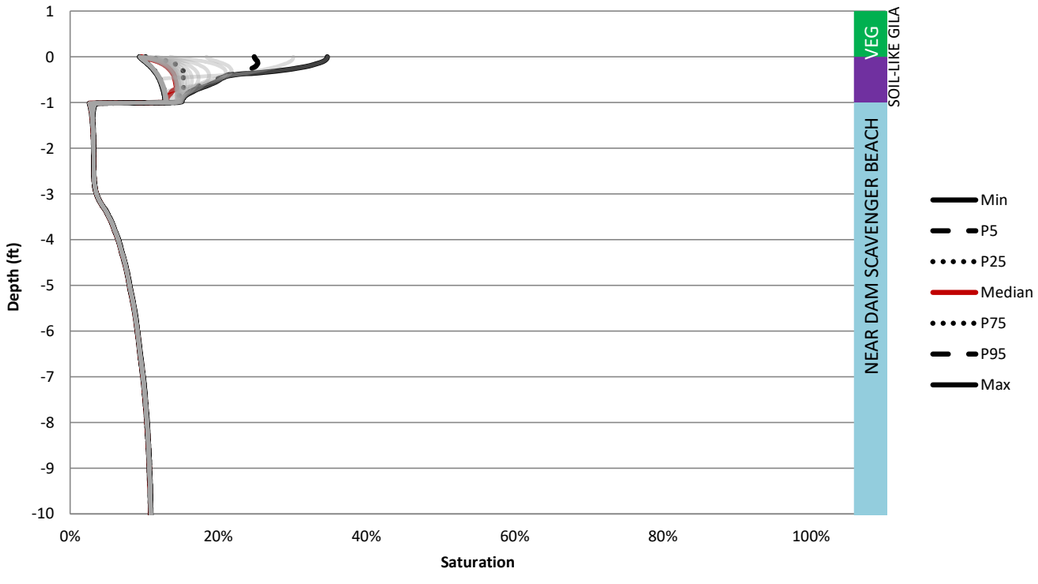
June Average Year (1980) - Daily Saturation



June Wet Year (1992) - Daily Saturation



June Dry Year (2000)- Daily Saturation



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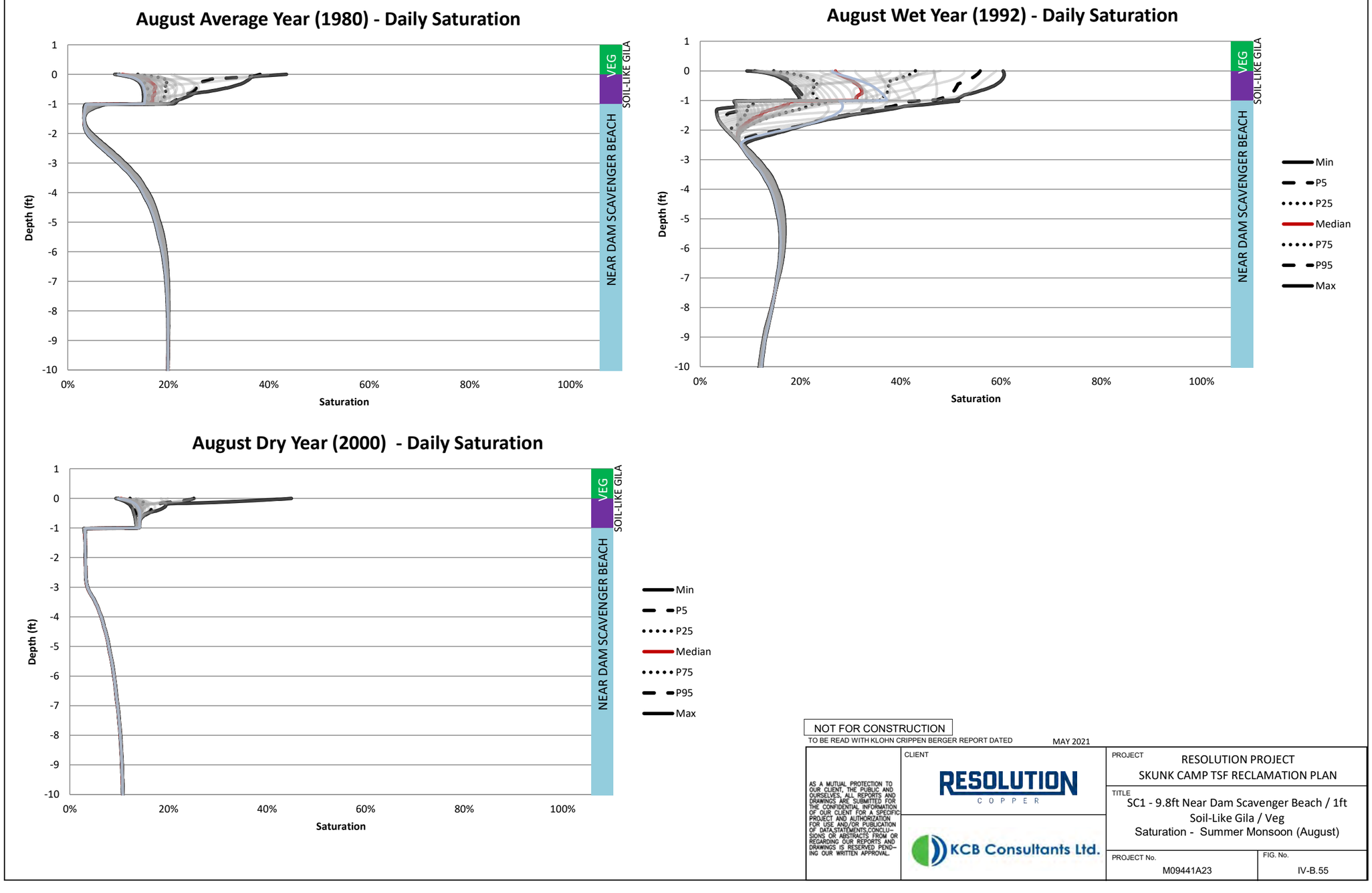
KCB Consultants Ltd.

PROJECT: RESOLUTION PROJECT
SKUNK CAMP TSF RECLAMATION PLAN

TITLE: SC1 - 9.8ft Near Dam Scavenger Beach / 1ft Soil-Like Gila / Veg
Saturation - Dry Season (June)

PROJECT No. M09441A23

FIG. No. IV-B.54


August Average Year (1980) - Daily Saturation
August Wet Year (1992) - Daily Saturation
August Dry Year (2000) - Daily Saturation
Depth (ft)
Saturation
VEG
SOIL-LIKE GILA
NEAR DAM SCAVENGER BEACH
Min
P5
P25
Median
P75
P95
Max
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MAY 2021
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CLIENT
RESOLUTION COPPER
KCB Consultants Ltd.
PROJECT
RESOLUTION PROJECT
SKUNK CAMP TSF RECLAMATION PLAN
TITLE
SC1 - 9.8ft Near Dam Scavenger Beach / 1ft Soil-Like Gila / Veg
Saturation - Summer Monsoon (August)
PROJECT No.
M09441A23
FIG. No.
IV-B.55

Table IV-B.21 SC2 Annual Water Balance

Water Year	Result Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
		(in)	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
1951	1951-10-01	14	32	-9.4	11	-4.1	0	14	4.6	60
1952	1952-10-01	0	35	-14	12	-2.99	0	20	6.4	72
1953	1953-10-01	15	40	-11.6	12	-2.38	0	15	3.8	72
1954	1954-10-01	21	34	-16	13	-1.16	0	21	5.1	72
1955	1955-10-01	13	42	-9.6	11.5	-0.934	0	13	3.8	72
1956	1956-10-01	13	45	-8.6	10.7	-0.689	0	13	4.0	74
1957	1957-10-01	15	40	-9.9	10.4	-0.430	0	15	5.2	71
1958	1958-10-01	19	35	-13	11	-0.250	0	19	6.5	70
1959	1959-10-01	16	42	-10.9	10.2	-0.206	0	16	4.6	75
1960	1960-10-01	19	37	-15	11	-0.801	0	19	4.5	73
1961	1961-10-01	9.8	46	-5.5	8.0	-0.9185	0	9.8	4.2	73
1962	1962-10-01	14	40	-9.9	8.7	-0.3783	0	14	4.3	71
1963	1963-10-01	24	33	-18	12	-0.3453	0	24	5.3	73
1964	1964-10-01	11	44	-6.2	10.4	-0.6602	0	11	5.2	72
1965	1965-10-01	18	37	-12	12	-0.5606	0	18	5.3	71
1966	1966-10-01	23	32	-18	10	-1.6516	0	23	4.4	72
1967	1967-10-01	14	42	-9.8	12.4	-1.4736	0	14	4.4	72
1968	1968-10-01	22	33	-18	12	-2.0252	0	22	4.5	71
1969	1969-10-01	19	37	-13	12	-2.2697	0	19	5.2	72
1970	1970-10-01	16	40	-10.7	11.0	-1.2618	0	16	5.1	72
1971	1971-10-01	12	44	-8.4	8.4	-0.5760	0	12	3.7	73
1972	1972-10-01	11	48	-7.3	9.6	-0.4087	0	11	3.8	76
1973	1973-10-01	31	22	-23	13	-1.4827	0	31	8	69
1974	1974-10-01	15	40	-10.5	11.8	-1.7984	0	15	4.8	72
1975	1975-10-01	19	34	-13	13	-0.9362	0	19	6.1	69
1976	1976-10-01	16	40	-11.1	10.7	-0.7453	0	16	4.9	72
1977	1977-10-01	16	40	-11.0	11.3	-0.3528	0	16	5.1	73
1978	1978-10-01	24	31	-18	13	-0.8055	0	24	5.7	71
1979	1979-10-01	30	25	-23	12	-6.4126	0	30	7	71
1980	1980-10-01	20	35	-15	12	-4.0882	0	20	5.6	71
1981	1981-10-01	15	43	-10.8	12.5	-1.9843	0	15	4.3	75
1982	1982-10-01	24	31	-16	13	-0.8465	0	24	7.3	69
1983	1983-10-01	27	27	-20	13	-1.2756	0	27	7	69
1984	1984-10-01	18	37	-10.9	13	-2.71654	0	18	6.6	71
1985	1985-10-01	22	29	-16	12	-2.49213	0	22	6.5	67
1986	1986-10-01	21	33	-15	13	-1.98819	0	21	6.3	70
1987	1987-10-01	20	34	-14	13	-2.16535	0	20	5.7	70
1988	1988-10-01	23	32	-16	12	-1.86220	0	23	6.4	71
1989	1989-10-01	12	45	-7.8	10.9	-2	0	12	3.9	74
1990	1990-10-01	23	32	-17	11	-0.83858	0	23	5.9	71
1991	1991-10-01	23	32	-16	13	-2.00787	0	23	6.3	71
1992	1992-10-01	36	18	-27	14	-6	0	36	9	70
1993	1993-10-01	33	21	-27	13	-17.09449	0	33	6	70
1994	1994-10-01	15	41	-10.7	12.8	-4.4882	0	15	4.6	73
1995	1995-10-01	25	30	-18	12	-2.3228	0	25	6.3	71
1996	1996-10-01	13	43	-8.7	12.1	-1.7087	0	13	4.7	74
1997	1997-10-01	10	48	-6.5	9.4	-0.7165	0	10	3.6	75
1998	1998-10-01	20	33	-14	12	-0.3465	0	20	6.2	69
1999	1999-10-01	15	42	-9.9	9.8	-0.3780	0	15	5.0	73
2000	2000-10-01	5.4	54	-3.4	6.1	-0.2008	0	5.4	2.0	77
2001	2001-10-01	23	31	-17	12	-0.1457	0	23	6	71
2002	2002-10-01	5.4	53	-3.0	5.8	-0.2756	0	5.4	2.5	75
2003	2003-10-01	13	46	-8.8	8.6	-0.1732	0	13	4.3	76
2004	2004-10-01	12	47	-8.0	8.4	-0.1181	0	12	4.2	77

Table IV-B.21 SC2 Annual Water Balance

Water Year	Result Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
		(in)	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
2005	2005-10-01	24	32	-19	11	-0.19291	0	24	5.2	72
2006	2006-10-01	12	46	-8.3	10.2	-0.62205	0	12	3.8	75

Table IV-B.22 SC2 Monthly Water Balance 9 Wet Years (1983 to 1991)

Month	Result Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
		[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
Nov-82	1982-11-30	0	4	-1.7	1.2	-0.11417	0	2.5	0.8	8.8
Dec-82	1982-12-30	2.5	0	-1.7	0.4	0	0	2.5	0.8	2.72
Jan-83	1983-01-29	0.67	2	-0.51	0.50	0	0	0.67	0.18	3.03
Feb-83	1983-02-28	3.5	-1	-3.0	0.7	0	0	3.5	0.6	2.93
Mar-83	1983-03-30	5.4	-3	-4.4	1.1	0	0	5.4	1.0	4.0
Apr-83	1983-04-29	0.83	4	-0.24	1.60	0	0	0.83	0.56	5.3
May-83	1983-05-29	0	6	0.039	1	-0.10630	0	0	0.024	7.9
Jun-83	1983-06-28	0	7	0.000	0.9882	0	0	0	0.024	9.4
Jul-83	1983-07-28	2.1	5	-1.6	1.4	0	0	2.1	0.53	9.6
Aug-83	1983-08-27	3.8	2	-2.4	1.8	0	0	3.8	1.4	7.2
Sep-83	1983-09-26	1.8	4	-0.98	1.64	-0.19291	0	1.8	0.83	7.5
Oct-83	1983-10-26	4.9	-1	-4.1	0.9	0	0	4.9	0.8	5.1
Nov-83	1983-11-25	1.6	2	-1.34	0.57	0	0	1.6	0.30	4.2
Dec-83	1983-12-25	1.9	0	-1.4	0.4	0	0	1.9	0.51	2.61
Jan-84	1984-01-24	1.5	1	-0.91	0.42	0	0	1.5	0.63	2.70
Feb-84	1984-02-23	0	3	0.079	1	0	0	0	0.043	3.7
Mar-84	1984-03-24	0	4	0.000	0.8543	-0.26378	0	0	0.012	5.0
Apr-84	1984-04-23	0.87	4	-0.55	1.31	0	0	0.87	0.30	6.5
May-84	1984-05-23	0.67	5	-0.31	1.29	0	0	0.67	0.37	7.5
Jun-84	1984-06-22	0.039	7	0.039	1	0	0	0.039	0.055	9.3
Jul-84	1984-07-22	3.6	2	-2.5	1.4	-0.23622	0	3.6	1.1	8.5
Aug-84	1984-08-21	3.9	1	-2.2	1.7	0	0	3.9	1.7	6.9
Sep-84	1984-09-20	1.1	4	-0.43	1.68	0	0	1.1	0.72	7.0
Oct-84	1984-10-20	2.5	1	-1.6	1.0	0	0	2.5	0.9	5.6
Nov-84	1984-11-19	0	4	0.079	0.6654	0	0	0	0.055	4.2
Dec-84	1984-12-19	4.8	-3	-4.1	0.4	0	0	4.8	0.7	3.1
Jan-85	1985-01-18	3.9	-2	-3.2	0.4	0	0	3.9	0.74	2.29
Feb-85	1985-02-17	2.9	-1	-2.2	0.5	0	0	2.9	0.7	2.31
Mar-85	1985-03-19	1.7	1	-0.91	1.03	-0.13780	0	1.7	0.78	3.6
Apr-85	1985-04-18	0.43	4	-0.08	1.65	0	0	0.43	0.39	5.4
May-85	1985-05-18	0.47	5	-0.24	1.10	0	0	0.47	0.22	6.7
Jun-85	1985-06-17	0	7	0.039	1	0	0	0	0.016	8.6
Jul-85	1985-07-17	0.24	6	-0.20	0.843	-0.30315	0	0.24	0.05	8.4
Aug-85	1985-08-16	2.1	4	-1.3	1.5	0	0	2.1	0.74	7.8
Sep-85	1985-09-15	2.2	3	-1.26	1.61	0	0	2.2	0.9	7.9
Oct-85	1985-10-15	3.1	1	-2.2	1.1	0	0	3.1	1.0	5.7
Nov-85	1985-11-14	1.4	2	-0.94	0.63	0	0	1.4	0.46	3.9
Dec-85	1985-12-14	2.7	0	-2.0	0.4	0	0	2.7	0.7	3.1
Jan-86	1986-01-13	0	3	0.276	0.47	0	0	0	0.252	3.3
Feb-86	1986-02-12	2.3	0	-1.9	0.51	-0.14173	0	2.3	0.5	3.6
Mar-86	1986-03-14	1.9	1	-1.5	1.1	0	0	1.9	0.50	3.7
Apr-86	1986-04-13	3.1	1	-2.4	1.5	0	0	3.1	0.7	4.9
May-86	1986-05-13	0	6	0.039	1	0	0	0	0.024	7.4
Jun-86	1986-06-12	0.039	7	0.000	1	-0.16142	0	0.039	0.024	9.1
Jul-86	1986-07-12	2.2	5	-1.7	1.2	0	0	2.2	0.45	9.2
Aug-86	1986-08-11	2.8	3	-1.9	1.7	0	0	2.8	1.0	7.5
Sep-86	1986-09-10	3.0	2	-1.97	1.65	0	0	3.0	1.0	7.3
Oct-86	1986-10-10	0.91	4	-0.43	1.22	0	0	0.91	0.47	6.1
Nov-86	1986-11-09	2.7	0	-2.0	0.7	0	0	2.7	0.7	4.6
Dec-86	1986-12-09	2.6	0	-2.2	0.47	0	0	2.6	0.41	3.4
Jan-87	1987-01-08	1.5	1	-0.67	0.4	0	0	1.5	0.8	2.73
Feb-87	1987-02-07	3.1	-1	-2.3	0.5	0	0	3.1	0.8	2.91
Mar-87	1987-03-09	2.3	1	-1.8	1.0	0	0	2.3	0.46	3.4
Apr-87	1987-04-08	0.94	3	-0.47	1.50	0	0	0.94	0.45	5.0

Table IV-B.22 SC2 Monthly Water Balance 9 Wet Years (1983 to 1991)

Month	Result Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
		[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
May-87	1987-05-08	0.039	5	0.000	1	0	0	0.039	0.035	6.8
Jun-87	1987-06-07	0.31	6	0	1	0	0	0.31	0.24	8.2
Jul-87	1987-07-07	0.20	7	-0.039	1	-0.23228	0	0.20	0.13	9.2
Aug-87	1987-08-06	3.1	4	-2.6	1.6	0	0	3.1	0.52	8.9
Sep-87	1987-09-05	2.4	3	-1.7	1.8	0	0	2.4	0.60	7.5
Oct-87	1987-10-05	0.79	4	-0.24	1.38	0	0	0.79	0.57	6.7
Nov-87	1987-11-04	1.4	3	-1.02	0.83	0	0	1.4	0.37	5.8
Dec-87	1987-12-04	0.71	3	-0.28	0.6	0	0	0.71	0.41	3.8
Jan-88	1988-01-03	4.0	-2	-3.2	0.4	0	0	4.0	0.9	3.0
Feb-88	1988-02-02	3.6	-1	-3.0	0.4	0	0	3.6	0.63	2.36
Mar-88	1988-03-03	0.75	3	-0.43	0.94	0	0	0.75	0.30	3.6
Apr-88	1988-04-02	0.12	4	0	1	0	0	0.12	0.10	5.5
May-88	1988-05-02	2.4	2	-1.6	1.2	0	0	2.4	0.8	6.1
Jun-88	1988-06-01	0	7	0	2	0	0	0	0.051	8.0
Jul-88	1988-07-01	0.12	7	0.000	1	0	0	0.12	0.13	8.9
Aug-88	1988-07-31	2.5	4	-1.7	1.06	0	0	2.5	0.7	8.5
Sep-88	1988-08-30	6.7	-1	-5.0	1.8	0	0	6.7	1.6	7.3
Oct-88	1988-10-29	2.0	7	-1.2	2.3	-0.29921	0	2.0	0.83	12.7
Nov-88	1988-11-28	1.7	1	-1.4	0.55	0	0	1.7	0.31	4.1
Dec-88	1988-12-28	1.1	1	-0.59	0.4	0	0	1.1	0.52	3.1
Jan-89	1989-01-27	2.0	0	-1.34	0.4	0	0	2.0	0.62	2.41
Feb-89	1989-02-26	0.51	2	-0.157	0.827	0	0	0.51	0.37	3.3
Mar-89	1989-03-28	1.7	2	-1.5	1.02	0	0	1.7	0.23	5.3
Apr-89	1989-04-27	0	6	0.157	1.73	0	0	0	0.154	6.9
May-89	1989-05-27	0.16	6	0	1	0	0	0.16	0.17	8.3
Jun-89	1989-06-26	0	7	0.000	1	0	0	0	0.012	9.1
Jul-89	1989-07-26	0.079	7	0.000	0.748	0	0	0.079	0.059	9.0
Aug-89	1989-08-25	1.3	4	-0.67	0.98	0	0	1.3	0.67	8.0
Sep-89	1989-09-24	1.5	4	-1.2	1.3	0	0	1.5	0.30	7.3
Oct-89	1989-10-24	1.1	3	-0.59	0.87	0	0	1.1	0.48	6.1
Nov-89	1989-11-23	0.28	3	-0.16	0.472	0	0	0.28	0.13	4.5
Dec-89	1989-12-23	0	3	0.079	0.276	-0.09449	0	0	0.094	3.5
Jan-90	1990-01-22	2.2	0	-1.5	0.3	0	0	2.2	0.69	2.85
Feb-90	1990-02-21	2.5	0	-1.7	0.6	0	0	2.5	0.9	2.49
Mar-90	1990-03-23	0.83	3	-0.43	1.30	0	0	0.83	0.36	4.2
Apr-90	1990-04-22	1.0	4	-0.55	1.77	0	0	1.0	0.49	6.0
May-90	1990-05-22	1.1	5	-0.83	1.57	0	0	1.1	0.26	7.7
Jun-90	1990-06-21	0.39	7	-0.197	1	0	0	0.39	0.21	9.0
Jul-90	1990-07-21	0.94	6	-0.51	0.59	0	0	0.94	0.42	8.6
Aug-90	1990-08-20	9.6	-4	-8.5	1.1	0	0	9.6	1.0	7.8
Sep-90	1990-09-19	2.5	3	-2.0	1.6	0	0	2.5	0.48	7.1
Oct-90	1990-10-19	0.39	4	0.079	1.1	0	0	0.39	0.50	5.9
Nov-90	1990-11-18	1.6	2	-1.0	0.67	0	0	1.6	0.49	4.2
Dec-90	1990-12-18	2.8	0	-2.0	0.43	0	0	2.8	0.73	3.5
Jan-91	1991-01-17	4.7	-3	-3.7	0.4	0	0	4.7	0.9	2.33
Feb-91	1991-02-16	0.16	3	0	0.7	0	0	0.16	0.16	3.3
Mar-91	1991-03-18	3.6	0	-2.9	1.2	0	0	3.6	0.7	4.3
Apr-91	1991-04-17	3.3	1	-2.5	1.5	0	0	3.3	0.7	4.8
May-91	1991-05-17	0	6	0	1	0	0	0	0.020	7.4
Jun-91	1991-06-16	0.71	6	-0.276	1	-0.27165	0	0.71	0.45	8.7
Jul-91	1991-07-16	0.43	7	-0.24	1.26	0	0	0.43	0.19	9.4
Aug-91	1991-08-15	3.3	3	-2.4	1.5	0	0	3.3	1.0	8.4
Sep-91	1991-09-14	2.0	3	-1.3	1.7	0	0	2.0	0.75	7.5
Oct-91	1991-10-01	0.24	2	-0.079	0.787	0	0	0.24	0.16	3.5

Table IV-B.23 SC2 Monsoon Period Water Balance

Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
1951-07-01	0	7	0.014	0.95	-0.51	0	0	0.014	9.2
1951-08-01	1.1	6	-0.58	1.26	-0.44	0	1.1	0.47	9.5
1951-09-01	3.6	2	-2.9	1.6	-0.38	0	3.6	0.7	7.8
1951-10-01	0.65	4	-0.34	1.4	-0.32	0	0.65	0.31	6.6
1951-11-01	1.6	3	-1.2	0.75	-0.28	0	1.6	0.39	5.4
1951	7.0	23	-5.1	6.0	-1.92	0	7.0	1.9	39
1952-07-01	0.63	7	-0.236	1.23	-0.301	0	0.63	0.39	9.6
1952-08-01	0.56	6	-0.171	0.98	-0.337	0	0.56	0.39	8.8
1952-09-01	0.45	5	-0.16	1.10	-0.330	0	0.45	0.29	7.8
1952-10-01	0.70	5	-0.34	0.92	-0.294	0	0.70	0.36	7.0
1952-11-01	0	5	0.031	0.64	-0.268	0	0	0.031	5.9
1952	2.3	28	-0.87	4.9	-1.53	0	2.3	1.5	39
1953-07-01	0	7	0.009	0.920	-0.202	0	0	0.008	9.1
1953-08-01	2.7	4	-2.1	1.3	-0.205	0	2.7	0.62	8.8
1953-09-01	1.8	4	-1.14	1.9	-0.194	0	1.8	0.7	7.7
1953-10-01	0	5	0.061	1.376	-0.172	0	0	0.061	6.8
1953-11-01	0.012	4	0.012	0.464	-0.159	0	0.012	0.024	5.5
1953	4.5	25	-3.1	6.0	-0.933	0	4.5	1.4	38
1954-07-01	0.13	7	-0.028	0.972	-0.0717	0	0.13	0.10	9.0
1954-08-01	4.5	2	-3.4	1.5	-0.0732	0	4.5	1.0	7.8
1954-09-01	5.3	0	-4.3	1.9	-0.0728	0	5.3	1.0	7.4
1954-10-01	1.3	4	-0.73	1.43	-0.0681	0	1.3	0.56	6.6
1954-11-01	0	5	0.047	0.929	-0.0681	0	0	0.047	5.6
1954	11	17	-8.4	6.7	-0.354	0	11	2.7	36
1955-07-01	2.1	5	-1.7	1.5	-0.0835	0	2.1	0.36	9.1
1955-08-01	4.5	2	-3.5	1.3	-0.0839	0	4.5	0.9	7.9
1955-09-01	2.7	3	-1.7	1.8	-0.0795	0	2.7	1.0	7.2
1955-10-01	0.12	5	-0.0157	1.315	-0.0717	0	0.12	0.11	6.8
1955-11-01	0.020	5	0.016	0.496	-0.0677	0	0.020	0.034	5.9
1955	9.4	19	-6.9	6.4	-0.386	0	9.4	2.5	37
1956-07-01	0.24	7	-0.138	0.720	-0.0543	0	0.24	0.10	9.4
1956-08-01	2.8	4	-1.8	1.1	-0.0563	0	2.8	1.0	9.0
1956-09-01	1.7	4	-1.2	1.8	-0.0551	0	1.7	0.57	7.5
1956-10-01	0.075	5	-0.055	0.965	-0.0516	0	0.075	0.022	6.8
1956-11-01	0.53	4	-0.28	0.27	-0.0512	0	0.53	0.26	5.2
1956	5.4	24	-3.4	4.9	-0.269	0	5.4	1.9	38
1957-07-01	0.031	7	0.020	0.665	-0.0295	0	0.031	0.050	9.3
1957-08-01	1.1	5	-0.59	0.49	-0.0299	0	1.1	0.51	8.5
1957-09-01	3.4	2	-2.2	1.3	-0.0287	0	3.4	1.1	8.1
1957-10-01	0.57	5	-0.303	1.42	-0.0272	0	0.57	0.26	6.6
1957-11-01	3.2	0	-2.4	0.59	-0.0272	0	3.2	0.8	4.6
1957	8.3	20	-5.6	4.5	-0.1425	0	8.3	2.8	37
1958-07-01	0.70	6	-0.45	1.14	-0.0177	0	0.70	0.25	9.3
1958-08-01	0.78	6	-0.43	0.89	-0.0181	0	0.78	0.36	9.1
1958-09-01	0.85	5	-0.35	0.98	-0.0185	0	0.85	0.50	8.0
1958-10-01	3.0	2	-2.3	0.9	-0.0177	0	3.0	0.7	6.4
1958-11-01	1.9	2	-1.5	0.9	-0.0193	0	1.9	0.42	5.3
1958	7.3	22	-5.0	4.8	-0.0913	0	7.3	2.3	38
1959-07-01	1.0	6	-0.60	0.61	-0.0161	0	1.0	0.43	9.1
1959-08-01	3.8	4	-3.0	1.2	-0.0161	0	3.8	0.8	9.6
1959-09-01	5.3	0	-3.7	1.8	-0.01575	0	5.3	1.6	7.4
1959-10-01	0.051	5	0.028	1.114	-0.0154	0	0.051	0.071	6.9
1959-11-01	4.8	-1	-4.4	0.72	-0.01535	0	4.8	0.37	5.3
1959	15	14	-12	5.5	-0.0787	0	15	3.3	38
1960-07-01	0	7	0.012	0.933	-0.12559	0	0	0.012	9.2
1960-08-01	0.74	6	-0.46	1.11	-0.14488	0	0.74	0.28	9.2
1960-09-01	1.5	4	-0.74	1.54	-0.14488	0	1.5	0.80	8.1

Table IV-B.23 SC2 Monsoon Period Water Balance

Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
1960-10-01	0.27	5	-0.075	0.693	-0.13110	0	0.27	0.20	7.0
1960-11-01	2.1	2	-1.4	0.6	-0.12283	0	2.1	0.63	5.0
1960	4.6	25	-2.7	4.9	-0.6693	0	4.6	1.9	38
1961-07-01	0	7	0.008	0.2362	-0.05709	0	0	0.008	9.3
1961-08-01	0.67	6	-0.29	0.33	-0.05433	0	0.67	0.38	8.9
1961-09-01	3.0	3	-2.1	0.98	-0.04961	0	3.0	0.8	8.1
1961-10-01	0.50	4	0.063	1.29	-0.04488	0	0.50	0.56	6.3
1961-11-01	0.45	4	-0.32	0.346	-0.04213	0	0.45	0.14	5.4
1961	4.6	24	-2.7	3.2	-0.2480	0	4.6	1.9	38
1962-07-01	0	7	0.012	0.8780	-0.02795	0	0	0.008	9.1
1962-08-01	0.61	6	-0.26	0.78	-0.03071	0	0.61	0.36	8.9
1962-09-01	0.49	6	-0.22	0.65	-0.03228	0	0.49	0.27	8.4
1962-10-01	1.2	4	-0.61	0.46	-0.03228	0	1.2	0.62	6.6
1962-11-01	0.87	3	-0.42	0.58	-0.03307	0	0.87	0.46	5.1
1962	3.2	26	-1.5	3.4	-0.1563	0	3.2	1.7	38
1963-07-01	0	7	0.012	0.8386	-0.02677	0	0	0.012	9.0
1963-08-01	0.079	7	-0.020	0.567	-0.02953	0	0.079	0.059	9.4
1963-09-01	10	-5	-8.7	1.4	-0.02953	0	10	1.8	7.5
1963-10-01	1.0	4	-0.41	1.5	-0.03031	0	1.0	0.64	6.6
1963-11-01	0.67	4	-0.41	0.91	-0.03189	0	0.67	0.26	5.8
1963	12	17	-9.5	5.3	-0.1480	0	12	2.8	38
1964-07-01	0	7	0.012	0.5748	-0.06811	0	0	0.012	9.4
1964-08-01	1.5	5	-0.76	0.66	-0.06890	0	1.5	0.72	8.8
1964-09-01	2.2	4	-1.12	1.4	-0.06575	0	2.2	1.1	7.7
1964-10-01	1.6	3	-0.69	0.96	-0.06024	0	1.6	0.9	6.1
1964-11-01	1.5	3	-1.2	0.8	-0.05827	0	1.5	0.30	5.8
1964	6.8	22	-3.8	4.4	-0.3213	0	6.8	3.0	38
1965-07-01	0.10	7	-0.004	0.8976	-0.04252	0	0.10	0.10	8.8
1965-08-01	1.4	5	-0.75	1.12	-0.04882	0	1.4	0.69	8.9
1965-09-01	0.90	5	-0.45	1.31	-0.05236	0	0.90	0.45	8.0
1965-10-01	1.0	4	-0.58	0.95	-0.05157	0	1.0	0.46	6.6
1965-11-01	0.46	4	-0.26	0.40	-0.05276	0	0.46	0.20	5.7
1965	3.9	25	-2.1	4.7	-0.2480	0	3.9	1.9	38
1966-07-01	0.18	7	-0.051	0.906	-0.25315	0	0.18	0.13	9.1
1966-08-01	0.84	6	-0.40	1.08	-0.26220	0	0.84	0.44	8.3
1966-09-01	1.6	4	-1.09	1.31	-0.23898	0	1.6	0.52	8.1
1966-10-01	2.7	2	-2.1	1.4	-0.20906	0	2.7	0.53	6.5
1966-11-01	1.4	3	-0.92	0.93	-0.19528	0	1.4	0.44	5.1
1966	6.7	22	-4.6	5.7	-1.1587	0	6.7	2.1	37
1967-07-01	0.075	7	0.000	0.575	-0.09921	0	0.075	0.075	9.0
1967-08-01	4.0	2	-3.1	1.3	-0.09488	0	4.0	0.9	8.3
1967-09-01	2.5	4	-1.9	2.0	-0.08701	0	2.5	0.60	8.0
1967-10-01	0.56	4	-0.26	1.11	-0.07756	0	0.56	0.29	6.5
1967-11-01	0.42	4	-0.20	0.70	-0.07126	0	0.42	0.22	5.6
1967	7.5	21	-5.4	5.7	-0.4299	0	7.5	2.1	37
1968-07-01	0	7	0.012	0.961	-0.29882	0	0	0.012	9.3
1968-08-01	1.8	5	-1.18	1.21	-0.30669	0	1.8	0.66	8.9
1968-09-01	2.5	3	-1.5	1.8	-0.28268	0	2.5	1.0	7.3
1968-10-01	0.047	5	0.024	1.126	-0.23819	0	0.047	0.075	6.9
1968-11-01	0.39	4	-0.21	0.61	-0.21732	0	0.39	0.18	5.1
1968	4.8	24	-2.9	5.7	-1.3437	0	4.8	1.9	38
1969-07-01	0	7	0.016	0.953	-0.22323	0	0	0.016	9.4
1969-08-01	0.33	6	-0.102	0.913	-0.22598	0	0.33	0.23	8.7
1969-09-01	2.6	4	-1.6	1.7	-0.21260	0	2.6	0.9	8.3
1969-10-01	1.2	4	-0.76	1.46	-0.18858	0	1.2	0.48	6.8
1969-11-01	0.83	3	-0.55	0.79	-0.17520	0	0.83	0.28	5.2
1969	5.0	24	-3.0	5.9	-1.0256	0	5.0	1.9	38

Table IV-B.23 SC2 Monsoon Period Water Balance

Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
1970-07-01	0.079	7	0.004	0.866	-0.08150	0	0.079	0.087	9.1
1970-08-01	1.0	6	-0.52	1.02	-0.08110	0	1.0	0.52	9.1
1970-09-01	1.7	4	-0.95	0.94	-0.07756	0	1.7	0.8	8.0
1970-10-01	3.3	2	-2.8	1.4	-0.07008	0	3.3	0.55	7.0
1970-11-01	0	4	0.016	0.634	-0.06693	0	0	0.020	5.3
1970	6.2	23	-4.2	4.8	-0.3772	0	6.2	1.9	39
1971-07-01	0	7	0.008	0.272	-0.04094	0	0	0.012	9.0
1971-08-01	0.39	7	-0.15	0.31	-0.03976	0	0.39	0.23	9.2
1971-09-01	4.7	1	-3.3	1.4	-0.03504	0	4.7	1.4	7.8
1971-10-01	3.1	2	-2.6	1.40	-0.03228	0	3.1	0.42	7.1
1971-11-01	4.2	0	-3.3	0.9	-0.03189	0	4.2	0.9	5.1
1971	12	16	-9.4	4.2	-0.1799	0	12	2.9	38
1972-07-01	1.7	6	-1.2	0.94	-0.03858	0	1.7	0.46	9.3
1972-08-01	0.27	7	-0.12	1.13	-0.04094	0	0.27	0.15	9.5
1972-09-01	2.0	4	-1.3	1.2	-0.04055	0	2.0	0.71	8.4
1972-10-01	0.67	4	-0.22	0.74	-0.03780	0	0.67	0.45	6.8
1972-11-01	8.7	-5	-7.5	0.7	-0.03465	0	8.7	1.2	4.9
1972	13	16	-10.3	4.7	-0.1925	0	13	3.0	39
1973-07-01	0.87	6	-0.49	1.44	-0.21575	0	0.87	0.38	9.0
1973-08-01	2.7	4	-2.1	1.3	-0.26575	0	2.7	0.62	8.9
1973-09-01	1.4	5	-0.69	2.0	-0.27362	0	1.4	0.74	8.1
1973-10-01	0	5	0.024	1.0709	-0.24685	0	0	0.024	6.7
1973-11-01	0	4	0.012	0.4331	-0.22874	0	0	0.012	5.6
1973	5.0	24	-3.2	6.3	-1.2307	0	5.0	1.8	38
1974-07-01	0	7	0.012	0.9331	-0.12244	0	0	0.008	9.4
1974-08-01	2.4	4	-1.7	1.4	0	0	2.4	0.8	8.6
1974-09-01	1.4	4	-0.71	1.87	-0.11535	0	1.4	0.7	8.3
1974-10-01	3.4	1	-2.4	1.4	-0.10394	0	3.4	1.01	6.5
1974-11-01	3.4	1	-2.7	0.87	-0.09921	0	3.4	0.7	5.3
1974	11	18	-7.5	6.4	-0.5626	0	11	3.1	38
1975-07-01	0	7	0.012	0.9724	-0.07126	0	0	0.012	9.6
1975-08-01	2.2	4	-1.03	1.29	-0.08386	0	2.2	1.2	8.3
1975-09-01	2.0	4	-1.3	2.0	0	0	2.0	0.71	8.0
1975-10-01	0.91	4	-0.35	1.33	-0.08976	0	0.91	0.56	6.8
1975-11-01	0.24	4	-0.067	0.406	-0.09094	0	0.24	0.19	5.4
1975	5.4	23	-2.7	6.0	-0.4268	0	5.4	2.6	38
1976-07-01	0	8	0.016	0.3898	-0.05118	0	0	0.020	9.7
1976-08-01	2.8	3	-2.1	0.8	0	0	2.8	0.65	8.7
1976-09-01	0.87	5	-0.54	1.68	-0.04685	0	0.87	0.31	7.9
1976-10-01	4.0	1	-3.2	1.3	0	0	4.0	0.8	6.4
1976-11-01	0.91	3	-0.52	0.85	-0.04055	0	0.91	0.39	5.1
1976	8.5	20	-6.3	5.0	-0.2291	0	8.5	2.2	38
1977-07-01	0.079	7	0.000	0.4528	0	0	0.079	0.051	9.5
1977-08-01	2.5	5	-1.8	0.8	-0.02559	0	2.5	0.7	9.4
1977-09-01	2.4	4	-1.8	1.9	0	0	2.4	0.7	8.1
1977-10-01	3.5	1	-2.5	1.4	0	0	3.5	1.0	6.4
1977-11-01	1.3	3	-0.82	0.94	-0.02441	0	1.3	0.49	5.5
1977	9.8	19	-6.9	5.5	-0.12520	0	9.8	2.9	39
1978-07-01	0.55	7	-0.39	1.02	-0.10315	0	0.55	0.16	9.4
1978-08-01	0.98	6	-0.56	1.29	0	0	0.98	0.41	9.4
1978-09-01	1.0	4	-0.57	1.72	0	0	1.0	0.49	7.3
1978-10-01	0.39	4	-0.193	1	-0.17598	0	0.39	0.20	6.6
1978-11-01	1.9	2	-1.5	0.6	0	0	1.9	0.42	5.9
1978	4.9	24	-3.2	5.5	-0.78898	0	4.9	1.7	39
1979-07-01	0.35	7	-0.047	1.169	-0.93858	0	0.35	0.30	9.2
1979-08-01	0.16	7	-0.047	0.933	-1	0	0.16	0.11	9.3
1979-09-01	1.5	4	-0.74	1.48	-1	0	1.5	0.8	7.8

Table IV-B.23 SC2 Monsoon Period Water Balance

Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
1979-10-01	0.118	5	0.004	0.858	-0.53071	0	0.118	0.11	7.2
1979-11-01	0.67	4	-0.44	0.60	0	0	0.67	0.24	5.9
1979	2.8	27	-1.27	5.0	-3.36614	0	2.8	1.6	39
1980-07-01	0.16	7	-0.106	0.945	0	0	0.16	0.055	9.0
1980-08-01	1.9	5	-1.14	1.40	0	0	1.9	0.81	9.1
1980-09-01	1.3	5	-0.72	1.97	-0.39370	0	1.3	0.59	7.9
1980-10-01	0.59	5	-0.31	1.29	0	0	0.59	0.27	7.0
1980-11-01	0.039	4	0.008	0.4488	-0.30315	0	0.039	0.047	5.9
1980	4.0	25	-2.3	6.1	-1.90945	0	4.0	1.8	39
1981-07-01	0.12	7	-0.012	1.1024	-0.12205	0	0.12	0.12	9.3
1981-08-01	2.2	5	-1.6	1.14	0	0	2.2	0.5	9.3
1981-09-01	2.6	4	-1.8	2.1	0	0	2.6	0.8	7.9
1981-10-01	0.51	5	-0.31	1.1063	-0.10630	0	0.51	0.20	7.5
1981-11-01	0.94	3	-0.50	0.83	0	0	0.94	0.46	5.2
1981	6.4	23	-4.2	6.3	-0.56693	0	6.4	2.1	39
1982-07-01	0.039	7	-0.039	0.9606	-0.05906	0	0.039	0.024	9.1
1982-08-01	2.7	4	-1.7	1.3	0	0	2.7	0.9	8.8
1982-09-01	3.8	1	-2.8	1.8	0	0	3.8	1.0	6.9
1982-10-01	3.5	2	-2.4	1.4	0	0	3.5	1.0	6.7
1982-11-01	0.039	4	0.118	0.8307	-0.05906	0	0.039	0.154	5.4
1982	10.0	18	-6.9	6.3	-0.29921	0	10.0	3.1	37
1983-07-01	0	7	0.000	0.9882	0	0	0	0.012	9.4
1983-08-01	2.8	4	-2.1	1.5	0	0	2.8	0.7	9.5
1983-09-01	3.6	2	-2.4	1.9	0	0	3.6	1.2	7.5
1983-10-01	5.1	0	-4.1	1.5	-0.18898	0	5.1	1.0	7.3
1983-11-01	1.1	2	-0.59	0.8	0	0	1.1	0.55	4.9
1983	13	16	-9.1	6.8	-0.92520	0	13	3.6	39
1984-07-01	1.3	6	-1.02	0.96	-0.25984	0	1.3	0.31	9.3
1984-08-01	3.3	3	-2.0	1.7	0	0	3.3	1.4	7.8
1984-09-01	3.3	2	-1.7	1.8	0	0	3.3	1.6	7.4
1984-10-01	1.9	3	-1.22	1.46	0	0	1.9	0.70	6.9
1984-11-01	1.3	2	-0.71	0.83	0	0	1.3	0.65	4.9
1984	11	16	-6.6	6.7	-1.05512	0	11	4.6	36
1985-07-01	0	6	0.039	1	0	0	0	0.012	8.6
1985-08-01	1.3	6	-0.87	1.06	-0.30315	0	1.3	0.38	8.7
1985-09-01	2.1	4	-1.38	1.9	0	0	2.1	0.7	8.1
1985-10-01	3.5	1	-2.3	1.3	0	0	3.5	1.2	6.6
1985-11-01	1.3	2	-0.55	0.79	0	0	1.3	0.70	4.6
1985	8.1	19	-5.1	6.0	-1.31102	0	8.1	3.0	37
1986-07-01	0.039	7	0.000	1	-0.17717	0	0.039	0.024	9.3
1986-08-01	4.7	1	-3.4	1.7	0	0	4.7	1.3	8.5
1986-09-01	2.0	4	-1.22	1.81	0	0	2.0	0.8	8.0
1986-10-01	2.1	3	-1.38	1.38	0	0	2.1	0.7	6.5
1986-11-01	1.7	2	-1.3	0.9	0	0	1.7	0.39	4.8
1986	11	17	-7.4	6.7	-0.87795	0	11	3.3	37
1987-07-01	0.20	7	-0.079	1	0	0	0.20	0.13	9.0
1987-08-01	2.0	5	-1.7	1.4	-0.23622	0	2.0	0.35	9.0
1987-09-01	2.9	3	-2.1	2.0	0	0	2.9	0.74	8.1
1987-10-01	1.3	4	-0.67	1.42	0	0	1.3	0.59	7.1
1987-11-01	0.31	4	-0.157	0.945	0	0	0.31	0.20	6.0
1987	6.7	23	-4.7	6.8	-1.06693	0	6.7	2.0	39
1988-07-01	0.12	7	0.000	1	0	0	0.12	0.13	8.9
1988-08-01	3.4	3	-2.6	1.06	0	0	3.4	0.8	8.8
1988-09-01	5.9	0	-4.2	1.9	0	0	5.9	1.7	7.5
1988-10-01	0.31	5	-0.039	1	-0.15354	0	0.31	0.27	6.9
1988-11-01	1.5	3	-1.0	0.8	0	0	1.5	0.46	5.8
1988	11	17	-7.9	6.1	-0.82677	0	11	3.3	38

Table IV-B.23 SC2 Monsoon Period Water Balance

Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
1989-07-01	0	7	0.039	1	0	0	0	0.012	9.2
1989-08-01	0.47	6	-0.28	0.75	0	0	0.47	0.24	9.3
1989-09-01	0.94	5	-0.43	1.06	0	0	0.94	0.49	7.8
1989-10-01	1.5	4	-1.2	1.3	0	0	1.5	0.30	7.3
1989-11-01	1.1	3	-0.55	0.75	0	0	1.1	0.52	5.9
1989	4.0	25	-2.4	4.8	-1	0	4.0	1.6	39
1990-07-01	0.28	7	-0.157	0	0	0	0.28	0.14	9.3
1990-08-01	1.5	5	-0.87	0.83	0	0	1.5	0.61	8.6
1990-09-01	9.0	-3	-8.1	1.5	0	0	9.0	0.9	7.4
1990-10-01	2.8	2	-2.0	1.3	0	0	2.8	0.8	6.8
1990-11-01	0.28	4	-0.039	0.87	0	0	0.28	0.20	5.3
1990	14	14	-11	5.0	0	0	14	2.7	37
1991-07-01	0.63	7	0	1	0	0	0.63	0.39	9.2
1991-08-01	1.7	5	-1.2	1.22	0	0	1.7	0.51	9.3
1991-09-01	2.8	3	-1.8	2.0	0	0	2.8	0.9	8.3
1991-10-01	1.6	3	-1.02	1.46	0	0	1.6	0.58	6.5
1991-11-01	1.2	4	-0.91	0.75	0	0	1.2	0.27	6.6
1991	7.8	22	-5.2	6.6	-1	0	7.8	2.7	40
1992-07-01	1.3	6	-0.63	1.93	-1	0	1.3	0.7	8.9
1992-08-01	3.3	4	-2.5	1.5	-1	0	3.3	0.8	9.3
1992-09-01	5.3	0	-4.1	1.9	-1	0	5.3	1.2	7.8
1992-10-01	0.91	4	-0.59	1.46	-1	0	0.91	0.29	6.7
1992-11-01	1.2	3	-0.91	0.91	-1	0	1.2	0.33	6.2
1992	12	17	-8.7	7.6	-4	0	12	3.3	39
1993-07-01	0	7	0.000	1.22	-2	0	0	0.020	9.3
1993-08-01	0.24	7	-0.12	0.98	-1	0	0.24	0.13	8.9
1993-09-01	3.4	2	-2.1	1.5	-1	0	3.4	1.3	8.5
1993-10-01	0.16	5	0.079	1.378	-1	0	0.16	0.23	6.4
1993-11-01	0.79	3	-0.39	0.71	-1	0	0.79	0.43	6.0
1993	4.6	24	-2.6	5.8	-5	0	4.6	2.1	39
1994-07-01	0.39	7	-0.20	1.26	-0.33858	0	0.39	0.17	8.9
1994-08-01	1.5	5	-1.18	1.02	0	0	1.5	0.29	9.1
1994-09-01	0.71	5	-0.20	1.93	-0.26772	0	0.71	0.52	8.6
1994-10-01	1.9	3	-1.2	1.4	-0.21654	0	1.9	0.71	6.6
1994-11-01	1.9	2	-1.5	0.8	0	0	1.9	0.35	5.3
1994	6.3	22	-4.3	6.4	-1.3268	0	6.3	2.0	39
1995-07-01	0	7	0	0.984	-0.26378	0	0	0.016	9.0
1995-08-01	0.039	7	0.000	1	-0.27953	0	0.039	0.047	9.3
1995-09-01	3.9	2	-2.9	1.6	0	0	3.9	0.9	8.8
1995-10-01	2.7	2	-2.2	1.5	-0.21654	0	2.7	0.57	7.2
1995-11-01	0	4	0.118	0.94	-0.20472	0	0	0.114	5.8
1995	6.6	23	-5.0	5.9	-1.2165	0	6.6	1.7	40
1996-07-01	0.39	7	-0.24	0.83	-0.12205	0	0.39	0.17	9.1
1996-08-01	2.4	4	-1.46	1.46	-0.11811	0	2.4	0.9	8.9
1996-09-01	1.3	5	-0.71	1.54	0	0	1.3	0.55	8.1
1996-10-01	3.0	1	-2.0	1.2	-0.09843	0	3.0	1.1	6.7
1996-11-01	0.39	4	-0.20	0.866	-0.09843	0	0.39	0.25	6.0
1996	7.4	21	-4.6	5.9	-0.5472	0	7.4	2.9	39
1997-07-01	0.039	7	0	0	-0.04724	0	0.039	0.035	9.0
1997-08-01	0.118	7	0	0.315	-0.04724	0	0.118	0.07	9.9
1997-09-01	2.6	3	-1.7	1.3	0	0	2.6	0.85	8.5
1997-10-01	0	5	0.039	1	-0.03937	0	0	0.028	7.3
1997-11-01	0.71	3	-0.43	0.24	-0.03543	0	0.71	0.31	6.0
1997	3.5	26	-2.2	3.0	-0.2087	0	3.5	1.3	41
1998-07-01	0	7	0	1	-0.02362	0	0	0.012	9.2
1998-08-01	1.7	5	-1.10	1.61	0	0	1.7	0.60	9.1
1998-09-01	2.4	3	-1.4	2.0	-0.03150	0	2.4	1.00	8.3

Table IV-B.23 SC2 Monsoon Period Water Balance

Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
1998-10-01	1.3	4	-0.87	1.38	-0.03543	0	1.3	0.47	7.0
1998-11-01	0	4	0	0.433	0	0	0	0.016	6.3
1998	5.5	24	-3.3	6.3	-0.1614	0	5.5	2.1	40
1999-07-01	0	7	0	0	-0.02756	0	0	0.012	9.1
1999-08-01	5.8	0	-4.3	1.2	0	0	5.8	1.5	8.7
1999-09-01	2.8	3	-1.9	1.9	-0.02362	0	2.8	1.0	7.8
1999-10-01	1.1	4	-0.35	1.54	0	0	1.1	0.76	6.8
1999-11-01	0	5	0.039	1	-0.01969	0	0	0.028	6.2
1999	9.7	19	-6.5	5.7	-0.1181	0	9.7	3.3	39
2000-07-01	0.79	6	-0.43	0.43	0	0	0.79	0.37	9.5
2000-08-01	0.079	7	0	0	-0.01575	0	0.079	0.063	9.5
2000-09-01	0.67	5	-0.28	0.35	0	0	0.67	0.41	8.7
2000-10-01	0	5	0.039	0	0	0	0	0.028	6.8
2000-11-01	5.3	-2	-4.4	0.4	-0.01181	0	5.3	0.9	5.9
2000	6.9	22	-5.1	1.5	-0.06693	0	6.9	1.7	40
2001-07-01	0.039	7	0.000	1	-0.01575	0	0.039	0.039	9.2
2001-08-01	2.7	4	-2.3	0.83	0	0	2.7	0.39	9.7
2001-09-01	3.3	2	-2.3	1.9	0	0	3.3	1.0	7.6
2001-10-01	0.16	5	0	1	-0.01969	0	0.16	0.12	7.3
2001-11-01	0.35	4	-0.20	0.55	0	0	0.35	0.20	5.5
2001	6.6	22	-4.8	5.2	-0.09055	0	6.6	1.8	39
2002-07-01	0	7	0	0	-0.02362	0	0	0.012	9.2
2002-08-01	0.31	7	-0.118	0.236	0	0	0.31	0.22	9.7
2002-09-01	0.47	5	-0.197	0.236	0	0	0.47	0.24	8.1
2002-10-01	1.2	4	-0.67	0.71	-0.01969	0	1.2	0.54	7.1
2002-11-01	0.118	4	0	0	0	0	0.118	0.083	6.1
2002	2.1	28	-0.98	1.57	-0.11024	0	2.1	1.1	40
2003-07-01	0	8	0	1	0	0	0	0	10.0
2003-08-01	0.47	7	0	0.354	0	0	0.47	0.39	10.2
2003-09-01	1.3	5	-0.83	0.67	0	0	1.3	0.48	8.5
2003-10-01	1.9	3	-1.02	1.10	-0.00787	0	1.9	0.9	7.4
2003-11-01	0.079	4	0.039	0	0	0	0.079	0.10	6.0
2003	3.8	27	-1.9	3.2	-0.05906	0	3.8	1.9	42
2004-07-01	0	8	0.000	0	-0.01181	0	0	0	10.0
2004-08-01	0.59	7	-0.24	0.24	0	0	0.59	0.33	9.8
2004-09-01	2.1	4	-1.26	0.94	0	0	2.1	0.8	8.6
2004-10-01	1.5	4	-1.1	0.9	-0.00787	0	1.5	0.45	7.9
2004-11-01	1.2	3	-0.79	0.67	0	0	1.2	0.42	6.1
2004	5.4	25	-3.3	3.0	-0.04331	0	5.4	2.1	42
2005-07-01	0.079	8	0	1.024	0	0	0.079	0.059	9.7
2005-08-01	1.4	6	-1.06	1.02	-0.03150	0	1.4	0.34	10.6
2005-09-01	4.7	1	-3.5	1.9	0	0	4.7	1.2	7.3
2005-10-01	0.08	5	0.039	1.181	0	0	0.08	0.10	7.4
2005-11-01	0.43	4	-0.24	0.55	0	0	0.43	0.18	6.1
2005	6.7	23	-4.8	5.7	-0.20079	0	6.7	1.9	41
2006-07-01	0.51	7	-0.24	0.51	0	0	0.51	0.29	10.1
2006-08-01	3.2	3	-2.5	0.7	0	0	3.2	0.71	9.2
2006-09-01	2.9	3	-1.7	2.0	0	0	2.9	1.2	7.4
2006-10-01	1.1	4	-0.67	1.42	0	0	1.1	0.45	6.9
2006-11-01	1.0	3	-0.43	0.83	0	0	1.0	0.58	5.9
2006	8.7	20	-5.6	5.4	0	0	8.7	3.2	40

Table IV-B.24 SC2 Winter Storm Period Water Balance

Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
1951-11-01	0	2.7	-1.2	0.75	-0.28	0	1.6	0.39	5.4
1951-12-01	1.7	1.5	-0.98	0.57	-0.23	0	1.7	0.72	3.7
1952-01-01	3.0	-0.66	-2.4	0.39	-0.21	0	3.0	0.66	2.8
1952-02-01	2.8	-0.36	-2.0	0.46	-0.19	0	2.8	0.81	2.9
1952-03-01	0.50	2.4	-0.17	0.83	-0.17	0	0.50	0.33	3.8
1952	8.0	5.6	-6.7	3.0	-1.1	0	9.7	2.9	19
1952-11-01	0	4.8	0.031	0.64	-0.27	0	0	0.031	5.9
1952-12-01	4.3	-1.5	-3.7	0.35	-0.22	0	4.3	0.60	3.3
1953-01-01	2.0	0.26	-1.3	0.37	-0.20	0	2.0	0.70	2.7
1953-02-01	0.74	2.1	-0.34	0.54	-0.18	0	0.74	0.40	3.3
1953-03-01	0.60	2.4	-0.36	0.78	-0.16	0	0.60	0.24	3.8
1953	7.6	8.0	-5.7	2.7	-1.0	0	7.6	2.0	19
1953-11-01	0.012	4.4	0.012	0.46	-0.16	0	0.012	0.024	5.5
1953-12-01	0.56	2.8	-0.34	0.34	-0.14	0	0.56	0.22	3.9
1954-01-01	0.19	2.3	-0.026	0.34	-0.12	0	0.19	0.17	2.9
1954-02-01	2.4	0.35	-1.8	0.45	-0.11	0	2.4	0.59	3.2
1954-03-01	0.72	2.5	-0.41	0.93	-0.093	0	0.72	0.31	4.2
1954	3.9	12	-2.6	2.5	-0.62	0	3.9	1.3	20
1954-11-01	0	4.6	0.047	0.93	-0.068	0	0	0.047	5.6
1954-12-01	0.091	3.5	-0.051	0.34	-0.069	0	0.091	0.039	4.3
1955-01-01	0.29	2.7	-0.098	0.33	-0.076	0	0.29	0.19	3.5
1955-02-01	3.4	-1.4	-2.6	0.37	-0.080	0	3.4	0.79	2.4
1955-03-01	0.28	2.5	-0.051	0.77	-0.074	0	0.28	0.23	3.5
1955	4.1	12	-2.8	2.7	-0.37	0	4.1	1.3	19
1955-11-01	0.020	4.7	0.016	0.50	-0.068	0	0.020	0.034	5.9
1955-12-01	0.96	2.1	-0.65	0.39	-0.063	0	0.96	0.32	3.7
1956-01-01	1.4	1.4	-1.0	0.45	-0.063	0	1.4	0.34	3.1
1956-02-01	2.6	0.30	-2.1	0.54	-0.060	0	2.6	0.47	3.5
1956-03-01	2.0	0.49	-1.3	0.72	-0.054	0	2.0	0.74	3.1
1956	7.0	9.0	-5.1	2.6	-0.31	0	7.0	1.9	19
1956-11-01	0.53	3.6	-0.28	0.27	-0.051	0	0.53	0.26	5.2
1956-12-01	0	3.2	0.079	0.30	-0.046	0	0	0.080	3.8
1957-01-01	0.47	2.2	-0.26	0.25	-0.045	0	0.47	0.21	3.1
1957-02-01	4.8	-2.7	-4.1	0.36	-0.041	0	4.8	0.66	2.7
1957-03-01	0.73	2.1	-0.13	0.82	-0.034	0	0.73	0.60	3.4
1957	6.5	8.4	-4.7	2.0	-0.22	0	6.5	1.8	18
1957-11-01	3.2	0.30	-2.4	0.59	-0.027	0	3.2	0.79	4.6
1957-12-01	0.61	2.0	-0.12	0.46	-0.025	0	0.61	0.49	3.0
1958-01-01	1.1	1.6	-0.57	0.45	-0.025	0	1.1	0.49	3.2
1958-02-01	0.012	2.9	0.043	0.51	-0.023	0	0.012	0.056	3.3
1958-03-01	2.5	-0.035	-1.9	0.71	-0.020	0	2.5	0.59	3.2
1958	7.4	6.8	-5.0	2.7	-0.12	0	7.4	2.4	17
1958-11-01	1.9	2.3	-1.5	0.94	-0.019	0	1.9	0.42	5.3
1958-12-01	1.5	1.6	-1.2	0.53	-0.018	0	1.5	0.35	3.6
1959-01-01	0	3.0	0.055	0.48	-0.019	0	0	0.059	3.6
1959-02-01	0.21	2.8	-0.063	0.52	-0.018	0	0.21	0.15	3.5
1959-03-01	1.4	1.1	-0.94	0.66	-0.016	0	1.4	0.49	3.3
1959	5.1	11	-3.6	3.1	-0.090	0	5.1	1.5	19
1959-11-01	4.8	-0.59	-4.4	0.72	-0.015	0	4.8	0.37	5.3
1959-12-01	0.38	2.8	0.12	0.56	-0.015	0	0.38	0.50	3.7
1960-01-01	5.2	-3.0	-4.6	0.37	-0.014	0	5.2	0.66	2.7
1960-02-01	4.2	-2.0	-3.4	0.41	-0.014	0	4.2	0.73	2.5

Table IV-B.24 SC2 Winter Storm Period Water Balance

Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
1960-03-01	0.87	1.8	-0.41	0.76	-0.015	0	0.87	0.46	3.4
1960	15	-1.1	-13	2.8	-0.072	0	15	2.7	18
1960-11-01	2.1	1.9	-1.4	0.59	-0.12	0	2.1	0.63	5.0
1960-12-01	0.48	2.6	-0.19	0.54	-0.11	0	0.48	0.30	3.7
1961-01-01	0.46	2.2	-0.20	0.44	-0.10	0	0.46	0.27	3.3
1961-02-01	0.70	1.9	-0.38	0.46	-0.094	0	0.70	0.32	3.2
1961-03-01	0.23	2.9	-0.031	0.78	-0.077	0	0.23	0.20	3.7
1961	3.9	12	-2.2	2.8	-0.51	0	3.9	1.7	19
1961-11-01	0.45	3.6	-0.32	0.35	-0.042	0	0.45	0.14	5.4
1961-12-01	0.32	2.4	0.0039	0.20	-0.037	0	0.32	0.32	3.1
1962-01-01	3.9	-1.7	-3.2	0.30	-0.034	0	3.9	0.64	2.6
1962-02-01	3.2	-0.94	-2.7	0.43	-0.032	0	3.2	0.52	2.7
1962-03-01	1.7	0.75	-1.1	0.69	-0.028	0	1.7	0.57	3.2
1962	9.5	4.2	-7.3	2.0	-0.17	0	9.5	2.2	17
1962-11-01	0.87	3.2	-0.42	0.58	-0.033	0	0.87	0.46	5.1
1962-12-01	0.83	2.5	-0.54	0.44	-0.031	0	0.83	0.29	3.9
1963-01-01	1.8	0.87	-1.1	0.40	-0.031	0	1.8	0.66	3.3
1963-02-01	2.1	0.47	-1.5	0.49	-0.030	0	2.1	0.56	3.0
1963-03-01	4.2	-1.2	-3.9	0.86	-0.026	0	4.2	0.33	3.8
1963	9.8	5.9	-7.5	2.8	-0.15	0	9.8	2.3	19
1963-11-01	0.67	3.9	-0.41	0.91	-0.032	0	0.67	0.26	5.8
1963-12-01	2.3	0.71	-1.5	0.54	-0.032	0	2.3	0.85	3.6
1964-01-01	0.34	2.5	-0.067	0.46	-0.039	0	0.34	0.27	3.3
1964-02-01	0.58	1.9	-0.34	0.46	-0.048	0	0.58	0.24	3.0
1964-03-01	0	2.8	0.047	0.76	-0.052	0	0	0.047	3.6
1964	3.9	12	-2.3	3.1	-0.20	0	3.9	1.7	19
1964-11-01	1.5	3.1	-1.2	0.81	-0.058	0	1.5	0.30	5.8
1964-12-01	1.4	1.6	-0.96	0.52	-0.054	0	1.4	0.43	3.6
1965-01-01	1.7	0.87	-1.3	0.42	-0.051	0	1.7	0.43	3.3
1965-02-01	2.9	-0.47	-2.2	0.46	-0.048	0	2.9	0.70	2.6
1965-03-01	2.8	0	-2.4	0.81	-0.039	0	2.8	0.40	3.4
1965	10	5.1	-8.1	3.0	-0.25	0	10	2.3	19
1965-11-01	0.46	4.0	-0.26	0.40	-0.053	0	0.46	0.20	5.7
1965-12-01	2.4	0.87	-2.0	0.30	-0.049	0	2.4	0.37	3.9
1966-01-01	10	-8.3	-9.6	0.35	-0.048	0	10	0.84	2.7
1966-02-01	1.8	0.51	-1.3	0.44	-0.046	0	1.8	0.55	2.8
1966-03-01	2.0	0.51	-1.5	0.74	-0.043	0	2.0	0.54	3.1
1966	17	-2.4	-15	2.2	-0.24	0	17	2.5	18
1966-11-01	1.4	2.8	-0.92	0.93	-0.20	0	1.4	0.44	5.1
1966-12-01	0.87	2.3	-0.58	0.56	-0.17	0	0.87	0.29	4.1
1967-01-01	1.3	1.3	-0.76	0.43	-0.16	0	1.3	0.49	3.1
1967-02-01	0.79	1.9	-0.48	0.50	-0.14	0	0.79	0.31	2.9
1967-03-01	0	3.0	0.063	0.84	-0.12	0	0	0.067	3.9
1967	4.3	11	-2.7	3.3	-0.78	0	4.3	1.6	19
1967-11-01	0.42	3.8	-0.20	0.70	-0.071	0	0.42	0.22	5.6
1967-12-01	2.1	1.0	-1.7	0.31	-0.063	0	2.1	0.41	3.9
1968-01-01	10	-8.0	-9.4	0.34	-0.061	0	10	0.64	2.3
1968-02-01	0.63	2.0	-0.29	0.48	-0.058	0	0.63	0.33	3.1
1968-03-01	1.9	0.98	-1.4	0.84	-0.064	0	1.9	0.54	3.4
1968	15	-0.16	-13	2.7	-0.32	0	15	2.1	18
1968-11-01	0.39	3.7	-0.21	0.61	-0.22	0	0.39	0.18	5.1
1968-12-01	2.5	0.43	-1.9	0.47	-0.19	0	2.5	0.60	3.8

Table IV-B.24 SC2 Winter Storm Period Water Balance

Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
1969-01-01	3.3	-0.87	-2.7	0.40	-0.18	0	3.3	0.54	2.9
1969-02-01	4.2	-1.9	-3.5	0.43	-0.16	0	4.2	0.69	2.6
1969-03-01	1.4	1.1	-0.64	0.71	-0.13	0	1.4	0.72	3.0
1969	12	2.5	-9.0	2.6	-0.87	0	12	2.7	17
1969-11-01	0.83	3.2	-0.55	0.79	-0.18	0	0.83	0.28	5.2
1969-12-01	2.1	0.71	-1.5	0.50	-0.15	0	2.1	0.65	3.6
1970-01-01	1.3	1.5	-0.73	0.45	-0.13	0	1.3	0.59	3.4
1970-02-01	0.50	2.2	-0.11	0.51	-0.12	0	0.50	0.40	2.9
1970-03-01	0.41	2.4	-0.10	0.82	-0.098	0	0.41	0.30	3.6
1970	5.2	10.0	-3.0	3.1	-0.67	0	5.2	2.2	19
1970-11-01	0	4.2	0.016	0.63	-0.067	0	0	0.020	5.3
1970-12-01	0.65	2.5	-0.53	0.28	-0.060	0	0.65	0.12	3.9
1971-01-01	1.2	1.2	-0.59	0.35	-0.059	0	1.2	0.62	3.0
1971-02-01	0.85	2.1	-0.55	0.56	-0.055	0	0.85	0.30	3.1
1971-03-01	0.82	2.1	-0.52	0.77	-0.047	0	0.82	0.30	4.0
1971	3.5	12	-2.2	2.6	-0.29	0	3.5	1.4	19
1971-11-01	4.2	-0.31	-3.3	0.87	-0.032	0	4.2	0.88	5.1
1971-12-01	0.039	3.1	0.083	0.55	-0.030	0	0.039	0.12	3.7
1972-01-01	2.1	0.35	-1.4	0.40	-0.028	0	2.1	0.75	3.0
1972-02-01	0	2.8	0.13	0.52	-0.029	0	0	0.13	3.2
1972-03-01	0	3.5	0.024	0.77	-0.028	0	0	0.020	4.1
1972	6.4	9.5	-4.5	3.1	-0.15	0	6.4	1.9	19
1972-11-01	8.7	-5.0	-7.5	0.68	-0.035	0	8.7	1.2	4.9
1972-12-01	2.8	-0.20	-2.0	0.47	-0.032	0	2.8	0.80	3.2
1973-01-01	3.0	-0.67	-2.4	0.37	-0.031	0	3.0	0.61	2.9
1973-02-01	0.74	1.6	-0.039	0.44	-0.034	0	0.74	0.70	2.6
1973-03-01	3.2	-0.63	-2.3	0.72	-0.039	0	3.2	0.87	2.8
1973	18	-4.9	-14	2.7	-0.17	0	18	4.1	16
1973-11-01	0	4.1	0.012	0.43	-0.23	0	0	0.012	5.6
1973-12-01	1.8	1.3	-1.2	0.35	-0.20	0	1.8	0.59	3.9
1974-01-01	0.098	2.8	0.071	0.47	-0.19	0	0.098	0.17	3.3
1974-02-01	3.4	-1.0	-2.6	0.45	-0.17	0	3.4	0.76	2.9
1974-03-01	0.16	2.8	-0.012	0.82	-0.14	0	0.16	0.14	3.3
1974	5.4	9.9	-3.7	2.5	-0.93	0	5.4	1.7	19
1974-11-01	3.4	0.51	-2.7	0.87	-0.099	0	3.4	0.67	5.3
1974-12-01	0.12	3.0	0.25	0.56	-0.089	0	0.12	0.37	3.6
1975-01-01	0.79	1.7	-0.39	0.39	-0.083	0	0.79	0.35	3.1
1975-02-01	0.39	1.9	-0.16	0.43	-0.075	0	0.39	0.24	2.6
1975-03-01	3.9	-1.2	-3.4	0.80	-0.062	0	3.9	0.56	3.0
1975	8.6	5.9	-6.4	3.0	-0.41	0	8.6	2.2	18
1975-11-01	0.24	3.9	-0.067	0.41	-0.091	0	0.24	0.19	5.4
1975-12-01	2.2	1.3	-2.0	0.24	-0.082	0	2.2	0.19	4.2
1976-01-01	1.3	1.3	-0.57	0.43	-0.079	0	1.3	0.68	3.1
1976-02-01	0.20	2.3	-0.0039	0.47	-0.072	0	0.20	0.22	2.9
1976-03-01	1.6	1.4	-1.0	0.86	-0.061	0	1.6	0.58	3.4
1976	5.5	10	-3.6	2.4	-0.39	0	5.5	1.9	19
1976-11-01	0.91	2.9	-0.52	0.85	-0.041	0	0.91	0.39	5.1
1976-12-01	0.55	2.6	-0.24	0.56	-0.036	0	0.55	0.31	4.0
1977-01-01	1.8	0.79	-1.6	0.43	-0.033	0	1.8	0.27	3.1
1977-02-01	1.9	0.43	-1.0	0.44	-0.032	0	1.9	0.89	2.5
1977-03-01	0.079	3.3	0.020	0.92	-0.028	0	0.079	0.098	4.1
1977	5.3	10	-3.3	3.2	-0.17	0	5.3	1.9	19

Table IV-B.24 SC2 Winter Storm Period Water Balance

Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
1977-11-01	1.3	2.9	-0.82	0.94	-0.024	0	1.3	0.49	5.5
1977-12-01	0.35	2.9	-0.035	0.58	-0.022	0	0.35	0.32	3.9
1978-01-01	0.67	2.1	-0.44	0.42	-0.022	0	0.67	0.21	3.5
1978-02-01	6.4	-4.2	-5.7	0.42	-0.019	0	6.4	0.74	2.5
1978-03-01	5.5	-3.0	-4.6	0.72	-0.016	0	5.5	0.89	2.9
1978	14	0.75	-12	3.1	-0.10	0	14	2.7	18
1978-11-01	1.9	2.5	-1.5	0.59	-0.17	0	1.9	0.42	5.9
1978-12-01	5.6	-2.9	-4.9	0.48	-0.15	0	5.6	0.70	3.7
1979-01-01	6.6	-4.3	-5.9	0.37	-0.14	0	6.6	0.71	2.5
1979-02-01	6.0	-4.2	-4.9	0.34	-0.14	0	6.0	1.2	2.3
1979-03-01	1.2	1.9	-0.79	0.89	-0.22	0	1.2	0.45	3.3
1979	21	-7.0	-18	2.7	-0.82	0	21	3.5	18
1979-11-01	0.67	3.9	-0.44	0.60	-0.44	0	0.67	0.24	5.9
1979-12-01	0.67	2.5	-0.28	0.54	-0.36	0	0.67	0.39	4.0
1980-01-01	0.71	2.2	-0.41	0.46	-0.31	0	0.71	0.30	3.7
1980-02-01	4.1	-2.1	-3.2	0.37	-0.27	0	4.1	0.87	2.4
1980-03-01	6.0	-3.6	-5.5	0.70	-0.21	0	6.0	0.52	2.4
1980	12	2.9	-9.9	2.7	-1.6	0	12	2.3	18
1980-11-01	0.039	4.3	0.0079	0.45	-0.30	0	0.039	0.047	5.9
1980-12-01	0	3.5	0.012	0.28	-0.25	0	0	0.012	4.3
1981-01-01	0.55	2.6	-0.26	0.39	-0.22	0	0.55	0.30	3.5
1981-02-01	1.3	1.5	-0.95	0.47	-0.19	0	1.3	0.37	3.5
1981-03-01	2.6	0.39	-2.2	0.87	-0.15	0	2.6	0.44	3.6
1981	4.6	12	-3.4	2.5	-1.1	0	4.6	1.2	21
1981-11-01	0.94	2.9	-0.50	0.83	-0.10	0	0.94	0.46	5.2
1981-12-01	2.3	0.98	-2.2	0.46	-0.091	0	2.3	0.14	4.4
1982-01-01	0	3.0	0.20	0.49	-0.087	0	0	0.20	3.3
1982-02-01	2.7	-0.43	-1.8	0.43	-0.079	0	2.7	0.96	2.8
1982-03-01	1.8	0.91	-1.1	0.78	-0.063	0	1.8	0.74	3.1
1982	7.8	7.3	-5.3	3.0	-0.42	0	7.8	2.5	19
1982-11-01	0.039	4.1	0.12	0.83	-0.059	0	0.039	0.15	5.4
1982-12-01	3.3	-0.75	-2.6	0.37	-0.055	0	3.3	0.69	3.6
1983-01-01	1.7	0.67	-0.83	0.39	-0.059	0	1.7	0.84	2.7
1983-02-01	1.9	0.79	-1.6	0.51	-0.055	0	1.9	0.29	3.2
1983-03-01	2.3	0.28	-1.9	0.73	-0.055	0	2.3	0.43	2.8
1983	9.3	5.0	-6.9	2.8	-0.28	0	9.3	2.4	18
1983-11-01	1.1	2.5	-0.59	0.81	-0.18	0	1.1	0.55	4.9
1983-12-01	2.0	1.0	-1.5	0.52	-0.17	0	2.0	0.48	3.8
1984-01-01	2.5	-0.24	-2.0	0.37	-0.19	0	2.5	0.52	2.7
1984-02-01	0.47	2.2	-0.079	0.52	-0.21	0	0.47	0.43	2.8
1984-03-01	0	3.1	0.039	0.77	-0.22	0	0	0.028	3.9
1984	6.1	8.6	-4.1	3.0	-0.97	0	6.1	2.0	18
1984-11-01	1.3	2.3	-0.71	0.83	-0.17	0	1.3	0.65	4.9
1984-12-01	2.1	1.1	-1.8	0.52	-0.15	0	2.1	0.27	4.2
1985-01-01	5.8	-3.6	-4.9	0.35	-0.13	0	5.8	0.85	2.5
1985-02-01	2.7	-0.71	-2.0	0.37	-0.12	0	2.7	0.72	2.5
1985-03-01	1.7	0.55	-1.1	0.64	-0.11	0	1.7	0.60	2.5
1985	14	-0.31	-10	2.7	-0.68	0	14	3.1	17
1985-11-01	1.3	2.3	-0.55	0.79	-0.21	0	1.3	0.70	4.6
1985-12-01	2.8	-0.039	-2.2	0.47	-0.18	0	2.8	0.50	3.9
1986-01-01	0.87	2.0	-0.31	0.47	-0.17	0	0.87	0.59	3.1
1986-02-01	0.12	3.1	-0.039	0.59	-0.15	0	0.12	0.043	3.6

Table IV-B.24 SC2 Winter Storm Period Water Balance

Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
1986-03-01	3.1	-0.59	-2.3	0.71	-0.13	0	3.1	0.79	2.9
1986	8.1	6.7	-5.4	3.0	-0.83	0	8.1	2.6	18
1986-11-01	1.7	2.1	-1.3	0.87	-0.17	0	1.7	0.39	4.8
1986-12-01	1.4	1.4	-0.75	0.51	-0.15	0	1.4	0.68	3.7
1987-01-01	3.0	-0.59	-2.3	0.39	-0.14	0	3.0	0.70	2.9
1987-02-01	3.3	-0.83	-2.6	0.47	-0.13	0	3.3	0.78	2.8
1987-03-01	2.7	-0.20	-2.1	0.71	-0.13	0	2.7	0.55	3.5
1987	12	1.9	-9.1	3.0	-0.72	0	12	3.1	18
1987-11-01	0.31	4.1	-0.16	0.94	-0.19	0	0.31	0.20	6.0
1987-12-01	1.8	1.4	-1.2	0.55	-0.16	0	1.8	0.58	3.8
1988-01-01	4.0	-1.5	-3.1	0.39	-0.15	0	4.0	0.84	3.2
1988-02-01	3.6	-1.3	-3.0	0.43	-0.13	0	3.6	0.65	2.5
1988-03-01	0.75	2.4	-0.43	0.87	-0.11	0	0.75	0.30	3.4
1988	10	5.1	-7.9	3.2	-0.73	0	10	2.6	19
1988-11-01	1.5	2.8	-1.0	0.79	-0.15	0	1.5	0.46	5.8
1988-12-01	1.7	1.3	-1.4	0.51	-0.14	0	1.7	0.38	4.0
1989-01-01	1.1	1.4	-0.51	0.43	-0.15	0	1.1	0.58	3.1
1989-02-01	2.2	0.16	-1.6	0.43	-0.15	0	2.2	0.60	2.7
1989-03-01	0.28	2.7	-0.039	0.87	-0.13	0	0.28	0.24	3.1
1989	6.8	8.3	-4.6	3.0	-0.70	0	6.8	2.3	19
1989-11-01	1.1	3.1	-0.55	0.75	-0.11	0	1.1	0.52	5.9
1989-12-01	0.28	3.0	-0.16	0.39	-0.10	0	0.28	0.15	4.2
1990-01-01	0.87	2.0	-0.67	0.24	-0.094	0	0.87	0.18	3.4
1990-02-01	1.3	1.0	-0.67	0.43	-0.087	0	1.3	0.63	2.7
1990-03-01	2.5	-0.079	-1.7	0.71	-0.067	0	2.5	0.88	2.6
1990	6.0	9.0	-3.7	2.5	-0.46	0	6.0	2.4	19
1990-11-01	0.28	3.7	-0.039	0.87	-0.039	0	0.28	0.20	5.3
1990-12-01	2.2	0.94	-1.3	0.55	-0.043	0	2.2	0.86	4.2
1991-01-01	4.8	-2.7	-4.1	0.35	-0.047	0	4.8	0.76	3.0
1991-02-01	1.8	0.75	-1.3	0.47	-0.059	0	1.8	0.49	2.6
1991-03-01	0.98	2.3	-0.55	0.94	-0.067	0	0.98	0.41	3.3
1991	10	5.0	-7.3	3.2	-0.26	0	10	2.7	18
1991-11-01	1.2	3.5	-0.91	0.75	-0.26	0	1.2	0.27	6.6
1991-12-01	3.3	-0.39	-2.7	0.51	-0.22	0	3.3	0.54	3.6
1992-01-01	4.0	-1.7	-3.1	0.35	-0.20	0	4.0	0.87	2.9
1992-02-01	3.0	-0.71	-2.0	0.43	-0.20	0	3.0	0.94	2.2
1992-03-01	2.8	-0.12	-2.1	0.75	-0.20	0	2.8	0.67	3.0
1992	14	0.55	-11	2.8	-1.1	0	14	3.3	18
1992-11-01	1.2	3.1	-0.91	0.91	-0.61	0	1.2	0.33	6.2
1992-12-01	0.47	2.3	-0.12	0.47	-0.58	0	0.47	0.37	3.6
1993-01-01	6.4	-4.3	-5.4	0.35	-0.56	0	6.4	0.92	2.5
1993-02-01	11	-9.4	-10	0.31	-0.55	0	11	0.89	1.9
1993-03-01	6.0	-4.1	-5.1	0.55	-1.8	0	6.0	0.93	2.7
1993	25	-12	-22	2.6	-4.1	0	25	3.4	17
1993-11-01	0.79	3.5	-0.39	0.71	-0.59	0	0.79	0.43	6.0
1993-12-01	4.2	-1.4	-3.8	0.43	-0.46	0	4.2	0.35	3.6
1994-01-01	0.31	2.3	-0.079	0.43	-0.41	0	0.31	0.21	3.4
1994-02-01	0.28	2.6	-0.12	0.51	-0.40	0	0.28	0.16	3.3
1994-03-01	2.6	-0.12	-2.0	0.71	-0.36	0	2.6	0.56	3.0
1994	8.1	6.9	-6.5	2.8	-2.2	0	8.1	1.7	19
1994-11-01	1.9	1.9	-1.5	0.79	-0.20	0	1.9	0.35	5.3
1994-12-01	3.4	-0.87	-2.5	0.43	-0.17	0	3.4	0.85	3.5

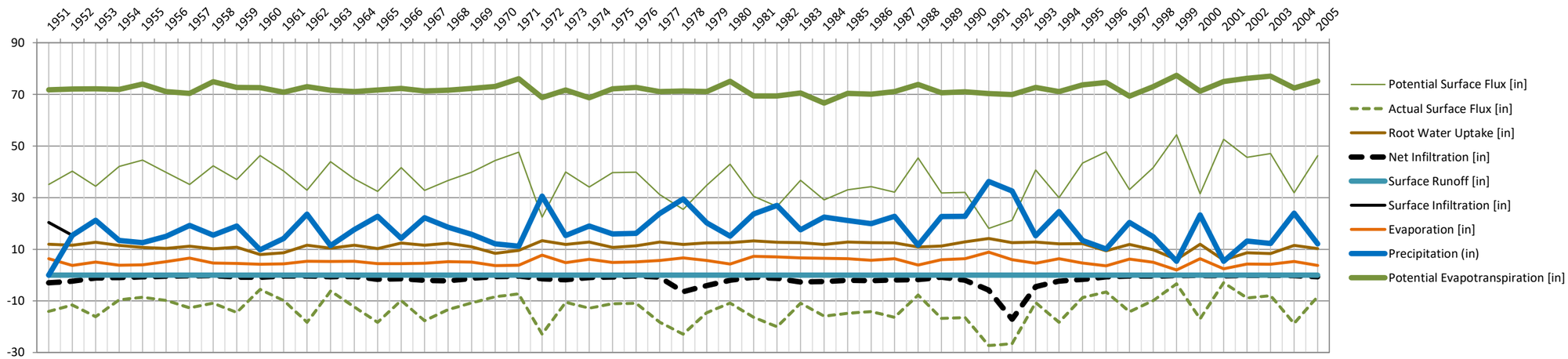
Table IV-B.24 SC2 Winter Storm Period Water Balance

Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
1995-01-01	2.6	-0.31	-2.0	0.39	-0.15	0	2.6	0.64	3.0
1995-02-01	3.7	-1.2	-2.8	0.43	-0.13	0	3.7	0.89	2.6
1995-03-01	2.7	-0.039	-2.2	0.79	-0.11	0	2.7	0.51	3.1
1995	14	-0.51	-11	2.8	-0.76	0	14	3.2	18
1995-11-01	0	4.3	0.12	0.94	-0.20	0	0	0.11	5.8
1995-12-01	1.3	1.8	-0.87	0.51	-0.18	0	1.3	0.45	3.9
1996-01-01	0.91	1.9	-0.59	0.47	-0.17	0	0.91	0.28	3.5
1996-02-01	0	2.9	0.039	0.51	-0.16	0	0	0.071	3.3
1996-03-01	3.1	-0.28	-2.6	0.83	-0.13	0	3.1	0.52	3.6
1996	5.4	11	-3.9	3.3	-0.85	0	5.4	1.4	20
1996-11-01	0.39	4.1	-0.20	0.87	-0.098	0	0.39	0.25	6.0
1996-12-01	1.3	1.9	-0.91	0.43	-0.083	0	1.3	0.31	3.8
1997-01-01	0	2.6	0.24	0.43	-0.079	0	0	0.25	3.2
1997-02-01	2.8	-0.47	-2.1	0.43	-0.067	0	2.8	0.71	2.7
1997-03-01	1.7	1.3	-1.4	0.83	-0.055	0	1.7	0.27	3.4
1997	6.2	9.3	-4.4	3.0	-0.38	0	6.2	1.8	19
1997-11-01	0.71	3.2	-0.43	0.24	-0.035	0	0.71	0.31	6.0
1997-12-01	0.83	2.1	-0.43	0.31	-0.031	0	0.83	0.37	3.7
1998-01-01	2.7	-0.39	-1.9	0.35	-0.031	0	2.7	0.81	3.1
1998-02-01	0.39	2.2	-0.039	0.47	-0.031	0	0.39	0.36	2.4
1998-03-01	6.4	-4.4	-5.4	0.55	-0.020	0	6.4	1.0	2.9
1998	11	2.8	-8.1	1.9	-0.15	0	11	2.9	18
1998-11-01	0	4.4	0.039	0.43	-0.039	0	0	0.016	6.3
1998-12-01	1.1	2.1	-0.87	0.16	-0.039	0	1.1	0.19	3.9
1999-01-01	0.75	2.0	-0.16	0.43	-0.039	0	0.75	0.58	3.3
1999-02-01	0.039	2.9	0	0.55	-0.035	0	0.039	0.067	3.6
1999-03-01	0.20	3.2	-0.079	0.55	-0.031	0	0.20	0.12	3.6
1999	2.0	15	-1.1	2.1	-0.19	0	2.0	0.97	21
1999-11-01	0	4.5	0.039	0.83	-0.020	0	0	0.028	6.2
1999-12-01	0	3.7	0.039	0.31	-0.024	0	0	0.012	4.7
2000-01-01	0.039	2.8	-0.039	0.20	-0.020	0	0.039	0.012	3.7
2000-02-01	0.28	2.9	-0.12	0.35	-0.016	0	0.28	0.16	3.4
2000-03-01	0.71	2.5	-0.35	0.31	-0.020	0	0.71	0.37	3.9
2000	1.0	16	-0.43	2.0	-0.098	0	1.0	0.58	22
2000-11-01	5.3	-1.5	-4.4	0.35	-0.012	0	5.3	0.86	6.1
2000-12-01	2.1	0.63	-1.5	0.47	-0.0079	0	2.1	0.67	2.9
2001-01-01	0.12	2.9	0	0.47	-0.012	0	0.12	0.10	3.7
2001-02-01	3.4	-1.1	-2.5	0.39	-0.0079	0	3.4	0.86	3.0
2001-03-01	1.7	0.91	-1.0	0.79	-0.0079	0	1.7	0.69	2.8
2001	13	1.8	-9.4	2.5	-0.047	0	13	3.2	19
2001-11-01	0.35	3.7	-0.20	0.59	-0.024	0	0.35	0.20	5.7
2001-12-01	0.31	3.0	-0.12	0.39	-0.020	0	0.31	0.18	4.6
2002-01-01	1.8	0.55	-1.3	0.35	-0.024	0	1.8	0.57	2.9
2002-02-01	0.24	2.5	-0.12	0.47	-0.024	0	0.24	0.12	3.2
2002-03-01	0	3.3	0.079	0.75	-0.024	0	0	0.071	3.4
2002	2.7	13	-1.6	2.6	-0.11	0	2.7	1.1	20
2002-11-01	0.12	4.2	0	0.20	-0.024	0	0.12	0.083	6.3
2002-12-01	0.87	2.6	-0.67	0.16	-0.016	0	0.87	0.18	4.4
2003-01-01	0.98	1.5	-0.39	0.24	-0.020	0	0.98	0.61	3.4
2003-02-01	0.35	2.9	-0.039	0.51	-0.016	0	0.35	0.32	3.1
2003-03-01	5.0	-2.4	-4.5	0.63	-0.012	0	5.0	0.46	3.6
2003	7.3	8.8	-5.6	1.7	-0.087	0	7.3	1.7	21

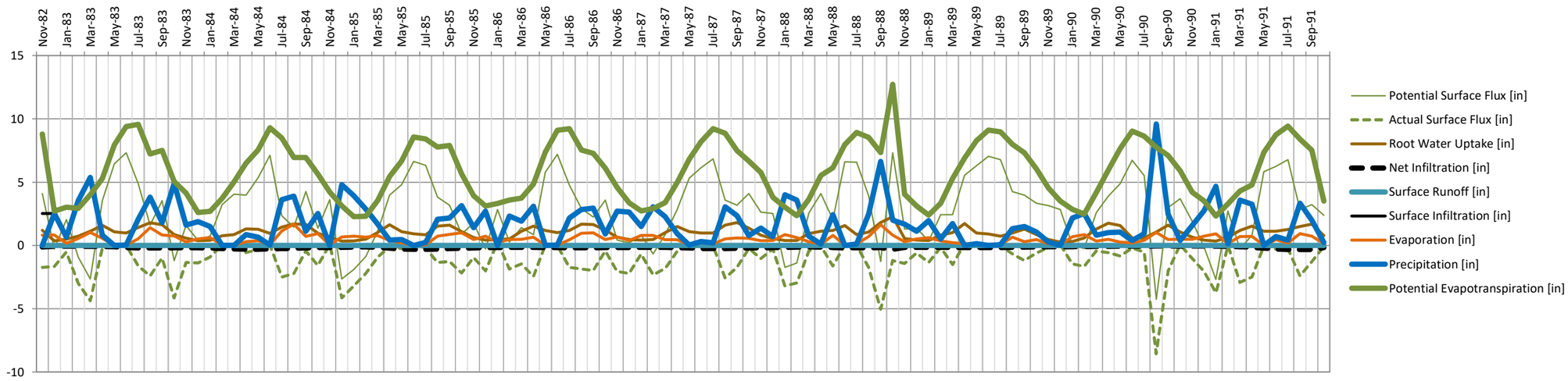
Table IV-B.24 SC2 Winter Storm Period Water Balance

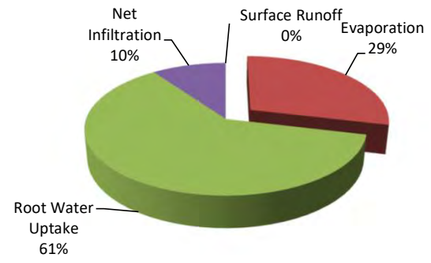
Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
2003-11-01	0.079	4.6	0.039	0.51	-0.012	0	0.079	0.10	6.3
2003-12-01	0.87	2.0	-0.59	0.24	-0.012	0	0.87	0.28	3.9
2004-01-01	0.98	1.9	-0.55	0.31	-0.012	0	0.98	0.42	3.9
2004-02-01	1.5	0.94	-0.87	0.35	-0.012	0	1.5	0.58	3.1
2004-03-01	0.67	2.0	-0.28	0.75	-0.0079	0	0.67	0.42	3.0
2004	4.1	11	-2.2	2.2	-0.055	0	4.1	1.8	20
2004-11-01	1.2	3.0	-0.79	0.67	-0.0079	0	1.2	0.43	6.4
2004-12-01	0.63	2.0	-0.28	0.31	-0.0039	0	0.63	0.37	3.5
2005-01-01	2.8	-0.039	-2.2	0.39	-0.0079	0	2.8	0.53	3.0
2005-02-01	4.2	-1.9	-3.6	0.43	-0.0039	0	4.2	0.64	2.7
2005-03-01	7.4	-5.3	-6.4	0.59	-0.0039	0	7.4	0.95	2.7
2005	16	-2.2	-13	2.4	-0.028	0	16	2.9	18
2005-11-01	0.43	4.0	-0.24	0.59	-0.059	0	0.43	0.18	6.4
2005-12-01	0	3.4	0	0.39	-0.055	0	0	0.028	4.4
2006-01-01	0	2.8	0.039	0.20	-0.059	0	0	0.012	3.5
2006-02-01	0	3.4	0	0.31	-0.059	0	0	0.0079	3.8
2006-03-01	0.12	3.3	-0.039	0.47	-0.051	0	0.12	0.079	4.1
2006	0.55	17	-0.24	2.0	-0.28	0	0.55	0.31	22

Annual Water Balance - 56-Year Simulated Period (Results on October 1)



Monthly Water Balance - 9 Wet Years (1983 - 1991)





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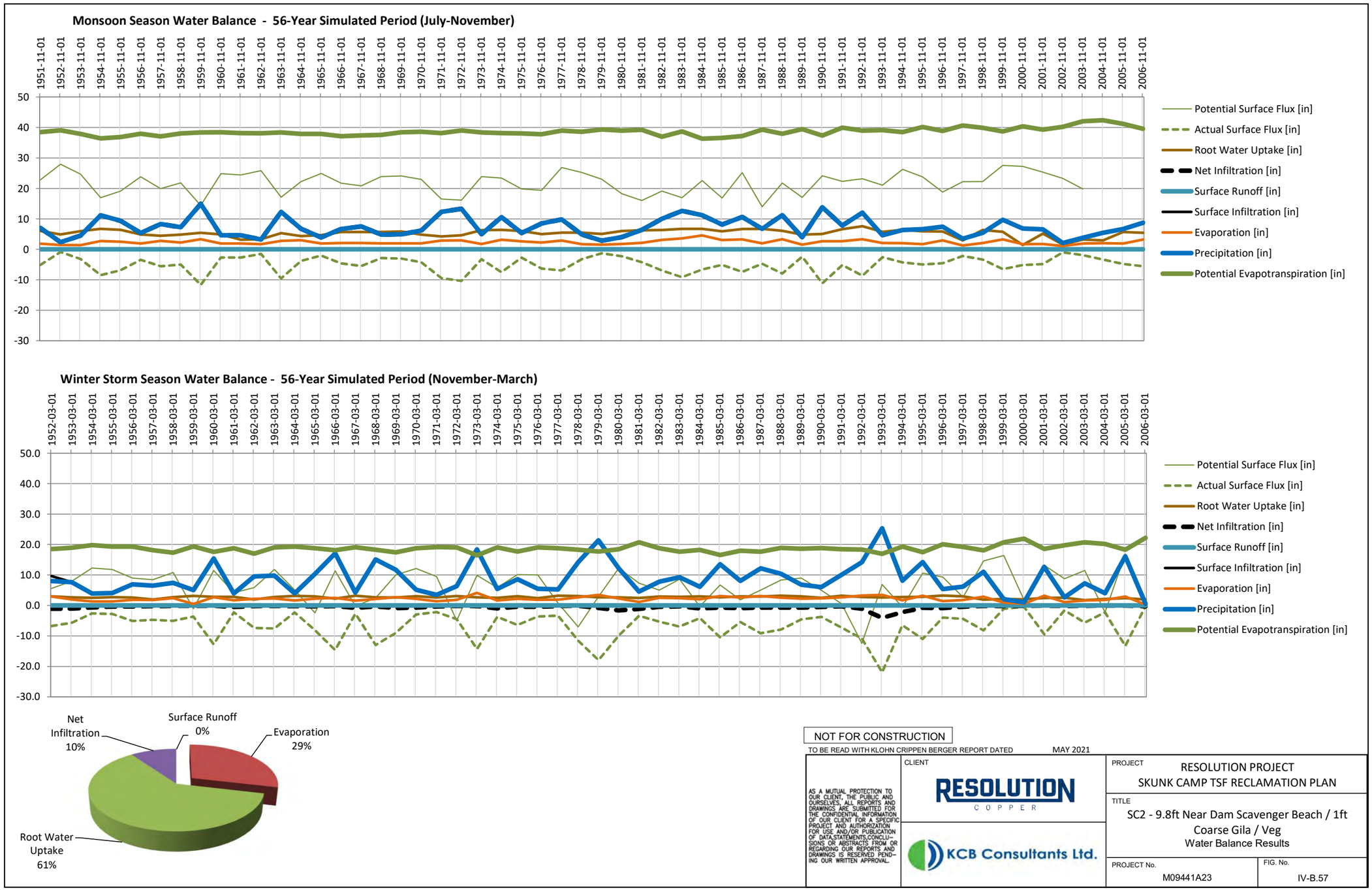
SKUNK CAMP TSF RECLAMATION PLAN

TITLE: SC2 - 9.8ft Near Dam Scavenger Beach / 1ft Coarse Gila / Veg
Water Balance Results

PROJECT No. M09441A23

FIG. No. IV-B.56



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Water Balance Results

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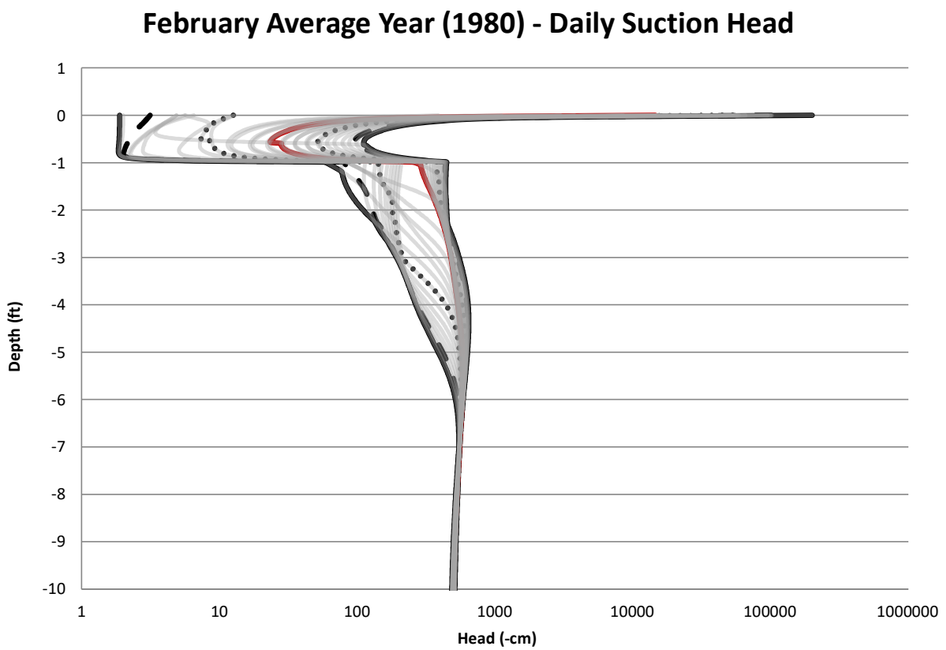
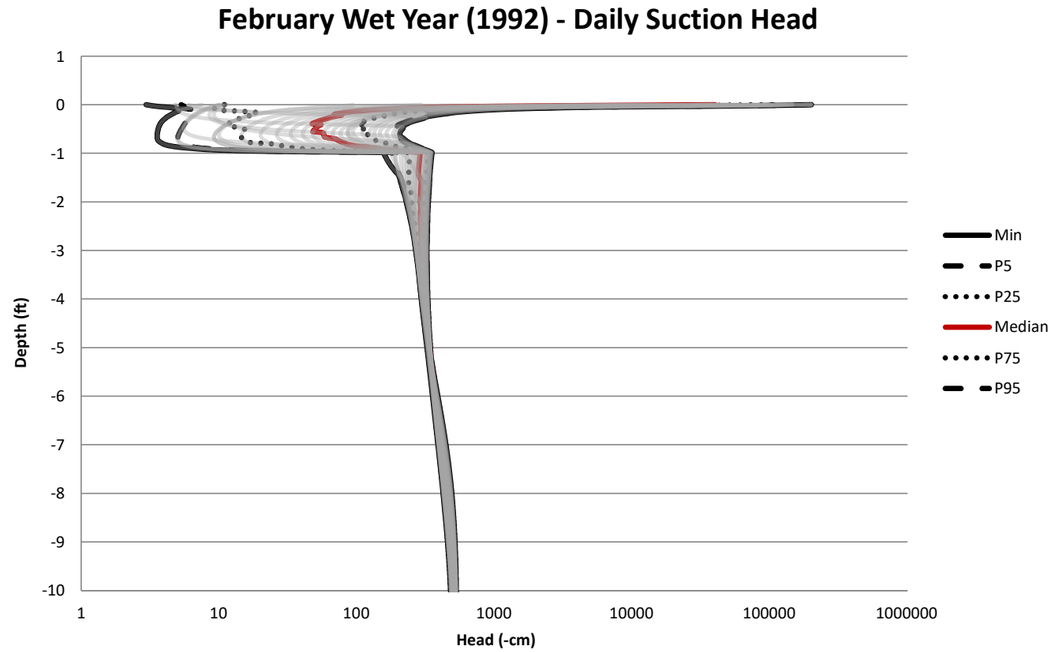
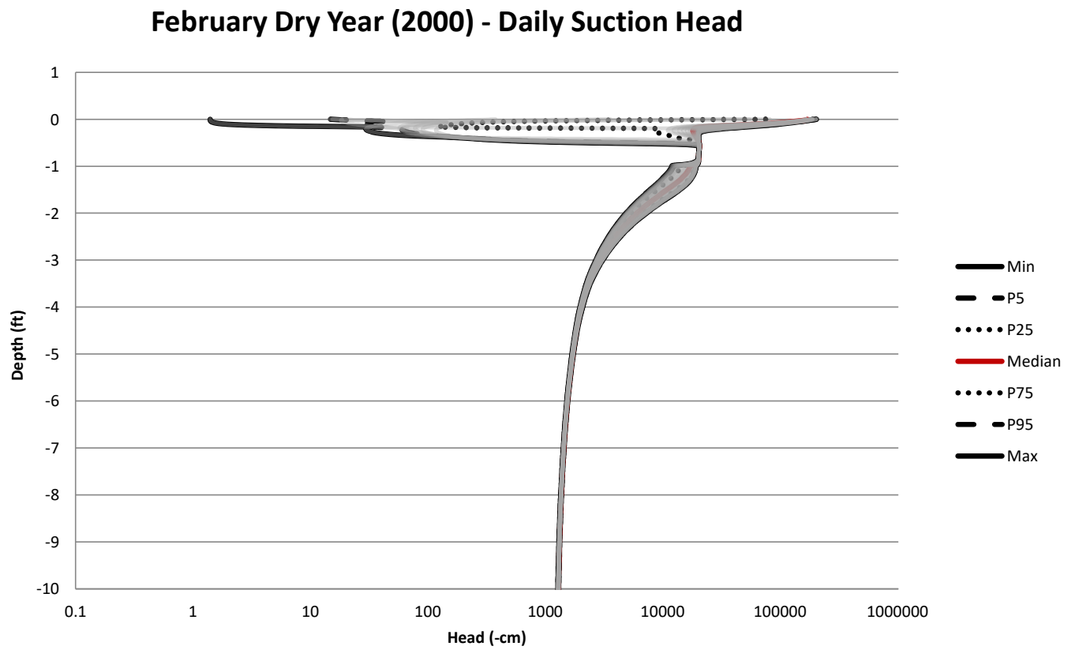
FIG. No. IV-B.57







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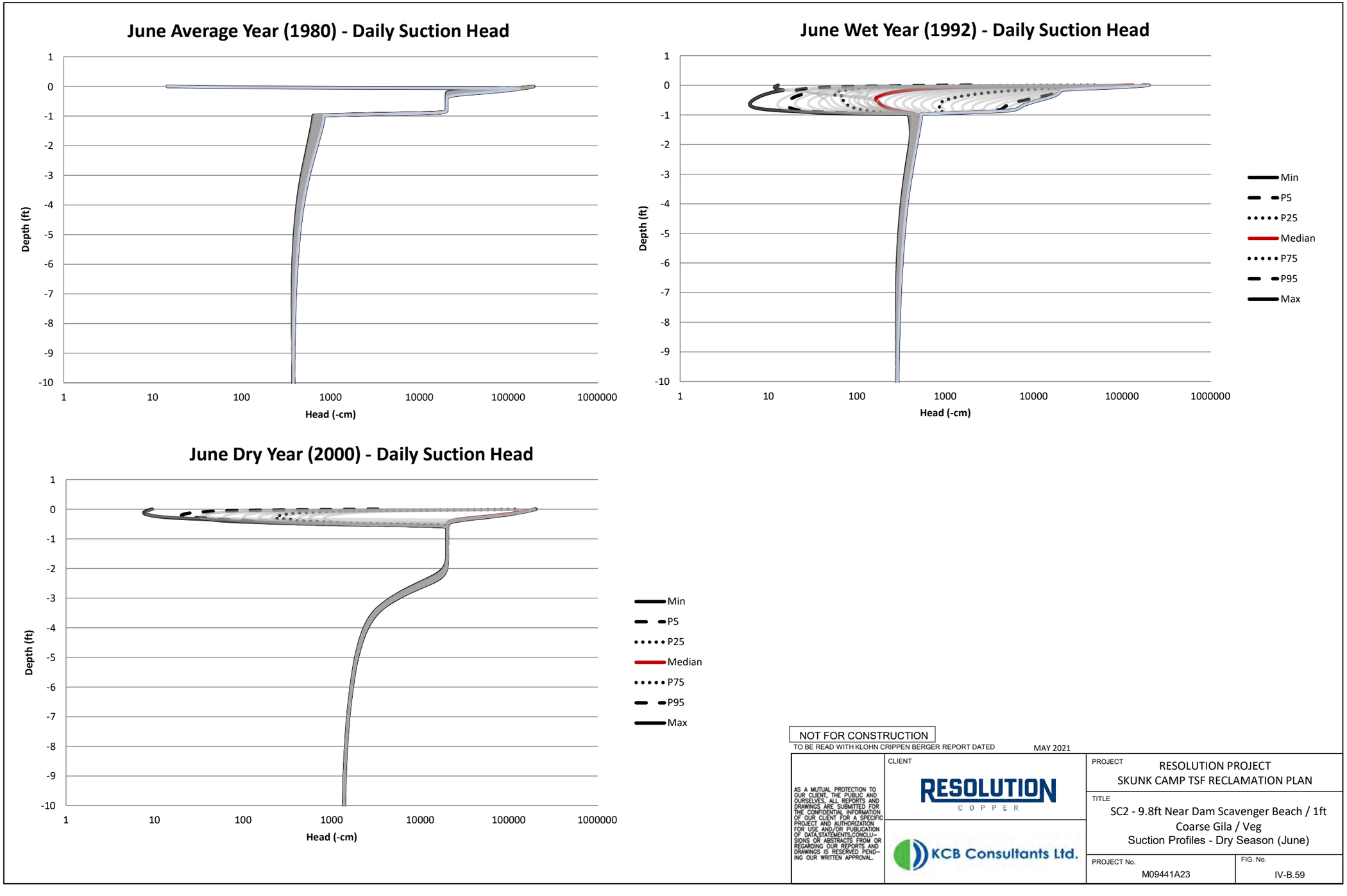
TITLE: SC2 - 9.8ft Near Dam Scavenger Beach / 1ft Coarse Gila / Veg
Suction Profiles - Winter (February)

PROJECT No. M09441A23

FIG. No. IV-B.58



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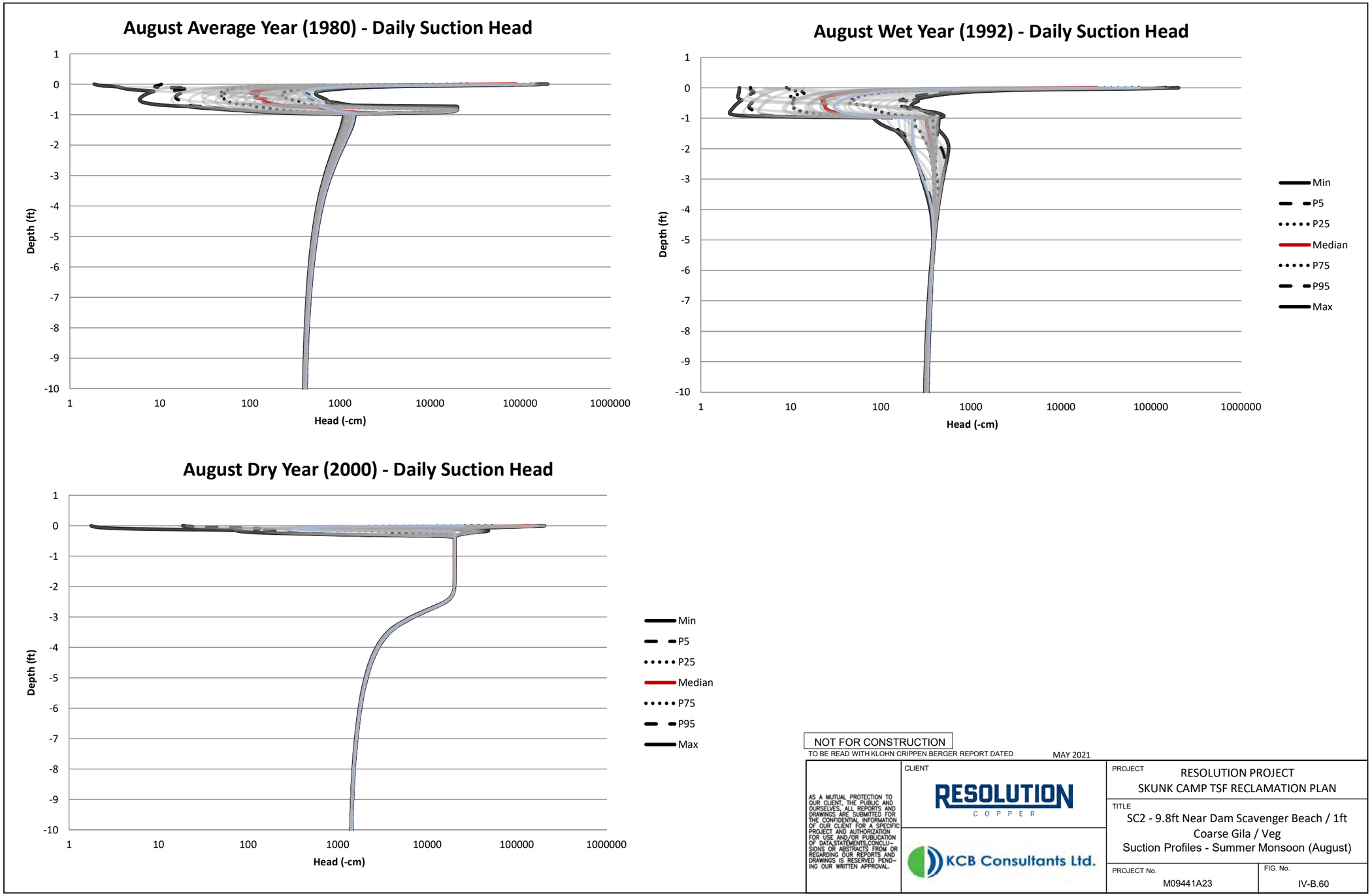
SKUNK CAMP TSF RECLAMATION PLAN

TITLE: SC2 - 9.8ft Near Dam Scavenger Beach / 1ft Coarse Gila / Veg
Suction Profiles - Dry Season (June)

PROJECT No. M09441A23

FIG. No. IV-B.59



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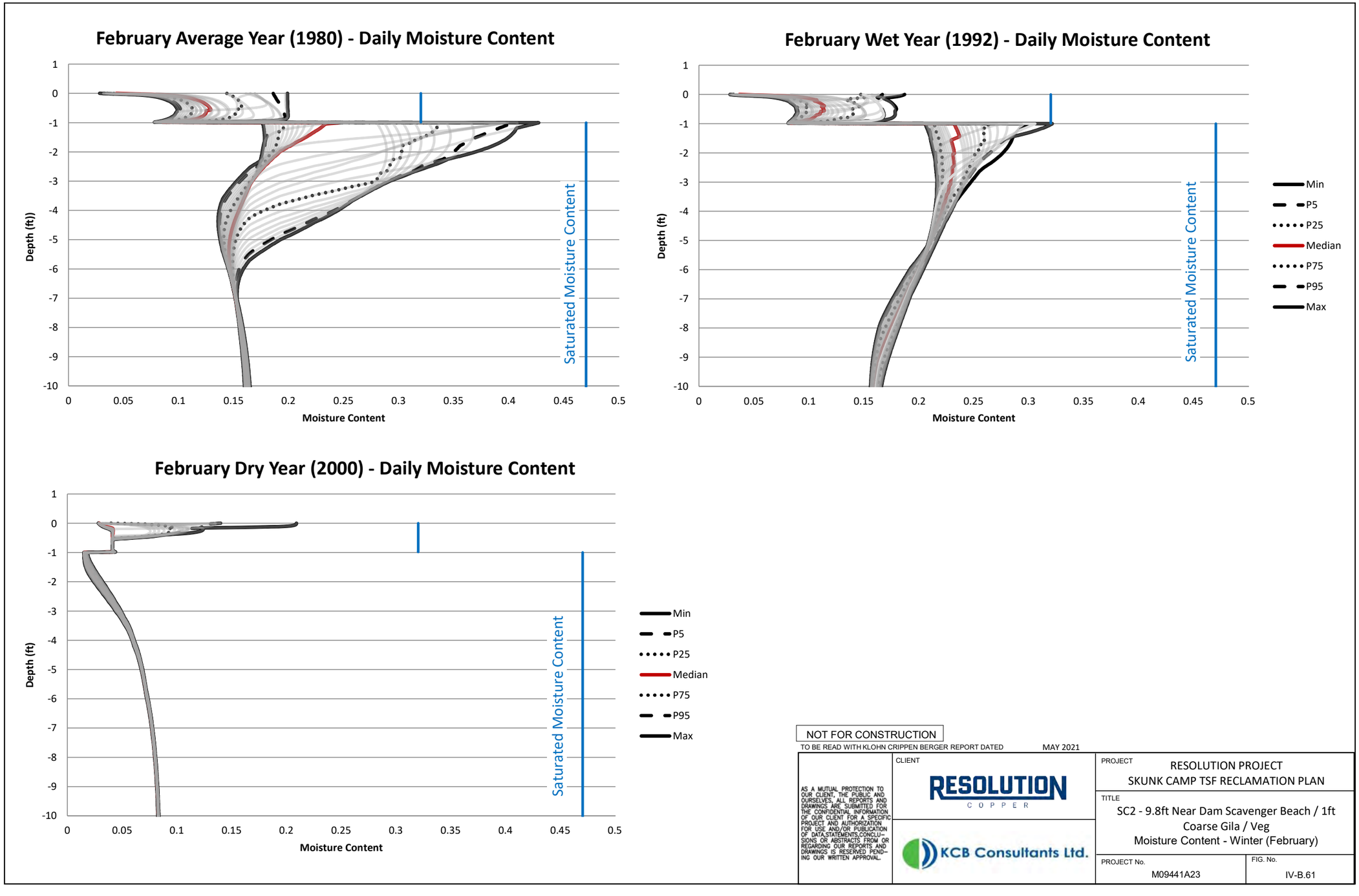
TITLE: SC2 - 9.8ft Near Dam Scavenger Beach / 1ft Coarse Gila / Veg
Suction Profiles - Summer Monsoon (August)

PROJECT No. M09441A23

FIG. No. IV-B.60



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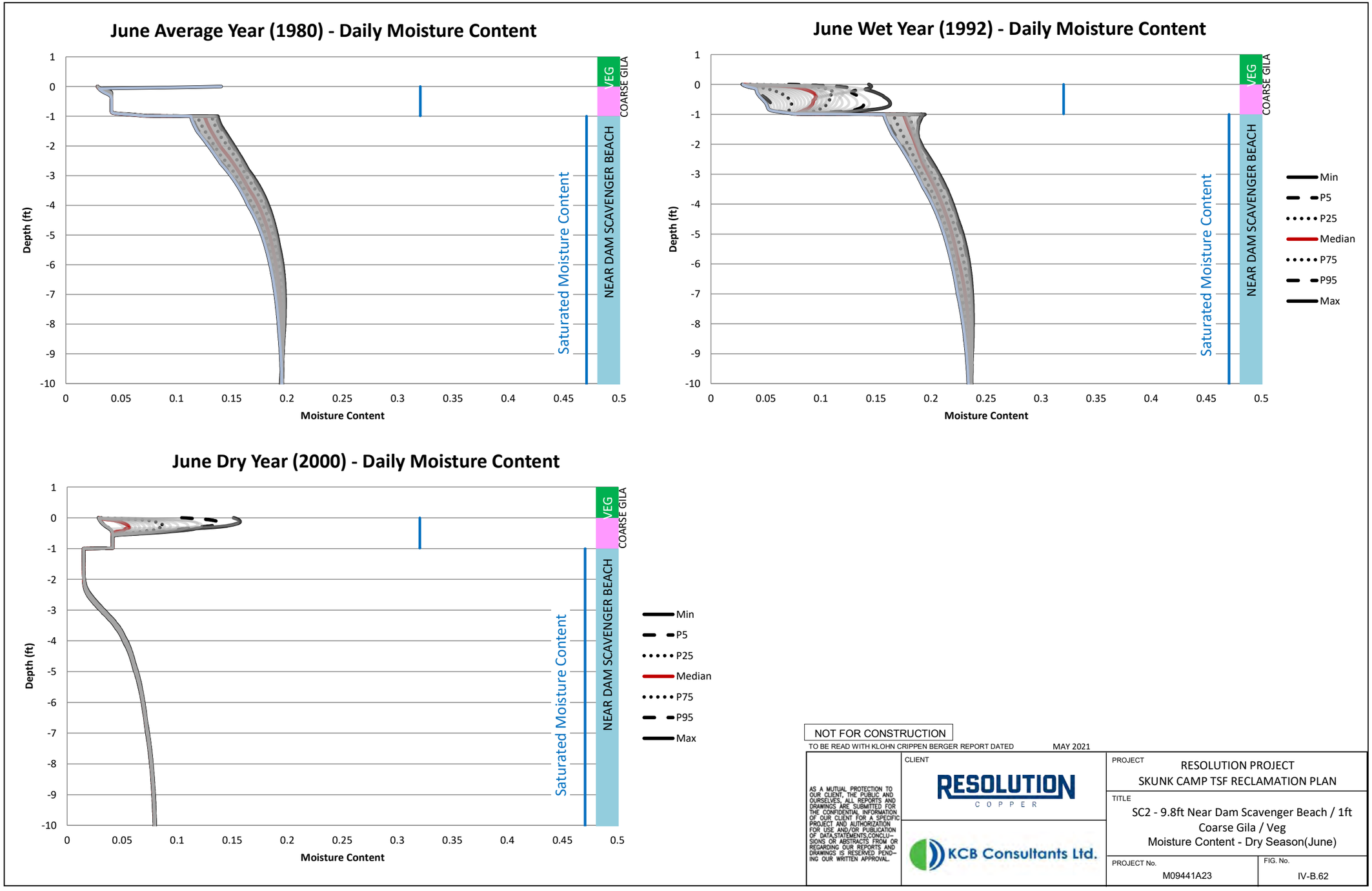
PROJECT: RESOLUTION PROJECT
SKUNK CAMP TSF RECLAMATION PLAN

TITLE: SC2 - 9.8ft Near Dam Scavenger Beach / 1ft Coarse Gila / Veg
Moisture Content - Winter (February)

PROJECT No. M09441A23

FIG. No. IV-B.61



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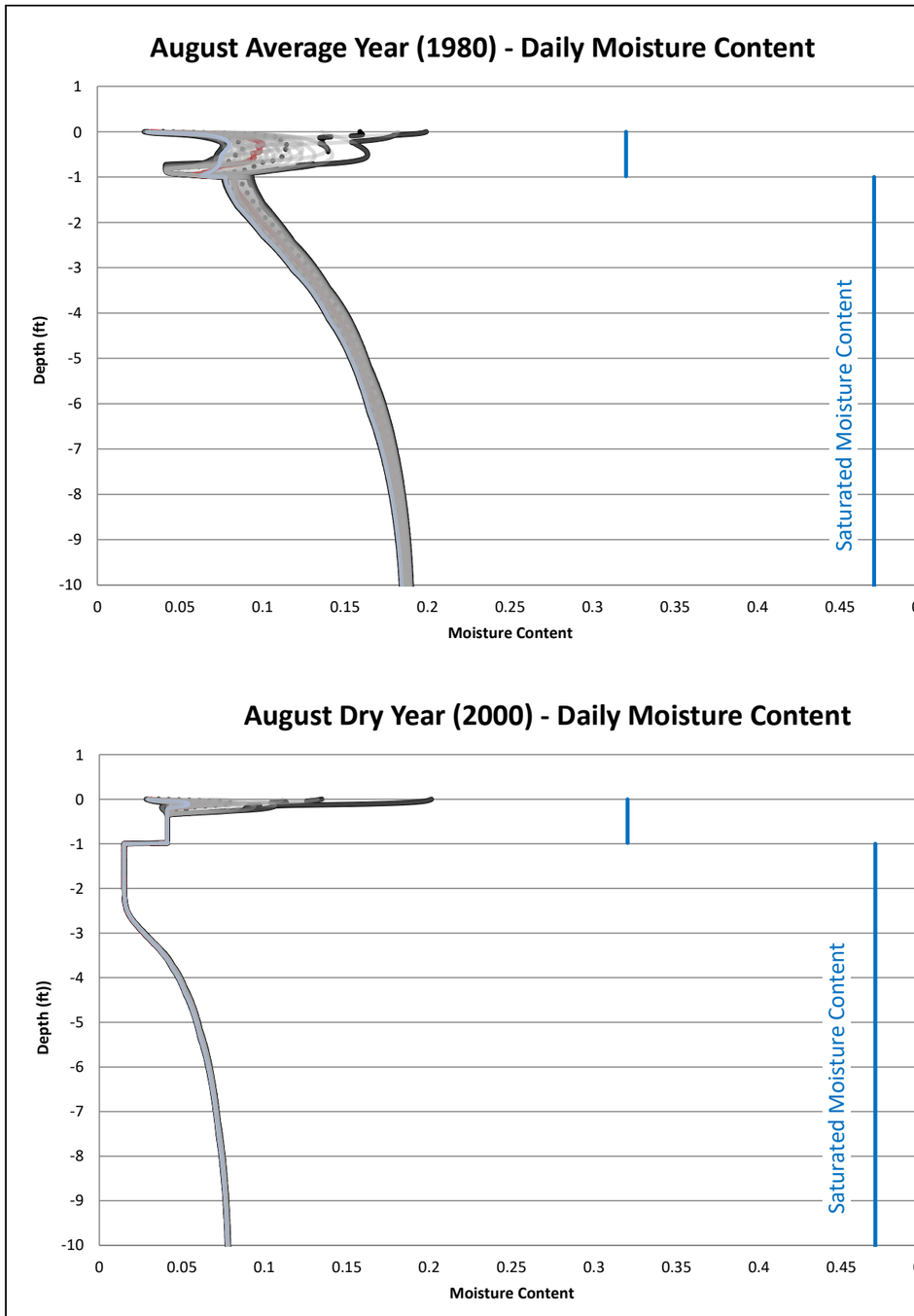
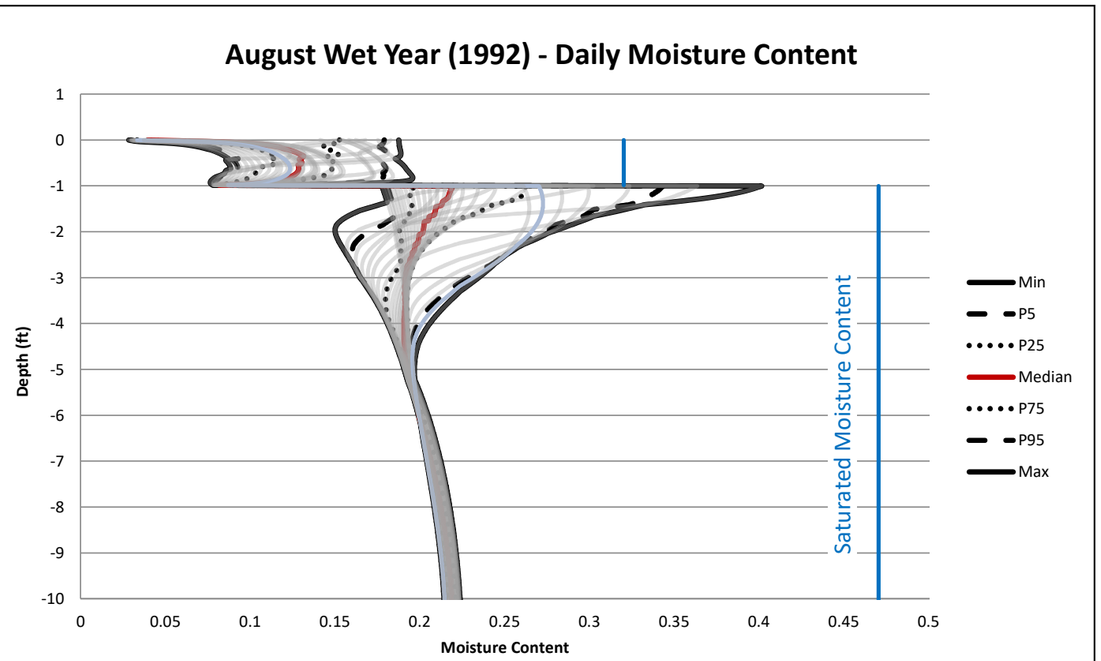
SKUNK CAMP TSF RECLAMATION PLAN

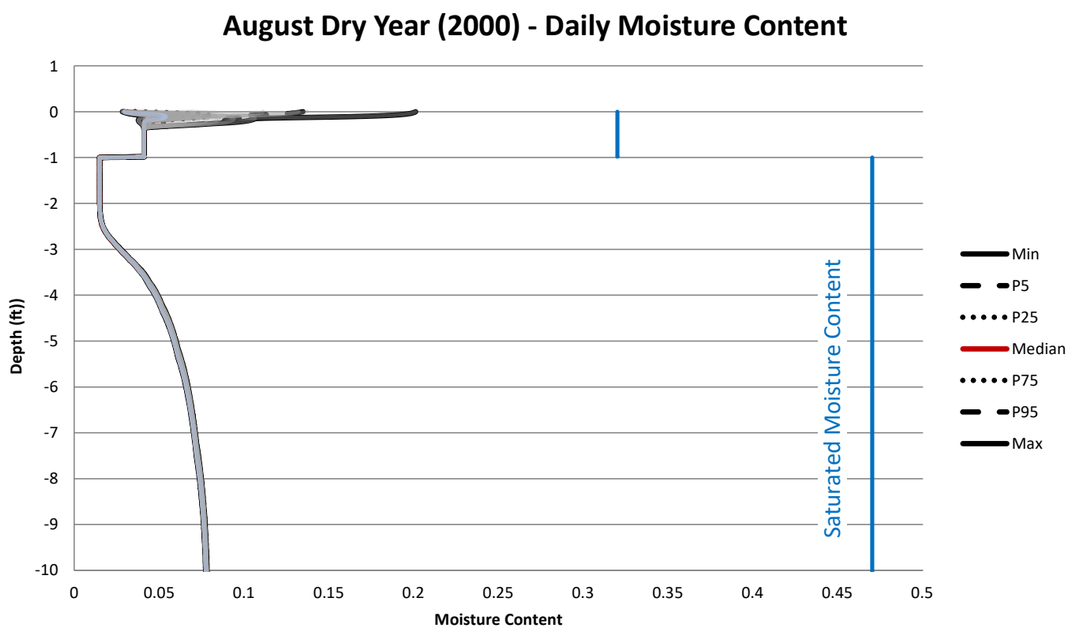
TITLE: SC2 - 9.8ft Near Dam Scavenger Beach / 1ft Coarse Gila / Veg
Moisture Content - Dry Season(June)

PROJECT No. M09441A23

FIG. No. IV-B.62







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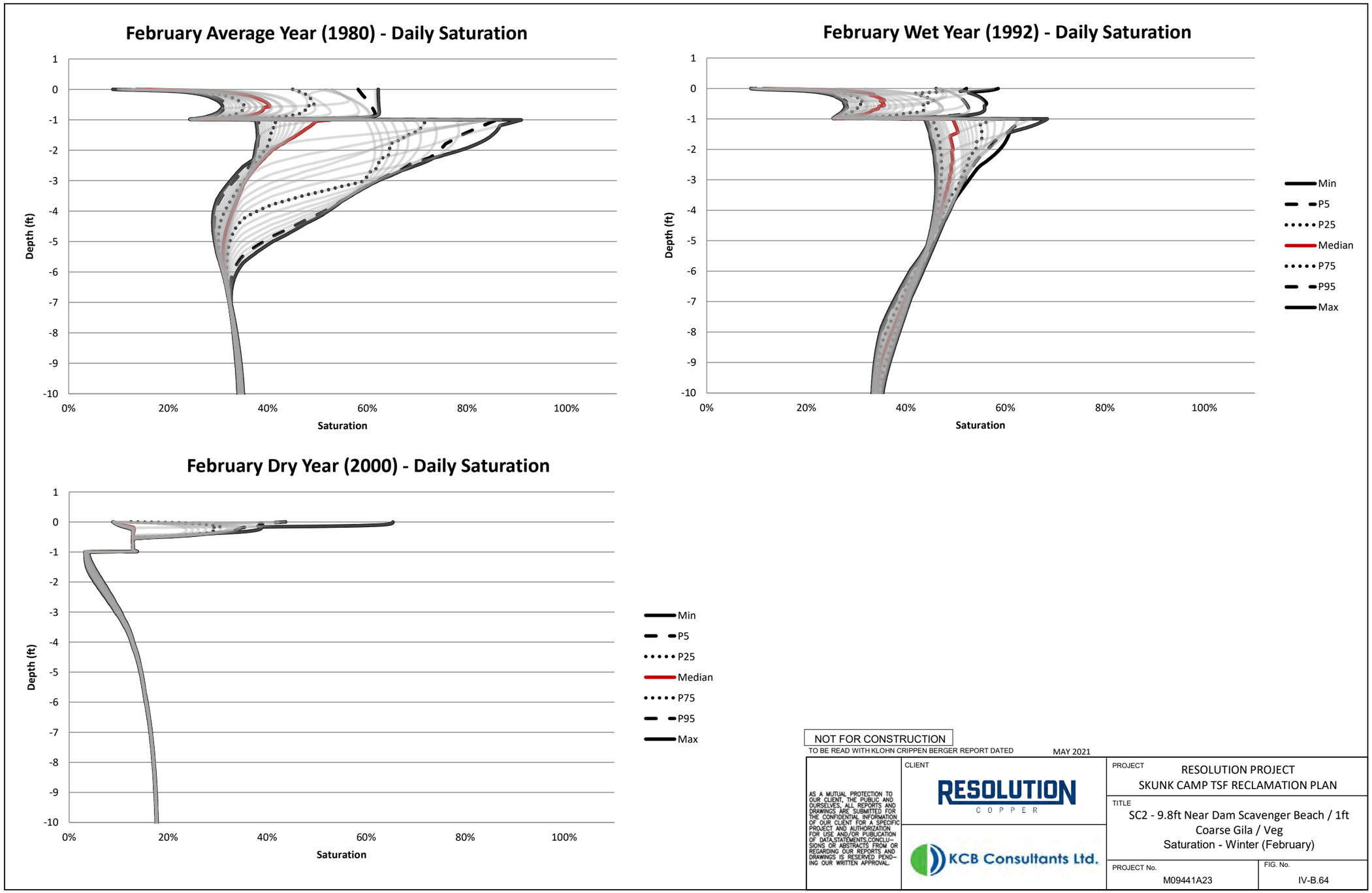
PROJECT: RESOLUTION PROJECT
SKUNK CAMP TSF RECLAMATION PLAN

TITLE: SC2 - 9.8ft Near Dam Scavenger Beach / 1ft Coarse Gila / Veg
Moisture Content - Summer Monsoon (August)

PROJECT No. M09441A23

FIG. No. IV-B.63



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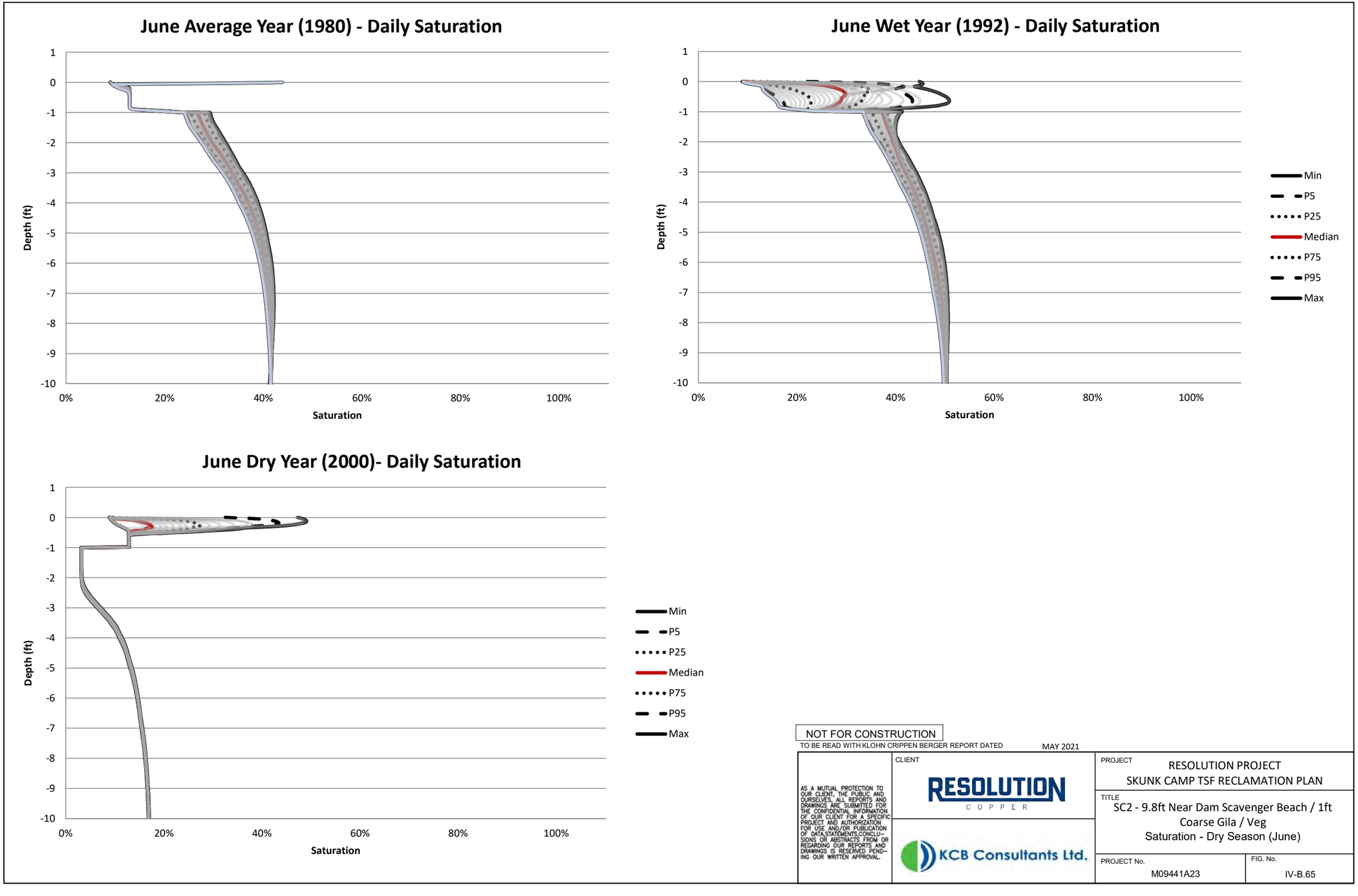
PROJECT: RESOLUTION PROJECT
SKUNK CAMP TSF RECLAMATION PLAN

TITLE: SC2 - 9.8ft Near Dam Scavenger Beach / 1ft Coarse Gila / Veg
Saturation - Winter (February)

PROJECT No. M09441A23

FIG. No. IV-B.64



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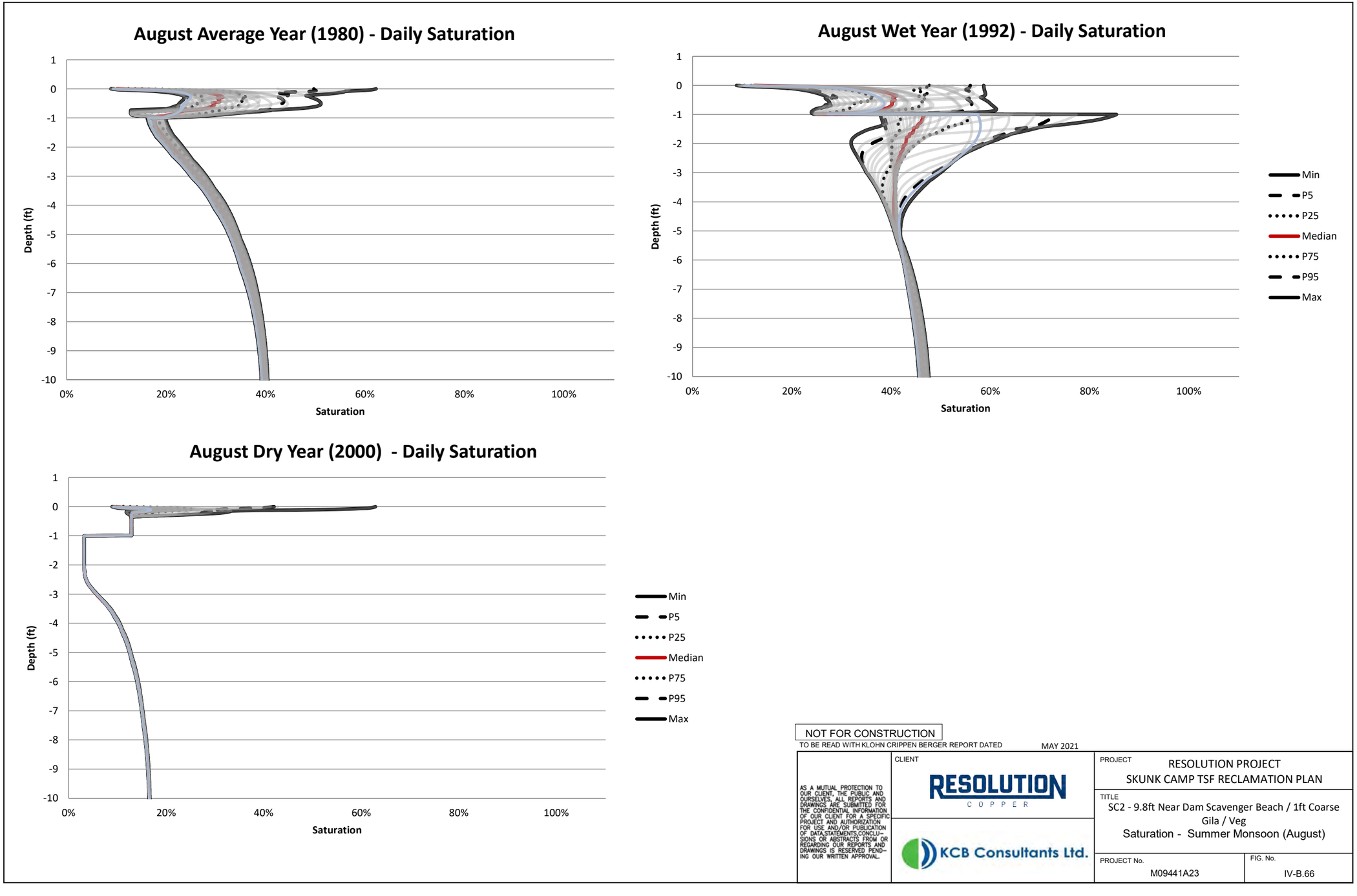
PROJECT: RESOLUTION PROJECT
SKUNK CAMP TSF RECLAMATION PLAN

TITLE: SC2 - 9.8ft Near Dam Scavenger Beach / 1ft Coarse Gila / Veg
Saturation - Dry Season (June)

PROJECT No. M09441A23

FIG. No. IV-B.65



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KCB Consultants Ltd.

PROJECT: RESOLUTION PROJECT
SKUNK CAMP TSF RECLAMATION PLAN

TITLE: SC2 - 9.8ft Near Dam Scavenger Beach / 1ft Coarse Gila / Veg
Saturation - Summer Monsoon (August)

PROJECT No. M09441A23

FIG. No. IV-B.66

Table IV-B.25 SC3 Annual Water Balance

Water Year	Result Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
		(in)	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
1951	1951-10-01	14	46	9.0	0	-18	0	14	23	36
1952	1952-10-01	0	51	3.3	0	-2.8	0	20	24	41
1953	1953-10-01	15	57	0.98	0	-1.1	0	15	16	41
1954	1954-10-01	21	51	-0.73	0	-0.59	0	21	20	41
1955	1955-10-01	13	58	1.5	0	-0.39	0	13	15	39
1956	1956-10-01	13	61	1.0	0	-0.29	0	13	14	42
1957	1957-10-01	15	56	0.24	0	-0.21	0	15	15	39
1958	1958-10-01	19	51	-0.66	0	-0.17	0	19	19	40
1959	1959-10-01	16	59	0.56	0	-0.14	0	16	16	42
1960	1960-10-01	19	54	-1.4	0	-0.14	0	19	18	42
1961	1961-10-01	9.8	63	0.95	0	-0.24	0	9.8	11	40
1962	1962-10-01	14	56	-0.16	0	-0.18	0	14	14	40
1963	1963-10-01	24	49	-3.0	0	-0.16	0	24	21	41
1964	1964-10-01	11	60	2.5	0	-0.17	0	11	14	39
1965	1965-10-01	18	53	0.083	0	-0.17	0	18	18	39
1966	1966-10-01	23	49	-4.4	0	-0.27	0	23	18	41
1967	1967-10-01	14	58	1.8	0	-0.48	0	14	16	39
1968	1968-10-01	22	49	-2.5	0	-0.50	0	22	20	39
1969	1969-10-01	19	53	0.19	0	-0.63	0	19	19	40
1970	1970-10-01	16	56	0.20	0	-0.45	0	16	16	40
1971	1971-10-01	12	61	-1.1	0	-0.30	0	12	11	40
1972	1972-10-01	11	65	2.9	0	-0.21	0	11	14	43
1973	1973-10-01	31	38	-2.3	0	-0.22	0	31	28	38
1974	1974-10-01	15	56	0.22	0	-0.31	0	15	16	39
1975	1975-10-01	19	50	0.50	0	-0.23	0	19	19	37
1976	1976-10-01	16	56	-0.94	0	-0.20	0	16	15	40
1977	1977-10-01	16	56	0.61	0	-0.16	0	16	17	40
1978	1978-10-01	24	47	-1.9	0	-0.16	0	24	22	40
1979	1979-10-01	30	42	-4.3	0	-0.90	0	30	25	41
1980	1980-10-01	20	51	-0.014	0	-1.2	0	20	20	40
1981	1981-10-01	15	60	0.99	0	-0.80	0	15	16	43
1982	1982-10-01	23	46	-0.47	0	-0.45	0	23	23	38
1983	1983-10-01	27	42	-3.2	0	-0.33	0	27	24	38
1984	1984-10-01	18	53	3.4	0	-0.35	0	18	21	39
1985	1985-10-01	22	44	-1.5	0	-0.33	0	22	21	36
1986	1986-10-01	21	49	0.63	0	-0.35	0	21	22	39
1987	1987-10-01	20	50	0.44	0	-0.29	0	20	20	38
1988	1988-10-01	23	48	-0.77	0	-0.26	0	23	22	39
1989	1989-10-01	12	62	1.5	0	-0.24	0	12	13	43
1990	1990-10-01	23	48	-3.8	0	-0.19	0	23	19	39
1991	1991-10-01	23	48	1.3	0	-0.23	0	23	24	39
1992	1992-10-01	36	34	-3.3	0	-0.42	0	36	33	40
1993	1993-10-01	33	37	-7.0	0	-2.9	0	33	26	39
1994	1994-10-01	15	57	2.5	0	-2.2	0	15	18	41
1995	1995-10-01	25	46	-1.2	0	-0.88	0	25	23	39
1996	1996-10-01	13	60	2.3	0	-0.58	0	13	16	42
1997	1997-10-01	10	65	1.5	0	-0.34	0	10	12	42
1998	1998-10-01	20	49	-0.98	0	-0.22	0	20	19	39
1999	1999-10-01	15	58	0.34	0	-0.20	0	15	15	40
2000	2000-10-01	5.4	72	1.6	0	-0.17	0	5.4	7.0	45
2001	2001-10-01	23	48	-1.7	0	-0.13	0	23	22	41
2002	2002-10-01	5.4	70	1.4	0	-0.13	0	5.4	6.8	44
2003	2003-10-01	13	63	-0.37	0	-0.11	0	13	13	43
2004	2004-10-01	12	65	0.070	0	-0.094	0	12	12	44

Table IV-B.25 SC3 Annual Water Balance

Water Year	Result Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
		(in)	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
2005	2005-10-01	24	49	-2.8	0	-0.094	0	24	21	39
2006	2006-10-01	12	63	0.77	0	-0.20	0	12	13	41

Table IV-B.26 SC3 Monthly Water Balance 9 Wet Years (1983 to 1991)

Month	Result Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
		[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
Nov-82	1982-11-30	0	5.6	0.10	0	-0.058	0	2.5	2.6	4.9
Dec-82	1982-12-30	2.5	0.12	-0.25	0	-0.028	0	2.5	2.2	0.97
Jan-83	1983-01-29	0.67	2.6	0.35	0	-0.027	0	0.67	1.1	1.0
Feb-83	1983-02-28	3.5	-0.16	-1.0	0	-0.027	0	3.5	2.5	1.0
Mar-83	1983-03-30	5.4	-1.5	-2.0	0	-0.026	0	5.4	3.3	1.7
Apr-83	1983-04-29	0.83	5.2	1.9	0	-0.026	0	0.83	2.7	2.5
May-83	1983-05-29	0	8.5	0.77	0	-0.026	0	0	0.75	4.1
Jun-83	1983-06-28	0.039	9.5	0.47	0	-0.026	0	0.039	0.47	5.8
Jul-83	1983-07-28	2.1	6.9	-0.45	0	-0.026	0	2.1	1.7	6.0
Aug-83	1983-08-27	3.8	3.5	-0.0086	0	-0.026	0	3.8	3.8	4.3
Sep-83	1983-09-26	1.9	5.2	0.37	0	-0.027	0	1.9	2.2	4.9
Oct-83	1983-10-26	4.9	-0.31	-1.7	0	-0.027	0	4.9	3.2	3.1
Nov-83	1983-11-25	1.6	2.2	-0.32	0	-0.028	0	1.6	1.3	2.1
Dec-83	1983-12-25	1.9	0.79	0.43	0	-0.028	0	1.9	2.3	0.94
Jan-84	1984-01-24	1.5	1.2	0.44	0	-0.028	0	1.5	2.0	0.88
Feb-84	1984-02-23	0	4.1	0.67	0	-0.028	0	0	0.67	1.4
Mar-84	1984-03-24	0	5.7	0.43	0	-0.029	0	0	0.43	2.2
Apr-84	1984-04-23	0.87	5.9	0.12	0	-0.029	0	0.87	0.94	3.2
May-84	1984-05-23	0.67	7.4	0.28	0	-0.029	0	0.67	0.98	4.3
Jun-84	1984-06-22	0.039	9.3	0.30	0	-0.030	0	0.039	0.31	5.8
Jul-84	1984-07-22	3.6	4.1	-1.00	0	-0.029	0	3.6	2.6	5.4
Aug-84	1984-08-21	3.9	3.2	0.026	0	-0.029	0	3.9	3.9	4.2
Sep-84	1984-09-20	1.2	5.9	0.62	0	-0.028	0	1.2	1.8	4.5
Oct-84	1984-10-20	2.5	2.4	-0.18	0	-0.028	0	2.5	2.3	3.6
Nov-84	1984-11-19	0	4.3	0.56	0	-0.028	0	0	0.59	2.0
Dec-84	1984-12-19	4.8	-2.3	-2.9	0	-0.026	0	4.8	1.9	1.2
Jan-85	1985-01-18	4.0	-1.5	-1.5	0	-0.026	0	4.0	2.4	0.67
Feb-85	1985-02-17	2.9	-0.35	-0.37	0	-0.025	0	2.9	2.5	0.63
Mar-85	1985-03-19	1.7	2.2	1.0	0	-0.024	0	1.7	2.7	1.5
Apr-85	1985-04-18	0.43	5.7	1.2	0	-0.024	0	0.43	1.6	2.5
May-85	1985-05-18	0.47	6.6	0.54	0	-0.025	0	0.47	0.98	3.7
Jun-85	1985-06-17	0	8.7	0.45	0	-0.027	0	0	0.47	4.5
Jul-85	1985-07-17	0.24	8.2	0.15	0	-0.029	0	0.24	0.35	5.4
Aug-85	1985-08-16	2.1	5.7	-0.066	0	-0.030	0	2.1	2.0	4.7
Sep-85	1985-09-15	2.2	4.9	-0.13	0	-0.031	0	2.2	2.0	5.2
Oct-85	1985-10-15	3.1	2.0	-0.27	0	-0.031	0	3.1	2.9	3.5
Nov-85	1985-11-14	1.4	2.4	-0.13	0	-0.032	0	1.4	1.3	2.0
Dec-85	1985-12-14	2.7	0.20	-0.71	0	-0.031	0	2.7	2.0	1.2
Jan-86	1986-01-13	0	3.3	1.4	0	-0.031	0	0	1.4	1.2
Feb-86	1986-02-12	2.3	0.79	-1.4	0	-0.030	0	2.3	0.94	1.5
Mar-86	1986-03-14	1.9	2.6	0.30	0	-0.029	0	1.9	2.2	1.7
Apr-86	1986-04-13	3.1	2.5	0.076	0	-0.029	0	3.1	3.2	2.7
May-86	1986-05-13	0	7.8	0.80	0	-0.029	0	0	0.79	4.2
Jun-86	1986-06-12	0	9.4	0.45	0	-0.028	0	0	0.47	5.2
Jul-86	1986-07-12	2.2	6.8	-0.53	0	-0.027	0	2.2	1.7	6.1
Aug-86	1986-08-11	2.8	4.7	0.039	0	-0.026	0	2.8	2.8	4.1
Sep-86	1986-09-10	3.0	3.9	-0.61	0	-0.026	0	3.0	2.4	4.8
Oct-86	1986-10-10	0.91	4.8	0.97	0	-0.026	0	0.91	1.9	3.9
Nov-86	1986-11-09	2.7	1.2	-0.61	0	-0.026	0	2.7	2.1	2.4
Dec-86	1986-12-09	2.6	0.67	-1.4	0	-0.026	0	2.6	1.3	1.4
Jan-87	1987-01-08	1.5	1.3	0.80	0	-0.025	0	1.5	2.3	0.93
Feb-87	1987-02-07	3.1	-0.16	-0.48	0	-0.024	0	3.1	2.6	0.93
Mar-87	1987-03-09	2.3	1.9	0.040	0	-0.024	0	2.3	2.3	1.3
Apr-87	1987-04-08	0.94	4.4	0.89	0	-0.024	0	0.94	1.8	2.3

Table IV-B.26 SC3 Monthly Water Balance 9 Wet Years (1983 to 1991)

Month	Result Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
		[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
May-87	1987-05-08	0.039	7.2	0.59	0	-0.024	0	0.039	0.63	3.0
Jun-87	1987-06-07	0.28	8.1	0.37	0	-0.023	0	0.28	0.67	4.7
Jul-87	1987-07-07	0.24	8.9	0.26	0	-0.023	0	0.24	0.47	5.9
Aug-87	1987-08-06	3.0	5.5	-1.1	0	-0.023	0	3.0	1.9	5.8
Sep-87	1987-09-05	2.4	5.0	0.13	0	-0.023	0	2.4	2.5	4.5
Oct-87	1987-10-05	0.79	5.5	0.74	0	-0.023	0	0.79	1.5	4.2
Nov-87	1987-11-04	1.4	3.5	-0.52	0	-0.023	0	1.4	0.87	3.6
Dec-87	1987-12-04	0.71	3.1	0.76	0	-0.022	0	0.71	1.5	1.7
Jan-88	1988-01-03	4.0	-1.3	-2.2	0	-0.022	0	4.0	1.9	1.0
Feb-88	1988-02-02	3.6	-0.98	-1.0	0	-0.022	0	3.6	2.6	0.65
Mar-88	1988-03-03	0.71	3.5	1.3	0	-0.021	0	0.71	2.0	1.3
Apr-88	1988-04-02	0.16	5.9	0.73	0	-0.021	0	0.16	0.87	2.4
May-88	1988-05-02	2.4	3.7	-0.33	0	-0.020	0	2.4	2.1	3.6
Jun-88	1988-06-01	0	8.7	0.75	0	-0.020	0	0	0.75	4.5
Jul-88	1988-07-01	0.12	8.5	0.38	0	-0.020	0	0.12	0.51	5.6
Aug-88	1988-07-31	2.4	5.7	-0.93	0	-0.020	0	2.4	1.5	5.4
Sep-88	1988-08-30	6.7	0.59	-1.5	0	-0.020	0	6.7	5.2	4.5
Oct-88	1988-10-29	2.0	9.8	1.6	0	-0.043	0	2.0	3.6	7.9
Nov-88	1988-11-28	1.7	1.9	-0.82	0	-0.021	0	1.7	0.91	2.2
Dec-88	1988-12-28	1.1	1.9	0.69	0	-0.021	0	1.1	1.8	1.1
Jan-89	1989-01-27	2.0	0.71	-0.017	0	-0.021	0	2.0	1.9	0.66
Feb-89	1989-02-26	0.51	3.3	0.60	0	-0.020	0	0.51	1.1	1.1
Mar-89	1989-03-28	1.7	4.1	-1.0	0	-0.020	0	1.7	0.71	2.8
Apr-89	1989-04-27	0	7.6	1.3	0	-0.020	0	0	1.3	4.2
May-89	1989-05-27	0.20	8.4	0.36	0	-0.020	0	0.20	0.51	5.0
Jun-89	1989-06-26	0	9.1	0.26	0	-0.020	0	0	0.28	5.7
Jul-89	1989-07-26	0.079	8.7	0.20	0	-0.019	0	0.079	0.28	6.1
Aug-89	1989-08-25	1.3	6.1	-0.062	0	-0.019	0	1.3	1.3	4.9
Sep-89	1989-09-24	1.5	5.7	-0.18	0	-0.018	0	1.5	1.3	4.7
Oct-89	1989-10-24	1.1	4.5	0.065	0	-0.018	0	1.1	1.1	4.0
Nov-89	1989-11-23	0.31	3.8	0.16	0	-0.018	0	0.31	0.47	2.2
Dec-89	1989-12-23	0	3.3	0.39	0	-0.018	0	0	0.39	1.3
Jan-90	1990-01-22	2.1	0.47	-0.71	0	-0.017	0	2.1	1.4	0.94
Feb-90	1990-02-21	2.6	0.35	-0.59	0	-0.017	0	2.6	1.9	0.83
Mar-90	1990-03-23	0.79	3.9	0.55	0	-0.016	0	0.79	1.4	1.8
Apr-90	1990-04-22	1.0	5.8	0.32	0	-0.016	0	1.0	1.3	3.2
May-90	1990-05-22	1.1	6.9	0.12	0	-0.015	0	1.1	1.2	4.5
Jun-90	1990-06-21	0.39	8.9	0.25	0	-0.015	0	0.39	0.67	5.4
Jul-90	1990-07-21	0.94	7.4	0.034	0	-0.014	0	0.94	0.94	5.7
Aug-90	1990-08-20	9.6	-2.6	-7.1	0	-0.013	0	9.6	2.5	4.6
Sep-90	1990-09-19	2.4	4.7	1.6	0	-0.014	0	2.4	4.1	4.3
Oct-90	1990-10-19	0.43	4.8	2.2	0	-0.014	0	0.43	2.6	3.8
Nov-90	1990-11-18	1.5	2.6	0.15	0	-0.013	0	1.5	1.7	2.4
Dec-90	1990-12-18	2.8	0.31	-1.0	0	-0.013	0	2.8	1.7	1.4
Jan-91	1991-01-17	4.6	-2.3	-2.3	0	-0.014	0	4.6	2.4	0.79
Feb-91	1991-02-16	0.16	3.4	2.1	0	-0.015	0	0.16	2.2	1.0
Mar-91	1991-03-18	3.6	0.87	-0.95	0	-0.015	0	3.6	2.6	1.8
Apr-91	1991-04-17	3.2	2.4	0.45	0	-0.017	0	3.2	3.7	2.2
May-91	1991-05-17	0	7.8	1.0	0	-0.019	0	0	0.98	3.9
Jun-91	1991-06-16	0.71	8.4	0.44	0	-0.020	0	0.71	1.2	5.1
Jul-91	1991-07-16	0.43	8.9	0.42	0	-0.023	0	0.43	0.87	5.8
Aug-91	1991-08-15	3.3	4.8	-0.74	0	-0.025	0	3.3	2.6	5.1
Sep-91	1991-09-14	2.0	4.9	0.36	0	-0.027	0	2.0	2.4	4.9
Oct-91	1991-10-01	0.24	3.2	0.47	0	-0.016	0	0.24	0.71	2.3

Table IV-B.27 SC3 Monsoon Period Water Balance

Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
1951-07-01	0	9.2	1.00	0	-1.0	0	0	1.00	5.7
1951-08-01	1.1	8.4	0.62	0	-0.78	0	1.1	1.7	6.3
1951-09-01	3.6	4.2	-1.5	0	-0.63	0	3.6	2.1	5.1
1951-10-01	0.65	6.0	1.7	0	-0.49	0	0.65	2.4	4.7
1951-11-01	1.6	3.7	-0.15	0	-0.41	0	1.6	1.5	3.1
1951	7.0	32	1.7	0	-3.3	0	7.0	8.7	25
1952-07-01	0.63	8.9	0.66	0	-0.17	0	0.63	1.3	5.8
1952-08-01	0.56	8.3	0.43	0	-0.16	0	0.56	0.99	5.6
1952-09-01	0.45	7.3	0.44	0	-0.15	0	0.45	0.89	5.4
1952-10-01	0.70	6.3	0.24	0	-0.14	0	0.70	0.94	4.9
1952-11-01	0	5.9	0.42	0	-0.13	0	0	0.43	3.8
1952	2.3	37	2.2	0	-0.75	0	2.3	4.5	25
1953-07-01	0	9.1	0.36	0	-0.077	0	0	0.36	5.9
1953-08-01	2.7	5.8	-1.1	0	-0.075	0	2.7	1.6	5.6
1953-09-01	1.8	6.0	0.41	0	-0.071	0	1.8	2.2	5.0
1953-10-01	0	6.8	0.90	0	-0.065	0	0	0.91	5.0
1953-11-01	0.012	5.4	0.39	0	-0.064	0	0.012	0.41	3.4
1953	4.5	33	0.96	0	-0.35	0	4.5	5.5	25
1954-07-01	0.13	8.9	0.46	0	-0.042	0	0.13	0.59	5.5
1954-08-01	4.5	3.2	-1.0	0	-0.041	0	4.5	3.4	4.9
1954-09-01	5.3	2.1	-0.97	0	-0.040	0	5.3	4.3	4.3
1954-10-01	1.3	5.4	0.85	0	-0.037	0	1.3	2.1	4.5
1954-11-01	0	5.6	0.80	0	-0.037	0	0	0.80	3.5
1954	11	25	0.11	0	-0.20	0	11	11	23
1955-07-01	2.1	7.0	-0.45	0	-0.031	0	2.1	1.6	5.5
1955-08-01	4.5	3.4	-1.7	0	-0.031	0	4.5	2.7	4.8
1955-09-01	2.7	4.4	0.82	0	-0.030	0	2.7	3.5	4.3
1955-10-01	0.13	6.7	0.75	0	-0.029	0	0.13	0.88	4.7
1955-11-01	0.020	5.8	0.42	0	-0.029	0	0.020	0.44	3.6
1955	9.4	27	-0.18	0	-0.15	0	9.4	9.2	23
1956-07-01	0.24	9.2	0.13	0	-0.022	0	0.24	0.37	6.2
1956-08-01	2.8	6.2	-0.53	0	-0.022	0	2.8	2.2	5.2
1956-09-01	1.8	5.7	0.25	0	-0.022	0	1.8	2.0	4.5
1956-10-01	0.075	6.8	0.37	0	-0.021	0	0.075	0.44	4.9
1956-11-01	0.53	4.5	0.059	0	-0.021	0	0.53	0.59	3.1
1956	5.4	32	0.28	0	-0.11	0	5.4	5.6	24
1957-07-01	0.031	9.3	0.37	0	-0.016	0	0.031	0.40	5.9
1957-08-01	1.1	7.4	-0.055	0	-0.017	0	1.1	1.0	5.3
1957-09-01	3.4	4.4	-0.49	0	-0.016	0	3.4	2.9	4.8
1957-10-01	0.57	6.1	0.52	0	-0.015	0	0.57	1.1	4.5
1957-11-01	3.2	1.1	-1.7	0	-0.015	0	3.2	1.6	2.6
1957	8.3	28	-1.3	0	-0.080	0	8.3	7.0	23
1958-07-01	0.70	8.5	0.16	0	-0.013	0	0.70	0.86	5.9
1958-08-01	0.78	8.2	0.092	0	-0.013	0	0.78	0.87	5.9
1958-09-01	0.85	7.2	0.26	0	-0.013	0	0.85	1.1	5.0
1958-10-01	3.0	3.2	-0.97	0	-0.013	0	3.0	2.0	4.4
1958-11-01	1.9	3.2	0.25	0	-0.013	0	1.9	2.2	3.1
1958	7.3	30	-0.21	0	-0.064	0	7.3	7.1	24
1959-07-01	1.0	8.2	-0.092	0	-0.011	0	1.0	0.94	6.0
1959-08-01	3.8	5.8	-1.5	0	-0.011	0	3.8	2.3	6.1
1959-09-01	5.3	2.0	-0.25	0	-0.011	0	5.3	5.1	4.3
1959-10-01	0.051	6.6	0.88	0	-0.011	0	0.051	0.93	4.6
1959-11-01	4.8	0.35	-3.8	0	-0.010	0	4.8	1.0	3.2
1959	15	23	-4.8	0	-0.053	0	15	10	24
1960-07-01	0	9.3	0.39	0	-0.013	0	0	0.39	6.2
1960-08-01	0.74	8.3	0.13	0	-0.016	0	0.74	0.87	5.9
1960-09-01	1.5	6.5	0.14	0	-0.018	0	1.5	1.7	4.9

Table IV-B.27 SC3 Monsoon Period Water Balance

Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
1960-10-01	0.27	6.6	0.33	0	-0.019	0	0.27	0.61	4.8
1960-11-01	2.1	2.8	-0.43	0	-0.020	0	2.1	1.6	2.9
1960	4.6	33	0.57	0	-0.086	0	4.6	5.2	25
1961-07-01	0	9.4	0.17	0	-0.019	0	0	0.17	6.1
1961-08-01	0.67	8.0	0.015	0	-0.019	0	0.67	0.68	5.8
1961-09-01	3.0	5.1	-1.3	0	-0.018	0	3.0	1.7	4.9
1961-10-01	0.50	5.9	1.1	0	-0.017	0	0.50	1.6	3.9
1961-11-01	0.45	4.5	-0.0055	0	-0.018	0	0.45	0.44	3.3
1961	4.6	33	-0.032	0	-0.091	0	4.6	4.6	24
1962-07-01	0	9.1	0.29	0	-0.014	0	0	0.29	5.7
1962-08-01	0.61	8.2	0.14	0	-0.014	0	0.61	0.75	5.7
1962-09-01	0.49	7.8	0.17	0	-0.014	0	0.49	0.66	5.6
1962-10-01	1.2	5.2	-0.15	0	-0.013	0	1.2	1.1	4.5
1962-11-01	0.87	4.1	0.12	0	-0.014	0	0.87	1.00	3.0
1962	3.2	34	0.57	0	-0.069	0	3.2	3.8	25
1963-07-01	0	9.1	0.34	0	-0.013	0	0	0.34	5.4
1963-08-01	0.079	9.3	0.25	0	-0.013	0	0.079	0.33	6.1
1963-09-01	10	-3.3	-5.9	0	-0.012	0	10	4.6	4.3
1963-10-01	1.0	5.7	2.9	0	-0.012	0	1.0	3.9	4.4
1963-11-01	0.67	4.9	0.76	0	-0.013	0	0.67	1.4	3.6
1963	12	26	-1.6	0	-0.062	0	12	11	24
1964-07-01	0	9.4	0.22	0	-0.015	0	0	0.22	5.4
1964-08-01	1.5	7.2	-0.23	0	-0.016	0	1.5	1.3	5.6
1964-09-01	2.2	5.6	-0.055	0	-0.016	0	2.2	2.1	4.6
1964-10-01	1.6	4.4	0.094	0	-0.015	0	1.6	1.7	3.8
1964-11-01	1.5	4.2	-0.22	0	-0.016	0	1.5	1.3	3.6
1964	6.8	31	-0.19	0	-0.078	0	6.8	6.6	23
1965-07-01	0.10	8.8	0.33	0	-0.013	0	0.10	0.43	5.2
1965-08-01	1.4	7.1	-0.047	0	-0.013	0	1.4	1.4	5.4
1965-09-01	0.90	7.0	0.23	0	-0.014	0	0.90	1.1	5.0
1965-10-01	1.0	5.4	0.12	0	-0.013	0	1.0	1.2	4.3
1965-11-01	0.46	5.0	0.16	0	-0.014	0	0.46	0.62	3.5
1965	3.9	33	0.79	0	-0.067	0	3.9	4.7	23
1966-07-01	0.18	8.6	0.43	0	-0.030	0	0.18	0.61	5.8
1966-08-01	0.84	7.6	0.23	0	-0.037	0	0.84	1.1	5.3
1966-09-01	1.6	6.3	-0.15	0	-0.043	0	1.6	1.5	5.1
1966-10-01	2.7	3.7	-0.27	0	-0.044	0	2.7	2.4	4.3
1966-11-01	1.4	3.8	0.47	0	-0.047	0	1.4	1.8	2.9
1966	6.7	30	0.71	0	-0.20	0	6.7	7.4	23
1967-07-01	0.079	8.9	0.26	0	-0.036	0	0.079	0.33	5.2
1967-08-01	4.0	4.2	-0.89	0	-0.035	0	4.0	3.1	5.0
1967-09-01	2.5	5.6	0.071	0	-0.034	0	2.5	2.6	4.8
1967-10-01	0.55	5.7	0.47	0	-0.032	0	0.55	1.0	4.4
1967-11-01	0.42	4.8	0.34	0	-0.031	0	0.42	0.76	3.5
1967	7.5	29	0.24	0	-0.17	0	7.5	7.8	23
1968-07-01	0	9.4	0.47	0	-0.054	0	0	0.47	6.0
1968-08-01	1.8	6.9	-0.28	0	-0.060	0	1.8	1.6	5.3
1968-09-01	2.5	4.7	0.29	0	-0.062	0	2.5	2.8	4.1
1968-10-01	0.047	6.7	0.58	0	-0.061	0	0.047	0.63	4.3
1968-11-01	0.39	4.6	0.31	0	-0.062	0	0.39	0.70	3.0
1968	4.8	32	1.4	0	-0.30	0	4.8	6.2	23
1969-07-01	0	9.3	0.47	0	-0.049	0	0	0.46	5.6
1969-08-01	0.33	8.1	0.31	0	-0.050	0	0.33	0.64	5.6
1969-09-01	2.6	5.7	-0.21	0	-0.050	0	2.6	2.4	5.4
1969-10-01	1.2	5.3	0.17	0	-0.048	0	1.2	1.4	4.6
1969-11-01	0.83	4.1	0.13	0	-0.048	0	0.83	0.96	3.2
1969	5.0	33	0.87	0	-0.24	0	5.0	5.8	24

Table IV-B.27 SC3 Monsoon Period Water Balance

Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
1970-07-01	0.079	9.2	0.30	0	-0.033	0	0.079	0.38	5.7
1970-08-01	1.0	7.6	0.11	0	-0.033	0	1.0	1.2	6.0
1970-09-01	1.7	6.5	-0.13	0	-0.031	0	1.7	1.6	5.1
1970-10-01	3.4	3.2	-0.71	0	-0.030	0	3.4	2.6	4.7
1970-11-01	0	5.1	0.61	0	-0.030	0	0	0.61	3.0
1970	6.2	32	0.18	0	-0.16	0	6.2	6.4	24
1971-07-01	0	9.1	0.17	0	-0.023	0	0	0.17	5.4
1971-08-01	0.39	8.7	0.087	0	-0.022	0	0.39	0.48	6.0
1971-09-01	4.7	2.9	-1.3	0	-0.021	0	4.7	3.4	4.5
1971-10-01	3.1	3.7	-1.8	0	-0.020	0	3.1	1.3	4.7
1971-11-01	4.2	0.55	-0.095	0	-0.020	0	4.2	4.1	2.9
1971	12	25	-2.9	0	-0.11	0	12	9.5	24
1972-07-01	1.7	7.7	-0.39	0	-0.017	0	1.7	1.3	5.8
1972-08-01	0.27	9.2	0.40	0	-0.017	0	0.27	0.67	6.2
1972-09-01	2.0	6.0	-0.24	0	-0.017	0	2.0	1.8	5.3
1972-10-01	0.67	6.0	0.35	0	-0.016	0	0.67	1.0	4.6
1972-11-01	8.7	-4.2	-5.0	0	-0.016	0	8.7	3.7	2.9
1972	13	25	-4.9	0	-0.083	0	13	8.4	25
1973-07-01	0.87	8.2	0.48	0	-0.020	0	0.87	1.3	5.8
1973-08-01	2.7	5.7	-0.81	0	-0.022	0	2.7	1.9	5.7
1973-09-01	1.4	6.7	0.93	0	-0.024	0	1.4	2.4	5.2
1973-10-01	0	6.6	0.53	0	-0.025	0	0	0.51	4.6
1973-11-01	0	5.1	0.34	0	-0.028	0	0	0.35	3.4
1973	5.0	32	1.5	0	-0.12	0	5.0	6.5	25
1974-07-01	0	9.5	0.26	0	-0.025	0	0	0.28	6.2
1974-08-01	2.4	6.0	-0.40	0	-0.024	0	2.4	2.0	5.5
1974-09-01	1.4	6.5	0.29	0	-0.024	0	1.4	1.7	5.3
1974-10-01	3.4	2.9	-0.57	0	-0.023	0	3.4	2.8	4.5
1974-11-01	3.4	1.4	-1.8	0	-0.022	0	3.4	1.6	3.2
1974	11	26	-2.2	0	-0.12	0	11	8.4	25
1975-07-01	0	9.5	0.40	0	-0.018	0	0	0.39	5.8
1975-08-01	2.2	5.5	-0.15	0	-0.018	0	2.2	2.1	5.2
1975-09-01	2.0	6.3	0.081	0	-0.018	0	2.0	2.0	5.0
1975-10-01	0.91	5.6	0.33	0	-0.018	0	0.91	1.3	4.7
1975-11-01	0.28	4.8	0.28	0	-0.019	0	0.28	0.51	3.5
1975	5.4	32	0.95	0	-0.090	0	5.4	6.3	24
1976-07-01	0	9.8	0.29	0	-0.016	0	0	0.31	5.8
1976-08-01	2.8	5.3	-0.83	0	-0.016	0	2.8	1.9	5.6
1976-09-01	0.83	7.3	0.38	0	-0.015	0	0.83	1.2	4.9
1976-10-01	4.0	1.9	-1.3	0	-0.014	0	4.0	2.7	4.3
1976-11-01	0.91	3.8	0.78	0	-0.015	0	0.91	1.7	2.7
1976	8.5	28	-0.67	0	-0.076	0	8.5	7.9	23
1977-07-01	0.039	9.5	0.23	0	-0.013	0	0.039	0.28	5.9
1977-08-01	2.6	6.5	-0.66	0	-0.013	0	2.6	1.9	6.1
1977-09-01	2.4	5.6	-0.067	0	-0.012	0	2.4	2.4	5.3
1977-10-01	3.5	2.5	-0.57	0	-0.011	0	3.5	2.9	4.3
1977-11-01	1.3	3.9	0.40	0	-0.012	0	1.3	1.7	3.5
1977	9.8	28	-0.67	0	-0.060	0	9.8	9.1	25
1978-07-01	0.55	8.7	0.42	0	-0.013	0	0.55	0.94	6.0
1978-08-01	0.94	7.9	0.22	0	-0.016	0	0.94	1.2	6.3
1978-09-01	1.1	6.4	0.56	0	-0.020	0	1.1	1.6	4.4
1978-10-01	0.39	5.9	0.34	0	-0.024	0	0.39	0.71	4.5
1978-11-01	1.9	3.5	-0.67	0	-0.028	0	1.9	1.3	4.1
1978	4.9	32	0.87	0	-0.10	0	4.9	5.7	25
1979-07-01	0.35	9.1	0.77	0	-0.12	0	0.35	1.1	5.5
1979-08-01	0.16	8.8	0.55	0	-0.14	0	0.16	0.71	6.2
1979-09-01	1.5	6.1	0.27	0	-0.14	0	1.5	1.8	4.9

Table IV-B.27 SC3 Monsoon Period Water Balance

Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
1979-10-01	0.12	6.7	0.48	0	-0.14	0	0.12	0.59	5.2
1979-11-01	0.67	4.9	0.17	0	-0.13	0	0.67	0.87	4.0
1979	2.8	36	2.2	0	-0.68	0	2.8	5.1	26
1980-07-01	0.16	8.9	0.47	0	-0.091	0	0.16	0.63	5.6
1980-08-01	2.0	6.7	-0.047	0	-0.097	0	2.0	1.9	5.8
1980-09-01	1.3	6.7	0.61	0	-0.098	0	1.3	1.9	5.1
1980-10-01	0.59	6.2	0.42	0	-0.093	0	0.59	0.98	4.8
1980-11-01	0.039	5.3	0.39	0	-0.093	0	0.039	0.43	3.8
1980	4.1	34	1.8	0	-0.47	0	4.1	5.9	25
1981-07-01	0.12	9.2	0.49	0	-0.055	0	0.12	0.59	5.9
1981-08-01	2.2	6.7	-0.84	0	-0.054	0	2.2	1.3	5.9
1981-09-01	2.6	5.7	0.56	0	-0.052	0	2.6	3.1	4.9
1981-10-01	0.51	6.3	0.34	0	-0.049	0	0.51	0.87	5.2
1981-11-01	0.94	3.7	0.34	0	-0.049	0	0.94	1.3	3.1
1981	6.4	32	0.89	0	-0.26	0	6.4	7.2	25
1982-07-01	0.039	9.1	0.42	0	-0.032	0	0.039	0.47	5.4
1982-08-01	2.7	5.5	-0.56	0	-0.032	0	2.7	2.1	5.3
1982-09-01	3.8	3.3	-0.36	0	-0.031	0	3.8	3.5	4.4
1982-10-01	3.0	3.1	-0.15	0	-0.030	0	3.0	2.9	4.5
1982-11-01	0.039	5.1	0.79	0	-0.031	0	0.039	0.79	3.2
1982	9.6	26	0.14	0	-0.16	0	9.6	9.7	23
1983-07-01	0	9.6	0.46	0	-0.026	0	0	0.43	5.9
1983-08-01	2.8	6.1	-0.65	0	-0.027	0	2.8	2.2	5.9
1983-09-01	3.6	4.0	-0.17	0	-0.027	0	3.6	3.5	4.4
1983-10-01	5.1	1.4	-2.7	0	-0.027	0	5.1	2.4	4.8
1983-11-01	1.1	3.3	2.1	0	-0.028	0	1.1	3.2	3.0
1983	13	24	-1.0	0	-0.14	0	13	12	24
1984-07-01	1.3	7.7	-0.51	0	-0.029	0	1.3	0.83	5.8
1984-08-01	3.3	4.6	-0.019	0	-0.030	0	3.3	3.3	4.9
1984-09-01	3.3	3.7	0.11	0	-0.030	0	3.3	3.4	4.4
1984-10-01	1.9	4.6	-0.096	0	-0.028	0	1.9	1.8	4.8
1984-11-01	1.4	3.1	0.45	0	-0.029	0	1.4	1.8	2.7
1984	11	24	-0.064	0	-0.15	0	11	11	23
1985-07-01	0	8.1	0.39	0	-0.028	0	0	0.39	5.0
1985-08-01	1.3	7.6	-0.27	0	-0.030	0	1.3	0.94	5.3
1985-09-01	2.1	5.8	0.011	0	-0.032	0	2.1	2.1	4.9
1985-10-01	3.5	2.4	-0.53	0	-0.031	0	3.5	3.0	4.3
1985-11-01	1.3	3.1	0.73	0	-0.033	0	1.3	2.0	2.5
1985	8.1	27	0.33	0	-0.15	0	8.1	8.5	22
1986-07-01	0	9.2	0.36	0	-0.027	0	0	0.39	5.9
1986-08-01	4.8	3.1	-0.91	0	-0.027	0	4.8	3.8	5.0
1986-09-01	2.0	5.6	0.11	0	-0.027	0	2.0	2.2	5.1
1986-10-01	2.1	4.1	0.14	0	-0.026	0	2.1	2.2	4.3
1986-11-01	1.7	3.0	0.11	0	-0.027	0	1.7	1.9	2.5
1986	11	25	-0.18	0	-0.13	0	11	10	23
1987-07-01	0.24	9.1	0.27	0	-0.024	0	0.24	0.47	5.5
1987-08-01	2.0	6.9	-0.51	0	-0.024	0	2.0	1.6	5.9
1987-09-01	2.9	4.9	-0.12	0	-0.024	0	2.9	2.8	5.0
1987-10-01	1.3	5.2	0.31	0	-0.023	0	1.3	1.6	4.5
1987-11-01	0.35	5.2	0.42	0	-0.024	0	0.35	0.75	3.8
1987	6.8	31	0.38	0	-0.12	0	6.8	7.1	25
1988-07-01	0.12	8.5	0.38	0	-0.020	0	0.12	0.51	5.6
1988-08-01	3.4	4.9	-1.8	0	-0.020	0	3.4	1.6	5.6
1988-09-01	5.9	1.8	-0.41	0	-0.021	0	5.9	5.5	4.6
1988-10-01	0.31	6.2	1.4	0	-0.021	0	0.31	1.8	4.3
1988-11-01	1.5	3.7	0.12	0	-0.022	0	1.5	1.6	3.6
1988	11	25	-0.27	0	-0.10	0	11	11	24

Table IV-B.27 SC3 Monsoon Period Water Balance

Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
1989-07-01	0	9.3	0.25	0	-0.020	0	0	0.28	5.9
1989-08-01	0.47	8.2	0.061	0	-0.020	0	0.47	0.55	6.1
1989-09-01	0.94	6.9	0.13	0	-0.019	0	0.94	1.0	4.7
1989-10-01	1.5	5.2	-0.16	0	-0.019	0	1.5	1.3	4.8
1989-11-01	1.1	4.1	0.13	0	-0.018	0	1.1	1.2	3.7
1989	3.9	34	0.40	0	-0.095	0	3.9	4.4	25
1990-07-01	0.28	8.9	0.22	0	-0.015	0	0.28	0.51	5.8
1990-08-01	1.5	6.6	-0.078	0	-0.015	0	1.5	1.4	5.6
1990-09-01	9.0	-1.5	-4.7	0	-0.014	0	9.0	4.3	4.3
1990-10-01	2.8	3.5	0.51	0	-0.014	0	2.8	3.3	4.5
1990-11-01	0.24	4.6	1.3	0	-0.015	0	0.24	1.5	3.3
1990	14	22	-2.8	0	-0.072	0	14	11	23
1991-07-01	0.63	8.8	0.43	0	-0.022	0	0.63	1.0	5.6
1991-08-01	1.7	7.1	-0.34	0	-0.025	0	1.7	1.4	5.7
1991-09-01	2.8	5.1	0.25	0	-0.027	0	2.8	3.0	5.1
1991-10-01	1.6	4.7	0.30	0	-0.028	0	1.6	1.9	4.3
1991-11-01	1.2	4.6	-0.45	0	-0.030	0	1.2	0.75	4.3
1991	7.9	30	0.19	0	-0.13	0	7.9	8.0	25
1992-07-01	1.3	7.9	0.82	0	-0.035	0	1.3	2.1	5.3
1992-08-01	3.3	5.5	-1.1	0	-0.044	0	3.3	2.2	5.9
1992-09-01	5.3	2.2	-0.48	0	-0.051	0	5.3	4.8	4.8
1992-10-01	0.91	5.9	1.3	0	-0.054	0	0.91	2.2	4.4
1992-11-01	1.2	4.1	0.084	0	-0.057	0	1.2	1.3	4.0
1992	12	26	0.68	0	-0.24	0	12	13	24
1993-07-01	0	9.2	1.0	0	-0.51	0	0	1.0	5.5
1993-08-01	0.28	8.5	0.75	0	-0.47	0	0.28	1.0	5.7
1993-09-01	3.4	4.1	-0.55	0	-0.40	0	3.4	2.9	5.4
1993-10-01	0.16	6.3	1.3	0	-0.35	0	0.16	1.5	4.0
1993-11-01	0.79	4.4	0.50	0	-0.31	0	0.79	1.3	3.9
1993	4.6	33	3.0	0	-2.0	0	4.6	7.7	24
1994-07-01	0.39	8.6	0.44	0	-0.13	0	0.39	0.83	5.6
1994-08-01	1.5	7.4	-0.61	0	-0.13	0	1.5	0.87	6.0
1994-09-01	0.71	7.4	1.0	0	-0.11	0	0.71	1.7	5.5
1994-10-01	1.9	4.4	0.013	0	-0.11	0	1.9	1.9	4.5
1994-11-01	1.9	2.8	-0.30	0	-0.098	0	1.9	1.6	3.4
1994	6.3	31	0.54	0	-0.58	0	6.3	6.9	25
1995-07-01	0	9.3	0.46	0	-0.063	0	0	0.47	5.1
1995-08-01	0.039	9.1	0.36	0	-0.067	0	0.039	0.39	5.8
1995-09-01	3.9	4.3	-0.82	0	-0.063	0	3.9	3.0	5.8
1995-10-01	2.8	3.9	-0.66	0	-0.063	0	2.8	2.1	4.9
1995-11-01	0	5.3	1.4	0	-0.059	0	0	1.3	3.7
1995	6.7	32	0.70	0	-0.31	0	6.7	7.3	25
1996-07-01	0.39	8.6	0.11	0	-0.043	0	0.39	0.51	5.8
1996-08-01	2.4	6.3	-0.25	0	-0.039	0	2.4	2.1	5.7
1996-09-01	1.3	6.6	0.16	0	-0.039	0	1.3	1.4	5.2
1996-10-01	3.0	2.8	-0.22	0	-0.035	0	3.0	2.8	4.3
1996-11-01	0.43	5.1	0.41	0	-0.035	0	0.43	0.83	4.0
1996	7.4	29	0.20	0	-0.19	0	7.4	7.6	25
1997-07-01	0	9.1	0.24	0	-0.028	0	0	0.24	5.5
1997-08-01	0.12	9.4	0.18	0	-0.024	0	0.12	0.28	6.4
1997-09-01	2.6	5.4	-0.42	0	-0.024	0	2.6	2.2	5.0
1997-10-01	0	7.0	0.39	0	-0.024	0	0	0.39	4.9
1997-11-01	0.71	4.1	0.014	0	-0.024	0	0.71	0.75	3.9
1997	3.4	35	0.40	0	-0.12	0	3.4	3.8	26
1998-07-01	0	9.3	0.45	0	-0.020	0	0	0.43	5.3
1998-08-01	1.7	7.0	0.0035	0	-0.016	0	1.7	1.7	6.0
1998-09-01	2.4	5.4	0.048	0	-0.016	0	2.4	2.4	5.1

Table IV-B.27 SC3 Monsoon Period Water Balance

Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
1998-10-01	1.3	5.3	0.20	0	-0.020	0	1.3	1.5	5.1
1998-11-01	0	5.4	0.38	0	-0.016	0	0	0.39	4.0
1998	5.4	32	1.1	0	-0.087	0	5.4	6.5	25
1999-07-01	0	9.1	0.26	0	-0.016	0	0	0.28	5.4
1999-08-01	5.8	2.1	-2.0	0	-0.016	0	5.8	3.9	5.5
1999-09-01	2.8	4.8	0.17	0	-0.016	0	2.8	3.0	4.6
1999-10-01	1.1	5.4	1.0	0	-0.016	0	1.1	2.2	4.5
1999-11-01	0	5.6	0.47	0	-0.016	0	0	0.47	4.0
1999	9.8	27	-0.0089	0	-0.079	0	9.8	9.8	24
2000-07-01	0.79	8.3	0.0096	0	-0.012	0	0.79	0.83	6.3
2000-08-01	0.079	9.5	0.24	0	-0.016	0	0.079	0.31	6.0
2000-09-01	0.67	6.9	0.076	0	-0.012	0	0.67	0.75	5.7
2000-10-01	0	6.9	0.19	0	-0.012	0	0	0.20	4.8
2000-11-01	5.3	-0.87	-3.7	0	-0.012	0	5.3	1.6	3.9
2000	6.9	31	-3.2	0	-0.063	0	6.9	3.7	27
2001-07-01	0.039	9.3	0.36	0	-0.0079	0	0.039	0.39	6.0
2001-08-01	2.7	6.2	-1.6	0	-0.012	0	2.7	1.1	6.4
2001-09-01	3.4	4.3	0.71	0	-0.012	0	3.4	4.1	4.5
2001-10-01	0.12	6.3	0.62	0	-0.0079	0	0.12	0.75	5.2
2001-11-01	0.35	4.5	0.31	0	-0.012	0	0.35	0.71	3.8
2001	6.6	31	0.41	0	-0.051	0	6.6	7.0	26
2002-07-01	0	9.6	0.13	0	-0.012	0	0	0.12	6.0
2002-08-01	0.35	8.8	0.073	0	-0.012	0	0.35	0.39	6.8
2002-09-01	0.43	7.4	-0.0077	0	-0.012	0	0.43	0.47	5.3
2002-10-01	1.2	5.4	-0.076	0	-0.0079	0	1.2	1.1	4.9
2002-11-01	0.12	5.0	0.19	0	-0.012	0	0.12	0.28	3.9
2002	2.1	36	0.31	0	-0.055	0	2.1	2.4	27
2003-07-01	0	10	0.28	0	-0.0079	0	0	0.28	6.5
2003-08-01	0.47	8.8	0.17	0	-0.012	0	0.47	0.67	6.6
2003-09-01	1.3	6.9	-0.12	0	-0.0079	0	1.3	1.1	5.3
2003-10-01	2.0	4.9	-0.010	0	-0.0079	0	2.0	1.9	4.7
2003-11-01	0.039	5.5	0.33	0	-0.0079	0	0.039	0.39	4.0
2003	3.8	36	0.66	0	-0.043	0	3.8	4.4	27
2004-07-01	0	10	0.24	0	-0.0079	0	0	0.24	5.9
2004-08-01	0.55	8.8	0.10	0	-0.0079	0	0.55	0.67	6.1
2004-09-01	2.1	6.1	-0.25	0	-0.0079	0	2.1	1.9	5.3
2004-10-01	1.5	5.6	-0.20	0	-0.0079	0	1.5	1.3	5.3
2004-11-01	1.2	3.8	-0.13	0	-0.0039	0	1.2	1.1	3.6
2004	5.4	34	-0.24	0	-0.035	0	5.4	5.1	26
2005-07-01	0.079	9.8	0.48	0	-0.0079	0	0.079	0.55	5.5
2005-08-01	1.4	7.9	-0.21	0	-0.0079	0	1.4	1.2	7.1
2005-09-01	4.7	3.0	-0.36	0	-0.012	0	4.7	4.3	4.2
2005-10-01	0.079	6.6	0.74	0	-0.012	0	0.079	0.83	4.9
2005-11-01	0.43	4.8	0.33	0	-0.016	0	0.43	0.75	3.9
2005	6.7	32	0.99	0	-0.055	0	6.7	7.6	26
2006-07-01	0.51	9.1	0.084	0	-0.016	0	0.51	0.59	6.1
2006-08-01	3.2	4.9	-1.9	0	-0.020	0	3.2	1.2	5.8
2006-09-01	2.9	5.0	1.1	0	-0.016	0	2.9	4.0	4.3
2006-10-01	1.1	5.2	0.41	0	-0.016	0	1.1	1.5	4.1
2006-11-01	1.0	3.9	0.25	0	-0.020	0	1.0	1.3	3.4
2006	8.7	28	-0.12	0	-0.087	0	8.7	8.6	24

Table IV-B.28 SC3 Winter Storm Period Water Balance

Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
1951-11-01	0	3.7	-0.15	0	-0.41	0	1.6	1.5	3.1
1951-12-01	1.7	2.0	0.81	0	-0.35	0	1.7	2.5	1.6
1952-01-01	3.0	-0.26	-1.0	0	-0.31	0	3.0	2.0	1.0
1952-02-01	2.8	0.10	0.089	0	-0.27	0	2.8	2.9	0.98
1952-03-01	0.50	3.3	1.4	0	-0.22	0	0.50	1.9	1.3
1952	8.0	8.9	1.1	0	-1.6	0	9.7	11	8.0
1952-11-01	0	5.9	0.42	0	-0.13	0	0	0.43	3.8
1952-12-01	4.3	-1.0	-2.7	0	-0.11	0	4.3	1.6	1.4
1953-01-01	2.0	0.63	0.50	0	-0.11	0	2.0	2.5	0.90
1953-02-01	0.74	2.7	1.2	0	-0.10	0	0.74	1.9	1.2
1953-03-01	0.60	3.2	0.37	0	-0.087	0	0.60	0.97	1.3
1953	7.6	11	-0.30	0	-0.54	0	7.6	7.3	8.5
1953-11-01	0.012	5.4	0.39	0	-0.064	0	0.012	0.41	3.4
1953-12-01	0.56	3.4	0.11	0	-0.059	0	0.56	0.67	1.8
1954-01-01	0.19	2.7	0.31	0	-0.058	0	0.19	0.50	1.0
1954-02-01	2.4	0.89	-0.84	0	-0.056	0	2.4	1.6	1.1
1954-03-01	0.72	3.5	0.51	0	-0.048	0	0.72	1.2	1.8
1954	3.9	16	0.48	0	-0.28	0	3.9	4.4	9.2
1954-11-01	0	5.6	0.80	0	-0.037	0	0	0.80	3.5
1954-12-01	0.091	4.1	0.37	0	-0.035	0	0.091	0.46	1.9
1955-01-01	0.29	3.2	0.33	0	-0.035	0	0.29	0.62	1.2
1955-02-01	3.4	-1.0	-1.4	0	-0.035	0	3.4	2.0	0.73
1955-03-01	0.28	3.3	0.90	0	-0.031	0	0.28	1.2	1.3
1955	4.1	15	0.96	0	-0.17	0	4.1	5.0	8.6
1955-11-01	0.020	5.8	0.42	0	-0.029	0	0.020	0.44	3.6
1955-12-01	0.96	2.7	-0.034	0	-0.027	0	0.96	0.93	1.6
1956-01-01	1.4	1.8	-0.049	0	-0.027	0	1.4	1.3	1.2
1956-02-01	2.6	0.85	-1.6	0	-0.026	0	2.6	1.1	1.3
1956-03-01	2.0	1.2	0.51	0	-0.024	0	2.0	2.5	1.0
1956	7.0	12	-0.71	0	-0.13	0	7.0	6.3	8.7
1956-11-01	0.53	4.5	0.059	0	-0.021	0	0.53	0.59	3.1
1956-12-01	0	3.8	0.40	0	-0.020	0	0	0.40	1.5
1957-01-01	0.47	2.7	0.084	0	-0.020	0	0.47	0.55	1.1
1957-02-01	4.8	-2.3	-2.9	0	-0.019	0	4.8	1.9	0.85
1957-03-01	0.73	2.9	1.4	0	-0.017	0	0.73	2.1	1.5
1957	6.5	12	-0.95	0	-0.095	0	6.5	5.6	8.0
1957-11-01	3.2	1.1	-1.7	0	-0.015	0	3.2	1.6	2.6
1957-12-01	0.61	2.5	1.2	0	-0.015	0	0.61	1.8	1.3
1958-01-01	1.1	2.1	0.24	0	-0.015	0	1.1	1.3	1.2
1958-02-01	0.012	3.4	0.41	0	-0.015	0	0.012	0.42	1.1
1958-03-01	2.5	0.68	-0.82	0	-0.013	0	2.5	1.7	1.3
1958	7.4	9.8	-0.65	0	-0.073	0	7.4	6.8	7.4
1958-11-01	1.9	3.2	0.25	0	-0.013	0	1.9	2.2	3.1
1958-12-01	1.5	2.2	-0.16	0	-0.012	0	1.5	1.4	1.5
1959-01-01	0	3.5	0.62	0	-0.013	0	0	0.62	1.5
1959-02-01	0.21	3.3	0.30	0	-0.012	0	0.21	0.51	1.2
1959-03-01	1.4	1.9	-0.25	0	-0.011	0	1.4	1.2	1.2
1959	5.1	14	0.75	0	-0.061	0	5.1	5.8	8.5
1959-11-01	4.8	0.35	-3.8	0	-0.010	0	4.8	1.0	3.2
1959-12-01	0.38	3.4	2.3	0	-0.0098	0	0.38	2.7	1.5
1960-01-01	5.2	-2.6	-3.3	0	-0.0098	0	5.2	2.0	0.93
1960-02-01	4.2	-1.6	-1.6	0	-0.0094	0	4.2	2.5	0.76

Table IV-B.28 SC3 Winter Storm Period Water Balance

Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
1960-03-01	0.87	2.5	1.9	0	-0.0091	0	0.87	2.7	1.1
1960	15	2.0	-4.5	0	-0.048	0	15	11	7.6
1960-11-01	2.1	2.8	-0.43	0	-0.020	0	2.1	1.6	2.9
1960-12-01	0.48	3.1	0.42	0	-0.020	0	0.48	0.91	1.6
1961-01-01	0.47	2.7	0.20	0	-0.022	0	0.47	0.67	1.2
1961-02-01	0.70	2.4	-0.091	0	-0.022	0	0.70	0.61	1.1
1961-03-01	0.23	3.8	0.41	0	-0.019	0	0.23	0.65	1.4
1961	3.9	15	0.52	0	-0.10	0	3.9	4.5	8.2
1961-11-01	0.45	4.5	-0.0055	0	-0.018	0	0.45	0.44	3.3
1961-12-01	0.32	2.9	0.35	0	-0.017	0	0.32	0.67	1.2
1962-01-01	3.9	-1.3	-1.9	0	-0.017	0	3.9	1.9	0.91
1962-02-01	3.2	-0.51	-1.4	0	-0.016	0	3.2	1.8	0.83
1962-03-01	1.7	1.4	0.44	0	-0.014	0	1.7	2.1	1.2
1962	9.5	7.0	-2.6	0	-0.081	0	9.5	6.9	7.4
1962-11-01	0.87	4.1	0.12	0	-0.014	0	0.87	1.00	3.0
1962-12-01	0.83	3.1	0.018	0	-0.014	0	0.83	0.85	1.9
1963-01-01	1.8	1.3	-0.56	0	-0.014	0	1.8	1.3	1.3
1963-02-01	2.1	0.98	-0.072	0	-0.014	0	2.1	2.0	0.89
1963-03-01	4.2	-0.31	-2.0	0	-0.012	0	4.2	2.3	1.5
1963	9.8	9.2	-2.4	0	-0.067	0	9.8	7.4	8.7
1963-11-01	0.67	4.9	0.76	0	-0.013	0	0.67	1.4	3.6
1963-12-01	2.3	1.2	-0.24	0	-0.012	0	2.3	2.1	1.5
1964-01-01	0.34	3.0	0.81	0	-0.013	0	0.34	1.1	1.2
1964-02-01	0.58	2.4	0.24	0	-0.013	0	0.58	0.82	0.92
1964-03-01	0	3.7	0.43	0	-0.013	0	0	0.43	1.2
1964	3.9	15	2.0	0	-0.064	0	3.9	5.9	8.5
1964-11-01	1.5	4.2	-0.22	0	-0.016	0	1.5	1.3	3.6
1964-12-01	1.4	2.1	-0.13	0	-0.015	0	1.4	1.3	1.5
1965-01-01	1.7	1.3	-0.43	0	-0.015	0	1.7	1.3	1.1
1965-02-01	2.9	-0.039	-0.44	0	-0.015	0	2.9	2.4	0.89
1965-03-01	2.8	0.83	-0.57	0	-0.013	0	2.8	2.3	1.2
1965	10	8.4	-1.8	0	-0.074	0	10	8.5	8.3
1965-11-01	0.46	5.0	0.16	0	-0.014	0	0.46	0.62	3.5
1965-12-01	2.4	1.5	-1.5	0	-0.013	0	2.4	0.87	1.9
1966-01-01	10	-7.9	-8.5	0	-0.013	0	10	1.9	0.84
1966-02-01	1.8	0.94	0.95	0	-0.013	0	1.8	2.8	0.87
1966-03-01	2.0	1.3	1.1	0	-0.012	0	2.0	3.1	1.0
1966	17	0.75	-7.8	0	-0.065	0	17	9.3	8.1
1966-11-01	1.4	3.8	0.47	0	-0.047	0	1.4	1.8	2.9
1966-12-01	0.88	2.9	0.27	0	-0.045	0	0.88	1.1	1.9
1967-01-01	1.3	1.8	-0.011	0	-0.046	0	1.3	1.2	1.1
1967-02-01	0.79	2.4	0.21	0	-0.045	0	0.79	1.0	0.85
1967-03-01	0	3.9	0.50	0	-0.040	0	0	0.50	1.5
1967	4.3	15	1.4	0	-0.22	0	4.3	5.7	8.2
1967-11-01	0.42	4.8	0.34	0	-0.031	0	0.42	0.76	3.5
1967-12-01	2.1	1.6	-1.3	0	-0.030	0	2.1	0.81	1.9
1968-01-01	10	-7.6	-8.0	0	-0.030	0	10	2.0	0.73
1968-02-01	0.63	2.5	2.3	0	-0.028	0	0.63	3.0	1.1
1968-03-01	1.9	1.8	0.86	0	-0.026	0	1.9	2.8	1.4
1968	15	3.1	-5.7	0	-0.15	0	15	9.4	8.6
1968-11-01	0.39	4.6	0.31	0	-0.062	0	0.39	0.70	3.0
1968-12-01	2.5	0.94	-0.68	0	-0.058	0	2.5	1.9	1.7

Table IV-B.28 SC3 Winter Storm Period Water Balance

Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
1969-01-01	3.3	-0.43	-1.8	0	-0.058	0	3.3	1.4	0.97
1969-02-01	4.2	-1.5	-1.7	0	-0.056	0	4.2	2.5	0.85
1969-03-01	1.4	1.9	1.5	0	-0.049	0	1.4	2.9	0.96
1969	12	5.5	-2.4	0	-0.28	0	12	9.4	7.5
1969-11-01	0.83	4.1	0.13	0	-0.048	0	0.83	0.96	3.2
1969-12-01	2.1	1.2	-0.34	0	-0.045	0	2.1	1.8	1.5
1970-01-01	1.3	1.9	0.028	0	-0.045	0	1.3	1.4	1.2
1970-02-01	0.50	2.7	0.58	0	-0.043	0	0.50	1.1	0.85
1970-03-01	0.41	3.3	0.31	0	-0.037	0	0.41	0.72	1.4
1970	5.2	13	0.72	0	-0.22	0	5.2	5.9	8.2
1970-11-01	0	5.1	0.61	0	-0.030	0	0	0.61	3.0
1970-12-01	0.65	3.1	-0.12	0	-0.029	0	0.65	0.52	1.9
1971-01-01	1.2	1.6	0.067	0	-0.028	0	1.2	1.3	1.0
1971-02-01	0.85	2.7	0.31	0	-0.028	0	0.85	1.2	0.98
1971-03-01	0.82	2.9	0.031	0	-0.024	0	0.82	0.85	1.5
1971	3.5	15	0.90	0	-0.14	0	3.5	4.4	8.4
1971-11-01	4.2	0.55	-0.095	0	-0.020	0	4.2	4.1	2.9
1971-12-01	0.039	3.7	1.3	0	-0.019	0	0.039	1.3	1.5
1972-01-01	2.1	0.75	-0.28	0	-0.018	0	2.1	1.8	0.92
1972-02-01	0	3.3	0.84	0	-0.018	0	0	0.84	1.1
1972-03-01	0	4.6	0.37	0	-0.017	0	0	0.37	1.5
1972	6.4	13	2.1	0	-0.091	0	6.4	8.5	8.0
1972-11-01	8.7	-4.2	-5.0	0	-0.016	0	8.7	3.7	2.9
1972-12-01	2.8	0.31	0.30	0	-0.016	0	2.8	3.1	1.3
1973-01-01	3.0	-0.28	-0.66	0	-0.016	0	3.0	2.3	0.92
1973-02-01	0.74	2.0	1.6	0	-0.016	0	0.74	2.4	0.78
1973-03-01	3.2	0.079	-0.67	0	-0.014	0	3.2	2.5	0.88
1973	18	-2.1	-4.4	0	-0.078	0	18	14	6.7
1973-11-01	0	5.1	0.34	0	-0.028	0	0	0.35	3.4
1973-12-01	1.8	1.8	-0.60	0	-0.027	0	1.8	1.1	1.8
1974-01-01	0.098	3.3	0.66	0	-0.028	0	0.098	0.79	1.1
1974-02-01	3.4	-0.55	-1.1	0	-0.028	0	3.4	2.3	0.93
1974-03-01	0.12	3.6	0.71	0	-0.025	0	0.12	0.87	1.1
1974	5.4	13	0.049	0	-0.14	0	5.4	5.5	8.3
1974-11-01	3.4	1.4	-1.8	0	-0.022	0	3.4	1.6	3.2
1974-12-01	0.12	3.6	1.8	0	-0.022	0	0.12	1.9	1.6
1975-01-01	0.75	2.0	0.34	0	-0.022	0	0.75	1.1	1.1
1975-02-01	0.43	2.3	0.23	0	-0.021	0	0.43	0.63	0.80
1975-03-01	3.9	-0.35	-1.8	0	-0.018	0	3.9	2.2	1.00
1975	8.6	9.0	-1.2	0	-0.10	0	8.6	7.4	7.7
1975-11-01	0.28	4.8	0.28	0	-0.019	0	0.28	0.51	3.5
1975-12-01	2.2	1.9	-1.7	0	-0.017	0	2.2	0.47	2.1
1976-01-01	1.2	1.8	0.90	0	-0.018	0	1.2	2.2	1.1
1976-02-01	0.24	2.8	0.61	0	-0.018	0	0.24	0.83	0.89
1976-03-01	1.6	2.2	-0.12	0	-0.016	0	1.6	1.5	1.1
1976	5.5	13	-0.015	0	-0.087	0	5.5	5.5	8.6
1976-11-01	0.91	3.8	0.78	0	-0.015	0	0.91	1.7	2.7
1976-12-01	0.55	3.2	0.36	0	-0.014	0	0.55	0.91	1.8
1977-01-01	1.8	1.2	-1.1	0	-0.014	0	1.8	0.71	1.1
1977-02-01	1.9	0.87	0.38	0	-0.014	0	1.9	2.3	0.68
1977-03-01	0.079	4.3	0.69	0	-0.013	0	0.079	0.79	1.6
1977	5.2	13	1.1	0	-0.070	0	5.2	6.4	7.9

Table IV-B.28 SC3 Winter Storm Period Water Balance

Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
1977-11-01	1.3	3.9	0.40	0	-0.012	0	1.3	1.7	3.5
1977-12-01	0.35	3.5	0.57	0	-0.011	0	0.35	0.94	1.9
1978-01-01	0.67	2.5	-0.070	0	-0.011	0	0.67	0.55	1.4
1978-02-01	6.4	-3.7	-4.4	0	-0.011	0	6.4	2.0	0.72
1978-03-01	5.5	-2.2	-2.3	0	-0.0094	0	5.5	3.2	0.90
1978	14	3.9	-5.8	0	-0.054	0	14	8.4	8.3
1978-11-01	1.9	3.5	-0.67	0	-0.028	0	1.9	1.3	4.1
1978-12-01	5.6	-2.4	-3.4	0	-0.029	0	5.6	2.3	1.5
1979-01-01	6.6	-3.9	-3.9	0	-0.031	0	6.6	2.6	0.88
1979-02-01	6.0	-3.8	-3.8	0	-0.031	0	6.0	2.2	0.63
1979-03-01	1.2	2.8	2.5	0	-0.029	0	1.2	3.8	1.2
1979	21	-3.9	-9.3	0	-0.15	0	21	12	8.4
1979-11-01	0.67	4.9	0.17	0	-0.13	0	0.67	0.87	4.0
1979-12-01	0.71	3.1	0.32	0	-0.12	0	0.71	0.98	1.7
1980-01-01	0.67	2.8	0.065	0	-0.11	0	0.67	0.75	1.3
1980-02-01	4.1	-1.7	-2.3	0	-0.11	0	4.1	1.8	0.84
1980-03-01	6.0	-2.9	-3.3	0	-0.093	0	6.0	2.8	0.89
1980	12	6.1	-5.0	0	-0.56	0	12	7.2	8.8
1980-11-01	0.039	5.3	0.39	0	-0.093	0	0.039	0.43	3.8
1980-12-01	0	4.1	0.30	0	-0.085	0	0	0.31	2.0
1981-01-01	0.55	3.1	0.18	0	-0.082	0	0.55	0.71	1.3
1981-02-01	1.3	2.0	-0.21	0	-0.077	0	1.3	1.1	1.3
1981-03-01	2.6	1.3	-0.85	0	-0.064	0	2.6	1.8	1.4
1981	4.6	16	-0.20	0	-0.40	0	4.6	4.4	9.8
1981-11-01	0.94	3.7	0.34	0	-0.049	0	0.94	1.3	3.1
1981-12-01	2.3	1.6	-1.9	0	-0.045	0	2.3	0.47	2.2
1982-01-01	0	3.5	1.6	0	-0.044	0	0	1.6	1.3
1982-02-01	2.8	0	-0.50	0	-0.042	0	2.8	2.2	0.85
1982-03-01	1.8	1.7	0.12	0	-0.036	0	1.8	1.9	1.1
1982	7.8	11	-0.27	0	-0.22	0	7.8	7.6	8.5
1982-11-01	0.039	5.1	0.79	0	-0.031	0	0.039	0.79	3.2
1982-12-01	3.3	-0.31	-1.5	0	-0.028	0	3.3	1.9	1.7
1983-01-01	1.7	1.1	0.66	0	-0.029	0	1.7	2.4	0.96
1983-02-01	1.9	1.3	-0.82	0	-0.028	0	1.9	1.1	1.1
1983-03-01	2.3	1.0	0.090	0	-0.025	0	2.3	2.4	0.99
1983	9.3	8.2	-0.75	0	-0.14	0	9.3	8.5	7.9
1983-11-01	1.1	3.3	2.1	0	-0.028	0	1.1	3.2	3.0
1983-12-01	2.0	1.6	-0.52	0	-0.028	0	2.0	1.5	1.8
1984-01-01	2.5	0.12	-0.21	0	-0.029	0	2.5	2.2	0.94
1984-02-01	0.47	2.8	1.2	0	-0.029	0	0.47	1.7	0.88
1984-03-01	0	4.0	0.55	0	-0.027	0	0	0.55	1.5
1984	6.1	12	3.1	0	-0.14	0	6.1	9.2	8.0
1984-11-01	1.4	3.1	0.45	0	-0.029	0	1.4	1.8	2.7
1984-12-01	2.1	1.7	-1.2	0	-0.027	0	2.1	0.91	1.7
1985-01-01	5.7	-3.3	-3.5	0	-0.027	0	5.7	2.3	0.85
1985-02-01	2.7	-0.31	-0.32	0	-0.026	0	2.7	2.4	0.71
1985-03-01	1.7	1.2	1.00	0	-0.023	0	1.7	2.6	0.89
1985	14	2.4	-3.5	0	-0.13	0	14	10.0	6.9
1985-11-01	1.3	3.1	0.73	0	-0.033	0	1.3	2.0	2.5
1985-12-01	2.8	0.43	-1.5	0	-0.031	0	2.8	1.3	1.8
1986-01-01	0.87	2.5	1.3	0	-0.032	0	0.87	2.2	1.0
1986-02-01	0.12	3.7	0.52	0	-0.031	0	0.12	0.59	1.4

Table IV-B.28 SC3 Winter Storm Period Water Balance

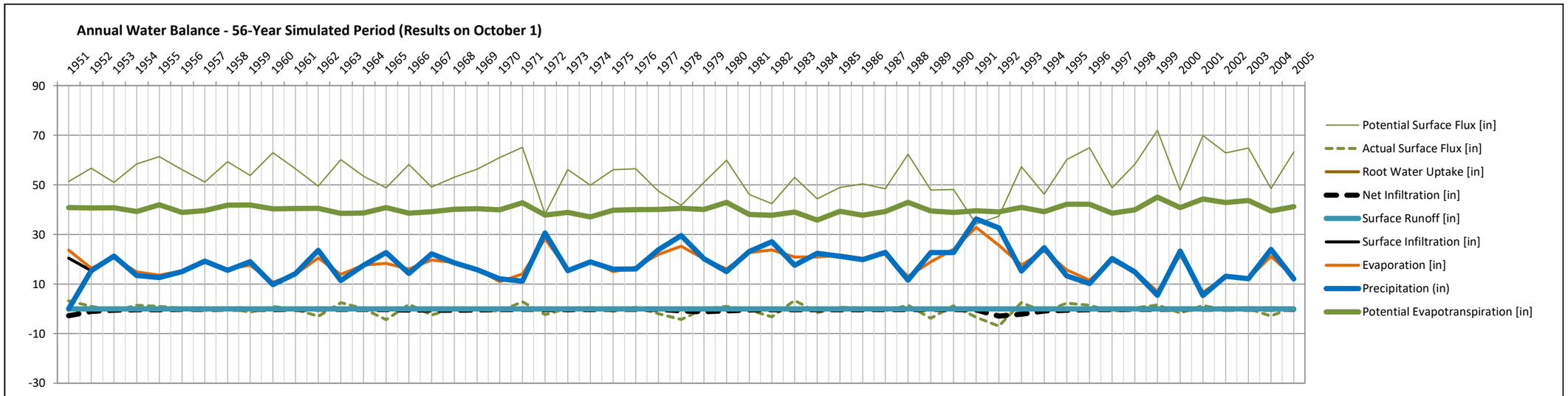
Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
1986-03-01	3.1	0.079	-0.78	0	-0.028	0	3.1	2.3	1.1
1986	8.1	9.8	0.28	0	-0.16	0	8.1	8.3	7.9
1986-11-01	1.7	3.0	0.11	0	-0.027	0	1.7	1.9	2.5
1986-12-01	1.4	1.9	0.26	0	-0.026	0	1.4	1.7	1.6
1987-01-01	3.0	-0.20	-0.91	0	-0.026	0	3.0	2.1	1.1
1987-02-01	3.3	-0.35	-0.96	0	-0.026	0	3.3	2.4	0.87
1987-03-01	2.7	0.51	-0.83	0	-0.023	0	2.7	1.9	1.3
1987	12	4.9	-2.3	0	-0.13	0	12	9.9	7.4
1987-11-01	0.35	5.2	0.42	0	-0.024	0	0.35	0.75	3.8
1987-12-01	1.8	1.9	-0.13	0	-0.022	0	1.8	1.7	1.7
1988-01-01	4.0	-1.1	-2.3	0	-0.022	0	4.0	1.7	1.1
1988-02-01	3.6	-0.91	-0.95	0	-0.022	0	3.6	2.6	0.69
1988-03-01	0.71	3.3	1.4	0	-0.020	0	0.71	2.1	1.2
1988	10	8.4	-1.6	0	-0.11	0	10	8.9	8.5
1988-11-01	1.5	3.7	0.12	0	-0.022	0	1.5	1.6	3.6
1988-12-01	1.7	1.9	-0.55	0	-0.021	0	1.7	1.2	2.0
1989-01-01	1.1	1.8	0.61	0	-0.021	0	1.1	1.7	1.0
1989-02-01	2.2	0.55	-0.27	0	-0.021	0	2.2	1.9	0.80
1989-03-01	0.28	3.6	0.61	0	-0.020	0	0.28	0.91	1.1
1989	6.8	12	0.53	0	-0.11	0	6.8	7.3	8.5
1989-11-01	1.1	4.1	0.13	0	-0.018	0	1.1	1.2	3.7
1989-12-01	0.31	3.6	0.19	0	-0.018	0	0.31	0.51	2.0
1990-01-01	0.87	2.5	-0.47	0	-0.018	0	0.87	0.39	1.1
1990-02-01	1.3	1.5	0.24	0	-0.017	0	1.3	1.5	0.94
1990-03-01	2.6	0.63	-0.46	0	-0.015	0	2.6	2.1	0.89
1990	6.1	12	-0.38	0	-0.087	0	6.1	5.7	8.7
1990-11-01	0.24	4.6	1.3	0	-0.015	0	0.24	1.5	3.3
1990-12-01	2.2	1.5	0.016	0	-0.013	0	2.2	2.2	2.1
1991-01-01	4.8	-2.3	-3.3	0	-0.014	0	4.8	1.5	1.1
1991-02-01	1.8	1.3	1.1	0	-0.015	0	1.8	2.9	0.77
1991-03-01	0.94	3.3	0.79	0	-0.014	0	0.94	1.7	1.3
1991	10.0	8.3	-0.14	0	-0.070	0	10.0	9.8	8.5
1991-11-01	1.2	4.6	-0.45	0	-0.030	0	1.2	0.75	4.3
1991-12-01	3.2	0.079	-1.2	0	-0.029	0	3.2	2.0	1.6
1992-01-01	4.0	-1.3	-1.5	0	-0.030	0	4.0	2.5	0.99
1992-02-01	3.0	-0.24	-0.32	0	-0.030	0	3.0	2.7	0.64
1992-03-01	2.8	0.59	-0.039	0	-0.028	0	2.8	2.7	1.0
1992	14	3.7	-3.5	0	-0.15	0	14	11	8.5
1992-11-01	1.2	4.1	0.084	0	-0.057	0	1.2	1.3	4.0
1992-12-01	0.47	2.8	0.89	0	-0.057	0	0.47	1.4	1.6
1993-01-01	6.4	-4.0	-4.2	0	-0.059	0	6.4	2.1	0.73
1993-02-01	11	-9.1	-9.1	0	-0.059	0	11	2.2	0.58
1993-03-01	6.0	-3.5	-3.5	0	-0.053	0	6.0	2.5	0.95
1993	25	-9.6	-16	0	-0.29	0	25	9.6	7.8
1993-11-01	0.79	4.4	0.50	0	-0.31	0	0.79	1.3	3.9
1993-12-01	4.2	-0.83	-2.2	0	-0.26	0	4.2	2.0	1.6
1994-01-01	0.31	2.8	1.5	0	-0.23	0	0.31	1.8	1.2
1994-02-01	0.28	3.2	0.70	0	-0.21	0	0.28	0.98	1.1
1994-03-01	2.6	0.59	-0.49	0	-0.18	0	2.6	2.1	1.0
1994	8.1	10	0.041	0	-1.2	0	8.1	8.2	8.9
1994-11-01	1.9	2.8	-0.30	0	-0.098	0	1.9	1.6	3.4
1994-12-01	3.4	-0.39	-0.86	0	-0.091	0	3.4	2.5	1.7

Table IV-B.28 SC3 Winter Storm Period Water Balance

Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
1995-01-01	2.7	0.079	-0.50	0	-0.087	0	2.7	2.2	1.0
1995-02-01	3.6	-0.79	-0.81	0	-0.083	0	3.6	2.9	0.77
1995-03-01	2.7	0.79	-0.23	0	-0.067	0	2.7	2.5	1.1
1995	14	2.4	-2.7	0	-0.43	0	14	12	8.0
1995-11-01	0	5.3	1.4	0	-0.059	0	0	1.3	3.7
1995-12-01	1.3	2.4	0.14	0	-0.059	0	1.3	1.5	1.9
1996-01-01	0.91	2.3	0.12	0	-0.055	0	0.91	1.0	1.4
1996-02-01	0	3.5	0.48	0	-0.055	0	0	0.51	1.2
1996-03-01	3.1	0.59	-1.1	0	-0.051	0	3.1	2.0	1.3
1996	5.4	14	1.00	0	-0.28	0	5.4	6.4	9.5
1996-11-01	0.43	5.1	0.41	0	-0.035	0	0.43	0.83	4.0
1996-12-01	1.2	2.4	-0.38	0	-0.031	0	1.2	0.87	1.6
1997-01-01	0.039	3.1	0.76	0	-0.035	0	0.039	0.79	1.2
1997-02-01	2.8	-0.039	-1.1	0	-0.031	0	2.8	1.8	0.93
1997-03-01	1.7	2.1	-0.63	0	-0.028	0	1.7	1.1	1.2
1997	6.2	13	-0.91	0	-0.16	0	6.2	5.3	8.9
1997-11-01	0.71	4.1	0.014	0	-0.024	0	0.71	0.75	3.9
1997-12-01	0.83	2.7	0.028	0	-0.020	0	0.83	0.87	1.7
1998-01-01	2.7	-0.039	-0.95	0	-0.024	0	2.7	1.7	1.1
1998-02-01	0.39	2.7	0.73	0	-0.020	0	0.39	1.1	0.82
1998-03-01	6.4	-3.9	-4.1	0	-0.016	0	6.4	2.3	0.98
1998	11	5.6	-4.3	0	-0.10	0	11	6.7	8.5
1998-11-01	0	5.4	0.38	0	-0.016	0	0	0.39	4.0
1998-12-01	1.1	2.7	-0.61	0	-0.020	0	1.1	0.43	1.7
1999-01-01	0.75	2.5	0.65	0	-0.016	0	0.75	1.4	1.2
1999-02-01	0.079	3.5	0.32	0	-0.020	0	0.079	0.35	1.3
1999-03-01	0.20	4.2	0.19	0	-0.016	0	0.20	0.39	1.3
1999	2.1	18	0.93	0	-0.087	0	2.1	3.0	9.5
1999-11-01	0	5.6	0.47	0	-0.016	0	0	0.47	4.0
1999-12-01	0	4.3	0.28	0	-0.016	0	0	0.28	2.6
2000-01-01	0.039	3.3	0.18	0	-0.012	0	0.039	0.20	1.4
2000-02-01	0.28	3.5	0.16	0	-0.016	0	0.28	0.47	1.2
2000-03-01	0.71	3.4	-0.040	0	-0.016	0	0.71	0.63	1.6
2000	1.0	20	1.0	0	-0.075	0	1.0	2.0	11
2000-11-01	5.3	-0.63	-3.7	0	-0.012	0	5.3	1.6	4.0
2000-12-01	2.1	1.1	0.64	0	-0.012	0	2.1	2.8	1.0
2001-01-01	0.079	3.4	1.0	0	-0.0079	0	0.079	1.1	1.4
2001-02-01	3.4	-0.67	-1.5	0	-0.012	0	3.4	1.9	0.98
2001-03-01	1.8	1.7	0.63	0	-0.012	0	1.8	2.4	0.93
2001	13	4.8	-3.0	0	-0.055	0	13	9.7	8.4
2001-11-01	0.35	4.7	0.32	0	-0.012	0	0.35	0.71	4.0
2001-12-01	0.31	3.6	0.23	0	-0.012	0	0.31	0.51	2.6
2002-01-01	1.9	0.94	-0.40	0	-0.012	0	1.9	1.4	1.0
2002-02-01	0.20	3.1	0.29	0	-0.012	0	0.20	0.51	1.1
2002-03-01	0	4.3	0.37	0	-0.0079	0	0	0.39	1.2
2002	2.7	17	0.81	0	-0.055	0	2.7	3.5	9.8
2002-11-01	0.12	5.2	0.19	0	-0.012	0	0.12	0.28	4.1
2002-12-01	0.87	3.1	-0.49	0	-0.012	0	0.87	0.39	2.1
2003-01-01	0.98	2.0	0.20	0	-0.0079	0	0.98	1.2	1.3
2003-02-01	0.35	3.6	0.28	0	-0.012	0	0.35	0.63	1.1
2003-03-01	5.0	-1.7	-3.6	0	-0.0079	0	5.0	1.4	1.4
2003	7.3	12	-3.4	0	-0.051	0	7.3	3.9	9.9

Table IV-B.28 SC3 Winter Storm Period Water Balance

Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
2003-11-01	0.039	5.7	0.35	0	-0.0079	0	0.039	0.39	4.2
2003-12-01	0.91	2.5	-0.085	0	-0.0079	0	0.91	0.79	2.2
2004-01-01	0.94	2.4	-0.066	0	-0.0079	0	0.94	0.91	1.5
2004-02-01	1.5	1.4	-0.37	0	-0.0079	0	1.5	1.1	1.1
2004-03-01	0.67	2.8	0.29	0	-0.0079	0	0.67	0.98	1.0
2004	4.0	15	0.12	0	-0.039	0	4.0	4.1	9.9
2004-11-01	1.2	4.0	-0.10	0	-0.0079	0	1.2	1.1	3.8
2004-12-01	0.67	2.4	0.28	0	-0.0079	0	0.67	0.94	1.4
2005-01-01	2.8	0.43	-1.5	0	-0.0079	0	2.8	1.3	0.93
2005-02-01	4.2	-1.5	-1.8	0	-0.0079	0	4.2	2.5	0.89
2005-03-01	7.4	-4.7	-4.8	0	-0.0039	0	7.4	2.5	0.82
2005	16	0.67	-7.9	0	-0.035	0	16	8.3	7.9
2005-11-01	0.43	5.0	0.35	0	-0.016	0	0.43	0.75	4.1
2005-12-01	0	4.1	0.34	0	-0.016	0	0	0.35	2.2
2006-01-01	0	3.3	0.26	0	-0.016	0	0	0.28	1.5
2006-02-01	0	4.1	0.22	0	-0.016	0	0	0.20	1.4
2006-03-01	0.12	4.2	0.16	0	-0.016	0	0.12	0.28	1.6
2006	0.55	21	1.3	0	-0.079	0	0.55	1.9	11


Annual Water Balance - 56-Year Simulated Period (Results on October 1)
Potential Surface Flux [in]
Actual Surface Flux [in]
Root Water Uptake [in]
Net Infiltration [in]
Surface Runoff [in]
Surface Infiltration [in]
Evaporation [in]
Precipitation (in)
Potential Evapotranspiration [in]
Monthly Water Balance - 9 Wet Years (1983 - 1991)
Potential Surface Flux [in]
Actual Surface Flux [in]
Root Water Uptake [in]
Net Infiltration [in]
Surface Runoff [in]
Surface Infiltration [in]
Evaporation [in]
Precipitation [in]
Potential Evapotranspiration [in]
Net Infiltration 2%
Surface Runoff 0%
Root Water Uptake 0%
Evaporation 98%
Depth (ft)
SOIL-LIKE
NEAR DAM SCAVENGER BEACH
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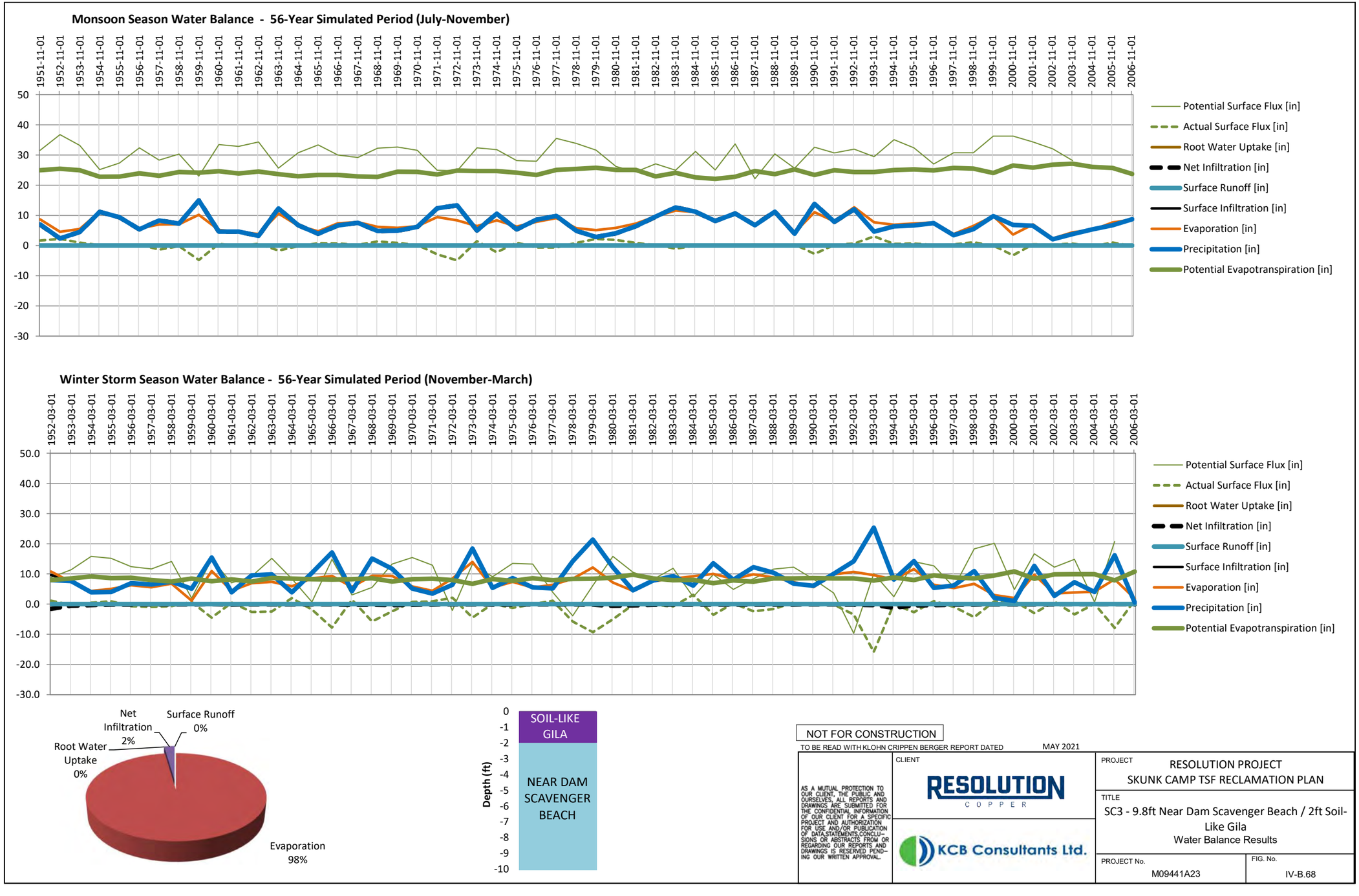
RESOLUTION PROJECT
SKUNK CAMP TSF RECLAMATION PLAN
TITLE
SC3 - 9.8ft Near Dam Scavenger Beach / 2ft Soil-Like Gila
Water Balance Results
PROJECT No.
M09441A23
FIG. No.
IV-B.67



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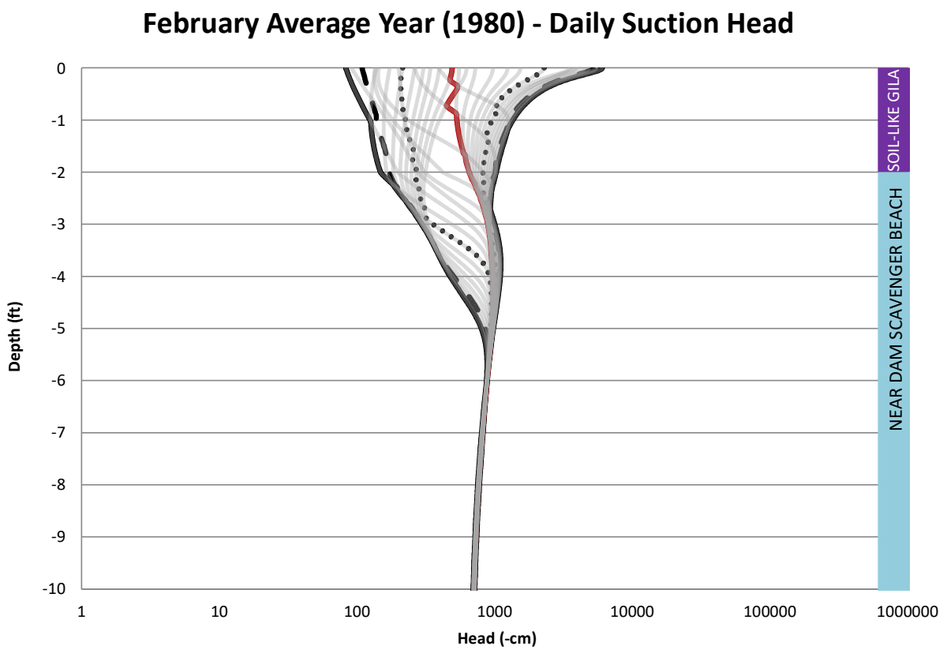
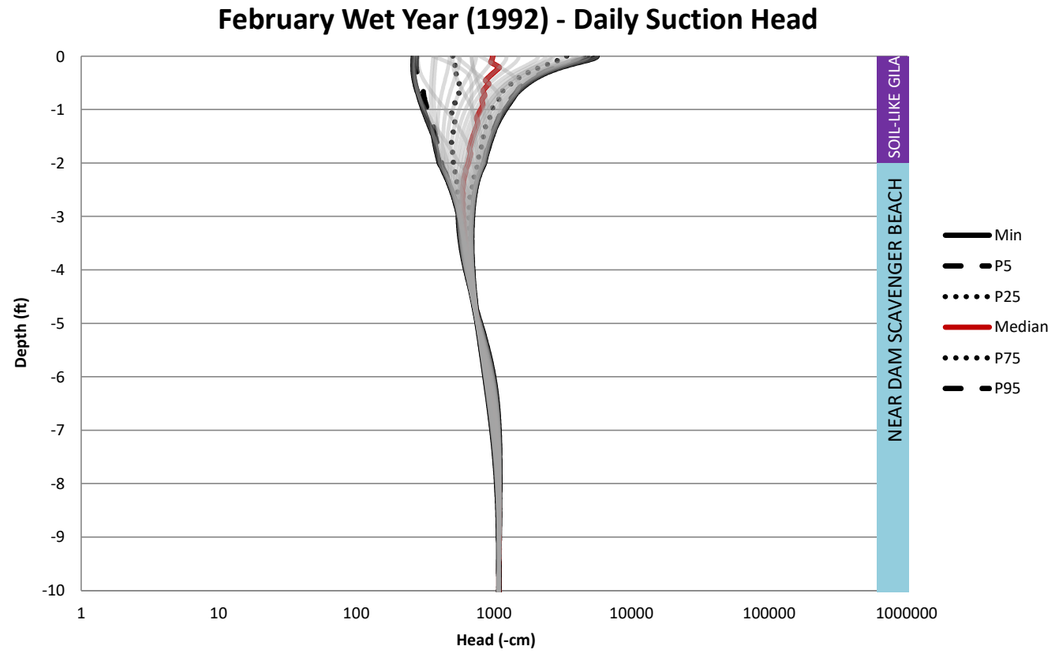
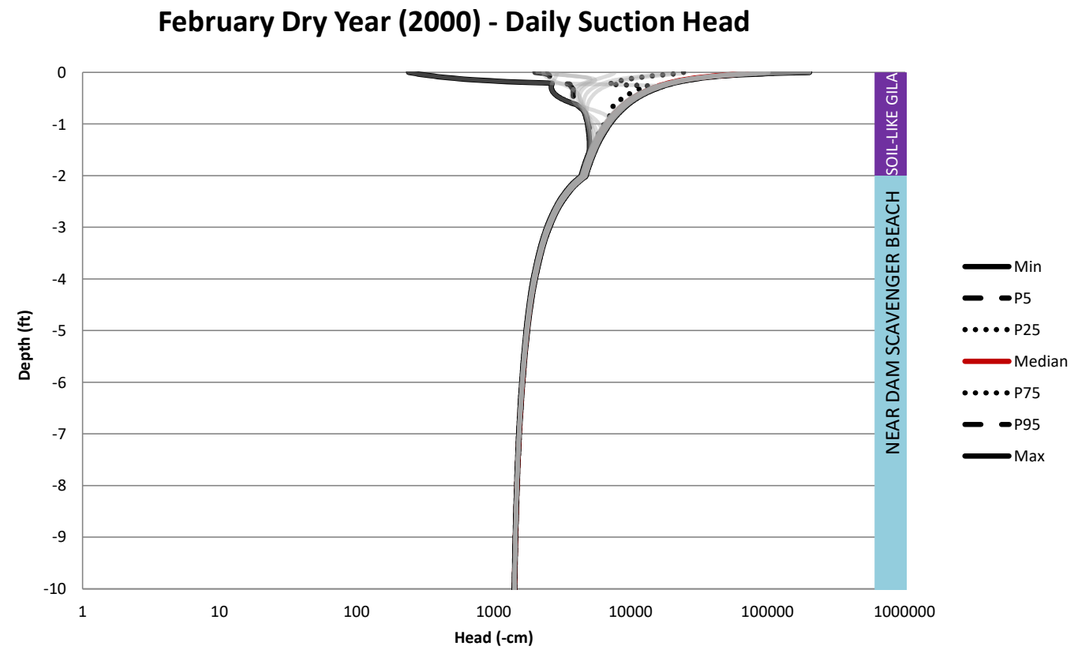
TITLE: SC3 - 9.8ft Near Dam Scavenger Beach / 2ft Soil-Like Gila
Water Balance Results

PROJECT No. M09441A23

FIG. No. IV-B.68







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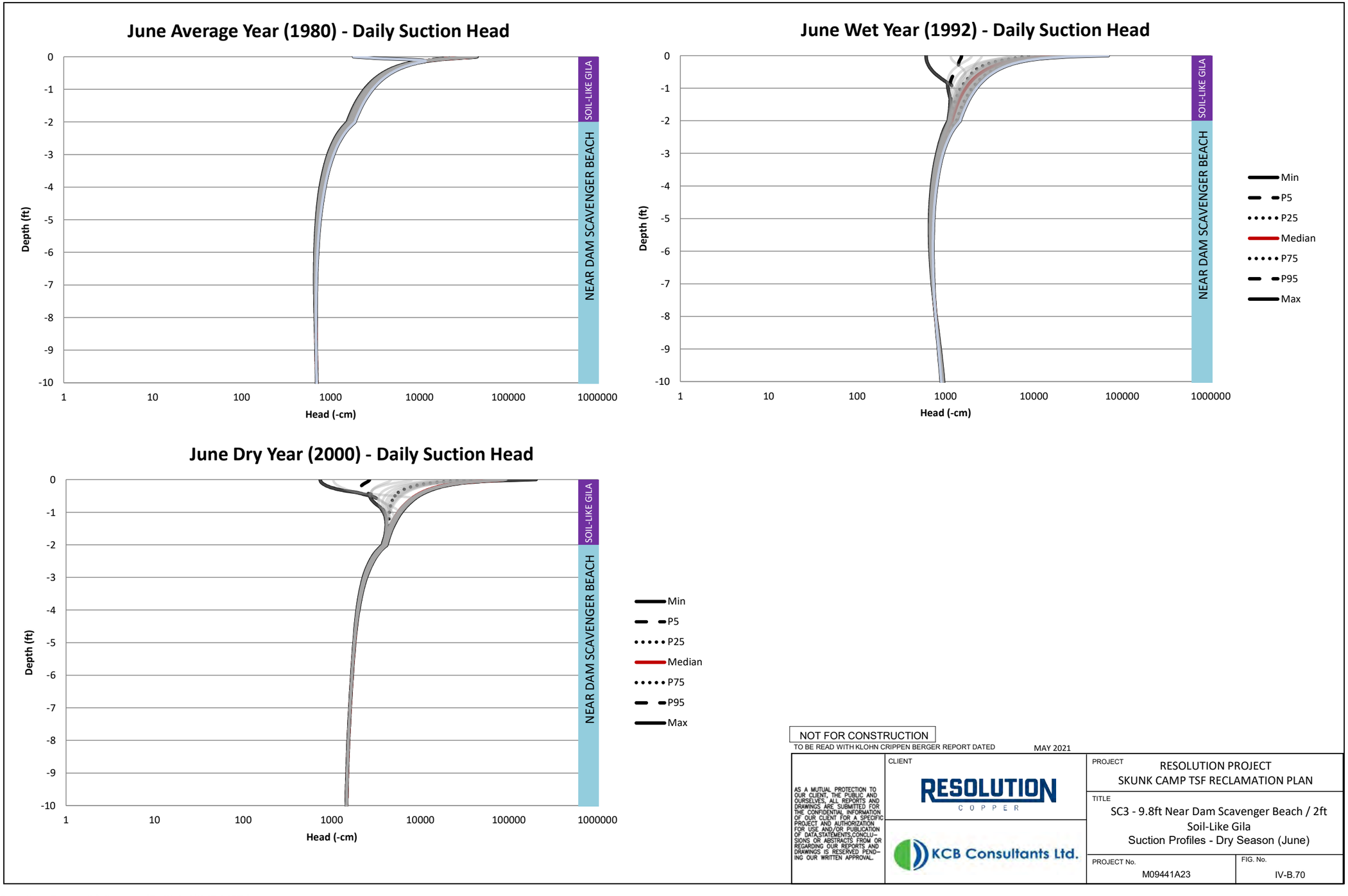
SKUNK CAMP TSF RECLAMATION PLAN

TITLE: SC3 - 9.8ft Near Dam Scavenger Beach / 2ft Soil-Like Gila
Suction Profiles - Winter (February)

PROJECT No. M09441A23

FIG. No. IV-B-69



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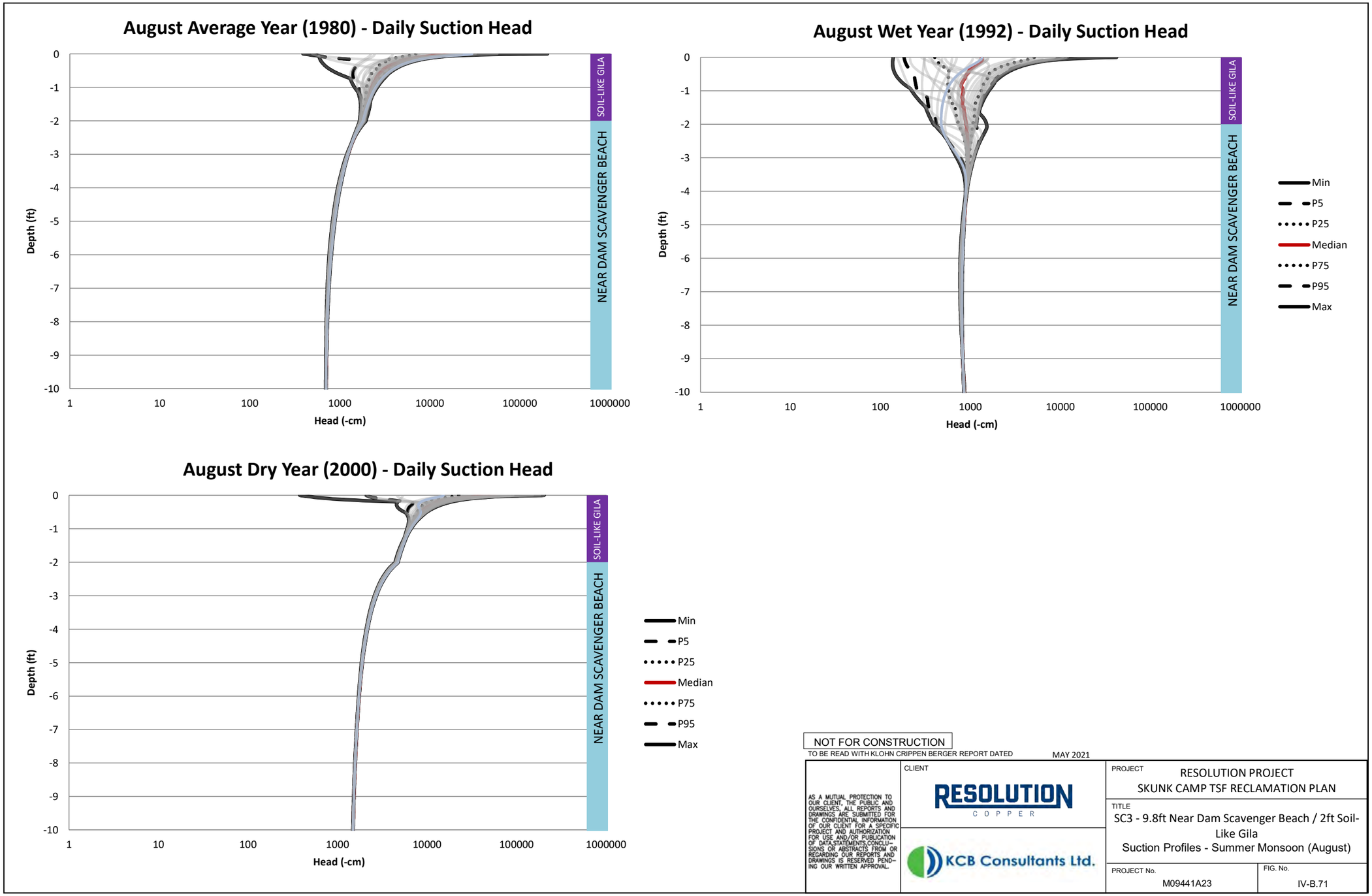
SKUNK CAMP TSF RECLAMATION PLAN

TITLE: SC3 - 9.8ft Near Dam Scavenger Beach / 2ft Soil-Like Gila
Suction Profiles - Dry Season (June)

PROJECT No. M09441A23

FIG. No. IV-B.70



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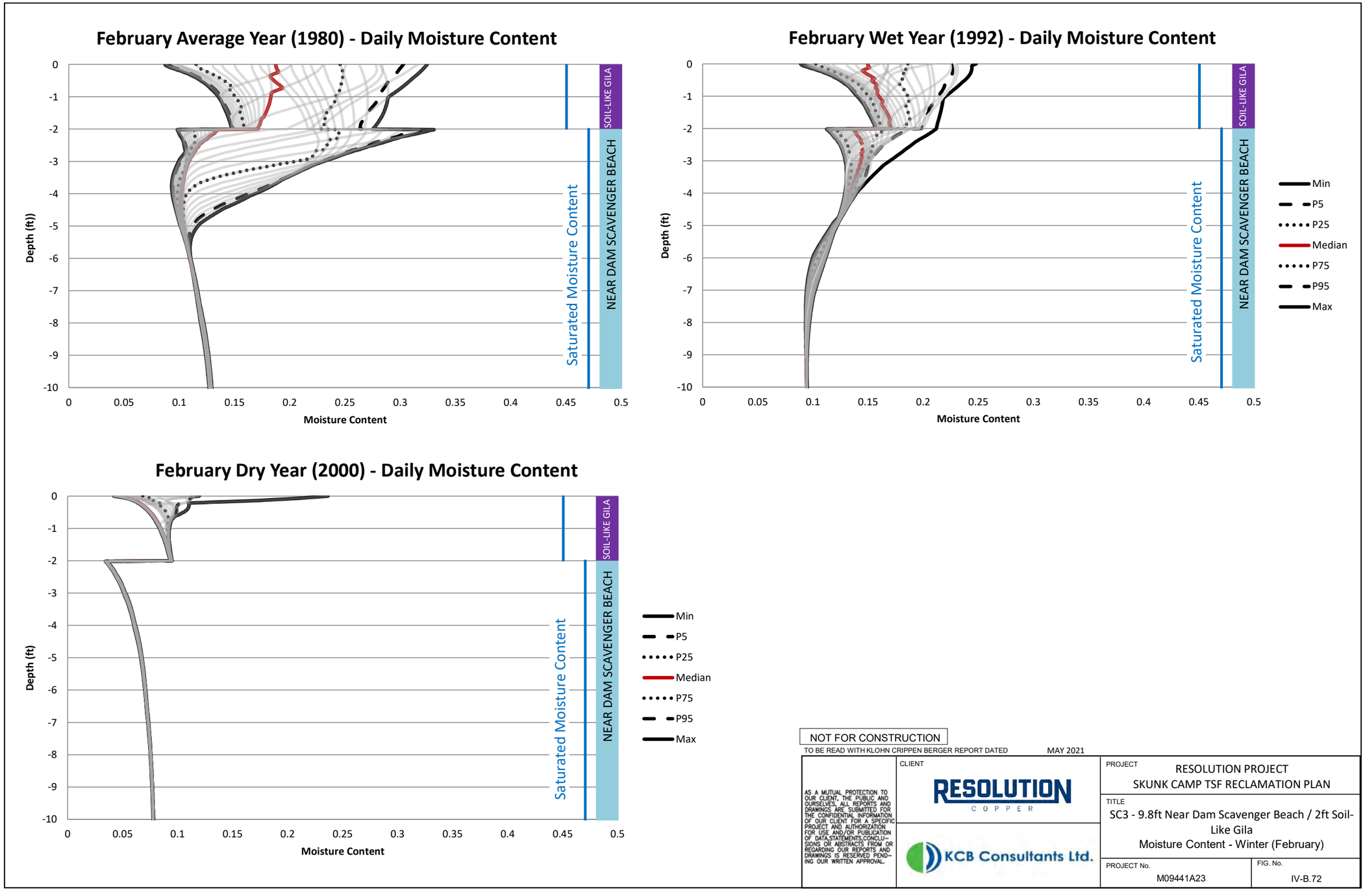
TITLE: SC3 - 9.8ft Near Dam Scavenger Beach / 2ft Soil-Like Gila
Suction Profiles - Summer Monsoon (August)

PROJECT No. M09441A23

FIG. No. IV-B.71



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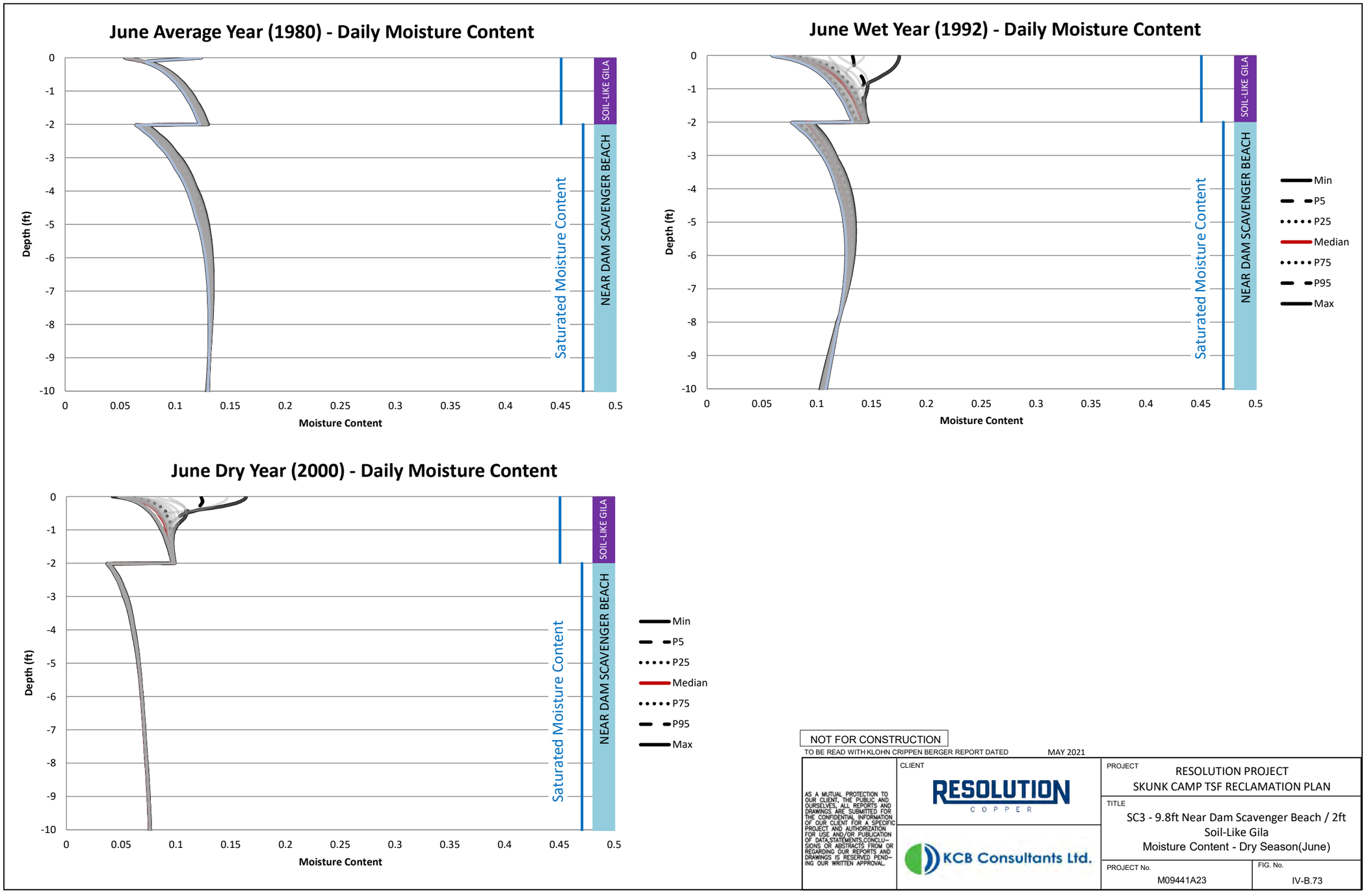
SKUNK CAMP TSF RECLAMATION PLAN

TITLE: SC3 - 9.8ft Near Dam Scavenger Beach / 2ft Soil-Like Gila
Moisture Content - Winter (February)

PROJECT No. M09441A23

FIG. No. IV-B.72



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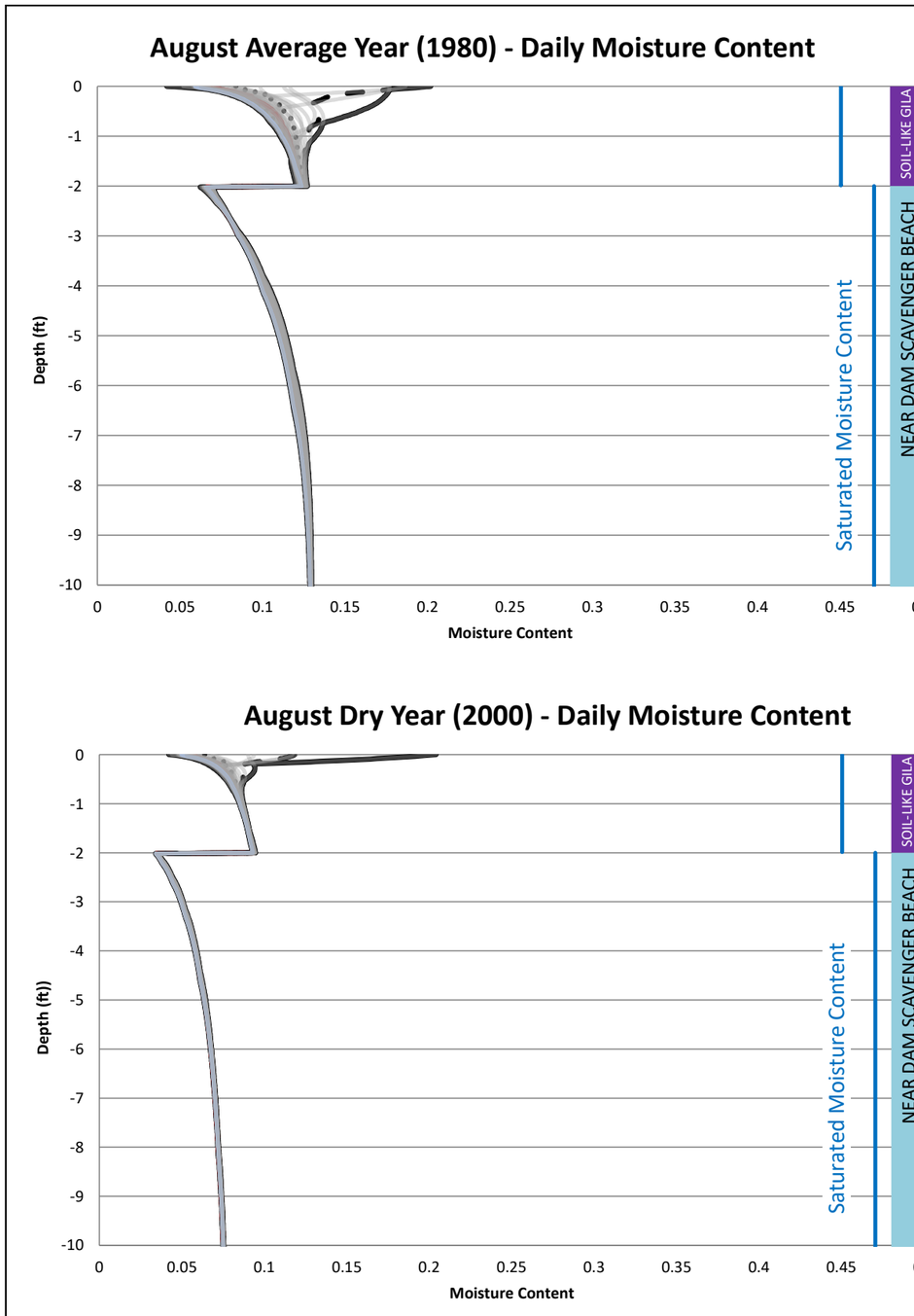
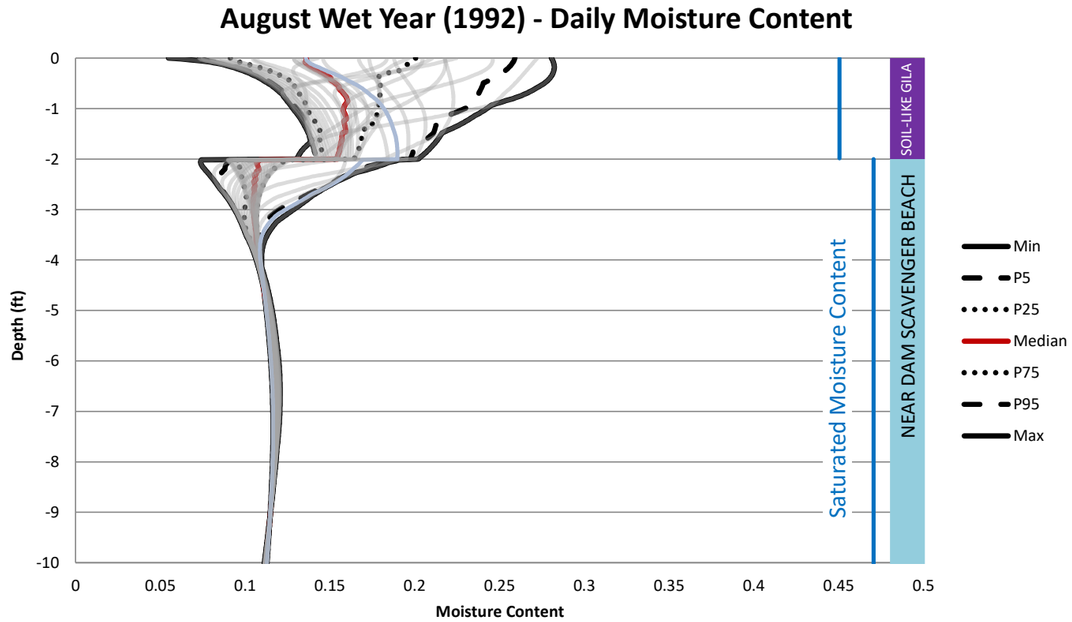
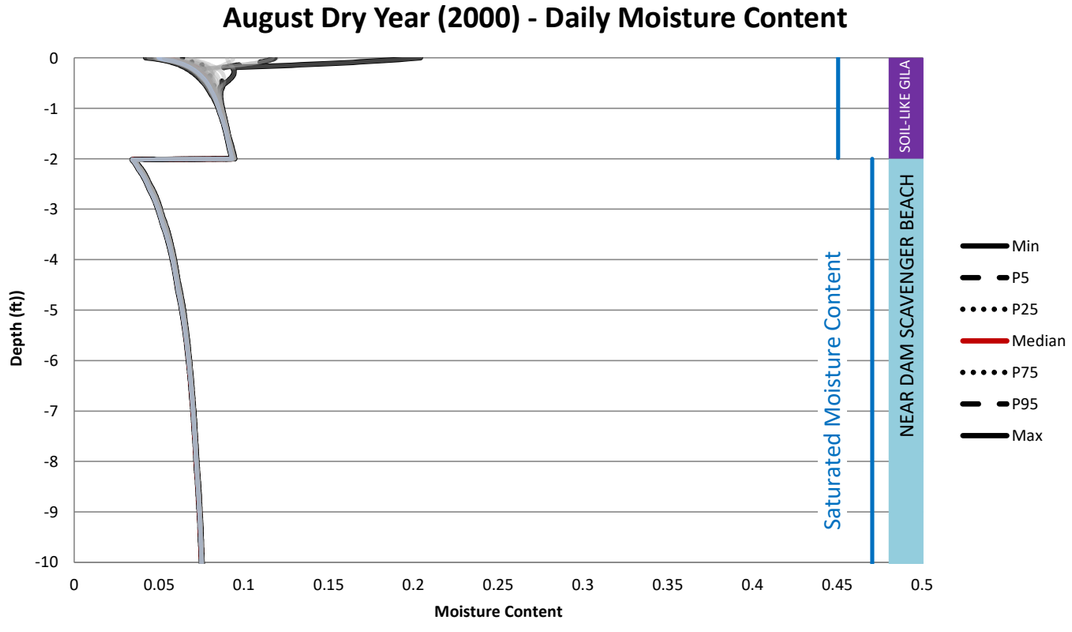
TITLE: SC3 - 9.8ft Near Dam Scavenger Beach / 2ft Soil-Like Gila
Moisture Content - Dry Season(June)

PROJECT No. M09441A23

FIG. No. IV-B.73







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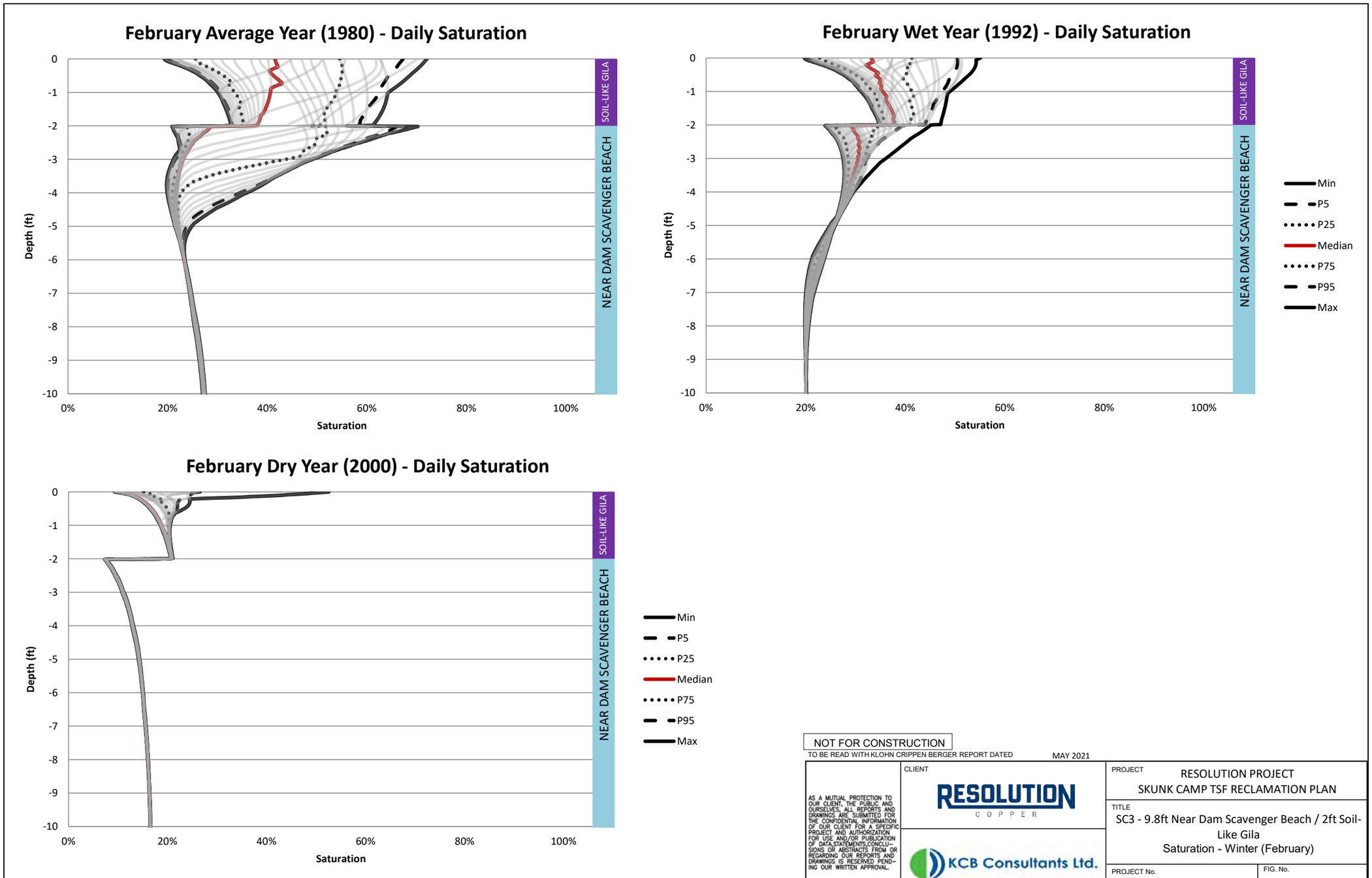
PROJECT: RESOLUTION PROJECT
SKUNK CAMP TSF RECLAMATION PLAN

TITLE: SC3 - 9.8ft Near Dam Scavenger Beach / 2ft Soil-Like Gila
Moisture Content - Summer Monsoon (August)

PROJECT No. M09441A23

FIG. No. IV-B.74



NOT FOR CONSTRUCTION

TO BE READ WITH KLOHN CRIPPEN BERGER REPORT DATED MAY 2021

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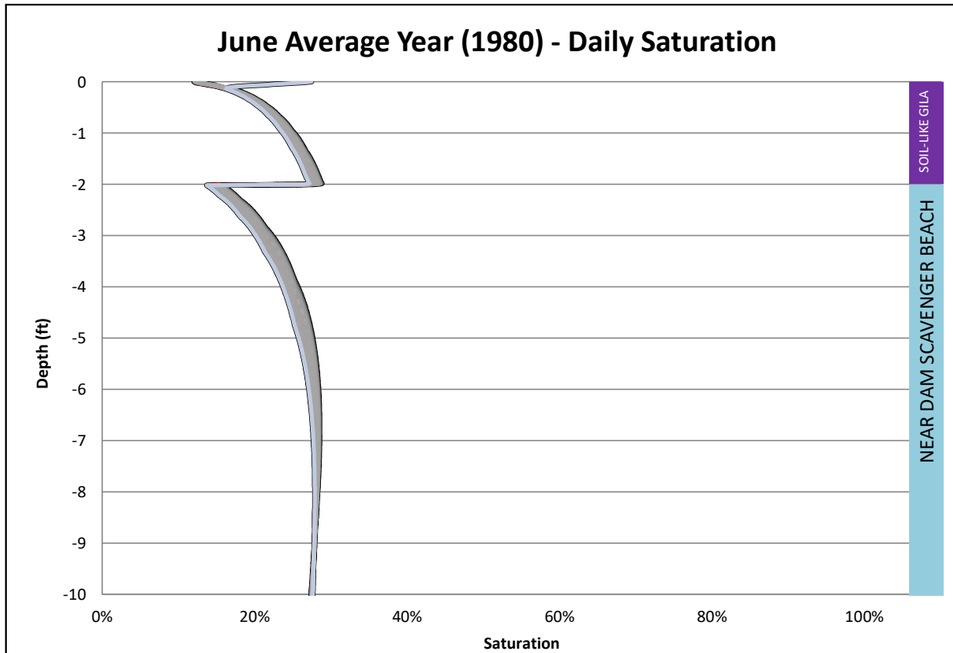
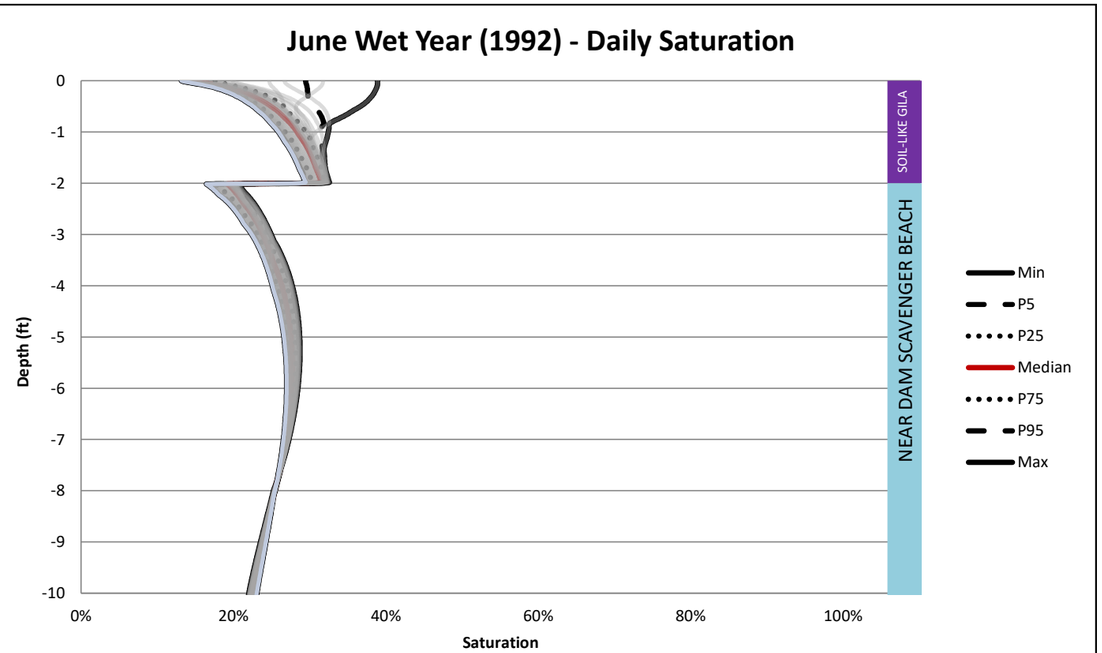
PROJECT: RESOLUTION PROJECT
SKUNK CAMP TSF RECLAMATION PLAN

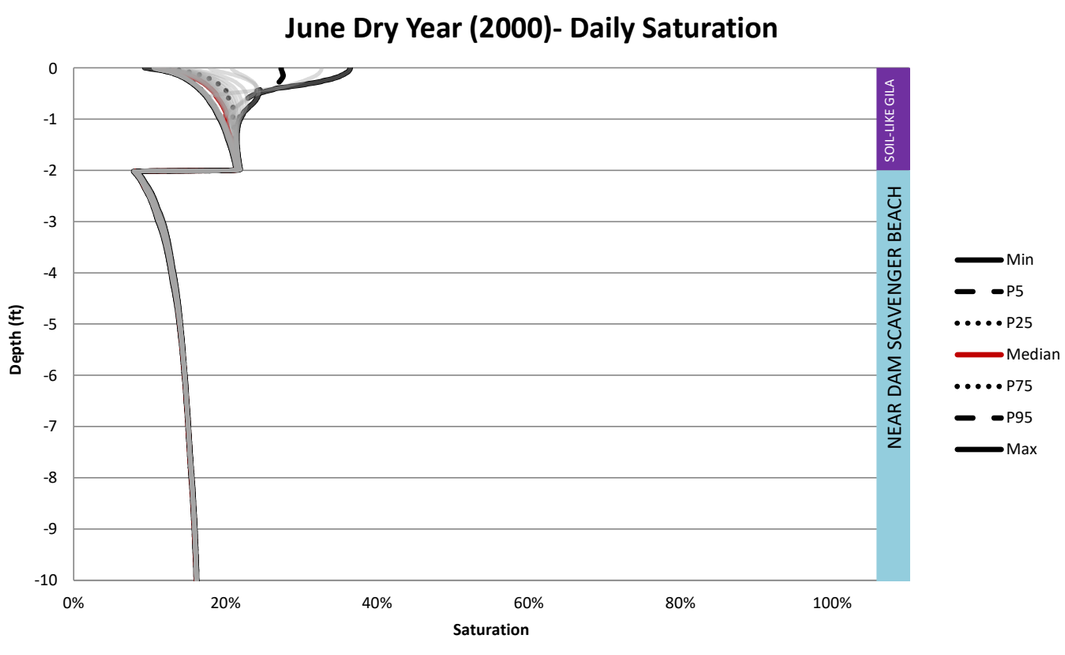
TITLE: SC3 - 9.8ft Near Dam Scavenger Beach / 2ft Soil-Like Gila
Saturation - Winter (February)

PROJECT No. M09441A23

FIG. No. IV-B.75







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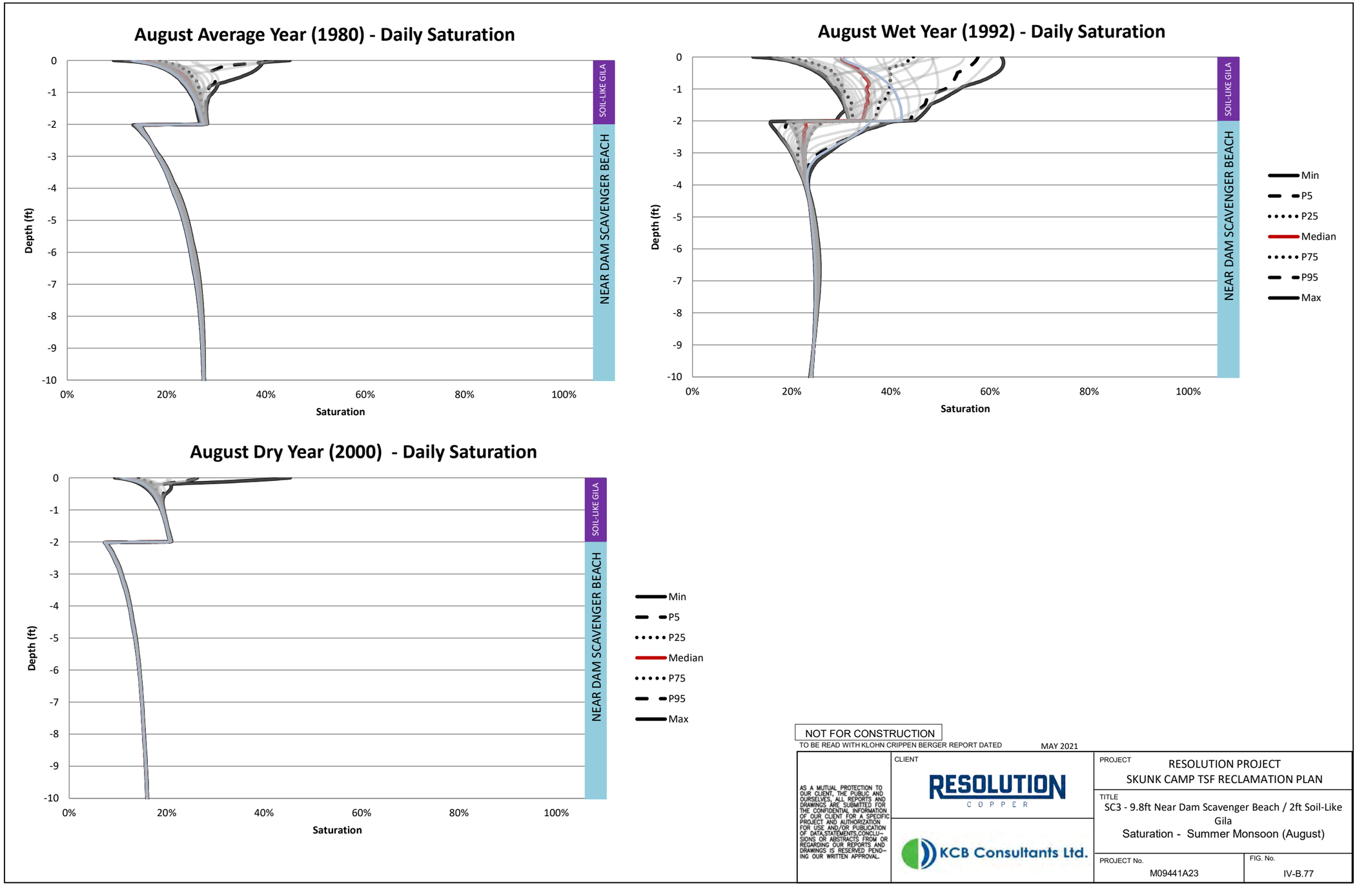
PROJECT: RESOLUTION PROJECT
SKUNK CAMP TSF RECLAMATION PLAN

TITLE: SC3 - 9.8ft Near Dam Scavenger Beach / 2ft Soil-Like Gila
Saturation - Dry Season (June)

PROJECT No. M09441A23

FIG. No. IV-B.76



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PROJECT: RESOLUTION PROJECT
SKUNK CAMP TSF RECLAMATION PLAN

TITLE: SC3 - 9.8ft Near Dam Scavenger Beach / 2ft Soil-Like Gila
Saturation - Summer Monsoon (August)

PROJECT No. M09441A23

FIG. No. IV-B.77

Table IV-B.29 SC4 Annual Water Balance

Water Year	Result Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
		(in)	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
1951	1951-10-01	14	46	-7.6	0	-6.8	0	14	6.4	60
1952	1952-10-01	0	51	-12	0	-13	0	20	8.4	72
1953	1953-10-01	15	57	-10	0	-10	0	15	5.2	72
1954	1954-10-01	21	51	-14	0	-8.8	0	21	7.0	72
1955	1955-10-01	13	58	-8.2	0	-12	0	13	5.2	72
1956	1956-10-01	13	61	-7.0	0	-9.8	0	13	5.6	74
1957	1957-10-01	15	56	-7.9	0	-7.6	0	15	7.1	71
1958	1958-10-01	19	51	-11	0	-9.3	0	19	8.6	70
1959	1959-10-01	16	59	-9.4	0	-8.4	0	16	6.1	75
1960	1960-10-01	19	54	-13	0	-16	0	19	6.2	73
1961	1961-10-01	9.8	63	-3.6	0	-6.3	0	9.8	6.1	73
1962	1962-10-01	14	56	-8.2	0	-6.6	0	14	6.0	71
1963	1963-10-01	24	50	-17	0	-8.1	0	24	6.8	73
1964	1964-10-01	11	60	-4.2	0	-12	0	11	7.2	72
1965	1965-10-01	18	53	-10	0	-9.4	0	18	7.1	71
1966	1966-10-01	23	49	-17	0	-15	0	23	5.9	72
1967	1967-10-01	14	58	-8.1	0	-8.5	0	14	6.2	72
1968	1968-10-01	22	49	-16	0	-16	0	22	6.2	71
1969	1969-10-01	19	53	-12	0	-12	0	19	7.0	72
1970	1970-10-01	16	56	-8.8	0	-8.7	0	16	7.0	72
1971	1971-10-01	12	61	-6.9	0	-7.0	0	12	5.1	73
1972	1972-10-01	11	65	-5.8	0	-8.8	0	11	5.3	76
1973	1973-10-01	31	38	-21	0	-16	0	31	9.7	69
1974	1974-10-01	15	56	-9.0	0	-10	0	15	6.4	72
1975	1975-10-01	19	50	-11	0	-11	0	19	8.1	69
1976	1976-10-01	16	56	-9.2	0	-8.2	0	16	6.7	72
1977	1977-10-01	16	57	-9.4	0	-8.7	0	16	6.7	73
1978	1978-10-01	24	47	-16	0	-17	0	24	7.7	71
1979	1979-10-01	30	42	-21	0	-22	0	30	8.6	71
1980	1980-10-01	20	51	-12	0	-12	0	20	7.8	71
1981	1981-10-01	15	60	-8.9	0	-8.5	0	15	6.2	75
1982	1982-10-01	23	46	-14	0	-10	0	23	9.1	69
1983	1983-10-01	27	42	-18	0	-16	0	27	8.8	69
1984	1984-10-01	18	53	-9.0	0	-14	0	18	8.5	71
1985	1985-10-01	22	44	-14	0	-14	0	22	8.4	67
1986	1986-10-01	21	49	-13	0	-12	0	21	8.1	70
1987	1987-10-01	20	50	-12	0	-14	0	20	7.5	70
1988	1988-10-01	23	49	-15	0	-12	0	23	8.3	71
1989	1989-10-01	12	62	-6.1	0	-12	0	12	5.5	74
1990	1990-10-01	23	48	-15	0	-6.5	0	23	8.1	71
1991	1991-10-01	23	48	-14	0	-18	0	23	8.4	71
1992	1992-10-01	36	34	-25	0	-20	0	36	11	70
1993	1993-10-01	33	37	-25	0	-30	0	33	7.8	70
1994	1994-10-01	15	57	-8.3	0	-11	0	15	6.9	73
1995	1995-10-01	25	46	-16	0	-12	0	25	8.1	71
1996	1996-10-01	13	60	-7.0	0	-10.0	0	13	6.4	74
1997	1997-10-01	10	65	-4.9	0	-7.6	0	10	5.3	75
1998	1998-10-01	20	49	-12	0	-8.6	0	20	8.2	69
1999	1999-10-01	15	58	-8.3	0	-7.6	0	15	6.5	73
2000	2000-10-01	5.4	72	-2.0	0	-7.7	0	5.4	3.5	77
2001	2001-10-01	23	48	-15	0	-8.6	0	23	8.1	71
2002	2002-10-01	5.4	70	-1.6	0	-8.5	0	5.4	3.7	75
2003	2003-10-01	13	63	-7.0	0	-4.9	0	13	6.1	76
2004	2004-10-01	12	65	-6.3	0	-5.6	0	12	6.0	77

Table IV-B.29 SC4 Annual Water Balance

Water Year	Result Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
		(in)	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
2005	2005-10-01	24	49	-17	0	-12	0	24	6.9	72
2006	2006-10-01	12	63	-6.6	0	-9.0	0	12	5.4	75

Table IV-B.30 SC4 Monthly Water Balance 9 Wet Years (1983 to 1991)

Month	Result Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
		[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
Nov-82	1982-11-30	0	5.5	-1.6	0	-2.3	0	2.5	0.89	8.8
Dec-82	1982-12-30	2.5	0.12	-1.6	0	-1.2	0	2.5	0.92	2.7
Jan-83	1983-01-29	0.67	2.6	-0.41	0	-1.2	0	0.67	0.28	3.0
Feb-83	1983-02-28	3.5	-0.12	-2.8	0	-1.2	0	3.5	0.69	2.9
Mar-83	1983-03-30	5.4	-1.5	-4.1	0	-1.3	0	5.4	1.3	4.0
Apr-83	1983-04-29	0.83	5.2	0.059	0	-1.6	0	0.83	0.88	5.3
May-83	1983-05-29	0	8.6	0.13	0	-1.8	0	0	0.13	7.9
Jun-83	1983-06-28	0	9.4	0.071	0	-1.6	0	0	0.083	9.4
Jul-83	1983-07-28	2.1	6.9	-1.5	0	-1.3	0	2.1	0.66	9.6
Aug-83	1983-08-27	3.8	3.4	-2.2	0	-1.1	0	3.8	1.6	7.2
Sep-83	1983-09-26	1.9	5.2	-0.74	0	-1.1	0	1.9	1.1	7.5
Oct-83	1983-10-26	4.9	-0.39	-4.0	0	-1.1	0	4.9	0.90	5.1
Nov-83	1983-11-25	1.6	2.2	-1.2	0	-1.4	0	1.6	0.41	4.2
Dec-83	1983-12-25	1.9	0.71	-1.3	0	-1.6	0	1.9	0.58	2.6
Jan-84	1984-01-24	1.5	1.2	-0.78	0	-1.6	0	1.5	0.73	2.7
Feb-84	1984-02-23	0	4.1	0.12	0	-1.6	0	0	0.12	3.7
Mar-84	1984-03-24	0	5.7	0.075	0	-1.4	0	0	0.075	5.0
Apr-84	1984-04-23	0.83	5.9	-0.40	0	-1.2	0	0.83	0.46	6.5
May-84	1984-05-23	0.67	7.4	-0.035	0	-1.1	0	0.67	0.64	7.5
Jun-84	1984-06-22	0.039	9.3	0.11	0	-0.91	0	0.039	0.14	9.3
Jul-84	1984-07-22	3.6	4.1	-2.3	0	-0.77	0	3.6	1.3	8.5
Aug-84	1984-08-21	3.9	3.2	-2.0	0	-0.69	0	3.9	1.9	6.9
Sep-84	1984-09-20	1.1	5.9	-0.14	0	-0.69	0	1.1	1.0	7.0
Oct-84	1984-10-20	2.5	2.4	-1.4	0	-0.75	0	2.5	1.1	5.6
Nov-84	1984-11-19	0	4.3	0.15	0	-0.81	0	0	0.15	4.2
Dec-84	1984-12-19	4.8	-2.3	-4.0	0	-0.87	0	4.8	0.75	3.1
Jan-85	1985-01-18	3.9	-1.5	-3.1	0	-0.89	0	3.9	0.82	2.3
Feb-85	1985-02-17	2.9	-0.35	-2.1	0	-1.2	0	2.9	0.80	2.3
Mar-85	1985-03-19	1.7	2.2	-0.70	0	-1.7	0	1.7	0.98	3.6
Apr-85	1985-04-18	0.47	5.7	0.18	0	-1.7	0	0.47	0.63	5.4
May-85	1985-05-18	0.43	6.6	-0.028	0	-1.5	0	0.43	0.43	6.7
Jun-85	1985-06-17	0	8.7	0.094	0	-1.3	0	0	0.094	8.6
Jul-85	1985-07-17	0.24	8.2	-0.14	0	-1.1	0	0.24	0.091	8.4
Aug-85	1985-08-16	2.1	5.7	-1.1	0	-0.98	0	2.1	1.0	7.8
Sep-85	1985-09-15	2.2	4.9	-0.96	0	-0.85	0	2.2	1.2	7.9
Oct-85	1985-10-15	3.1	1.9	-2.0	0	-0.74	0	3.1	1.1	5.7
Nov-85	1985-11-14	1.4	2.4	-0.84	0	-0.74	0	1.4	0.58	3.9
Dec-85	1985-12-14	2.7	0.16	-1.9	0	-0.80	0	2.7	0.83	3.1
Jan-86	1986-01-13	0	3.3	0.33	0	-0.86	0	0	0.33	3.3
Feb-86	1986-02-12	2.4	0.79	-1.8	0	-0.93	0	2.4	0.57	3.6
Mar-86	1986-03-14	1.9	2.6	-1.3	0	-0.94	0	1.9	0.65	3.7
Apr-86	1986-04-13	3.1	2.4	-2.1	0	-0.95	0	3.1	0.98	4.9
May-86	1986-05-13	0	7.8	0.16	0	-1.1	0	0	0.14	7.4
Jun-86	1986-06-12	0.039	9.4	0.039	0	-1.2	0	0.039	0.087	9.1
Jul-86	1986-07-12	2.2	6.8	-1.6	0	-1.1	0	2.2	0.53	9.2
Aug-86	1986-08-11	2.8	4.6	-1.6	0	-0.98	0	2.8	1.2	7.5
Sep-86	1986-09-10	3.0	4.0	-1.7	0	-0.98	0	3.0	1.2	7.3
Oct-86	1986-10-10	0.91	4.8	-0.28	0	-0.98	0	0.91	0.65	6.1
Nov-86	1986-11-09	2.8	1.1	-1.9	0	-1.0	0	2.8	0.80	4.6
Dec-86	1986-12-09	2.6	0.67	-2.1	0	-1.1	0	2.6	0.52	3.4
Jan-87	1987-01-08	1.5	1.3	-0.59	0	-1.1	0	1.5	0.91	2.7
Feb-87	1987-02-07	3.1	-0.12	-2.2	0	-1.1	0	3.1	0.90	2.9
Mar-87	1987-03-09	2.2	1.9	-1.7	0	-1.2	0	2.2	0.62	3.4
Apr-87	1987-04-08	0.94	4.4	-0.28	0	-1.3	0	0.94	0.67	5.0

Table IV-B.30 SC4 Monthly Water Balance 9 Wet Years (1983 to 1991)

Month	Result Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
		[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
May-87	1987-05-08	0.039	7.2	0.12	0	-1.4	0	0.039	0.14	6.8
Jun-87	1987-06-07	0.31	8.1	0.079	0	-1.3	0	0.31	0.37	8.2
Jul-87	1987-07-07	0.20	8.9	0	0	-1.2	0	0.20	0.22	9.2
Aug-87	1987-08-06	3.1	5.5	-2.4	0	-1.0	0	3.1	0.71	8.9
Sep-87	1987-09-05	2.3	5.1	-1.5	0	-0.87	0	2.3	0.82	7.5
Oct-87	1987-10-05	0.83	5.5	-0.039	0	-0.87	0	0.83	0.78	6.7
Nov-87	1987-11-04	1.4	3.5	-0.83	0	-0.87	0	1.4	0.56	5.8
Dec-87	1987-12-04	0.71	3.1	-0.20	0	-0.87	0	0.71	0.51	3.8
Jan-88	1988-01-03	4.0	-1.3	-3.0	0	-0.83	0	4.0	0.97	3.0
Feb-88	1988-02-02	3.6	-0.98	-2.9	0	-0.83	0	3.6	0.72	2.4
Mar-88	1988-03-03	0.71	3.5	-0.31	0	-1.0	0	0.71	0.43	3.6
Apr-88	1988-04-02	0.16	5.9	0.079	0	-1.3	0	0.16	0.22	5.5
May-88	1988-05-02	2.4	3.7	-1.4	0	-1.3	0	2.4	1.0	6.1
Jun-88	1988-06-01	0	8.7	0.20	0	-1.2	0	0	0.19	8.0
Jul-88	1988-07-01	0.12	8.5	0.079	0	-1.1	0	0.12	0.21	8.9
Aug-88	1988-07-31	2.5	5.8	-1.6	0	-0.98	0	2.5	0.89	8.5
Sep-88	1988-08-30	6.7	0.67	-4.8	0	-0.83	0	6.7	1.9	7.3
Oct-88	1988-10-29	2.0	9.8	-0.83	0	-2.0	0	2.0	1.2	13
Nov-88	1988-11-28	1.7	1.9	-1.3	0	-1.2	0	1.7	0.44	4.1
Dec-88	1988-12-28	1.1	1.8	-0.51	0	-1.2	0	1.1	0.62	3.1
Jan-89	1989-01-27	2.0	0.71	-1.3	0	-1.1	0	2.0	0.72	2.4
Feb-89	1989-02-26	0.55	3.3	0	0	-1.1	0	0.55	0.52	3.3
Mar-89	1989-03-28	1.7	4.1	-1.3	0	-1.1	0	1.7	0.39	5.3
Apr-89	1989-04-27	0	7.6	0.31	0	-1.1	0	0	0.30	6.9
May-89	1989-05-27	0.16	8.4	0.079	0	-0.94	0	0.16	0.24	8.3
Jun-89	1989-06-26	0	9.1	0.079	0	-0.91	0	0	0.067	9.1
Jul-89	1989-07-26	0.079	8.7	0	0	-0.79	0	0.079	0.11	9.0
Aug-89	1989-08-25	1.3	6.1	-0.35	0	-0.71	0	1.3	0.97	8.0
Sep-89	1989-09-24	1.5	5.7	-1.0	0	-0.67	0	1.5	0.48	7.3
Oct-89	1989-10-24	1.1	4.5	-0.39	0	-0.59	0	1.1	0.67	6.1
Nov-89	1989-11-23	0.28	3.8	-0.039	0	-0.55	0	0.28	0.26	4.5
Dec-89	1989-12-23	0	3.3	0.24	0	-0.55	0	0	0.22	3.5
Jan-90	1990-01-22	2.2	0.47	-1.3	0	-0.51	0	2.2	0.79	2.9
Feb-90	1990-02-21	2.5	0.35	-1.5	0	-0.47	0	2.5	1.0	2.5
Mar-90	1990-03-23	0.83	3.9	-0.28	0	-0.47	0	0.83	0.53	4.2
Apr-90	1990-04-22	1.0	5.7	-0.31	0	-0.51	0	1.0	0.73	6.0
May-90	1990-05-22	1.1	6.9	-0.59	0	-0.51	0	1.1	0.46	7.7
Jun-90	1990-06-21	0.43	8.9	0	0	-0.51	0	0.43	0.39	9.0
Jul-90	1990-07-21	0.91	7.4	-0.35	0	-0.55	0	0.91	0.61	8.6
Aug-90	1990-08-20	9.6	-2.7	-8.3	0	-0.51	0	9.6	1.4	7.8
Sep-90	1990-09-19	2.4	4.7	-1.8	0	-0.55	0	2.4	0.66	7.1
Oct-90	1990-10-19	0.43	4.8	0.24	0	-1.1	0	0.43	0.66	5.9
Nov-90	1990-11-18	1.5	2.6	-0.94	0	-1.4	0	1.5	0.63	4.2
Dec-90	1990-12-18	2.8	0.31	-1.9	0	-1.5	0	2.8	0.86	3.5
Jan-91	1991-01-17	4.7	-2.3	-3.7	0	-1.3	0	4.7	1.0	2.3
Feb-91	1991-02-16	0.12	3.4	0.12	0	-1.5	0	0.12	0.27	3.3
Mar-91	1991-03-18	3.6	0.87	-2.7	0	-1.8	0	3.6	0.93	4.3
Apr-91	1991-04-17	3.2	2.5	-2.3	0	-1.7	0	3.2	0.97	4.8
May-91	1991-05-17	0	7.8	0.12	0	-1.9	0	0	0.12	7.4
Jun-91	1991-06-16	0.71	8.4	-0.12	0	-1.8	0	0.71	0.59	8.7
Jul-91	1991-07-16	0.47	8.9	-0.039	0	-1.5	0	0.47	0.39	9.4
Aug-91	1991-08-15	3.3	4.8	-2.2	0	-1.3	0	3.3	1.2	8.4
Sep-91	1991-09-14	2.0	4.9	-1.0	0	-1.1	0	2.0	0.98	7.5
Oct-91	1991-10-01	0.24	3.2	0.039	0	-0.59	0	0.24	0.30	3.5

Table IV-B.31 SC4 Monsoon Period Water Balance

Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
1951-07-01	0	9.2	0.091	0	-0.89	0	0	0.091	9.2
1951-08-01	1.1	8.4	-0.41	0	-0.86	0	1.1	0.64	9.5
1951-09-01	3.6	4.2	-2.7	0	-0.78	0	3.6	0.95	7.8
1951-10-01	0.65	6.0	-0.15	0	-0.70	0	0.65	0.49	6.6
1951-11-01	1.6	3.7	-1.0	0	-0.72	0	1.6	0.60	5.4
1951	7.0	32	-4.2	0	-4.0	0	7.0	2.8	39
1952-07-01	0.63	8.9	-0.014	0	-1.5	0	0.63	0.62	9.6
1952-08-01	0.56	8.3	-0.033	0	-1.5	0	0.56	0.53	8.8
1952-09-01	0.45	7.3	0.039	0	-1.3	0	0.45	0.49	7.8
1952-10-01	0.70	6.3	-0.18	0	-1.1	0	0.70	0.53	7.0
1952-11-01	0	5.9	0.13	0	-0.96	0	0	0.13	5.9
1952	2.3	37	-0.054	0	-6.3	0	2.3	2.3	39
1953-07-01	0	9.1	0.048	0	-0.98	0	0	0.049	9.1
1953-08-01	2.7	5.8	-2.0	0	-0.90	0	2.7	0.75	8.8
1953-09-01	1.8	6.1	-0.87	0	-0.79	0	1.8	0.93	7.7
1953-10-01	0	6.8	0.20	0	-0.71	0	0	0.20	6.8
1953-11-01	0.012	5.4	0.084	0	-0.72	0	0.012	0.096	5.5
1953	4.5	33	-2.5	0	-4.1	0	4.5	2.0	38
1954-07-01	0.13	8.9	0.10	0	-0.86	0	0.13	0.23	9.0
1954-08-01	4.5	3.2	-3.2	0	-0.88	0	4.5	1.3	7.8
1954-09-01	5.3	2.1	-4.1	0	-0.82	0	5.3	1.1	7.4
1954-10-01	1.3	5.4	-0.51	0	-1.0	0	1.3	0.77	6.6
1954-11-01	0	5.6	0.18	0	-1.4	0	0	0.18	5.6
1954	11	25	-7.6	0	-4.9	0	11	3.6	36
1955-07-01	2.1	7.0	-1.6	0	-0.73	0	2.1	0.46	9.1
1955-08-01	4.5	3.4	-3.4	0	-0.70	0	4.5	1.1	7.9
1955-09-01	2.7	4.4	-1.4	0	-0.68	0	2.7	1.3	7.2
1955-10-01	0.12	6.7	0.15	0	-0.74	0	0.12	0.27	6.8
1955-11-01	0.020	5.8	0.091	0	-0.94	0	0.020	0.11	5.9
1955	9.3	27	-6.1	0	-3.8	0	9.3	3.2	37
1956-07-01	0.24	9.2	-0.075	0	-0.80	0	0.24	0.17	9.4
1956-08-01	2.8	6.2	-1.6	0	-0.75	0	2.8	1.2	9.0
1956-09-01	1.7	5.7	-0.94	0	-0.69	0	1.7	0.80	7.5
1956-10-01	0.079	6.8	0.055	0	-0.63	0	0.079	0.13	6.8
1956-11-01	0.53	4.5	-0.16	0	-0.66	0	0.53	0.37	5.2
1956	5.4	32	-2.7	0	-3.5	0	5.4	2.7	38
1957-07-01	0.031	9.3	0.12	0	-0.68	0	0.031	0.15	9.3
1957-08-01	1.1	7.4	-0.38	0	-0.69	0	1.1	0.71	8.5
1957-09-01	3.4	4.4	-2.0	0	-0.67	0	3.4	1.4	8.1
1957-10-01	0.57	6.1	-0.15	0	-0.61	0	0.57	0.42	6.6
1957-11-01	3.2	1.1	-2.3	0	-0.63	0	3.2	0.90	4.6
1957	8.3	28	-4.7	0	-3.3	0	8.3	3.6	37
1958-07-01	0.70	8.5	-0.29	0	-0.97	0	0.70	0.41	9.3
1958-08-01	0.78	8.2	-0.20	0	-0.98	0	0.78	0.59	9.1
1958-09-01	0.85	7.2	-0.016	0	-0.90	0	0.85	0.83	8.0
1958-10-01	3.0	3.2	-2.1	0	-0.76	0	3.0	0.91	6.4
1958-11-01	1.9	3.3	-1.4	0	-0.72	0	1.9	0.56	5.3
1958	7.3	30	-4.0	0	-4.3	0	7.3	3.3	38
1959-07-01	1.0	8.2	-0.45	0	-0.62	0	1.0	0.59	9.1
1959-08-01	3.8	5.7	-2.8	0	-0.59	0	3.8	0.99	9.6
1959-09-01	5.3	2.0	-3.5	0	-0.54	0	5.3	1.8	7.4
1959-10-01	0.051	6.6	0.14	0	-0.56	0	0.051	0.19	6.9
1959-11-01	4.8	0.35	-4.2	0	-0.79	0	4.8	0.55	5.3
1959	15	23	-11	0	-3.1	0	15	4.1	38
1960-07-01	0	9.3	0.083	0	-1.2	0	0	0.087	9.2
1960-08-01	0.74	8.3	-0.30	0	-1.1	0	0.74	0.44	9.2
1960-09-01	1.5	6.4	-0.44	0	-0.94	0	1.5	1.1	8.1

Table IV-B.31 SC4 Monsoon Period Water Balance

Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
1960-10-01	0.27	6.6	0.11	0	-0.78	0	0.27	0.37	7.0
1960-11-01	2.1	2.8	-1.3	0	-0.72	0	2.1	0.79	5.0
1960	4.6	33	-1.8	0	-4.8	0	4.6	2.8	38
1961-07-01	0	9.4	0.055	0	-0.43	0	0	0.055	9.3
1961-08-01	0.67	8.0	-0.13	0	-0.42	0	0.67	0.54	8.9
1961-09-01	3.0	5.1	-1.9	0	-0.40	0	3.0	1.1	8.1
1961-10-01	0.50	5.9	0.27	0	-0.37	0	0.50	0.77	6.3
1961-11-01	0.45	4.5	-0.19	0	-0.37	0	0.45	0.26	5.4
1961	4.6	33	-1.9	0	-2.0	0	4.6	2.7	38
1962-07-01	0	9.1	0.059	0	-0.78	0	0	0.059	9.1
1962-08-01	0.61	8.2	-0.11	0	-0.77	0	0.61	0.50	8.9
1962-09-01	0.49	7.8	-0.043	0	-0.72	0	0.49	0.45	8.4
1962-10-01	1.2	5.2	-0.39	0	-0.65	0	1.2	0.84	6.6
1962-11-01	0.87	4.2	-0.24	0	-0.61	0	0.87	0.63	5.1
1962	3.2	34	-0.72	0	-3.5	0	3.2	2.5	38
1963-07-01	0	9.1	0.087	0	-0.90	0	0	0.087	9.0
1963-08-01	0.079	9.3	0.051	0	-0.88	0	0.079	0.13	9.4
1963-09-01	10	-3.2	-8.5	0	-0.78	0	10	2.0	7.5
1963-10-01	1.0	5.7	-0.24	0	-0.79	0	1.0	0.81	6.6
1963-11-01	0.67	4.9	-0.26	0	-1.4	0	0.67	0.41	5.8
1963	12	26	-8.8	0	-4.7	0	12	3.4	38
1964-07-01	0	9.3	0.063	0	-0.73	0	0	0.063	9.4
1964-08-01	1.5	7.2	-0.51	0	-0.70	0	1.5	0.97	8.8
1964-09-01	2.2	5.6	-0.84	0	-0.65	0	2.2	1.3	7.7
1964-10-01	1.6	4.4	-0.44	0	-0.58	0	1.6	1.1	6.1
1964-11-01	1.5	4.1	-1.1	0	-0.56	0	1.5	0.44	5.8
1964	6.8	31	-2.8	0	-3.2	0	6.8	3.9	38
1965-07-01	0.10	8.8	0.059	0	-1.1	0	0.10	0.17	8.8
1965-08-01	1.4	7.0	-0.52	0	-1.0	0	1.4	0.91	8.9
1965-09-01	0.90	7.0	-0.17	0	-0.93	0	0.90	0.74	8.0
1965-10-01	1.0	5.4	-0.38	0	-0.78	0	1.0	0.66	6.6
1965-11-01	0.46	5.0	-0.11	0	-0.72	0	0.46	0.35	5.7
1965	3.9	33	-1.1	0	-4.6	0	3.9	2.8	38
1966-07-01	0.18	8.6	-0.0079	0	-1.3	0	0.18	0.18	9.1
1966-08-01	0.84	7.6	-0.24	0	-1.2	0	0.84	0.60	8.3
1966-09-01	1.6	6.3	-0.90	0	-0.99	0	1.6	0.70	8.1
1966-10-01	2.7	3.7	-2.0	0	-0.81	0	2.7	0.71	6.5
1966-11-01	1.4	3.8	-0.77	0	-0.75	0	1.4	0.59	5.1
1966	6.7	30	-3.9	0	-5.0	0	6.7	2.8	37
1967-07-01	0.079	8.9	0.067	0	-0.64	0	0.079	0.15	9.0
1967-08-01	4.0	4.2	-2.9	0	-0.64	0	4.0	1.0	8.3
1967-09-01	2.5	5.6	-1.7	0	-0.61	0	2.5	0.81	8.0
1967-10-01	0.56	5.7	-0.016	0	-0.64	0	0.56	0.54	6.5
1967-11-01	0.42	4.8	-0.020	0	-0.75	0	0.42	0.40	5.6
1967	7.5	29	-4.6	0	-3.3	0	7.5	2.9	37
1968-07-01	0	9.4	0.055	0	-1.4	0	0	0.055	9.3
1968-08-01	1.8	6.9	-1.1	0	-1.2	0	1.8	0.75	8.9
1968-09-01	2.5	4.7	-1.3	0	-1.1	0	2.5	1.3	7.3
1968-10-01	0.051	6.7	0.14	0	-0.91	0	0.051	0.19	6.9
1968-11-01	0.39	4.6	-0.047	0	-0.89	0	0.39	0.34	5.1
1968	4.8	32	-2.2	0	-5.5	0	4.8	2.6	38
1969-07-01	0	9.3	0.10	0	-1.1	0	0	0.098	9.4
1969-08-01	0.33	8.1	0.0039	0	-1.1	0	0.33	0.34	8.7
1969-09-01	2.6	5.7	-1.3	0	-0.96	0	2.6	1.2	8.3
1969-10-01	1.2	5.3	-0.59	0	-0.82	0	1.2	0.65	6.8
1969-11-01	0.83	4.1	-0.42	0	-0.77	0	0.83	0.41	5.2
1969	5.0	33	-2.2	0	-4.8	0	5.0	2.7	38

Table IV-B.31 SC4 Monsoon Period Water Balance

Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
1970-07-01	0.079	9.2	0.059	0	-0.80	0	0.079	0.14	9.1
1970-08-01	1.0	7.6	-0.24	0	-0.76	0	1.0	0.80	9.1
1970-09-01	1.7	6.4	-0.65	0	-0.70	0	1.7	1.1	8.0
1970-10-01	3.3	3.2	-2.7	0	-0.63	0	3.3	0.69	7.0
1970-11-01	0	5.1	0.11	0	-0.64	0	0	0.11	5.3
1970	6.2	32	-3.4	0	-3.5	0	6.2	2.8	39
1971-07-01	0	9.1	0.055	0	-0.53	0	0	0.055	9.0
1971-08-01	0.39	8.7	-0.059	0	-0.51	0	0.39	0.33	9.2
1971-09-01	4.7	2.9	-3.1	0	-0.45	0	4.7	1.6	7.8
1971-10-01	3.1	3.7	-2.4	0	-0.41	0	3.1	0.65	7.1
1971-11-01	4.2	0.55	-3.2	0	-0.43	0	4.2	1.0	5.1
1971	12	25	-8.7	0	-2.3	0	12	3.6	38
1972-07-01	1.7	7.8	-1.1	0	-0.66	0	1.7	0.60	9.3
1972-08-01	0.27	9.2	0.10	0	-0.63	0	0.27	0.37	9.5
1972-09-01	2.0	6.0	-1.0	0	-0.57	0	2.0	0.98	8.4
1972-10-01	0.67	6.0	0.035	0	-0.52	0	0.67	0.70	6.8
1972-11-01	8.7	-4.2	-7.4	0	-0.49	0	8.7	1.3	4.9
1972	13	25	-9.3	0	-2.9	0	13	4.0	39
1973-07-01	0.87	8.2	-0.23	0	-1.8	0	0.87	0.64	9.0
1973-08-01	2.7	5.7	-1.9	0	-1.5	0	2.7	0.78	8.9
1973-09-01	1.4	6.8	-0.46	0	-1.3	0	1.4	0.97	8.1
1973-10-01	0	6.6	0.14	0	-1.2	0	0	0.14	6.7
1973-11-01	0	5.1	0.079	0	-1.2	0	0	0.079	5.6
1973	5.0	32	-2.4	0	-7.0	0	5.0	2.6	38
1974-07-01	0	9.5	0.055	0	-0.82	0	0	0.059	9.4
1974-08-01	2.4	6.0	-1.5	0	-0.77	0	2.4	0.99	8.6
1974-09-01	1.4	6.5	-0.48	0	-0.71	0	1.4	0.91	8.3
1974-10-01	3.3	2.9	-2.2	0	-0.66	0	3.3	1.2	6.5
1974-11-01	3.4	1.4	-2.5	0	-0.69	0	3.4	0.86	5.3
1974	11	26	-6.6	0	-3.6	0	11	4.0	38
1975-07-01	0	9.5	0.071	0	-1.2	0	0	0.067	9.6
1975-08-01	2.2	5.5	-0.82	0	-1.2	0	2.2	1.4	8.3
1975-09-01	2.0	6.3	-1.0	0	-1.0	0	2.0	0.98	8.0
1975-10-01	0.91	5.6	-0.10	0	-0.90	0	0.91	0.80	6.8
1975-11-01	0.28	4.8	0.063	0	-0.86	0	0.28	0.32	5.4
1975	5.4	32	-1.8	0	-5.2	0	5.4	3.6	38
1976-07-01	0	9.8	0.12	0	-0.63	0	0	0.12	9.7
1976-08-01	2.8	5.2	-1.9	0	-0.62	0	2.8	0.83	8.7
1976-09-01	0.83	7.3	-0.38	0	-0.60	0	0.83	0.48	7.9
1976-10-01	4.0	2.0	-2.9	0	-0.57	0	4.0	1.1	6.4
1976-11-01	0.87	3.8	-0.37	0	-0.63	0	0.87	0.54	5.1
1976	8.5	28	-5.5	0	-3.1	0	8.5	3.0	38
1977-07-01	0.039	9.5	0.059	0	-0.73	0	0.039	0.11	9.5
1977-08-01	2.5	6.5	-1.7	0	-0.71	0	2.5	0.81	9.4
1977-09-01	2.5	5.6	-1.6	0	-0.67	0	2.5	0.88	8.1
1977-10-01	3.4	2.5	-2.4	0	-0.63	0	3.4	1.1	6.4
1977-11-01	1.3	3.9	-0.70	0	-0.72	0	1.3	0.62	5.5
1977	9.8	28	-6.3	0	-3.5	0	9.8	3.5	39
1978-07-01	0.51	8.7	-0.28	0	-2.0	0	0.51	0.27	9.4
1978-08-01	0.98	7.9	-0.32	0	-1.7	0	0.98	0.66	9.4
1978-09-01	1.1	6.4	-0.36	0	-1.3	0	1.1	0.69	7.3
1978-10-01	0.39	5.9	-0.024	0	-1.1	0	0.39	0.37	6.6
1978-11-01	1.9	3.5	-1.4	0	-1.0	0	1.9	0.51	5.9
1978	4.9	32	-2.4	0	-7.2	0	4.9	2.5	39
1979-07-01	0.35	9.1	0.14	0	-2.0	0	0.35	0.49	9.2
1979-08-01	0.16	8.8	0.039	0	-1.6	0	0.16	0.20	9.3
1979-09-01	1.5	6.1	-0.48	0	-1.3	0	1.5	1.1	7.8

Table IV-B.31 SC4 Monsoon Period Water Balance

Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
1979-10-01	0.079	6.7	0.13	0	-1.1	0	0.079	0.23	7.2
1979-11-01	0.67	4.9	-0.33	0	-0.97	0	0.67	0.35	5.9
1979	2.8	36	-0.50	0	-7.0	0	2.8	2.3	39
1980-07-01	0.16	9.0	-0.028	0	-1.4	0	0.16	0.13	9.0
1980-08-01	2.0	6.7	-0.83	0	-1.3	0	2.0	1.1	9.1
1980-09-01	1.3	6.7	-0.43	0	-1.1	0	1.3	0.89	7.9
1980-10-01	0.59	6.1	-0.11	0	-0.93	0	0.59	0.46	7.0
1980-11-01	0.039	5.3	0.098	0	-0.86	0	0.039	0.14	5.9
1980	4.1	34	-1.3	0	-5.6	0	4.1	2.7	39
1981-07-01	0.12	9.2	0.15	0	-0.75	0	0.12	0.28	9.3
1981-08-01	2.2	6.7	-1.5	0	-0.76	0	2.2	0.65	9.3
1981-09-01	2.6	5.7	-1.5	0	-0.73	0	2.6	1.1	7.9
1981-10-01	0.51	6.3	-0.12	0	-0.70	0	0.51	0.39	7.5
1981-11-01	0.98	3.7	-0.34	0	-0.77	0	0.98	0.62	5.2
1981	6.4	32	-3.3	0	-3.7	0	6.4	3.1	39
1982-07-01	0.039	9.1	0.059	0	-1.0	0	0.039	0.11	9.1
1982-08-01	2.6	5.5	-1.4	0	-1.0	0	2.6	1.2	8.8
1982-09-01	3.8	3.3	-2.5	0	-0.94	0	3.8	1.3	6.9
1982-10-01	3.0	3.1	-2.0	0	-0.89	0	3.0	0.97	6.7
1982-11-01	0	5.0	0.13	0	-1.1	0	0	0.14	5.4
1982	9.5	26	-5.8	0	-5.0	0	9.5	3.7	37
1983-07-01	0	9.6	0.067	0	-1.6	0	0	0.067	9.4
1983-08-01	2.8	6.1	-1.9	0	-1.4	0	2.8	0.89	9.5
1983-09-01	3.7	4.0	-2.2	0	-1.2	0	3.7	1.5	7.5
1983-10-01	5.1	1.4	-3.8	0	-1.1	0	5.1	1.3	7.3
1983-11-01	1.1	3.3	-0.43	0	-1.2	0	1.1	0.70	4.9
1983	13	24	-8.3	0	-6.4	0	13	4.4	39
1984-07-01	1.3	7.7	-0.94	0	-0.87	0	1.3	0.39	9.3
1984-08-01	3.3	4.5	-1.7	0	-0.77	0	3.3	1.6	7.8
1984-09-01	3.3	3.7	-1.4	0	-0.71	0	3.3	1.8	7.4
1984-10-01	1.9	4.6	-0.94	0	-0.71	0	1.9	0.96	6.9
1984-11-01	1.3	3.1	-0.58	0	-0.79	0	1.3	0.77	4.9
1984	11	24	-5.6	0	-3.8	0	11	5.6	36
1985-07-01	0	8.2	0.079	0	-1.2	0	0	0.075	8.6
1985-08-01	1.3	7.6	-0.70	0	-1.1	0	1.3	0.54	8.7
1985-09-01	2.1	5.7	-1.1	0	-0.94	0	2.1	1.0	8.1
1985-10-01	3.6	2.4	-2.1	0	-0.78	0	3.6	1.4	6.6
1985-11-01	1.2	3.1	-0.42	0	-0.76	0	1.2	0.83	4.6
1985	8.1	27	-4.2	0	-4.8	0	8.1	3.9	37
1986-07-01	0.039	9.2	0.039	0	-1.2	0	0.039	0.071	9.3
1986-08-01	4.8	3.1	-3.1	0	-1.1	0	4.8	1.6	8.5
1986-09-01	2.0	5.6	-0.98	0	-0.98	0	2.0	1.1	8.0
1986-10-01	2.1	4.0	-1.2	0	-1.0	0	2.1	0.91	6.5
1986-11-01	1.7	3.0	-1.2	0	-1.0	0	1.7	0.54	4.8
1986	11	25	-6.5	0	-5.3	0	11	4.1	37
1987-07-01	0.20	9.1	0	0	-1.2	0	0.20	0.22	9.0
1987-08-01	2.0	6.9	-1.6	0	-1.1	0	2.0	0.49	9.0
1987-09-01	2.9	4.9	-1.9	0	-0.94	0	2.9	1.00	8.1
1987-10-01	1.3	5.2	-0.47	0	-0.83	0	1.3	0.80	7.1
1987-11-01	0.31	5.2	0.079	0	-0.91	0	0.31	0.41	6.0
1987	6.7	31	-3.9	0	-5.0	0	6.7	2.9	39
1988-07-01	0.12	8.5	0.079	0	-1.1	0	0.12	0.21	8.9
1988-08-01	3.4	5.0	-2.5	0	-0.98	0	3.4	0.94	8.8
1988-09-01	5.9	1.8	-4.0	0	-0.87	0	5.9	1.9	7.5
1988-10-01	0.31	6.2	0.16	0	-0.91	0	0.31	0.48	6.9
1988-11-01	1.5	3.7	-0.87	0	-1.2	0	1.5	0.60	5.8
1988	11	25	-7.1	0	-5.0	0	11	4.2	38

Table IV-B.31 SC4 Monsoon Period Water Balance

Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
1989-07-01	0	9.3	0.079	0	-0.87	0	0	0.063	9.2
1989-08-01	0.51	8.2	-0.16	0	-0.83	0	0.51	0.35	9.3
1989-09-01	0.91	6.9	-0.16	0	-0.71	0	0.91	0.77	7.8
1989-10-01	1.5	5.2	-1.0	0	-0.63	0	1.5	0.46	7.3
1989-11-01	1.1	4.1	-0.31	0	-0.63	0	1.1	0.73	5.9
1989	4.0	34	-1.6	0	-3.7	0	4.0	2.4	39
1990-07-01	0.28	8.9	0	0	-0.55	0	0.28	0.30	9.3
1990-08-01	1.5	6.5	-0.63	0	-0.55	0	1.5	0.85	8.6
1990-09-01	9.0	-1.6	-7.8	0	-0.51	0	9.0	1.2	7.4
1990-10-01	2.8	3.5	-1.8	0	-0.71	0	2.8	1.0	6.8
1990-11-01	0.24	4.6	0.12	0	-1.3	0	0.24	0.37	5.3
1990	14	22	-10	0	-3.6	0	14	3.7	37
1991-07-01	0.63	8.8	-0.039	0	-1.7	0	0.63	0.56	9.2
1991-08-01	1.7	7.1	-0.98	0	-1.4	0	1.7	0.72	9.3
1991-09-01	2.8	5.1	-1.5	0	-1.2	0	2.8	1.2	8.3
1991-10-01	1.6	4.7	-0.79	0	-1.0	0	1.6	0.79	6.5
1991-11-01	1.2	4.6	-0.83	0	-1.1	0	1.2	0.39	6.6
1991	7.9	30	-4.2	0	-6.4	0	7.9	3.7	40
1992-07-01	1.3	7.9	-0.39	0	-2.2	0	1.3	0.92	8.9
1992-08-01	3.3	5.5	-2.2	0	-1.9	0	3.3	1.0	9.3
1992-09-01	5.3	2.1	-3.8	0	-1.6	0	5.3	1.5	7.8
1992-10-01	0.87	5.9	-0.39	0	-1.7	0	0.87	0.47	6.7
1992-11-01	1.2	4.2	-0.75	0	-2.0	0	1.2	0.51	6.2
1992	12	26	-7.6	0	-9.4	0	12	4.4	39
1993-07-01	0	9.2	0.12	0	-2.1	0	0	0.13	9.3
1993-08-01	0.24	8.5	0.039	0	-1.7	0	0.24	0.26	8.9
1993-09-01	3.4	4.1	-1.9	0	-1.4	0	3.4	1.6	8.5
1993-10-01	0.16	6.3	0.20	0	-1.2	0	0.16	0.38	6.4
1993-11-01	0.83	4.4	-0.12	0	-1.1	0	0.83	0.66	6.0
1993	4.6	33	-1.6	0	-7.4	0	4.6	3.0	39
1994-07-01	0.39	8.6	0.039	0	-0.83	0	0.39	0.40	8.9
1994-08-01	1.5	7.4	-1.0	0	-0.75	0	1.5	0.45	9.1
1994-09-01	0.71	7.5	0.12	0	-0.75	0	0.71	0.81	8.6
1994-10-01	1.9	4.4	-1.1	0	-0.63	0	1.9	0.89	6.6
1994-11-01	1.9	2.8	-1.4	0	-0.63	0	1.9	0.49	5.3
1994	6.3	31	-3.3	0	-3.6	0	6.3	3.0	39
1995-07-01	0	9.3	0.12	0	-1.3	0	0	0.11	9.0
1995-08-01	0.039	9.1	0.079	0	-1.2	0	0.039	0.10	9.3
1995-09-01	3.9	4.3	-2.7	0	-0.98	0	3.9	1.1	8.8
1995-10-01	2.7	3.9	-2.0	0	-0.87	0	2.7	0.73	7.2
1995-11-01	0	5.3	0.24	0	-0.91	0	0	0.24	5.8
1995	6.6	32	-4.3	0	-5.2	0	6.6	2.3	40
1996-07-01	0.39	8.5	-0.12	0	-0.75	0	0.39	0.27	9.1
1996-08-01	2.4	6.3	-1.3	0	-0.71	0	2.4	1.1	8.9
1996-09-01	1.2	6.6	-0.47	0	-0.71	0	1.2	0.79	8.1
1996-10-01	3.0	2.8	-1.7	0	-0.59	0	3.0	1.3	6.7
1996-11-01	0.43	5.1	0	0	-0.63	0	0.43	0.42	6.0
1996	7.4	29	-3.6	0	-3.4	0	7.4	3.9	39
1997-07-01	0	9.1	0.079	0	-0.67	0	0	0.094	9.0
1997-08-01	0.12	9.4	0	0	-0.63	0	0.12	0.13	9.9
1997-09-01	2.6	5.4	-1.5	0	-0.59	0	2.6	1.1	8.5
1997-10-01	0	7.0	0.12	0	-0.55	0	0	0.15	7.3
1997-11-01	0.75	4.1	-0.28	0	-0.55	0	0.75	0.45	6.0
1997	3.5	35	-1.5	0	-3.0	0	3.5	1.9	41
1998-07-01	0	9.3	0.079	0	-1.1	0	0	0.063	9.2
1998-08-01	1.7	7.0	-0.91	0	-1.1	0	1.7	0.81	9.1
1998-09-01	2.4	5.4	-1.1	0	-0.94	0	2.4	1.3	8.3

Table IV-B.31 SC4 Monsoon Period Water Balance

Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
1998-10-01	1.3	5.2	-0.63	0	-0.87	0	1.3	0.70	7.0
1998-11-01	0	5.4	0.12	0	-0.83	0	0	0.11	6.3
1998	5.4	32	-2.4	0	-4.8	0	5.4	3.0	40
1999-07-01	0	9.1	0.039	0	-0.55	0	0	0.067	9.1
1999-08-01	5.7	2.1	-4.2	0	-0.51	0	5.7	1.6	8.7
1999-09-01	2.8	4.8	-1.6	0	-0.55	0	2.8	1.3	7.8
1999-10-01	1.1	5.4	-0.12	0	-0.55	0	1.1	0.98	6.8
1999-11-01	0	5.6	0.12	0	-0.75	0	0	0.14	6.2
1999	9.7	27	-5.7	0	-2.9	0	9.7	4.1	39
2000-07-01	0.79	8.3	-0.31	0	-0.59	0	0.79	0.50	9.5
2000-08-01	0.079	9.5	0.12	0	-0.55	0	0.079	0.19	9.5
2000-09-01	0.67	6.9	-0.039	0	-0.55	0	0.67	0.62	8.7
2000-10-01	0	6.9	0.079	0	-0.47	0	0	0.10	6.8
2000-11-01	5.3	-0.79	-4.3	0	-0.43	0	5.3	0.99	5.9
2000	6.9	31	-4.5	0	-2.6	0	6.9	2.4	40
2001-07-01	0.039	9.3	0.12	0	-0.94	0	0.039	0.12	9.2
2001-08-01	2.7	6.2	-2.2	0	-0.94	0	2.7	0.46	9.7
2001-09-01	3.4	4.4	-2.2	0	-0.83	0	3.4	1.2	7.6
2001-10-01	0.12	6.3	0.12	0	-0.87	0	0.12	0.24	7.3
2001-11-01	0.35	4.5	-0.039	0	-1.1	0	0.35	0.34	5.5
2001	6.6	31	-4.2	0	-4.6	0	6.6	2.4	39
2002-07-01	0	9.6	0.039	0	-0.55	0	0	0.043	9.2
2002-08-01	0.35	8.9	-0.039	0	-0.51	0	0.35	0.30	9.7
2002-09-01	0.43	7.4	-0.12	0	-0.47	0	0.43	0.35	8.1
2002-10-01	1.2	5.4	-0.43	0	-0.43	0	1.2	0.74	7.1
2002-11-01	0.079	5.0	0.079	0	-0.39	0	0.079	0.19	6.1
2002	2.1	36	-0.47	0	-2.4	0	2.1	1.6	40
2003-07-01	0	10	0.079	0	-0.51	0	0	0.063	10.0
2003-08-01	0.51	8.8	0	0	-0.55	0	0.51	0.48	10
2003-09-01	1.3	6.9	-0.55	0	-0.55	0	1.3	0.77	8.5
2003-10-01	1.9	4.9	-0.75	0	-0.51	0	1.9	1.2	7.4
2003-11-01	0.079	5.5	0.16	0	-0.47	0	0.079	0.23	6.0
2003	3.8	36	-1.1	0	-2.6	0	3.8	2.7	42
2004-07-01	0	10	0.079	0	-0.55	0	0	0.067	10
2004-08-01	0.55	8.8	-0.079	0	-0.55	0	0.55	0.48	9.8
2004-09-01	2.1	6.1	-0.98	0	-0.51	0	2.1	1.1	8.6
2004-10-01	1.5	5.6	-0.91	0	-0.51	0	1.5	0.63	7.9
2004-11-01	1.2	3.8	-0.63	0	-0.51	0	1.2	0.57	6.1
2004	5.4	34	-2.5	0	-2.6	0	5.4	2.9	42
2005-07-01	0.039	9.8	0.039	0	-1.5	0	0.039	0.12	9.7
2005-08-01	1.4	7.8	-0.98	0	-1.3	0	1.4	0.42	11
2005-09-01	4.6	3.0	-3.2	0	-1.1	0	4.6	1.5	7.3
2005-10-01	0.12	6.6	0.12	0	-1.0	0	0.12	0.24	7.4
2005-11-01	0.39	4.8	-0.079	0	-1.1	0	0.39	0.33	6.1
2005	6.6	32	-4.1	0	-6.0	0	6.6	2.6	41
2006-07-01	0.51	9.1	-0.12	0	-0.63	0	0.51	0.38	10
2006-08-01	3.2	4.9	-2.2	0	-0.59	0	3.2	0.98	9.2
2006-09-01	2.9	5.1	-1.4	0	-0.59	0	2.9	1.5	7.4
2006-10-01	1.1	5.3	-0.51	0	-0.55	0	1.1	0.61	6.9
2006-11-01	1.1	3.8	-0.24	0	-0.67	0	1.1	0.81	5.9
2006	8.8	28	-4.4	0	-3.0	0	8.8	4.3	40

Table IV-B.32 SC4 Winter Storm Period Water Balance

Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
1951-11-01	0	3.7	-1.0	0	-0.72	0	1.6	0.60	5.4
1951-12-01	1.7	2.0	-0.89	0	-0.72	0	1.7	0.81	3.7
1952-01-01	3.0	-0.27	-2.3	0	-0.75	0	3.0	0.75	2.8
1952-02-01	2.8	0.10	-1.9	0	-0.77	0	2.8	0.90	2.9
1952-03-01	0.50	3.3	-0.022	0	-0.85	0	0.50	0.48	3.8
1952	8.0	8.9	-6.1	0	-3.8	0	9.7	3.5	19
1952-11-01	0	5.9	0.13	0	-0.96	0	0	0.13	5.9
1952-12-01	4.3	-1.0	-3.6	0	-0.79	0	4.3	0.70	3.3
1953-01-01	2.0	0.64	-1.2	0	-0.73	0	2.0	0.78	2.7
1953-02-01	0.74	2.7	-0.24	0	-0.78	0	0.74	0.50	3.3
1953-03-01	0.60	3.2	-0.24	0	-0.80	0	0.60	0.36	3.8
1953	7.6	11	-5.2	0	-4.1	0	7.6	2.5	19
1953-11-01	0.012	5.4	0.084	0	-0.72	0	0.012	0.096	5.5
1953-12-01	0.56	3.4	-0.23	0	-0.69	0	0.56	0.33	3.9
1954-01-01	0.19	2.7	0.082	0	-0.69	0	0.19	0.27	2.9
1954-02-01	2.4	0.89	-1.7	0	-0.65	0	2.4	0.70	3.2
1954-03-01	0.72	3.5	-0.27	0	-0.54	0	0.72	0.45	4.2
1954	3.9	16	-2.1	0	-3.3	0	3.9	1.8	20
1954-11-01	0	5.6	0.18	0	-1.4	0	0	0.18	5.6
1954-12-01	0.091	4.1	0.028	0	-1.3	0	0.091	0.11	4.3
1955-01-01	0.29	3.2	0.020	0	-1.3	0	0.29	0.31	3.5
1955-02-01	3.4	-1.0	-2.5	0	-1.1	0	3.4	0.89	2.4
1955-03-01	0.28	3.3	0.094	0	-0.90	0	0.28	0.38	3.5
1955	4.1	15	-2.2	0	-6.0	0	4.1	1.9	19
1955-11-01	0.020	5.8	0.091	0	-0.94	0	0.020	0.11	5.9
1955-12-01	0.97	2.7	-0.56	0	-0.94	0	0.97	0.41	3.7
1956-01-01	1.4	1.8	-0.94	0	-0.91	0	1.4	0.43	3.1
1956-02-01	2.6	0.86	-2.0	0	-0.83	0	2.6	0.60	3.5
1956-03-01	2.0	1.2	-1.1	0	-0.73	0	2.0	0.87	3.1
1956	7.0	12	-4.6	0	-4.4	0	7.0	2.4	19
1956-11-01	0.53	4.5	-0.16	0	-0.66	0	0.53	0.37	5.2
1956-12-01	0	3.8	0.20	0	-0.63	0	0	0.20	3.8
1957-01-01	0.47	2.7	-0.13	0	-0.63	0	0.47	0.33	3.1
1957-02-01	4.8	-2.3	-4.0	0	-0.59	0	4.8	0.79	2.7
1957-03-01	0.73	2.9	0.031	0	-0.51	0	0.73	0.76	3.4
1957	6.5	12	-4.1	0	-3.0	0	6.5	2.5	18
1957-11-01	3.2	1.1	-2.3	0	-0.63	0	3.2	0.90	4.6
1957-12-01	0.61	2.5	-0.024	0	-0.63	0	0.61	0.59	3.0
1958-01-01	1.1	2.1	-0.48	0	-0.69	0	1.1	0.59	3.2
1958-02-01	0.012	3.4	0.13	0	-0.74	0	0.012	0.13	3.3
1958-03-01	2.5	0.68	-1.8	0	-0.67	0	2.5	0.72	3.2
1958	7.4	9.8	-4.5	0	-3.4	0	7.4	2.9	17
1958-11-01	1.9	3.3	-1.4	0	-0.72	0	1.9	0.56	5.3
1958-12-01	1.5	2.1	-1.1	0	-0.72	0	1.5	0.46	3.6
1959-01-01	0	3.6	0.14	0	-0.83	0	0	0.14	3.6
1959-02-01	0.21	3.3	0.035	0	-0.88	0	0.21	0.25	3.5
1959-03-01	1.4	1.9	-0.81	0	-0.77	0	1.4	0.62	3.3
1959	5.1	14	-3.1	0	-3.9	0	5.1	2.0	19
1959-11-01	4.8	0.35	-4.2	0	-0.79	0	4.8	0.55	5.3
1959-12-01	0.38	3.4	0.21	0	-0.91	0	0.38	0.59	3.7
1960-01-01	5.2	-2.6	-4.5	0	-1.2	0	5.2	0.74	2.7
1960-02-01	4.2	-1.7	-3.3	0	-1.4	0	4.2	0.83	2.5

Table IV-B.32 SC4 Winter Storm Period Water Balance

Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
1960-03-01	0.87	2.6	-0.26	0	-1.9	0	0.87	0.61	3.4
1960	15	2.0	-12	0	-6.2	0	15	3.3	18
1960-11-01	2.1	2.8	-1.3	0	-0.72	0	2.1	0.79	5.0
1960-12-01	0.48	3.1	-0.063	0	-0.64	0	0.48	0.42	3.7
1961-01-01	0.47	2.7	-0.071	0	-0.63	0	0.47	0.40	3.3
1961-02-01	0.70	2.4	-0.26	0	-0.61	0	0.70	0.43	3.2
1961-03-01	0.23	3.8	0.13	0	-0.53	0	0.23	0.37	3.7
1961	3.9	15	-1.5	0	-3.1	0	3.9	2.4	19
1961-11-01	0.45	4.5	-0.19	0	-0.37	0	0.45	0.26	5.4
1961-12-01	0.32	2.9	0.18	0	-0.36	0	0.32	0.50	3.1
1962-01-01	3.9	-1.3	-3.1	0	-0.37	0	3.9	0.74	2.6
1962-02-01	3.2	-0.51	-2.6	0	-0.37	0	3.2	0.63	2.7
1962-03-01	1.7	1.4	-0.93	0	-0.36	0	1.7	0.74	3.2
1962	9.5	7.0	-6.7	0	-1.8	0	9.5	2.9	17
1962-11-01	0.87	4.2	-0.24	0	-0.61	0	0.87	0.63	5.1
1962-12-01	0.83	3.1	-0.43	0	-0.54	0	0.83	0.40	3.9
1963-01-01	1.8	1.3	-1.0	0	-0.51	0	1.8	0.77	3.3
1963-02-01	2.1	0.98	-1.5	0	-0.47	0	2.1	0.64	3.0
1963-03-01	4.2	-0.28	-3.8	0	-0.41	0	4.2	0.44	3.8
1963	9.8	9.3	-7.0	0	-2.5	0	9.8	2.9	19
1963-11-01	0.67	4.9	-0.26	0	-1.4	0	0.67	0.41	5.8
1963-12-01	2.3	1.2	-1.4	0	-1.5	0	2.3	0.98	3.6
1964-01-01	0.33	3.0	0.039	0	-1.4	0	0.33	0.38	3.3
1964-02-01	0.58	2.4	-0.24	0	-1.3	0	0.58	0.35	3.0
1964-03-01	0	3.7	0.15	0	-1.1	0	0	0.14	3.6
1964	3.9	15	-1.7	0	-6.8	0	3.9	2.2	19
1964-11-01	1.5	4.1	-1.1	0	-0.56	0	1.5	0.44	5.8
1964-12-01	1.4	2.1	-0.86	0	-0.52	0	1.4	0.52	3.6
1965-01-01	1.7	1.3	-1.2	0	-0.54	0	1.7	0.52	3.3
1965-02-01	2.9	0	-2.1	0	-0.56	0	2.9	0.79	2.6
1965-03-01	2.8	0.83	-2.3	0	-0.56	0	2.8	0.52	3.4
1965	10	8.4	-7.5	0	-2.7	0	10	2.8	19
1965-11-01	0.46	5.0	-0.11	0	-0.72	0	0.46	0.35	5.7
1965-12-01	2.4	1.5	-1.9	0	-0.66	0	2.4	0.47	3.9
1966-01-01	10	-8.0	-9.5	0	-0.64	0	10	0.94	2.7
1966-02-01	1.8	0.94	-1.2	0	-0.93	0	1.8	0.63	2.8
1966-03-01	2.0	1.3	-1.3	0	-1.7	0	2.0	0.69	3.1
1966	17	0.71	-14	0	-4.7	0	17	3.1	18
1966-11-01	1.4	3.8	-0.77	0	-0.75	0	1.4	0.59	5.1
1966-12-01	0.87	2.9	-0.48	0	-0.76	0	0.87	0.40	4.1
1967-01-01	1.3	1.8	-0.67	0	-0.84	0	1.3	0.58	3.1
1967-02-01	0.79	2.4	-0.39	0	-0.83	0	0.79	0.41	2.9
1967-03-01	0	3.9	0.16	0	-0.70	0	0	0.16	3.9
1967	4.3	15	-2.1	0	-3.9	0	4.3	2.1	19
1967-11-01	0.42	4.8	-0.020	0	-0.75	0	0.42	0.40	5.6
1967-12-01	2.1	1.5	-1.6	0	-0.76	0	2.1	0.52	3.9
1968-01-01	10.0	-7.6	-9.3	0	-0.76	0	10.0	0.72	2.3
1968-02-01	0.63	2.5	-0.19	0	-1.4	0	0.63	0.43	3.1
1968-03-01	1.9	1.9	-1.3	0	-2.1	0	1.9	0.69	3.4
1968	15	3.1	-12	0	-5.8	0	15	2.8	18
1968-11-01	0.39	4.6	-0.047	0	-0.89	0	0.39	0.34	5.1
1968-12-01	2.5	0.94	-1.8	0	-0.81	0	2.5	0.73	3.8

Table IV-B.32 SC4 Winter Storm Period Water Balance

Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
1969-01-01	3.3	-0.47	-2.6	0	-0.77	0	3.3	0.64	2.9
1969-02-01	4.2	-1.5	-3.4	0	-0.77	0	4.2	0.79	2.6
1969-03-01	1.4	1.8	-0.48	0	-0.84	0	1.4	0.87	3.0
1969	12	5.4	-8.3	0	-4.1	0	12	3.4	17
1969-11-01	0.83	4.1	-0.42	0	-0.77	0	0.83	0.41	5.2
1969-12-01	2.1	1.2	-1.4	0	-0.71	0	2.1	0.76	3.6
1970-01-01	1.3	1.9	-0.65	0	-0.72	0	1.3	0.68	3.4
1970-02-01	0.50	2.7	0.028	0	-0.73	0	0.50	0.53	2.9
1970-03-01	0.41	3.3	0.067	0	-0.66	0	0.41	0.47	3.6
1970	5.2	13	-2.3	0	-3.6	0	5.2	2.8	19
1970-11-01	0	5.1	0.11	0	-0.64	0	0	0.11	5.3
1970-12-01	0.65	3.1	-0.44	0	-0.67	0	0.65	0.21	3.9
1971-01-01	1.2	1.7	-0.45	0	-0.71	0	1.2	0.75	3.0
1971-02-01	0.85	2.7	-0.47	0	-0.69	0	0.85	0.39	3.1
1971-03-01	0.81	2.9	-0.39	0	-0.59	0	0.81	0.43	4.0
1971	3.5	15	-1.6	0	-3.3	0	3.5	1.9	19
1971-11-01	4.2	0.55	-3.2	0	-0.43	0	4.2	1.0	5.1
1971-12-01	0.039	3.7	0.18	0	-0.60	0	0.039	0.22	3.7
1972-01-01	2.1	0.75	-1.2	0	-0.90	0	2.1	0.87	3.0
1972-02-01	0	3.3	0.22	0	-1.0	0	0	0.22	3.2
1972-03-01	0	4.6	0.083	0	-0.94	0	0	0.083	4.1
1972	6.4	13	-4.0	0	-3.9	0	6.4	2.4	19
1972-11-01	8.7	-4.2	-7.4	0	-0.49	0	8.7	1.3	4.9
1972-12-01	2.8	0.31	-1.9	0	-0.57	0	2.8	0.89	3.2
1973-01-01	3.0	-0.31	-2.3	0	-1.1	0	3.0	0.69	2.9
1973-02-01	0.74	2.0	0.083	0	-1.5	0	0.74	0.82	2.6
1973-03-01	3.2	0.039	-2.2	0	-1.4	0	3.2	1.0	2.8
1973	18	-2.1	-14	0	-5.0	0	18	4.7	16
1973-11-01	0	5.1	0.079	0	-1.2	0	0	0.079	5.6
1973-12-01	1.8	1.9	-1.1	0	-1.0	0	1.8	0.67	3.9
1974-01-01	0.098	3.2	0.16	0	-0.96	0	0.098	0.26	3.3
1974-02-01	3.4	-0.51	-2.5	0	-0.83	0	3.4	0.89	2.9
1974-03-01	0.16	3.6	0.11	0	-0.72	0	0.16	0.26	3.3
1974	5.4	13	-3.3	0	-4.7	0	5.4	2.2	19
1974-11-01	3.4	1.4	-2.5	0	-0.69	0	3.4	0.86	5.3
1974-12-01	0.12	3.6	0.34	0	-0.71	0	0.12	0.46	3.6
1975-01-01	0.75	2.0	-0.28	0	-0.83	0	0.75	0.46	3.1
1975-02-01	0.39	2.3	-0.067	0	-0.92	0	0.39	0.34	2.6
1975-03-01	4.0	-0.39	-3.2	0	-0.80	0	4.0	0.74	3.0
1975	8.7	9.0	-5.8	0	-4.0	0	8.7	2.9	18
1975-11-01	0.28	4.8	0.063	0	-0.86	0	0.28	0.32	5.4
1975-12-01	2.1	1.9	-1.9	0	-0.76	0	2.1	0.26	4.2
1976-01-01	1.3	1.8	-0.47	0	-0.74	0	1.3	0.77	3.1
1976-02-01	0.24	2.8	0.11	0	-0.72	0	0.24	0.33	2.9
1976-03-01	1.6	2.2	-0.90	0	-0.67	0	1.6	0.71	3.4
1976	5.5	14	-3.1	0	-3.7	0	5.5	2.4	19
1976-11-01	0.87	3.8	-0.37	0	-0.63	0	0.87	0.54	5.1
1976-12-01	0.55	3.2	-0.11	0	-0.69	0	0.55	0.44	4.0
1977-01-01	1.9	1.2	-1.4	0	-0.77	0	1.9	0.41	3.1
1977-02-01	1.9	0.91	-0.91	0	-0.78	0	1.9	0.99	2.5
1977-03-01	0.079	4.2	0.13	0	-0.70	0	0.079	0.21	4.1
1977	5.2	13	-2.7	0	-3.6	0	5.2	2.6	19

Table IV-B.32 SC4 Winter Storm Period Water Balance

Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
1977-11-01	1.3	3.9	-0.70	0	-0.72	0	1.3	0.62	5.5
1977-12-01	0.35	3.5	0.087	0	-0.83	0	0.35	0.44	3.9
1978-01-01	0.63	2.5	-0.35	0	-0.93	0	0.63	0.30	3.5
1978-02-01	6.4	-3.7	-5.5	0	-0.90	0	6.4	0.85	2.5
1978-03-01	5.5	-2.2	-4.4	0	-0.82	0	5.5	1.1	2.9
1978	14	3.9	-11	0	-4.2	0	14	3.3	18
1978-11-01	1.9	3.5	-1.4	0	-1.0	0	1.9	0.51	5.9
1978-12-01	5.6	-2.4	-4.8	0	-0.88	0	5.6	0.80	3.7
1979-01-01	6.6	-3.9	-5.8	0	-0.93	0	6.6	0.79	2.5
1979-02-01	6.0	-3.8	-4.7	0	-1.7	0	6.0	1.3	2.3
1979-03-01	1.2	2.8	-0.64	0	-2.7	0	1.2	0.60	3.3
1979	21	-3.9	-17	0	-7.3	0	21	4.0	18
1979-11-01	0.67	4.9	-0.33	0	-0.97	0	0.67	0.35	5.9
1979-12-01	0.71	3.1	-0.14	0	-0.81	0	0.71	0.54	4.0
1980-01-01	0.67	2.8	-0.29	0	-0.73	0	0.67	0.41	3.7
1980-02-01	4.1	-1.7	-3.1	0	-0.67	0	4.1	0.99	2.4
1980-03-01	6.0	-2.9	-5.4	0	-0.59	0	6.0	0.66	2.4
1980	12	6.1	-9.2	0	-3.8	0	12	3.0	18
1980-11-01	0.039	5.3	0.098	0	-0.86	0	0.039	0.14	5.9
1980-12-01	0	4.1	0.067	0	-0.76	0	0	0.067	4.3
1981-01-01	0.55	3.1	-0.13	0	-0.72	0	0.55	0.43	3.5
1981-02-01	1.3	2.0	-0.85	0	-0.67	0	1.3	0.47	3.5
1981-03-01	2.6	1.3	-2.1	0	-0.56	0	2.6	0.58	3.6
1981	4.6	16	-2.9	0	-3.6	0	4.6	1.7	21
1981-11-01	0.98	3.7	-0.34	0	-0.77	0	0.98	0.62	5.2
1981-12-01	2.3	1.6	-2.1	0	-0.76	0	2.3	0.22	4.4
1982-01-01	0	3.5	0.29	0	-0.76	0	0	0.29	3.3
1982-02-01	2.7	0	-1.7	0	-0.76	0	2.7	1.1	2.8
1982-03-01	1.8	1.7	-0.94	0	-0.70	0	1.8	0.88	3.1
1982	7.8	11	-4.8	0	-3.7	0	7.8	3.1	19
1982-11-01	0	5.0	0.13	0	-1.1	0	0	0.14	5.4
1982-12-01	3.3	-0.31	-2.5	0	-1.2	0	3.3	0.77	3.6
1983-01-01	1.7	1.1	-0.77	0	-1.2	0	1.7	0.93	2.7
1983-02-01	1.9	1.3	-1.5	0	-1.2	0	1.9	0.40	3.2
1983-03-01	2.3	1.0	-1.8	0	-1.1	0	2.3	0.56	2.8
1983	9.2	8.2	-6.4	0	-5.8	0	9.2	2.8	18
1983-11-01	1.1	3.3	-0.43	0	-1.2	0	1.1	0.70	4.9
1983-12-01	2.0	1.6	-1.5	0	-1.5	0	2.0	0.58	3.8
1984-01-01	2.5	0.12	-1.9	0	-1.6	0	2.5	0.60	2.7
1984-02-01	0.51	2.8	0.047	0	-1.7	0	0.51	0.53	2.8
1984-03-01	0	4.0	0.094	0	-1.5	0	0	0.098	3.9
1984	6.1	12	-3.6	0	-7.5	0	6.1	2.5	18
1984-11-01	1.3	3.1	-0.58	0	-0.79	0	1.3	0.77	4.9
1984-12-01	2.1	1.7	-1.7	0	-0.83	0	2.1	0.35	4.2
1985-01-01	5.8	-3.3	-4.9	0	-0.90	0	5.8	0.93	2.5
1985-02-01	2.7	-0.31	-1.8	0	-1.0	0	2.7	0.84	2.5
1985-03-01	1.7	1.2	-0.94	0	-1.3	0	1.7	0.72	2.5
1985	14	2.4	-9.9	0	-4.9	0	14	3.6	17
1985-11-01	1.2	3.1	-0.42	0	-0.76	0	1.2	0.83	4.6
1985-12-01	2.8	0.39	-2.2	0	-0.77	0	2.8	0.58	3.9
1986-01-01	0.87	2.6	-0.20	0	-0.86	0	0.87	0.68	3.1
1986-02-01	0.12	3.7	0.028	0	-0.94	0	0.12	0.12	3.6

Table IV-B.32 SC4 Winter Storm Period Water Balance

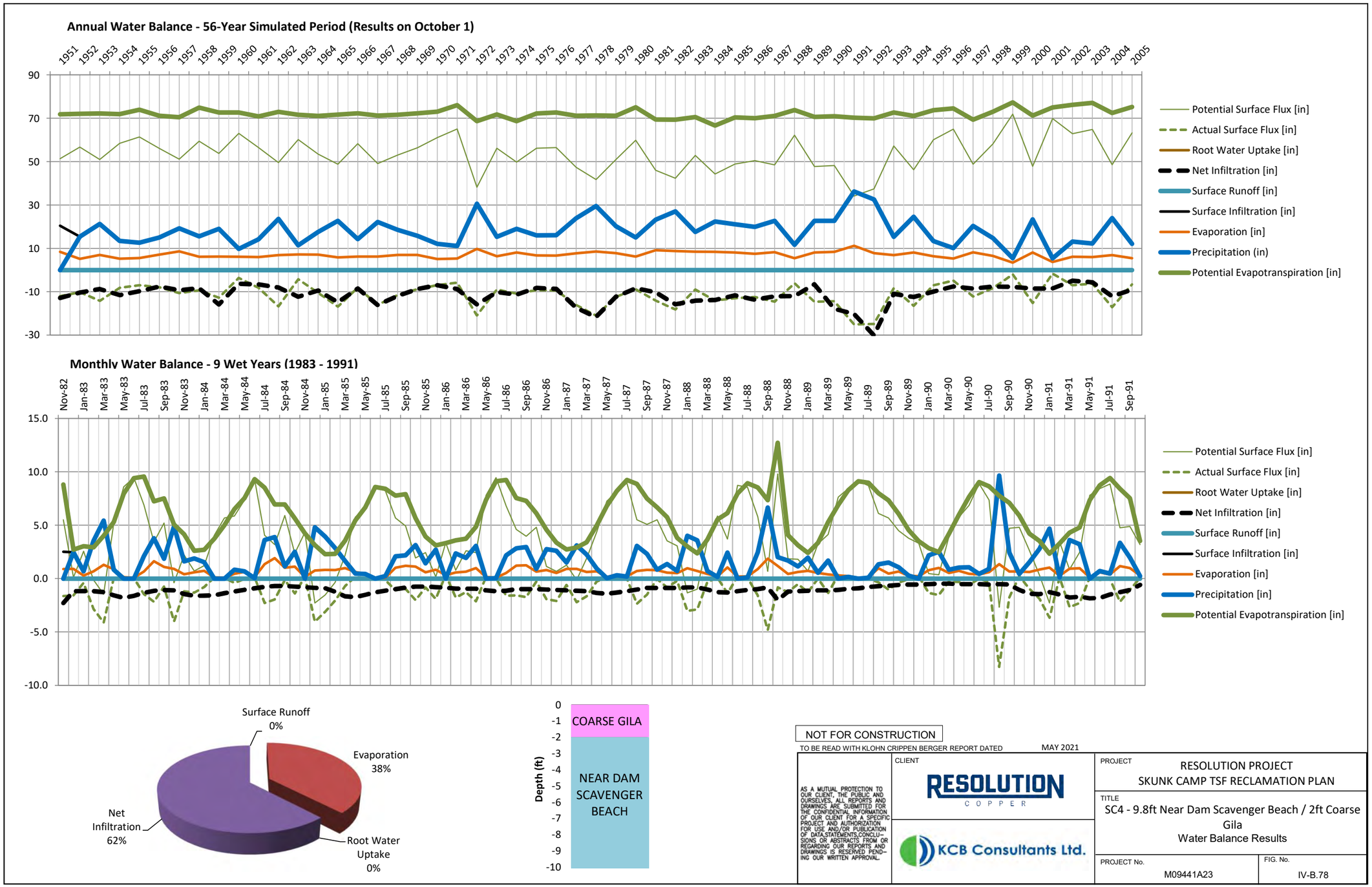
Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
1986-03-01	3.1	0.12	-2.1	0	-0.89	0	3.1	0.93	2.9
1986	8.0	9.8	-4.9	0	-4.2	0	8.0	3.1	18
1986-11-01	1.7	3.0	-1.2	0	-1.0	0	1.7	0.54	4.8
1986-12-01	1.4	1.9	-0.63	0	-1.1	0	1.4	0.79	3.7
1987-01-01	3.0	-0.16	-2.2	0	-1.1	0	3.0	0.80	2.9
1987-02-01	3.3	-0.35	-2.5	0	-1.1	0	3.3	0.88	2.8
1987-03-01	2.7	0.51	-2.0	0	-1.1	0	2.7	0.68	3.5
1987	12	4.9	-8.5	0	-5.5	0	12	3.7	18
1987-11-01	0.31	5.2	0.079	0	-0.91	0	0.31	0.41	6.0
1987-12-01	1.8	1.9	-1.1	0	-0.87	0	1.8	0.69	3.8
1988-01-01	4.0	-1.1	-3.1	0	-0.87	0	4.0	0.96	3.2
1988-02-01	3.6	-0.91	-2.8	0	-0.83	0	3.6	0.74	2.5
1988-03-01	0.71	3.3	-0.31	0	-0.98	0	0.71	0.43	3.4
1988	10	8.4	-7.2	0	-4.4	0	10	3.2	19
1988-11-01	1.5	3.7	-0.87	0	-1.2	0	1.5	0.60	5.8
1988-12-01	1.7	1.9	-1.2	0	-1.2	0	1.7	0.51	4.0
1989-01-01	1.1	1.8	-0.43	0	-1.2	0	1.1	0.69	3.1
1989-02-01	2.2	0.55	-1.5	0	-1.1	0	2.2	0.72	2.7
1989-03-01	0.31	3.6	0.079	0	-1.1	0	0.31	0.37	3.1
1989	6.9	11	-3.9	0	-5.8	0	6.9	2.9	19
1989-11-01	1.1	4.1	-0.31	0	-0.63	0	1.1	0.73	5.9
1989-12-01	0.28	3.6	0	0	-0.55	0	0.28	0.29	4.2
1990-01-01	0.87	2.4	-0.63	0	-0.55	0	0.87	0.26	3.4
1990-02-01	1.3	1.5	-0.55	0	-0.51	0	1.3	0.74	2.7
1990-03-01	2.5	0.63	-1.5	0	-0.47	0	2.5	1.0	2.6
1990	6.0	12	-3.0	0	-2.7	0	6.0	3.0	19
1990-11-01	0.24	4.6	0.12	0	-1.3	0	0.24	0.37	5.3
1990-12-01	2.2	1.5	-1.2	0	-1.5	0	2.2	0.97	4.2
1991-01-01	4.8	-2.3	-3.9	0	-1.4	0	4.8	0.87	3.0
1991-02-01	1.8	1.2	-1.2	0	-1.3	0	1.8	0.59	2.6
1991-03-01	0.94	3.3	-0.35	0	-1.6	0	0.94	0.58	3.3
1991	10	8.3	-6.6	0	-7.1	0	10	3.4	18
1991-11-01	1.2	4.6	-0.83	0	-1.1	0	1.2	0.39	6.6
1991-12-01	3.3	0.079	-2.6	0	-0.98	0	3.3	0.65	3.6
1992-01-01	3.9	-1.4	-3.0	0	-0.98	0	3.9	0.96	2.9
1992-02-01	3.0	-0.28	-2.0	0	-1.2	0	3.0	1.1	2.2
1992-03-01	2.8	0.63	-1.9	0	-1.5	0	2.8	0.84	3.0
1992	14	3.7	-10	0	-5.7	0	14	3.9	18
1992-11-01	1.2	4.2	-0.75	0	-2.0	0	1.2	0.51	6.2
1992-12-01	0.51	2.8	-0.039	0	-1.8	0	0.51	0.47	3.6
1993-01-01	6.3	-4.0	-5.3	0	-1.5	0	6.3	1.0	2.5
1993-02-01	11	-9.0	-10	0	-1.9	0	11	1.00	1.9
1993-03-01	6.0	-3.5	-5.0	0	-4.8	0	6.0	1.1	2.7
1993	25	-9.6	-21	0	-12	0	25	4.1	17
1993-11-01	0.83	4.4	-0.12	0	-1.1	0	0.83	0.66	6.0
1993-12-01	4.2	-0.87	-3.7	0	-0.94	0	4.2	0.44	3.6
1994-01-01	0.28	2.8	0.039	0	-0.98	0	0.28	0.32	3.4
1994-02-01	0.28	3.2	0	0	-1.1	0	0.28	0.27	3.3
1994-03-01	2.6	0.55	-1.9	0	-0.98	0	2.6	0.72	3.0
1994	8.2	10	-5.7	0	-5.1	0	8.2	2.4	19
1994-11-01	1.9	2.8	-1.4	0	-0.63	0	1.9	0.49	5.3
1994-12-01	3.3	-0.43	-2.4	0	-0.59	0	3.3	0.94	3.5

Table IV-B.32 SC4 Winter Storm Period Water Balance

Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
1995-01-01	2.7	0.079	-1.9	0	-0.67	0	2.7	0.72	3.0
1995-02-01	3.7	-0.79	-2.7	0	-0.79	0	3.7	0.99	2.6
1995-03-01	2.7	0.75	-2.0	0	-1.0	0	2.7	0.66	3.1
1995	14	2.4	-10	0	-3.7	0	14	3.8	18
1995-11-01	0	5.3	0.24	0	-0.91	0	0	0.24	5.8
1995-12-01	1.3	2.4	-0.75	0	-0.94	0	1.3	0.56	3.9
1996-01-01	0.91	2.3	-0.55	0	-0.98	0	0.91	0.36	3.5
1996-02-01	0.039	3.5	0.16	0	-0.94	0	0.039	0.15	3.3
1996-03-01	3.1	0.59	-2.5	0	-0.83	0	3.1	0.67	3.6
1996	5.4	14	-3.4	0	-4.6	0	5.4	2.0	20
1996-11-01	0.43	5.1	0	0	-0.63	0	0.43	0.42	6.0
1996-12-01	1.2	2.4	-0.83	0	-0.63	0	1.2	0.42	3.8
1997-01-01	0.039	3.1	0.31	0	-0.67	0	0.039	0.34	3.2
1997-02-01	2.8	-0.079	-2.0	0	-0.67	0	2.8	0.83	2.7
1997-03-01	1.7	2.1	-1.3	0	-0.55	0	1.7	0.43	3.4
1997	6.2	13	-3.7	0	-3.1	0	6.2	2.4	19
1997-11-01	0.75	4.1	-0.28	0	-0.55	0	0.75	0.45	6.0
1997-12-01	0.79	2.6	-0.28	0	-0.47	0	0.79	0.52	3.7
1998-01-01	2.7	0	-1.8	0	-0.47	0	2.7	0.91	3.1
1998-02-01	0.39	2.7	0.12	0	-0.43	0	0.39	0.46	2.4
1998-03-01	6.4	-3.8	-5.3	0	-0.39	0	6.4	1.1	2.9
1998	11	5.7	-7.5	0	-2.3	0	11	3.5	18
1998-11-01	0	5.4	0.12	0	-0.83	0	0	0.11	6.3
1998-12-01	1.1	2.7	-0.83	0	-0.79	0	1.1	0.26	3.9
1999-01-01	0.75	2.5	-0.079	0	-0.75	0	0.75	0.67	3.3
1999-02-01	0.039	3.5	0.12	0	-0.75	0	0.039	0.15	3.6
1999-03-01	0.20	4.2	0	0	-0.59	0	0.20	0.22	3.6
1999	2.0	18	-0.67	0	-3.7	0	2.0	1.4	21
1999-11-01	0	5.6	0.12	0	-0.75	0	0	0.14	6.2
1999-12-01	0	4.3	0.079	0	-0.75	0	0	0.079	4.7
2000-01-01	0.039	3.3	0.039	0	-0.83	0	0.039	0.055	3.7
2000-02-01	0.31	3.5	-0.039	0	-0.75	0	0.31	0.27	3.4
2000-03-01	0.67	3.4	-0.20	0	-0.67	0	0.67	0.48	3.9
2000	1.0	20	0	0	-3.7	0	1.0	1.0	22
2000-11-01	5.3	-0.59	-4.3	0	-0.43	0	5.3	0.99	6.1
2000-12-01	2.1	1.1	-1.3	0	-0.39	0	2.1	0.76	2.9
2001-01-01	0.079	3.3	0.12	0	-0.47	0	0.079	0.20	3.7
2001-02-01	3.4	-0.67	-2.4	0	-0.59	0	3.4	0.96	3.0
2001-03-01	1.8	1.7	-0.91	0	-0.63	0	1.8	0.85	2.8
2001	13	4.9	-8.9	0	-2.5	0	13	3.8	19
2001-11-01	0.35	4.7	-0.039	0	-1.1	0	0.35	0.34	5.7
2001-12-01	0.28	3.6	0.039	0	-0.98	0	0.28	0.30	4.6
2002-01-01	1.9	0.94	-1.2	0	-0.91	0	1.9	0.66	2.9
2002-02-01	0.20	3.1	-0.039	0	-0.83	0	0.20	0.20	3.2
2002-03-01	0	4.3	0.16	0	-0.71	0	0	0.17	3.4
2002	2.7	17	-1.1	0	-4.5	0	2.7	1.7	20
2002-11-01	0.079	5.2	0.079	0	-0.43	0	0.079	0.19	6.3
2002-12-01	0.87	3.1	-0.59	0	-0.35	0	0.87	0.29	4.4
2003-01-01	0.98	2.0	-0.20	0	-0.35	0	0.98	0.75	3.4
2003-02-01	0.35	3.6	0.079	0	-0.35	0	0.35	0.45	3.1
2003-03-01	5.0	-1.7	-4.3	0	-0.24	0	5.0	0.60	3.6
2003	7.2	12	-5.0	0	-1.7	0	7.2	2.3	21

Table IV-B.32 SC4 Winter Storm Period Water Balance

Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
2003-11-01	0.079	5.7	0.16	0	-0.51	0	0.079	0.24	6.3
2003-12-01	0.87	2.6	-0.47	0	-0.47	0	0.87	0.38	3.9
2004-01-01	0.98	2.3	-0.43	0	-0.43	0	0.98	0.54	3.9
2004-02-01	1.5	1.5	-0.79	0	-0.39	0	1.5	0.68	3.1
2004-03-01	0.67	2.8	-0.12	0	-0.39	0	0.67	0.56	3.0
2004	4.1	15	-1.7	0	-2.2	0	4.1	2.4	20
2004-11-01	1.2	4.0	-0.63	0	-0.51	0	1.2	0.58	6.4
2004-12-01	0.67	2.4	-0.16	0	-0.43	0	0.67	0.48	3.5
2005-01-01	2.8	0.35	-2.1	0	-0.47	0	2.8	0.63	3.0
2005-02-01	4.2	-1.5	-3.5	0	-0.47	0	4.2	0.72	2.7
2005-03-01	7.4	-4.6	-6.3	0	-0.47	0	7.4	1.1	2.7
2005	16	0.71	-13	0	-2.4	0	16	3.5	18
2005-11-01	0.39	5.0	-0.079	0	-1.2	0	0.39	0.33	6.4
2005-12-01	0	4.1	0.12	0	-1.0	0	0	0.11	4.4
2006-01-01	0	3.3	0.039	0	-1.0	0	0	0.063	3.5
2006-02-01	0	4.1	0.079	0	-0.87	0	0	0.047	3.8
2006-03-01	0.12	4.3	0	0	-0.67	0	0.12	0.13	4.1
2006	0.51	21	0.16	0	-4.8	0	0.51	0.67	22



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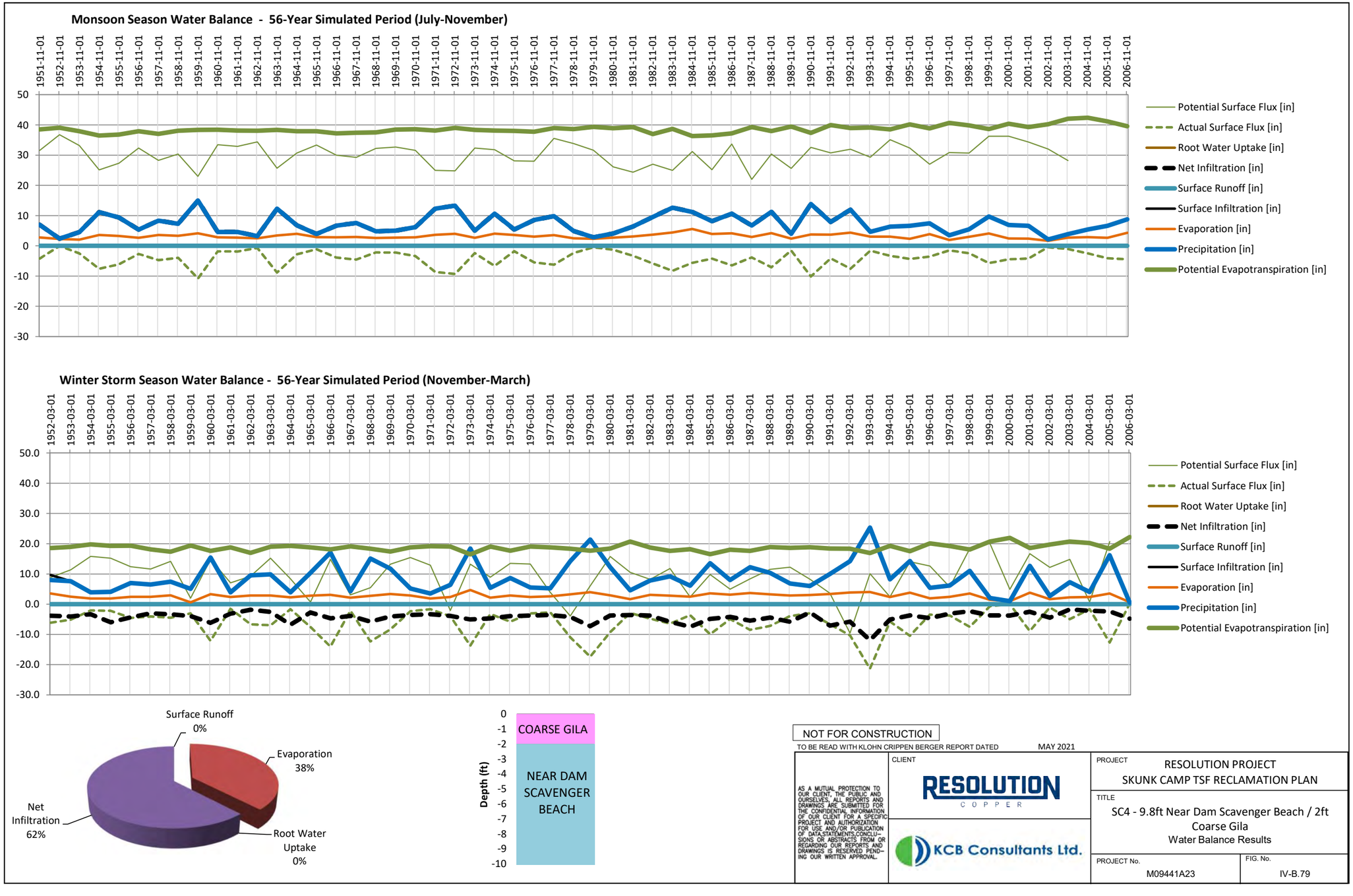
SKUNK CAMP TSF RECLAMATION PLAN

TITLE: SC4 - 9.8ft Near Dam Scavenger Beach / 2ft Coarse Gila
Water Balance Results

PROJECT No. M09441A23

FIG. No. IV-B.78


Monsoon Season Water Balance - 56-Year Simulated Period (July-November)
Potential Surface Flux [in]
Actual Surface Flux [in]
Root Water Uptake [in]
Net Infiltration [in]
Surface Runoff [in]
Surface Infiltration [in]
Evaporation [in]
Precipitation [in]
Potential Evapotranspiration [in]
Winter Storm Season Water Balance - 56-Year Simulated Period (November-March)
Surface Runoff 0%
Evaporation 38%
Net Infiltration 62%
Root Water Uptake 0%
Depth (ft)
COARSE GILA
NEAR DAM SCAVENGER BEACH
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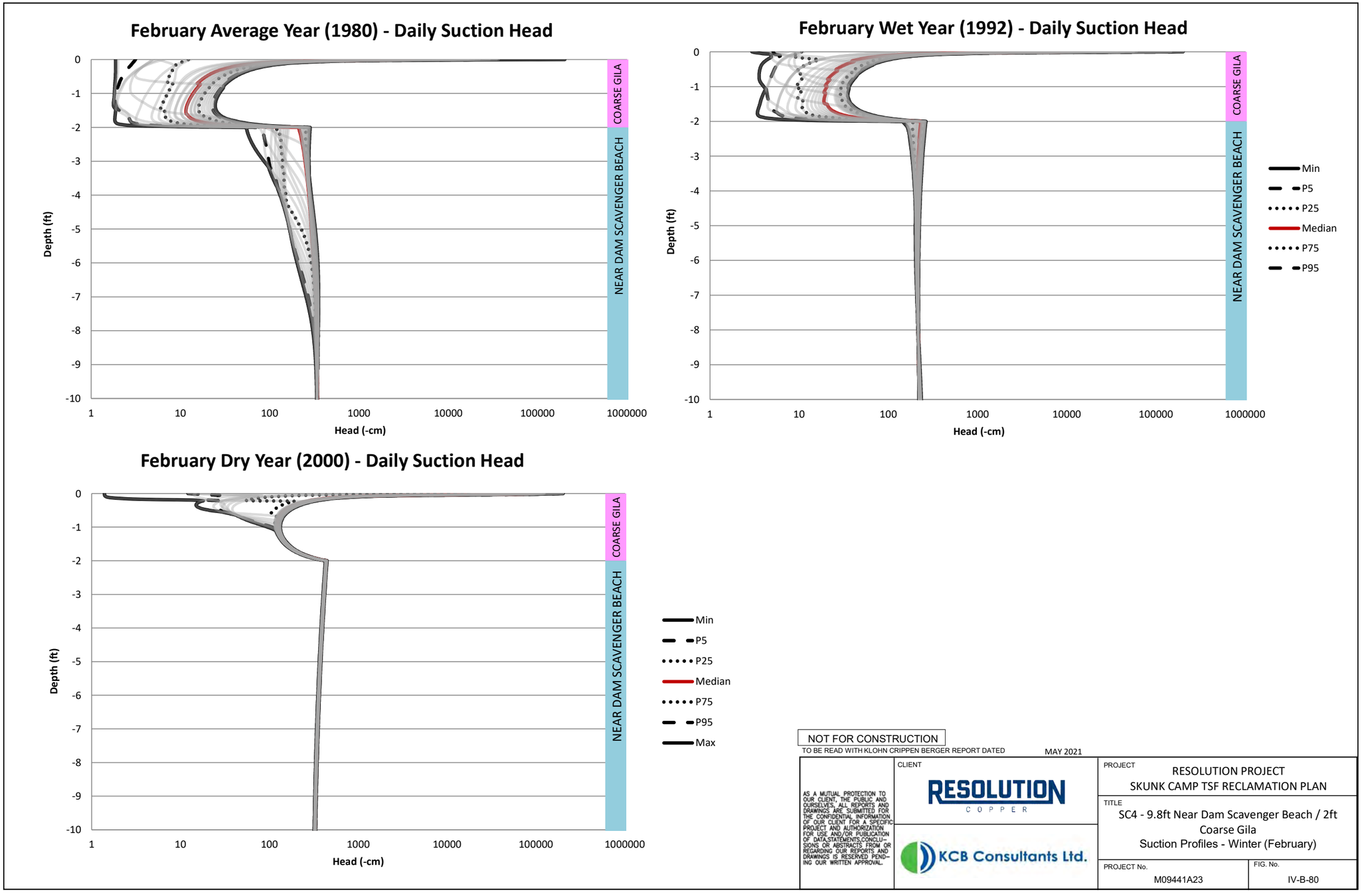
Water Balance Results
PROJECT No.
M09441A23
FIG. No.
IV-B.79


February Average Year (1980) - Daily Suction Head
Depth (ft)
0
-1
-2
-3
-4
-5
-6
-7
-8
-9
-10
1
10
100
1000
10000
100000
1000000
Head (-cm)
COARSE GILA
NEAR DAM SCAVENGER BEACH
February Wet Year (1992) - Daily Suction Head
Depth (ft)
Head (-cm)
COARSE GILA
NEAR DAM SCAVENGER BEACH
Min
P5
P25
Median
P75
P95
February Dry Year (2000) - Daily Suction Head
Depth (ft)
Head (-cm)
COARSE GILA
NEAR DAM SCAVENGER BEACH
Min
P5
P25
Median
P75
P95
Max
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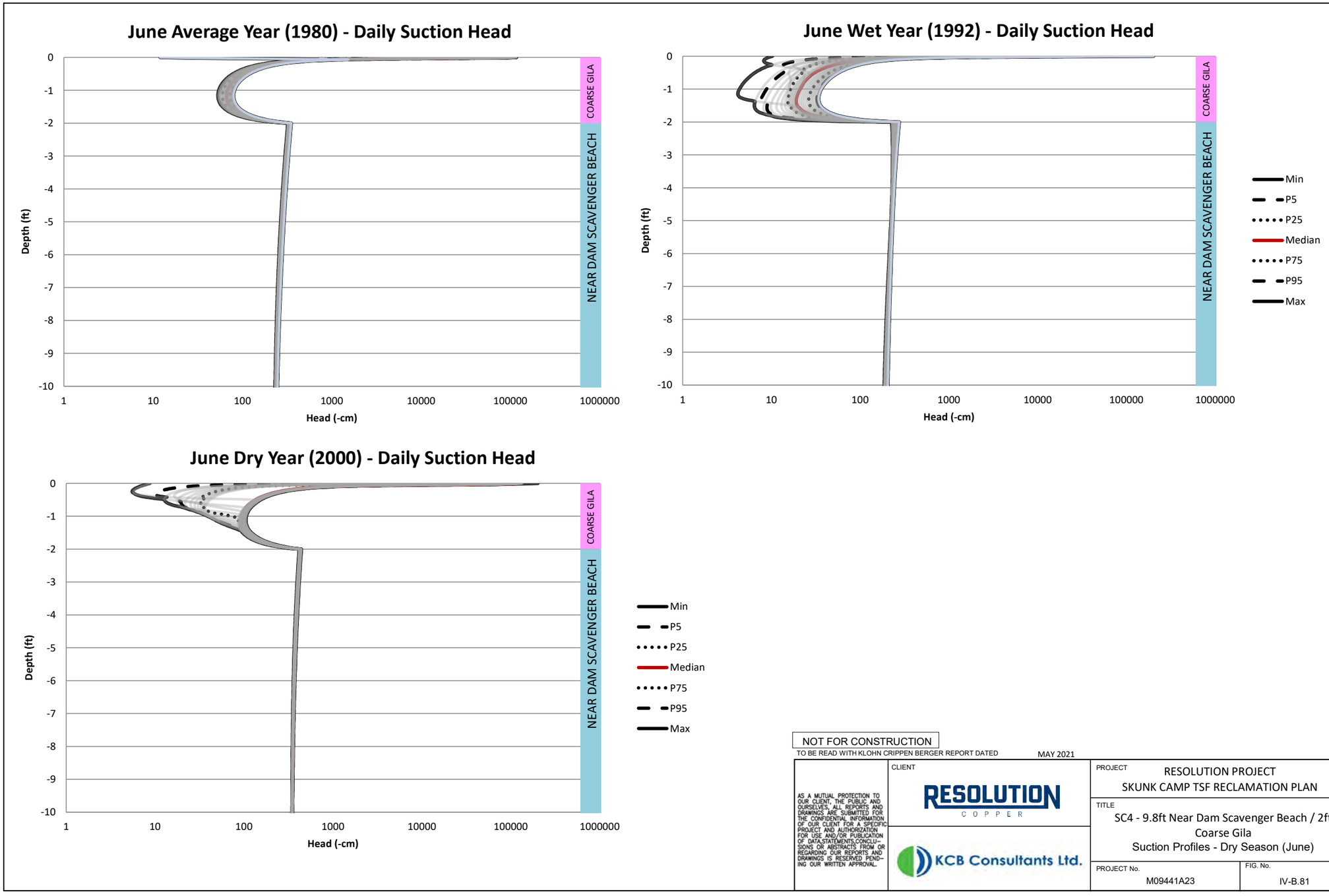
TITLE
SC4 - 9.8ft Near Dam Scavenger Beach / 2ft Coarse Gila
Suction Profiles - Winter (February)
PROJECT No.
M09441A23
FIG. No.
IV-B-80


June Average Year (1980) - Daily Suction Head
Depth (ft)
0
-1
-2
-3
-4
-5
-6
-7
-8
-9
-10
1
10
100
1000
10000
100000
1000000
Head (-cm)
COARSE GILA
NEAR DAM SCAVENGER BEACH
June Wet Year (1992) - Daily Suction Head
Depth (ft)
Head (-cm)
COARSE GILA
NEAR DAM SCAVENGER BEACH
Min
P5
P25
Median
P75
P95
Max
June Dry Year (2000) - Daily Suction Head
Depth (ft)
Head (-cm)
COARSE GILA
NEAR DAM SCAVENGER BEACH
Min
P5
P25
Median
P75
P95
Max
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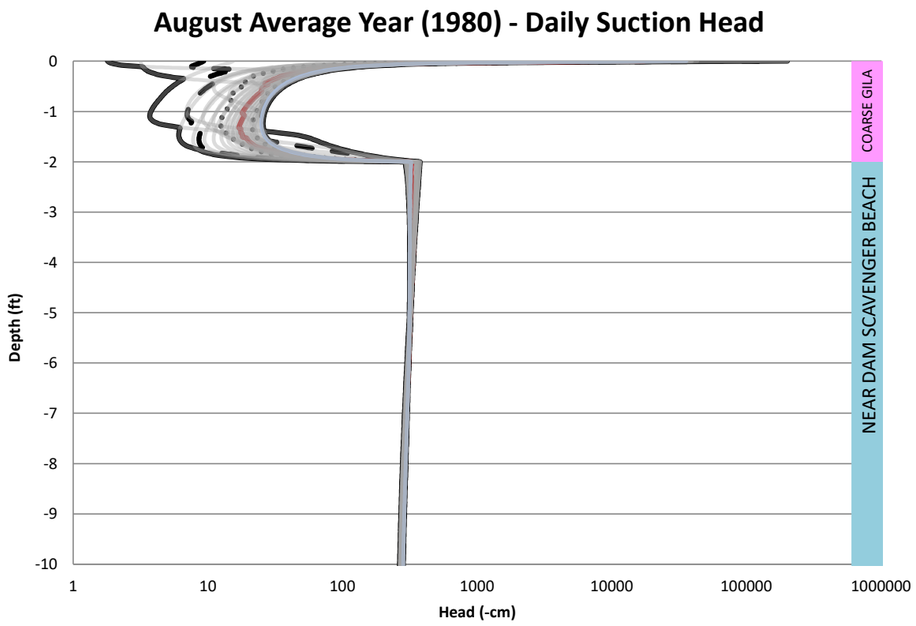
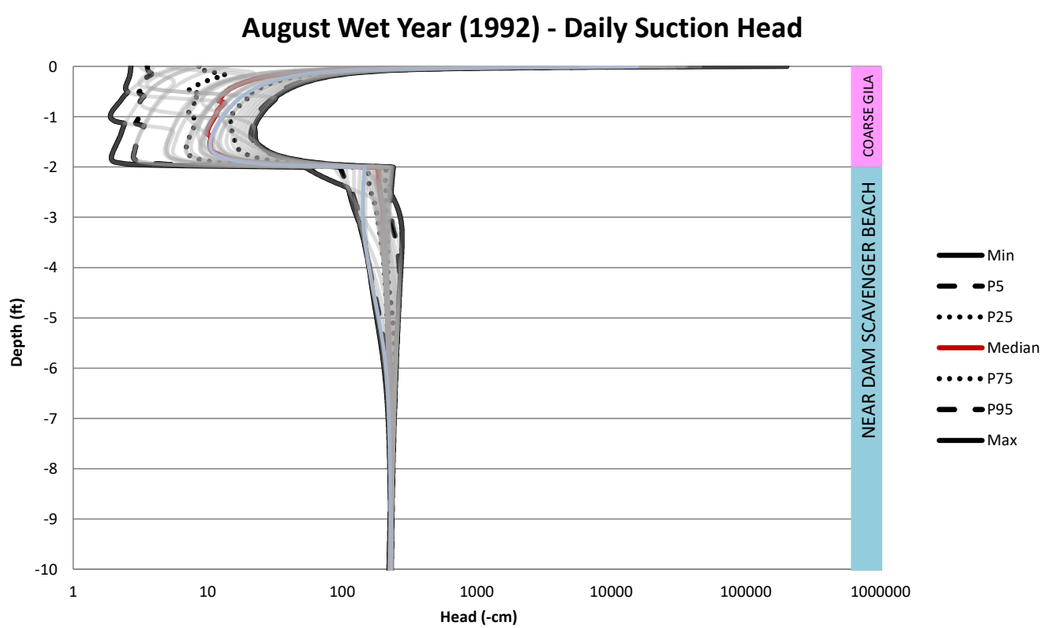
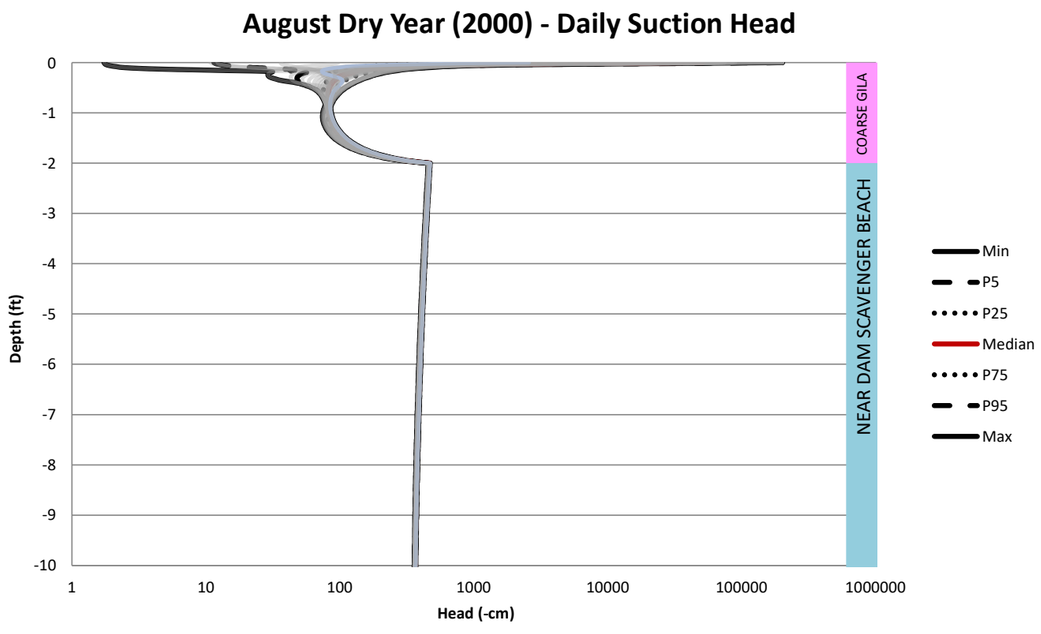
TITLE
SC4 - 9.8ft Near Dam Scavenger Beach / 2ft Coarse Gila
Suction Profiles - Dry Season (June)
PROJECT No.
M09441A23
FIG. No.
IV-B.81







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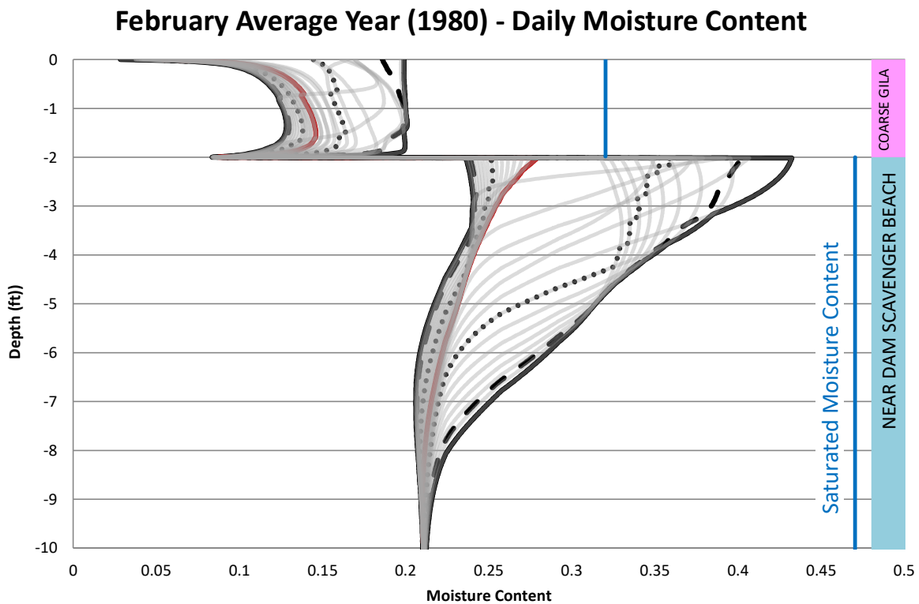
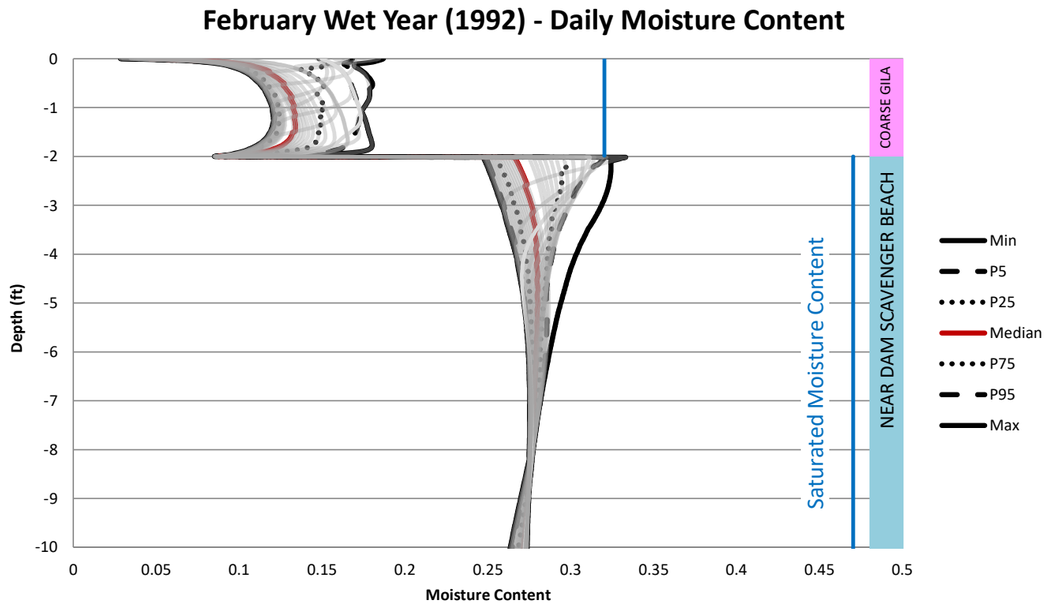
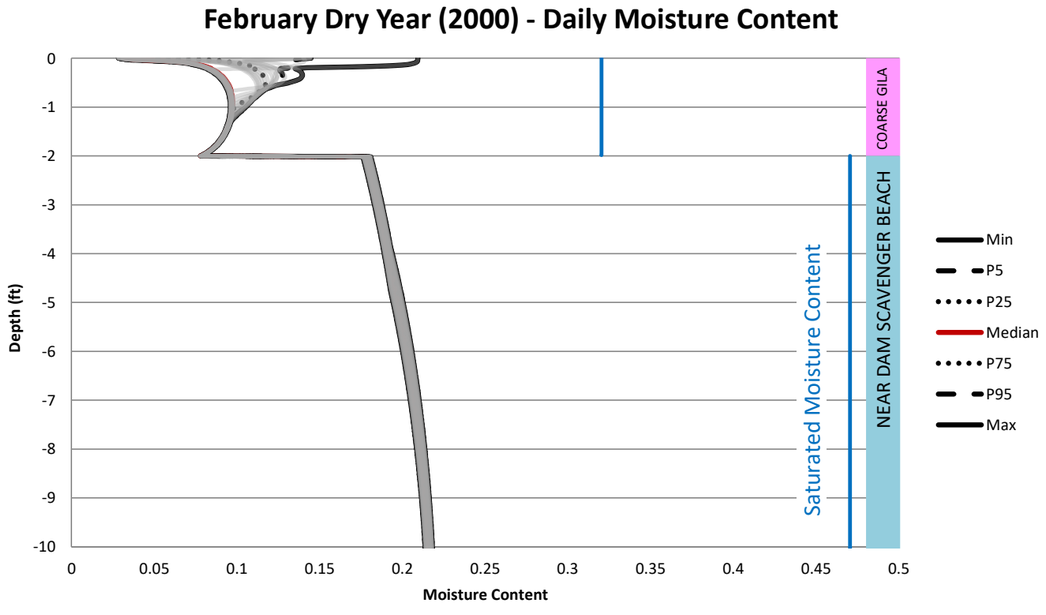
TITLE: SC4 - 9.8ft Near Dam Scavenger Beach / 2ft Coarse Gila
Suction Profiles - Summer Monsoon (August)

PROJECT No. M09441A23

FIG. No. IV-B.82







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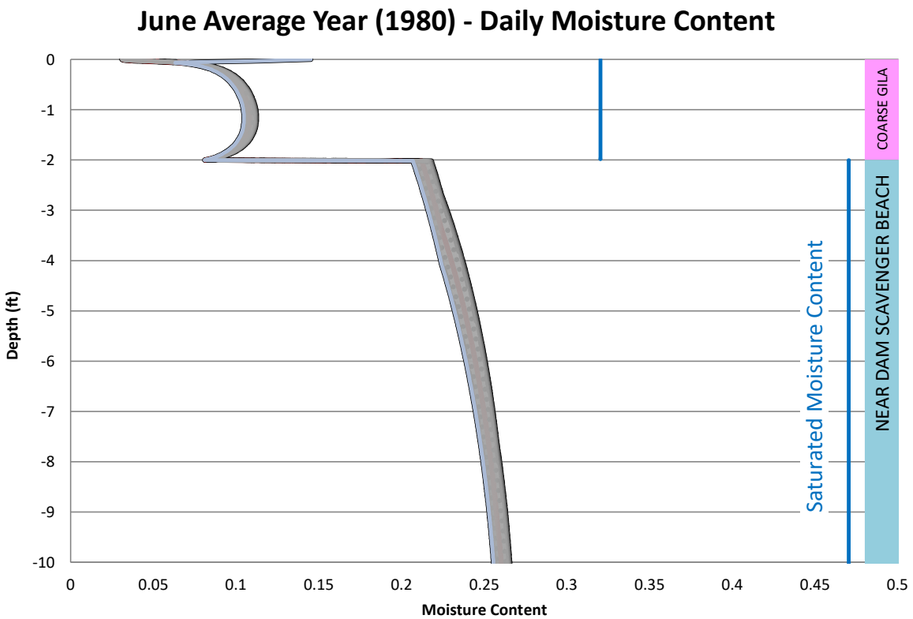
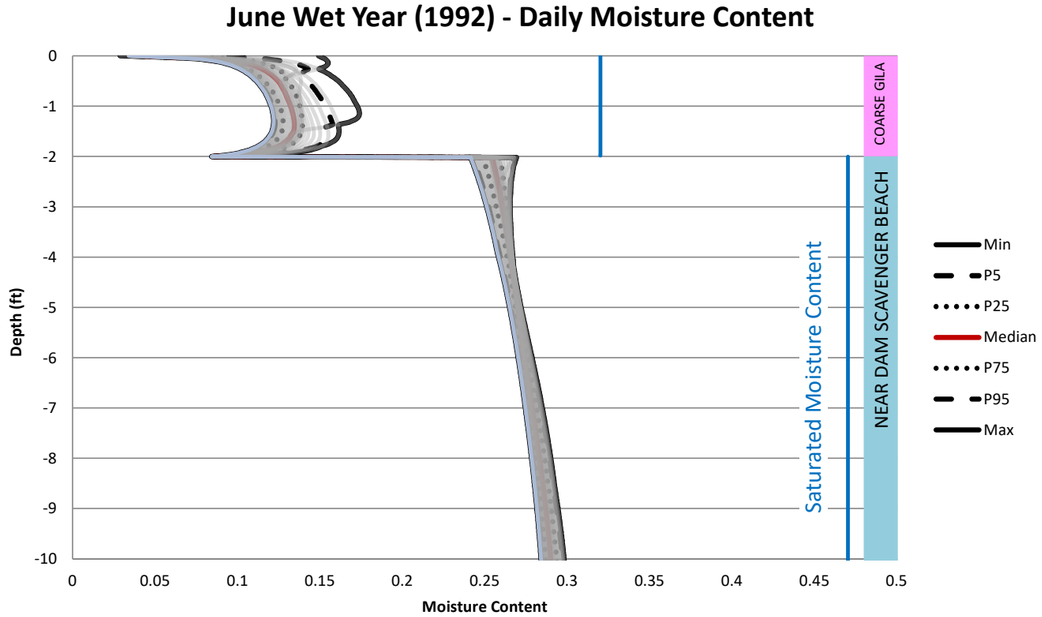
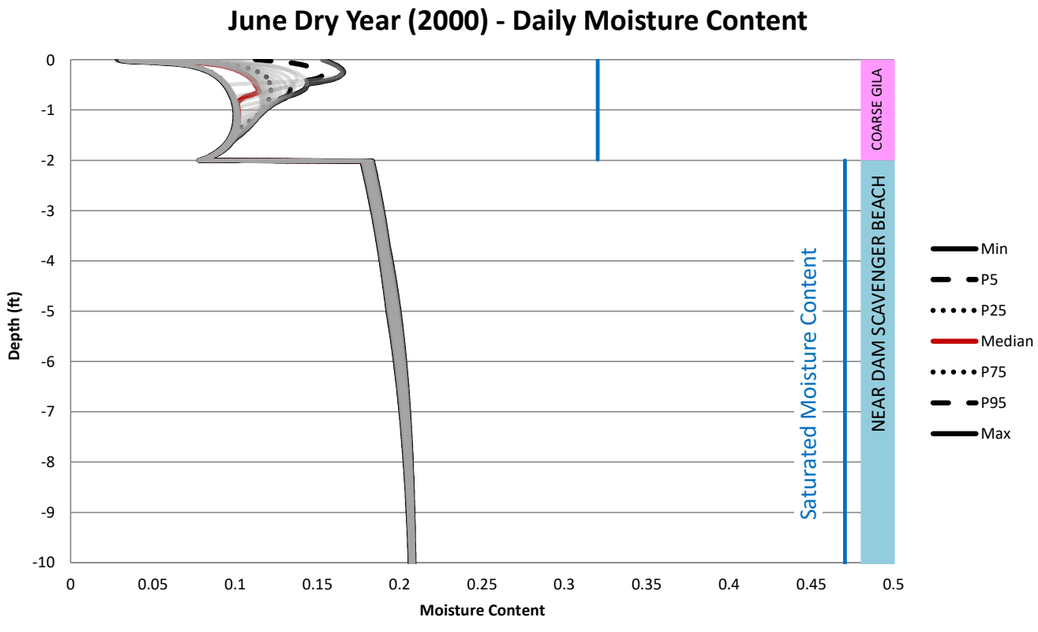
TITLE: SC4 - 9.8ft Near Dam Scavenger Beach / 2ft Coarse Gila
Moisture Content - Winter (February)

PROJECT No. M09441A23

FIG. No. IV-B.83







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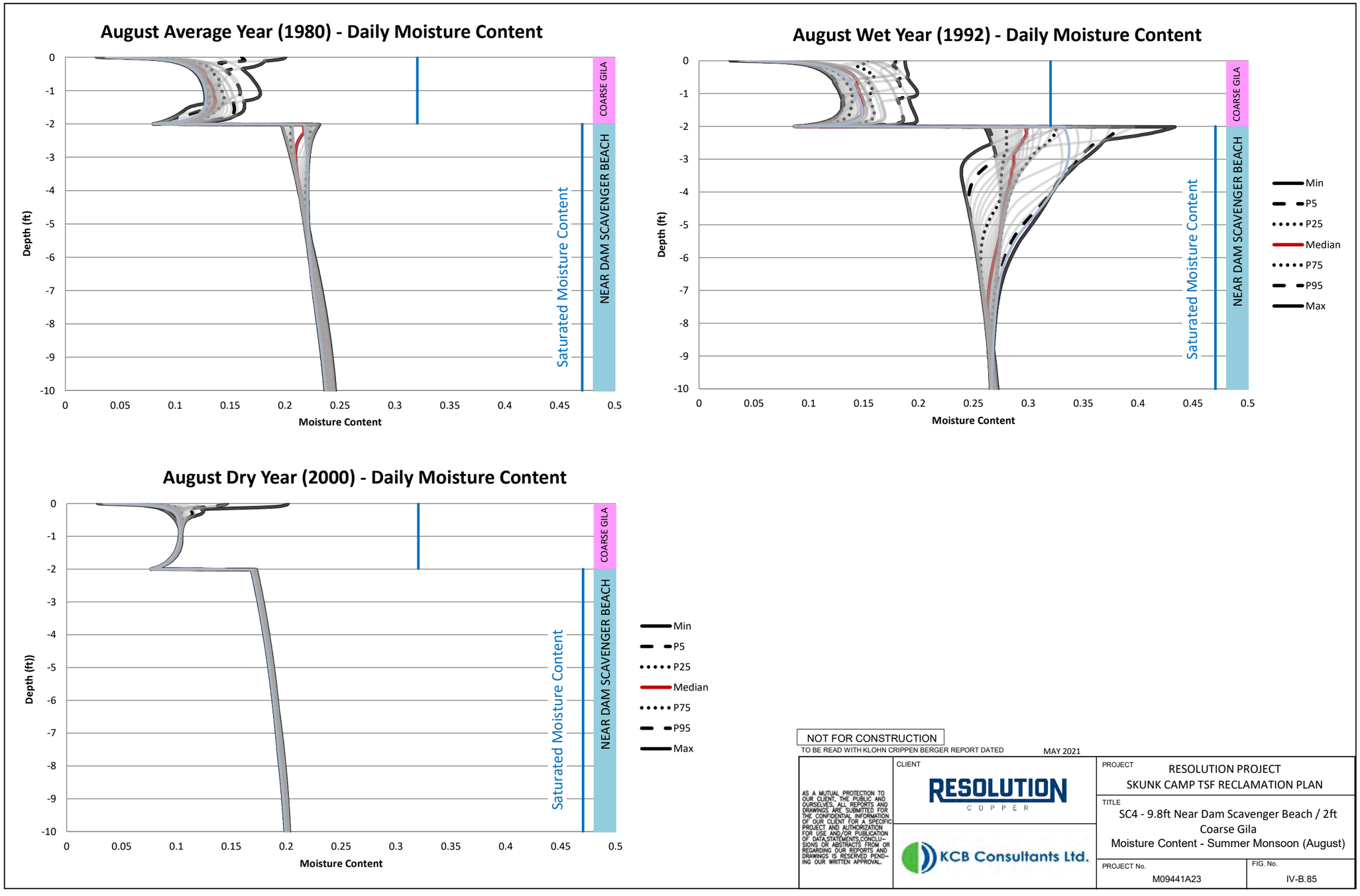
SKUNK CAMP TSF RECLAMATION PLAN

TITLE: SC4 - 9.8ft Near Dam Scavenger Beach / 2ft Coarse Gila
Moisture Content - Dry Season(June)

PROJECT No. M09441A23

FIG. No. IV-B.84



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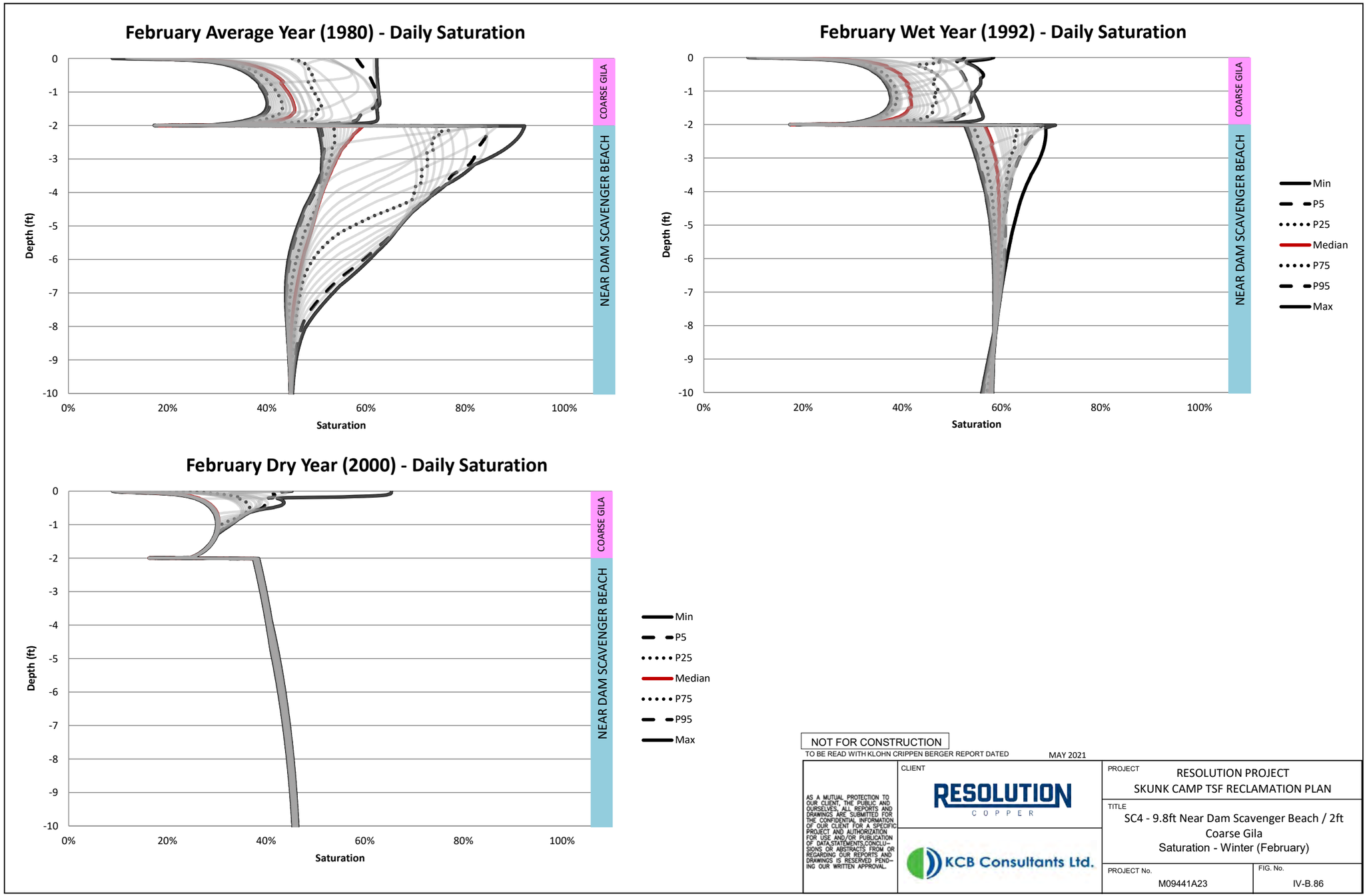
TITLE: SC4 - 9.8ft Near Dam Scavenger Beach / 2ft Coarse Gila
Moisture Content - Summer Monsoon (August)

PROJECT No. M09441A23

FIG. No. IV-B.85


February Average Year (1980) - Daily Saturation
February Wet Year (1992) - Daily Saturation
February Dry Year (2000) - Daily Saturation
Depth (ft)
0
-1
-2
-3
-4
-5
-6
-7
-8
-9
-10
0%
20%
40%
60%
80%
100%
Saturation
COARSE GILA
NEAR DAM SCAVENGER BEACH
Min
P5
P25
Median
P75
P95
Max
NOT FOR CONSTRUCTION
TO BE READ WITH KLOHN CRIPPEN BERGER REPORT DATED
MAY 2021
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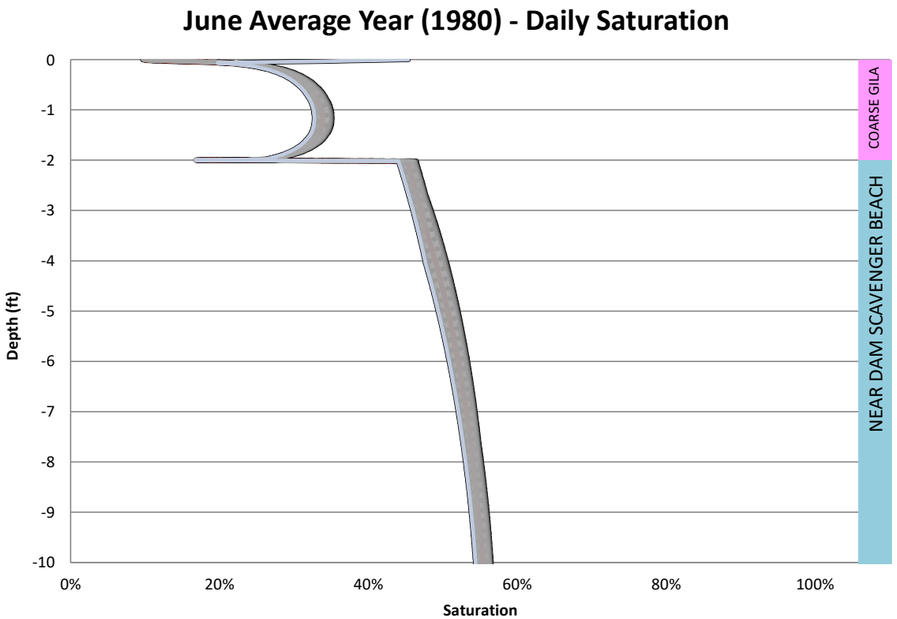
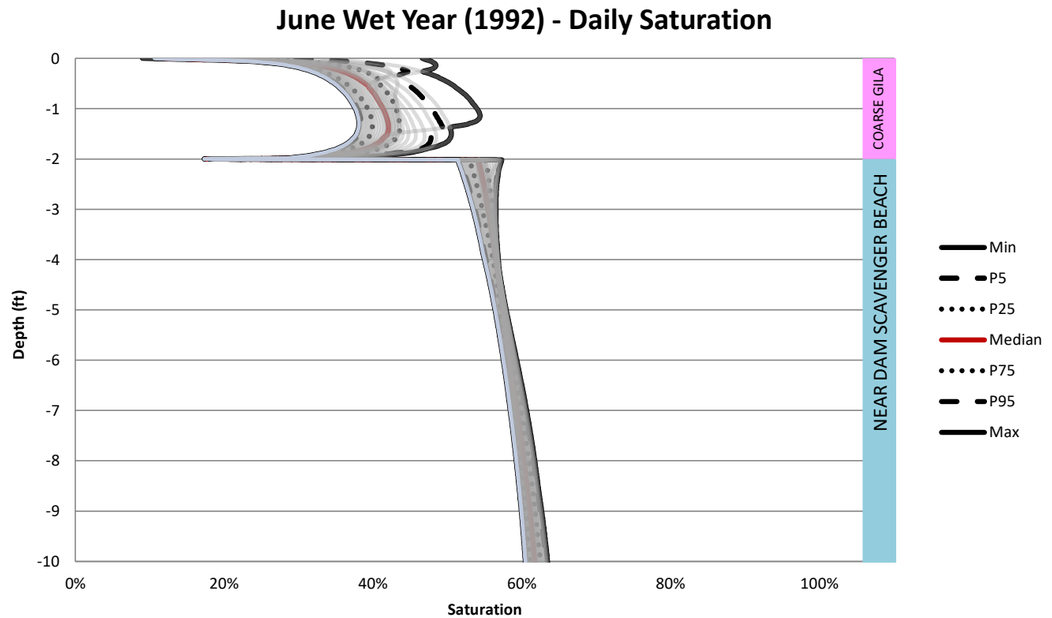
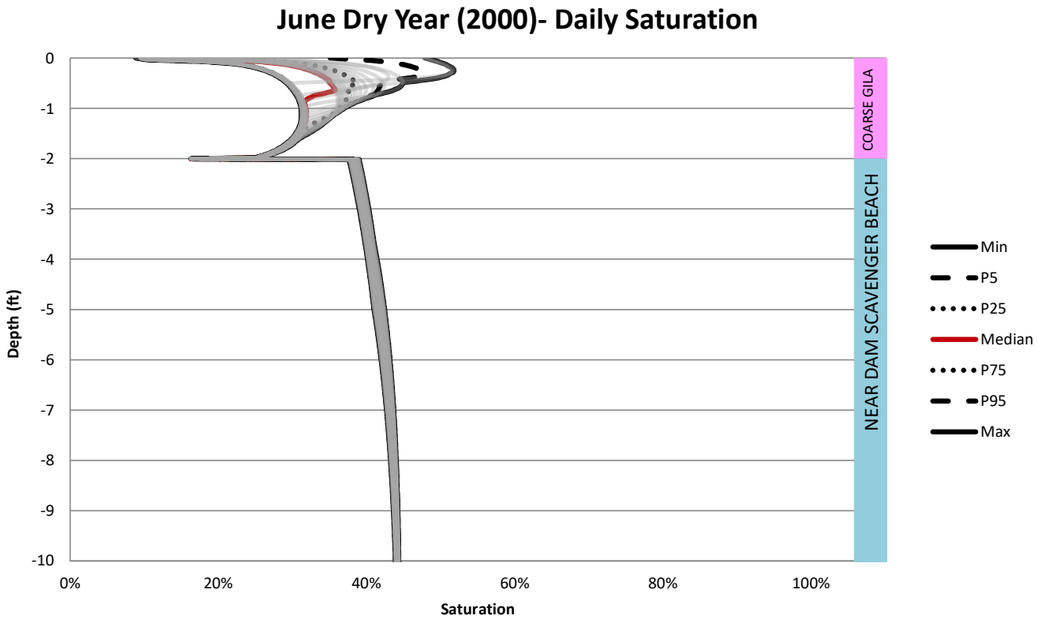
CLIENT
RESOLUTION COPPER
KCB Consultants Ltd.
PROJECT
RESOLUTION PROJECT
SKUNK CAMP TSF RECLAMATION PLAN
TITLE
SC4 - 9.8ft Near Dam Scavenger Beach / 2ft Coarse Gila
Saturation - Winter (February)
PROJECT No.
M09441A23
FIG. No.
IV-B.86







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CLIENT: RESOLUTION COPPER

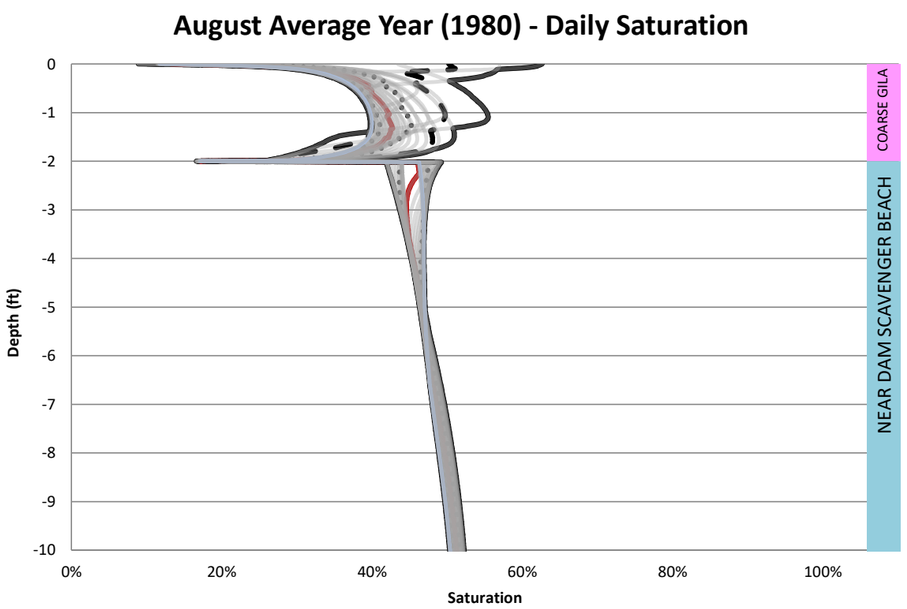
KCB Consultants Ltd.

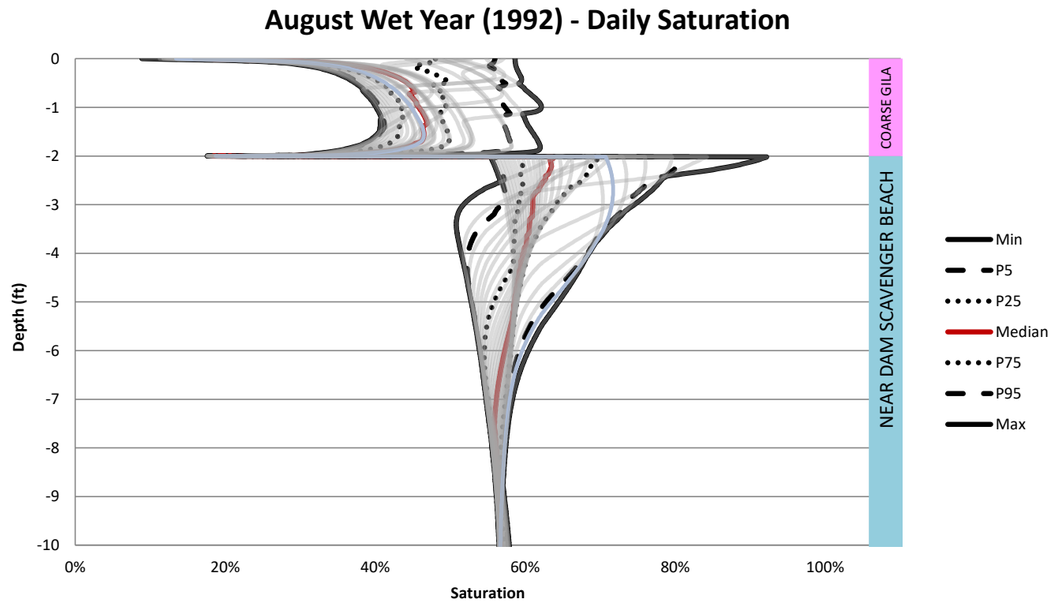
PROJECT: RESOLUTION PROJECT
SKUNK CAMP TSF RECLAMATION PLAN

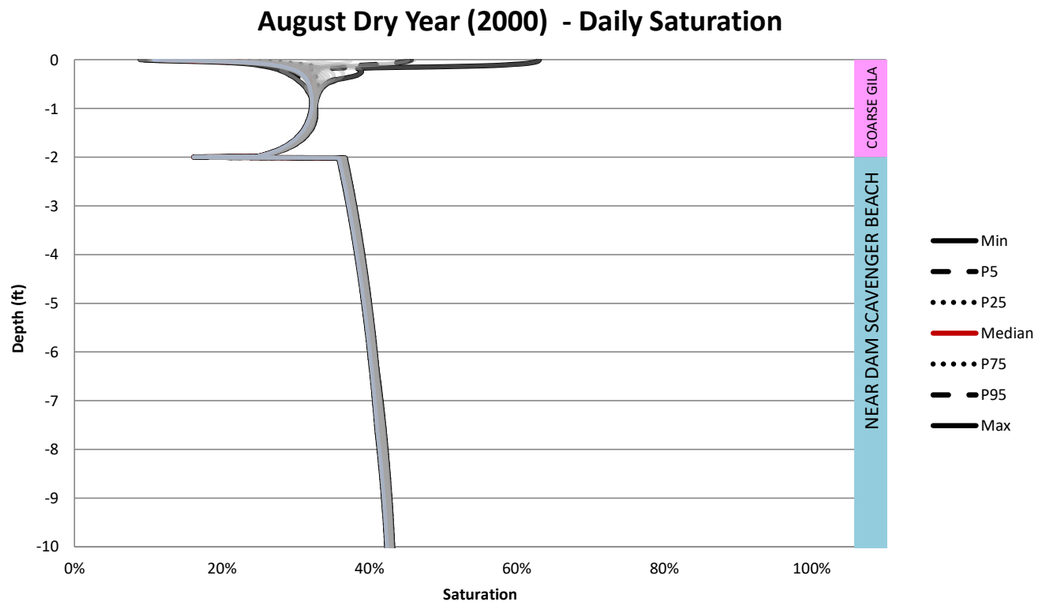
TITLE: SC4 - 9.8ft Near Dam Scavenger Beach / 2ft Coarse Gila
Saturation - Dry Season (June)

PROJECT No. M09441A23

FIG. No. IV-B.87







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CLIENT: RESOLUTION COPPER

KCB Consultants Ltd.

PROJECT: RESOLUTION PROJECT
SKUNK CAMP TSF RECLAMATION PLAN

TITLE: SC4 - 9.8ft Near Dam Scavenger Beach / 2ft Coarse Gila
Saturation - Summer Monsoon (August)

PROJECT No. M09441A23

FIG. No. IV-B.88

Table IV-B.33 BC3 Annual Water Balance

Water Year	Result Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
		(in)	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
1951	1951-10-01	14	46	0.39	0	-0.29	0	14	14	60
1952	1952-10-01	0	51	0.35	0	-0.40	0	20	21	72
1953	1953-10-01	15	57	-0.37	0	-0.39	0	15	15	72
1954	1954-10-01	21	51	-1.6	0	-0.39	0	21	20	72
1955	1955-10-01	13	58	0.94	0	-0.37	0	13	14	72
1956	1956-10-01	13	61	0.78	0	-0.36	0	13	13	74
1957	1957-10-01	15	56	0.092	0	-0.34	0	15	15	71
1958	1958-10-01	19	51	-0.80	0	-0.30	0	19	18	70
1959	1959-10-01	16	59	0.42	0	-0.27	0	16	16	75
1960	1960-10-01	19	54	-1.8	0	-0.26	0.21	19	17	73
1961	1961-10-01	9.8	63	1.1	0	-0.30	0	9.8	11	73
1962	1962-10-01	14	56	-0.43	0	-0.32	0	14	14	71
1963	1963-10-01	24	50	-3.4	0	-0.29	0	24	20	73
1964	1964-10-01	11	60	2.5	0	-0.28	0	11	14	72
1965	1965-10-01	18	53	-0.18	0	-0.30	0	18	17	71
1966	1966-10-01	23	49	-4.7	0	-0.30	0	23	18	72
1967	1967-10-01	14	58	1.7	0	-0.46	0	14	16	72
1968	1968-10-01	22	49	-2.7	0	-0.49	0.56	22	19	71
1969	1969-10-01	19	53	-0.15	0	-0.63	0	19	18	72
1970	1970-10-01	16	56	-0.0094	0	-0.64	0	16	16	72
1971	1971-10-01	11	61	-0.12	0	-0.54	0	11	11	73
1972	1972-10-01	12	65	1.9	0	-0.46	0	12	14	76
1973	1973-10-01	31	38	-2.8	0	-0.41	0	31	28	69
1974	1974-10-01	15	56	0.28	0	-0.45	0	15	16	72
1975	1975-10-01	19	50	0.19	0	-0.45	0	19	19	69
1976	1976-10-01	16	56	-0.85	0	-0.42	0	16	15	72
1977	1977-10-01	16	56	0.50	0	-0.38	0	16	17	73
1978	1978-10-01	24	47	-2.5	0	-0.34	0	24	21	71
1979	1979-10-01	29	42	-4.8	0	-0.50	0.045	29	25	71
1980	1980-10-01	20	51	-0.42	0	-1.1	0	20	20	71
1981	1981-10-01	15	60	0.80	0	-1.1	0	15	16	75
1982	1982-10-01	23	46	-0.67	0	-0.83	0	23	23	69
1983	1983-10-01	26	42	-2.6	0	-0.68	0	26	23	69
1984	1984-10-01	19	53	2.4	0	-0.63	0	19	21	71
1985	1985-10-01	22	44	-1.6	0	-0.61	0	22	21	67
1986	1986-10-01	21	49	0.32	0	-0.61	0	21	21	70
1987	1987-10-01	20	50	0.22	0	-0.57	0	20	20	70
1988	1988-10-01	23	48	-0.97	0	-0.52	0	23	22	71
1989	1989-10-01	12	62	1.5	0	-0.49	0	12	13	74
1990	1990-10-01	23	48	-2.7	0	-0.46	1.8	21	18	71
1991	1991-10-01	23	48	0.30	0	-0.41	0	23	23	71
1992	1992-10-01	36	34	-4.0	0	-0.45	0	36	32	70
1993	1993-10-01	32	37	-7.4	0	-1.1	0.56	32	25	70
1994	1994-10-01	15	57	2.0	0	-2.4	0	15	17	73
1995	1995-10-01	25	46	-1.5	0	-1.5	0	25	23	71
1996	1996-10-01	13	60	2.5	0	-1.2	0	13	16	74
1997	1997-10-01	10	65	1.5	0	-0.83	0	10	12	75
1998	1998-10-01	20	49	-1.1	0	-0.63	0	20	19	69
1999	1999-10-01	15	58	0.51	0	-0.51	0	15	15	73
2000	2000-10-01	5.4	72	1.7	0	-0.45	0	5.4	7.1	77
2001	2001-10-01	23	48	-2.0	0	-0.38	0	23	21	71
2002	2002-10-01	5.4	70	1.7	0	-0.35	0	5.4	7.1	75
2003	2003-10-01	13	63	-0.30	0	-0.32	0	13	13	76
2004	2004-10-01	12	65	0.13	0	-0.27	0	12	12	77

Table IV-B.33 BC3 Annual Water Balance

Water Year	Result Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
		(in)	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
2005	2005-10-01	24	49	-2.9	0	-0.25	0.85	23	20	72
2006	2006-10-01	12	63	0.69	0	-0.27	0	12	13	75

Table IV-B.34 BC3 Monthly Water Balance 9 Wet Years (1983 to 1991)

Month	Result Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
		[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
Nov-82	1982-11-30	0	5.5	0.051	0	-0.12	0	2.5	2.6	8.8
Dec-82	1982-12-30	2.5	0.16	-0.25	0	-0.059	0	2.5	2.2	2.7
Jan-83	1983-01-29	0.67	2.5	0.26	0	-0.058	0	0.67	0.94	3.0
Feb-83	1983-02-28	3.5	-0.16	-1.1	0	-0.056	0	3.5	2.4	2.9
Mar-83	1983-03-30	5.4	-1.5	-2.1	0	-0.056	0	5.4	3.3	4.0
Apr-83	1983-04-29	0.83	5.2	1.8	0	-0.055	0	0.83	2.6	5.3
May-83	1983-05-29	0	8.6	0.71	0	-0.054	0	0	0.71	7.9
Jun-83	1983-06-28	0	9.5	0.47	0	-0.054	0	0	0.51	9.4
Jul-83	1983-07-28	2.1	6.9	-0.36	0	-0.052	0	2.1	1.7	9.6
Aug-83	1983-08-27	3.8	3.4	0.038	0	-0.052	0	3.8	3.9	7.2
Sep-83	1983-09-26	1.8	5.2	0.35	0	-0.052	0	1.8	2.2	7.5
Oct-83	1983-10-26	4.9	-0.35	-1.7	0	-0.052	0	4.9	3.1	5.1
Nov-83	1983-11-25	1.6	2.2	-0.41	0	-0.052	0	1.6	1.2	4.2
Dec-83	1983-12-25	1.9	0.79	0.38	0	-0.052	0	1.9	2.2	2.6
Jan-84	1984-01-24	1.5	1.2	0.39	0	-0.052	0	1.5	1.9	2.7
Feb-84	1984-02-23	0	4.1	0.62	0	-0.052	0	0	0.63	3.7
Mar-84	1984-03-24	0	5.7	0.43	0	-0.052	0	0	0.43	5.0
Apr-84	1984-04-23	0.87	5.9	0.17	0	-0.052	0	0.87	1.0	6.5
May-84	1984-05-23	0.67	7.3	0.30	0	-0.052	0	0.67	0.98	7.5
Jun-84	1984-06-22	0.039	9.3	0.31	0	-0.052	0	0.039	0.31	9.3
Jul-84	1984-07-22	3.6	4.1	-0.88	0	-0.052	0	3.6	2.8	8.5
Aug-84	1984-08-21	3.9	3.2	0.12	0	-0.052	0	3.9	4.0	6.9
Sep-84	1984-09-20	1.1	5.9	0.53	0	-0.052	0	1.1	1.7	7.0
Oct-84	1984-10-20	2.5	2.4	-0.15	0	-0.052	0	2.5	2.4	5.6
Nov-84	1984-11-19	0	4.3	0.50	0	-0.053	0	0	0.47	4.2
Dec-84	1984-12-19	4.8	-2.3	-2.9	0	-0.052	0	4.8	1.9	3.1
Jan-85	1985-01-18	3.9	-1.5	-1.5	0	-0.051	0	3.9	2.4	2.3
Feb-85	1985-02-17	2.9	-0.35	-0.37	0	-0.051	0	2.9	2.5	2.3
Mar-85	1985-03-19	1.7	2.2	0.91	0	-0.050	0	1.7	2.6	3.6
Apr-85	1985-04-18	0.43	5.7	1.0	0	-0.050	0	0.43	1.5	5.4
May-85	1985-05-18	0.47	6.6	0.51	0	-0.049	0	0.47	0.98	6.7
Jun-85	1985-06-17	0	8.7	0.44	0	-0.048	0	0	0.43	8.6
Jul-85	1985-07-17	0.20	8.2	0.16	0	-0.049	0	0.20	0.39	8.4
Aug-85	1985-08-16	2.1	5.7	0.024	0	-0.049	0	2.1	2.1	7.8
Sep-85	1985-09-15	2.2	4.9	-0.072	0	-0.049	0	2.2	2.1	7.9
Oct-85	1985-10-15	3.1	2.0	-0.25	0	-0.050	0	3.1	2.9	5.7
Nov-85	1985-11-14	1.4	2.4	-0.20	0	-0.050	0	1.4	1.2	3.9
Dec-85	1985-12-14	2.8	0.20	-0.70	0	-0.050	0	2.8	2.0	3.1
Jan-86	1986-01-13	0	3.3	1.3	0	-0.051	0	0	1.3	3.3
Feb-86	1986-02-12	2.3	0.79	-1.4	0	-0.051	0	2.3	0.91	3.6
Mar-86	1986-03-14	1.9	2.6	0.27	0	-0.051	0	1.9	2.2	3.7
Apr-86	1986-04-13	3.1	2.4	-0.0043	0	-0.051	0	3.1	3.1	4.9
May-86	1986-05-13	0	7.8	0.73	0	-0.051	0	0	0.71	7.4
Jun-86	1986-06-12	0.039	9.4	0.44	0	-0.050	0	0.039	0.47	9.1
Jul-86	1986-07-12	2.2	6.8	-0.44	0	-0.050	0	2.2	1.7	9.2
Aug-86	1986-08-11	2.8	4.6	0.036	0	-0.050	0	2.8	2.8	7.5
Sep-86	1986-09-10	3.0	4.0	-0.61	0	-0.050	0	3.0	2.4	7.3
Oct-86	1986-10-10	0.91	4.8	0.95	0	-0.049	0	0.91	1.9	6.1
Nov-86	1986-11-09	2.7	1.2	-0.63	0	-0.048	0	2.7	2.1	4.6
Dec-86	1986-12-09	2.6	0.63	-1.4	0	-0.048	0	2.6	1.2	3.4
Jan-87	1987-01-08	1.5	1.3	0.76	0	-0.048	0	1.5	2.2	2.7
Feb-87	1987-02-07	3.1	-0.16	-0.47	0	-0.048	0	3.1	2.6	2.9
Mar-87	1987-03-09	2.3	1.9	-0.055	0	-0.047	0	2.3	2.2	3.4
Apr-87	1987-04-08	0.94	4.4	0.80	0	-0.047	0	0.94	1.7	5.0

Table IV-B.34 BC3 Monthly Water Balance 9 Wet Years (1983 to 1991)

Month	Result Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
		[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
May-87	1987-05-08	0.039	7.2	0.55	0	-0.046	0	0.039	0.55	6.8
Jun-87	1987-06-07	0.31	8.1	0.38	0	-0.046	0	0.31	0.71	8.2
Jul-87	1987-07-07	0.20	8.9	0.29	0	-0.045	0	0.20	0.47	9.2
Aug-87	1987-08-06	3.0	5.5	-1.1	0	-0.045	0	3.0	2.0	8.9
Sep-87	1987-09-05	2.4	5.0	0.15	0	-0.045	0	2.4	2.5	7.5
Oct-87	1987-10-05	0.79	5.6	0.72	0	-0.044	0	0.79	1.5	6.7
Nov-87	1987-11-04	1.4	3.5	-0.53	0	-0.044	0	1.4	0.87	5.8
Dec-87	1987-12-04	0.71	3.1	0.78	0	-0.044	0	0.71	1.5	3.8
Jan-88	1988-01-03	4.0	-1.3	-2.2	0	-0.044	0	4.0	1.8	3.0
Feb-88	1988-02-02	3.6	-0.94	-1.0	0	-0.043	0	3.6	2.6	2.4
Mar-88	1988-03-03	0.71	3.5	1.2	0	-0.043	0	0.71	1.9	3.6
Apr-88	1988-04-02	0.16	5.9	0.66	0	-0.043	0	0.16	0.79	5.5
May-88	1988-05-02	2.4	3.7	-0.28	0	-0.042	0	2.4	2.2	6.1
Jun-88	1988-06-01	0	8.7	0.68	0	-0.042	0	0	0.67	8.0
Jul-88	1988-07-01	0.16	8.5	0.38	0	-0.041	0	0.16	0.51	8.9
Aug-88	1988-07-31	2.4	5.7	-0.84	0	-0.041	0	2.4	1.6	8.5
Sep-88	1988-08-30	6.7	0.59	-1.4	0	-0.041	0	6.7	5.3	7.3
Oct-88	1988-10-29	2.0	9.8	1.5	0	-0.081	0	2.0	3.5	13
Nov-88	1988-11-28	1.7	1.9	-0.86	0	-0.041	0	1.7	0.87	4.1
Dec-88	1988-12-28	1.1	1.8	0.69	0	-0.041	0	1.1	1.8	3.1
Jan-89	1989-01-27	2.0	0.75	-0.038	0	-0.041	0	2.0	1.9	2.4
Feb-89	1989-02-26	0.51	3.3	0.55	0	-0.041	0	0.51	1.1	3.3
Mar-89	1989-03-28	1.7	4.1	-1.0	0	-0.041	0	1.7	0.67	5.3
Apr-89	1989-04-27	0	7.6	1.3	0	-0.041	0	0	1.3	6.9
May-89	1989-05-27	0.16	8.4	0.35	0	-0.041	0	0.16	0.51	8.3
Jun-89	1989-06-26	0	9.1	0.27	0	-0.040	0	0	0.28	9.1
Jul-89	1989-07-26	0.079	8.7	0.22	0	-0.040	0	0.079	0.31	9.0
Aug-89	1989-08-25	1.3	6.1	0.018	0	-0.039	0	1.3	1.3	8.0
Sep-89	1989-09-24	1.5	5.6	-0.13	0	-0.040	0	1.5	1.4	7.3
Oct-89	1989-10-24	1.1	4.5	0.088	0	-0.039	0	1.1	1.1	6.1
Nov-89	1989-11-23	0.28	3.8	0.14	0	-0.039	0	0.28	0.43	4.5
Dec-89	1989-12-23	0	3.3	0.40	0	-0.039	0	0	0.39	3.5
Jan-90	1990-01-22	2.2	0.47	-0.64	0	-0.039	0	2.2	1.5	2.9
Feb-90	1990-02-21	2.6	0.35	-0.58	0	-0.038	0	2.6	2.0	2.5
Mar-90	1990-03-23	0.79	3.9	0.50	0	-0.038	0	0.79	1.3	4.2
Apr-90	1990-04-22	1.0	5.8	0.30	0	-0.038	0	1.0	1.3	6.0
May-90	1990-05-22	1.1	6.9	0.11	0	-0.037	0	1.1	1.2	7.7
Jun-90	1990-06-21	0.39	8.9	0.24	0	-0.037	0	0.39	0.63	9.0
Jul-90	1990-07-21	0.94	7.3	0.069	0	-0.036	0	0.94	0.98	8.6
Aug-90	1990-08-20	9.6	-2.6	-5.3	0	-0.036	1.8	7.8	2.6	7.8
Sep-90	1990-09-19	2.5	4.7	0.91	0	-0.035	0	2.5	3.3	7.1
Oct-90	1990-10-19	0.39	4.8	1.9	0	-0.035	0	0.39	2.3	5.9
Nov-90	1990-11-18	1.5	2.6	0.017	0	-0.035	0	1.5	1.6	4.2
Dec-90	1990-12-18	2.8	0.31	-1.1	0	-0.034	0	2.8	1.6	3.5
Jan-91	1991-01-17	4.6	-2.3	-2.3	0	-0.033	0	4.6	2.4	2.3
Feb-91	1991-02-16	0.16	3.4	1.9	0	-0.033	0	0.16	2.0	3.3
Mar-91	1991-03-18	3.6	0.87	-1.0	0	-0.033	0	3.6	2.6	4.3
Apr-91	1991-04-17	3.2	2.4	0.34	0	-0.033	0	3.2	3.6	4.8
May-91	1991-05-17	0	7.8	0.88	0	-0.032	0	0	0.87	7.4
Jun-91	1991-06-16	0.71	8.4	0.43	0	-0.033	0	0.71	1.1	8.7
Jul-91	1991-07-16	0.43	8.9	0.41	0	-0.032	0	0.43	0.87	9.4
Aug-91	1991-08-15	3.3	4.8	-0.62	0	-0.033	0	3.3	2.7	8.4
Sep-91	1991-09-14	2.0	4.9	0.32	0	-0.033	0	2.0	2.3	7.5
Oct-91	1991-10-01	0.24	3.2	0.42	0	-0.019	0	0.24	0.63	3.5

Table IV-B.35 BC3 Monsoon Period Water Balance

Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
1951-07-01	0	9.2	0.34	0	-0.032	0	0	0.34	9.2
1951-08-01	1.1	8.4	0.068	0	-0.033	0	1.1	1.1	9.5
1951-09-01	3.6	4.2	-1.9	0	-0.033	0	3.6	1.7	7.8
1951-10-01	0.65	6.0	1.2	0	-0.032	0	0.65	1.8	6.6
1951-11-01	1.6	3.7	-0.52	0	-0.034	0	1.6	1.1	5.4
1951	7.0	32	-0.87	0	-0.17	0	7.0	6.1	39
1952-07-01	0.63	8.9	0.47	0	-0.032	0	0.63	1.1	9.6
1952-08-01	0.56	8.3	0.30	0	-0.033	0	0.56	0.86	8.8
1952-09-01	0.45	7.3	0.32	0	-0.033	0	0.45	0.77	7.8
1952-10-01	0.70	6.3	0.15	0	-0.032	0	0.70	0.85	7.0
1952-11-01	0	5.9	0.30	0	-0.033	0	0	0.30	5.9
1952	2.3	37	1.5	0	-0.16	0	2.3	3.9	39
1953-07-01	0	9.1	0.30	0	-0.033	0	0	0.31	9.1
1953-08-01	2.7	5.8	-1.1	0	-0.034	0	2.7	1.6	8.8
1953-09-01	1.8	6.0	0.37	0	-0.034	0	1.8	2.2	7.7
1953-10-01	0	6.8	0.77	0	-0.033	0	0	0.77	6.8
1953-11-01	0.012	5.4	0.32	0	-0.034	0	0.012	0.33	5.5
1953	4.5	33	0.65	0	-0.17	0	4.5	5.2	38
1954-07-01	0.13	8.9	0.40	0	-0.032	0	0.13	0.54	9.0
1954-08-01	4.5	3.2	-0.99	0	-0.033	0	4.5	3.5	7.8
1954-09-01	5.3	2.1	-1.1	0	-0.033	0	5.3	4.2	7.4
1954-10-01	1.3	5.4	0.72	0	-0.032	0	1.3	2.0	6.6
1954-11-01	0	5.6	0.69	0	-0.032	0	0	0.69	5.6
1954	11	25	-0.26	0	-0.16	0	11	11	36
1955-07-01	2.1	7.0	-0.41	0	-0.031	0	2.1	1.6	9.1
1955-08-01	4.5	3.4	-1.7	0	-0.031	0	4.5	2.8	7.9
1955-09-01	2.7	4.4	0.71	0	-0.031	0	2.7	3.4	7.2
1955-10-01	0.12	6.7	0.64	0	-0.030	0	0.12	0.76	6.8
1955-11-01	0.020	5.8	0.37	0	-0.031	0	0.020	0.39	5.9
1955	9.3	27	-0.39	0	-0.16	0	9.3	9.0	37
1956-07-01	0.24	9.2	0.15	0	-0.029	0	0.24	0.39	9.4
1956-08-01	2.8	6.2	-0.42	0	-0.030	0	2.8	2.3	9.0
1956-09-01	1.7	5.7	0.22	0	-0.030	0	1.7	2.0	7.5
1956-10-01	0.075	6.8	0.31	0	-0.029	0	0.075	0.39	6.8
1956-11-01	0.53	4.5	0.058	0	-0.030	0	0.53	0.59	5.2
1956	5.4	32	0.31	0	-0.15	0	5.4	5.7	38
1957-07-01	0.031	9.3	0.34	0	-0.027	0	0.031	0.37	9.3
1957-08-01	1.1	7.4	-0.014	0	-0.028	0	1.1	1.1	8.5
1957-09-01	3.4	4.4	-0.39	0	-0.027	0	3.4	3.0	8.1
1957-10-01	0.57	6.1	0.44	0	-0.026	0	0.57	1.0	6.6
1957-11-01	3.2	1.1	-1.6	0	-0.027	0	3.2	1.6	4.6
1957	8.3	28	-1.3	0	-0.14	0	8.3	7.0	37
1958-07-01	0.70	8.5	0.16	0	-0.024	0	0.70	0.86	9.3
1958-08-01	0.78	8.2	0.11	0	-0.024	0	0.78	0.90	9.1
1958-09-01	0.85	7.2	0.27	0	-0.024	0	0.85	1.1	8.0
1958-10-01	3.0	3.2	-0.88	0	-0.023	0	3.0	2.1	6.4
1958-11-01	1.9	3.2	0.17	0	-0.024	0	1.9	2.1	5.3
1958	7.3	30	-0.16	0	-0.12	0	7.3	7.1	38
1959-07-01	1.0	8.2	-0.034	0	-0.022	0	1.0	1.00	9.1
1959-08-01	3.8	5.8	-1.4	0	-0.023	0	3.8	2.4	9.6
1959-09-01	5.3	2.0	-0.27	0	-0.023	0	5.3	5.0	7.4
1959-10-01	0.047	6.6	0.74	0	-0.022	0	0.047	0.78	6.9
1959-11-01	4.8	0.35	-3.6	0	-0.022	0.21	4.6	0.98	5.3
1959	15	23	-4.6	0	-0.11	0.21	15	10	38
1960-07-01	0	9.3	0.38	0	-0.021	0	0	0.38	9.2
1960-08-01	0.74	8.3	0.17	0	-0.022	0	0.74	0.91	9.2
1960-09-01	1.5	6.5	0.17	0	-0.022	0	1.5	1.7	8.1

Table IV-B.35 BC3 Monsoon Period Water Balance

Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
1960-10-01	0.27	6.6	0.32	0	-0.022	0	0.27	0.59	7.0
1960-11-01	2.1	2.8	-0.38	0	-0.023	0	2.1	1.7	5.0
1960	4.6	33	0.66	0	-0.11	0	4.6	5.3	38
1961-07-01	0	9.4	0.18	0	-0.026	0	0	0.17	9.3
1961-08-01	0.67	8.0	0.057	0	-0.027	0	0.67	0.73	8.9
1961-09-01	3.0	5.1	-1.2	0	-0.028	0	3.0	1.7	8.1
1961-10-01	0.50	5.9	1.1	0	-0.027	0	0.50	1.6	6.3
1961-11-01	0.45	4.5	-0.033	0	-0.028	0	0.45	0.42	5.4
1961	4.6	33	0.074	0	-0.14	0	4.6	4.7	38
1962-07-01	0	9.1	0.29	0	-0.026	0	0	0.29	9.1
1962-08-01	0.61	8.2	0.17	0	-0.026	0	0.61	0.78	8.9
1962-09-01	0.49	7.8	0.19	0	-0.026	0	0.49	0.69	8.4
1962-10-01	1.2	5.2	-0.088	0	-0.025	0	1.2	1.1	6.6
1962-11-01	0.87	4.2	0.13	0	-0.025	0	0.87	1.0	5.1
1962	3.2	34	0.70	0	-0.13	0	3.2	3.9	38
1963-07-01	0	9.1	0.33	0	-0.023	0	0	0.33	9.0
1963-08-01	0.079	9.3	0.26	0	-0.024	0	0.079	0.34	9.4
1963-09-01	10	-3.2	-5.8	0	-0.024	0	10	4.7	7.5
1963-10-01	1.0	5.7	2.7	0	-0.023	0	1.0	3.8	6.6
1963-11-01	0.67	4.9	0.67	0	-0.024	0	0.67	1.3	5.8
1963	12	26	-1.8	0	-0.12	0	12	10	38
1964-07-01	0	9.3	0.23	0	-0.023	0	0	0.23	9.4
1964-08-01	1.5	7.2	-0.15	0	-0.024	0	1.5	1.3	8.8
1964-09-01	2.2	5.6	0.015	0	-0.024	0	2.2	2.2	7.7
1964-10-01	1.6	4.4	0.11	0	-0.024	0	1.6	1.7	6.1
1964-11-01	1.5	4.2	-0.22	0	-0.025	0	1.5	1.3	5.8
1964	6.8	31	-0.021	0	-0.12	0	6.8	6.7	38
1965-07-01	0.10	8.8	0.32	0	-0.024	0	0.10	0.43	8.8
1965-08-01	1.4	7.1	0.022	0	-0.025	0	1.4	1.5	8.9
1965-09-01	0.90	7.0	0.24	0	-0.025	0	0.90	1.1	8.0
1965-10-01	1.0	5.4	0.14	0	-0.024	0	1.0	1.2	6.6
1965-11-01	0.46	5.0	0.17	0	-0.025	0	0.46	0.63	5.7
1965	3.9	33	0.89	0	-0.12	0	3.9	4.8	38
1966-07-01	0.18	8.6	0.42	0	-0.024	0	0.18	0.60	9.1
1966-08-01	0.84	7.6	0.26	0	-0.026	0	0.84	1.1	8.3
1966-09-01	1.6	6.3	-0.098	0	-0.028	0	1.6	1.5	8.1
1966-10-01	2.7	3.7	-0.31	0	-0.029	0	2.7	2.4	6.5
1966-11-01	1.4	3.8	0.41	0	-0.033	0	1.4	1.8	5.1
1966	6.7	30	0.69	0	-0.14	0	6.7	7.3	37
1967-07-01	0.079	8.9	0.25	0	-0.040	0	0.079	0.33	9.0
1967-08-01	4.0	4.2	-0.80	0	-0.042	0	4.0	3.2	8.3
1967-09-01	2.5	5.6	0.020	0	-0.042	0	2.5	2.5	8.0
1967-10-01	0.56	5.7	0.41	0	-0.041	0	0.56	0.96	6.5
1967-11-01	0.42	4.8	0.31	0	-0.042	0	0.42	0.73	5.6
1967	7.5	29	0.20	0	-0.21	0	7.5	7.7	37
1968-07-01	0	9.4	0.44	0	-0.040	0	0	0.44	9.3
1968-08-01	1.8	6.9	-0.21	0	-0.043	0	1.8	1.6	8.9
1968-09-01	2.5	4.6	0.27	0	-0.043	0	2.5	2.8	7.3
1968-10-01	0.051	6.7	0.51	0	-0.044	0	0.051	0.56	6.9
1968-11-01	0.39	4.6	0.30	0	-0.048	0	0.39	0.69	5.1
1968	4.8	32	1.3	0	-0.22	0	4.8	6.1	38
1969-07-01	0	9.3	0.44	0	-0.053	0	0	0.44	9.4
1969-08-01	0.33	8.2	0.32	0	-0.055	0	0.33	0.65	8.7
1969-09-01	2.6	5.7	-0.14	0	-0.055	0	2.6	2.4	8.3
1969-10-01	1.2	5.4	0.16	0	-0.054	0	1.2	1.4	6.8
1969-11-01	0.82	4.1	0.12	0	-0.056	0	0.82	0.95	5.2
1969	5.0	33	0.90	0	-0.27	0	5.0	5.9	38

Table IV-B.35 BC3 Monsoon Period Water Balance

Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
1970-07-01	0.079	9.2	0.30	0	-0.052	0	0.079	0.38	9.1
1970-08-01	1.0	7.6	0.16	0	-0.053	0	1.0	1.2	9.1
1970-09-01	1.7	6.4	-0.067	0	-0.052	0	1.7	1.7	8.0
1970-10-01	3.3	3.2	-0.77	0	-0.050	0	3.3	2.6	7.0
1970-11-01	0	5.1	0.54	0	-0.050	0	0	0.54	5.3
1970	6.2	31	0.16	0	-0.26	0	6.2	6.4	39
1971-07-01	0	9.1	0.18	0	-0.043	0	0	0.19	9.0
1971-08-01	0.39	8.7	0.12	0	-0.043	0	0.39	0.51	9.2
1971-09-01	4.7	2.9	-1.1	0	-0.043	0	4.7	3.6	7.8
1971-10-01	2.2	3.7	-1.00	0	-0.041	0	2.2	1.2	7.1
1971-11-01	5.1	0.51	-1.0	0	-0.041	0	5.1	4.1	5.1
1971	12	25	-2.8	0	-0.21	0	12	9.5	38
1972-07-01	1.7	7.8	-0.30	0	-0.036	0	1.7	1.4	9.3
1972-08-01	0.27	9.2	0.39	0	-0.037	0	0.27	0.66	9.5
1972-09-01	2.0	6.0	-0.18	0	-0.037	0	2.0	1.8	8.4
1972-10-01	0.67	6.0	0.33	0	-0.035	0	0.67	1.00	6.8
1972-11-01	8.7	-4.2	-5.0	0	-0.036	0	8.7	3.7	4.9
1972	13	25	-4.7	0	-0.18	0	13	8.5	39
1973-07-01	0.87	8.3	0.46	0	-0.033	0	0.87	1.3	9.0
1973-08-01	2.7	5.7	-0.74	0	-0.035	0	2.7	2.0	8.9
1973-09-01	1.4	6.7	0.90	0	-0.035	0	1.4	2.3	8.1
1973-10-01	0	6.6	0.48	0	-0.034	0	0	0.48	6.7
1973-11-01	0	5.1	0.34	0	-0.036	0	0	0.33	5.6
1973	5.0	32	1.4	0	-0.17	0	5.0	6.5	38
1974-07-01	0	9.5	0.27	0	-0.038	0	0	0.28	9.4
1974-08-01	2.4	6.0	-0.30	0	-0.039	0	2.4	2.1	8.6
1974-09-01	1.4	6.5	0.28	0	-0.039	0	1.4	1.7	8.3
1974-10-01	3.4	2.9	-0.53	0	-0.038	0	3.4	2.9	6.5
1974-11-01	3.4	1.4	-1.8	0	-0.039	0	3.4	1.6	5.3
1974	11	26	-2.1	0	-0.19	0	11	8.5	38
1975-07-01	0	9.5	0.39	0	-0.036	0	0	0.39	9.6
1975-08-01	2.2	5.6	-0.059	0	-0.037	0	2.2	2.2	8.3
1975-09-01	2.0	6.3	0.084	0	-0.037	0	2.0	2.1	8.0
1975-10-01	0.91	5.6	0.32	0	-0.035	0	0.91	1.2	6.8
1975-11-01	0.24	4.8	0.28	0	-0.036	0	0.24	0.55	5.4
1975	5.4	32	1.0	0	-0.18	0	5.4	6.4	38
1976-07-01	0	9.8	0.28	0	-0.034	0	0	0.28	9.7
1976-08-01	2.8	5.2	-0.74	0	-0.035	0	2.8	2.0	8.7
1976-09-01	0.87	7.3	0.35	0	-0.034	0	0.87	1.2	7.9
1976-10-01	4.0	2.0	-1.2	0	-0.033	0	4.0	2.7	6.4
1976-11-01	0.91	3.7	0.69	0	-0.033	0	0.91	1.6	5.1
1976	8.5	28	-0.67	0	-0.17	0	8.5	7.8	38
1977-07-01	0.039	9.5	0.24	0	-0.030	0	0.039	0.28	9.5
1977-08-01	2.6	6.5	-0.54	0	-0.031	0	2.6	2.0	9.4
1977-09-01	2.4	5.6	-0.066	0	-0.030	0	2.4	2.4	8.1
1977-10-01	3.4	2.4	-0.57	0	-0.029	0	3.4	2.9	6.4
1977-11-01	1.3	3.9	0.34	0	-0.030	0	1.3	1.7	5.5
1977	9.8	28	-0.60	0	-0.15	0	9.8	9.2	39
1978-07-01	0.55	8.7	0.41	0	-0.027	0	0.55	0.94	9.4
1978-08-01	0.98	7.9	0.23	0	-0.028	0	0.98	1.2	9.4
1978-09-01	1.1	6.4	0.55	0	-0.028	0	1.1	1.6	7.3
1978-10-01	0.39	5.9	0.34	0	-0.028	0	0.39	0.71	6.6
1978-11-01	1.9	3.5	-0.64	0	-0.030	0	1.9	1.3	5.9
1978	4.9	32	0.90	0	-0.14	0	4.9	5.8	39
1979-07-01	0.35	9.1	0.71	0	-0.043	0	0.35	1.1	9.2
1979-08-01	0.16	8.8	0.54	0	-0.053	0	0.16	0.67	9.3
1979-09-01	1.5	6.1	0.30	0	-0.063	0	1.5	1.9	7.8

Table IV-B.35 BC3 Monsoon Period Water Balance

Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
1979-10-01	0.079	6.7	0.46	0	-0.068	0	0.079	0.55	7.2
1979-11-01	0.71	4.9	0.20	0	-0.076	0	0.71	0.91	5.9
1979	2.8	36	2.2	0	-0.30	0	2.8	5.0	39
1980-07-01	0.16	8.9	0.45	0	-0.089	0	0.16	0.59	9.0
1980-08-01	1.9	6.7	0.00039	0	-0.093	0	1.9	2.0	9.1
1980-09-01	1.3	6.7	0.59	0	-0.093	0	1.3	1.9	7.9
1980-10-01	0.59	6.2	0.39	0	-0.092	0	0.59	0.94	7.0
1980-11-01	0.039	5.3	0.37	0	-0.096	0	0.039	0.43	5.9
1980	4.0	34	1.8	0	-0.46	0	4.0	5.8	39
1981-07-01	0.12	9.2	0.46	0	-0.085	0	0.12	0.59	9.3
1981-08-01	2.2	6.7	-0.80	0	-0.085	0	2.2	1.4	9.3
1981-09-01	2.6	5.7	0.57	0	-0.083	0	2.6	3.2	7.9
1981-10-01	0.51	6.4	0.29	0	-0.078	0	0.51	0.79	7.5
1981-11-01	0.98	3.7	0.34	0	-0.078	0	0.98	1.3	5.2
1981	6.4	32	0.85	0	-0.41	0	6.4	7.2	39
1982-07-01	0.039	9.1	0.39	0	-0.065	0	0.039	0.43	9.1
1982-08-01	2.6	5.6	-0.48	0	-0.066	0	2.6	2.2	8.8
1982-09-01	3.8	3.3	-0.34	0	-0.065	0	3.8	3.5	6.9
1982-10-01	3.0	3.1	-0.24	0	-0.061	0	3.0	2.8	6.7
1982-11-01	0	5.0	0.70	0	-0.063	0	0	0.71	5.4
1982	9.5	26	0.031	0	-0.32	0	9.5	9.6	37
1983-07-01	0	9.6	0.46	0	-0.053	0	0	0.47	9.4
1983-08-01	2.8	6.1	-0.54	0	-0.054	0	2.8	2.2	9.5
1983-09-01	3.6	4.0	-0.17	0	-0.054	0	3.6	3.5	7.5
1983-10-01	4.1	1.4	-1.8	0	-0.052	0	4.1	2.4	7.3
1983-11-01	2.1	3.3	0.97	0	-0.054	0	2.1	3.1	4.9
1983	13	24	-1.0	0	-0.27	0	13	12	39
1984-07-01	1.3	7.7	-0.43	0	-0.052	0	1.3	0.91	9.3
1984-08-01	3.3	4.5	0.078	0	-0.054	0	3.3	3.4	7.8
1984-09-01	3.3	3.7	0.11	0	-0.054	0	3.3	3.4	7.4
1984-10-01	1.9	4.6	-0.091	0	-0.052	0	1.9	1.8	6.9
1984-11-01	1.3	3.2	0.40	0	-0.054	0	1.3	1.8	4.9
1984	11	24	0.067	0	-0.27	0	11	11	36
1985-07-01	0	8.2	0.39	0	-0.049	0	0	0.39	8.6
1985-08-01	1.2	7.6	-0.22	0	-0.050	0	1.2	0.98	8.7
1985-09-01	2.1	5.8	0.070	0	-0.050	0	2.1	2.2	8.1
1985-10-01	3.5	2.4	-0.44	0	-0.049	0	3.5	3.1	6.6
1985-11-01	1.2	3.1	0.65	0	-0.052	0	1.2	1.9	4.6
1985	8.1	27	0.46	0	-0.25	0	8.1	8.6	37
1986-07-01	0.039	9.2	0.37	0	-0.050	0	0.039	0.35	9.3
1986-08-01	4.7	3.1	-0.80	0	-0.051	0	4.7	4.0	8.5
1986-09-01	2.0	5.6	0.100	0	-0.051	0	2.0	2.1	8.0
1986-10-01	2.1	4.0	0.13	0	-0.049	0	2.1	2.2	6.5
1986-11-01	1.7	3.0	0.061	0	-0.050	0	1.7	1.8	4.8
1986	11	25	-0.13	0	-0.25	0	11	10	37
1987-07-01	0.20	9.0	0.30	0	-0.045	0	0.20	0.51	9.0
1987-08-01	2.0	6.9	-0.44	0	-0.046	0	2.0	1.6	9.0
1987-09-01	2.9	4.9	-0.090	0	-0.046	0	2.9	2.8	8.1
1987-10-01	1.3	5.2	0.29	0	-0.044	0	1.3	1.6	7.1
1987-11-01	0.35	5.2	0.40	0	-0.046	0	0.35	0.71	6.0
1987	6.7	31	0.46	0	-0.23	0	6.7	7.2	39
1988-07-01	0.16	8.5	0.38	0	-0.041	0	0.16	0.51	8.9
1988-08-01	3.4	4.9	-1.7	0	-0.042	0	3.4	1.7	8.8
1988-09-01	5.9	1.7	-0.32	0	-0.042	0	5.9	5.6	7.5
1988-10-01	0.28	6.2	1.3	0	-0.041	0	0.28	1.6	6.9
1988-11-01	1.5	3.7	0.11	0	-0.042	0	1.5	1.6	5.8
1988	11	25	-0.25	0	-0.21	0	11	11	38

Table IV-B.35 BC3 Monsoon Period Water Balance

Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
1989-07-01	0	9.3	0.26	0	-0.040	0	0	0.24	9.2
1989-08-01	0.51	8.2	0.12	0	-0.041	0	0.51	0.63	9.3
1989-09-01	0.91	6.9	0.17	0	-0.041	0	0.91	1.1	7.8
1989-10-01	1.5	5.2	-0.12	0	-0.039	0	1.5	1.4	7.3
1989-11-01	1.1	4.1	0.14	0	-0.041	0	1.1	1.2	5.9
1989	4.0	34	0.58	0	-0.20	0	4.0	4.5	39
1990-07-01	0.28	8.9	0.21	0	-0.037	0	0.28	0.47	9.3
1990-08-01	1.5	6.5	-0.017	0	-0.037	0	1.5	1.5	8.6
1990-09-01	9.0	-1.5	-3.2	0	-0.037	1.8	7.2	4.0	7.4
1990-10-01	2.8	3.5	0.10	0	-0.035	0	2.8	3.0	6.8
1990-11-01	0.28	4.6	0.98	0	-0.036	0	0.28	1.2	5.3
1990	14	22	-1.9	0	-0.18	1.8	12	10	37
1991-07-01	0.63	8.8	0.41	0	-0.033	0	0.63	1.0	9.2
1991-08-01	1.7	7.1	-0.30	0	-0.034	0	1.7	1.4	9.3
1991-09-01	2.8	5.2	0.30	0	-0.034	0	2.8	3.0	8.3
1991-10-01	1.6	4.7	0.24	0	-0.034	0	1.6	1.8	6.5
1991-11-01	1.2	4.6	-0.49	0	-0.035	0	1.2	0.75	6.6
1991	7.9	30	0.16	0	-0.17	0	7.9	8.0	40
1992-07-01	1.3	7.9	0.74	0	-0.038	0	1.3	2.0	8.9
1992-08-01	3.3	5.5	-1.1	0	-0.039	0	3.3	2.2	9.3
1992-09-01	5.3	2.2	-0.47	0	-0.041	0	5.3	4.8	7.8
1992-10-01	0.87	5.9	1.2	0	-0.041	0	0.87	2.1	6.7
1992-11-01	1.2	4.1	0.056	0	-0.044	0	1.2	1.3	6.2
1992	12	26	0.46	0	-0.20	0	12	12	39
1993-07-01	0	9.2	0.93	0	-0.12	0	0	0.94	9.3
1993-08-01	0.24	8.5	0.69	0	-0.17	0	0.24	0.94	8.9
1993-09-01	3.4	4.1	-0.51	0	-0.20	0	3.4	2.9	8.5
1993-10-01	0.16	6.3	1.2	0	-0.21	0	0.16	1.3	6.4
1993-11-01	0.83	4.4	0.46	0	-0.23	0	0.83	1.3	6.0
1993	4.6	33	2.8	0	-0.92	0	4.6	7.4	39
1994-07-01	0.35	8.6	0.42	0	-0.18	0	0.35	0.79	8.9
1994-08-01	1.5	7.4	-0.59	0	-0.18	0	1.5	0.87	9.1
1994-09-01	0.67	7.5	1.0	0	-0.18	0	0.67	1.7	8.6
1994-10-01	2.0	4.4	0.012	0	-0.16	0	2.0	1.9	6.6
1994-11-01	1.8	2.8	-0.32	0	-0.16	0	1.8	1.5	5.3
1994	6.3	31	0.54	0	-0.86	0	6.3	6.9	39
1995-07-01	0	9.3	0.45	0	-0.11	0	0	0.47	9.0
1995-08-01	0.039	9.1	0.37	0	-0.12	0	0.039	0.39	9.3
1995-09-01	3.9	4.3	-0.71	0	-0.11	0	3.9	3.1	8.8
1995-10-01	2.7	3.8	-0.71	0	-0.11	0	2.7	2.0	7.2
1995-11-01	0	5.3	1.3	0	-0.11	0	0	1.3	5.8
1995	6.6	32	0.71	0	-0.56	0	6.6	7.4	40
1996-07-01	0.39	8.6	0.16	0	-0.089	0	0.39	0.55	9.1
1996-08-01	2.4	6.3	-0.15	0	-0.088	0	2.4	2.2	8.9
1996-09-01	1.3	6.6	0.17	0	-0.086	0	1.3	1.4	8.1
1996-10-01	3.0	2.8	-0.18	0	-0.080	0	3.0	2.9	6.7
1996-11-01	0.43	5.1	0.37	0	-0.080	0	0.43	0.79	6.0
1996	7.4	29	0.36	0	-0.42	0	7.4	7.8	39
1997-07-01	0.039	9.1	0.25	0	-0.064	0	0.039	0.28	9.0
1997-08-01	0.12	9.4	0.21	0	-0.065	0	0.12	0.31	9.9
1997-09-01	2.6	5.4	-0.30	0	-0.063	0	2.6	2.3	8.5
1997-10-01	0	7.0	0.37	0	-0.060	0	0	0.35	7.3
1997-11-01	0.75	4.1	0.046	0	-0.060	0	0.75	0.79	6.0
1997	3.5	35	0.57	0	-0.31	0	3.5	4.0	41
1998-07-01	0	9.2	0.44	0	-0.048	0	0	0.47	9.2
1998-08-01	1.7	7.0	0.071	0	-0.048	0	1.7	1.8	9.1
1998-09-01	2.4	5.4	0.078	0	-0.047	0	2.4	2.5	8.3

Table IV-B.35 BC3 Monsoon Period Water Balance

Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
1998-10-01	1.3	5.3	0.20	0	-0.045	0	1.3	1.5	7.0
1998-11-01	0	5.4	0.36	0	-0.046	0	0	0.35	6.3
1998	5.5	32	1.1	0	-0.23	0	5.5	6.6	40
1999-07-01	0	9.2	0.27	0	-0.041	0	0	0.28	9.1
1999-08-01	5.8	2.1	-1.8	0	-0.041	0	5.8	4.0	8.7
1999-09-01	2.8	4.8	0.16	0	-0.041	0	2.8	3.0	7.8
1999-10-01	1.1	5.4	0.99	0	-0.040	0	1.1	2.1	6.8
1999-11-01	0	5.6	0.42	0	-0.041	0	0	0.39	6.2
1999	9.8	27	0.027	0	-0.20	0	9.8	9.8	39
2000-07-01	0.79	8.3	0.055	0	-0.035	0	0.79	0.87	9.5
2000-08-01	0.079	9.5	0.25	0	-0.037	0	0.079	0.31	9.5
2000-09-01	0.67	6.9	0.11	0	-0.035	0	0.67	0.79	8.7
2000-10-01	0	6.9	0.20	0	-0.035	0	0	0.20	6.8
2000-11-01	5.3	-0.87	-3.7	0	-0.035	0	5.3	1.7	5.9
2000	6.8	31	-3.0	0	-0.18	0	6.8	3.8	40
2001-07-01	0	9.3	0.36	0	-0.030	0	0	0.39	9.2
2001-08-01	2.7	6.2	-1.5	0	-0.031	0	2.7	1.1	9.7
2001-09-01	3.3	4.3	0.73	0	-0.030	0	3.3	4.1	7.6
2001-10-01	0.12	6.3	0.55	0	-0.030	0	0.12	0.67	7.3
2001-11-01	0.39	4.5	0.31	0	-0.030	0	0.39	0.71	5.5
2001	6.6	31	0.41	0	-0.15	0	6.6	7.0	39
2002-07-01	0	9.6	0.16	0	-0.029	0	0	0.16	9.2
2002-08-01	0.31	8.8	0.11	0	-0.030	0	0.31	0.43	9.7
2002-09-01	0.43	7.4	0.041	0	-0.030	0	0.43	0.51	8.1
2002-10-01	1.2	5.4	-0.013	0	-0.029	0	1.2	1.2	7.1
2002-11-01	0.079	5.0	0.20	0	-0.030	0	0.079	0.28	6.1
2002	2.0	36	0.50	0	-0.15	0	2.0	2.6	40
2003-07-01	0	10	0.28	0	-0.026	0	0	0.28	10.0
2003-08-01	0.51	8.7	0.20	0	-0.026	0	0.51	0.67	10
2003-09-01	1.3	6.9	-0.060	0	-0.026	0	1.3	1.2	8.5
2003-10-01	2.0	4.9	0.048	0	-0.024	0	2.0	2.0	7.4
2003-11-01	0.079	5.5	0.30	0	-0.025	0	0.079	0.35	6.0
2003	3.8	36	0.77	0	-0.13	0	3.8	4.5	42
2004-07-01	0	10	0.24	0	-0.022	0	0	0.24	10
2004-08-01	0.55	8.8	0.13	0	-0.022	0	0.55	0.67	9.8
2004-09-01	2.1	6.1	-0.17	0	-0.022	0	2.1	1.9	8.6
2004-10-01	1.5	5.6	-0.18	0	-0.021	0	1.5	1.3	7.9
2004-11-01	1.2	3.8	-0.12	0	-0.022	0	1.2	1.1	6.1
2004	5.4	34	-0.089	0	-0.11	0	5.4	5.3	42
2005-07-01	0.079	9.8	0.44	0	-0.020	0	0.079	0.51	9.7
2005-08-01	1.4	7.9	-0.19	0	-0.020	0	1.4	1.2	11
2005-09-01	4.7	3.0	-0.36	0	-0.020	0	4.7	4.3	7.3
2005-10-01	0.079	6.6	0.64	0	-0.020	0	0.079	0.71	7.4
2005-11-01	0.43	4.8	0.32	0	-0.021	0	0.43	0.75	6.1
2005	6.7	32	0.84	0	-0.10	0	6.7	7.5	41
2006-07-01	0.51	9.1	0.11	0	-0.024	0	0.51	0.59	10
2006-08-01	3.1	4.8	-1.9	0	-0.024	0	3.1	1.3	9.2
2006-09-01	2.9	5.1	1.1	0	-0.024	0	2.9	4.0	7.4
2006-10-01	1.1	5.2	0.34	0	-0.024	0	1.1	1.5	6.9
2006-11-01	1.0	3.9	0.24	0	-0.025	0	1.0	1.3	5.9
2006	8.7	28	-0.15	0	-0.12	0	8.7	8.6	40

Table IV-B.36 BC3 Winter Storm Period Water Balance

Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
1951-11-01	0	3.7	-0.52	0	-0.034	0	1.6	1.1	5.4
1951-12-01	1.7	2.0	0.52	0	-0.033	0	1.7	2.2	3.7
1952-01-01	3.0	-0.26	-1.3	0	-0.034	0	3.0	1.7	2.8
1952-02-01	2.8	0.10	-0.021	0	-0.034	0	2.8	2.8	2.9
1952-03-01	0.50	3.3	0.95	0	-0.032	0	0.50	1.5	3.8
1952	8.0	8.9	-0.41	0	-0.17	0	9.7	9.2	19
1952-11-01	0	5.9	0.30	0	-0.033	0	0	0.30	5.9
1952-12-01	4.3	-1.0	-2.8	0	-0.032	0	4.3	1.5	3.3
1953-01-01	2.0	0.64	0.40	0	-0.033	0	2.0	2.4	2.7
1953-02-01	0.74	2.7	0.86	0	-0.034	0	0.74	1.6	3.3
1953-03-01	0.60	3.2	0.25	0	-0.030	0	0.60	0.85	3.8
1953	7.6	11	-0.95	0	-0.16	0	7.6	6.7	19
1953-11-01	0.012	5.4	0.32	0	-0.034	0	0.012	0.33	5.5
1953-12-01	0.56	3.4	0.085	0	-0.033	0	0.56	0.65	3.9
1954-01-01	0.19	2.7	0.27	0	-0.034	0	0.19	0.46	2.9
1954-02-01	2.4	0.89	-0.83	0	-0.034	0	2.4	1.6	3.2
1954-03-01	0.72	3.5	0.42	0	-0.030	0	0.72	1.1	4.2
1954	3.9	16	0.26	0	-0.16	0	3.9	4.2	20
1954-11-01	0	5.6	0.69	0	-0.032	0	0	0.69	5.6
1954-12-01	0.091	4.1	0.33	0	-0.031	0	0.091	0.42	4.3
1955-01-01	0.29	3.2	0.31	0	-0.032	0	0.29	0.60	3.5
1955-02-01	3.4	-1.0	-1.4	0	-0.032	0	3.4	2.0	2.4
1955-03-01	0.28	3.3	0.79	0	-0.029	0	0.28	1.1	3.5
1955	4.1	15	0.69	0	-0.16	0	4.1	4.8	19
1955-11-01	0.020	5.8	0.37	0	-0.031	0	0.020	0.39	5.9
1955-12-01	0.96	2.7	-0.018	0	-0.030	0	0.96	0.95	3.7
1956-01-01	1.4	1.8	-0.076	0	-0.031	0	1.4	1.3	3.1
1956-02-01	2.6	0.85	-1.6	0	-0.031	0	2.6	1.0	3.5
1956-03-01	2.0	1.2	0.48	0	-0.029	0	2.0	2.5	3.1
1956	7.0	12	-0.81	0	-0.15	0	7.0	6.2	19
1956-11-01	0.53	4.5	0.058	0	-0.030	0	0.53	0.59	5.2
1956-12-01	0	3.8	0.39	0	-0.029	0	0	0.39	3.8
1957-01-01	0.47	2.6	0.096	0	-0.029	0	0.47	0.57	3.1
1957-02-01	4.8	-2.3	-2.9	0	-0.029	0	4.8	1.9	2.7
1957-03-01	0.73	2.9	1.3	0	-0.026	0	0.73	2.0	3.4
1957	6.5	12	-1.0	0	-0.14	0	6.5	5.5	18
1957-11-01	3.2	1.1	-1.6	0	-0.027	0	3.2	1.6	4.6
1957-12-01	0.61	2.5	1.1	0	-0.026	0	0.61	1.7	3.0
1958-01-01	1.1	2.1	0.20	0	-0.026	0	1.1	1.3	3.2
1958-02-01	0.012	3.4	0.37	0	-0.026	0	0.012	0.38	3.3
1958-03-01	2.5	0.69	-0.77	0	-0.023	0	2.5	1.7	3.2
1958	7.4	9.8	-0.75	0	-0.13	0	7.4	6.7	17
1958-11-01	1.9	3.2	0.17	0	-0.024	0	1.9	2.1	5.3
1958-12-01	1.5	2.2	-0.19	0	-0.023	0	1.5	1.3	3.6
1959-01-01	0	3.5	0.54	0	-0.023	0	0	0.54	3.6
1959-02-01	0.21	3.3	0.29	0	-0.023	0	0.21	0.50	3.5
1959-03-01	1.4	1.9	-0.21	0	-0.021	0	1.4	1.2	3.3
1959	5.1	14	0.60	0	-0.11	0	5.1	5.7	19
1959-11-01	4.8	0.35	-3.6	0	-0.022	0.21	4.6	0.98	5.3
1959-12-01	0.38	3.4	2.2	0	-0.022	0	0.38	2.5	3.7
1960-01-01	5.2	-2.6	-3.3	0	-0.022	0	5.2	1.9	2.7
1960-02-01	4.1	-1.6	-1.6	0	-0.022	0	4.1	2.5	2.5

Table IV-B.36 BC3 Winter Storm Period Water Balance

Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
1960-03-01	0.87	2.5	1.7	0	-0.020	0	0.87	2.6	3.4
1960	15	2.0	-4.7	0	-0.11	0.21	15	11	18
1960-11-01	2.1	2.8	-0.38	0	-0.023	0	2.1	1.7	5.0
1960-12-01	0.48	3.1	0.39	0	-0.023	0	0.48	0.88	3.7
1961-01-01	0.47	2.7	0.20	0	-0.024	0	0.47	0.67	3.3
1961-02-01	0.70	2.4	-0.095	0	-0.024	0	0.70	0.61	3.2
1961-03-01	0.22	3.8	0.44	0	-0.023	0	0.22	0.67	3.7
1961	3.9	15	0.56	0	-0.12	0	3.9	4.5	19
1961-11-01	0.45	4.5	-0.033	0	-0.028	0	0.45	0.42	5.4
1961-12-01	0.32	2.9	0.36	0	-0.027	0	0.32	0.68	3.1
1962-01-01	3.9	-1.3	-1.9	0	-0.028	0	3.9	1.9	2.6
1962-02-01	3.2	-0.51	-1.5	0	-0.028	0	3.2	1.7	2.7
1962-03-01	1.7	1.4	0.35	0	-0.025	0	1.7	2.0	3.2
1962	9.5	7.0	-2.8	0	-0.14	0	9.5	6.7	17
1962-11-01	0.87	4.2	0.13	0	-0.025	0	0.87	1.0	5.1
1962-12-01	0.83	3.1	0.032	0	-0.024	0	0.83	0.86	3.9
1963-01-01	1.8	1.3	-0.53	0	-0.025	0	1.8	1.3	3.3
1963-02-01	2.1	0.98	-0.083	0	-0.025	0	2.1	2.0	3.0
1963-03-01	4.2	-0.31	-2.0	0	-0.022	0	4.2	2.2	3.8
1963	9.8	9.3	-2.5	0	-0.12	0	9.8	7.4	19
1963-11-01	0.67	4.9	0.67	0	-0.024	0	0.67	1.3	5.8
1963-12-01	2.3	1.2	-0.23	0	-0.022	0	2.3	2.1	3.6
1964-01-01	0.34	3.0	0.73	0	-0.024	0	0.34	1.1	3.3
1964-02-01	0.58	2.4	0.24	0	-0.023	0	0.58	0.81	3.0
1964-03-01	0	3.6	0.41	0	-0.022	0	0	0.41	3.6
1964	3.9	15	1.8	0	-0.11	0	3.9	5.8	19
1964-11-01	1.5	4.2	-0.22	0	-0.025	0	1.5	1.3	5.8
1964-12-01	1.4	2.1	-0.15	0	-0.024	0	1.4	1.2	3.6
1965-01-01	1.7	1.3	-0.45	0	-0.025	0	1.7	1.2	3.3
1965-02-01	2.9	0	-0.45	0	-0.025	0	2.9	2.4	2.6
1965-03-01	2.8	0.83	-0.68	0	-0.023	0	2.8	2.1	3.4
1965	10	8.4	-2.0	0	-0.12	0	10	8.4	19
1965-11-01	0.46	5.0	0.17	0	-0.025	0	0.46	0.63	5.7
1965-12-01	2.4	1.4	-1.5	0	-0.024	0	2.4	0.87	3.9
1966-01-01	10	-7.9	-8.5	0	-0.025	0	10	2.0	2.7
1966-02-01	1.8	0.98	0.95	0	-0.024	0	1.8	2.8	2.8
1966-03-01	2.0	1.3	1.0	0	-0.022	0	2.0	3.0	3.1
1966	17	0.75	-7.8	0	-0.12	0	17	9.3	18
1966-11-01	1.4	3.8	0.41	0	-0.033	0	1.4	1.8	5.1
1966-12-01	0.88	2.9	0.25	0	-0.033	0	0.88	1.1	4.1
1967-01-01	1.3	1.8	-0.0075	0	-0.037	0	1.3	1.2	3.1
1967-02-01	0.79	2.4	0.21	0	-0.038	0	0.79	1.0	2.9
1967-03-01	0	3.9	0.47	0	-0.035	0	0	0.47	3.9
1967	4.3	15	1.3	0	-0.18	0	4.3	5.6	19
1967-11-01	0.42	4.8	0.31	0	-0.042	0	0.42	0.73	5.6
1967-12-01	2.1	1.6	-1.3	0	-0.041	0	2.1	0.83	3.9
1968-01-01	10.0	-7.6	-7.4	0	-0.041	0.56	9.4	2.1	2.3
1968-02-01	0.63	2.5	2.2	0	-0.041	0	0.63	2.8	3.1
1968-03-01	1.9	1.9	0.64	0	-0.038	0	1.9	2.6	3.4
1968	15	3.1	-5.5	0	-0.20	0.56	15	9.0	18
1968-11-01	0.39	4.6	0.30	0	-0.048	0	0.39	0.69	5.1
1968-12-01	2.5	0.91	-0.66	0	-0.049	0	2.5	1.9	3.8

Table IV-B.36 BC3 Winter Storm Period Water Balance

Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
1969-01-01	3.3	-0.43	-1.9	0	-0.052	0	3.3	1.4	2.9
1969-02-01	4.2	-1.4	-1.7	0	-0.053	0	4.2	2.4	2.6
1969-03-01	1.4	1.8	1.5	0	-0.048	0	1.4	2.8	3.0
1969	12	5.5	-2.5	0	-0.25	0	12	9.2	17
1969-11-01	0.82	4.1	0.12	0	-0.056	0	0.82	0.95	5.2
1969-12-01	2.1	1.3	-0.34	0	-0.054	0	2.1	1.8	3.6
1970-01-01	1.3	1.9	-0.027	0	-0.056	0	1.3	1.3	3.4
1970-02-01	0.50	2.7	0.57	0	-0.056	0	0.50	1.1	2.9
1970-03-01	0.41	3.3	0.29	0	-0.050	0	0.41	0.70	3.6
1970	5.2	13	0.62	0	-0.27	0	5.2	5.8	19
1970-11-01	0	5.1	0.54	0	-0.050	0	0	0.54	5.3
1970-12-01	0.65	3.1	-0.12	0	-0.048	0	0.65	0.53	3.9
1971-01-01	1.2	1.7	0.094	0	-0.049	0	1.2	1.3	3.0
1971-02-01	0.85	2.7	0.29	0	-0.048	0	0.85	1.1	3.1
1971-03-01	0.82	2.9	0.039	0	-0.043	0	0.82	0.86	4.0
1971	3.5	15	0.85	0	-0.24	0	3.5	4.4	19
1971-11-01	5.1	0.51	-1.0	0	-0.041	0	5.1	4.1	5.1
1971-12-01	0.039	3.7	1.1	0	-0.040	0	0.039	1.1	3.7
1972-01-01	2.1	0.79	-0.28	0	-0.040	0	2.1	1.8	3.0
1972-02-01	0	3.3	0.77	0	-0.040	0	0	0.77	3.2
1972-03-01	0	4.6	0.35	0	-0.037	0	0	0.35	4.1
1972	7.2	13	0.93	0	-0.20	0	7.2	8.2	19
1972-11-01	8.7	-4.2	-5.0	0	-0.036	0	8.7	3.7	4.9
1972-12-01	2.8	0.31	0.29	0	-0.034	0	2.8	3.1	3.2
1973-01-01	3.0	-0.31	-0.78	0	-0.035	0	3.0	2.2	2.9
1973-02-01	0.74	2.0	1.5	0	-0.035	0	0.74	2.3	2.6
1973-03-01	3.2	0.079	-0.69	0	-0.031	0	3.2	2.5	2.8
1973	18	-2.0	-4.6	0	-0.17	0	18	14	16
1973-11-01	0	5.1	0.34	0	-0.036	0	0	0.33	5.6
1973-12-01	1.8	1.9	-0.55	0	-0.036	0	1.8	1.2	3.9
1974-01-01	0.094	3.3	0.65	0	-0.037	0	0.094	0.75	3.3
1974-02-01	3.4	-0.55	-1.1	0	-0.038	0	3.4	2.3	2.9
1974-03-01	0.12	3.6	0.64	0	-0.035	0	0.12	0.79	3.3
1974	5.4	13	0.021	0	-0.18	0	5.4	5.4	19
1974-11-01	3.4	1.4	-1.8	0	-0.039	0	3.4	1.6	5.3
1974-12-01	0.12	3.6	1.7	0	-0.038	0	0.12	1.8	3.6
1975-01-01	0.75	2.0	0.31	0	-0.039	0	0.75	1.1	3.1
1975-02-01	0.39	2.3	0.22	0	-0.039	0	0.39	0.63	2.6
1975-03-01	3.9	-0.35	-1.8	0	-0.035	0	3.9	2.2	3.0
1975	8.6	9.0	-1.4	0	-0.19	0	8.6	7.2	18
1975-11-01	0.24	4.8	0.28	0	-0.036	0	0.24	0.55	5.4
1975-12-01	2.2	1.8	-1.7	0	-0.035	0	2.2	0.47	4.2
1976-01-01	1.3	1.8	0.95	0	-0.036	0	1.3	2.2	3.1
1976-02-01	0.24	2.8	0.55	0	-0.035	0	0.24	0.75	2.9
1976-03-01	1.6	2.2	-0.096	0	-0.033	0	1.6	1.5	3.4
1976	5.5	13	-0.0098	0	-0.18	0	5.5	5.5	19
1976-11-01	0.91	3.7	0.69	0	-0.033	0	0.91	1.6	5.1
1976-12-01	0.55	3.2	0.32	0	-0.033	0	0.55	0.87	4.0
1977-01-01	1.8	1.2	-1.1	0	-0.033	0	1.8	0.71	3.1
1977-02-01	1.9	0.87	0.38	0	-0.033	0	1.9	2.3	2.5
1977-03-01	0.079	4.3	0.61	0	-0.029	0	0.079	0.71	4.1
1977	5.3	13	0.90	0	-0.16	0	5.3	6.2	19

Table IV-B.36 BC3 Winter Storm Period Water Balance

Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
1977-11-01	1.3	3.9	0.34	0	-0.030	0	1.3	1.7	5.5
1977-12-01	0.35	3.5	0.52	0	-0.029	0	0.35	0.87	3.9
1978-01-01	0.63	2.5	-0.064	0	-0.029	0	0.63	0.59	3.5
1978-02-01	6.4	-3.7	-4.4	0	-0.029	0	6.4	2.0	2.5
1978-03-01	5.5	-2.2	-2.3	0	-0.026	0	5.5	3.2	2.9
1978	14	3.9	-5.9	0	-0.14	0	14	8.3	18
1978-11-01	1.9	3.5	-0.64	0	-0.030	0	1.9	1.3	5.9
1978-12-01	5.6	-2.4	-3.4	0	-0.030	0	5.6	2.2	3.7
1979-01-01	6.5	-3.9	-3.9	0	-0.032	0.045	6.5	2.6	2.5
1979-02-01	5.9	-3.9	-3.8	0	-0.034	0	5.9	2.2	2.3
1979-03-01	1.3	2.8	2.4	0	-0.031	0	1.3	3.7	3.3
1979	21	-3.9	-9.3	0	-0.16	0.045	21	12	18
1979-11-01	0.71	4.9	0.20	0	-0.076	0	0.71	0.91	5.9
1979-12-01	0.67	3.0	0.32	0	-0.080	0	0.67	0.98	4.0
1980-01-01	0.71	2.8	0.081	0	-0.087	0	0.71	0.79	3.7
1980-02-01	4.1	-1.7	-2.3	0	-0.091	0	4.1	1.8	2.4
1980-03-01	6.0	-2.9	-3.3	0	-0.087	0	6.0	2.8	2.4
1980	12	6.1	-5.0	0	-0.42	0	12	7.2	18
1980-11-01	0.039	5.3	0.37	0	-0.096	0	0.039	0.43	5.9
1980-12-01	0	4.1	0.30	0	-0.094	0	0	0.28	4.3
1981-01-01	0.55	3.1	0.20	0	-0.096	0	0.55	0.75	3.5
1981-02-01	1.3	2.0	-0.17	0	-0.096	0	1.3	1.2	3.5
1981-03-01	2.6	1.3	-0.86	0	-0.086	0	2.6	1.8	3.6
1981	4.6	16	-0.16	0	-0.47	0	4.6	4.4	21
1981-11-01	0.98	3.7	0.34	0	-0.078	0	0.98	1.3	5.2
1981-12-01	2.3	1.6	-1.9	0	-0.074	0	2.3	0.43	4.4
1982-01-01	0	3.5	1.6	0	-0.075	0	0	1.6	3.3
1982-02-01	2.7	0	-0.45	0	-0.074	0	2.7	2.3	2.8
1982-03-01	1.8	1.7	0.087	0	-0.065	0	1.8	1.9	3.1
1982	7.8	11	-0.31	0	-0.36	0	7.8	7.5	19
1982-11-01	0	5.0	0.70	0	-0.063	0	0	0.71	5.4
1982-12-01	3.3	-0.28	-1.4	0	-0.060	0	3.3	1.9	3.6
1983-01-01	1.7	1.1	0.65	0	-0.060	0	1.7	2.4	2.7
1983-02-01	1.9	1.3	-0.91	0	-0.059	0	1.9	0.98	3.2
1983-03-01	2.3	0.98	0.019	0	-0.053	0	2.3	2.4	2.8
1983	9.2	8.1	-0.96	0	-0.29	0	9.2	8.3	18
1983-11-01	2.1	3.3	0.97	0	-0.054	0	2.1	3.1	4.9
1983-12-01	2.0	1.6	-0.58	0	-0.052	0	2.0	1.5	3.8
1984-01-01	2.5	0.12	-0.26	0	-0.054	0	2.5	2.2	2.7
1984-02-01	0.47	2.8	1.1	0	-0.054	0	0.47	1.6	2.8
1984-03-01	0	4.0	0.53	0	-0.050	0	0	0.55	3.9
1984	7.1	12	1.8	0	-0.26	0	7.1	8.9	18
1984-11-01	1.3	3.2	0.40	0	-0.054	0	1.3	1.8	4.9
1984-12-01	2.1	1.7	-1.2	0	-0.052	0	2.1	0.87	4.2
1985-01-01	5.8	-3.3	-3.5	0	-0.053	0	5.8	2.3	2.5
1985-02-01	2.7	-0.31	-0.31	0	-0.053	0	2.7	2.4	2.5
1985-03-01	1.7	1.2	0.97	0	-0.047	0	1.7	2.6	2.5
1985	14	2.4	-3.6	0	-0.26	0	14	9.9	17
1985-11-01	1.2	3.1	0.65	0	-0.052	0	1.2	1.9	4.6
1985-12-01	2.8	0.43	-1.5	0	-0.050	0	2.8	1.3	3.9
1986-01-01	0.91	2.5	1.2	0	-0.053	0	0.91	2.1	3.1
1986-02-01	0.079	3.7	0.46	0	-0.053	0	0.079	0.55	3.6

Table IV-B.36 BC3 Winter Storm Period Water Balance

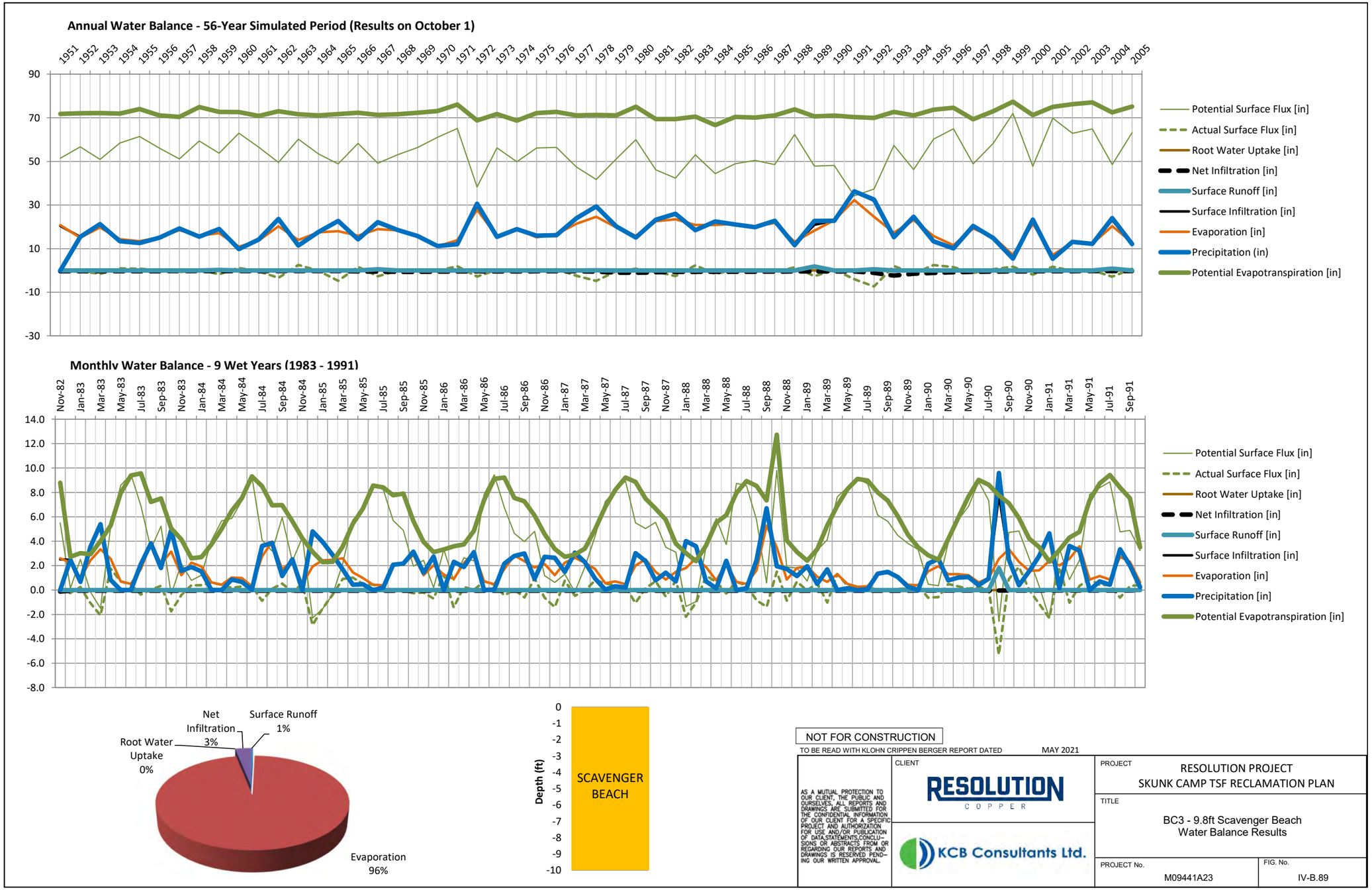
Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
1986-03-01	3.1	0.079	-0.77	0	-0.048	0	3.1	2.3	2.9
1986	8.0	9.8	0.074	0	-0.26	0	8.0	8.1	18
1986-11-01	1.7	3.0	0.061	0	-0.050	0	1.7	1.8	4.8
1986-12-01	1.4	1.9	0.23	0	-0.048	0	1.4	1.7	3.7
1987-01-01	3.0	-0.16	-0.94	0	-0.050	0	3.0	2.1	2.9
1987-02-01	3.3	-0.35	-0.97	0	-0.049	0	3.3	2.4	2.8
1987-03-01	2.7	0.55	-0.92	0	-0.044	0	2.7	1.8	3.5
1987	12	5.0	-2.5	0	-0.24	0	12	9.7	18
1987-11-01	0.35	5.2	0.40	0	-0.046	0	0.35	0.71	6.0
1987-12-01	1.8	1.9	-0.11	0	-0.044	0	1.8	1.7	3.8
1988-01-01	4.0	-1.1	-2.3	0	-0.045	0	4.0	1.7	3.2
1988-02-01	3.6	-0.87	-0.96	0	-0.045	0	3.6	2.6	2.5
1988-03-01	0.71	3.3	1.2	0	-0.042	0	0.71	2.0	3.4
1988	10	8.4	-1.7	0	-0.22	0	10	8.7	19
1988-11-01	1.5	3.7	0.11	0	-0.042	0	1.5	1.6	5.8
1988-12-01	1.7	1.9	-0.58	0	-0.041	0	1.7	1.2	4.0
1989-01-01	1.1	1.8	0.62	0	-0.042	0	1.1	1.7	3.1
1989-02-01	2.2	0.59	-0.30	0	-0.042	0	2.2	1.9	2.7
1989-03-01	0.31	3.6	0.56	0	-0.038	0	0.31	0.87	3.1
1989	6.9	12	0.41	0	-0.20	0	6.9	7.2	19
1989-11-01	1.1	4.1	0.14	0	-0.041	0	1.1	1.2	5.9
1989-12-01	0.28	3.6	0.19	0	-0.039	0	0.28	0.51	4.2
1990-01-01	0.91	2.4	-0.47	0	-0.040	0	0.91	0.39	3.4
1990-02-01	1.3	1.5	0.29	0	-0.040	0	1.3	1.6	2.7
1990-03-01	2.6	0.67	-0.45	0	-0.035	0	2.6	2.1	2.6
1990	6.1	12	-0.29	0	-0.20	0	6.1	5.7	19
1990-11-01	0.28	4.6	0.98	0	-0.036	0	0.28	1.2	5.3
1990-12-01	2.2	1.5	-0.052	0	-0.034	0	2.2	2.1	4.2
1991-01-01	4.8	-2.3	-3.4	0	-0.035	0	4.8	1.5	3.0
1991-02-01	1.8	1.2	0.99	0	-0.035	0	1.8	2.8	2.6
1991-03-01	0.94	3.3	0.61	0	-0.031	0	0.94	1.6	3.3
1991	10	8.3	-0.83	0	-0.17	0	10	9.2	18
1991-11-01	1.2	4.6	-0.49	0	-0.035	0	1.2	0.75	6.6
1991-12-01	3.2	0.12	-1.2	0	-0.035	0	3.2	2.1	3.6
1992-01-01	4.0	-1.3	-1.5	0	-0.037	0	4.0	2.5	2.9
1992-02-01	3.0	-0.28	-0.35	0	-0.037	0	3.0	2.6	2.2
1992-03-01	2.8	0.63	-0.15	0	-0.035	0	2.8	2.6	3.0
1992	14	3.7	-3.6	0	-0.18	0	14	11	18
1992-11-01	1.2	4.1	0.056	0	-0.044	0	1.2	1.3	6.2
1992-12-01	0.51	2.8	0.86	0	-0.045	0	0.51	1.4	3.6
1993-01-01	6.3	-4.0	-4.2	0	-0.049	0	6.3	2.1	2.5
1993-02-01	11	-9.0	-8.5	0	-0.052	0.56	11	2.2	1.9
1993-03-01	5.9	-3.5	-3.5	0	-0.048	0	5.9	2.5	2.7
1993	25	-9.6	-15	0	-0.24	0.56	25	9.4	17
1993-11-01	0.83	4.4	0.46	0	-0.23	0	0.83	1.3	6.0
1993-12-01	4.2	-0.87	-2.2	0	-0.22	0	4.2	2.0	3.6
1994-01-01	0.28	2.8	1.3	0	-0.22	0	0.28	1.6	3.4
1994-02-01	0.28	3.2	0.64	0	-0.22	0	0.28	0.91	3.3
1994-03-01	2.6	0.59	-0.51	0	-0.19	0	2.6	2.1	3.0
1994	8.2	10	-0.29	0	-1.1	0	8.2	7.9	19
1994-11-01	1.8	2.8	-0.32	0	-0.16	0	1.8	1.5	5.3
1994-12-01	3.4	-0.39	-0.88	0	-0.15	0	3.4	2.5	3.5

Table IV-B.36 BC3 Winter Storm Period Water Balance

Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
1995-01-01	2.7	0.079	-0.56	0	-0.15	0	2.7	2.1	3.0
1995-02-01	3.7	-0.79	-0.81	0	-0.14	0	3.7	2.8	2.6
1995-03-01	2.7	0.79	-0.33	0	-0.12	0	2.7	2.4	3.1
1995	14	2.5	-2.9	0	-0.71	0	14	11	18
1995-11-01	0	5.3	1.3	0	-0.11	0	0	1.3	5.8
1995-12-01	1.3	2.4	0.14	0	-0.11	0	1.3	1.5	3.9
1996-01-01	0.91	2.3	0.13	0	-0.11	0	0.91	1.0	3.5
1996-02-01	0	3.5	0.46	0	-0.10	0	0	0.47	3.3
1996-03-01	3.1	0.55	-1.1	0	-0.095	0	3.1	2.1	3.6
1996	5.4	14	0.96	0	-0.52	0	5.4	6.3	20
1996-11-01	0.43	5.1	0.37	0	-0.080	0	0.43	0.79	6.0
1996-12-01	1.2	2.4	-0.38	0	-0.075	0	1.2	0.83	3.8
1997-01-01	0.039	3.1	0.76	0	-0.076	0	0.039	0.79	3.2
1997-02-01	2.8	-0.079	-1.00	0	-0.074	0	2.8	1.9	2.7
1997-03-01	1.7	2.1	-0.70	0	-0.065	0	1.7	0.98	3.4
1997	6.2	13	-0.95	0	-0.37	0	6.2	5.2	19
1997-11-01	0.75	4.1	0.046	0	-0.060	0	0.75	0.79	6.0
1997-12-01	0.79	2.7	0.061	0	-0.057	0	0.79	0.87	3.7
1998-01-01	2.7	-0.039	-0.89	0	-0.058	0	2.7	1.8	3.1
1998-02-01	0.39	2.7	0.67	0	-0.056	0	0.39	1.0	2.4
1998-03-01	6.4	-3.8	-4.1	0	-0.050	0	6.4	2.3	2.9
1998	11	5.6	-4.3	0	-0.28	0	11	6.8	18
1998-11-01	0	5.4	0.36	0	-0.046	0	0	0.35	6.3
1998-12-01	1.1	2.7	-0.60	0	-0.043	0	1.1	0.47	3.9
1999-01-01	0.71	2.5	0.70	0	-0.045	0	0.71	1.4	3.3
1999-02-01	0.079	3.5	0.31	0	-0.045	0	0.079	0.39	3.6
1999-03-01	0.20	4.2	0.20	0	-0.040	0	0.20	0.39	3.6
1999	2.0	18	0.98	0	-0.22	0	2.0	3.0	21
1999-11-01	0	5.6	0.42	0	-0.041	0	0	0.39	6.2
1999-12-01	0	4.3	0.27	0	-0.039	0	0	0.28	4.7
2000-01-01	0.039	3.3	0.19	0	-0.040	0	0.039	0.24	3.7
2000-02-01	0.28	3.5	0.19	0	-0.039	0	0.28	0.47	3.4
2000-03-01	0.71	3.4	0.016	0	-0.036	0	0.71	0.71	3.9
2000	1.0	20	1.1	0	-0.20	0	1.0	2.1	22
2000-11-01	5.3	-0.63	-3.7	0	-0.036	0	5.3	1.7	6.1
2000-12-01	2.1	1.1	0.55	0	-0.033	0	2.1	2.7	2.9
2001-01-01	0.12	3.4	0.89	0	-0.033	0	0.12	0.98	3.7
2001-02-01	3.4	-0.67	-1.5	0	-0.033	0	3.4	1.9	3.0
2001-03-01	1.7	1.7	0.60	0	-0.030	0	1.7	2.4	2.8
2001	13	4.9	-3.1	0	-0.16	0	13	9.5	19
2001-11-01	0.39	4.7	0.32	0	-0.031	0	0.39	0.71	5.7
2001-12-01	0.28	3.7	0.25	0	-0.029	0	0.28	0.51	4.6
2002-01-01	1.9	0.94	-0.35	0	-0.030	0	1.9	1.5	2.9
2002-02-01	0.24	3.0	0.27	0	-0.030	0	0.24	0.51	3.2
2002-03-01	0	4.3	0.37	0	-0.028	0	0	0.35	3.4
2002	2.8	17	0.85	0	-0.15	0	2.8	3.6	20
2002-11-01	0.079	5.2	0.20	0	-0.031	0	0.079	0.28	6.3
2002-12-01	0.87	3.1	-0.47	0	-0.028	0	0.87	0.39	4.4
2003-01-01	0.98	2.0	0.28	0	-0.028	0	0.98	1.3	3.4
2003-02-01	0.35	3.5	0.28	0	-0.028	0	0.35	0.67	3.1
2003-03-01	5.0	-1.6	-3.5	0	-0.025	0	5.0	1.4	3.6
2003	7.2	12	-3.2	0	-0.14	0	7.2	4.0	21

Table IV-B.36 BC3 Winter Storm Period Water Balance

Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
2003-11-01	0.079	5.7	0.32	0	-0.026	0	0.079	0.39	6.3
2003-12-01	0.87	2.6	-0.058	0	-0.024	0	0.87	0.83	3.9
2004-01-01	0.94	2.4	-0.035	0	-0.024	0	0.94	0.94	3.9
2004-02-01	1.5	1.4	-0.35	0	-0.024	0	1.5	1.1	3.1
2004-03-01	0.67	2.8	0.31	0	-0.022	0	0.67	0.98	3.0
2004	4.0	15	0.18	0	-0.12	0	4.0	4.2	20
2004-11-01	1.2	4.0	-0.093	0	-0.023	0	1.2	1.1	6.4
2004-12-01	0.63	2.4	0.28	0	-0.021	0	0.63	0.91	3.5
2005-01-01	2.8	0.43	-1.5	0	-0.022	0	2.8	1.3	3.0
2005-02-01	4.2	-1.5	-1.8	0	-0.022	0	4.2	2.4	2.7
2005-03-01	7.3	-4.6	-4.0	0	-0.019	0.85	6.5	2.5	2.7
2005	16	0.67	-7.1	0	-0.11	0.85	15	8.2	18
2005-11-01	0.43	5.0	0.33	0	-0.022	0	0.43	0.75	6.4
2005-12-01	0	4.1	0.33	0	-0.021	0	0	0.31	4.4
2006-01-01	0	3.3	0.26	0	-0.022	0	0	0.28	3.5
2006-02-01	0	4.1	0.24	0	-0.022	0	0	0.24	3.8
2006-03-01	0.12	4.3	0.18	0	-0.020	0	0.12	0.31	4.1
2006	0.55	21	1.3	0	-0.11	0	0.55	1.9	22


Annual Water Balance - 56-Year Simulated Period (Results on October 1)
Potential Surface Flux [in]
Actual Surface Flux [in]
Root Water Uptake [in]
Net Infiltration [in]
Surface Runoff [in]
Surface Infiltration [in]
Evaporation [in]
Precipitation (in)
Potential Evapotranspiration [in]
Monthly Water Balance - 9 Wet Years (1983 - 1991)
Potential Surface Flux [in]
Actual Surface Flux [in]
Root Water Uptake [in]
Net Infiltration [in]
Surface Runoff [in]
Surface Infiltration [in]
Evaporation [in]
Precipitation [in]
Potential Evapotranspiration [in]
Net Infiltration 3%
Surface Runoff 1%
Root Water Uptake 0%
Evaporation 96%
Depth (ft)
SCAVENGER BEACH
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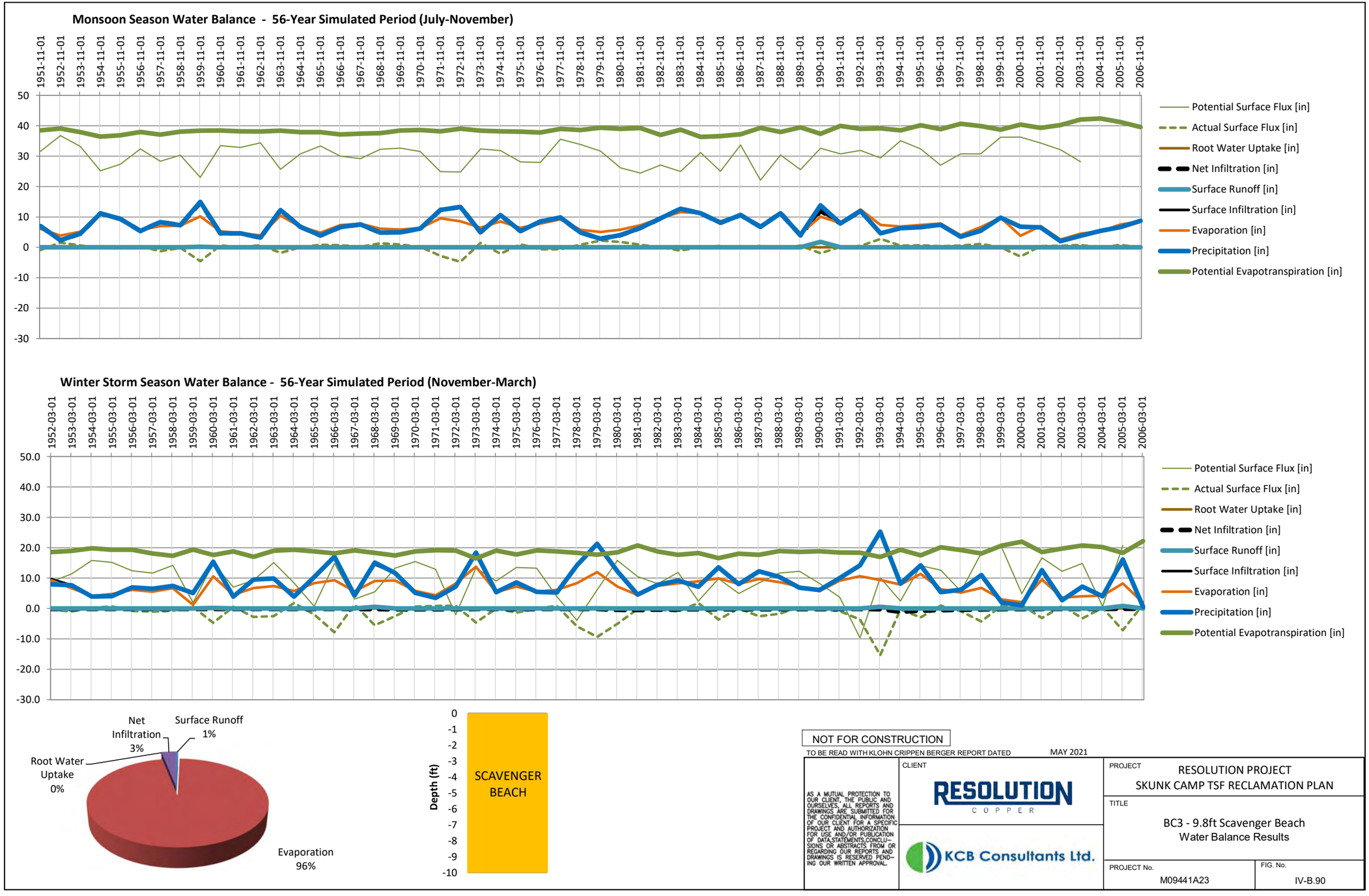
PROJECT
RESOLUTION PROJECT
SKUNK CAMP TSF RECLAMATION PLAN
TITLE
BC3 - 9.8ft Scavenger Beach
Water Balance Results
PROJECT No.
M09441A23
FIG. No.
IV-B.89


Monsoon Season Water Balance - 56-Year Simulated Period (July-November)
Winter Storm Season Water Balance - 56-Year Simulated Period (November-March)
Potential Surface Flux [in]
Actual Surface Flux [in]
Root Water Uptake [in]
Net Infiltration [in]
Surface Runoff [in]
Surface Infiltration [in]
Evaporation [in]
Precipitation [in]
Potential Evapotranspiration [in]
Net Infiltration 3%
Surface Runoff 1%
Root Water Uptake 0%
Evaporation 96%
Depth (ft)
SCAVENGER BEACH
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PROJECT
RESOLUTION PROJECT
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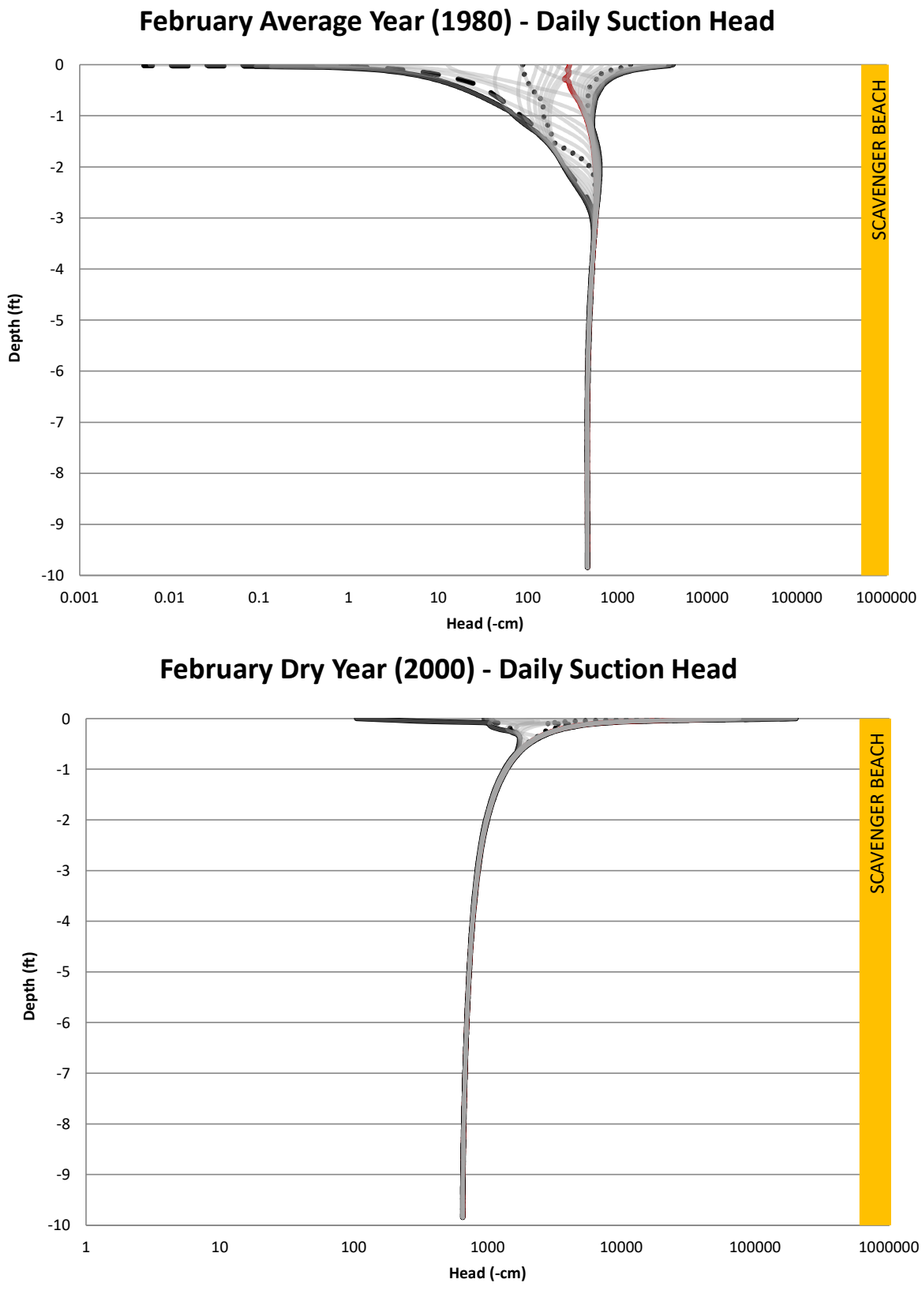
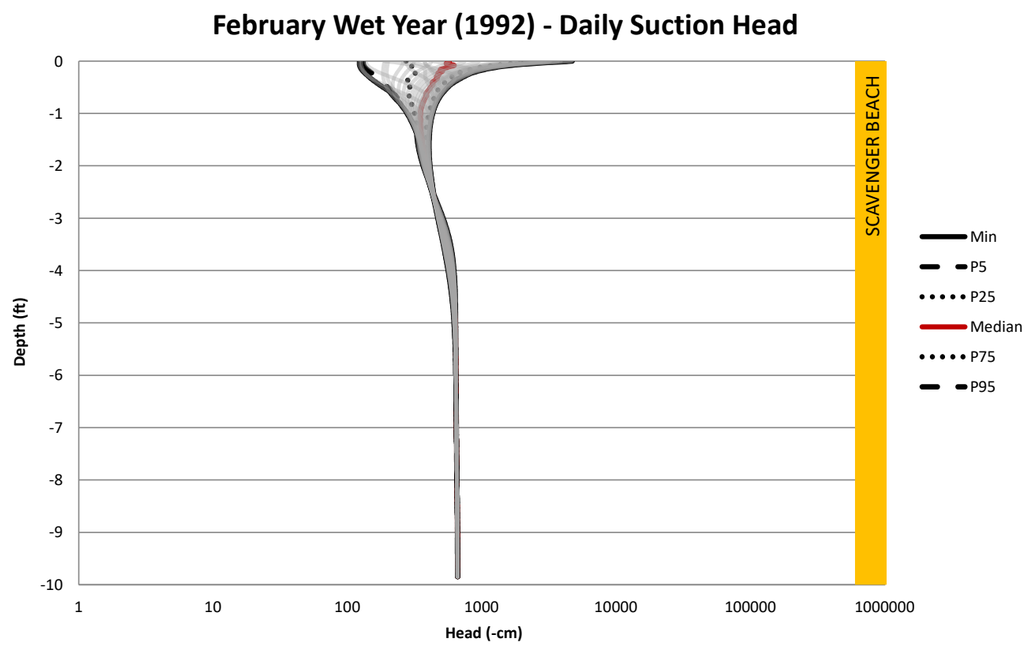
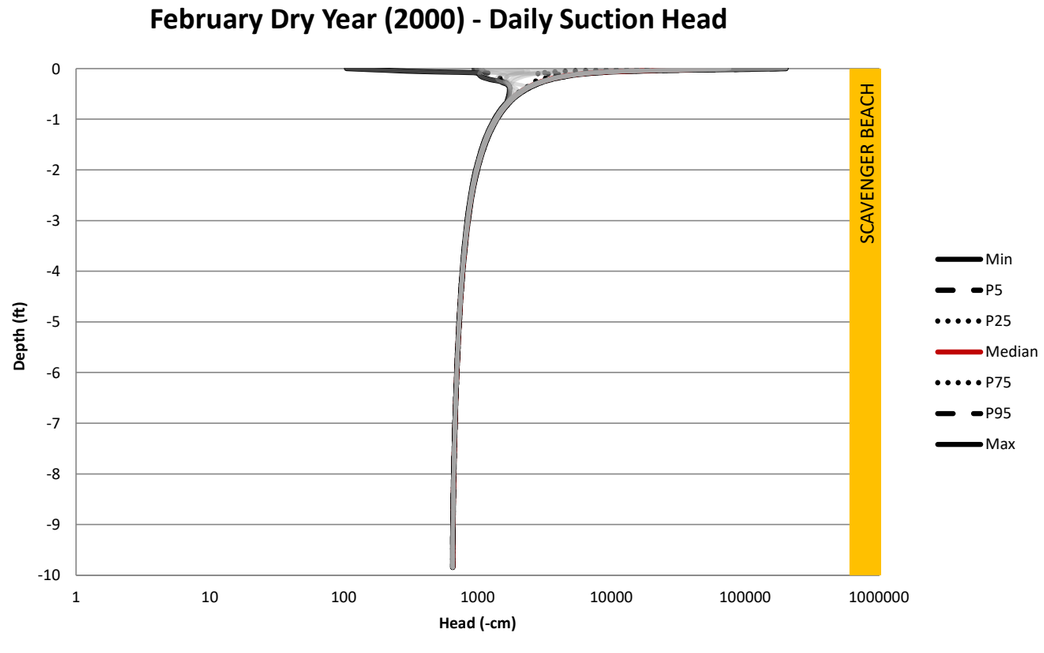
TITLE
BC3 - 9.8ft Scavenger Beach
Water Balance Results
PROJECT No.
M09441A23
FIG. No.
IV-B.90







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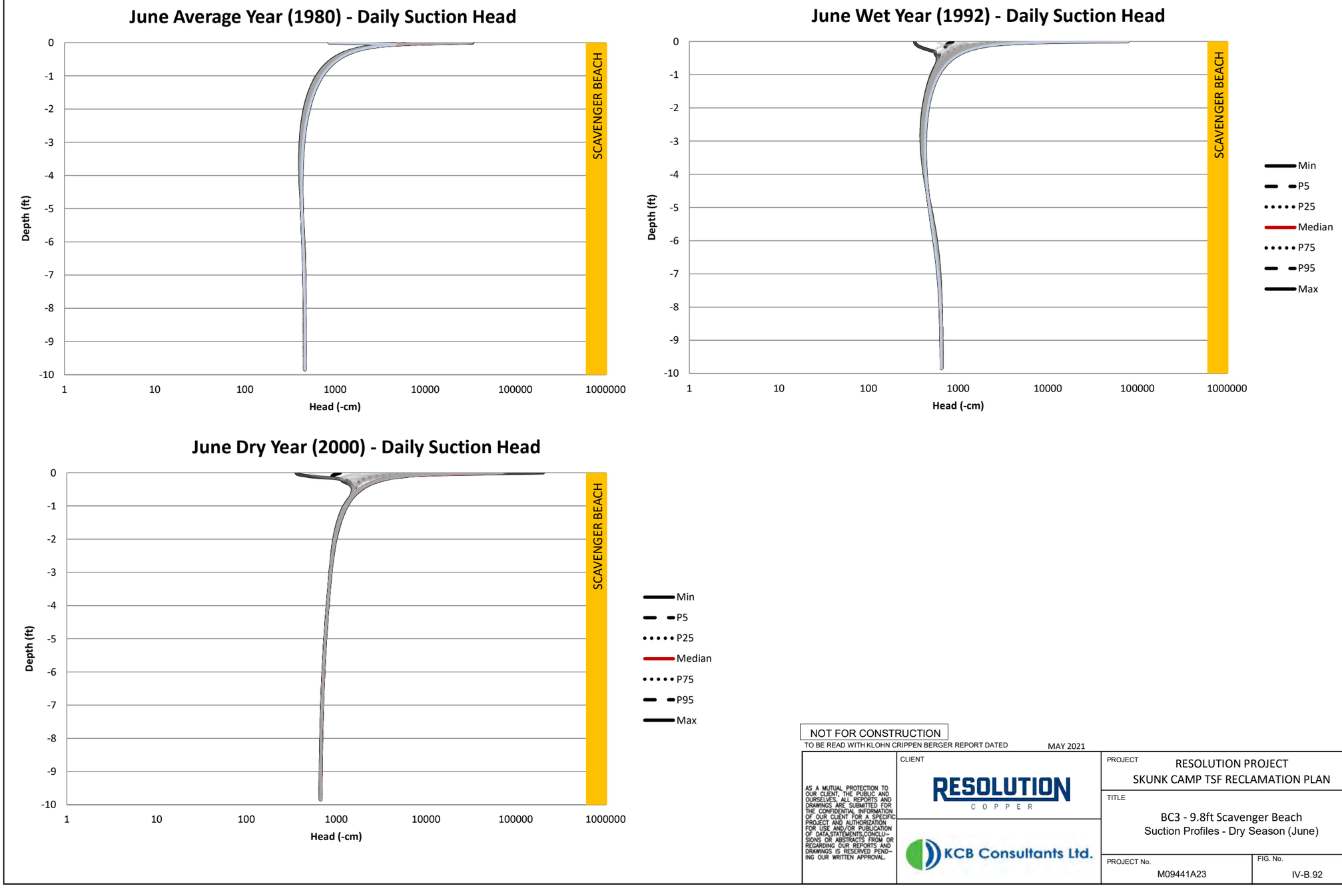
TITLE: BC3 - 9.8ft Scavenger Beach
Suction Profiles - Winter (February)

PROJECT No. M09441A23

FIG. No. IV-B.91



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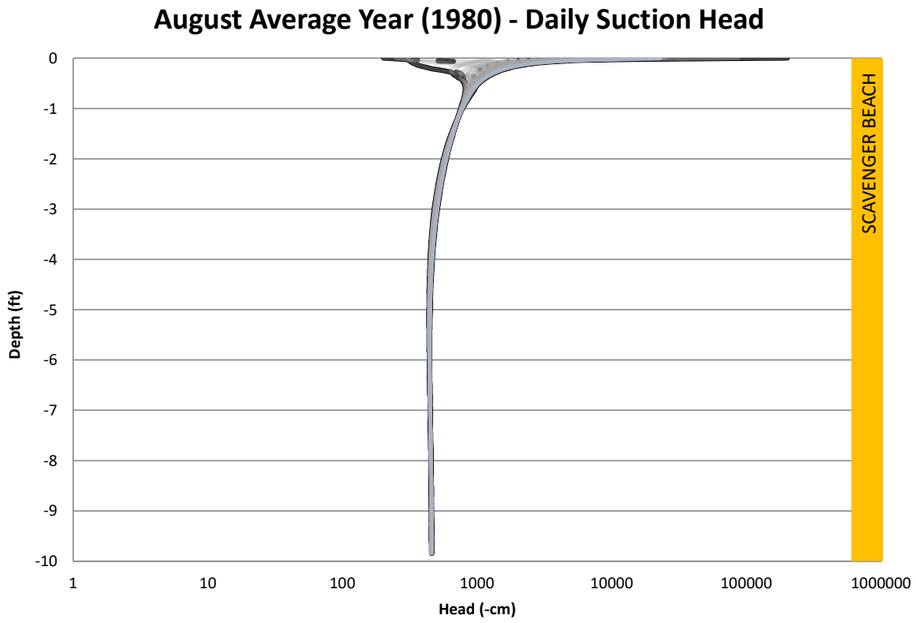
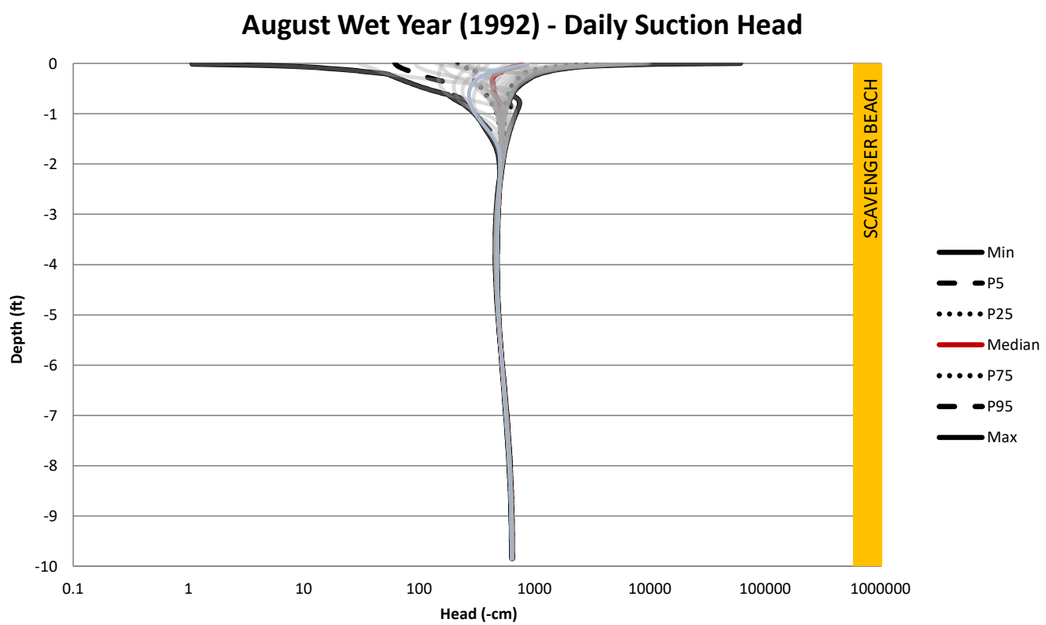
SKUNK CAMP TSF RECLAMATION PLAN

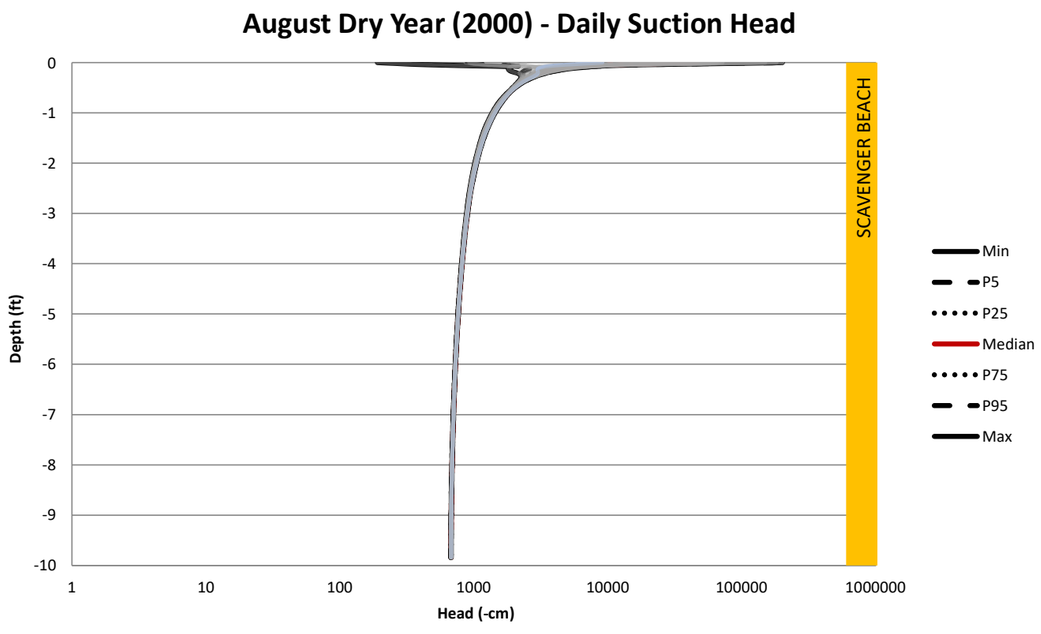
TITLE: BC3 - 9.8ft Scavenger Beach
Suction Profiles - Dry Season (June)

PROJECT No. M09441A23

FIG. No. IV-B.92







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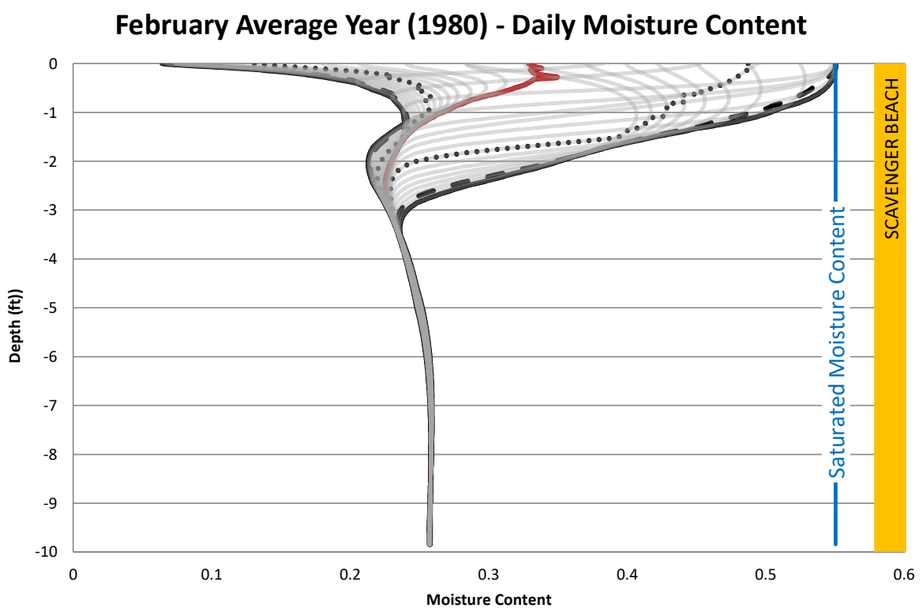
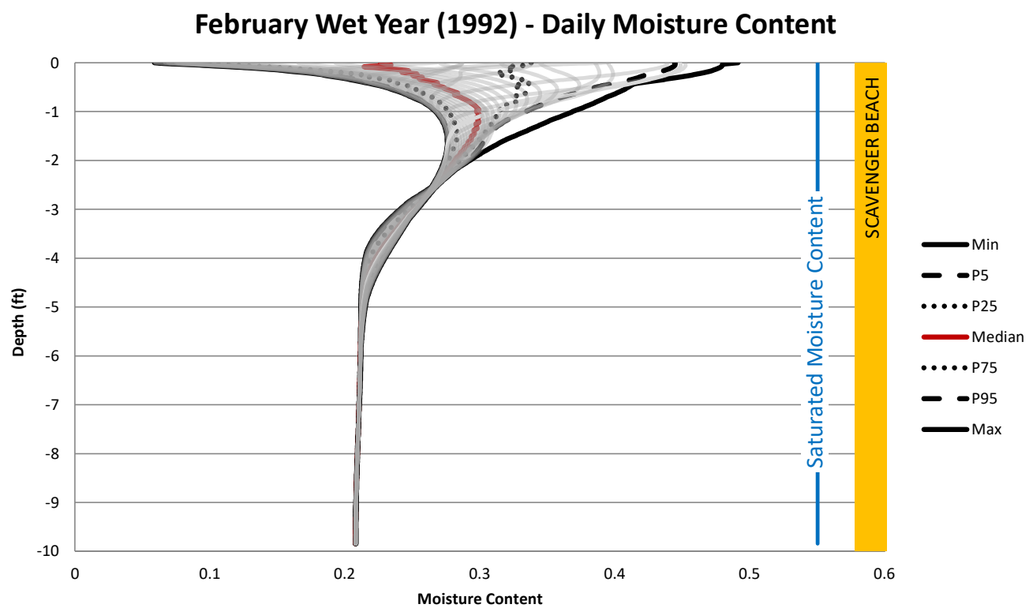
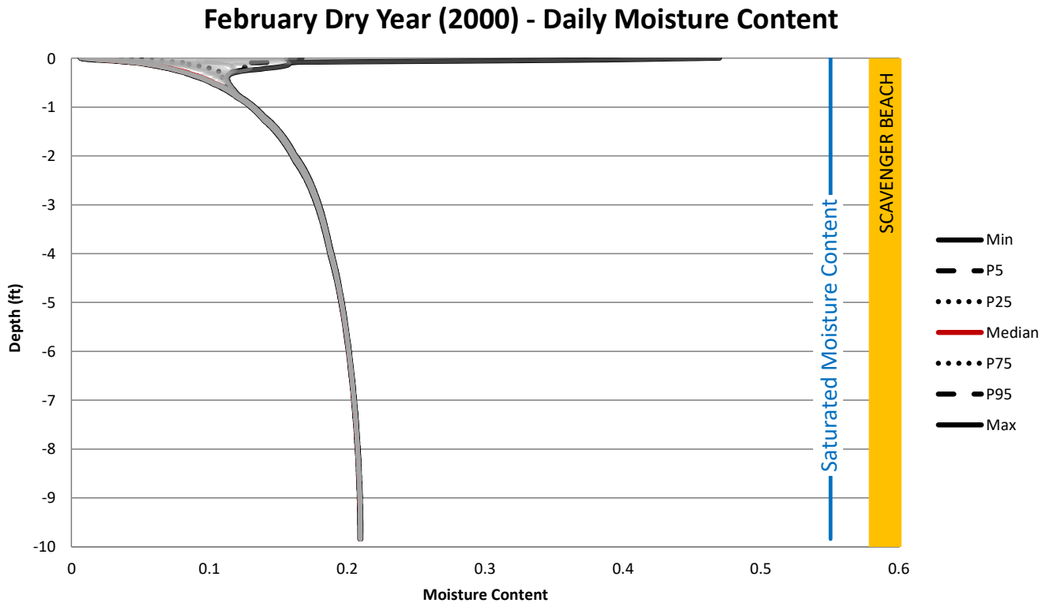
TITLE: BC3 - 9.8ft Scavenger Beach
Suction Profiles - Summer Monsoon (August)

PROJECT No. M09441A23

FIG. No. IV-B.93







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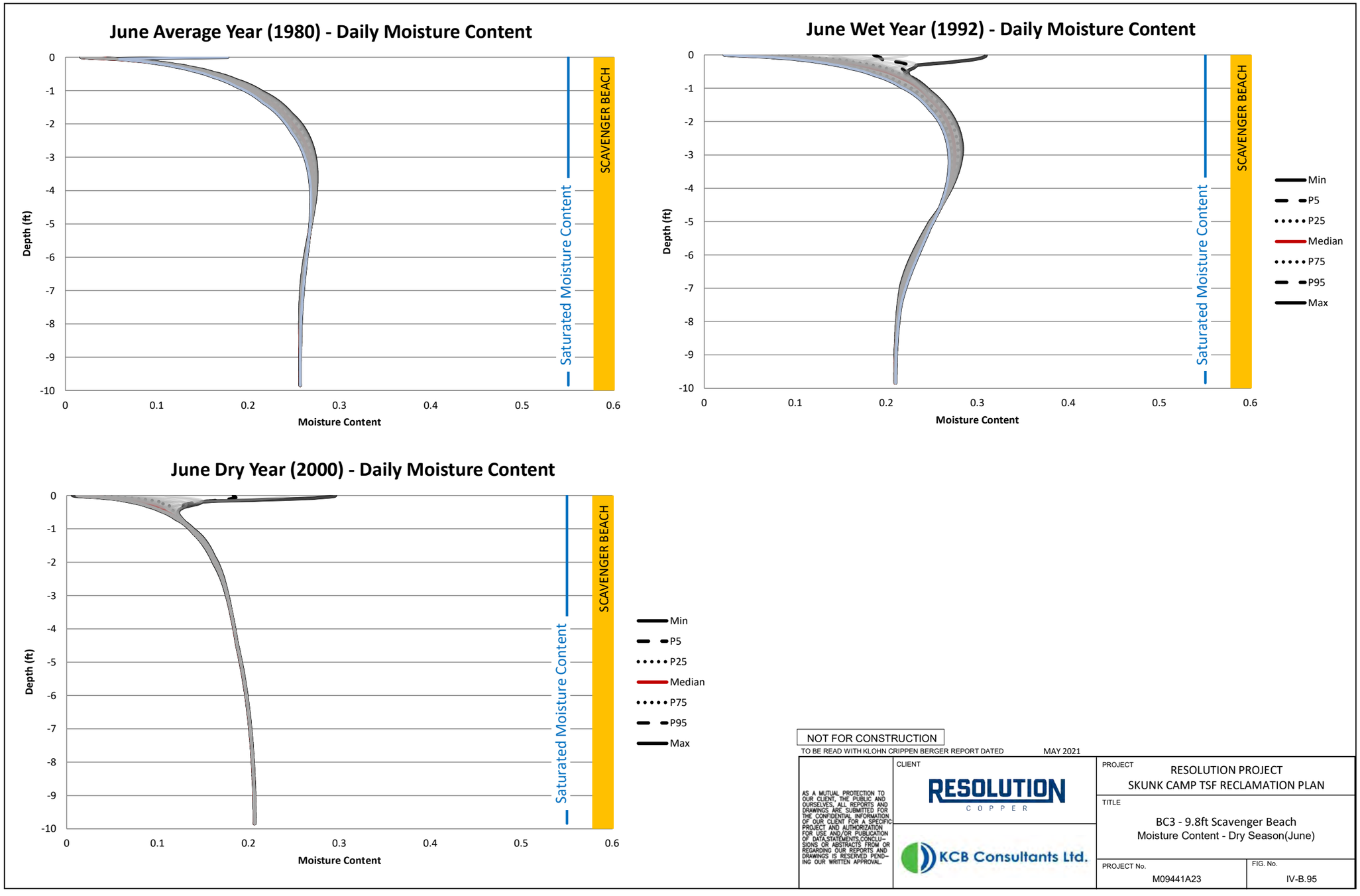
TITLE: BC3 - 9.8ft Scavenger Beach
Moisture Content - Winter (February)

PROJECT No. M09441A23

FIG. No. IV-B.94



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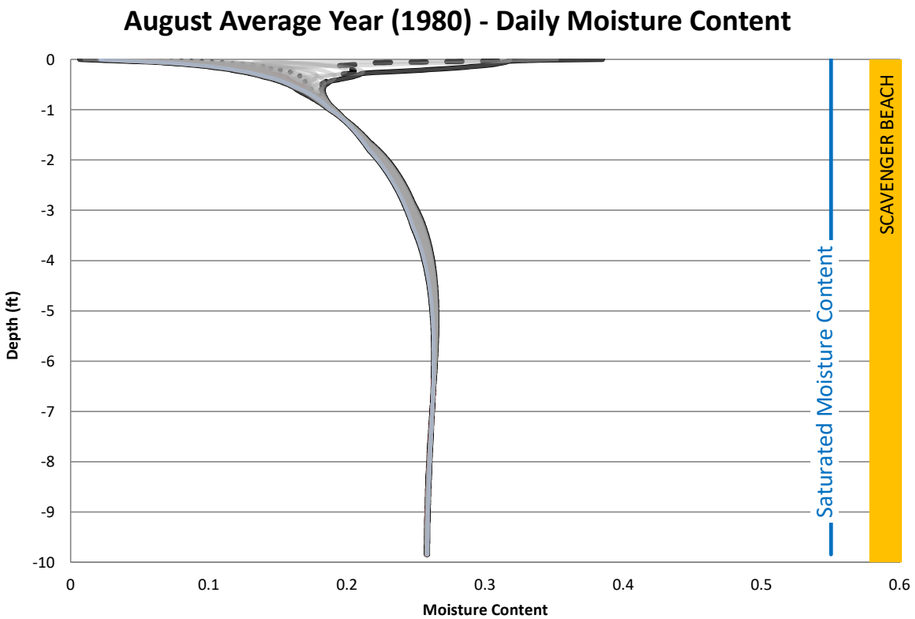
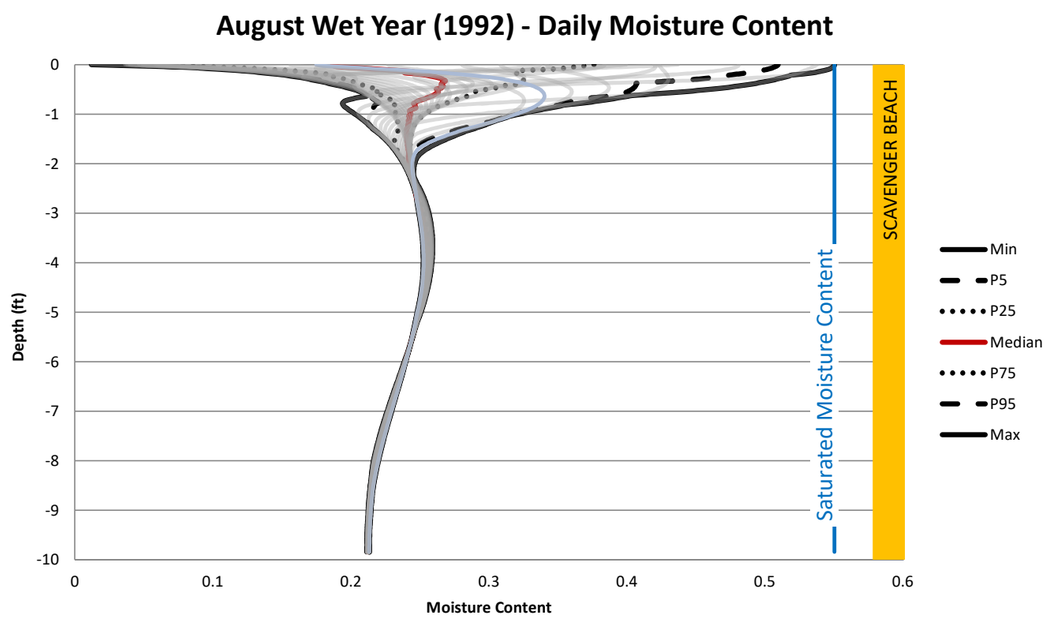
SKUNK CAMP TSF RECLAMATION PLAN

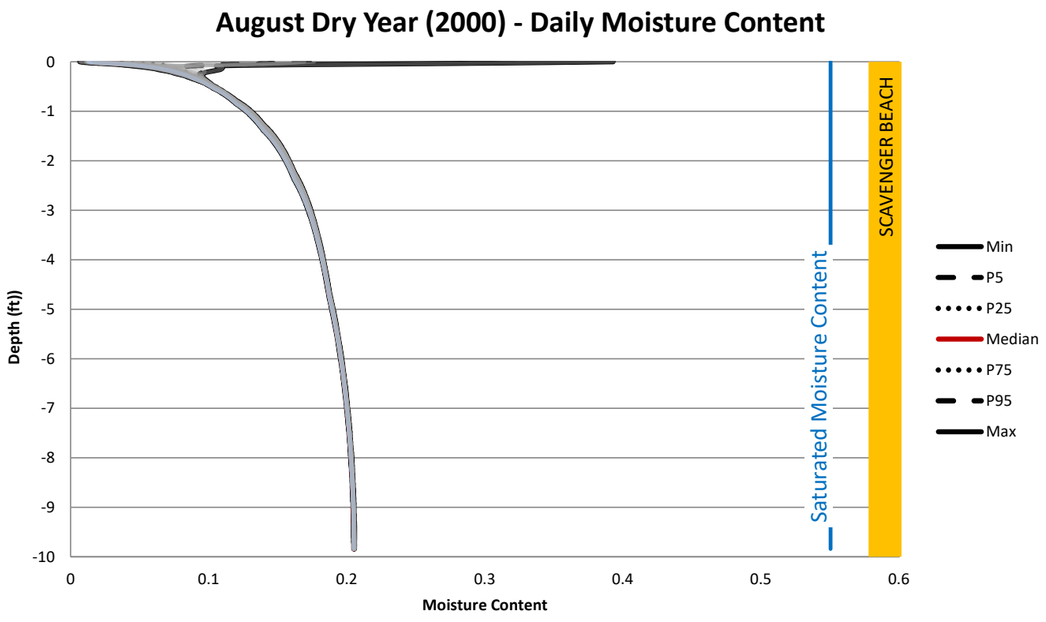
TITLE: BC3 - 9.8ft Scavenger Beach
Moisture Content - Dry Season(June)

PROJECT No. M09441A23

FIG. No. IV-B.95







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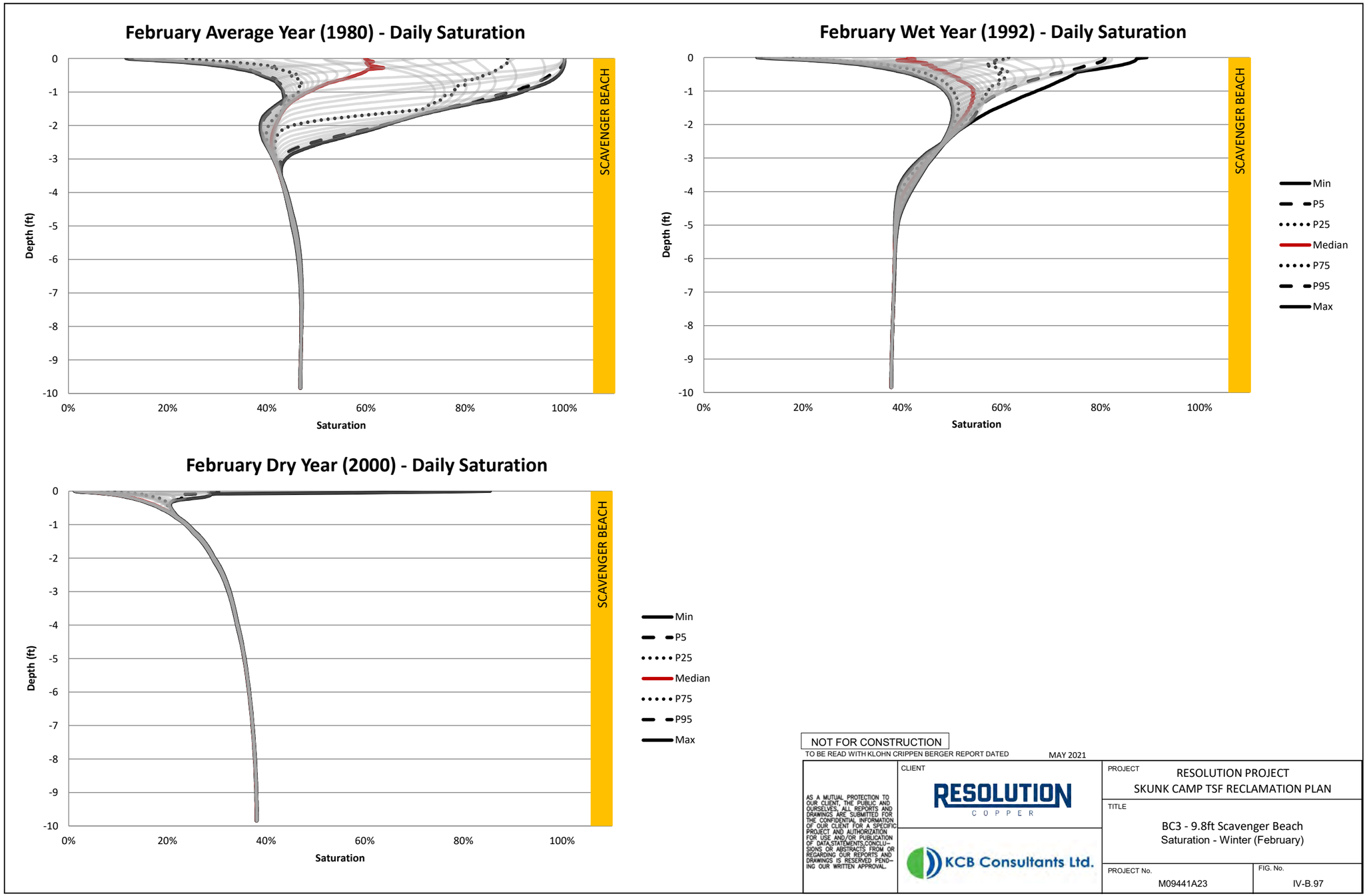
PROJECT: RESOLUTION PROJECT
SKUNK CAMP TSF RECLAMATION PLAN

TITLE: BC3 - 9.8ft Scavenger Beach
Moisture Content - Summer Monsoon (August)

PROJECT No. M09441A23

FIG. No. IV-B.96



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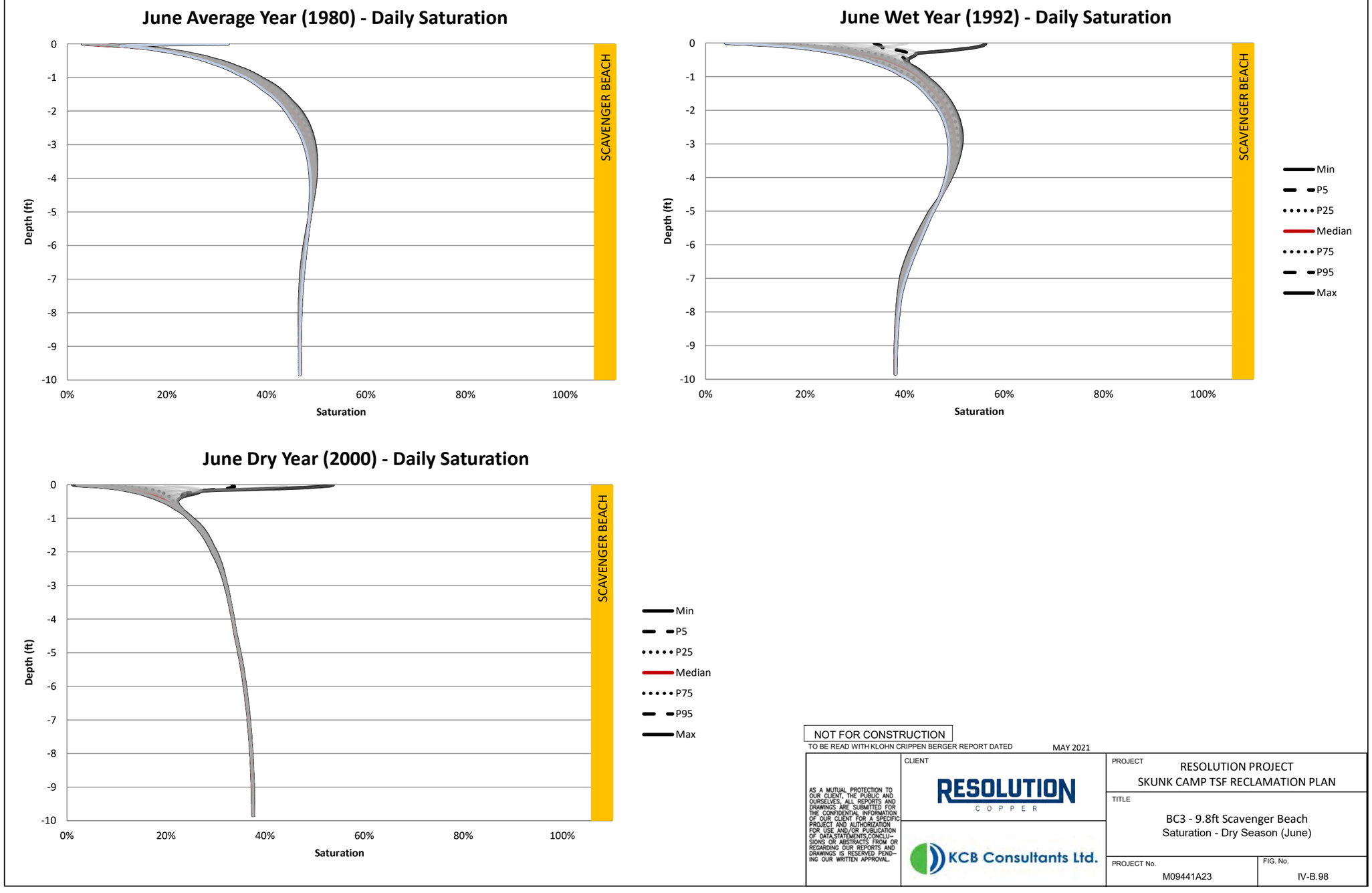
SKUNK CAMP TSF RECLAMATION PLAN

TITLE: BC3 - 9.8ft Scavenger Beach
Saturation - Winter (February)

PROJECT No. M09441A23

FIG. No. IV-B.97



NOT FOR CONSTRUCTION

TO BE READ WITH KLOHN CRIPPEN BERGER REPORT DATED MAY 2021

AS A MUTUAL PROTECTION TO OUR CLIENT, THE PUBLIC AND OURSELVES, ALL REPORTS AND DRAWINGS ARE SUBMITTED FOR THE CONFIDENTIAL INFORMATION OF OUR CLIENT FOR A SPECIFIC PROJECT AND AUTHORIZATION FOR USE AND/OR PUBLICATION OF DATA,STATEMENTS,CONCLUSIONS OR ABSTRACTS FROM OR REGARDING OUR REPORTS AND DRAWINGS IS RESERVED PENDING OUR WRITTEN APPROVAL.

CLIENT: RESOLUTION COPPER

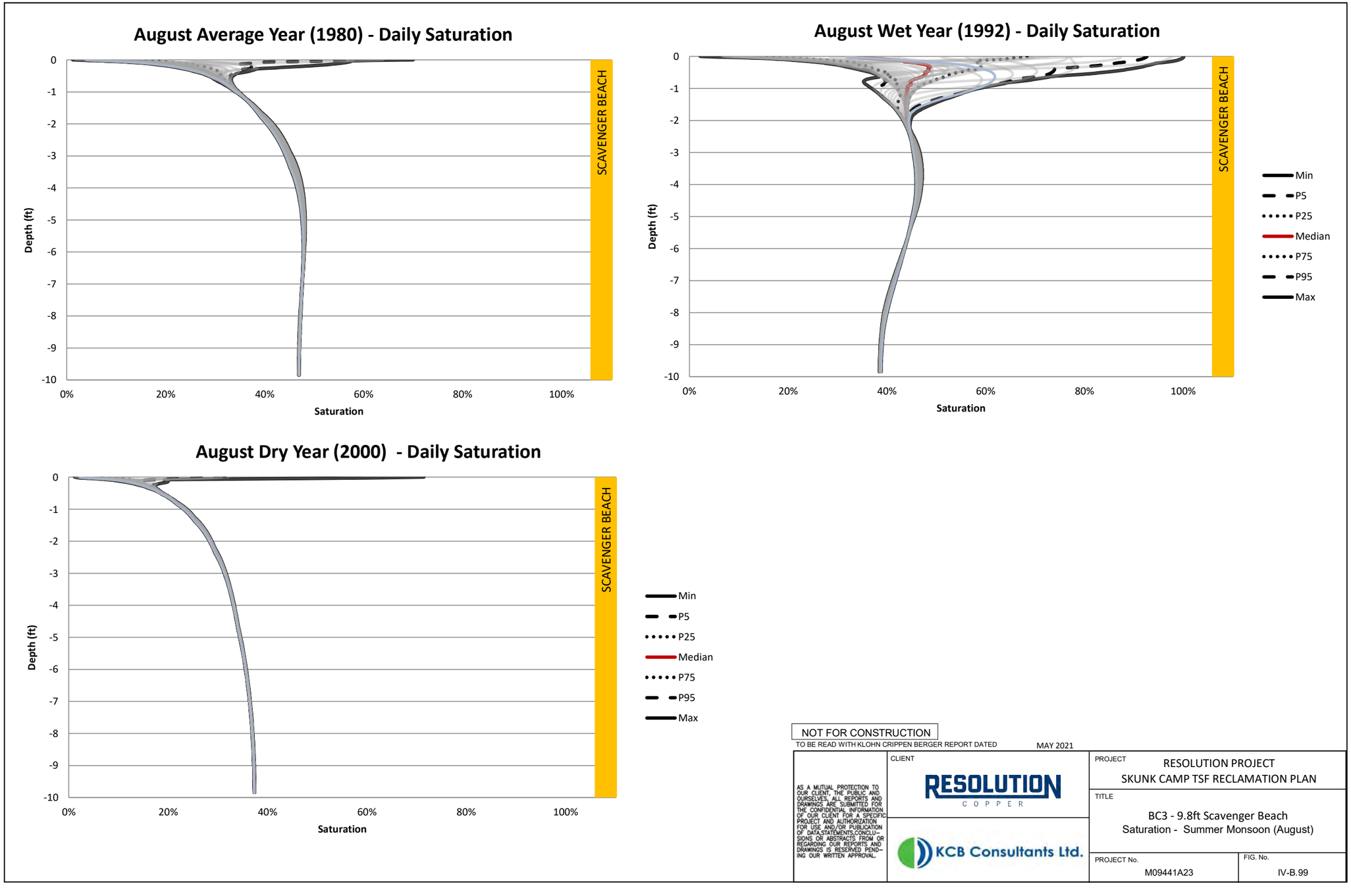
KCB Consultants Ltd.

PROJECT: RESOLUTION PROJECT
SKUNK CAMP TSF RECLAMATION PLAN

TITLE: BC3 - 9.8ft Scavenger Beach
Saturation - Dry Season (June)

PROJECT No. M09441A23

FIG. No. IV-B.98



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TO BE READ WITH KLOHN CRIPPEN BERGER REPORT DATED MAY 2021

AS A MUTUAL PROTECTION TO OUR CLIENT, THE PUBLIC AND OURSELVES, ALL REPORTS AND DRAWINGS ARE SUBMITTED FOR THE CONFIDENTIAL INFORMATION OF OUR CLIENT FOR A SPECIFIC PROJECT AND AUTHORIZATION FOR USE AND/OR PUBLICATION OF DATA,STATEMENTS,CONCLUSIONS OR ABSTRACTS FROM OR REGARDING OUR REPORTS AND DRAWINGS IS RESERVED PENDING OUR WRITTEN APPROVAL.

CLIENT: RESOLUTION COPPER

KCB Consultants Ltd.

PROJECT: RESOLUTION PROJECT
SKUNK CAMP TSF RECLAMATION PLAN

TITLE: BC3 - 9.8ft Scavenger Beach
Saturation - Summer Monsoon (August)

PROJECT No. M09441A23

FIG. No. IV-B.99

Table IV-B.37 DC3 Annual Water Balance

Water Year	Result Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
		(in)	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
1951	1951-10-01	14	32	-1.7	9.0	-1.7	0	14	12	60
1952	1952-10-01	0	35	-5.7	8.9	-1.7	0	20	15	72
1953	1953-10-01	15	40	-5.5	7.2	-1.0	0	15	9.9	72
1954	1954-10-01	21	34	-9.0	9.2	-0.67	0	21	12	72
1955	1955-10-01	13	42	-4.9	6.6	-0.46	0	13	8.6	72
1956	1956-10-01	13	45	-4.4	5.4	-0.34	0	13	8.2	74
1957	1957-10-01	15	40	-5.0	5.6	-0.26	0	15	10	71
1958	1958-10-01	19	35	-7.0	6.6	-0.20	0	19	12	70
1959	1959-10-01	16	42	-5.1	6.1	-0.16	0	16	10	75
1960	1960-10-01	19	37	-7.1	6.5	-0.13	0	19	12	73
1961	1961-10-01	9.8	46	-2.8	3.5	-0.11	0	9.8	6.9	73
1962	1962-10-01	14	40	-4.7	4.8	-0.094	0	14	9.5	71
1963	1963-10-01	24	33	-9.7	7.6	-0.080	0	24	14	73
1964	1964-10-01	11	44	-2.9	5.1	-0.072	0	11	8.5	72
1965	1965-10-01	18	37	-6.0	6.4	-0.063	0	18	12	71
1966	1966-10-01	23	32	-11	7.2	-0.056	0	23	12	72
1967	1967-10-01	14	42	-4.8	6.5	-0.050	0	14	9.5	72
1968	1968-10-01	22	33	-9.3	7.6	-0.048	0	22	13	71
1969	1969-10-01	19	37	-6.6	7.0	-0.048	0	19	12	72
1970	1970-10-01	16	40	-5.9	5.8	-0.050	0	16	9.9	72
1971	1971-10-01	12	44	-5.4	3.9	-0.050	0	12	6.7	73
1972	1972-10-01	11	48	-1.8	4.5	-0.048	0	11	9.4	76
1973	1973-10-01	31	22	-11	9.6	-0.043	0	31	20	69
1974	1974-10-01	15	40	-5.8	5.8	-0.040	0	15	9.5	72
1975	1975-10-01	19	34	-6.8	7.4	-0.037	0	19	12	69
1976	1976-10-01	16	40	-6.3	5.0	-0.034	0	16	9.7	72
1977	1977-10-01	16	40	-5.6	6.2	-0.032	0	16	10	73
1978	1978-10-01	24	31	-9.8	8.7	-0.030	0	24	14	71
1979	1979-10-01	30	25	-12	9.1	-0.026	0	30	18	71
1980	1980-10-01	20	35	-7.7	8.0	-0.026	0	20	13	71
1981	1981-10-01	15	43	-6.0	6.8	-0.033	0	15	9.0	75
1982	1982-10-01	23	31	-8.9	8.4	-0.039	0	23	14	69
1983	1983-10-01	27	27	-12	9.0	-0.041	0	27	15	69
1984	1984-10-01	18	37	-3.6	6.8	-0.041	0	18	14	71
1985	1985-10-01	22	29	-8.3	7.2	-0.039	0	22	14	67
1986	1986-10-01	21	33	-7.7	8.6	-0.036	0	21	13	70
1987	1987-10-01	20	34	-7.0	7.4	-0.033	0	20	13	70
1988	1988-10-01	23	32	-8.3	7.9	-0.031	0	23	14	71
1989	1989-10-01	12	45	-3.8	4.4	-0.030	0	12	7.8	74
1990	1990-10-01	23	32	-9.8	6.4	-0.026	0	23	13	71
1991	1991-10-01	23	32	-7.3	9.4	-0.023	0	23	15	71
1992	1992-10-01	36	18	-14	12	-0.021	0	36	22	70
1993	1993-10-01	33	21	-16	11	-0.021	0	33	16	70
1994	1994-10-01	15	41	-5.0	7.0	-0.026	0	15	10	73
1995	1995-10-01	25	30	-9.1	8.3	-0.052	0	25	16	71
1996	1996-10-01	13	43	-4.2	5.9	-0.070	0	13	9.2	74
1997	1997-10-01	10	48	-3.3	4.1	-0.072	0	10	6.9	75
1998	1998-10-01	20	33	-7.8	7.6	-0.068	0	20	13	69
1999	1999-10-01	15	42	-5.3	5.5	-0.062	0	15	9.5	73
2000	2000-10-01	5.4	54	-1.7	2.2	-0.056	0	5.4	3.7	77
2001	2001-10-01	23	31	-8.5	8.2	-0.048	0	23	15	71
2002	2002-10-01	5.4	53	-1.2	1.6	-0.043	0	5.4	4.1	75
2003	2003-10-01	13	46	-4.8	4.8	-0.038	0	13	8.3	76
2004	2004-10-01	12	47	-4.5	4.3	-0.035	0	12	7.7	77

Table IV-B.37 DC3 Annual Water Balance

Water Year	Result Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
		(in)	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
2005	2005-10-01	24	32	-10	8.7	-0.032	0	24	14	72
2006	2006-10-01	12	46	-4.6	5.2	-0.028	0	12	7.5	75

Table IV-B.38 DC3 Monthly Water Balance 9 Wet Years (1983 to 1991)

Month	Result Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
		[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
Nov-82	1982-11-30	0	4.1	-0.98	0.79	-0.0067	0	2.5	1.6	8.8
Dec-82	1982-12-30	2.5	-0.24	-0.72	0.35	-0.0035	0	2.5	1.8	2.7
Jan-83	1983-01-29	0.67	2.0	-0.13	0.39	-0.0035	0	0.67	0.56	3.0
Feb-83	1983-02-28	3.5	-0.91	-1.6	0.72	-0.0035	0	3.5	2.0	2.9
Mar-83	1983-03-30	5.4	-2.6	-3.0	1.1	-0.0031	0	5.4	2.4	4.0
Apr-83	1983-04-29	0.79	3.5	0.94	1.5	-0.0035	0	0.79	1.8	5.3
May-83	1983-05-29	0	6.5	0.13	0.83	-0.0035	0	0	0.13	7.9
Jun-83	1983-06-28	0.039	7.3	0.063	0.33	-0.0035	0	0.039	0.071	9.4
Jul-83	1983-07-28	2.1	4.8	-1.1	0.55	-0.0031	0	2.1	1.1	9.6
Aug-83	1983-08-27	3.8	1.6	-1.2	1.4	-0.0031	0	3.8	2.6	7.2
Sep-83	1983-09-26	1.9	3.5	-0.57	0.92	-0.0035	0	1.9	1.3	7.5
Oct-83	1983-10-26	4.9	-1.2	-2.5	0.73	-0.0031	0	4.9	2.4	5.1
Nov-83	1983-11-25	1.6	1.6	-0.91	0.48	-0.0035	0	1.6	0.70	4.2
Dec-83	1983-12-25	1.9	0.35	-0.059	0.37	-0.0035	0	1.9	1.8	2.6
Jan-84	1984-01-24	1.5	0.79	-0.051	0.40	-0.0031	0	1.5	1.5	2.7
Feb-84	1984-02-23	0	3.2	0.25	0.52	-0.0035	0	0	0.24	3.7
Mar-84	1984-03-24	0	4.1	0.094	0.45	-0.0035	0	0	0.098	5.0
Apr-84	1984-04-23	0.87	4.0	-0.33	0.51	-0.0035	0	0.87	0.53	6.5
May-84	1984-05-23	0.67	5.4	-0.11	0.28	-0.0031	0	0.67	0.57	7.5
Jun-84	1984-06-22	0.039	7.1	0.079	0.11	-0.0035	0	0.039	0.12	9.3
Jul-84	1984-07-22	3.6	2.4	-1.7	0.77	-0.0031	0	3.6	2.0	8.5
Aug-84	1984-08-21	3.9	1.5	-1.1	1.3	-0.0031	0	3.9	2.8	6.9
Sep-84	1984-09-20	1.2	4.3	-0.17	0.79	-0.0035	0	1.2	0.99	7.0
Oct-84	1984-10-20	2.5	1.4	-0.93	0.59	-0.0031	0	2.5	1.6	5.6
Nov-84	1984-11-19	0	3.6	0.15	0.23	-0.0031	0	0	0.15	4.2
Dec-84	1984-12-19	4.8	-2.7	-3.3	0.28	-0.0031	0	4.8	1.5	3.1
Jan-85	1985-01-18	3.9	-1.9	-1.9	0.37	-0.0031	0	3.9	2.0	2.3
Feb-85	1985-02-17	2.9	-0.87	-0.87	0.50	-0.0031	0	2.9	2.0	2.3
Mar-85	1985-03-19	1.7	1.1	0.45	1.0	-0.0031	0	1.7	2.1	3.6
Apr-85	1985-04-18	0.43	4.0	0.31	1.3	-0.0031	0	0.43	0.79	5.4
May-85	1985-05-18	0.47	4.8	-0.067	0.66	-0.0031	0	0.47	0.39	6.7
Jun-85	1985-06-17	0	6.7	0.067	0.32	-0.0035	0	0	0.039	8.6
Jul-85	1985-07-17	0.24	6.3	-0.13	0.21	-0.0031	0	0.24	0.12	8.4
Aug-85	1985-08-16	2.1	3.9	-0.76	0.76	-0.0031	0	2.1	1.3	7.8
Sep-85	1985-09-15	2.1	3.1	-0.85	0.68	-0.0028	0	2.1	1.3	7.9
Oct-85	1985-10-15	3.2	0.87	-1.2	0.86	-0.0031	0	3.2	1.9	5.7
Nov-85	1985-11-14	1.4	1.8	-0.68	0.44	-0.0031	0	1.4	0.75	3.9
Dec-85	1985-12-14	2.7	-0.24	-1.3	0.37	-0.0028	0	2.7	1.5	3.1
Jan-86	1986-01-13	0	2.8	0.85	0.40	-0.0031	0	0	0.83	3.3
Feb-86	1986-02-12	2.3	0.28	-1.7	0.34	-0.0031	0	2.3	0.59	3.6
Mar-86	1986-03-14	1.9	1.5	-0.45	0.98	-0.0028	0	1.9	1.5	3.7
Apr-86	1986-04-13	3.1	0.83	-1.0	1.5	-0.0031	0	3.1	2.0	4.9
May-86	1986-05-13	0	5.8	0.15	0.87	-0.0031	0	0	0.16	7.4
Jun-86	1986-06-12	0	7.2	0.063	0.29	-0.0028	0	0	0.079	9.1
Jul-86	1986-07-12	2.2	4.8	-1.1	0.51	-0.0031	0	2.2	1.1	9.2
Aug-86	1986-08-11	2.8	2.9	-0.96	1.2	-0.0028	0	2.8	1.9	7.5
Sep-86	1986-09-10	3.0	2.2	-1.5	0.86	-0.0028	0	3.0	1.5	7.3
Oct-86	1986-10-10	0.91	3.5	0.13	0.71	-0.0028	0	0.91	1.0	6.1
Nov-86	1986-11-09	2.8	0.47	-1.3	0.52	-0.0028	0	2.8	1.4	4.6
Dec-86	1986-12-09	2.6	0.16	-1.9	0.34	-0.0028	0	2.6	0.75	3.4
Jan-87	1987-01-08	1.5	0.83	0.31	0.37	-0.0028	0	1.5	1.8	2.7
Feb-87	1987-02-07	3.1	-0.63	-0.98	0.50	-0.0028	0	3.1	2.1	2.9
Mar-87	1987-03-09	2.3	0.83	-0.72	0.97	-0.0024	0	2.3	1.6	3.4
Apr-87	1987-04-08	0.94	2.8	0.024	1.2	-0.0028	0	0.94	0.94	5.0

Table IV-B.38 DC3 Monthly Water Balance 9 Wet Years (1983 to 1991)

Month	Result Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
		[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
May-87	1987-05-08	0	5.3	0.10	0.54	-0.0028	0	0	0.12	6.8
Jun-87	1987-06-07	0.31	6.1	0.028	0.21	-0.0028	0	0.31	0.35	8.2
Jul-87	1987-07-07	0.20	6.9	0.0079	0.11	-0.0028	0	0.20	0.20	9.2
Aug-87	1987-08-06	3.1	3.5	-1.8	0.82	-0.0028	0	3.1	1.2	8.9
Sep-87	1987-09-05	2.4	3.2	-0.89	1.2	-0.0024	0	2.4	1.5	7.5
Oct-87	1987-10-05	0.79	4.1	0.059	0.51	-0.0028	0	0.79	0.87	6.7
Nov-87	1987-11-04	1.4	2.6	-0.90	0.13	-0.0028	0	1.4	0.51	5.8
Dec-87	1987-12-04	0.71	2.5	0.24	0.35	-0.0028	0	0.71	0.91	3.8
Jan-88	1988-01-03	4.0	-1.7	-2.6	0.28	-0.0024	0	4.0	1.5	3.0
Feb-88	1988-02-02	3.6	-1.4	-1.5	0.42	-0.0028	0	3.6	2.2	2.4
Mar-88	1988-03-03	0.71	2.6	0.74	0.89	-0.0024	0	0.71	1.5	3.6
Apr-88	1988-04-02	0.16	4.1	0.14	0.92	-0.0028	0	0.16	0.28	5.5
May-88	1988-05-02	2.4	2.0	-1.1	0.93	-0.0024	0	2.4	1.3	6.1
Jun-88	1988-06-01	0	6.6	0.17	0.61	-0.0028	0	0	0.16	8.0
Jul-88	1988-07-01	0.16	6.6	0.047	0.15	-0.0028	0	0.16	0.20	8.9
Aug-88	1988-07-31	2.4	4.0	-1.4	0.29	-0.0024	0	2.4	1.1	8.5
Sep-88	1988-08-30	6.7	-1.3	-2.9	1.6	-0.0024	0	6.7	3.8	7.3
Oct-88	1988-10-29	2.0	7.3	0.024	1.7	-0.0051	0	2.0	2.0	13
Nov-88	1988-11-28	1.7	1.3	-1.3	0.27	-0.0028	0	1.7	0.47	4.1
Dec-88	1988-12-28	1.1	1.4	0.12	0.36	-0.0024	0	1.1	1.2	3.1
Jan-89	1989-01-27	2.0	0.31	-0.52	0.38	-0.0024	0	2.0	1.5	2.4
Feb-89	1989-02-26	0.51	2.4	0.15	0.58	-0.0028	0	0.51	0.67	3.3
Mar-89	1989-03-28	1.7	2.4	-1.4	0.44	-0.0024	0	1.7	0.35	5.3
Apr-89	1989-04-27	0	5.6	0.63	0.86	-0.0024	0	0	0.63	6.9
May-89	1989-05-27	0.16	6.3	0.063	0.083	-0.0024	0	0.16	0.20	8.3
Jun-89	1989-06-26	0	7.1	0.047	0.039	-0.0024	0	0	0.079	9.1
Jul-89	1989-07-26	0.079	6.8	0.020	0.028	-0.0024	0	0.079	0.079	9.0
Aug-89	1989-08-25	1.3	4.3	-0.41	0.25	-0.0024	0	1.3	0.94	8.0
Sep-89	1989-09-24	1.5	4.0	-0.65	0.54	-0.0024	0	1.5	0.83	7.3
Oct-89	1989-10-24	1.1	3.3	-0.33	0.29	-0.0020	0	1.1	0.75	6.1
Nov-89	1989-11-23	0.31	3.2	-0.071	0.059	-0.0024	0	0.31	0.20	4.5
Dec-89	1989-12-23	0	2.8	0.20	0.035	-0.0024	0	0	0.20	3.5
Jan-90	1990-01-22	2.1	0.039	-1.0	0.23	-0.0020	0	2.1	1.1	2.9
Feb-90	1990-02-21	2.6	-0.24	-1.1	0.48	-0.0024	0	2.6	1.5	2.5
Mar-90	1990-03-23	0.79	2.6	-0.028	0.89	-0.0020	0	0.79	0.79	4.2
Apr-90	1990-04-22	1.0	3.9	-0.29	0.73	-0.0024	0	1.0	0.75	6.0
May-90	1990-05-22	1.1	4.8	-0.46	0.51	-0.0020	0	1.1	0.59	7.7
Jun-90	1990-06-21	0.39	6.8	-0.043	0.071	-0.0024	0	0.39	0.35	9.0
Jul-90	1990-07-21	0.91	5.5	-0.28	0.23	-0.0020	0	0.91	0.67	8.6
Aug-90	1990-08-20	9.6	-4.3	-7.9	0.72	-0.0020	0	9.6	1.8	7.8
Sep-90	1990-09-19	2.4	3.0	0.63	1.7	-0.0020	0	2.4	3.1	7.1
Oct-90	1990-10-19	0.43	3.7	1.2	0.99	-0.0020	0	0.43	1.7	5.9
Nov-90	1990-11-18	1.5	2.0	-0.50	0.57	-0.0020	0	1.5	1.0	4.2
Dec-90	1990-12-18	2.8	-0.16	-1.6	0.39	-0.0020	0	2.8	1.2	3.5
Jan-91	1991-01-17	4.7	-2.7	-2.7	0.37	-0.0020	0	4.7	2.0	2.3
Feb-91	1991-02-16	0.16	2.7	1.6	0.67	-0.0020	0	0.16	1.8	3.3
Mar-91	1991-03-18	3.6	-0.28	-1.8	1.1	-0.0020	0	3.6	1.8	4.3
Apr-91	1991-04-17	3.2	0.87	-0.69	1.5	-0.0016	0	3.2	2.6	4.8
May-91	1991-05-17	0	5.8	0.21	1.1	-0.0020	0	0	0.20	7.4
Jun-91	1991-06-16	0.71	6.3	-0.11	0.53	-0.0020	0	0.71	0.59	8.7
Jul-91	1991-07-16	0.47	6.8	-0.067	0.40	-0.0020	0	0.47	0.39	9.4
Aug-91	1991-08-15	3.3	2.8	-1.5	0.81	-0.0016	0	3.3	1.8	8.4
Sep-91	1991-09-14	2.0	3.2	-0.63	1.1	-0.0020	0	2.0	1.4	7.5
Oct-91	1991-10-01	0.24	2.4	0.059	0.37	-0.0012	0	0.24	0.28	3.5

Table IV-B.39 DC3 Monsoon Period Water Balance

Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
1951-07-01	0	7.2	0.076	0.64	-0.19	0	0	0.076	9.2
1951-08-01	1.1	6.3	-0.36	0.73	-0.19	0	1.1	0.69	9.5
1951-09-01	3.6	2.2	-2.5	0.86	-0.19	0	3.6	1.1	7.8
1951-10-01	0.65	4.4	0.43	1.2	-0.18	0	0.65	1.1	6.6
1951-11-01	1.6	2.7	-0.99	0.56	-0.18	0	1.6	0.65	5.4
1951	7.0	23	-3.4	4.0	-0.92	0	7.0	3.6	39
1952-07-01	0.63	6.8	-0.066	0.73	-0.12	0	0.63	0.56	9.6
1952-08-01	0.56	6.3	-0.074	0.36	-0.12	0	0.56	0.49	8.8
1952-09-01	0.45	5.4	-0.0055	0.34	-0.12	0	0.45	0.44	7.8
1952-10-01	0.70	4.7	-0.16	0.34	-0.11	0	0.70	0.54	7.0
1952-11-01	0	4.8	0.10	0.18	-0.11	0	0	0.10	5.9
1952	2.3	28	-0.20	2.0	-0.57	0	2.3	2.1	39
1953-07-01	0	7.0	0.048	0.29	-0.074	0	0	0.048	9.1
1953-08-01	2.7	3.9	-1.7	0.62	-0.074	0	2.7	1.0	8.8
1953-09-01	1.8	4.0	-0.47	1.0	-0.071	0	1.8	1.3	7.7
1953-10-01	0	5.2	0.26	0.64	-0.067	0	0	0.26	6.8
1953-11-01	0.012	4.4	0.065	0.13	-0.067	0	0.012	0.077	5.5
1953	4.5	25	-1.8	2.7	-0.35	0	4.5	2.8	38
1954-07-01	0.13	6.8	0.053	0.31	-0.051	0	0.13	0.19	9.0
1954-08-01	4.5	1.5	-2.1	1.1	-0.051	0	4.5	2.4	7.8
1954-09-01	5.3	0.20	-2.4	1.7	-0.049	0	5.3	2.9	7.4
1954-10-01	1.3	3.8	-0.16	1.2	-0.046	0	1.3	1.1	6.6
1954-11-01	0	4.6	0.19	0.48	-0.045	0	0	0.19	5.6
1954	11	17	-4.4	4.9	-0.24	0	11	6.8	36
1955-07-01	2.1	5.0	-1.0	0.81	-0.036	0	2.1	1.0	9.1
1955-08-01	4.5	1.7	-2.5	0.71	-0.036	0	4.5	2.0	7.9
1955-09-01	2.7	2.6	-0.43	1.6	-0.035	0	2.7	2.3	7.2
1955-10-01	0.13	5.1	0.14	0.69	-0.033	0	0.13	0.26	6.8
1955-11-01	0.020	4.7	0.073	0.16	-0.033	0	0.020	0.091	5.9
1955	9.4	19	-3.7	4.0	-0.17	0	9.4	5.6	37
1956-07-01	0.24	7.1	-0.086	0.15	-0.026	0	0.24	0.15	9.4
1956-08-01	2.8	4.2	-1.1	0.56	-0.027	0	2.8	1.7	9.0
1956-09-01	1.7	3.8	-0.53	1.0	-0.026	0	1.7	1.2	7.5
1956-10-01	0.075	5.2	0.023	0.18	-0.024	0	0.075	0.098	6.8
1956-11-01	0.53	3.6	-0.18	0.063	-0.024	0	0.53	0.35	5.2
1956	5.4	24	-1.9	2.0	-0.13	0	5.4	3.5	38
1957-07-01	0.031	7.2	0.081	0.16	-0.020	0	0.031	0.11	9.3
1957-08-01	1.1	5.5	-0.36	0.19	-0.020	0	1.1	0.73	8.5
1957-09-01	3.4	2.4	-1.2	0.91	-0.020	0	3.4	2.2	8.1
1957-10-01	0.57	4.5	-0.040	0.60	-0.019	0	0.57	0.53	6.6
1957-11-01	3.2	0.30	-2.1	0.31	-0.019	0	3.2	1.1	4.6
1957	8.3	20	-3.6	2.2	-0.098	0	8.3	4.7	37
1958-07-01	0.70	6.4	-0.25	0.28	-0.016	0	0.70	0.45	9.3
1958-08-01	0.78	6.2	-0.23	0.17	-0.016	0	0.78	0.56	9.1
1958-09-01	0.85	5.1	-0.12	0.35	-0.016	0	0.85	0.73	8.0
1958-10-01	3.0	1.7	-1.5	0.65	-0.015	0	3.0	1.5	6.4
1958-11-01	1.9	2.3	-0.53	0.76	-0.015	0	1.9	1.4	5.3
1958	7.3	22	-2.7	2.2	-0.078	0	7.3	4.6	38
1959-07-01	1.0	6.1	-0.35	0.28	-0.012	0	1.0	0.68	9.1
1959-08-01	3.8	3.7	-2.1	0.81	-0.012	0	3.8	1.6	9.6
1959-09-01	5.3	0.15	-1.6	1.6	-0.012	0	5.3	3.7	7.4
1959-10-01	0.047	5.1	0.22	0.84	-0.012	0	0.047	0.28	6.9
1959-11-01	4.8	-0.60	-4.2	0.34	-0.012	0	4.8	0.56	5.3
1959	15	14	-8.1	3.9	-0.060	0	15	6.9	38
1960-07-01	0	7.2	0.059	0.30	-0.011	0	0	0.059	9.2
1960-08-01	0.74	6.3	-0.26	0.35	-0.011	0	0.74	0.48	9.2
1960-09-01	1.5	4.4	-0.42	0.61	-0.010	0	1.5	1.1	8.1

Table IV-B.39 DC3 Monsoon Period Water Balance

Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
1960-10-01	0.27	5.0	0.031	0.19	-0.0098	0	0.27	0.30	7.0
1960-11-01	2.1	1.9	-0.91	0.40	-0.0098	0	2.1	1.1	5.0
1960	4.6	25	-1.5	1.8	-0.051	0	4.6	3.1	38
1961-07-01	0	7.3	0.043	0.087	-0.0087	0	0	0.039	9.3
1961-08-01	0.67	6.1	-0.16	0.094	-0.0091	0	0.67	0.52	8.9
1961-09-01	3.0	3.0	-1.7	0.52	-0.0087	0	3.0	1.3	8.1
1961-10-01	0.50	4.4	0.54	0.63	-0.0083	0	0.50	1.0	6.3
1961-11-01	0.45	3.6	-0.24	0.055	-0.0087	0	0.45	0.22	5.4
1961	4.6	24	-1.5	1.4	-0.043	0	4.6	3.1	38
1962-07-01	0	7.0	0.047	0.15	-0.0075	0	0	0.047	9.1
1962-08-01	0.61	6.3	-0.12	0.13	-0.0079	0	0.61	0.49	8.9
1962-09-01	0.49	5.6	-0.071	0.14	-0.0075	0	0.49	0.43	8.4
1962-10-01	1.2	3.7	-0.40	0.19	-0.0071	0	1.2	0.83	6.6
1962-11-01	0.87	3.2	-0.19	0.29	-0.0075	0	0.87	0.68	5.1
1962	3.2	26	-0.73	0.91	-0.037	0	3.2	2.5	38
1963-07-01	0	7.0	0.055	0.15	-0.0063	0	0	0.055	9.0
1963-08-01	0.079	7.2	0.031	0.094	-0.0067	0	0.079	0.11	9.4
1963-09-01	10	-5.1	-7.1	1.2	-0.0063	0	10	3.4	7.5
1963-10-01	1.0	4.1	1.9	1.5	-0.0063	0	1.0	3.0	6.6
1963-11-01	0.67	3.9	-0.012	0.78	-0.0067	0	0.67	0.66	5.8
1963	12	17	-5.1	3.7	-0.032	0	12	7.2	38
1964-07-01	0	7.2	0.051	0.091	-0.0055	0	0	0.051	9.4
1964-08-01	1.5	5.3	-0.56	0.24	-0.0059	0	1.5	0.93	8.8
1964-09-01	2.2	3.6	-0.66	0.78	-0.0059	0	2.2	1.5	7.7
1964-10-01	1.6	3.0	-0.39	0.44	-0.0055	0	1.6	1.2	6.1
1964-11-01	1.5	3.1	-0.70	0.39	-0.0055	0	1.5	0.83	5.8
1964	6.8	22	-2.3	1.9	-0.028	0	6.8	4.5	38
1965-07-01	0.10	6.8	0.043	0.14	-0.0051	0	0.10	0.15	8.8
1965-08-01	1.4	5.2	-0.48	0.32	-0.0051	0	1.4	0.96	8.9
1965-09-01	0.90	5.0	-0.20	0.37	-0.0051	0	0.90	0.70	8.0
1965-10-01	1.0	3.9	-0.27	0.31	-0.0051	0	1.0	0.77	6.6
1965-11-01	0.46	4.0	-0.11	0.10	-0.0051	0	0.46	0.35	5.7
1965	3.9	25	-1.0	1.2	-0.026	0	3.9	2.9	38
1966-07-01	0.18	6.6	0	0.36	-0.0043	0	0.18	0.19	9.1
1966-08-01	0.84	5.8	-0.23	0.41	-0.0047	0	0.84	0.61	8.3
1966-09-01	1.6	4.3	-0.67	0.57	-0.0043	0	1.6	0.94	8.1
1966-10-01	2.7	2.2	-1.3	1.0	-0.0043	0	2.7	1.4	6.5
1966-11-01	1.4	2.8	-0.31	0.72	-0.0043	0	1.4	1.1	5.1
1966	6.7	22	-2.5	3.1	-0.022	0	6.7	4.2	37
1967-07-01	0.079	6.9	0.043	0.11	-0.0039	0	0.079	0.12	9.0
1967-08-01	4.0	2.4	-1.7	0.95	-0.0043	0	4.0	2.3	8.3
1967-09-01	2.5	3.5	-0.97	1.4	-0.0039	0	2.5	1.5	8.0
1967-10-01	0.56	4.3	-0.091	0.41	-0.0039	0	0.56	0.46	6.5
1967-11-01	0.42	3.8	-0.039	0.17	-0.0043	0	0.42	0.38	5.6
1967	7.5	21	-2.8	3.0	-0.020	0	7.5	4.8	37
1968-07-01	0	7.2	0.055	0.37	-0.0039	0	0	0.055	9.3
1968-08-01	1.8	5.0	-0.86	0.57	-0.0039	0	1.8	0.98	8.9
1968-09-01	2.5	2.8	-0.78	1.2	-0.0043	0	2.5	1.8	7.3
1968-10-01	0.051	5.2	0.11	0.31	-0.0039	0	0.051	0.15	6.9
1968-11-01	0.39	3.7	-0.079	0.16	-0.0039	0	0.39	0.31	5.1
1968	4.8	24	-1.6	2.6	-0.020	0	4.8	3.3	38
1969-07-01	0	7.2	0.067	0.26	-0.0039	0	0	0.071	9.4
1969-08-01	0.33	6.3	-0.024	0.18	-0.0043	0	0.33	0.31	8.7
1969-09-01	2.6	3.6	-0.98	0.90	-0.0039	0	2.6	1.6	8.3
1969-10-01	1.2	3.8	-0.43	0.55	-0.0039	0	1.2	0.81	6.8
1969-11-01	0.83	3.1	-0.31	0.24	-0.0043	0	0.83	0.51	5.2
1969	5.0	24	-1.7	2.1	-0.020	0	5.0	3.3	38

Table IV-B.39 DC3 Monsoon Period Water Balance

Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
1970-07-01	0.079	7.1	0.051	0.12	-0.0043	0	0.079	0.13	9.1
1970-08-01	1.0	5.7	-0.27	0.24	-0.0039	0	1.0	0.77	9.1
1970-09-01	1.7	4.4	-0.57	0.41	-0.0043	0	1.7	1.1	8.0
1970-10-01	3.4	1.7	-1.7	1.1	-0.0043	0	3.4	1.7	7.0
1970-11-01	0	4.2	0.15	0.41	-0.0043	0	0	0.15	5.3
1970	6.2	23	-2.3	2.2	-0.021	0	6.2	3.9	39
1971-07-01	0	7.0	0.047	0.047	-0.0043	0	0	0.047	9.0
1971-08-01	0.39	6.7	-0.067	0.059	-0.0043	0	0.39	0.32	9.2
1971-09-01	4.7	0.94	-2.1	1.1	-0.0039	0	4.7	2.6	7.8
1971-10-01	3.1	2.1	-2.4	0.75	-0.0039	0	3.1	0.66	7.1
1971-11-01	4.2	-0.35	-0.93	0.84	-0.0043	0	4.2	3.3	5.1
1971	12	16	-5.5	2.8	-0.021	0	12	6.9	38
1972-07-01	1.7	5.6	-0.74	0.39	-0.0039	0	1.7	0.94	9.3
1972-08-01	0.27	7.1	0.047	0.28	-0.0039	0	0.27	0.32	9.5
1972-09-01	2.0	4.0	-0.80	0.59	-0.0039	0	2.0	1.2	8.4
1972-10-01	0.66	4.4	-0.035	0.28	-0.0035	0	0.66	0.63	6.8
1972-11-01	8.7	-5.0	-5.7	0.63	-0.0035	0	8.7	3.0	4.9
1972	13	16	-7.3	2.2	-0.019	0	13	6.0	39
1973-07-01	0.87	6.2	-0.22	0.67	-0.0035	0	0.87	0.65	9.0
1973-08-01	2.7	3.9	-1.5	0.72	-0.0035	0	2.7	1.2	8.9
1973-09-01	1.4	4.6	-0.071	1.2	-0.0035	0	1.4	1.4	8.1
1973-10-01	0	5.1	0.091	0.19	-0.0035	0	0	0.094	6.7
1973-11-01	0	4.1	0.055	0.071	-0.0035	0	0	0.055	5.6
1973	5.0	24	-1.7	2.8	-0.018	0	5.0	3.3	38
1974-07-01	0	7.4	0.043	0.083	-0.0031	0	0	0.043	9.4
1974-08-01	2.4	4.1	-1.00	0.65	-0.0035	0	2.4	1.4	8.6
1974-09-01	1.4	4.5	-0.37	0.67	-0.0031	0	1.4	1.0	8.3
1974-10-01	3.4	1.5	-1.5	0.97	-0.0031	0	3.4	1.9	6.5
1974-11-01	3.4	0.51	-2.4	0.48	-0.0031	0	3.4	1.0	5.3
1974	11	18	-5.2	2.9	-0.016	0	11	5.4	38
1975-07-01	0	7.4	0.059	0.22	-0.0031	0	0	0.055	9.6
1975-08-01	2.2	3.8	-0.72	0.54	-0.0028	0	2.2	1.5	8.3
1975-09-01	2.0	4.2	-0.72	0.82	-0.0031	0	2.0	1.3	8.0
1975-10-01	0.91	4.1	-0.18	0.32	-0.0031	0	0.91	0.72	6.8
1975-11-01	0.28	3.9	0.012	0.031	-0.0031	0	0.28	0.27	5.4
1975	5.4	23	-1.5	1.9	-0.015	0	5.4	3.8	38
1976-07-01	0	7.6	0.071	0.035	-0.0028	0	0	0.075	9.7
1976-08-01	2.8	3.5	-1.4	0.53	-0.0028	0	2.8	1.4	8.7
1976-09-01	0.83	5.2	-0.21	0.80	-0.0031	0	0.83	0.64	7.9
1976-10-01	4.0	0.55	-2.1	0.81	-0.0024	0	4.0	1.9	6.4
1976-11-01	0.91	2.9	0.043	0.64	-0.0031	0	0.91	0.94	5.1
1976	8.5	20	-3.6	2.8	-0.014	0	8.5	4.9	38
1977-07-01	0.039	7.4	0.039	0.028	-0.0028	0	0.039	0.091	9.5
1977-08-01	2.6	4.5	-1.2	0.54	-0.0024	0	2.6	1.4	9.4
1977-09-01	2.4	3.5	-0.94	1.1	-0.0028	0	2.4	1.5	8.1
1977-10-01	3.5	1.1	-1.5	0.99	-0.0024	0	3.5	1.9	6.4
1977-11-01	1.3	2.9	-0.30	0.61	-0.0028	0	1.3	1.0	5.5
1977	9.8	19	-3.9	3.2	-0.013	0	9.8	5.9	39
1978-07-01	0.55	6.7	-0.22	0.59	-0.0024	0	0.55	0.31	9.4
1978-08-01	0.98	5.9	-0.35	0.50	-0.0024	0	0.98	0.63	9.4
1978-09-01	1.1	4.5	-0.19	0.79	-0.0024	0	1.1	0.87	7.3
1978-10-01	0.39	4.4	-0.079	0.25	-0.0028	0	0.39	0.31	6.6
1978-11-01	1.9	2.5	-1.1	0.28	-0.0024	0	1.9	0.81	5.9
1978	4.9	24	-1.9	2.4	-0.012	0	4.9	2.9	39
1979-07-01	0.35	7.0	0.071	0.70	-0.0024	0	0.35	0.42	9.2
1979-08-01	0.16	6.8	0.016	0.41	-0.0020	0	0.16	0.18	9.3
1979-09-01	1.5	4.1	-0.44	0.71	-0.0024	0	1.5	1.1	7.8

Table IV-B.39 DC3 Monsoon Period Water Balance

Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
1979-10-01	0.12	5.1	0.075	0.26	-0.0020	0	0.12	0.18	7.2
1979-11-01	0.67	3.9	-0.27	0.25	-0.0024	0	0.67	0.41	5.9
1979	2.8	27	-0.55	2.3	-0.011	0	2.8	2.3	39
1980-07-01	0.16	6.9	-0.047	0.46	-0.0020	0	0.16	0.11	9.0
1980-08-01	1.9	4.8	-0.74	0.62	-0.0024	0	1.9	1.2	9.1
1980-09-01	1.3	4.6	-0.26	0.94	-0.0024	0	1.3	1.0	7.9
1980-10-01	0.55	4.6	-0.12	0.37	-0.0020	0	0.55	0.46	7.0
1980-11-01	0.039	4.3	0.059	0.11	-0.0028	0	0.039	0.10	5.9
1980	4.0	25	-1.1	2.5	-0.011	0	4.0	2.9	39
1981-07-01	0.16	7.1	0.087	0.23	-0.0028	0	0.16	0.21	9.3
1981-08-01	2.1	4.7	-1.3	0.39	-0.0028	0	2.1	0.88	9.3
1981-09-01	2.6	3.5	-0.64	1.4	-0.0031	0	2.6	2.0	7.9
1981-10-01	0.51	4.8	-0.17	0.29	-0.0031	0	0.51	0.34	7.5
1981-11-01	0.94	2.9	-0.19	0.35	-0.0031	0	0.94	0.77	5.2
1981	6.4	23	-2.2	2.7	-0.015	0	6.4	4.2	39
1982-07-01	0.079	7.1	0.039	0.17	-0.0035	0	0.079	0.087	9.1
1982-08-01	2.6	3.7	-1.2	0.49	-0.0035	0	2.6	1.5	8.8
1982-09-01	3.8	1.5	-1.6	1.4	-0.0035	0	3.8	2.2	6.9
1982-10-01	3.1	2.2	-1.2	1.1	-0.0031	0	3.1	1.8	6.7
1982-11-01	0	4.1	0.21	0.49	-0.0035	0	0	0.22	5.4
1982	9.6	19	-3.8	3.7	-0.017	0	9.6	5.8	37
1983-07-01	0	7.4	0.059	0.31	-0.0035	0	0	0.059	9.4
1983-08-01	2.8	4.1	-1.4	0.68	-0.0035	0	2.8	1.4	9.5
1983-09-01	3.6	2.1	-1.4	1.5	-0.0035	0	3.6	2.3	7.5
1983-10-01	5.1	-0.12	-3.6	0.83	-0.0031	0	5.1	1.4	7.3
1983-11-01	1.1	2.5	1.2	0.78	-0.0035	0	1.1	2.3	4.9
1983	13	16	-5.2	4.0	-0.017	0	13	7.5	39
1984-07-01	1.3	5.7	-0.77	0.16	-0.0035	0	1.3	0.56	9.3
1984-08-01	3.3	2.8	-0.94	1.1	-0.0031	0	3.3	2.4	7.8
1984-09-01	3.3	1.9	-0.98	1.2	-0.0031	0	3.3	2.3	7.4
1984-10-01	1.9	3.1	-0.80	0.59	-0.0031	0	1.9	1.1	6.9
1984-11-01	1.4	2.3	-0.24	0.52	-0.0035	0	1.4	1.1	4.9
1984	11	16	-3.7	3.6	-0.017	0	11	7.5	36
1985-07-01	0	6.3	0.055	0.24	-0.0031	0	0	0.039	8.6
1985-08-01	1.3	5.6	-0.66	0.29	-0.0035	0	1.3	0.59	8.7
1985-09-01	2.1	3.8	-0.77	0.92	-0.0031	0	2.1	1.3	8.1
1985-10-01	3.5	1.1	-1.4	0.89	-0.0028	0	3.5	2.1	6.6
1985-11-01	1.3	2.3	-0.035	0.62	-0.0031	0	1.3	1.2	4.6
1985	8.1	19	-2.8	3.0	-0.016	0	8.1	5.3	37
1986-07-01	0	7.2	0.047	0.16	-0.0031	0	0	0.079	9.3
1986-08-01	4.8	1.3	-2.0	1.2	-0.0028	0	4.8	2.7	8.5
1986-09-01	2.0	3.6	-0.76	0.94	-0.0031	0	2.0	1.3	8.0
1986-10-01	2.0	2.6	-0.76	0.84	-0.0028	0	2.0	1.3	6.5
1986-11-01	1.8	2.1	-0.68	0.58	-0.0028	0	1.8	1.1	4.8
1986	11	17	-4.2	3.8	-0.015	0	11	6.5	37
1987-07-01	0.20	7.0	0.0079	0.13	-0.0028	0	0.20	0.24	9.0
1987-08-01	2.1	4.9	-1.1	0.68	-0.0028	0	2.1	0.94	9.0
1987-09-01	2.9	2.9	-1.2	1.2	-0.0028	0	2.9	1.7	8.1
1987-10-01	1.3	3.7	-0.39	0.56	-0.0024	0	1.3	0.87	7.1
1987-11-01	0.35	4.2	0	0.15	-0.0028	0	0.35	0.35	6.0
1987	6.8	23	-2.7	2.7	-0.013	0	6.8	4.1	39
1988-07-01	0.16	6.6	0.047	0.15	-0.0028	0	0.16	0.20	8.9
1988-08-01	3.4	3.1	-2.2	0.31	-0.0024	0	3.4	1.1	8.8
1988-09-01	5.9	-0.24	-1.9	1.7	-0.0028	0	5.9	4.0	7.5
1988-10-01	0.31	4.7	0.50	1.1	-0.0024	0	0.31	0.83	6.9
1988-11-01	1.5	2.8	-0.56	0.53	-0.0028	0	1.5	0.91	5.8
1988	11	17	-4.2	3.8	-0.013	0	11	7.1	38

Table IV-B.39 DC3 Monsoon Period Water Balance

Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
1989-07-01	0	7.2	0.047	0.035	-0.0024	0	0	0.039	9.2
1989-08-01	0.51	6.3	-0.16	0.067	-0.0024	0	0.51	0.35	9.3
1989-09-01	0.91	4.9	-0.20	0.22	-0.0028	0	0.91	0.71	7.8
1989-10-01	1.5	3.6	-0.65	0.57	-0.0020	0	1.5	0.83	7.3
1989-11-01	1.1	3.1	-0.28	0.28	-0.0024	0	1.1	0.79	5.9
1989	4.0	25	-1.2	1.2	-0.012	0	4.0	2.7	39
1990-07-01	0.28	6.9	-0.028	0.043	-0.0020	0	0.28	0.24	9.3
1990-08-01	1.5	4.8	-0.50	0.42	-0.0024	0	1.5	0.98	8.6
1990-09-01	9.0	-3.4	-5.6	1.3	-0.0020	0	9.0	3.4	7.4
1990-10-01	2.8	2.0	-0.52	1.4	-0.0020	0	2.8	2.3	6.8
1990-11-01	0.24	3.7	0.46	0.74	-0.0020	0	0.24	0.75	5.3
1990	14	14	-6.2	3.9	-0.010	0	14	7.6	37
1991-07-01	0.59	6.7	-0.063	0.42	-0.0016	0	0.59	0.55	9.2
1991-08-01	1.7	5.2	-0.85	0.39	-0.0020	0	1.7	0.87	9.3
1991-09-01	2.7	3.1	-0.84	1.3	-0.0020	0	2.7	1.9	8.3
1991-10-01	1.6	3.2	-0.54	0.80	-0.0020	0	1.6	1.0	6.5
1991-11-01	1.2	3.5	-0.85	0.18	-0.0020	0	1.2	0.35	6.6
1991	7.8	22	-3.1	3.1	-0.0094	0	7.8	4.7	40
1992-07-01	1.3	5.8	-0.25	1.2	-0.0020	0	1.3	1.1	8.9
1992-08-01	3.3	3.5	-2.0	0.80	-0.0016	0	3.3	1.3	9.3
1992-09-01	5.3	0.28	-2.1	1.7	-0.0016	0	5.3	3.2	7.8
1992-10-01	0.87	4.3	0.14	1.3	-0.0020	0	0.87	1.0	6.7
1992-11-01	1.2	3.1	-0.62	0.51	-0.0020	0	1.2	0.59	6.2
1992	12	17	-4.8	5.5	-0.0091	0	12	7.2	39
1993-07-01	0	7.1	0.12	0.95	-0.0020	0	0	0.12	9.3
1993-08-01	0.24	6.6	-0.0039	0.63	-0.0020	0	0.24	0.24	8.9
1993-09-01	3.4	2.2	-1.5	0.97	-0.0016	0	3.4	1.9	8.5
1993-10-01	0.16	4.8	0.39	0.86	-0.0016	0	0.16	0.55	6.4
1993-11-01	0.79	3.4	-0.17	0.42	-0.0020	0	0.79	0.63	6.0
1993	4.6	24	-1.2	3.8	-0.0091	0	4.6	3.4	39
1994-07-01	0.39	6.5	-0.031	0.36	-0.0024	0	0.39	0.35	8.9
1994-08-01	1.5	5.5	-1.00	0.26	-0.0028	0	1.5	0.47	9.1
1994-09-01	0.71	5.4	0.31	0.77	-0.0028	0	0.71	1.0	8.6
1994-10-01	1.9	3.0	-0.76	0.80	-0.0028	0	1.9	1.2	6.6
1994-11-01	1.9	1.9	-0.95	0.42	-0.0035	0	1.9	0.91	5.3
1994	6.3	22	-2.4	2.6	-0.014	0	6.3	3.9	39
1995-07-01	0	7.2	0.071	0.29	-0.0047	0	0	0.079	9.0
1995-08-01	0.039	7.1	0.047	0.21	-0.0051	0	0.039	0.079	9.3
1995-09-01	3.9	2.2	-1.8	1.1	-0.0051	0	3.9	2.0	8.8
1995-10-01	2.8	2.3	-1.6	0.99	-0.0051	0	2.8	1.2	7.2
1995-11-01	0	4.3	0.58	0.60	-0.0055	0	0	0.59	5.8
1995	6.7	23	-2.7	3.2	-0.026	0	6.7	4.0	40
1996-07-01	0.39	6.6	-0.15	0.13	-0.0059	0	0.39	0.24	9.1
1996-08-01	2.3	4.4	-0.85	0.72	-0.0059	0	2.3	1.5	8.9
1996-09-01	1.3	4.6	-0.39	0.50	-0.0059	0	1.3	0.87	8.1
1996-10-01	3.0	1.4	-1.1	0.89	-0.0059	0	3.0	1.9	6.7
1996-11-01	0.43	4.1	-0.035	0.28	-0.0063	0	0.43	0.39	6.0
1996	7.4	21	-2.5	2.5	-0.030	0	7.4	4.9	39
1997-07-01	0.039	7.0	0.059	0.059	-0.0059	0	0.039	0.079	9.0
1997-08-01	0.12	7.3	0.016	0.051	-0.0059	0	0.12	0.16	9.9
1997-09-01	2.6	3.4	-1.1	0.78	-0.0059	0	2.6	1.5	8.5
1997-10-01	0	5.4	0.11	0.14	-0.0059	0	0	0.12	7.3
1997-11-01	0.71	3.2	-0.24	0.098	-0.0063	0	0.71	0.51	6.0
1997	3.4	26	-1.1	1.1	-0.030	0	3.4	2.4	41
1998-07-01	0	7.2	0.059	0.31	-0.0055	0	0	0.079	9.2
1998-08-01	1.7	5.1	-0.64	0.65	-0.0055	0	1.7	1.1	9.1
1998-09-01	2.4	3.4	-0.86	0.96	-0.0055	0	2.4	1.5	8.3

Table IV-B.39 DC3 Monsoon Period Water Balance

Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
1998-10-01	1.3	3.7	-0.45	0.55	-0.0055	0	1.3	0.87	7.0
1998-11-01	0	4.4	0.079	0.067	-0.0055	0	0	0.079	6.3
1998	5.5	24	-1.8	2.5	-0.028	0	5.5	3.6	40
1999-07-01	0	7.1	0.051	0.059	-0.0051	0	0	0.079	9.1
1999-08-01	5.8	0.35	-2.8	1.0	-0.0047	0	5.8	3.0	8.7
1999-09-01	2.8	2.8	-0.93	1.4	-0.0051	0	2.8	1.9	7.8
1999-10-01	1.1	3.9	0.17	0.91	-0.0047	0	1.1	1.3	6.8
1999-11-01	0	4.5	0.098	0.13	-0.0051	0	0	0.12	6.2
1999	9.7	19	-3.5	3.5	-0.025	0	9.7	6.3	39
2000-07-01	0.79	6.3	-0.26	0.19	-0.0043	0	0.79	0.51	9.5
2000-08-01	0.079	7.4	0.063	0.031	-0.0047	0	0.079	0.16	9.5
2000-09-01	0.67	4.9	-0.11	0.075	-0.0043	0	0.67	0.55	8.7
2000-10-01	0	5.3	0.094	0.024	-0.0043	0	0	0.079	6.8
2000-11-01	5.3	-1.7	-4.0	0.30	-0.0043	0	5.3	1.3	5.9
2000	6.9	22	-4.3	0.61	-0.022	0	6.9	2.6	40
2001-07-01	0	7.2	0.063	0.16	-0.0039	0	0	0.079	9.2
2001-08-01	2.7	4.2	-2.0	0.26	-0.0039	0	2.7	0.75	9.7
2001-09-01	3.3	2.4	-0.54	1.6	-0.0039	0	3.3	2.8	7.6
2001-10-01	0.12	4.8	0.11	0.49	-0.0035	0	0.12	0.24	7.3
2001-11-01	0.39	3.6	-0.051	0.15	-0.0035	0	0.39	0.31	5.5
2001	6.6	22	-2.4	2.7	-0.019	0	6.6	4.2	39
2002-07-01	0	7.4	0.035	0.031	-0.0035	0	0	0.039	9.2
2002-08-01	0.35	6.8	-0.031	0.035	-0.0031	0	0.35	0.31	9.7
2002-09-01	0.43	5.4	-0.12	0.051	-0.0035	0	0.43	0.31	8.1
2002-10-01	1.2	3.9	-0.37	0.34	-0.0035	0	1.2	0.83	7.1
2002-11-01	0.12	4.1	0.051	0.016	-0.0031	0	0.12	0.16	6.1
2002	2.1	28	-0.43	0.48	-0.017	0	2.1	1.7	40
2003-07-01	0	7.9	0.047	0.11	-0.0031	0	0	0.079	10.0
2003-08-01	0.47	6.7	-0.043	0.047	-0.0031	0	0.47	0.43	10
2003-09-01	1.3	4.8	-0.45	0.24	-0.0031	0	1.3	0.83	8.5
2003-10-01	1.9	3.3	-0.58	0.64	-0.0028	0	1.9	1.4	7.4
2003-11-01	0.079	4.4	0.11	0.043	-0.0031	0	0.079	0.16	6.0
2003	3.8	27	-0.92	1.1	-0.015	0	3.8	2.9	42
2004-07-01	0	7.8	0.043	0.028	-0.0028	0	0	0.079	10
2004-08-01	0.55	6.7	-0.11	0.047	-0.0028	0	0.55	0.43	9.8
2004-09-01	2.1	4.0	-0.71	0.57	-0.0028	0	2.1	1.4	8.6
2004-10-01	1.5	3.9	-0.65	0.43	-0.0028	0	1.5	0.87	7.9
2004-11-01	1.2	2.9	-0.51	0.27	-0.0028	0	1.2	0.71	6.1
2004	5.4	25	-1.9	1.3	-0.014	0	5.4	3.5	42
2005-07-01	0.079	7.6	0.047	0.39	-0.0028	0	0.079	0.12	9.7
2005-08-01	1.4	5.8	-0.69	0.39	-0.0028	0	1.4	0.71	11
2005-09-01	4.7	1.0	-1.8	1.7	-0.0024	0	4.7	2.9	7.3
2005-10-01	0.079	5.0	0.13	0.59	-0.0028	0	0.079	0.24	7.4
2005-11-01	0.43	3.8	-0.091	0.20	-0.0024	0	0.43	0.31	6.1
2005	6.7	23	-2.4	3.3	-0.013	0	6.7	4.3	41
2006-07-01	0.51	7.0	-0.15	0.087	-0.0024	0	0.51	0.39	10
2006-08-01	3.2	3.1	-2.3	0.22	-0.0024	0	3.2	0.87	9.2
2006-09-01	2.9	3.0	-0.14	1.7	-0.0020	0	2.9	2.8	7.4
2006-10-01	1.1	3.7	-0.30	0.76	-0.0024	0	1.1	0.83	6.9
2006-11-01	1.1	3.0	-0.23	0.30	-0.0020	0	1.1	0.79	5.9
2006	8.8	20	-3.1	3.1	-0.011	0	8.8	5.6	40

Table IV-B.40 DC3 Winter Storm Period Water Balance

Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
1951-11-01	0	2.7	-0.99	0.56	-0.18	0	1.6	0.65	5.4
1951-12-01	1.7	1.5	-0.037	0.51	-0.17	0	1.7	1.7	3.7
1952-01-01	3.0	-0.66	-1.7	0.37	-0.17	0	3.0	1.3	2.8
1952-02-01	2.8	-0.36	-0.38	0.46	-0.16	0	2.8	2.4	2.9
1952-03-01	0.50	2.4	0.80	0.77	-0.14	0	0.50	1.3	3.8
1952	8.0	5.6	-2.3	2.7	-0.81	0	9.7	7.4	19
1952-11-01	0	4.8	0.10	0.18	-0.11	0	0	0.10	5.9
1952-12-01	4.3	-1.5	-3.1	0.24	-0.100	0	4.3	1.2	3.3
1953-01-01	2.0	0.26	0.095	0.37	-0.099	0	2.0	2.1	2.7
1953-02-01	0.74	2.1	0.62	0.50	-0.095	0	0.74	1.4	3.3
1953-03-01	0.60	2.4	-0.091	0.60	-0.082	0	0.60	0.51	3.8
1953	7.6	8.0	-2.3	1.9	-0.48	0	7.6	5.3	19
1953-11-01	0.012	4.4	0.065	0.13	-0.067	0	0.012	0.077	5.5
1953-12-01	0.56	2.8	-0.21	0.13	-0.063	0	0.56	0.35	3.9
1954-01-01	0.19	2.3	0.057	0.092	-0.063	0	0.19	0.25	2.9
1954-02-01	2.4	0.35	-1.2	0.29	-0.062	0	2.4	1.2	3.2
1954-03-01	0.72	2.5	-0.032	0.71	-0.054	0	0.72	0.69	4.2
1954	3.9	12	-1.4	1.3	-0.31	0	3.9	2.5	20
1954-11-01	0	4.6	0.19	0.48	-0.045	0	0	0.19	5.6
1954-12-01	0.091	3.5	0.0079	0.15	-0.043	0	0.091	0.098	4.3
1955-01-01	0.29	2.7	0.017	0.11	-0.043	0	0.29	0.31	3.5
1955-02-01	3.4	-1.4	-1.9	0.32	-0.041	0	3.4	1.6	2.4
1955-03-01	0.28	2.5	0.36	0.62	-0.036	0	0.28	0.63	3.5
1955	4.1	12	-1.3	1.7	-0.21	0	4.1	2.8	19
1955-11-01	0.020	4.7	0.073	0.16	-0.033	0	0.020	0.091	5.9
1955-12-01	0.96	2.1	-0.40	0.18	-0.032	0	0.96	0.56	3.7
1956-01-01	1.4	1.4	-0.53	0.33	-0.032	0	1.4	0.84	3.1
1956-02-01	2.6	0.30	-1.9	0.30	-0.031	0	2.6	0.72	3.5
1956-03-01	2.0	0.48	-0.10	0.70	-0.028	0	2.0	1.9	3.1
1956	7.0	9.0	-2.9	1.7	-0.16	0	7.0	4.1	19
1956-11-01	0.53	3.6	-0.18	0.063	-0.024	0	0.53	0.35	5.2
1956-12-01	0	3.2	0.19	0.067	-0.023	0	0	0.19	3.8
1957-01-01	0.47	2.2	-0.12	0.087	-0.023	0	0.47	0.35	3.1
1957-02-01	4.8	-2.7	-3.2	0.31	-0.022	0	4.8	1.6	2.7
1957-03-01	0.73	2.1	0.82	0.77	-0.020	0	0.73	1.6	3.4
1957	6.5	8.4	-2.5	1.3	-0.11	0	6.5	4.0	18
1957-11-01	3.2	0.30	-2.1	0.31	-0.019	0	3.2	1.1	4.6
1957-12-01	0.61	2.0	0.65	0.40	-0.018	0	0.61	1.3	3.0
1958-01-01	1.1	1.6	-0.17	0.35	-0.019	0	1.1	0.89	3.2
1958-02-01	0.012	2.9	0.15	0.24	-0.019	0	0.012	0.16	3.3
1958-03-01	2.5	-0.039	-1.3	0.56	-0.016	0	2.5	1.2	3.2
1958	7.4	6.8	-2.8	1.9	-0.090	0	7.4	4.7	17
1958-11-01	1.9	2.3	-0.53	0.76	-0.015	0	1.9	1.4	5.3
1958-12-01	1.5	1.6	-0.63	0.37	-0.014	0	1.5	0.90	3.6
1959-01-01	0	3.0	0.25	0.30	-0.015	0	0	0.25	3.6
1959-02-01	0.21	2.8	0.059	0.20	-0.014	0	0.21	0.27	3.5
1959-03-01	1.4	1.1	-0.61	0.41	-0.013	0	1.4	0.81	3.3
1959	5.1	11	-1.5	2.0	-0.070	0	5.1	3.6	19
1959-11-01	4.8	-0.60	-4.2	0.34	-0.012	0	4.8	0.56	5.3
1959-12-01	0.38	2.8	1.8	0.54	-0.011	0	0.38	2.1	3.7
1960-01-01	5.2	-3.0	-3.7	0.35	-0.012	0	5.2	1.6	2.7
1960-02-01	4.2	-2.0	-2.0	0.41	-0.011	0	4.2	2.1	2.5
1960-03-01	0.87	1.8	1.4	0.75	-0.010	0	0.87	2.3	3.4

Table IV-B.40 DC3 Winter Storm Period Water Balance

Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
1960	15	-1.1	-6.7	2.4	-0.057	0	15	8.7	18
1960-11-01	2.1	1.9	-0.91	0.40	-0.0098	0	2.1	1.1	5.0
1960-12-01	0.48	2.6	0.024	0.30	-0.0098	0	0.48	0.51	3.7
1961-01-01	0.47	2.2	-0.079	0.16	-0.0098	0	0.47	0.39	3.3
1961-02-01	0.70	1.9	-0.30	0.11	-0.0094	0	0.70	0.40	3.2
1961-03-01	0.23	2.9	0.15	0.29	-0.0087	0	0.23	0.38	3.7
1961	3.9	12	-1.1	1.3	-0.048	0	3.9	2.8	19
1961-11-01	0.45	3.6	-0.24	0.055	-0.0087	0	0.45	0.22	5.4
1961-12-01	0.32	2.4	0.15	0.071	-0.0079	0	0.32	0.47	3.1
1962-01-01	3.9	-1.7	-2.3	0.27	-0.0087	0	3.9	1.6	2.6
1962-02-01	3.2	-0.94	-1.8	0.40	-0.0083	0	3.2	1.4	2.7
1962-03-01	1.7	0.71	-0.020	0.67	-0.0075	0	1.7	1.6	3.2
1962	9.5	4.1	-4.2	1.5	-0.041	0	9.5	5.3	17
1962-11-01	0.87	3.2	-0.19	0.29	-0.0075	0	0.87	0.68	5.1
1962-12-01	0.83	2.5	-0.28	0.21	-0.0067	0	0.83	0.56	3.9
1963-01-01	1.8	0.87	-0.85	0.20	-0.0071	0	1.8	0.96	3.3
1963-02-01	2.1	0.47	-0.53	0.43	-0.0071	0	2.1	1.6	3.0
1963-03-01	4.2	-1.2	-2.5	0.76	-0.0059	0	4.2	1.7	3.8
1963	9.8	5.9	-4.3	1.9	-0.034	0	9.8	5.5	19
1963-11-01	0.67	3.9	-0.012	0.78	-0.0067	0	0.67	0.66	5.8
1963-12-01	2.3	0.67	-0.85	0.47	-0.0059	0	2.3	1.5	3.6
1964-01-01	0.34	2.5	0.29	0.37	-0.0063	0	0.34	0.63	3.3
1964-02-01	0.58	2.0	-0.13	0.29	-0.0063	0	0.58	0.46	3.0
1964-03-01	0	2.8	0.15	0.33	-0.0059	0	0	0.15	3.6
1964	3.9	12	-0.55	2.2	-0.031	0	3.9	3.4	19
1964-11-01	1.5	3.1	-0.70	0.39	-0.0055	0	1.5	0.83	5.8
1964-12-01	1.4	1.6	-0.56	0.32	-0.0055	0	1.4	0.83	3.6
1965-01-01	1.7	0.87	-0.83	0.30	-0.0055	0	1.7	0.87	3.3
1965-02-01	2.9	-0.47	-0.90	0.43	-0.0055	0	2.9	2.0	2.6
1965-03-01	2.8	-0.039	-1.1	0.77	-0.0051	0	2.8	1.7	3.4
1965	10	5.1	-4.1	2.2	-0.027	0	10	6.2	19
1965-11-01	0.46	4.0	-0.11	0.10	-0.0051	0	0.46	0.35	5.7
1965-12-01	2.4	0.87	-1.7	0.10	-0.0047	0	2.4	0.65	3.9
1966-01-01	10	-8.3	-8.9	0.33	-0.0047	0	10	1.6	2.7
1966-02-01	1.8	0.51	0.50	0.44	-0.0047	0	1.8	2.3	2.8
1966-03-01	2.0	0.51	0.52	0.74	-0.0047	0	2.0	2.5	3.1
1966	17	-2.4	-9.7	1.7	-0.024	0	17	7.5	18
1966-11-01	1.4	2.8	-0.31	0.72	-0.0043	0	1.4	1.1	5.1
1966-12-01	0.88	2.4	-0.26	0.37	-0.0043	0	0.88	0.63	4.1
1967-01-01	1.3	1.3	-0.46	0.29	-0.0043	0	1.3	0.78	3.1
1967-02-01	0.79	1.9	-0.19	0.31	-0.0043	0	0.79	0.60	2.9
1967-03-01	0	3.0	0.18	0.37	-0.0039	0	0	0.18	3.9
1967	4.3	11	-1.0	2.1	-0.021	0	4.3	3.2	19
1967-11-01	0.42	3.8	-0.039	0.17	-0.0043	0	0.42	0.38	5.6
1967-12-01	2.1	0.98	-1.6	0.091	-0.0039	0	2.1	0.56	3.9
1968-01-01	10	-8.0	-8.4	0.31	-0.0039	0	10	1.6	2.3
1968-02-01	0.63	2.0	2.0	0.50	-0.0039	0	0.63	2.6	3.1
1968-03-01	1.9	0.98	0.41	0.84	-0.0039	0	1.9	2.4	3.4
1968	15	-0.16	-7.6	1.9	-0.020	0	15	7.6	18
1968-11-01	0.39	3.7	-0.079	0.16	-0.0039	0	0.39	0.31	5.1
1968-12-01	2.5	0.43	-1.2	0.33	-0.0039	0	2.5	1.3	3.8
1969-01-01	3.3	-0.87	-2.2	0.32	-0.0039	0	3.3	1.0	2.9
1969-02-01	4.2	-1.9	-2.2	0.43	-0.0043	0	4.2	2.0	2.6

Table IV-B.40 DC3 Winter Storm Period Water Balance

Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
1969-03-01	1.4	1.1	0.99	0.71	-0.0035	0	1.4	2.3	3.0
1969	12	2.5	-4.7	2.0	-0.020	0	12	7.0	17
1969-11-01	0.83	3.1	-0.31	0.24	-0.0043	0	0.83	0.51	5.2
1969-12-01	2.1	0.71	-0.85	0.33	-0.0039	0	2.1	1.3	3.6
1970-01-01	1.3	1.5	-0.43	0.35	-0.0043	0	1.3	0.89	3.4
1970-02-01	0.50	2.2	0.17	0.32	-0.0043	0	0.50	0.66	2.9
1970-03-01	0.41	2.5	0.012	0.30	-0.0035	0	0.41	0.41	3.6
1970	5.2	10.0	-1.4	1.5	-0.020	0	5.2	3.8	19
1970-11-01	0	4.2	0.15	0.41	-0.0043	0	0	0.15	5.3
1970-12-01	0.65	2.5	-0.42	0.13	-0.0039	0	0.65	0.23	3.9
1971-01-01	1.2	1.2	-0.28	0.20	-0.0043	0	1.2	0.94	3.0
1971-02-01	0.85	2.1	-0.12	0.37	-0.0043	0	0.85	0.73	3.1
1971-03-01	0.82	2.1	-0.31	0.37	-0.0039	0	0.82	0.51	4.0
1971	3.5	12	-0.98	1.5	-0.021	0	3.5	2.6	19
1971-11-01	4.2	-0.35	-0.93	0.84	-0.0043	0	4.2	3.3	5.1
1971-12-01	0.039	3.1	0.72	0.48	-0.0039	0	0.039	0.76	3.7
1972-01-01	2.1	0.35	-0.72	0.37	-0.0043	0	2.1	1.4	3.0
1972-02-01	0	2.8	0.43	0.38	-0.0039	0	0	0.43	3.2
1972-03-01	0	3.6	0.11	0.37	-0.0039	0	0	0.11	4.1
1972	6.4	9.4	-0.38	2.4	-0.020	0	6.4	6.0	19
1972-11-01	8.7	-5.0	-5.7	0.63	-0.0035	0	8.7	3.0	4.9
1972-12-01	2.8	-0.16	-0.17	0.48	-0.0035	0	2.8	2.7	3.2
1973-01-01	3.0	-0.67	-0.89	0.38	-0.0035	0	3.0	2.1	2.9
1973-02-01	0.74	1.6	1.3	0.44	-0.0039	0	0.74	2.0	2.6
1973-03-01	3.2	-0.67	-1.2	0.70	-0.0031	0	3.2	2.0	2.8
1973	18	-5.0	-6.7	2.6	-0.018	0	18	12	16
1973-11-01	0	4.1	0.055	0.071	-0.0035	0	0	0.055	5.6
1973-12-01	1.8	1.3	-0.91	0.14	-0.0031	0	1.8	0.87	3.9
1974-01-01	0.098	2.8	0.28	0.24	-0.0039	0	0.098	0.37	3.3
1974-02-01	3.4	-0.98	-1.6	0.41	-0.0035	0	3.4	1.8	2.9
1974-03-01	0.16	2.8	0.27	0.59	-0.0031	0	0.16	0.42	3.3
1974	5.4	10.0	-1.9	1.4	-0.017	0	5.4	3.5	19
1974-11-01	3.4	0.51	-2.4	0.48	-0.0031	0	3.4	1.0	5.3
1974-12-01	0.12	3.0	1.1	0.46	-0.0031	0	0.12	1.2	3.6
1975-01-01	0.75	1.7	-0.075	0.29	-0.0031	0	0.75	0.68	3.1
1975-02-01	0.39	1.9	-0.043	0.20	-0.0035	0	0.39	0.36	2.6
1975-03-01	4.0	-1.2	-2.3	0.62	-0.0028	0	4.0	1.6	3.0
1975	8.6	5.9	-3.7	2.1	-0.016	0	8.6	4.9	18
1975-11-01	0.28	3.9	0.012	0.031	-0.0031	0	0.28	0.27	5.4
1975-12-01	2.1	1.2	-1.9	0.043	-0.0028	0	2.1	0.26	4.2
1976-01-01	1.3	1.3	0.39	0.37	-0.0031	0	1.3	1.6	3.1
1976-02-01	0.24	2.3	0.24	0.31	-0.0028	0	0.24	0.47	2.9
1976-03-01	1.6	1.4	-0.56	0.61	-0.0028	0	1.6	1.0	3.4
1976	5.5	10	-1.8	1.4	-0.015	0	5.5	3.7	19
1976-11-01	0.91	2.9	0.043	0.64	-0.0031	0	0.91	0.94	5.1
1976-12-01	0.55	2.6	-0.051	0.30	-0.0028	0	0.55	0.50	4.0
1977-01-01	1.8	0.75	-1.4	0.19	-0.0024	0	1.8	0.43	3.1
1977-02-01	1.9	0.43	-0.098	0.41	-0.0028	0	1.9	1.8	2.5
1977-03-01	0.079	3.3	0.27	0.61	-0.0028	0	0.079	0.35	4.1
1977	5.2	10	-1.2	2.1	-0.014	0	5.2	4.0	19
1977-11-01	1.3	2.9	-0.30	0.61	-0.0028	0	1.3	1.0	5.5
1977-12-01	0.35	2.9	0.15	0.26	-0.0024	0	0.35	0.50	3.9
1978-01-01	0.63	2.0	-0.32	0.087	-0.0028	0	0.63	0.33	3.5

Table IV-B.40 DC3 Winter Storm Period Water Balance

Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
1978-02-01	6.4	-4.1	-4.8	0.33	-0.0028	0	6.4	1.6	2.5
1978-03-01	5.5	-3.0	-3.0	0.73	-0.0024	0	5.5	2.5	2.9
1978	14	0.75	-8.2	2.0	-0.013	0	14	6.0	18
1978-11-01	1.9	2.5	-1.1	0.28	-0.0024	0	1.9	0.81	5.9
1978-12-01	5.6	-2.8	-3.9	0.44	-0.0020	0	5.6	1.8	3.7
1979-01-01	6.6	-4.3	-4.3	0.38	-0.0024	0	6.6	2.3	2.5
1979-02-01	6.0	-4.2	-4.2	0.35	-0.0020	0	6.0	1.8	2.3
1979-03-01	1.3	1.9	1.9	0.90	-0.0020	0	1.3	3.1	3.3
1979	21	-7.0	-12	2.4	-0.011	0	21	9.8	18
1979-11-01	0.67	3.9	-0.27	0.25	-0.0024	0	0.67	0.41	5.9
1979-12-01	0.67	2.5	-0.11	0.24	-0.0020	0	0.67	0.57	4.0
1980-01-01	0.71	2.2	-0.28	0.14	-0.0020	0	0.71	0.43	3.7
1980-02-01	4.1	-2.1	-2.7	0.31	-0.0020	0	4.1	1.4	2.4
1980-03-01	6.0	-3.6	-4.0	0.70	-0.0020	0	6.0	2.1	2.4
1980	12	2.9	-7.3	1.6	-0.010	0	12	4.9	18
1980-11-01	0.039	4.3	0.059	0.11	-0.0028	0	0.039	0.10	5.9
1980-12-01	0	3.5	0.047	0.071	-0.0024	0	0	0.043	4.3
1981-01-01	0.59	2.6	-0.13	0.10	-0.0028	0	0.59	0.43	3.5
1981-02-01	1.3	1.5	-0.61	0.27	-0.0024	0	1.3	0.71	3.5
1981-03-01	2.7	0.39	-1.5	0.71	-0.0024	0	2.7	1.2	3.6
1981	4.6	12	-2.1	1.3	-0.013	0	4.6	2.5	21
1981-11-01	0.94	2.9	-0.19	0.35	-0.0031	0	0.94	0.77	5.2
1981-12-01	2.3	1.0	-2.1	0.071	-0.0028	0	2.3	0.19	4.4
1982-01-01	0	3.0	1.0	0.40	-0.0035	0	0	1.0	3.3
1982-02-01	2.8	-0.43	-0.96	0.41	-0.0031	0	2.8	1.8	2.8
1982-03-01	1.8	0.91	-0.47	0.70	-0.0028	0	1.8	1.3	3.1
1982	7.8	7.3	-2.7	1.9	-0.015	0	7.8	5.1	19
1982-11-01	0	4.1	0.21	0.49	-0.0035	0	0	0.22	5.4
1982-12-01	3.3	-0.75	-2.0	0.30	-0.0035	0	3.3	1.3	3.6
1983-01-01	1.7	0.63	0.14	0.37	-0.0035	0	1.7	1.8	2.7
1983-02-01	1.9	0.83	-1.3	0.40	-0.0035	0	1.9	0.61	3.2
1983-03-01	2.3	0.24	-0.49	0.72	-0.0031	0	2.3	1.8	2.8
1983	9.2	5.0	-3.4	2.3	-0.017	0	9.2	5.9	18
1983-11-01	1.1	2.5	1.2	0.78	-0.0035	0	1.1	2.3	4.9
1983-12-01	2.0	1.0	-1.0	0.44	-0.0035	0	2.0	1.00	3.8
1984-01-01	2.5	-0.24	-0.69	0.36	-0.0035	0	2.5	1.8	2.7
1984-02-01	0.47	2.2	0.66	0.46	-0.0035	0	0.47	1.1	2.8
1984-03-01	0	3.1	0.17	0.49	-0.0031	0	0	0.17	3.9
1984	6.1	8.7	0.28	2.5	-0.017	0	6.1	6.4	18
1984-11-01	1.4	2.3	-0.24	0.52	-0.0035	0	1.4	1.1	4.9
1984-12-01	2.1	1.1	-1.5	0.19	-0.0031	0	2.1	0.55	4.2
1985-01-01	5.7	-3.6	-3.9	0.33	-0.0031	0	5.7	1.9	2.5
1985-02-01	2.7	-0.71	-0.70	0.38	-0.0035	0	2.7	2.0	2.5
1985-03-01	1.7	0.55	0.49	0.64	-0.0031	0	1.7	2.1	2.5
1985	14	-0.39	-5.9	2.1	-0.017	0	14	7.6	17
1985-11-01	1.3	2.3	-0.035	0.62	-0.0031	0	1.3	1.2	4.6
1985-12-01	2.8	-0.039	-1.9	0.31	-0.0031	0	2.8	0.83	3.9
1986-01-01	0.87	2.0	0.67	0.44	-0.0031	0	0.87	1.5	3.1
1986-02-01	0.079	3.1	0.14	0.35	-0.0031	0	0.079	0.24	3.6
1986-03-01	3.1	-0.59	-1.4	0.67	-0.0028	0	3.1	1.7	2.9
1986	8.1	6.7	-2.5	2.4	-0.015	0	8.1	5.5	18
1986-11-01	1.8	2.1	-0.68	0.58	-0.0028	0	1.8	1.1	4.8
1986-12-01	1.4	1.4	-0.30	0.37	-0.0028	0	1.4	1.1	3.7

Table IV-B.40 DC3 Winter Storm Period Water Balance

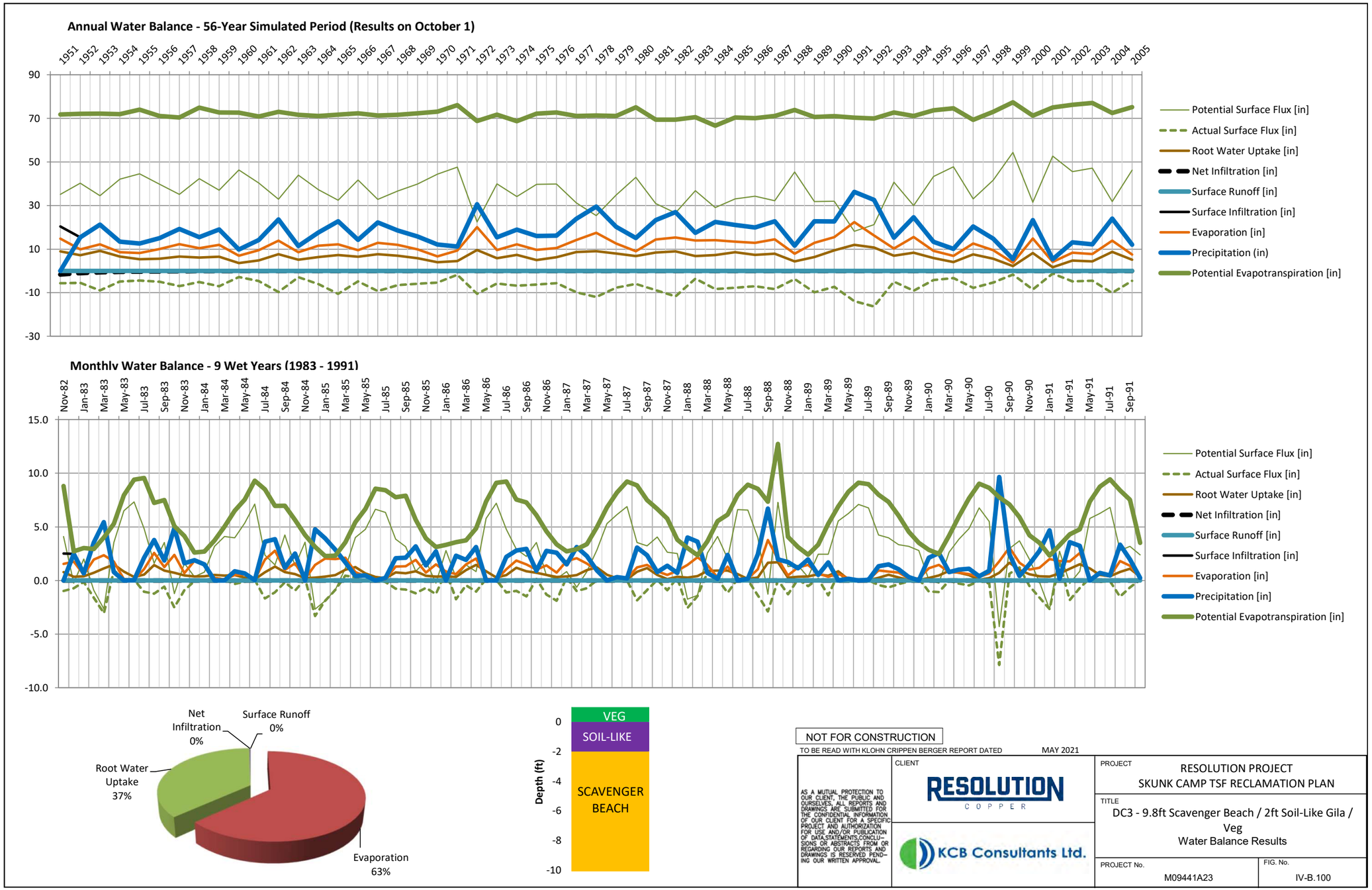
Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
1987-01-01	3.0	-0.59	-1.4	0.34	-0.0028	0	3.0	1.6	2.9
1987-02-01	3.4	-0.83	-1.4	0.45	-0.0028	0	3.4	1.9	2.8
1987-03-01	2.7	-0.20	-1.4	0.66	-0.0028	0	2.7	1.3	3.5
1987	12	1.9	-5.2	2.4	-0.014	0	12	7.0	18
1987-11-01	0.35	4.2	0	0.15	-0.0028	0	0.35	0.35	6.0
1987-12-01	1.7	1.3	-0.66	0.35	-0.0028	0	1.7	1.1	3.8
1988-01-01	4.0	-1.5	-2.7	0.28	-0.0028	0	4.0	1.3	3.2
1988-02-01	3.6	-1.3	-1.4	0.42	-0.0024	0	3.6	2.2	2.5
1988-03-01	0.71	2.4	0.81	0.84	-0.0028	0	0.71	1.5	3.4
1988	10	5.1	-3.9	2.0	-0.013	0	10	6.5	19
1988-11-01	1.5	2.8	-0.56	0.53	-0.0028	0	1.5	0.91	5.8
1988-12-01	1.7	1.3	-1.00	0.28	-0.0024	0	1.7	0.75	4.0
1989-01-01	1.1	1.4	0.031	0.35	-0.0028	0	1.1	1.1	3.1
1989-02-01	2.2	0.12	-0.76	0.40	-0.0024	0	2.2	1.4	2.7
1989-03-01	0.31	2.7	0.18	0.57	-0.0024	0	0.31	0.51	3.1
1989	6.8	8.3	-2.1	2.1	-0.013	0	6.8	4.7	19
1989-11-01	1.1	3.1	-0.28	0.28	-0.0024	0	1.1	0.79	5.9
1989-12-01	0.31	3.0	-0.031	0.047	-0.0024	0	0.31	0.24	4.2
1990-01-01	0.87	2.0	-0.63	0.028	-0.0024	0	0.87	0.24	3.4
1990-02-01	1.3	1.0	-0.14	0.32	-0.0020	0	1.3	1.1	2.7
1990-03-01	2.6	-0.079	-0.97	0.62	-0.0020	0	2.6	1.6	2.6
1990	6.1	9.0	-2.1	1.3	-0.011	0	6.1	4.0	19
1990-11-01	0.24	3.7	0.46	0.74	-0.0020	0	0.24	0.75	5.3
1990-12-01	2.2	0.94	-0.63	0.50	-0.0020	0	2.2	1.5	4.2
1991-01-01	4.8	-2.7	-3.7	0.31	-0.0020	0	4.8	1.1	3.0
1991-02-01	1.8	0.75	0.69	0.48	-0.0024	0	1.8	2.5	2.6
1991-03-01	0.94	2.3	0.20	0.85	-0.0016	0	0.94	1.1	3.3
1991	10	5.0	-3.0	2.9	-0.0098	0	10	7.0	18
1991-11-01	1.2	3.5	-0.85	0.18	-0.0020	0	1.2	0.35	6.6
1991-12-01	3.3	-0.43	-1.8	0.39	-0.0016	0	3.3	1.5	3.6
1992-01-01	4.0	-1.7	-1.9	0.37	-0.0020	0	4.0	2.1	2.9
1992-02-01	3.0	-0.71	-0.71	0.44	-0.0016	0	3.0	2.3	2.2
1992-03-01	2.8	-0.16	-0.55	0.74	-0.0016	0	2.8	2.2	3.0
1992	14	0.55	-5.8	2.1	-0.0087	0	14	8.4	18
1992-11-01	1.2	3.1	-0.62	0.51	-0.0020	0	1.2	0.59	6.2
1992-12-01	0.51	2.3	0.24	0.36	-0.0016	0	0.51	0.71	3.6
1993-01-01	6.3	-4.4	-4.6	0.31	-0.0016	0	6.3	1.8	2.5
1993-02-01	11	-9.4	-9.4	0.35	-0.0020	0	11	1.9	1.9
1993-03-01	6.0	-4.1	-4.1	0.56	-0.0016	0	6.0	1.9	2.7
1993	25	-12	-18	2.1	-0.0087	0	25	6.9	17
1993-11-01	0.79	3.4	-0.17	0.42	-0.0020	0	0.79	0.63	6.0
1993-12-01	4.2	-1.3	-2.6	0.34	-0.0016	0	4.2	1.5	3.6
1994-01-01	0.28	2.3	0.85	0.40	-0.0020	0	0.28	1.1	3.4
1994-02-01	0.28	2.6	0.19	0.41	-0.0020	0	0.28	0.43	3.3
1994-03-01	2.6	-0.12	-1.1	0.65	-0.0016	0	2.6	1.5	3.0
1994	8.1	6.9	-2.9	2.2	-0.0091	0	8.1	5.2	19
1994-11-01	1.9	1.9	-0.95	0.42	-0.0035	0	1.9	0.91	5.3
1994-12-01	3.4	-0.83	-1.4	0.42	-0.0035	0	3.4	1.9	3.5
1995-01-01	2.6	-0.35	-1.00	0.37	-0.0035	0	2.6	1.7	3.0
1995-02-01	3.7	-1.2	-1.2	0.46	-0.0035	0	3.7	2.4	2.6
1995-03-01	2.7	0	-0.83	0.75	-0.0035	0	2.7	1.9	3.1
1995	14	-0.47	-5.4	2.4	-0.018	0	14	8.8	18
1995-11-01	0	4.3	0.58	0.60	-0.0055	0	0	0.59	5.8

Table IV-B.40 DC3 Winter Storm Period Water Balance

Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
1995-12-01	1.3	1.8	-0.43	0.36	-0.0055	0	1.3	0.87	3.9
1996-01-01	0.91	1.9	-0.32	0.24	-0.0055	0	0.91	0.59	3.5
1996-02-01	0	2.9	0.15	0.21	-0.0059	0	0	0.16	3.3
1996-03-01	3.2	-0.28	-1.8	0.72	-0.0055	0	3.2	1.4	3.6
1996	5.4	11	-1.8	2.1	-0.028	0	5.4	3.6	20
1996-11-01	0.43	4.1	-0.035	0.28	-0.0063	0	0.43	0.39	6.0
1996-12-01	1.2	1.9	-0.70	0.13	-0.0059	0	1.2	0.55	3.8
1997-01-01	0.039	2.6	0.44	0.19	-0.0063	0	0.039	0.43	3.2
1997-02-01	2.8	-0.51	-1.5	0.30	-0.0059	0	2.8	1.4	2.7
1997-03-01	1.7	1.3	-1.1	0.58	-0.0055	0	1.7	0.55	3.4
1997	6.2	9.3	-2.9	1.5	-0.030	0	6.2	3.3	19
1997-11-01	0.71	3.2	-0.24	0.098	-0.0063	0	0.71	0.51	6.0
1997-12-01	0.83	2.1	-0.23	0.16	-0.0055	0	0.83	0.55	3.7
1998-01-01	2.7	-0.43	-1.3	0.28	-0.0059	0	2.7	1.4	3.1
1998-02-01	0.39	2.2	0.34	0.35	-0.0059	0	0.39	0.71	2.4
1998-03-01	6.4	-4.4	-4.7	0.52	-0.0051	0	6.4	1.7	2.9
1998	11	2.7	-6.1	1.4	-0.029	0	11	4.9	18
1998-11-01	0	4.4	0.079	0.067	-0.0055	0	0	0.079	6.3
1998-12-01	1.1	2.2	-0.83	0.039	-0.0051	0	1.1	0.24	3.9
1999-01-01	0.71	2.0	0.24	0.28	-0.0055	0	0.71	0.98	3.3
1999-02-01	0.079	2.9	0.091	0.13	-0.0055	0	0.079	0.16	3.6
1999-03-01	0.20	3.2	0.012	0.11	-0.0047	0	0.20	0.20	3.6
1999	2.0	15	-0.41	0.62	-0.026	0	2.0	1.7	21
1999-11-01	0	4.5	0.098	0.13	-0.0051	0	0	0.12	6.2
1999-12-01	0	3.7	0.055	0.028	-0.0047	0	0	0.039	4.7
2000-01-01	0.039	2.8	0.0079	0.016	-0.0051	0	0.039	0.039	3.7
2000-02-01	0.31	2.9	-0.028	0.031	-0.0047	0	0.31	0.28	3.4
2000-03-01	0.67	2.5	-0.22	0.11	-0.0043	0	0.67	0.47	3.9
2000	1.0	16	-0.091	0.31	-0.024	0	1.0	0.94	22
2000-11-01	5.3	-1.5	-4.0	0.30	-0.0043	0	5.3	1.3	6.1
2000-12-01	2.1	0.63	0.29	0.47	-0.0043	0	2.1	2.4	2.9
2001-01-01	0.12	2.8	0.61	0.42	-0.0043	0	0.12	0.71	3.7
2001-02-01	3.4	-1.1	-1.9	0.39	-0.0039	0	3.4	1.5	3.0
2001-03-01	1.7	0.87	0.075	0.74	-0.0039	0	1.7	1.9	2.8
2001	13	1.8	-5.0	2.3	-0.021	0	13	7.7	19
2001-11-01	0.39	3.7	-0.047	0.16	-0.0035	0	0.39	0.31	5.7
2001-12-01	0.28	3.1	-0.0079	0.047	-0.0035	0	0.28	0.28	4.6
2002-01-01	1.9	0.51	-0.79	0.24	-0.0035	0	1.9	1.1	2.9
2002-02-01	0.20	2.6	0.012	0.21	-0.0039	0	0.20	0.24	3.2
2002-03-01	0	3.3	0.18	0.18	-0.0031	0	0	0.16	3.4
2002	2.7	13	-0.66	0.84	-0.018	0	2.7	2.0	20
2002-11-01	0.12	4.2	0.055	0.020	-0.0031	0	0.12	0.16	6.3
2002-12-01	0.87	2.5	-0.60	0.016	-0.0035	0	0.87	0.28	4.4
2003-01-01	0.98	1.5	-0.028	0.18	-0.0031	0	0.98	0.94	3.4
2003-02-01	0.35	2.9	0.079	0.22	-0.0035	0	0.35	0.43	3.1
2003-03-01	5.0	-2.4	-3.9	0.37	-0.0028	0	5.0	1.1	3.6
2003	7.3	8.8	-4.4	0.80	-0.016	0	7.3	2.9	21
2003-11-01	0.079	4.6	0.11	0.055	-0.0031	0	0.079	0.16	6.3
2003-12-01	0.87	2.0	-0.33	0.15	-0.0031	0	0.87	0.55	3.9
2004-01-01	0.98	1.9	-0.33	0.19	-0.0028	0	0.98	0.63	3.9
2004-02-01	1.5	0.94	-0.61	0.18	-0.0031	0	1.5	0.83	3.1
2004-03-01	0.67	2.0	-0.043	0.40	-0.0028	0	0.67	0.67	3.0
2004	4.1	12	-1.2	0.96	-0.015	0	4.1	2.8	20

Table IV-B.40 DC3 Winter Storm Period Water Balance

Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
2004-11-01	1.2	3.0	-0.50	0.29	-0.0028	0	1.2	0.71	6.4
2004-12-01	0.63	2.0	-0.035	0.21	-0.0028	0	0.63	0.59	3.5
2005-01-01	2.8	-0.039	-1.9	0.30	-0.0028	0	2.8	0.91	3.0
2005-02-01	4.3	-2.0	-2.1	0.42	-0.0028	0	4.3	2.2	2.7
2005-03-01	7.3	-5.3	-5.3	0.59	-0.0024	0	7.3	2.0	2.7
2005	16	-2.3	-9.8	1.8	-0.013	0	16	6.4	18
2005-11-01	0.43	4.0	-0.087	0.20	-0.0024	0	0.43	0.35	6.4
2005-12-01	0	3.5	0.083	0.075	-0.0028	0	0	0.079	4.4
2006-01-01	0	2.8	0.051	0.047	-0.0024	0	0	0.039	3.5
2006-02-01	0	3.4	0.039	0.059	-0.0028	0	0	0.039	3.8
2006-03-01	0.12	3.3	0.0079	0.083	-0.0020	0	0.12	0.16	4.1
2006	0.55	17	0.094	0.47	-0.012	0	0.55	0.67	22


Annual Water Balance - 56-Year Simulated Period (Results on October 1)
Potential Surface Flux [in]
Actual Surface Flux [in]
Root Water Uptake [in]
Net Infiltration [in]
Surface Runoff [in]
Surface Infiltration [in]
Evaporation [in]
Precipitation (in)
Potential Evapotranspiration [in]
Monthly Water Balance - 9 Wet Years (1983 - 1991)
Potential Surface Flux [in]
Actual Surface Flux [in]
Root Water Uptake [in]
Net Infiltration [in]
Surface Runoff [in]
Surface Infiltration [in]
Evaporation [in]
Precipitation [in]
Potential Evapotranspiration [in]
Net Infiltration 0%
Surface Runoff 0%
Root Water Uptake 37%
Evaporation 63%
VEG
SOIL-LIKE
SCAVENGER BEACH
Depth (ft)
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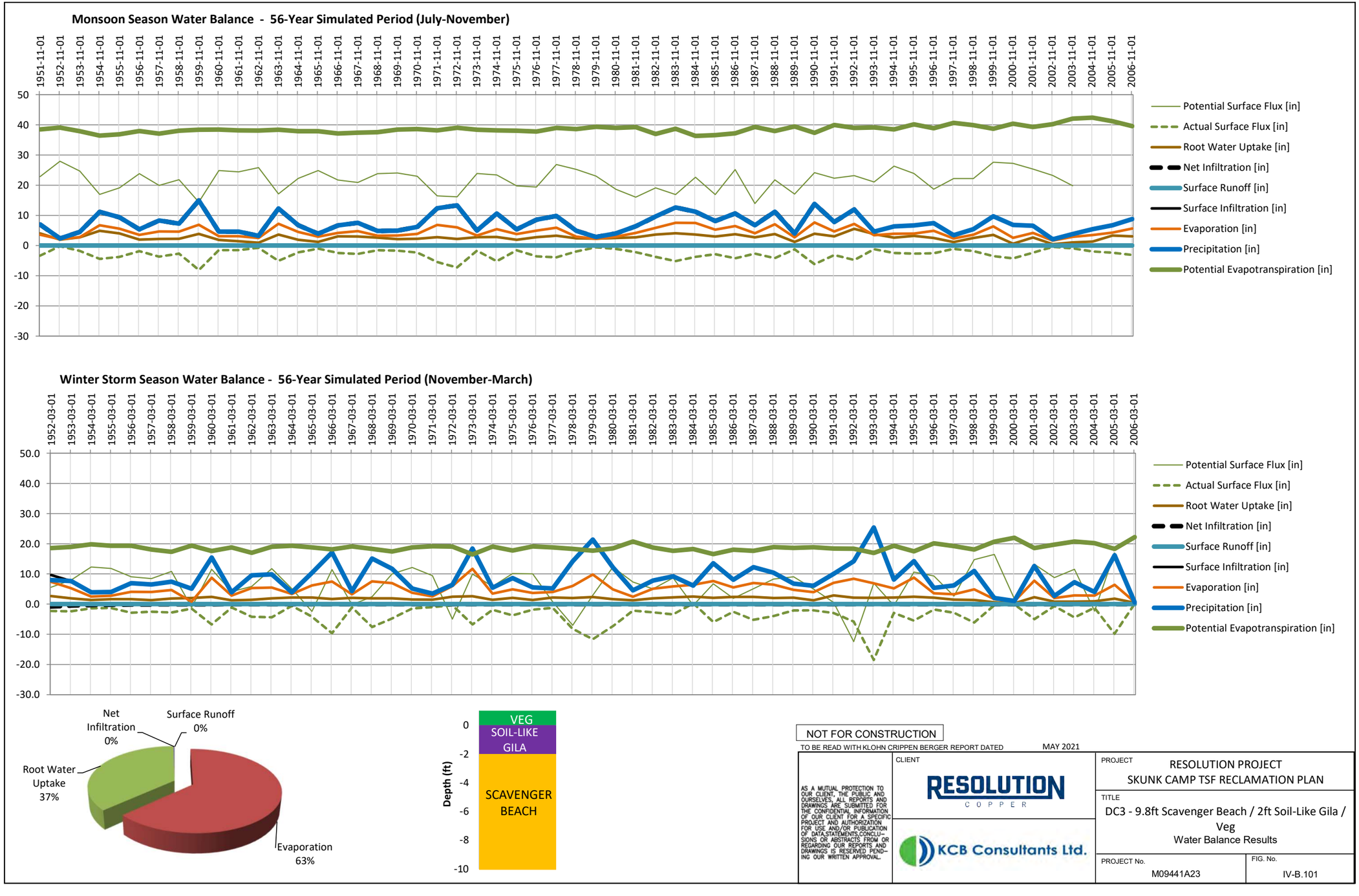
SKUNK CAMP TSF RECLAMATION PLAN
TITLE
DC3 - 9.8ft Scavenger Beach / 2ft Soil-Like Gila / Veg
Water Balance Results
PROJECT No.
M09441A23
FIG. No.
IV-B.100



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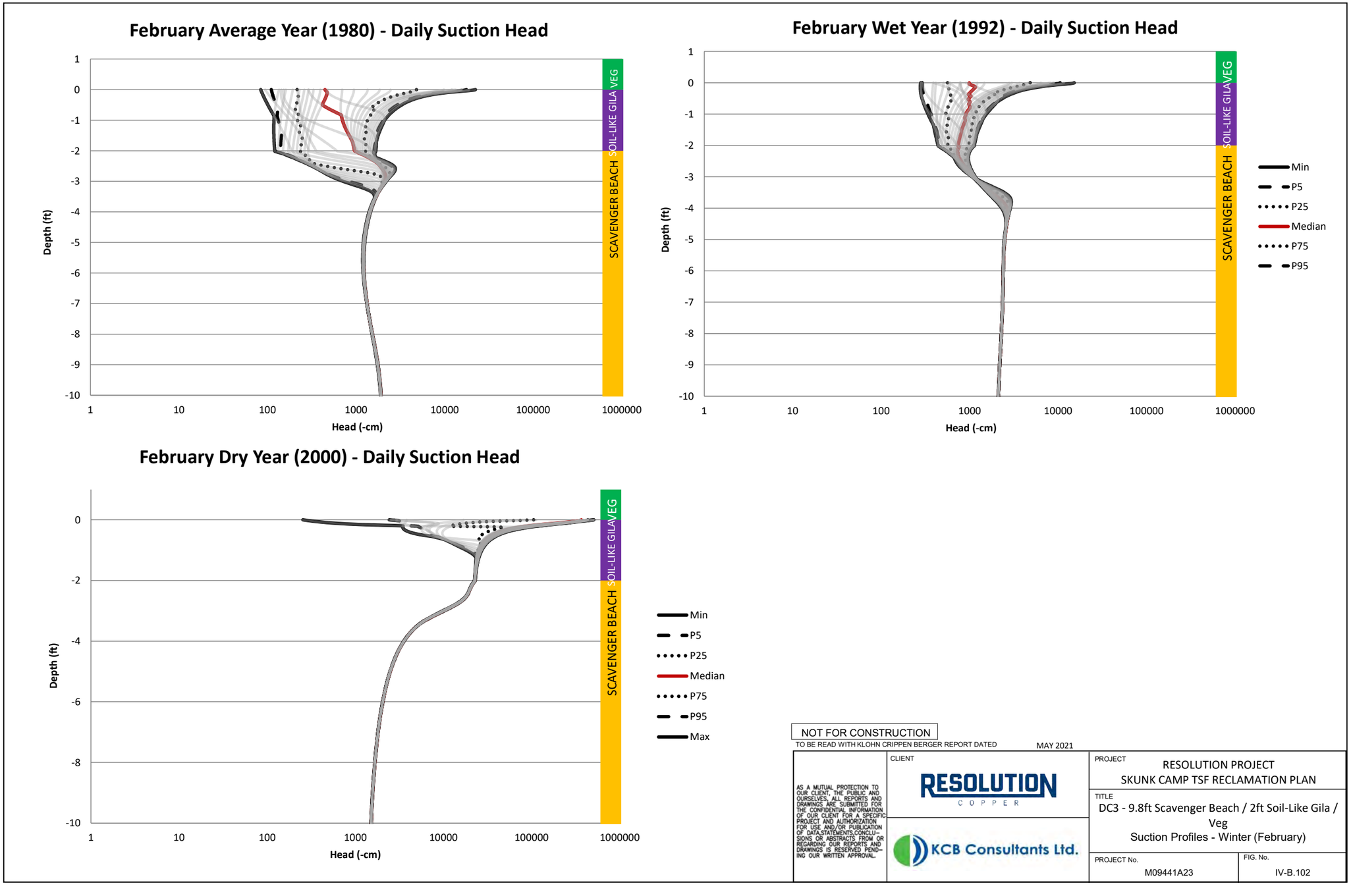
TITLE: DC3 - 9.8ft Scavenger Beach / 2ft Soil-Like Gila / Veg
Water Balance Results

PROJECT No. M09441A23

FIG. No. IV-B.101


February Average Year (1980) - Daily Suction Head
Depth (ft)
Head (-cm)
SCAVENGER BEACH
SOIL-LIKE GILA
VEG
February Wet Year (1992) - Daily Suction Head
February Dry Year (2000) - Daily Suction Head
Min
P5
P25
Median
P75
P95
Max
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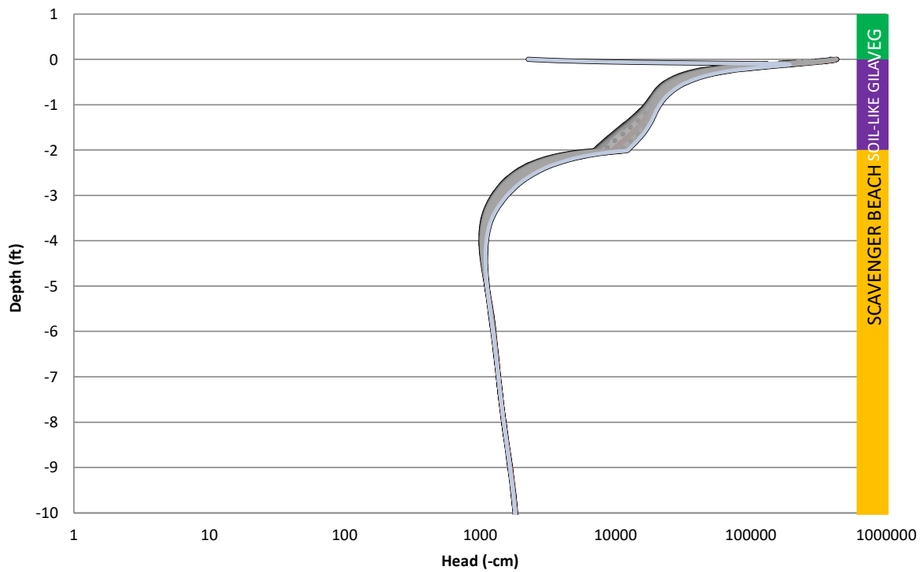
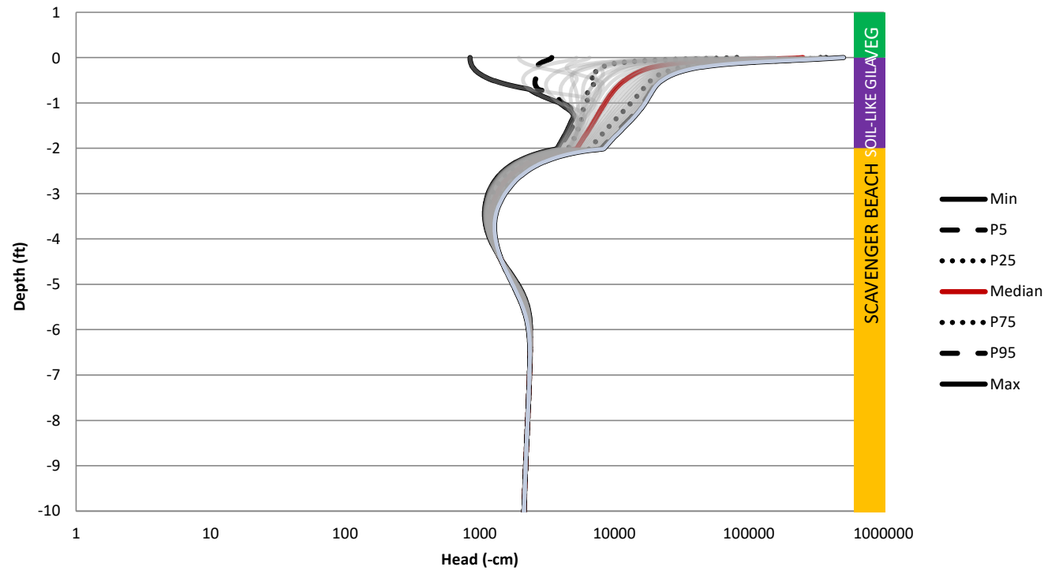
TITLE
DC3 - 9.8ft Scavenger Beach / 2ft Soil-Like Gila / Veg
Suction Profiles - Winter (February)
PROJECT No.
M09441A23
FIG. No.
IV-B.102

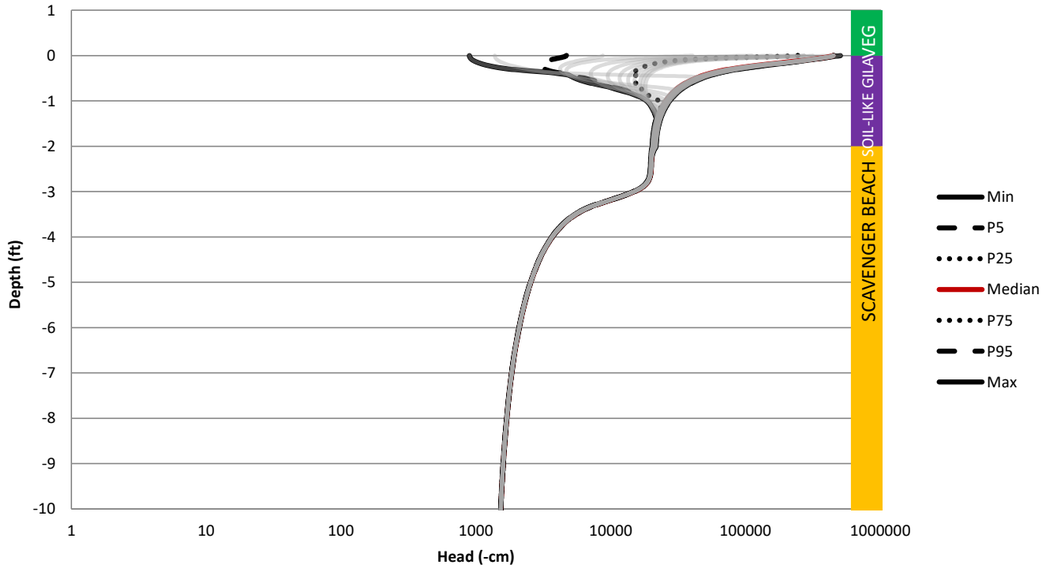
June Average Year (1980) - Daily Suction Head



June Wet Year (1992) - Daily Suction Head



June Dry Year (2000) - Daily Suction Head



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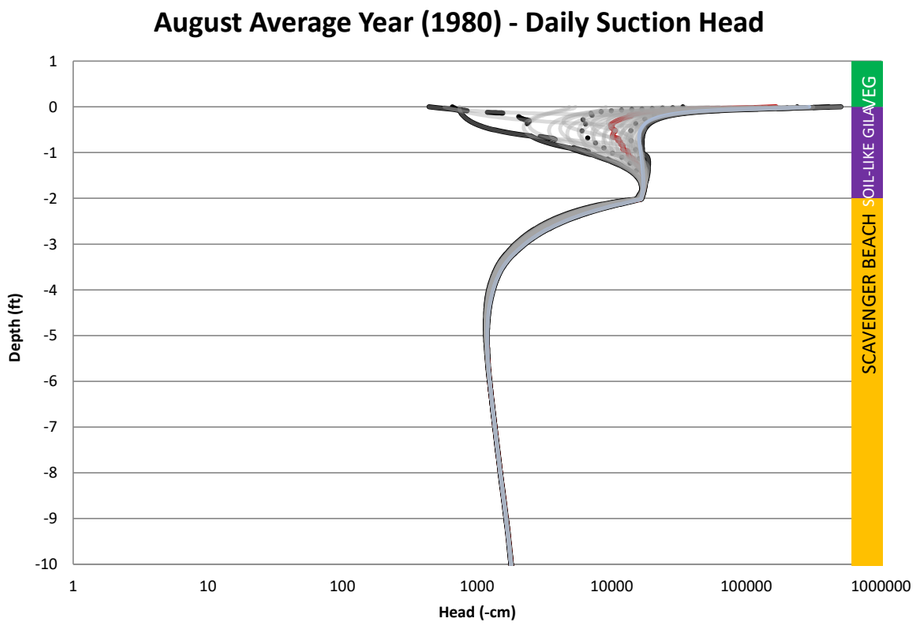
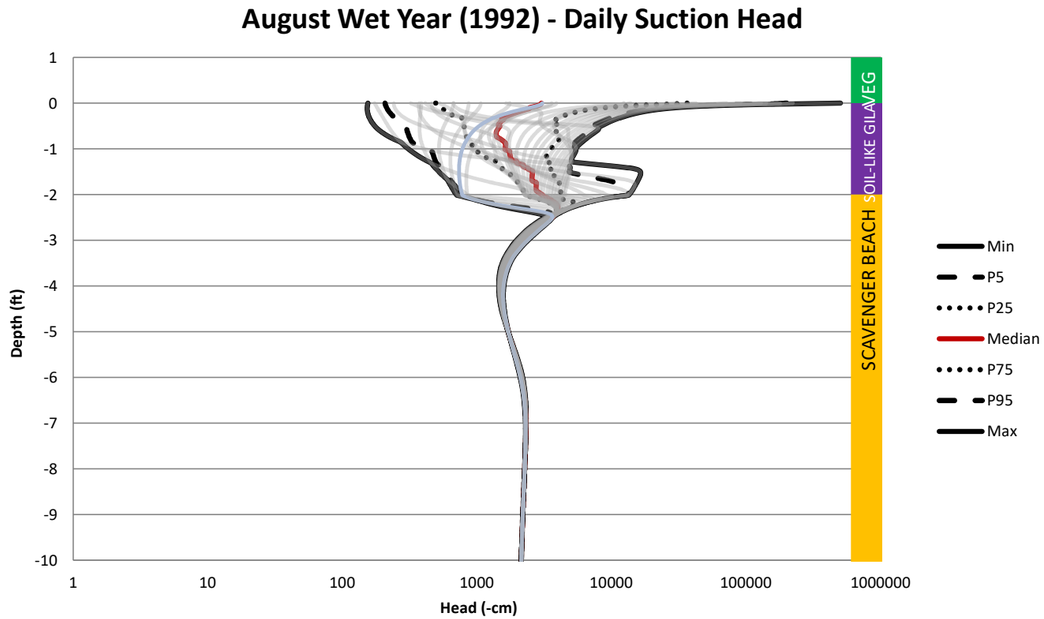
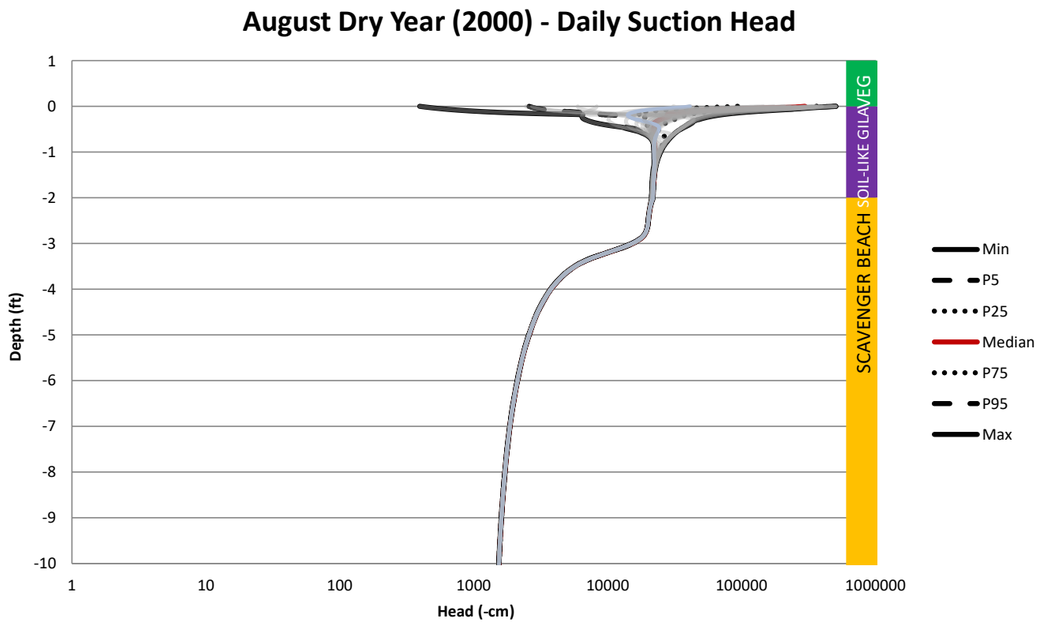
TITLE: DC3 - 9.8ft Scavenger Beach / 2ft Soil-Like Gila / Veg
Suction Profiles - Dry Season (June)

PROJECT No. M09441A23

FIG. No. IV-B.103







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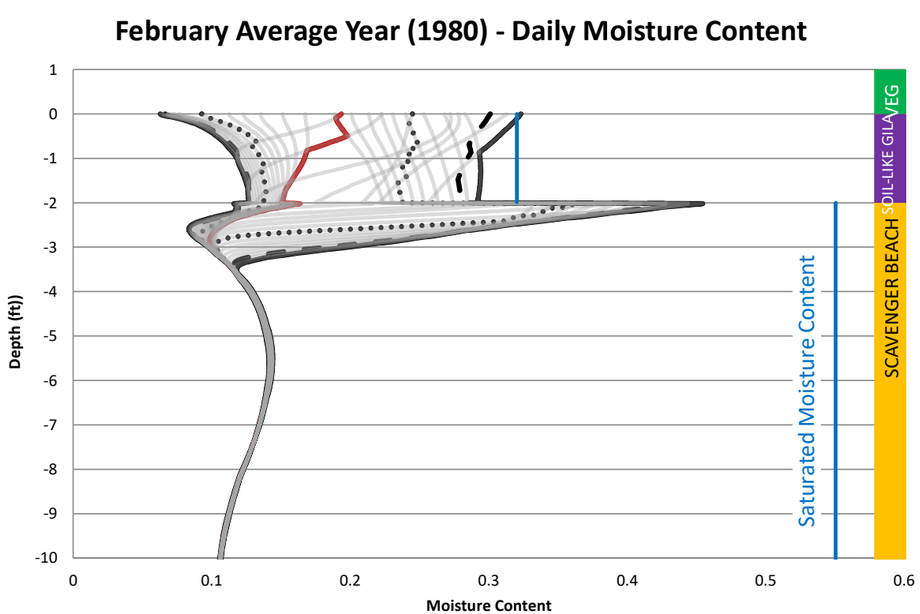
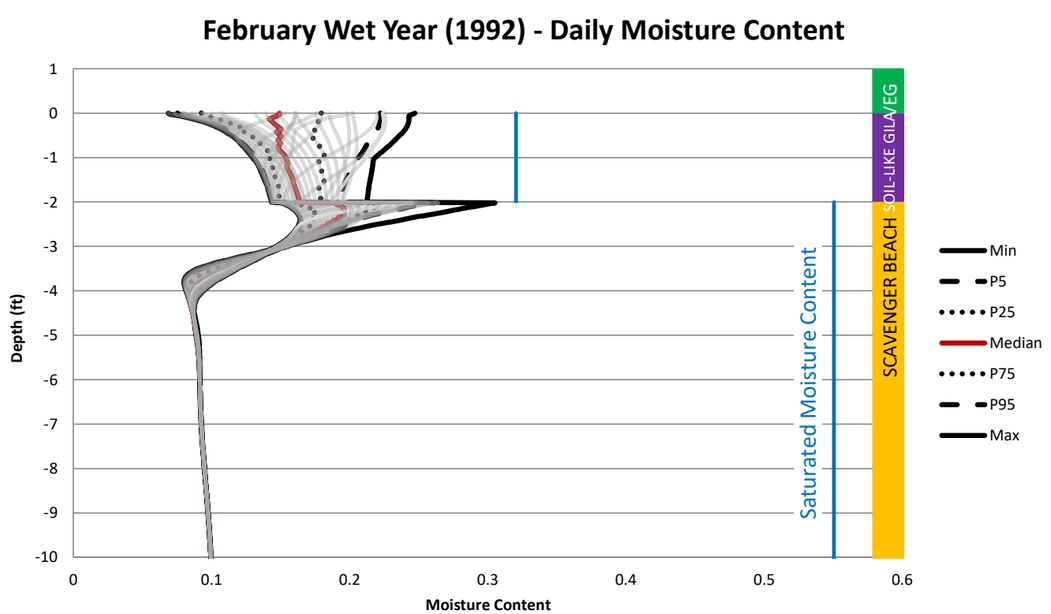
SKUNK CAMP TSF RECLAMATION PLAN

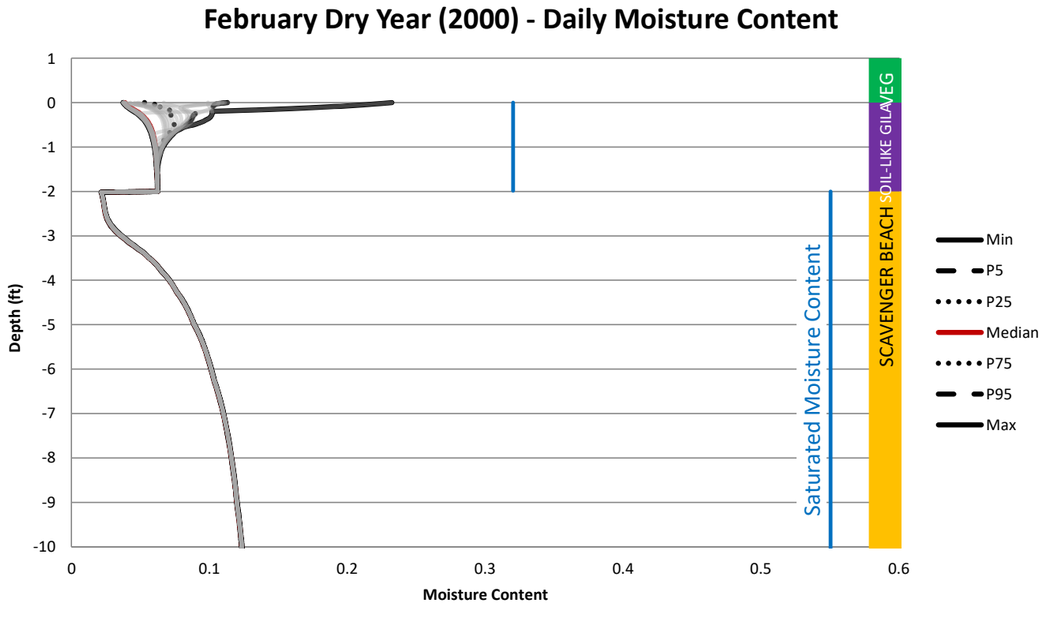
TITLE: DC3 - 9.8ft Scavenger Beach / 2ft Soil-Like Gila / Veg
Suction Profiles - Summer Monsoon (August)

PROJECT No. M09441A23

FIG. No. IV-B.104







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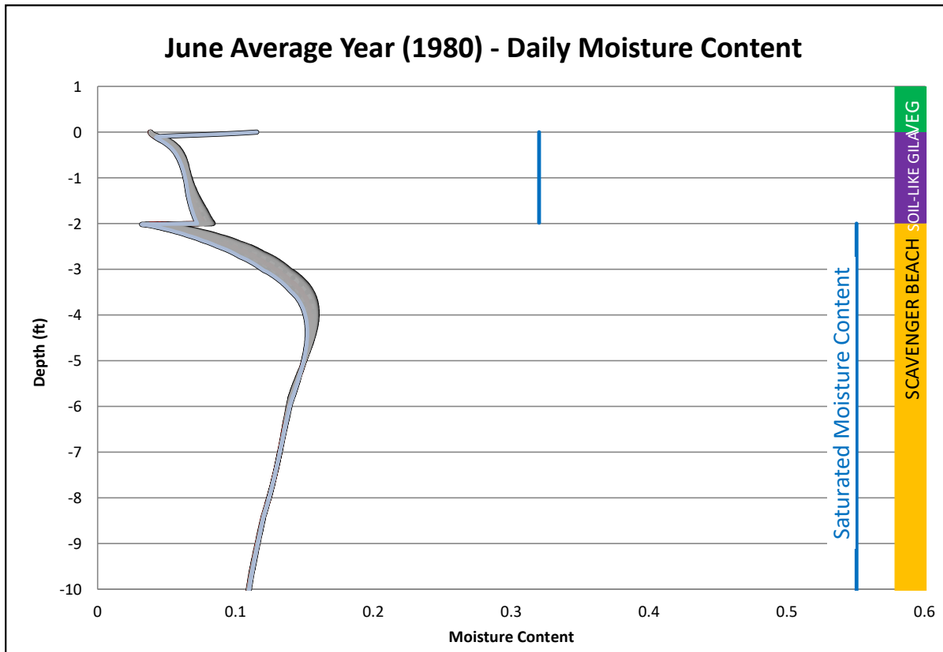
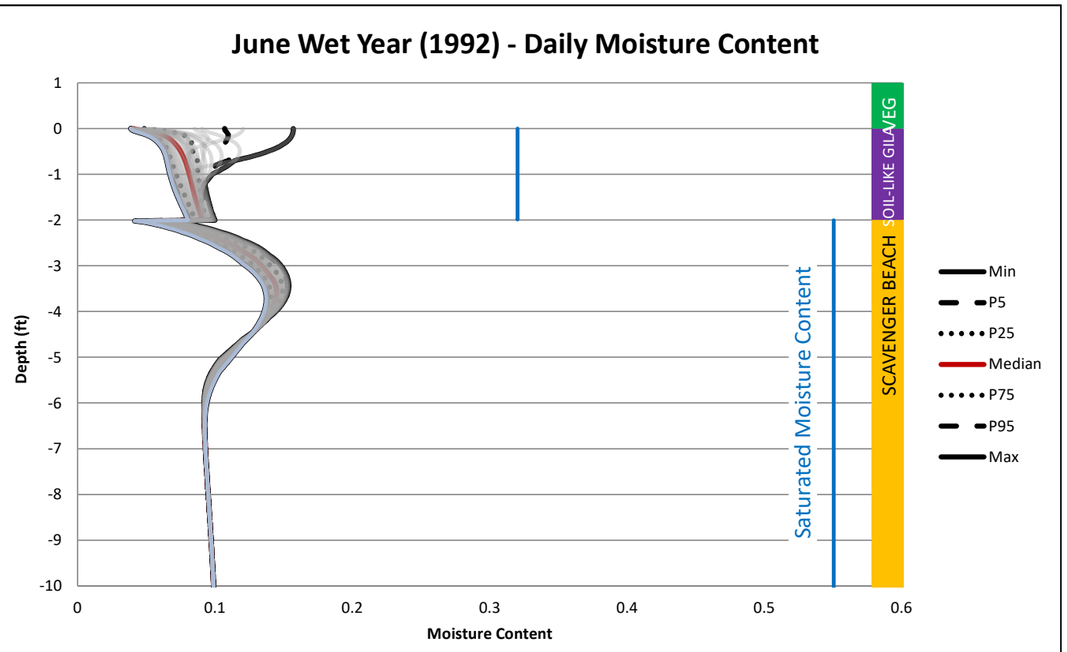
SKUNK CAMP TSF RECLAMATION PLAN

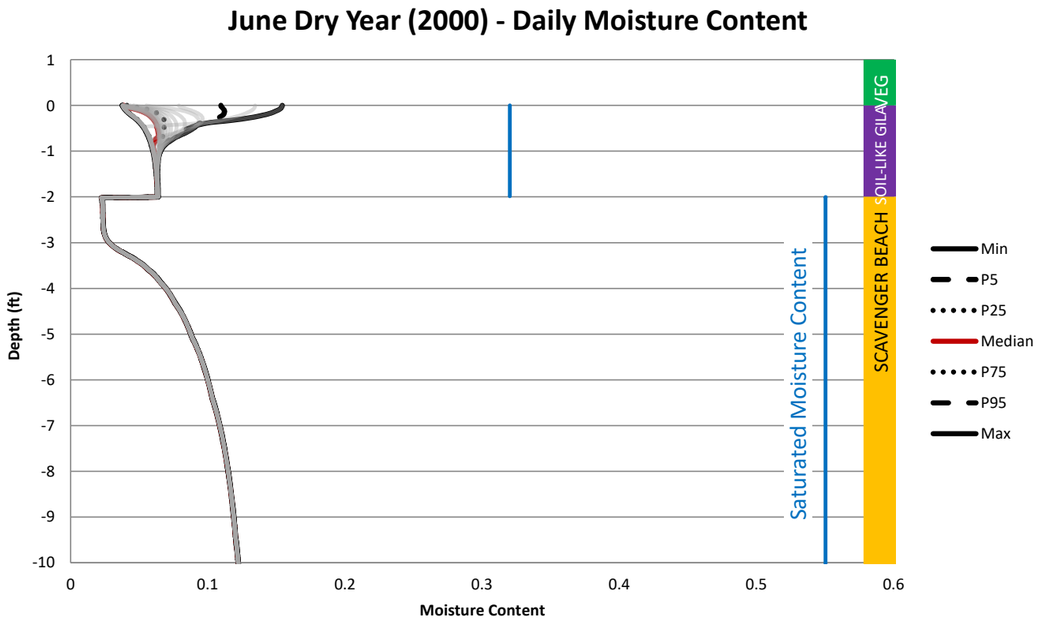
TITLE: DC3 - 9.8ft Scavenger Beach / 2ft Soil-Like Gila / Veg
Moisture Content - Winter (February)

PROJECT No. M09441A23

FIG. No. IV-B.105







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CLIENT: RESOLUTION COPPER

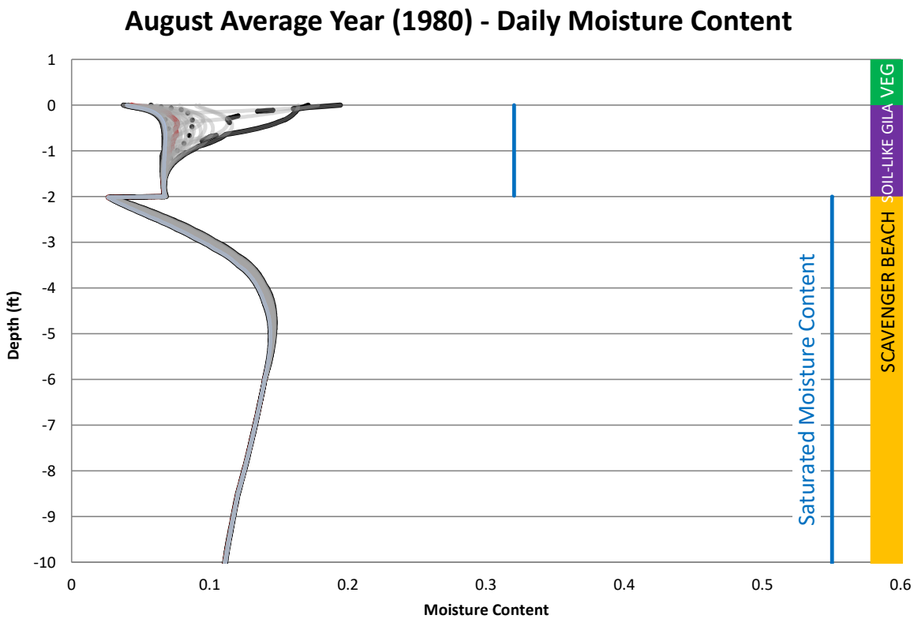
KCB Consultants Ltd.

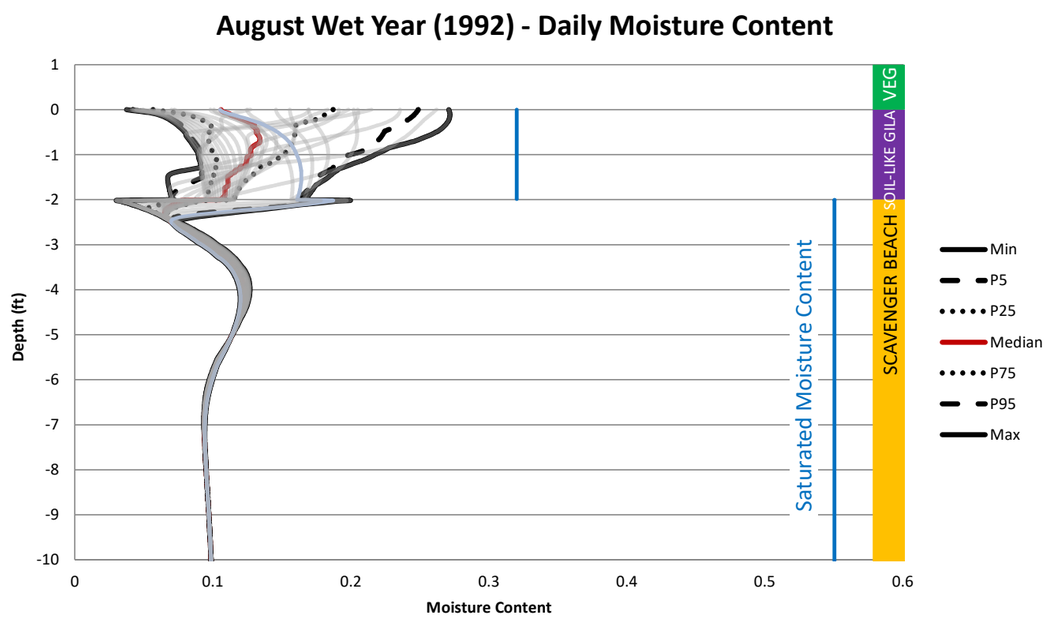
PROJECT: RESOLUTION PROJECT
SKUNK CAMP TSF RECLAMATION PLAN

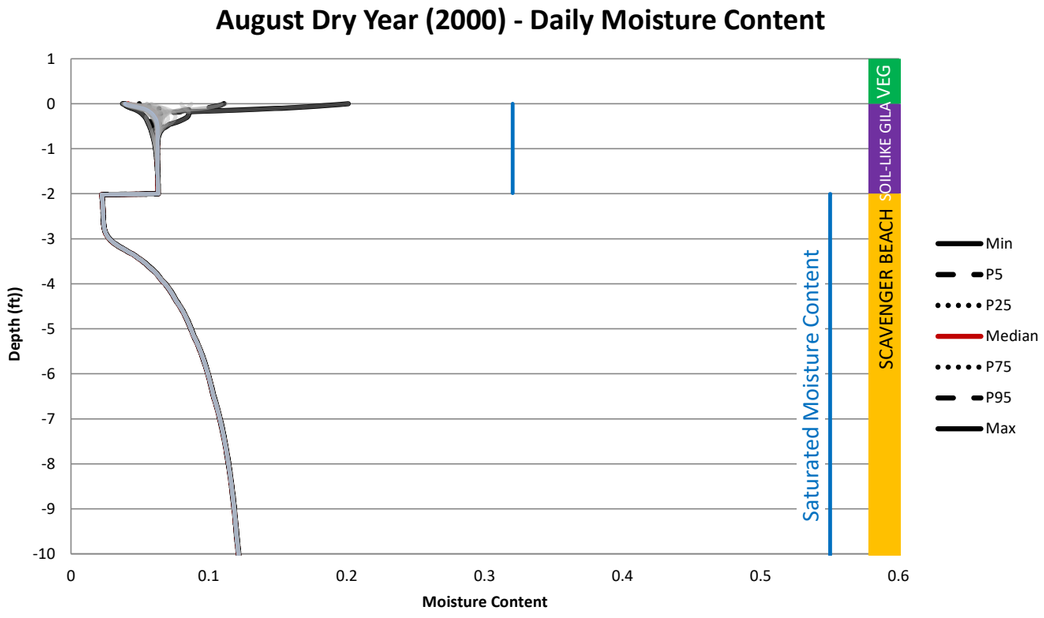
TITLE: DC3 - 9.8ft Scavenger Beach / 2ft Soil-Like Gila / Veg
Moisture Content - Dry Season(June)

PROJECT No. M09441A23

FIG. No. IV-B.106







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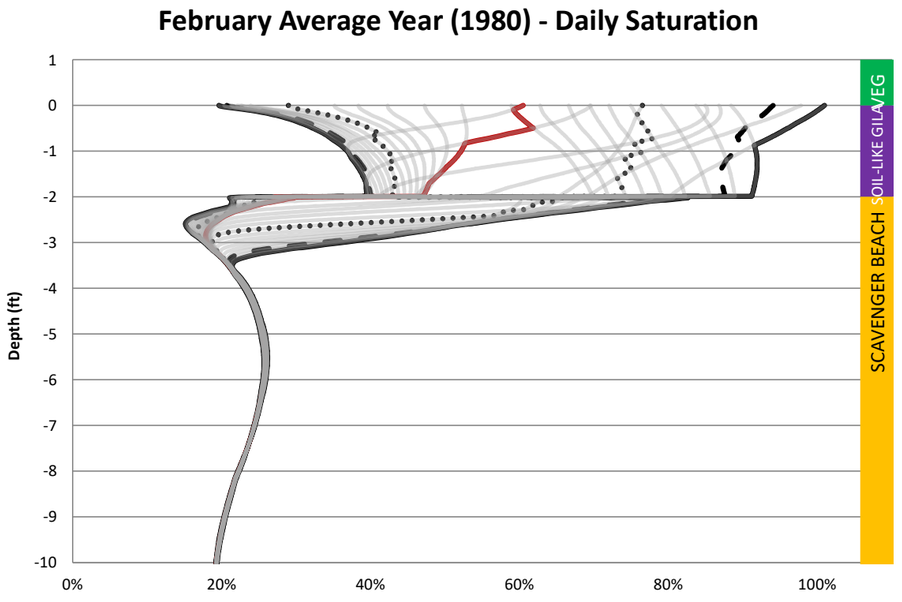
KCB Consultants Ltd.

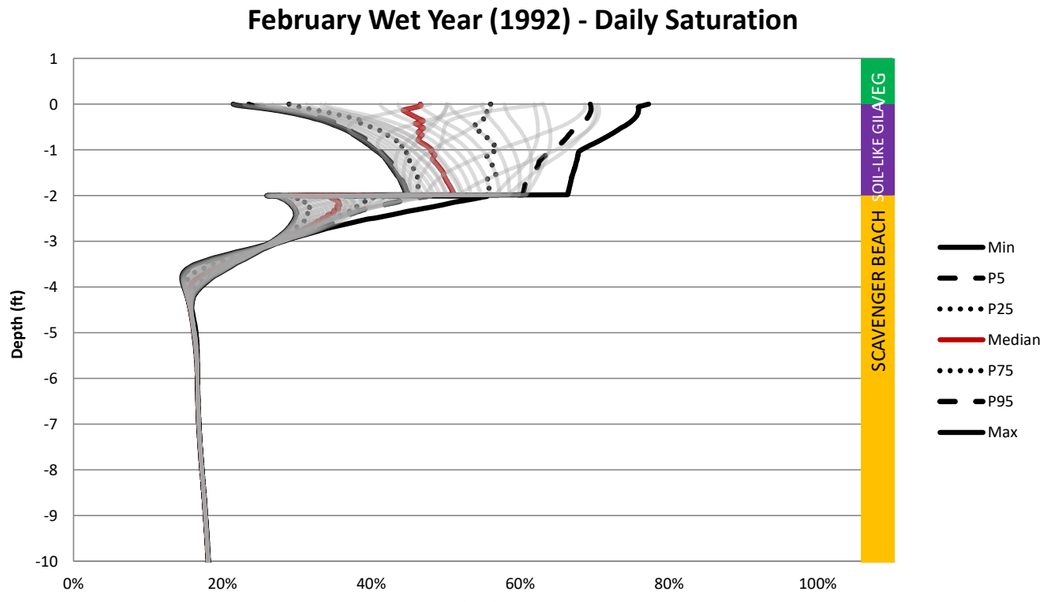
PROJECT: RESOLUTION PROJECT
SKUNK CAMP TSF RECLAMATION PLAN

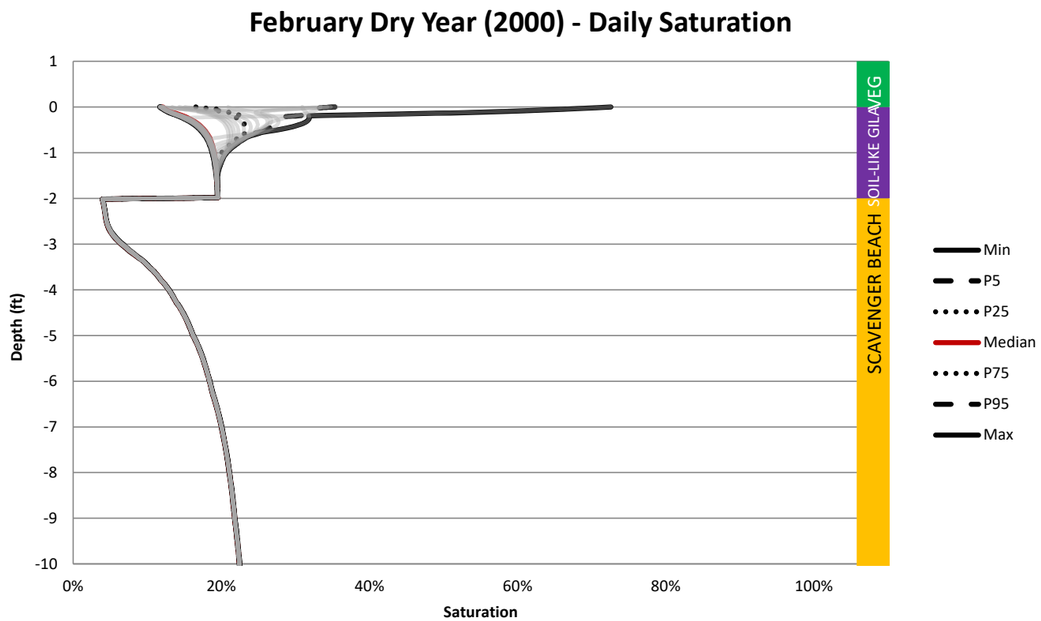
TITLE: DC3 - 9.8ft Scavenger Beach / 2ft Soil-Like Gila / Veg
Moisture Content - Summer Monsoon (August)

PROJECT No. M09441A23

FIG. No. IV-B.107







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KCB Consultants Ltd.

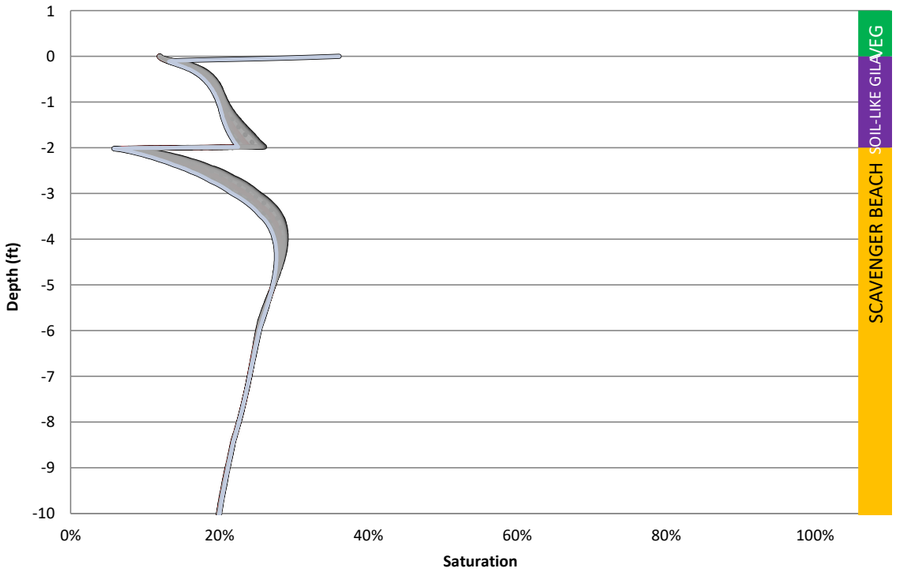
PROJECT: RESOLUTION PROJECT
SKUNK CAMP TSF RECLAMATION PLAN

TITLE: DC3 - 9.8ft Scavenger Beach / 2ft Soil-Like Gila / Veg
Saturation - Winter (February)

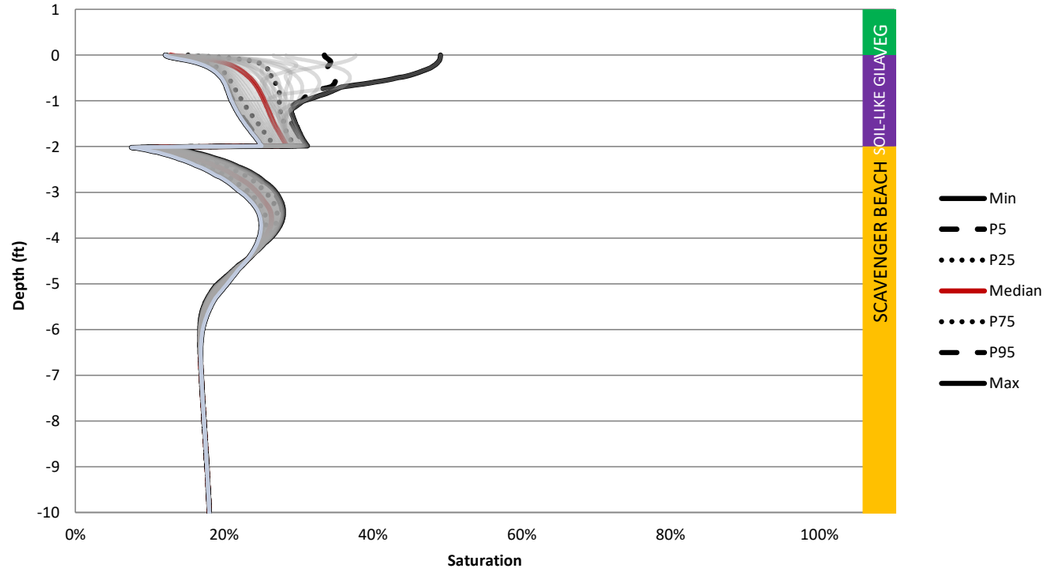
PROJECT No. M09441A23

FIG. No. IV-B.108

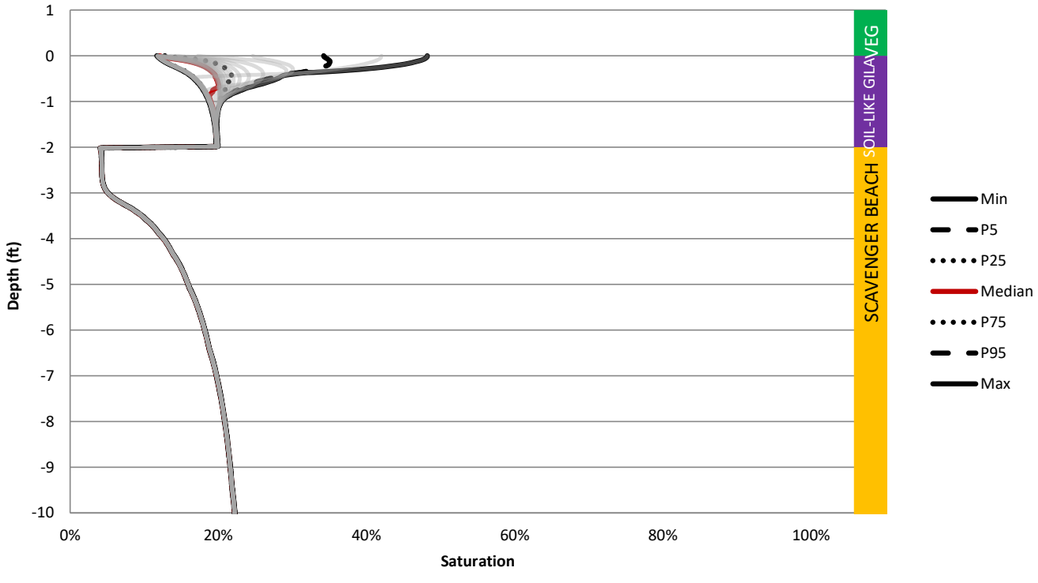
June Average Year (1980) - Daily Saturation



June Wet Year (1992) - Daily Saturation



June Dry Year (2000)- Daily Saturation



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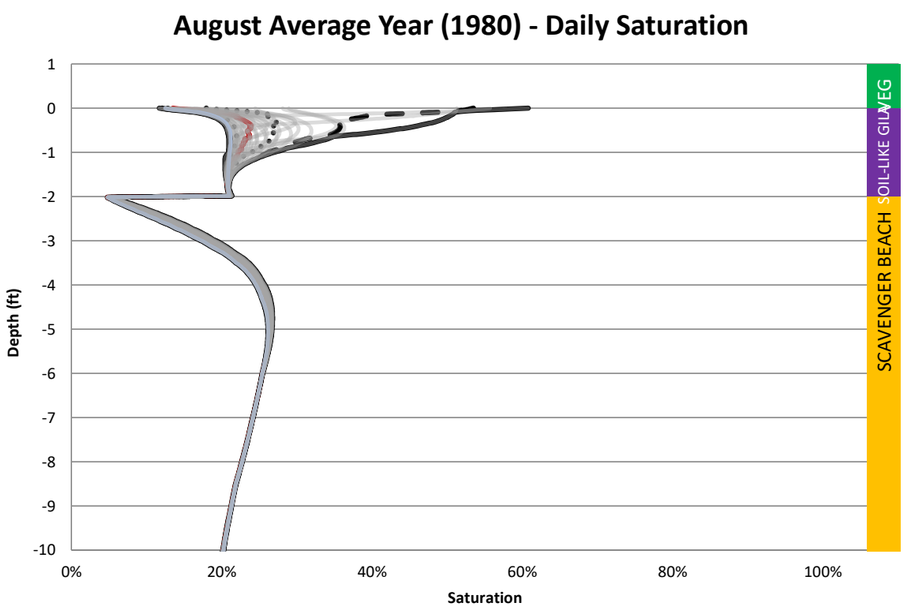
KCB Consultants Ltd.

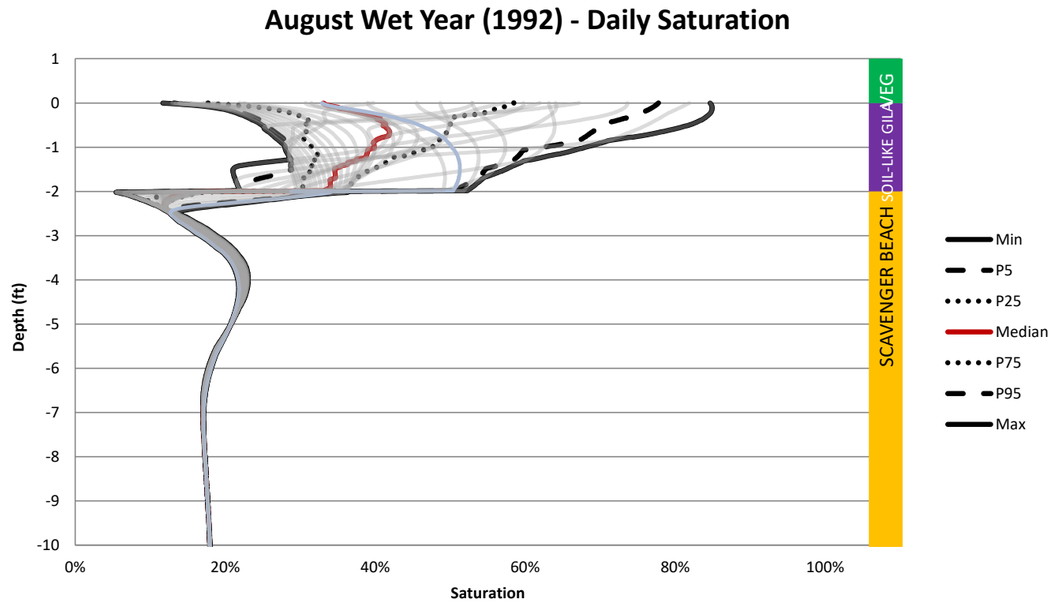
PROJECT: RESOLUTION PROJECT
SKUNK CAMP TSF RECLAMATION PLAN

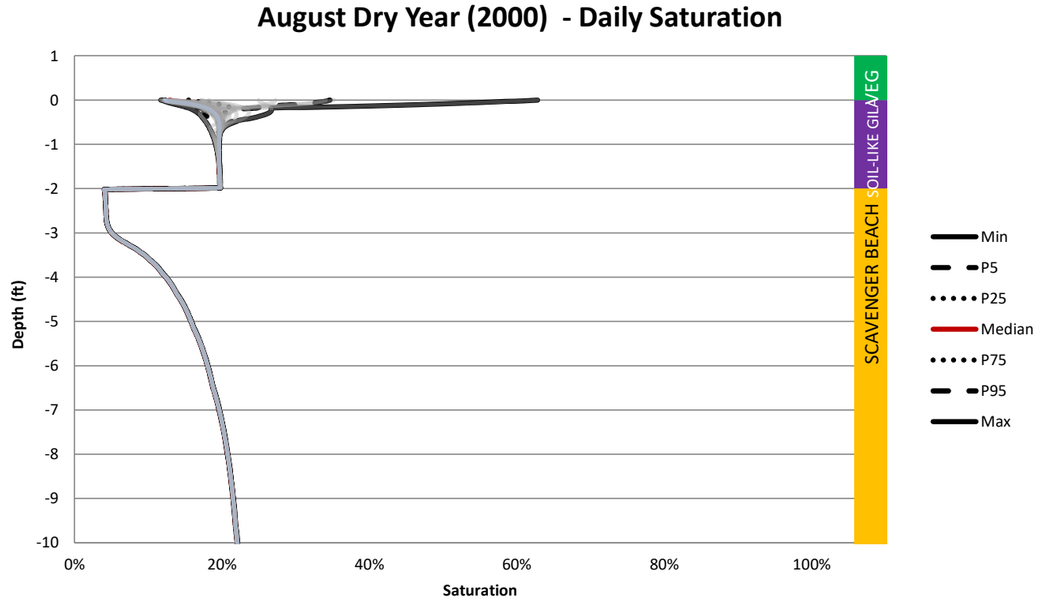
TITLE: DC3 - 9.8ft Scavenger Beach / 2ft Soil-Like Gila / Veg
Saturation - Dry Season (June)

PROJECT No. M09441A23

FIG. No. IV-B.109







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KCB Consultants Ltd.

PROJECT: RESOLUTION PROJECT
SKUNK CAMP TSF RECLAMATION PLAN

TITLE: DC3 - 9.8ft Scavenger Beach / 2ft Soil-Like Gila / Veg
Saturation - Summer Monsoon (August)

PROJECT No. M09441A23

FIG. No. IV-B.110

Table IV-B.41 DC4 Annual Water Balance

Water Year	Result Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
		(in)	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
1951	1951-10-01	14	32	-9.1	8.8	-1.9	0	14	4.9	60
1952	1952-10-01	0	35	-14	10	-3.0	0	20	6.8	72
1953	1953-10-01	15	40	-11	9.2	-3.3	0	15	4.1	72
1954	1954-10-01	21	34	-16	11	-2.8	0	21	5.5	72
1955	1955-10-01	13	42	-9.3	9.9	-2.3	0	13	4.1	72
1956	1956-10-01	13	45	-8.3	9.2	-2.0	0	13	4.3	74
1957	1957-10-01	15	40	-9.5	9.6	-1.6	0	15	5.6	71
1958	1958-10-01	19	35	-12	10	-1.2	0	19	7.0	70
1959	1959-10-01	16	42	-11	10	-0.95	0	16	5.0	75
1960	1960-10-01	19	37	-14	7.9	-0.96	0	19	4.9	73
1961	1961-10-01	9.8	46	-5.2	7.5	-1.7	0	9.8	4.6	73
1962	1962-10-01	14	40	-9.5	7.4	-1.3	0	14	4.6	71
1963	1963-10-01	24	33	-18	10	-1.1	0	24	5.7	73
1964	1964-10-01	11	44	-5.8	8.9	-1.3	0	11	5.6	72
1965	1965-10-01	18	37	-12	10	-1.4	0	18	5.7	71
1966	1966-10-01	23	32	-18	7.5	-1.8	0	23	4.8	72
1967	1967-10-01	14	42	-9.4	11	-3.0	0	14	4.9	72
1968	1968-10-01	22	33	-17	9.4	-2.7	0	22	4.9	71
1969	1969-10-01	19	37	-13	9.8	-3.7	0	19	5.6	72
1970	1970-10-01	16	40	-10	9.2	-3.0	0	16	5.5	72
1971	1971-10-01	12	44	-8.1	8.2	-2.1	0	12	4.0	73
1972	1972-10-01	11	48	-7.0	8.4	-1.5	0	11	4.2	76
1973	1973-10-01	31	22	-22	12	-1.6	0	31	8.2	69
1974	1974-10-01	15	40	-10	9.8	-2.9	0	15	5.2	72
1975	1975-10-01	19	34	-12	11	-2.2	0	19	6.5	69
1976	1976-10-01	16	40	-11	10.0	-1.9	0	16	5.3	72
1977	1977-10-01	16	40	-11	11	-1.4	0	16	5.5	73
1978	1978-10-01	24	31	-18	10	-1.1	0	24	6.1	71
1979	1979-10-01	30	25	-22	9.2	-5.0	0	30	7.1	71
1980	1980-10-01	20	35	-14	9.2	-6.4	0	20	6.0	71
1981	1981-10-01	15	43	-10	10	-4.7	0	15	4.6	75
1982	1982-10-01	23	31	-16	12	-2.9	0	23	7.5	69
1983	1983-10-01	27	27	-20	11	-2.4	0	27	7.4	69
1984	1984-10-01	18	37	-10	10	-3.7	0	18	7.1	71
1985	1985-10-01	22	29	-16	9.4	-3.7	0	22	6.9	67
1986	1986-10-01	21	33	-14	12	-3.7	0	21	6.8	70
1987	1987-10-01	20	34	-14	11	-3.3	0	20	6.2	70
1988	1988-10-01	23	32	-16	11	-3.2	0	23	6.8	71
1989	1989-10-01	12	45	-7.4	8.7	-3.0	0	12	4.2	74
1990	1990-10-01	23	32	-16	11	-2.3	0	23	6.4	71
1991	1991-10-01	23	32	-16	11	-2.2	0	23	6.8	71
1992	1992-10-01	36	18	-27	13	-5.0	0	36	9.4	70
1993	1993-10-01	33	21	-26	10	-17	0	33	6.3	70
1994	1994-10-01	15	41	-10	9.8	-7.3	0	15	5.0	73
1995	1995-10-01	25	30	-18	10	-4.2	0	25	6.7	71
1996	1996-10-01	13	43	-8.3	10	-3.8	0	13	5.1	74
1997	1997-10-01	10	48	-6.1	9.1	-2.4	0	10	4.0	75
1998	1998-10-01	20	33	-14	10	-1.5	0	20	6.6	69
1999	1999-10-01	15	42	-9.5	9.7	-1.3	0	15	5.3	73
2000	2000-10-01	5.4	54	-3.1	6.6	-1.1	0	5.4	2.3	77
2001	2001-10-01	23	31	-16	11	-0.76	0	23	6.8	71
2002	2002-10-01	5.4	53	-2.6	5.5	-0.75	0	5.4	2.7	75
2003	2003-10-01	13	46	-8.5	8.0	-0.69	0	13	4.6	76
2004	2004-10-01	12	47	-7.6	8.8	-0.54	0	12	4.6	77

Table IV-B.41 DC4 Annual Water Balance

Water Year	Result Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
		(in)	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
2005	2005-10-01	24	32	-18	9.7	-0.42	0	24	5.6	72
2006	2006-10-01	12	46	-8.0	8.7	-0.61	0	12	4.0	75

Table IV-B.42 DC4 Monthly Water Balance 9 Wet Years (1983 to 1991)

Month	Result Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
		[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
Nov-82	1982-11-30	0	4.1	-1.7	1.2	-0.39	0	2.6	0.82	8.8
Dec-82	1982-12-30	2.5	-0.24	-1.7	0.37	-0.19	0	2.5	0.87	2.7
Jan-83	1983-01-29	0.71	2.0	-0.43	0.50	-0.19	0	0.71	0.22	3.0
Feb-83	1983-02-28	3.5	-0.91	-3.0	0.72	-0.19	0	3.5	0.59	2.9
Mar-83	1983-03-30	5.4	-2.6	-4.3	1.1	-0.18	0	5.4	1.1	4.0
Apr-83	1983-04-29	0.83	3.5	-0.24	1.6	-0.18	0	0.83	0.61	5.3
May-83	1983-05-29	0	6.5	0.039	0.90	-0.19	0	0	0.039	7.9
Jun-83	1983-06-28	0	7.4	0.039	0.42	-0.19	0	0	0.035	9.4
Jul-83	1983-07-28	2.1	4.8	-1.6	0.87	-0.20	0	2.1	0.56	9.6
Aug-83	1983-08-27	3.8	1.7	-2.3	1.7	-0.22	0	3.8	1.5	7.2
Sep-83	1983-09-26	1.8	3.5	-0.94	1.6	-0.25	0	1.8	0.87	7.5
Oct-83	1983-10-26	4.9	-1.2	-4.1	0.87	-0.26	0	4.9	0.80	5.1
Nov-83	1983-11-25	1.6	1.6	-1.3	0.57	-0.27	0	1.6	0.33	4.2
Dec-83	1983-12-25	1.9	0.35	-1.3	0.37	-0.27	0	1.9	0.55	2.6
Jan-84	1984-01-24	1.5	0.79	-0.83	0.42	-0.28	0	1.5	0.67	2.7
Feb-84	1984-02-23	0	3.2	0.039	0.76	-0.29	0	0	0.071	3.7
Mar-84	1984-03-24	0	4.1	0.039	0.85	-0.30	0	0	0.028	5.0
Apr-84	1984-04-23	0.87	4.0	-0.51	0.83	-0.31	0	0.87	0.33	6.5
May-84	1984-05-23	0.67	5.4	-0.28	0.67	-0.33	0	0.67	0.41	7.5
Jun-84	1984-06-22	0.039	7.1	0.039	0.39	-0.33	0	0.039	0.071	9.3
Jul-84	1984-07-22	3.6	2.4	-2.4	1.2	-0.33	0	3.6	1.2	8.5
Aug-84	1984-08-21	3.9	1.5	-2.1	1.7	-0.33	0	3.9	1.7	6.9
Sep-84	1984-09-20	1.2	4.3	-0.35	1.7	-0.33	0	1.2	0.78	7.0
Oct-84	1984-10-20	2.5	1.4	-1.5	0.99	-0.32	0	2.5	0.99	5.6
Nov-84	1984-11-19	0	3.6	0.079	0.65	-0.31	0	0	0.083	4.2
Dec-84	1984-12-19	4.8	-2.7	-4.1	0.35	-0.30	0	4.8	0.70	3.1
Jan-85	1985-01-18	3.9	-1.9	-3.1	0.37	-0.29	0	3.9	0.77	2.3
Feb-85	1985-02-17	2.9	-0.87	-2.2	0.50	-0.27	0	2.9	0.71	2.3
Mar-85	1985-03-19	1.7	1.1	-0.87	1.0	-0.26	0	1.7	0.83	3.6
Apr-85	1985-04-18	0.43	4.0	0	1.6	-0.26	0	0.43	0.43	5.4
May-85	1985-05-18	0.47	4.8	-0.20	0.64	-0.28	0	0.47	0.25	6.7
Jun-85	1985-06-17	0	6.7	0.039	0.38	-0.30	0	0	0.028	8.6
Jul-85	1985-07-17	0.24	6.3	-0.16	0.35	-0.33	0	0.24	0.067	8.4
Aug-85	1985-08-16	2.1	3.9	-1.3	1.1	-0.34	0	2.1	0.79	7.8
Sep-85	1985-09-15	2.1	3.1	-1.3	1.3	-0.34	0	2.1	0.92	7.9
Oct-85	1985-10-15	3.1	0.91	-2.1	1.0	-0.35	0	3.1	1.1	5.7
Nov-85	1985-11-14	1.4	1.8	-0.91	0.65	-0.34	0	1.4	0.51	3.9
Dec-85	1985-12-14	2.8	-0.24	-2.0	0.42	-0.33	0	2.8	0.78	3.1
Jan-86	1986-01-13	0	2.8	0.31	0.48	-0.32	0	0	0.30	3.3
Feb-86	1986-02-12	2.3	0.24	-1.9	0.50	-0.31	0	2.3	0.49	3.6
Mar-86	1986-03-14	1.9	1.5	-1.4	1.1	-0.30	0	1.9	0.53	3.7
Apr-86	1986-04-13	3.1	0.87	-2.4	1.6	-0.29	0	3.1	0.72	4.9
May-86	1986-05-13	0	5.7	0.039	1.1	-0.28	0	0	0.043	7.4
Jun-86	1986-06-12	0	7.2	0	0.46	-0.28	0	0	0.031	9.1
Jul-86	1986-07-12	2.2	4.8	-1.7	0.74	-0.28	0	2.2	0.48	9.2
Aug-86	1986-08-11	2.8	2.9	-1.8	1.7	-0.28	0	2.8	1.0	7.5
Sep-86	1986-09-10	3.0	2.3	-1.9	1.7	-0.29	0	3.0	1.0	7.3
Oct-86	1986-10-10	0.91	3.5	-0.39	1.2	-0.29	0	0.91	0.52	6.1
Nov-86	1986-11-09	2.8	0.47	-2.0	0.68	-0.29	0	2.8	0.72	4.6
Dec-86	1986-12-09	2.6	0.16	-2.2	0.48	-0.28	0	2.6	0.46	3.4
Jan-87	1987-01-08	1.5	0.87	-0.63	0.40	-0.28	0	1.5	0.85	2.7
Feb-87	1987-02-07	3.1	-0.67	-2.3	0.50	-0.27	0	3.1	0.84	2.9
Mar-87	1987-03-09	2.3	0.87	-1.8	1.0	-0.26	0	2.3	0.50	3.4
Apr-87	1987-04-08	0.94	2.8	-0.43	1.5	-0.25	0	0.94	0.49	5.0

Table IV-B.42 DC4 Monthly Water Balance 9 Wet Years (1983 to 1991)

Month	Result Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
		[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
May-87	1987-05-08	0	5.3	0.039	0.93	-0.26	0	0	0.051	6.8
Jun-87	1987-06-07	0.31	6.1	-0.039	0.43	-0.26	0	0.31	0.27	8.2
Jul-87	1987-07-07	0.20	6.9	-0.079	0.42	-0.27	0	0.20	0.16	9.2
Aug-87	1987-08-06	3.1	3.5	-2.5	1.3	-0.28	0	3.1	0.56	8.9
Sep-87	1987-09-05	2.4	3.2	-1.7	1.8	-0.29	0	2.4	0.65	7.5
Oct-87	1987-10-05	0.79	4.1	-0.20	1.4	-0.29	0	0.79	0.62	6.7
Nov-87	1987-11-04	1.4	2.6	-0.98	0.74	-0.29	0	1.4	0.39	5.8
Dec-87	1987-12-04	0.71	2.5	-0.24	0.50	-0.29	0	0.71	0.45	3.8
Jan-88	1988-01-03	4.0	-1.7	-3.1	0.37	-0.28	0	4.0	0.88	3.0
Feb-88	1988-02-02	3.6	-1.3	-2.9	0.42	-0.27	0	3.6	0.65	2.4
Mar-88	1988-03-03	0.75	2.6	-0.39	0.94	-0.26	0	0.75	0.34	3.6
Apr-88	1988-04-02	0.12	4.1	0	1.1	-0.25	0	0.12	0.12	5.5
May-88	1988-05-02	2.4	2.0	-1.6	0.97	-0.24	0	2.4	0.83	6.1
Jun-88	1988-06-01	0	6.6	0.079	1.3	-0.24	0	0	0.079	8.0
Jul-88	1988-07-01	0.12	6.6	0	0.35	-0.25	0	0.12	0.15	8.9
Aug-88	1988-07-31	2.4	3.9	-1.7	0.55	-0.25	0	2.4	0.74	8.5
Sep-88	1988-08-30	6.7	-1.3	-5.0	1.8	-0.25	0	6.7	1.7	7.3
Oct-88	1988-10-29	2.0	7.3	-1.1	2.3	-0.51	0	2.0	0.89	13
Nov-88	1988-11-28	1.7	1.3	-1.4	0.53	-0.25	0	1.7	0.33	4.1
Dec-88	1988-12-28	1.1	1.4	-0.55	0.42	-0.25	0	1.1	0.56	3.1
Jan-89	1989-01-27	2.0	0.31	-1.3	0.42	-0.24	0	2.0	0.65	2.4
Feb-89	1989-02-26	0.55	2.5	-0.12	0.80	-0.24	0	0.55	0.42	3.3
Mar-89	1989-03-28	1.7	2.4	-1.5	1.0	-0.24	0	1.7	0.25	5.3
Apr-89	1989-04-27	0	5.6	0.20	1.6	-0.24	0	0	0.19	6.9
May-89	1989-05-27	0.16	6.3	0	0.42	-0.24	0	0.16	0.18	8.3
Jun-89	1989-06-26	0	7.0	0.039	0.37	-0.24	0	0	0.016	9.1
Jul-89	1989-07-26	0.079	6.8	0	0.35	-0.24	0	0.079	0.075	9.0
Aug-89	1989-08-25	1.3	4.3	-0.63	0.72	-0.24	0	1.3	0.71	8.0
Sep-89	1989-09-24	1.5	3.9	-1.1	1.1	-0.24	0	1.5	0.34	7.3
Oct-89	1989-10-24	1.1	3.4	-0.59	0.82	-0.23	0	1.1	0.51	6.1
Nov-89	1989-11-23	0.28	3.1	-0.12	0.36	-0.22	0	0.28	0.16	4.5
Dec-89	1989-12-23	0	2.8	0.12	0.19	-0.22	0	0	0.12	3.5
Jan-90	1990-01-22	2.2	0.039	-1.4	0.28	-0.21	0	2.2	0.72	2.9
Feb-90	1990-02-21	2.5	-0.28	-1.7	0.57	-0.20	0	2.5	0.91	2.5
Mar-90	1990-03-23	0.83	2.6	-0.39	1.3	-0.20	0	0.83	0.40	4.2
Apr-90	1990-04-22	1.0	3.9	-0.47	1.8	-0.19	0	1.0	0.53	6.0
May-90	1990-05-22	1.1	4.9	-0.79	1.2	-0.19	0	1.1	0.30	7.7
Jun-90	1990-06-21	0.39	6.7	-0.16	0.50	-0.18	0	0.39	0.25	9.0
Jul-90	1990-07-21	0.94	5.5	-0.47	0.62	-0.17	0	0.94	0.46	8.6
Aug-90	1990-08-20	9.6	-4.3	-8.5	1.1	-0.16	0	9.6	1.1	7.8
Sep-90	1990-09-19	2.5	3.0	-1.9	1.6	-0.15	0	2.5	0.53	7.1
Oct-90	1990-10-19	0.39	3.7	0.12	1.0	-0.15	0	0.39	0.54	5.9
Nov-90	1990-11-18	1.5	1.9	-1.0	0.68	-0.14	0	1.5	0.52	4.2
Dec-90	1990-12-18	2.8	-0.12	-2.0	0.44	-0.14	0	2.8	0.76	3.5
Jan-91	1991-01-17	4.6	-2.7	-3.7	0.36	-0.13	0	4.6	0.96	2.3
Feb-91	1991-02-16	0.16	2.7	0.039	0.67	-0.14	0	0.16	0.20	3.3
Mar-91	1991-03-18	3.6	-0.28	-2.9	1.1	-0.14	0	3.6	0.75	4.3
Apr-91	1991-04-17	3.2	0.87	-2.5	1.5	-0.15	0	3.2	0.76	4.8
May-91	1991-05-17	0	5.8	0.039	1.2	-0.17	0	0	0.035	7.4
Jun-91	1991-06-16	0.71	6.3	-0.24	0.59	-0.18	0	0.71	0.48	8.7
Jul-91	1991-07-16	0.43	6.8	-0.20	0.67	-0.21	0	0.43	0.22	9.4
Aug-91	1991-08-15	3.4	2.8	-2.4	1.0	-0.23	0	3.4	1.00	8.4
Sep-91	1991-09-14	2.0	3.2	-1.2	1.7	-0.26	0	2.0	0.80	7.5
Oct-91	1991-10-01	0.24	2.4	-0.039	0.79	-0.16	0	0.24	0.18	3.5

Table IV-B.43 DC4 Monsoon Period Water Balance

Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
1951-07-01	0	7.2	0.026	0.38	-0.21	0	0	0.026	9.2
1951-08-01	1.1	6.3	-0.56	0.68	-0.23	0	1.1	0.49	9.5
1951-09-01	3.6	2.2	-2.9	1.1	-0.25	0	3.6	0.74	7.8
1951-10-01	0.65	4.4	-0.30	1.4	-0.25	0	0.65	0.35	6.6
1951-11-01	1.6	2.7	-1.2	0.79	-0.27	0	1.6	0.42	5.4
1951	7.0	23	-4.9	4.3	-1.2	0	7.0	2.0	39
1952-07-01	0.63	6.8	-0.21	0.91	-0.23	0	0.63	0.42	9.6
1952-08-01	0.56	6.3	-0.14	0.43	-0.25	0	0.56	0.42	8.8
1952-09-01	0.45	5.4	-0.12	0.51	-0.27	0	0.45	0.33	7.8
1952-10-01	0.70	4.7	-0.30	0.45	-0.27	0	0.70	0.40	7.0
1952-11-01	0	4.8	0.052	0.32	-0.29	0	0	0.052	5.9
1952	2.3	28	-0.72	2.6	-1.3	0	2.3	1.6	39
1953-07-01	0	7.0	0.015	0.37	-0.26	0	0	0.015	9.1
1953-08-01	2.7	3.9	-2.1	0.81	-0.28	0	2.7	0.65	8.8
1953-09-01	1.8	4.0	-1.1	1.7	-0.28	0	1.8	0.72	7.7
1953-10-01	0	5.2	0.091	1.2	-0.27	0	0	0.091	6.8
1953-11-01	0.012	4.4	0.024	0.28	-0.28	0	0.012	0.035	5.5
1953	4.5	25	-3.0	4.4	-1.4	0	4.5	1.5	38
1954-07-01	0.13	6.8	-0.0039	0.41	-0.20	0	0.13	0.12	9.0
1954-08-01	4.5	1.5	-3.4	1.3	-0.20	0	4.5	1.1	7.8
1954-09-01	5.3	0.20	-4.3	1.9	-0.20	0	5.3	1.0	7.4
1954-10-01	1.3	3.8	-0.69	1.4	-0.19	0	1.3	0.60	6.6
1954-11-01	0	4.5	0.071	0.89	-0.19	0	0	0.074	5.6
1954	11	17	-8.2	5.8	-0.99	0	11	2.9	36
1955-07-01	2.1	5.0	-1.7	1.2	-0.19	0	2.1	0.39	9.1
1955-08-01	4.5	1.6	-3.5	1.3	-0.20	0	4.5	0.98	7.9
1955-09-01	2.7	2.6	-1.6	1.8	-0.20	0	2.7	1.1	7.2
1955-10-01	0.13	5.1	0.016	1.3	-0.19	0	0.13	0.14	6.8
1955-11-01	0.020	4.7	0.028	0.43	-0.19	0	0.020	0.048	5.9
1955	9.4	19	-6.7	6.1	-0.96	0	9.4	2.7	37
1956-07-01	0.24	7.1	-0.13	0.37	-0.16	0	0.24	0.11	9.4
1956-08-01	2.8	4.2	-1.7	0.91	-0.16	0	2.8	1.0	9.0
1956-09-01	1.8	3.8	-1.1	1.7	-0.16	0	1.8	0.63	7.5
1956-10-01	0.075	5.2	-0.035	1.1	-0.15	0	0.075	0.040	6.8
1956-11-01	0.53	3.6	-0.25	0.27	-0.15	0	0.53	0.28	5.2
1956	5.4	24	-3.3	4.3	-0.77	0	5.4	2.1	38
1957-07-01	0.031	7.2	0.031	0.53	-0.12	0	0.031	0.064	9.3
1957-08-01	1.1	5.5	-0.54	0.49	-0.12	0	1.1	0.55	8.5
1957-09-01	3.4	2.4	-2.2	1.3	-0.12	0	3.4	1.2	8.1
1957-10-01	0.57	4.5	-0.27	1.4	-0.11	0	0.57	0.30	6.6
1957-11-01	3.2	0.30	-2.4	0.67	-0.11	0	3.2	0.81	4.6
1957	8.3	20	-5.4	4.4	-0.59	0	8.3	2.9	37
1958-07-01	0.70	6.4	-0.43	0.67	-0.093	0	0.70	0.27	9.3
1958-08-01	0.78	6.2	-0.39	0.59	-0.094	0	0.78	0.40	9.1
1958-09-01	0.85	5.1	-0.31	0.90	-0.092	0	0.85	0.54	8.0
1958-10-01	3.0	1.7	-2.2	0.87	-0.087	0	3.0	0.78	6.4
1958-11-01	1.9	2.3	-1.5	0.93	-0.088	0	1.9	0.46	5.3
1958	7.3	22	-4.8	3.9	-0.45	0	7.3	2.5	38
1959-07-01	1.0	6.1	-0.57	0.73	-0.074	0	1.0	0.46	9.1
1959-08-01	3.8	3.7	-2.9	1.3	-0.076	0	3.8	0.85	9.6
1959-09-01	5.3	0.15	-3.6	1.8	-0.074	0	5.3	1.7	7.4
1959-10-01	0.051	5.1	0.047	1.2	-0.072	0	0.051	0.094	6.9
1959-11-01	4.8	-0.59	-4.4	0.65	-0.073	0	4.8	0.40	5.3
1959	15	14	-11	5.7	-0.37	0	15	3.5	38
1960-07-01	0	7.2	0.024	0.37	-0.079	0	0	0.024	9.2
1960-08-01	0.74	6.4	-0.43	0.56	-0.094	0	0.74	0.31	9.2
1960-09-01	1.5	4.4	-0.69	1.1	-0.11	0	1.5	0.84	8.1

Table IV-B.43 DC4 Monsoon Period Water Balance

Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
1960-10-01	0.27	5.0	-0.051	0.47	-0.12	0	0.27	0.22	7.0
1960-11-01	2.1	1.9	-1.4	0.50	-0.13	0	2.1	0.66	5.0
1960	4.6	25	-2.5	3.0	-0.53	0	4.6	2.1	38
1961-07-01	0	7.2	0.020	0.35	-0.14	0	0	0.016	9.3
1961-08-01	0.67	6.1	-0.25	0.41	-0.14	0	0.67	0.42	8.9
1961-09-01	3.0	3.1	-2.1	1.1	-0.14	0	3.0	0.87	8.1
1961-10-01	0.50	4.4	0.11	1.2	-0.13	0	0.50	0.61	6.3
1961-11-01	0.45	3.6	-0.29	0.44	-0.13	0	0.45	0.16	5.4
1961	4.6	24	-2.5	3.5	-0.68	0	4.6	2.1	38
1962-07-01	0	7.0	0.020	0.36	-0.10	0	0	0.020	9.1
1962-08-01	0.61	6.3	-0.22	0.47	-0.10	0	0.61	0.39	8.9
1962-09-01	0.50	5.6	-0.19	0.54	-0.10	0	0.50	0.30	8.4
1962-10-01	1.2	3.7	-0.58	0.43	-0.097	0	1.2	0.65	6.6
1962-11-01	0.87	3.2	-0.38	0.56	-0.099	0	0.87	0.49	5.1
1962	3.2	26	-1.4	2.4	-0.50	0	3.2	1.9	38
1963-07-01	0	7.0	0.020	0.35	-0.088	0	0	0.024	9.0
1963-08-01	0.079	7.2	0	0.36	-0.090	0	0.079	0.075	9.4
1963-09-01	10	-5.1	-8.6	1.4	-0.088	0	10	1.8	7.5
1963-10-01	1.1	4.1	-0.36	1.5	-0.087	0	1.1	0.69	6.6
1963-11-01	0.67	3.9	-0.38	0.91	-0.091	0	0.67	0.29	5.8
1963	12	17	-9.4	4.5	-0.44	0	12	2.9	38
1964-07-01	0	7.2	0.020	0.36	-0.12	0	0	0.020	9.4
1964-08-01	1.5	5.3	-0.73	0.57	-0.12	0	1.5	0.76	8.8
1964-09-01	2.2	3.6	-1.1	1.3	-0.13	0	2.2	1.1	7.7
1964-10-01	1.6	3.0	-0.66	0.95	-0.12	0	1.6	0.92	6.1
1964-11-01	1.5	3.1	-1.2	0.76	-0.13	0	1.5	0.34	5.8
1964	6.8	22	-3.6	4.0	-0.62	0	6.8	3.1	38
1965-07-01	0.10	6.8	0.012	0.39	-0.11	0	0.10	0.11	8.8
1965-08-01	1.4	5.2	-0.72	0.65	-0.11	0	1.4	0.72	8.9
1965-09-01	0.90	5.0	-0.41	1.0	-0.12	0	0.90	0.49	8.0
1965-10-01	1.0	3.9	-0.55	0.81	-0.11	0	1.0	0.49	6.6
1965-11-01	0.46	4.0	-0.24	0.33	-0.12	0	0.46	0.22	5.7
1965	3.9	25	-1.9	3.2	-0.57	0	3.9	2.0	38
1966-07-01	0.18	6.6	-0.035	0.37	-0.17	0	0.18	0.14	9.1
1966-08-01	0.84	5.7	-0.37	0.55	-0.21	0	0.84	0.48	8.3
1966-09-01	1.6	4.3	-1.1	0.75	-0.23	0	1.6	0.56	8.1
1966-10-01	2.7	2.2	-2.1	1.3	-0.25	0	2.7	0.57	6.5
1966-11-01	1.4	2.8	-0.88	0.92	-0.27	0	1.4	0.49	5.1
1966	6.7	22	-4.4	3.9	-1.1	0	6.7	2.2	37
1967-07-01	0.079	6.9	0.012	0.35	-0.23	0	0.079	0.091	9.0
1967-08-01	4.0	2.4	-3.0	1.2	-0.23	0	4.0	0.96	8.3
1967-09-01	2.5	3.5	-1.9	2.0	-0.22	0	2.5	0.65	8.0
1967-10-01	0.55	4.3	-0.23	1.2	-0.21	0	0.55	0.32	6.5
1967-11-01	0.42	3.8	-0.17	0.59	-0.21	0	0.42	0.24	5.6
1967	7.5	21	-5.3	5.3	-1.1	0	7.5	2.3	37
1968-07-01	0	7.3	0.020	0.39	-0.25	0	0	0.020	9.3
1968-08-01	1.8	5.0	-1.1	0.67	-0.30	0	1.8	0.70	8.9
1968-09-01	2.5	2.8	-1.5	1.6	-0.32	0	2.5	1.1	7.3
1968-10-01	0.047	5.2	0.043	1.1	-0.32	0	0.047	0.094	6.9
1968-11-01	0.39	3.7	-0.18	0.38	-0.33	0	0.39	0.20	5.1
1968	4.8	24	-2.7	4.1	-1.5	0	4.8	2.1	38
1969-07-01	0	7.2	0.024	0.39	-0.30	0	0	0.028	9.4
1969-08-01	0.33	6.3	-0.075	0.39	-0.31	0	0.33	0.25	8.7
1969-09-01	2.6	3.6	-1.6	1.3	-0.32	0	2.6	1.00	8.3
1969-10-01	1.2	3.8	-0.73	1.2	-0.31	0	1.2	0.52	6.8
1969-11-01	0.83	3.1	-0.52	0.58	-0.32	0	0.83	0.30	5.2
1969	5.0	24	-2.9	3.9	-1.6	0	5.0	2.1	38

Table IV-B.43 DC4 Monsoon Period Water Balance

Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
1970-07-01	0.079	7.1	0.016	0.37	-0.22	0	0.079	0.094	9.1
1970-08-01	1.0	5.7	-0.48	0.73	-0.22	0	1.0	0.56	9.1
1970-09-01	1.7	4.3	-0.91	0.82	-0.22	0	1.7	0.81	8.0
1970-10-01	3.3	1.7	-2.8	1.3	-0.20	0	3.3	0.59	7.0
1970-11-01	0	4.2	0.031	0.70	-0.21	0	0	0.031	5.3
1970	6.2	23	-4.1	4.0	-1.1	0	6.2	2.1	39
1971-07-01	0	7.0	0.020	0.34	-0.16	0	0	0.020	9.0
1971-08-01	0.39	6.7	-0.13	0.41	-0.16	0	0.39	0.26	9.2
1971-09-01	4.7	0.94	-3.3	1.4	-0.15	0	4.7	1.4	7.8
1971-10-01	3.1	2.1	-2.6	1.4	-0.14	0	3.1	0.46	7.1
1971-11-01	4.2	-0.31	-3.3	0.87	-0.14	0	4.2	0.92	5.1
1971	12	16	-9.3	4.5	-0.75	0	12	3.1	38
1972-07-01	1.7	5.6	-1.2	0.80	-0.12	0	1.7	0.50	9.3
1972-08-01	0.27	7.1	-0.083	1.1	-0.12	0	0.27	0.19	9.5
1972-09-01	2.0	4.0	-1.2	1.2	-0.12	0	2.0	0.76	8.4
1972-10-01	0.67	4.4	-0.18	0.76	-0.11	0	0.67	0.48	6.8
1972-11-01	8.7	-5.0	-7.5	0.68	-0.12	0	8.7	1.2	4.9
1972	13	16	-10	4.5	-0.59	0	13	3.1	39
1973-07-01	0.87	6.2	-0.45	0.83	-0.13	0	0.87	0.41	9.0
1973-08-01	2.7	3.9	-2.1	0.89	-0.17	0	2.7	0.66	8.9
1973-09-01	1.4	4.6	-0.64	1.8	-0.20	0	1.4	0.79	8.1
1973-10-01	0	5.0	0.043	0.85	-0.21	0	0	0.043	6.7
1973-11-01	0	4.2	0.020	0.18	-0.24	0	0	0.024	5.6
1973	5.0	24	-3.1	4.5	-0.95	0	5.0	1.9	38
1974-07-01	0	7.4	0.016	0.37	-0.23	0	0	0.016	9.4
1974-08-01	2.4	4.2	-1.6	1.00	-0.23	0	2.4	0.83	8.6
1974-09-01	1.4	4.5	-0.67	1.7	-0.22	0	1.4	0.71	8.3
1974-10-01	3.4	1.4	-2.3	1.3	-0.21	0	3.4	1.1	6.5
1974-11-01	3.4	0.51	-2.7	0.86	-0.22	0	3.4	0.71	5.3
1974	11	18	-7.3	5.2	-1.1	0	11	3.3	38
1975-07-01	0	7.4	0.020	0.46	-0.17	0	0	0.016	9.6
1975-08-01	2.2	3.8	-1.00	0.81	-0.17	0	2.2	1.2	8.3
1975-09-01	2.0	4.2	-1.2	1.5	-0.17	0	2.0	0.77	8.0
1975-10-01	0.87	4.1	-0.31	1.0	-0.17	0	0.87	0.58	6.8
1975-11-01	0.28	3.9	-0.043	0.22	-0.17	0	0.28	0.22	5.4
1975	5.4	23	-2.6	4.0	-0.83	0	5.4	2.8	38
1976-07-01	0	7.6	0.031	0.37	-0.15	0	0	0.031	9.7
1976-08-01	2.8	3.5	-2.1	0.83	-0.15	0	2.8	0.69	8.7
1976-09-01	0.83	5.2	-0.50	1.8	-0.15	0	0.83	0.35	7.9
1976-10-01	4.0	0.59	-3.1	1.3	-0.14	0	4.0	0.88	6.4
1976-11-01	0.91	2.9	-0.48	0.84	-0.14	0	0.91	0.43	5.1
1976	8.5	20	-6.1	5.1	-0.72	0	8.5	2.4	38
1977-07-01	0.039	7.4	0.012	0.36	-0.11	0	0.039	0.067	9.5
1977-08-01	2.6	4.5	-1.8	0.84	-0.11	0	2.6	0.74	9.4
1977-09-01	2.4	3.5	-1.7	1.9	-0.10	0	2.4	0.72	8.1
1977-10-01	3.5	1.1	-2.5	1.3	-0.098	0	3.5	1.0	6.4
1977-11-01	1.3	2.9	-0.78	0.94	-0.10	0	1.3	0.54	5.5
1977	9.8	19	-6.7	5.3	-0.52	0	9.8	3.1	39
1978-07-01	0.51	6.6	-0.37	0.46	-0.083	0	0.51	0.17	9.4
1978-08-01	0.98	5.9	-0.52	0.69	-0.098	0	0.98	0.45	9.4
1978-09-01	1.1	4.5	-0.53	1.2	-0.11	0	1.1	0.53	7.3
1978-10-01	0.39	4.4	-0.17	0.45	-0.13	0	0.39	0.22	6.6
1978-11-01	1.9	2.5	-1.5	0.35	-0.15	0	1.9	0.44	5.9
1978	4.9	24	-3.1	3.2	-0.57	0	4.9	1.8	39
1979-07-01	0.31	7.0	-0.020	0.57	-0.70	0	0.31	0.33	9.2
1979-08-01	0.20	6.8	-0.028	0.38	-0.78	0	0.20	0.13	9.3
1979-09-01	1.5	4.1	-0.70	0.90	-0.77	0	1.5	0.84	7.8

Table IV-B.43 DC4 Monsoon Period Water Balance

Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
1979-10-01	0.079	5.1	0.024	0.39	-0.71	0	0.079	0.13	7.2
1979-11-01	0.67	3.9	-0.43	0.31	-0.68	0	0.67	0.26	5.9
1979	2.8	27	-1.1	2.6	-3.6	0	2.8	1.7	39
1980-07-01	0.16	6.9	-0.094	0.39	-0.50	0	0.16	0.067	9.0
1980-08-01	1.9	4.8	-1.1	0.83	-0.56	0	1.9	0.85	9.1
1980-09-01	1.3	4.6	-0.68	1.4	-0.57	0	1.3	0.63	7.9
1980-10-01	0.59	4.6	-0.29	0.80	-0.54	0	0.59	0.30	7.0
1980-11-01	0.039	4.3	0.024	0.19	-0.54	0	0.039	0.059	5.9
1980	4.0	25	-2.1	3.6	-2.7	0	4.0	1.9	39
1981-07-01	0.12	7.1	0.020	0.51	-0.33	0	0.12	0.15	9.3
1981-08-01	2.2	4.7	-1.6	0.68	-0.33	0	2.2	0.56	9.3
1981-09-01	2.6	3.5	-1.7	2.0	-0.32	0	2.6	0.91	7.9
1981-10-01	0.51	4.8	-0.28	1.2	-0.30	0	0.51	0.23	7.5
1981-11-01	0.94	2.9	-0.47	0.71	-0.30	0	0.94	0.49	5.2
1981	6.4	23	-4.1	5.1	-1.6	0	6.4	2.3	39
1982-07-01	0.079	7.1	-0.0079	0.60	-0.21	0	0.079	0.039	9.1
1982-08-01	2.6	3.7	-1.7	0.84	-0.21	0	2.6	0.98	8.8
1982-09-01	3.8	1.5	-2.8	1.7	-0.20	0	3.8	1.0	6.9
1982-10-01	3.1	2.2	-2.3	1.4	-0.19	0	3.1	0.79	6.7
1982-11-01	0.039	4.1	0.079	0.80	-0.20	0	0.039	0.12	5.4
1982	9.6	19	-6.7	5.3	-1.0	0	9.6	2.9	37
1983-07-01	0	7.4	0.039	0.41	-0.19	0	0	0.020	9.4
1983-08-01	2.8	4.1	-2.0	0.99	-0.21	0	2.8	0.78	9.5
1983-09-01	3.7	2.1	-2.3	1.9	-0.23	0	3.7	1.3	7.5
1983-10-01	5.0	0	-4.0	1.5	-0.25	0	5.0	1.1	7.3
1983-11-01	1.1	2.5	-0.55	0.81	-0.27	0	1.1	0.59	4.9
1983	13	16	-8.9	5.6	-1.2	0	13	3.7	39
1984-07-01	1.3	5.6	-0.98	0.42	-0.33	0	1.3	0.34	9.3
1984-08-01	3.3	2.8	-1.9	1.6	-0.35	0	3.3	1.4	7.8
1984-09-01	3.3	1.9	-1.7	1.8	-0.34	0	3.3	1.6	7.4
1984-10-01	1.9	3.1	-1.1	1.5	-0.32	0	1.9	0.74	6.9
1984-11-01	1.4	2.4	-0.67	0.83	-0.33	0	1.4	0.69	4.9
1984	11	16	-6.4	6.0	-1.7	0	11	4.8	36
1985-07-01	0	6.3	0.039	0.33	-0.31	0	0	0.020	8.6
1985-08-01	1.2	5.6	-0.83	0.53	-0.35	0	1.2	0.41	8.7
1985-09-01	2.1	3.7	-1.3	1.6	-0.35	0	2.1	0.79	8.1
1985-10-01	3.5	1.1	-2.3	1.1	-0.35	0	3.5	1.3	6.6
1985-11-01	1.3	2.3	-0.51	0.80	-0.35	0	1.3	0.74	4.6
1985	8.1	19	-4.9	4.4	-1.7	0	8.1	3.2	37
1986-07-01	0	7.1	0.039	0.38	-0.28	0	0	0.031	9.3
1986-08-01	4.8	1.4	-3.4	1.5	-0.28	0	4.8	1.4	8.5
1986-09-01	2.0	3.6	-1.1	1.9	-0.30	0	2.0	0.86	8.0
1986-10-01	2.0	2.6	-1.3	1.4	-0.29	0	2.0	0.75	6.5
1986-11-01	1.8	2.1	-1.3	0.85	-0.30	0	1.8	0.43	4.8
1986	11	17	-7.1	6.0	-1.4	0	11	3.5	37
1987-07-01	0.20	7.0	-0.079	0.43	-0.27	0	0.20	0.16	9.0
1987-08-01	2.1	4.9	-1.7	1.1	-0.29	0	2.1	0.39	9.0
1987-09-01	2.9	2.9	-2.1	1.9	-0.30	0	2.9	0.79	8.1
1987-10-01	1.3	3.7	-0.63	1.4	-0.29	0	1.3	0.64	7.1
1987-11-01	0.31	4.2	-0.12	0.87	-0.30	0	0.31	0.23	6.0
1987	6.7	23	-4.6	5.7	-1.4	0	6.7	2.2	39
1988-07-01	0.12	6.6	0	0.35	-0.25	0	0.12	0.15	8.9
1988-08-01	3.4	3.1	-2.6	0.56	-0.26	0	3.4	0.79	8.8
1988-09-01	5.9	-0.20	-4.1	1.9	-0.26	0	5.9	1.8	7.5
1988-10-01	0.31	4.6	0	1.4	-0.26	0	0.31	0.31	6.9
1988-11-01	1.5	2.8	-0.98	0.80	-0.26	0	1.5	0.49	5.8
1988	11	17	-7.7	5.1	-1.3	0	11	3.5	38

Table IV-B.43 DC4 Monsoon Period Water Balance

Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
1989-07-01	0	7.2	0.039	0.37	-0.24	0	0	0.016	9.2
1989-08-01	0.51	6.3	-0.24	0.39	-0.25	0	0.51	0.27	9.3
1989-09-01	0.91	4.9	-0.39	0.80	-0.25	0	0.91	0.54	7.8
1989-10-01	1.5	3.6	-1.1	1.2	-0.24	0	1.5	0.33	7.3
1989-11-01	1.1	3.1	-0.51	0.70	-0.24	0	1.1	0.55	5.9
1989	4.0	25	-2.2	3.4	-1.2	0	4.0	1.7	39
1990-07-01	0.31	6.9	-0.12	0.46	-0.17	0	0.31	0.17	9.3
1990-08-01	1.5	4.8	-0.83	0.85	-0.17	0	1.5	0.66	8.6
1990-09-01	9.0	-3.3	-8.0	1.5	-0.16	0	9.0	0.93	7.4
1990-10-01	2.8	2.0	-1.9	1.4	-0.15	0	2.8	0.88	6.8
1990-11-01	0.28	3.7	-0.039	0.85	-0.15	0	0.28	0.24	5.3
1990	14	14	-11	5.1	-0.81	0	14	2.9	37
1991-07-01	0.63	6.7	-0.20	0.55	-0.19	0	0.63	0.44	9.2
1991-08-01	1.7	5.2	-1.1	0.67	-0.22	0	1.7	0.55	9.3
1991-09-01	2.8	3.1	-1.7	1.7	-0.26	0	2.8	0.99	8.3
1991-10-01	1.6	3.3	-0.94	1.5	-0.28	0	1.6	0.62	6.5
1991-11-01	1.2	3.5	-0.91	0.79	-0.31	0	1.2	0.30	6.6
1991	7.9	22	-4.9	5.2	-1.3	0	7.9	2.9	40
1992-07-01	1.3	5.8	-0.59	1.5	-0.51	0	1.3	0.71	8.9
1992-08-01	3.3	3.5	-2.4	0.91	-0.65	0	3.3	0.83	9.3
1992-09-01	5.3	0.28	-4.0	1.9	-0.71	0	5.3	1.3	7.8
1992-10-01	0.87	4.3	-0.55	1.5	-0.69	0	0.87	0.33	6.7
1992-11-01	1.3	3.1	-0.83	0.87	-0.69	0	1.3	0.36	6.2
1992	12	17	-8.4	6.6	-3.2	0	12	3.5	39
1993-07-01	0	7.1	0.039	0.63	-1.7	0	0	0.035	9.3
1993-08-01	0.24	6.6	-0.079	0.47	-1.5	0	0.24	0.15	8.9
1993-09-01	3.4	2.2	-2.1	0.91	-1.2	0	3.4	1.3	8.5
1993-10-01	0.16	4.8	0.079	1.3	-1.0	0	0.16	0.26	6.4
1993-11-01	0.83	3.5	-0.31	0.67	-0.92	0	0.83	0.46	6.0
1993	4.6	24	-2.4	4.0	-6.4	0	4.6	2.2	39
1994-07-01	0.39	6.5	-0.16	0.71	-0.51	0	0.39	0.21	8.9
1994-08-01	1.5	5.5	-1.1	0.43	-0.50	0	1.5	0.31	9.1
1994-09-01	0.71	5.4	-0.16	1.4	-0.47	0	0.71	0.57	8.6
1994-10-01	1.9	2.9	-1.2	1.1	-0.43	0	1.9	0.75	6.6
1994-11-01	1.9	1.9	-1.5	0.71	-0.41	0	1.9	0.38	5.3
1994	6.3	22	-4.1	4.4	-2.3	0	6.3	2.2	39
1995-07-01	0	7.2	0.039	0.39	-0.34	0	0	0.031	9.0
1995-08-01	0.039	7.1	0.039	0.35	-0.37	0	0.039	0.059	9.3
1995-09-01	3.8	2.2	-2.9	1.3	-0.38	0	3.8	0.99	8.8
1995-10-01	2.8	2.3	-2.1	1.5	-0.37	0	2.8	0.62	7.2
1995-11-01	0	4.3	0.16	0.94	-0.39	0	0	0.15	5.8
1995	6.6	23	-4.8	4.5	-1.8	0	6.6	1.9	40
1996-07-01	0.39	6.6	-0.20	0.43	-0.28	0	0.39	0.18	9.1
1996-08-01	2.4	4.4	-1.4	1.1	-0.28	0	2.4	0.97	8.9
1996-09-01	1.2	4.6	-0.63	1.4	-0.27	0	1.2	0.59	8.1
1996-10-01	3.0	1.4	-2.0	1.1	-0.26	0	3.0	1.1	6.7
1996-11-01	0.43	4.1	-0.12	0.91	-0.25	0	0.43	0.28	6.0
1996	7.4	21	-4.3	5.0	-1.3	0	7.4	3.1	39
1997-07-01	0	7.0	0.039	0.35	-0.18	0	0	0.047	9.0
1997-08-01	0.12	7.3	0	0.35	-0.18	0	0.12	0.094	9.9
1997-09-01	2.6	3.3	-1.7	1.3	-0.16	0	2.6	0.90	8.5
1997-10-01	0	5.4	0.039	0.83	-0.16	0	0	0.051	7.3
1997-11-01	0.71	3.2	-0.39	0.28	-0.15	0	0.71	0.33	6.0
1997	3.4	26	-2.0	3.1	-0.83	0	3.4	1.4	41
1998-07-01	0	7.2	0	0.39	-0.11	0	0	0.020	9.2
1998-08-01	1.7	5.1	-1.1	1.1	-0.11	0	1.7	0.64	9.1
1998-09-01	2.4	3.4	-1.3	1.6	-0.11	0	2.4	1.0	8.3

Table IV-B.43 DC4 Monsoon Period Water Balance

Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
1998-10-01	1.3	3.7	-0.83	1.1	-0.11	0	1.3	0.51	7.0
1998-11-01	0	4.4	0.039	0.35	-0.11	0	0	0.031	6.3
1998	5.4	24	-3.2	4.6	-0.55	0	5.4	2.2	40
1999-07-01	0	7.1	0	0.39	-0.11	0	0	0.016	9.1
1999-08-01	5.8	0.35	-4.3	1.3	-0.10	0	5.8	1.6	8.7
1999-09-01	2.8	2.8	-1.8	1.9	-0.11	0	2.8	1.0	7.8
1999-10-01	1.1	3.9	-0.31	1.5	-0.098	0	1.1	0.81	6.8
1999-11-01	0	4.5	0.039	0.87	-0.11	0	0	0.051	6.2
1999	9.7	19	-6.3	5.9	-0.52	0	9.7	3.5	39
2000-07-01	0.83	6.3	-0.39	0.59	-0.083	0	0.83	0.39	9.5
2000-08-01	0.079	7.4	0	0.43	-0.083	0	0.079	0.083	9.5
2000-09-01	0.63	5.0	-0.24	0.47	-0.075	0	0.63	0.44	8.7
2000-10-01	0	5.3	0.039	0.28	-0.075	0	0	0.047	6.8
2000-11-01	5.3	-1.7	-4.4	0.39	-0.067	0	5.3	0.88	5.9
2000	6.9	22	-5.0	2.2	-0.38	0	6.9	1.8	40
2001-07-01	0	7.2	0	0.39	-0.063	0	0	0.051	9.2
2001-08-01	2.7	4.2	-2.3	0.47	-0.063	0	2.7	0.42	9.7
2001-09-01	3.3	2.4	-2.3	1.9	-0.055	0	3.3	1.1	7.6
2001-10-01	0.12	4.8	0.039	0.98	-0.059	0	0.12	0.14	7.3
2001-11-01	0.35	3.6	-0.16	0.47	-0.063	0	0.35	0.22	5.5
2001	6.5	22	-4.7	4.2	-0.30	0	6.5	1.9	39
2002-07-01	0	7.4	0	0.35	-0.063	0	0	0.016	9.2
2002-08-01	0.31	6.8	-0.079	0.35	-0.063	0	0.31	0.26	9.7
2002-09-01	0.47	5.4	-0.16	0.39	-0.067	0	0.47	0.27	8.1
2002-10-01	1.2	3.9	-0.63	0.83	-0.059	0	1.2	0.58	7.1
2002-11-01	0.079	4.0	0	0.24	-0.063	0	0.079	0.098	6.1
2002	2.0	27	-0.87	2.2	-0.31	0	2.0	1.2	40
2003-07-01	0	7.9	0	0.39	-0.059	0	0	0.020	10.0
2003-08-01	0.47	6.7	-0.079	0.35	-0.055	0	0.47	0.41	10
2003-09-01	1.3	4.8	-0.75	0.75	-0.051	0	1.3	0.52	8.5
2003-10-01	1.9	3.3	-0.98	1.1	-0.051	0	1.9	0.95	7.4
2003-11-01	0.079	4.4	0.039	0.55	-0.051	0	0.079	0.12	6.0
2003	3.8	27	-1.8	3.1	-0.27	0	3.8	2.0	42
2004-07-01	0	7.8	0.039	0.35	-0.043	0	0	0.020	10
2004-08-01	0.55	6.7	-0.20	0.43	-0.043	0	0.55	0.36	9.8
2004-09-01	2.1	4.1	-1.2	1.1	-0.039	0	2.1	0.89	8.6
2004-10-01	1.5	3.9	-1.0	1.0	-0.039	0	1.5	0.49	7.9
2004-11-01	1.2	2.9	-0.75	0.71	-0.039	0	1.2	0.44	6.1
2004	5.4	25	-3.1	3.6	-0.20	0	5.4	2.2	42
2005-07-01	0.079	7.6	0.039	0.39	-0.035	0	0.079	0.079	9.7
2005-08-01	1.4	5.8	-1.1	0.47	-0.035	0	1.4	0.35	11
2005-09-01	4.7	1.0	-3.4	1.9	-0.031	0	4.7	1.3	7.3
2005-10-01	0.079	5.0	0.039	1.2	-0.035	0	0.079	0.13	7.4
2005-11-01	0.39	3.8	-0.20	0.43	-0.039	0	0.39	0.20	6.1
2005	6.7	23	-4.6	4.4	-0.18	0	6.7	2.0	41
2006-07-01	0.51	7.0	-0.24	0.39	-0.055	0	0.51	0.30	10
2006-08-01	3.2	3.0	-2.4	0.59	-0.059	0	3.2	0.75	9.2
2006-09-01	2.9	3.0	-1.7	2.0	-0.059	0	2.9	1.2	7.4
2006-10-01	1.1	3.8	-0.63	1.4	-0.059	0	1.1	0.49	6.9
2006-11-01	1.0	3.0	-0.43	0.79	-0.063	0	1.0	0.61	5.9
2006	8.7	20	-5.4	5.2	-0.30	0	8.7	3.4	40

Table IV-B.44 DC4 Winter Storm Period Water Balance

Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
1951-11-01	0	2.7	-1.2	0.79	-0.27	0	1.6	0.42	5.4
1951-12-01	1.7	1.5	-0.94	0.56	-0.26	0	1.7	0.77	3.7
1952-01-01	3.0	-0.66	-2.3	0.39	-0.26	0	3.0	0.70	2.8
1952-02-01	2.8	-0.36	-1.9	0.46	-0.26	0	2.8	0.85	2.9
1952-03-01	0.50	2.4	-0.13	0.82	-0.23	0	0.50	0.37	3.8
1952	8.0	5.6	-6.5	3.0	-1.3	0	9.7	3.1	19
1952-11-01	0	4.8	0.052	0.32	-0.29	0	0	0.052	5.9
1952-12-01	4.3	-1.5	-3.7	0.26	-0.28	0	4.3	0.63	3.3
1953-01-01	2.0	0.26	-1.2	0.37	-0.29	0	2.0	0.74	2.7
1953-02-01	0.74	2.1	-0.30	0.54	-0.29	0	0.74	0.44	3.3
1953-03-01	0.60	2.4	-0.34	0.78	-0.25	0	0.60	0.26	3.8
1953	7.6	8.0	-5.5	2.3	-1.4	0	7.6	2.1	19
1953-11-01	0.012	4.4	0.024	0.28	-0.28	0	0.012	0.035	5.5
1953-12-01	0.56	2.8	-0.33	0.19	-0.26	0	0.56	0.24	3.9
1954-01-01	0.19	2.3	-0.0035	0.22	-0.27	0	0.19	0.19	2.9
1954-02-01	2.4	0.35	-1.8	0.34	-0.26	0	2.4	0.61	3.2
1954-03-01	0.72	2.5	-0.37	0.92	-0.22	0	0.72	0.35	4.2
1954	3.9	12	-2.5	2.0	-1.3	0	3.9	1.4	20
1954-11-01	0	4.5	0.071	0.89	-0.19	0	0	0.074	5.6
1954-12-01	0.091	3.5	-0.035	0.22	-0.19	0	0.091	0.052	4.3
1955-01-01	0.29	2.7	-0.071	0.18	-0.19	0	0.29	0.22	3.5
1955-02-01	3.4	-1.4	-2.6	0.32	-0.19	0	3.4	0.82	2.4
1955-03-01	0.28	2.5	-0.016	0.76	-0.18	0	0.28	0.26	3.5
1955	4.1	12	-2.6	2.4	-0.94	0	4.1	1.4	19
1955-11-01	0.020	4.7	0.028	0.43	-0.19	0	0.020	0.048	5.9
1955-12-01	0.96	2.1	-0.63	0.27	-0.18	0	0.96	0.34	3.7
1956-01-01	1.4	1.4	-0.99	0.43	-0.18	0	1.4	0.38	3.1
1956-02-01	2.6	0.30	-2.1	0.53	-0.18	0	2.6	0.50	3.5
1956-03-01	2.0	0.48	-1.2	0.72	-0.16	0	2.0	0.77	3.1
1956	7.0	9.0	-4.9	2.4	-0.90	0	7.0	2.0	19
1956-11-01	0.53	3.6	-0.25	0.27	-0.15	0	0.53	0.28	5.2
1956-12-01	0	3.2	0.10	0.25	-0.14	0	0	0.11	3.8
1957-01-01	0.47	2.2	-0.24	0.20	-0.15	0	0.47	0.23	3.1
1957-02-01	4.8	-2.7	-4.1	0.35	-0.14	0	4.8	0.68	2.7
1957-03-01	0.73	2.1	-0.087	0.81	-0.12	0	0.73	0.64	3.4
1957	6.5	8.4	-4.6	1.9	-0.71	0	6.5	1.9	18
1957-11-01	3.2	0.30	-2.4	0.67	-0.11	0	3.2	0.81	4.6
1957-12-01	0.61	2.0	-0.079	0.46	-0.11	0	0.61	0.54	3.0
1958-01-01	1.1	1.6	-0.53	0.44	-0.11	0	1.1	0.53	3.2
1958-02-01	0.012	2.9	0.075	0.50	-0.11	0	0.012	0.085	3.3
1958-03-01	2.5	-0.035	-1.9	0.70	-0.096	0	2.5	0.63	3.2
1958	7.4	6.8	-4.8	2.8	-0.54	0	7.4	2.6	17
1958-11-01	1.9	2.3	-1.5	0.93	-0.088	0	1.9	0.46	5.3
1958-12-01	1.5	1.6	-1.1	0.52	-0.084	0	1.5	0.39	3.6
1959-01-01	0	3.0	0.091	0.48	-0.086	0	0	0.094	3.6
1959-02-01	0.21	2.8	-0.035	0.52	-0.084	0	0.21	0.17	3.5
1959-03-01	1.4	1.1	-0.91	0.68	-0.075	0	1.4	0.52	3.3
1959	5.1	11	-3.4	3.1	-0.42	0	5.1	1.6	19
1959-11-01	4.8	-0.59	-4.4	0.65	-0.073	0	4.8	0.40	5.3
1959-12-01	0.38	2.8	0.17	0.56	-0.071	0	0.38	0.54	3.7
1960-01-01	5.2	-3.0	-4.5	0.36	-0.072	0	5.2	0.70	2.7
1960-02-01	4.2	-2.0	-3.4	0.40	-0.071	0	4.2	0.76	2.5

Table IV-B.44 DC4 Winter Storm Period Water Balance

Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
1960-03-01	0.87	1.8	-0.35	0.75	-0.065	0	0.87	0.52	3.4
1960	15	-1.1	-13	2.7	-0.35	0	15	2.9	18
1960-11-01	2.1	1.9	-1.4	0.50	-0.13	0	2.1	0.66	5.0
1960-12-01	0.48	2.6	-0.14	0.51	-0.13	0	0.48	0.35	3.7
1961-01-01	0.47	2.2	-0.17	0.42	-0.14	0	0.47	0.30	3.3
1961-02-01	0.70	1.9	-0.36	0.44	-0.15	0	0.70	0.34	3.2
1961-03-01	0.23	2.9	0.0039	0.63	-0.14	0	0.23	0.23	3.7
1961	3.9	12	-2.1	2.5	-0.69	0	3.9	1.9	19
1961-11-01	0.45	3.6	-0.29	0.44	-0.13	0	0.45	0.16	5.4
1961-12-01	0.32	2.4	0.031	0.21	-0.12	0	0.32	0.35	3.1
1962-01-01	3.9	-1.7	-3.2	0.30	-0.12	0	3.9	0.67	2.6
1962-02-01	3.2	-0.94	-2.6	0.42	-0.12	0	3.2	0.56	2.7
1962-03-01	1.7	0.75	-1.1	0.68	-0.11	0	1.7	0.60	3.2
1962	9.5	4.2	-7.2	2.1	-0.61	0	9.5	2.3	17
1962-11-01	0.87	3.2	-0.38	0.56	-0.099	0	0.87	0.49	5.1
1962-12-01	0.83	2.5	-0.51	0.41	-0.095	0	0.83	0.32	3.9
1963-01-01	1.8	0.87	-1.1	0.35	-0.098	0	1.8	0.69	3.3
1963-02-01	2.1	0.47	-1.5	0.48	-0.097	0	2.1	0.59	3.0
1963-03-01	4.2	-1.2	-3.9	0.85	-0.087	0	4.2	0.36	3.8
1963	9.8	5.9	-7.4	2.6	-0.48	0	9.8	2.5	19
1963-11-01	0.67	3.9	-0.38	0.91	-0.091	0	0.67	0.29	5.8
1963-12-01	2.4	0.71	-1.5	0.54	-0.088	0	2.4	0.88	3.6
1964-01-01	0.33	2.5	-0.016	0.46	-0.093	0	0.33	0.32	3.3
1964-02-01	0.58	1.9	-0.31	0.45	-0.096	0	0.58	0.27	3.0
1964-03-01	0	2.8	0.075	0.74	-0.094	0	0	0.075	3.6
1964	3.9	12	-2.1	3.1	-0.46	0	3.9	1.8	19
1964-11-01	1.5	3.1	-1.2	0.76	-0.13	0	1.5	0.34	5.8
1964-12-01	1.4	1.6	-0.92	0.49	-0.12	0	1.4	0.46	3.6
1965-01-01	1.7	0.91	-1.2	0.42	-0.13	0	1.7	0.47	3.3
1965-02-01	2.9	-0.51	-2.1	0.45	-0.13	0	2.9	0.74	2.6
1965-03-01	2.8	0	-2.4	0.80	-0.11	0	2.8	0.44	3.4
1965	10	5.1	-7.9	2.9	-0.62	0	10	2.5	19
1965-11-01	0.46	4.0	-0.24	0.33	-0.12	0	0.46	0.22	5.7
1965-12-01	2.4	0.87	-2.0	0.25	-0.11	0	2.4	0.39	3.9
1966-01-01	10	-8.3	-9.6	0.35	-0.12	0	10	0.87	2.7
1966-02-01	1.8	0.51	-1.2	0.44	-0.12	0	1.8	0.59	2.8
1966-03-01	2.0	0.51	-1.4	0.73	-0.11	0	2.0	0.58	3.1
1966	17	-2.4	-14	2.1	-0.58	0	17	2.6	18
1966-11-01	1.4	2.8	-0.88	0.92	-0.27	0	1.4	0.49	5.1
1966-12-01	0.88	2.4	-0.54	0.55	-0.27	0	0.88	0.33	4.1
1967-01-01	1.2	1.3	-0.72	0.42	-0.28	0	1.2	0.53	3.1
1967-02-01	0.79	1.9	-0.44	0.50	-0.27	0	0.79	0.35	2.9
1967-03-01	0	3.0	0.098	0.82	-0.24	0	0	0.098	3.9
1967	4.3	11	-2.5	3.2	-1.3	0	4.3	1.8	19
1967-11-01	0.42	3.8	-0.17	0.59	-0.21	0	0.42	0.24	5.6
1967-12-01	2.1	1.0	-1.7	0.18	-0.19	0	2.1	0.43	3.9
1968-01-01	10	-8.0	-9.3	0.32	-0.20	0	10	0.67	2.3
1968-02-01	0.63	2.0	-0.25	0.48	-0.19	0	0.63	0.38	3.1
1968-03-01	1.9	0.98	-1.4	0.83	-0.17	0	1.9	0.58	3.4
1968	15	-0.16	-13	2.4	-0.96	0	15	2.3	18
1968-11-01	0.39	3.7	-0.18	0.38	-0.33	0	0.39	0.20	5.1
1968-12-01	2.5	0.43	-1.9	0.39	-0.32	0	2.5	0.64	3.8

Table IV-B.44 DC4 Winter Storm Period Water Balance

Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
1969-01-01	3.3	-0.87	-2.7	0.39	-0.32	0	3.3	0.58	2.9
1969-02-01	4.2	-1.9	-3.4	0.43	-0.31	0	4.2	0.72	2.6
1969-03-01	1.4	1.1	-0.59	0.71	-0.27	0	1.4	0.76	3.0
1969	12	2.5	-8.8	2.3	-1.6	0	12	2.9	17
1969-11-01	0.83	3.1	-0.52	0.58	-0.32	0	0.83	0.30	5.2
1969-12-01	2.1	0.75	-1.4	0.43	-0.30	0	2.1	0.69	3.6
1970-01-01	1.3	1.4	-0.69	0.45	-0.30	0	1.3	0.63	3.4
1970-02-01	0.50	2.2	-0.059	0.51	-0.29	0	0.50	0.44	2.9
1970-03-01	0.41	2.5	-0.071	0.81	-0.25	0	0.41	0.33	3.6
1970	5.2	10	-2.8	2.8	-1.4	0	5.2	2.4	19
1970-11-01	0	4.2	0.031	0.70	-0.21	0	0	0.031	5.3
1970-12-01	0.65	2.5	-0.52	0.30	-0.19	0	0.65	0.13	3.9
1971-01-01	1.2	1.2	-0.57	0.32	-0.19	0	1.2	0.65	3.0
1971-02-01	0.85	2.1	-0.51	0.55	-0.19	0	0.85	0.34	3.1
1971-03-01	0.82	2.1	-0.50	0.77	-0.17	0	0.82	0.32	4.0
1971	3.5	12	-2.1	2.6	-0.95	0	3.5	1.5	19
1971-11-01	4.2	-0.31	-3.3	0.87	-0.14	0	4.2	0.92	5.1
1971-12-01	0.039	3.1	0.12	0.54	-0.13	0	0.039	0.16	3.7
1972-01-01	2.1	0.31	-1.3	0.41	-0.13	0	2.1	0.79	3.0
1972-02-01	0	2.8	0.17	0.51	-0.13	0	0	0.17	3.2
1972-03-01	0	3.6	0.039	0.81	-0.11	0	0	0.043	4.1
1972	6.4	9.5	-4.3	3.1	-0.65	0	6.4	2.1	19
1972-11-01	8.7	-5.0	-7.5	0.68	-0.12	0	8.7	1.2	4.9
1972-12-01	2.8	-0.16	-2.0	0.47	-0.11	0	2.8	0.84	3.2
1973-01-01	3.0	-0.71	-2.3	0.37	-0.12	0	3.0	0.65	2.9
1973-02-01	0.74	1.6	0.012	0.44	-0.11	0	0.74	0.74	2.6
1973-03-01	3.2	-0.67	-2.3	0.72	-0.10	0	3.2	0.91	2.8
1973	18	-4.9	-14	2.7	-0.57	0	18	4.4	16
1973-11-01	0	4.2	0.020	0.18	-0.24	0	0	0.024	5.6
1973-12-01	1.8	1.3	-1.2	0.19	-0.24	0	1.8	0.61	3.9
1974-01-01	0.098	2.8	0.098	0.40	-0.26	0	0.098	0.20	3.3
1974-02-01	3.4	-0.98	-2.6	0.44	-0.27	0	3.4	0.80	2.9
1974-03-01	0.12	2.8	0.024	0.81	-0.24	0	0.12	0.17	3.3
1974	5.4	10	-3.6	2.0	-1.2	0	5.4	1.8	19
1974-11-01	3.4	0.51	-2.7	0.86	-0.22	0	3.4	0.71	5.3
1974-12-01	0.12	3.0	0.29	0.55	-0.20	0	0.12	0.41	3.6
1975-01-01	0.75	1.7	-0.36	0.39	-0.20	0	0.75	0.40	3.1
1975-02-01	0.43	1.9	-0.13	0.42	-0.20	0	0.43	0.27	2.6
1975-03-01	3.9	-1.2	-3.3	0.79	-0.17	0	3.9	0.60	3.0
1975	8.6	5.9	-6.2	3.0	-1.0	0	8.6	2.4	18
1975-11-01	0.28	3.9	-0.043	0.22	-0.17	0	0.28	0.22	5.4
1975-12-01	2.2	1.2	-1.9	0.13	-0.17	0	2.2	0.21	4.2
1976-01-01	1.2	1.3	-0.53	0.43	-0.17	0	1.2	0.72	3.1
1976-02-01	0.24	2.3	0.035	0.47	-0.17	0	0.24	0.27	2.9
1976-03-01	1.6	1.4	-0.99	0.85	-0.16	0	1.6	0.62	3.4
1976	5.5	10	-3.5	2.1	-0.84	0	5.5	2.0	19
1976-11-01	0.91	2.9	-0.48	0.84	-0.14	0	0.91	0.43	5.1
1976-12-01	0.55	2.6	-0.21	0.55	-0.13	0	0.55	0.35	4.0
1977-01-01	1.8	0.79	-1.5	0.42	-0.13	0	1.8	0.30	3.1
1977-02-01	1.9	0.43	-0.98	0.44	-0.13	0	1.9	0.92	2.5
1977-03-01	0.079	3.3	0.055	0.91	-0.11	0	0.079	0.13	4.1
1977	5.2	10	-3.1	3.2	-0.63	0	5.2	2.1	19

Table IV-B.44 DC4 Winter Storm Period Water Balance

Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
1977-11-01	1.3	2.9	-0.78	0.94	-0.10	0	1.3	0.54	5.5
1977-12-01	0.35	2.9	0.0079	0.57	-0.098	0	0.35	0.36	3.9
1978-01-01	0.67	2.0	-0.42	0.41	-0.094	0	0.67	0.24	3.5
1978-02-01	6.4	-4.2	-5.6	0.41	-0.091	0	6.4	0.78	2.5
1978-03-01	5.5	-3.0	-4.6	0.72	-0.079	0	5.5	0.93	2.9
1978	14	0.71	-11	3.0	-0.46	0	14	2.8	18
1978-11-01	1.9	2.5	-1.5	0.35	-0.15	0	1.9	0.44	5.9
1978-12-01	5.6	-2.9	-4.9	0.47	-0.16	0	5.6	0.74	3.7
1979-01-01	6.6	-4.3	-5.8	0.36	-0.17	0	6.6	0.74	2.5
1979-02-01	6.0	-4.2	-4.8	0.34	-0.19	0	6.0	1.2	2.3
1979-03-01	1.2	1.9	-0.75	0.88	-0.17	0	1.2	0.49	3.3
1979	21	-7.0	-18	2.4	-0.83	0	21	3.6	18
1979-11-01	0.67	3.9	-0.43	0.31	-0.68	0	0.67	0.26	5.9
1979-12-01	0.67	2.5	-0.26	0.37	-0.60	0	0.67	0.42	4.0
1980-01-01	0.71	2.2	-0.39	0.30	-0.57	0	0.71	0.31	3.7
1980-02-01	4.1	-2.1	-3.2	0.32	-0.54	0	4.1	0.90	2.4
1980-03-01	6.0	-3.6	-5.5	0.69	-0.47	0	6.0	0.55	2.4
1980	12	2.9	-9.8	2.0	-2.9	0	12	2.4	18
1980-11-01	0.039	4.3	0.024	0.19	-0.54	0	0.039	0.059	5.9
1980-12-01	0	3.5	0.020	0.12	-0.49	0	0	0.020	4.3
1981-01-01	0.55	2.6	-0.24	0.22	-0.48	0	0.55	0.32	3.5
1981-02-01	1.3	1.5	-0.92	0.35	-0.45	0	1.3	0.40	3.5
1981-03-01	2.6	0.39	-2.2	0.84	-0.38	0	2.6	0.47	3.6
1981	4.6	12	-3.3	1.7	-2.3	0	4.6	1.3	21
1981-11-01	0.94	2.9	-0.47	0.71	-0.30	0	0.94	0.49	5.2
1981-12-01	2.3	1.0	-2.2	0.31	-0.28	0	2.3	0.15	4.4
1982-01-01	0	3.0	0.25	0.48	-0.28	0	0	0.25	3.3
1982-02-01	2.8	-0.43	-1.7	0.43	-0.26	0	2.8	1.00	2.8
1982-03-01	1.8	0.91	-1.0	0.78	-0.23	0	1.8	0.79	3.1
1982	7.8	7.3	-5.2	2.7	-1.4	0	7.8	2.7	19
1982-11-01	0.039	4.1	0.079	0.80	-0.20	0	0.039	0.12	5.4
1982-12-01	3.3	-0.75	-2.6	0.39	-0.19	0	3.3	0.71	3.6
1983-01-01	1.7	0.63	-0.83	0.39	-0.19	0	1.7	0.88	2.7
1983-02-01	1.9	0.83	-1.6	0.50	-0.19	0	1.9	0.33	3.2
1983-03-01	2.3	0.24	-1.9	0.72	-0.17	0	2.3	0.46	2.8
1983	9.3	5.0	-6.8	2.8	-0.95	0	9.3	2.5	18
1983-11-01	1.1	2.5	-0.55	0.81	-0.27	0	1.1	0.59	4.9
1983-12-01	2.0	1.0	-1.5	0.52	-0.28	0	2.0	0.51	3.8
1984-01-01	2.5	-0.24	-1.9	0.37	-0.28	0	2.5	0.56	2.7
1984-02-01	0.47	2.2	-0.039	0.51	-0.29	0	0.47	0.47	2.8
1984-03-01	0	3.1	0.079	0.78	-0.28	0	0	0.047	3.9
1984	6.1	8.6	-4.0	3.0	-1.4	0	6.1	2.2	18
1984-11-01	1.4	2.4	-0.67	0.83	-0.33	0	1.4	0.69	4.9
1984-12-01	2.0	1.1	-1.8	0.51	-0.30	0	2.0	0.30	4.2
1985-01-01	5.8	-3.6	-4.9	0.35	-0.30	0	5.8	0.88	2.5
1985-02-01	2.7	-0.71	-1.9	0.37	-0.29	0	2.7	0.76	2.5
1985-03-01	1.7	0.55	-1.1	0.63	-0.25	0	1.7	0.64	2.5
1985	14	-0.35	-10	2.7	-1.5	0	14	3.3	17
1985-11-01	1.3	2.3	-0.51	0.80	-0.35	0	1.3	0.74	4.6
1985-12-01	2.7	-0.039	-2.2	0.47	-0.33	0	2.7	0.54	3.9
1986-01-01	0.91	2.0	-0.24	0.48	-0.34	0	0.91	0.63	3.1
1986-02-01	0.079	3.1	-0.039	0.56	-0.32	0	0.079	0.071	3.6

Table IV-B.44 DC4 Winter Storm Period Water Balance

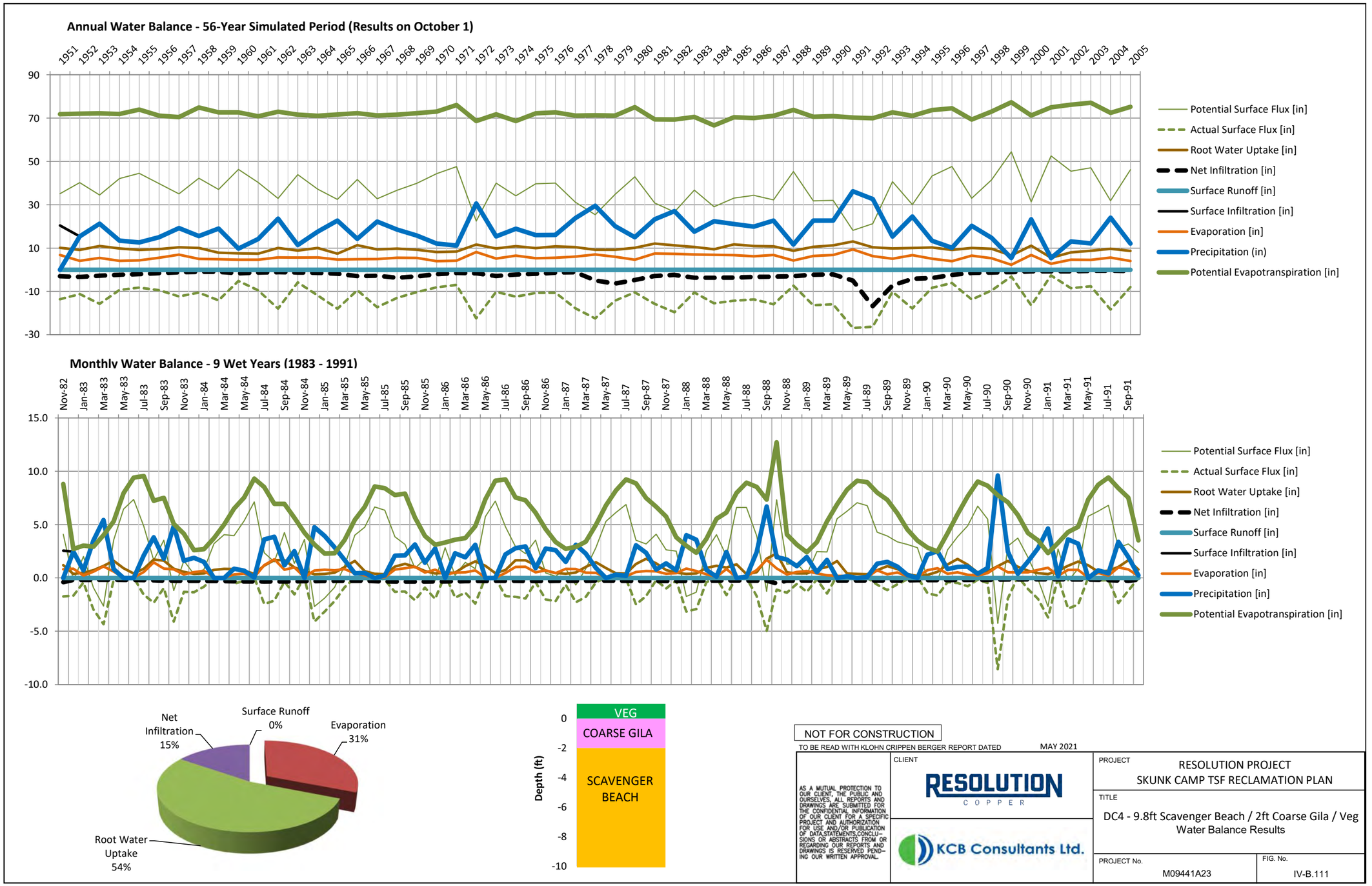
Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
1986-03-01	3.1	-0.63	-2.2	0.70	-0.28	0	3.1	0.82	2.9
1986	8.0	6.7	-5.2	3.0	-1.6	0	8.0	2.8	18
1986-11-01	1.8	2.1	-1.3	0.85	-0.30	0	1.8	0.43	4.8
1986-12-01	1.4	1.4	-0.71	0.50	-0.28	0	1.4	0.73	3.7
1987-01-01	3.0	-0.59	-2.3	0.40	-0.29	0	3.0	0.74	2.9
1987-02-01	3.4	-0.87	-2.5	0.47	-0.28	0	3.4	0.82	2.8
1987-03-01	2.7	-0.16	-2.1	0.70	-0.24	0	2.7	0.59	3.5
1987	12	1.9	-8.9	2.9	-1.4	0	12	3.3	18
1987-11-01	0.31	4.2	-0.12	0.87	-0.30	0	0.31	0.23	6.0
1987-12-01	1.8	1.3	-1.1	0.48	-0.29	0	1.8	0.62	3.8
1988-01-01	4.0	-1.5	-3.1	0.39	-0.29	0	4.0	0.87	3.2
1988-02-01	3.6	-1.3	-2.9	0.43	-0.28	0	3.6	0.67	2.5
1988-03-01	0.75	2.4	-0.39	0.88	-0.25	0	0.75	0.34	3.4
1988	10	5.1	-7.7	3.0	-1.4	0	10	2.7	19
1988-11-01	1.5	2.8	-0.98	0.80	-0.26	0	1.5	0.49	5.8
1988-12-01	1.7	1.3	-1.3	0.52	-0.25	0	1.7	0.41	4.0
1989-01-01	1.1	1.4	-0.47	0.41	-0.26	0	1.1	0.63	3.1
1989-02-01	2.2	0.12	-1.6	0.44	-0.25	0	2.2	0.64	2.7
1989-03-01	0.31	2.8	0	0.84	-0.23	0	0.31	0.28	3.1
1989	6.9	8.3	-4.4	3.0	-1.2	0	6.9	2.4	19
1989-11-01	1.1	3.1	-0.51	0.70	-0.24	0	1.1	0.55	5.9
1989-12-01	0.28	3.0	-0.12	0.28	-0.22	0	0.28	0.17	4.2
1990-01-01	0.87	2.0	-0.67	0.17	-0.22	0	0.87	0.20	3.4
1990-02-01	1.3	0.98	-0.63	0.39	-0.21	0	1.3	0.67	2.7
1990-03-01	2.5	-0.079	-1.6	0.71	-0.19	0	2.5	0.92	2.6
1990	6.0	9.0	-3.5	2.3	-1.1	0	6.0	2.5	19
1990-11-01	0.28	3.7	-0.039	0.85	-0.15	0	0.28	0.24	5.3
1990-12-01	2.2	0.94	-1.3	0.55	-0.14	0	2.2	0.90	4.2
1991-01-01	4.8	-2.7	-4.0	0.35	-0.14	0	4.8	0.78	3.0
1991-02-01	1.8	0.75	-1.3	0.47	-0.14	0	1.8	0.53	2.6
1991-03-01	0.94	2.3	-0.47	0.91	-0.13	0	0.94	0.44	3.3
1991	10	5.0	-7.1	3.1	-0.71	0	10	2.9	18
1991-11-01	1.2	3.5	-0.91	0.79	-0.31	0	1.2	0.30	6.6
1991-12-01	3.3	-0.39	-2.7	0.47	-0.30	0	3.3	0.57	3.6
1992-01-01	4.0	-1.7	-3.1	0.39	-0.31	0	4.0	0.91	2.9
1992-02-01	3.0	-0.71	-2.0	0.39	-0.31	0	3.0	0.98	2.2
1992-03-01	2.8	-0.16	-2.0	0.75	-0.28	0	2.8	0.71	3.0
1992	14	0.55	-11	2.8	-1.5	0	14	3.5	18
1992-11-01	1.3	3.1	-0.83	0.87	-0.69	0	1.3	0.36	6.2
1992-12-01	0.47	2.3	-0.12	0.47	-0.65	0	0.47	0.40	3.6
1993-01-01	6.4	-4.3	-5.4	0.31	-0.66	0	6.4	0.94	2.5
1993-02-01	11	-9.4	-10	0.24	-0.63	0	11	0.91	1.9
1993-03-01	6.0	-4.1	-5.1	0.55	-0.91	0	6.0	0.95	2.7
1993	25	-12	-22	2.4	-3.5	0	25	3.6	17
1993-11-01	0.83	3.5	-0.31	0.67	-0.92	0	0.83	0.46	6.0
1993-12-01	4.2	-1.4	-3.8	0.35	-0.80	0	4.2	0.37	3.6
1994-01-01	0.31	2.3	-0.039	0.43	-0.74	0	0.31	0.26	3.4
1994-02-01	0.28	2.6	-0.079	0.51	-0.67	0	0.28	0.19	3.3
1994-03-01	2.6	-0.12	-2.0	0.71	-0.55	0	2.6	0.60	3.0
1994	8.2	6.9	-6.3	2.7	-3.7	0	8.2	1.9	19
1994-11-01	1.9	1.9	-1.5	0.71	-0.41	0	1.9	0.38	5.3
1994-12-01	3.3	-0.83	-2.5	0.43	-0.37	0	3.3	0.89	3.5

Table IV-B.44 DC4 Winter Storm Period Water Balance

Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
1995-01-01	2.7	-0.31	-2.0	0.35	-0.37	0	2.7	0.68	3.0
1995-02-01	3.6	-1.2	-2.8	0.47	-0.34	0	3.6	0.93	2.6
1995-03-01	2.7	0	-2.2	0.75	-0.30	0	2.7	0.54	3.1
1995	14	-0.43	-11	2.7	-1.8	0	14	3.4	18
1995-11-01	0	4.3	0.16	0.94	-0.39	0	0	0.15	5.8
1995-12-01	1.3	1.8	-0.83	0.51	-0.36	0	1.3	0.49	3.9
1996-01-01	0.94	1.9	-0.59	0.43	-0.37	0	0.94	0.31	3.5
1996-02-01	0	3.0	0.079	0.55	-0.35	0	0	0.10	3.3
1996-03-01	3.1	-0.28	-2.6	0.79	-0.31	0	3.1	0.56	3.6
1996	5.4	11	-3.8	3.2	-1.8	0	5.4	1.6	20
1996-11-01	0.43	4.1	-0.12	0.91	-0.25	0	0.43	0.28	6.0
1996-12-01	1.2	1.9	-0.91	0.47	-0.23	0	1.2	0.34	3.8
1997-01-01	0	2.6	0.28	0.39	-0.23	0	0	0.28	3.2
1997-02-01	2.9	-0.55	-2.1	0.43	-0.21	0	2.9	0.74	2.7
1997-03-01	1.7	1.3	-1.3	0.83	-0.19	0	1.7	0.31	3.4
1997	6.2	9.3	-4.2	3.0	-1.1	0	6.2	1.9	19
1997-11-01	0.71	3.2	-0.39	0.28	-0.15	0	0.71	0.33	6.0
1997-12-01	0.83	2.1	-0.39	0.31	-0.14	0	0.83	0.40	3.7
1998-01-01	2.7	-0.39	-1.9	0.31	-0.13	0	2.7	0.85	3.1
1998-02-01	0.35	2.2	0.039	0.47	-0.13	0	0.35	0.41	2.4
1998-03-01	6.4	-4.4	-5.4	0.55	-0.11	0	6.4	1.0	2.9
1998	11	2.7	-8.0	1.9	-0.67	0	11	3.0	18
1998-11-01	0	4.4	0.039	0.35	-0.11	0	0	0.031	6.3
1998-12-01	1.1	2.1	-0.87	0.12	-0.11	0	1.1	0.21	3.9
1999-01-01	0.71	2.0	-0.12	0.39	-0.11	0	0.71	0.61	3.3
1999-02-01	0.079	2.9	0.039	0.43	-0.11	0	0.079	0.091	3.6
1999-03-01	0.20	3.2	-0.079	0.47	-0.11	0	0.20	0.14	3.6
1999	2.0	15	-0.98	1.8	-0.56	0	2.0	1.1	21
1999-11-01	0	4.5	0.039	0.87	-0.11	0	0	0.051	6.2
1999-12-01	0	3.7	0.039	0.31	-0.098	0	0	0.024	4.7
2000-01-01	0.039	2.9	-0.039	0.16	-0.10	0	0.039	0.020	3.7
2000-02-01	0.28	2.9	-0.079	0.20	-0.098	0	0.28	0.19	3.4
2000-03-01	0.71	2.5	-0.31	0.28	-0.087	0	0.71	0.38	3.9
2000	1.0	16	-0.35	1.8	-0.49	0	1.0	0.66	22
2000-11-01	5.3	-1.5	-4.4	0.39	-0.067	0	5.3	0.88	6.1
2000-12-01	2.1	0.59	-1.4	0.47	-0.067	0	2.1	0.72	2.9
2001-01-01	0.079	2.9	0.039	0.47	-0.071	0	0.079	0.13	3.7
2001-02-01	3.4	-1.1	-2.5	0.39	-0.067	0	3.4	0.89	3.0
2001-03-01	1.8	0.91	-1.0	0.79	-0.059	0	1.8	0.74	2.8
2001	13	1.7	-9.3	2.5	-0.33	0	13	3.4	19
2001-11-01	0.35	3.7	-0.16	0.47	-0.063	0	0.35	0.22	5.7
2001-12-01	0.31	3.0	-0.079	0.20	-0.063	0	0.31	0.20	4.6
2002-01-01	1.8	0.55	-1.3	0.28	-0.059	0	1.8	0.60	2.9
2002-02-01	0.24	2.5	-0.079	0.47	-0.063	0	0.24	0.15	3.2
2002-03-01	0	3.3	0.079	0.71	-0.059	0	0	0.094	3.4
2002	2.7	13	-1.5	2.1	-0.31	0	2.7	1.3	20
2002-11-01	0.079	4.2	0	0.28	-0.067	0	0.079	0.10	6.3
2002-12-01	0.87	2.5	-0.63	0.12	-0.063	0	0.87	0.20	4.4
2003-01-01	0.98	1.6	-0.35	0.28	-0.059	0	0.98	0.64	3.4
2003-02-01	0.39	2.9	-0.039	0.51	-0.063	0	0.39	0.35	3.1
2003-03-01	4.9	-2.4	-4.4	0.59	-0.047	0	4.9	0.49	3.6
2003	7.2	8.8	-5.5	1.8	-0.30	0	7.2	1.8	21

Table IV-B.44 DC4 Winter Storm Period Water Balance

Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
2003-11-01	0.079	4.6	0.039	0.59	-0.055	0	0.079	0.13	6.3
2003-12-01	0.87	2.0	-0.55	0.24	-0.051	0	0.87	0.31	3.9
2004-01-01	0.98	1.9	-0.55	0.35	-0.051	0	0.98	0.45	3.9
2004-02-01	1.5	0.94	-0.83	0.31	-0.047	0	1.5	0.61	3.1
2004-03-01	0.67	2.0	-0.24	0.67	-0.043	0	0.67	0.45	3.0
2004	4.1	11	-2.1	2.2	-0.25	0	4.1	1.9	20
2004-11-01	1.2	3.1	-0.75	0.75	-0.039	0	1.2	0.45	6.4
2004-12-01	0.67	1.9	-0.28	0.35	-0.039	0	0.67	0.40	3.5
2005-01-01	2.8	0	-2.2	0.39	-0.039	0	2.8	0.57	3.0
2005-02-01	4.3	-2.0	-3.5	0.43	-0.035	0	4.3	0.68	2.7
2005-03-01	7.3	-5.3	-6.4	0.55	-0.024	0	7.3	0.98	2.7
2005	16	-2.2	-13	2.5	-0.18	0	16	3.1	18
2005-11-01	0.39	4.0	-0.20	0.47	-0.039	0	0.39	0.20	6.4
2005-12-01	0	3.5	0.039	0.20	-0.043	0	0	0.047	4.4
2006-01-01	0	2.8	0	0.12	-0.043	0	0	0.020	3.5
2006-02-01	0	3.4	0.039	0.12	-0.043	0	0	0.020	3.8
2006-03-01	0.12	3.3	-0.039	0.20	-0.047	0	0.12	0.098	4.1
2006	0.51	17	-0.16	1.1	-0.22	0	0.51	0.39	22


Annual Water Balance - 56-Year Simulated Period (Results on October 1)
Potential Surface Flux [in]
Actual Surface Flux [in]
Root Water Uptake [in]
Net Infiltration [in]
Surface Runoff [in]
Surface Infiltration [in]
Evaporation [in]
Precipitation (in)
Potential Evapotranspiration [in]
Monthly Water Balance - 9 Wet Years (1983 - 1991)
Potential Surface Flux [in]
Actual Surface Flux [in]
Root Water Uptake [in]
Net Infiltration [in]
Surface Runoff [in]
Surface Infiltration [in]
Evaporation [in]
Precipitation [in]
Potential Evapotranspiration [in]
Net Infiltration 15%
Surface Runoff 0%
Evaporation 31%
Root Water Uptake 54%
Depth (ft)
VEG
COARSE GILA
SCAVENGER BEACH
NOT FOR CONSTRUCTION
TO BE READ WITH KLOHN CRIPPEN BERGER REPORT DATED MAY 2021
AS A MUTUAL PROTECTION TO OUR CLIENT, THE PUBLIC AND OURSELVES, ALL REPORTS AND DRAWINGS ARE SUBMITTED FOR THE CONFIDENTIAL INFORMATION OF OUR CLIENT FOR A SPECIFIC PROJECT AND AUTHORIZATION FOR USE AND/OR PUBLICATION OF DATA,STATEMENTS,CONCLUSIONS OR ABSTRACTS FROM OR REGARDING OUR REPORTS AND DRAWINGS IS RESERVED PENDING OUR WRITTEN APPROVAL.
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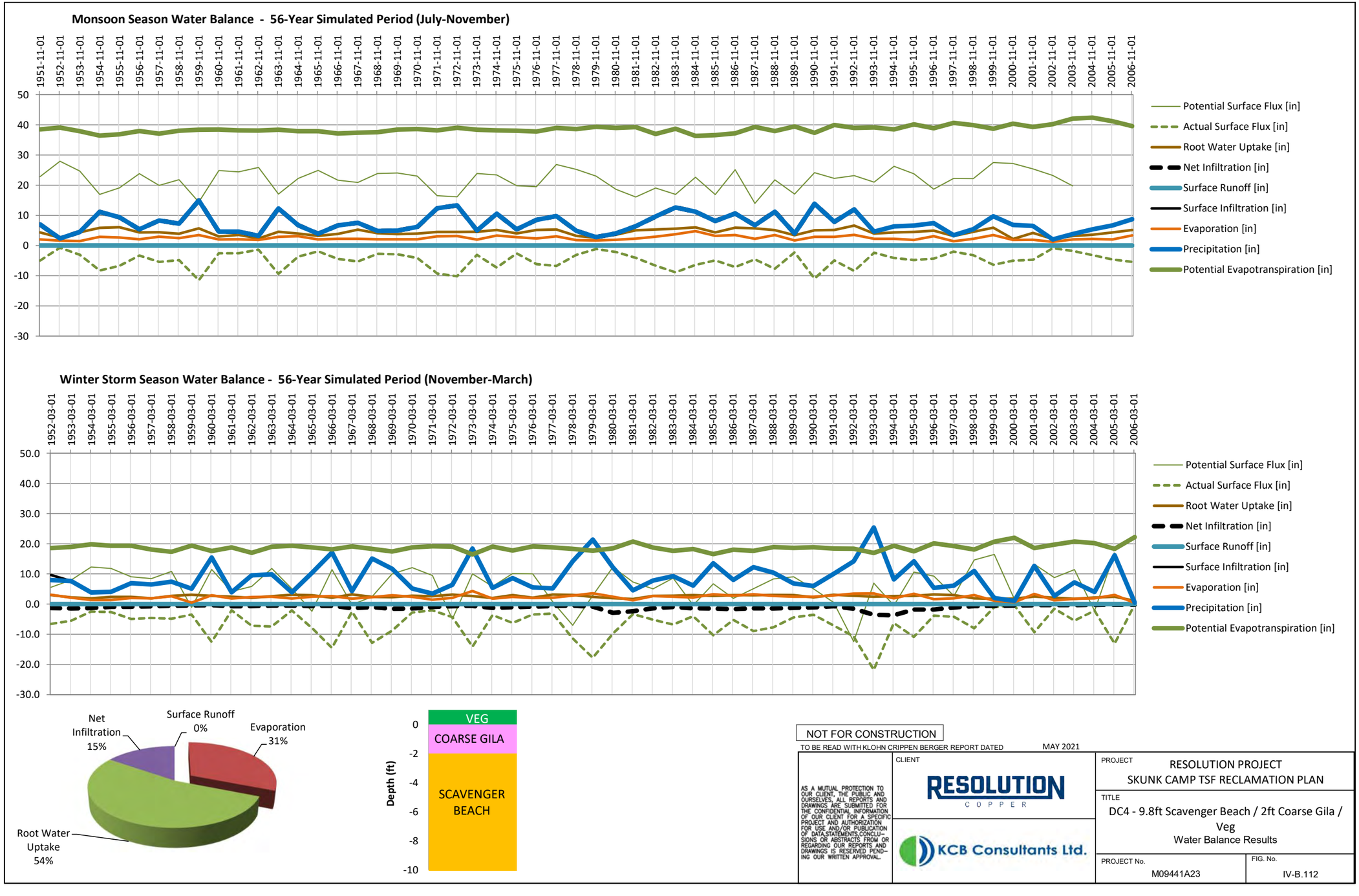
PROJECT
RESOLUTION PROJECT
SKUNK CAMP TSF RECLAMATION PLAN
TITLE
DC4 - 9.8ft Scavenger Beach / 2ft Coarse Gila / Veg Water Balance Results
PROJECT No.
M09441A23
FIG. No.
IV-B.111


Monsoon Season Water Balance - 56-Year Simulated Period (July-November)
Winter Storm Season Water Balance - 56-Year Simulated Period (November-March)
Potential Surface Flux [in]
Actual Surface Flux [in]
Root Water Uptake [in]
Net Infiltration [in]
Surface Runoff [in]
Surface Infiltration [in]
Evaporation [in]
Precipitation [in]
Potential Evapotranspiration [in]
Net Infiltration 15%
Surface Runoff 0%
Evaporation 31%
Root Water Uptake 54%
VEG
COARSE GILA
SCAVENGER BEACH
Depth (ft)
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PROJECT
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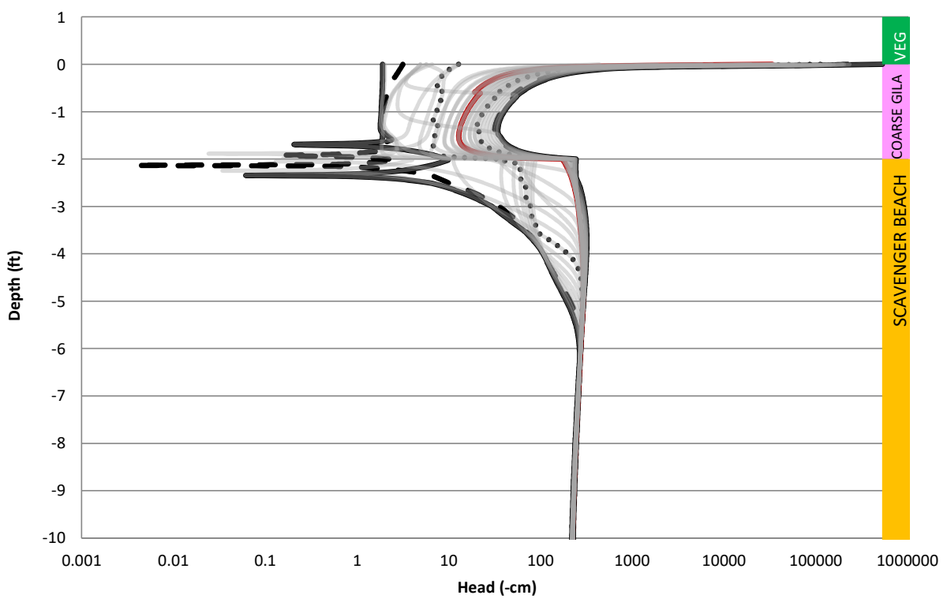
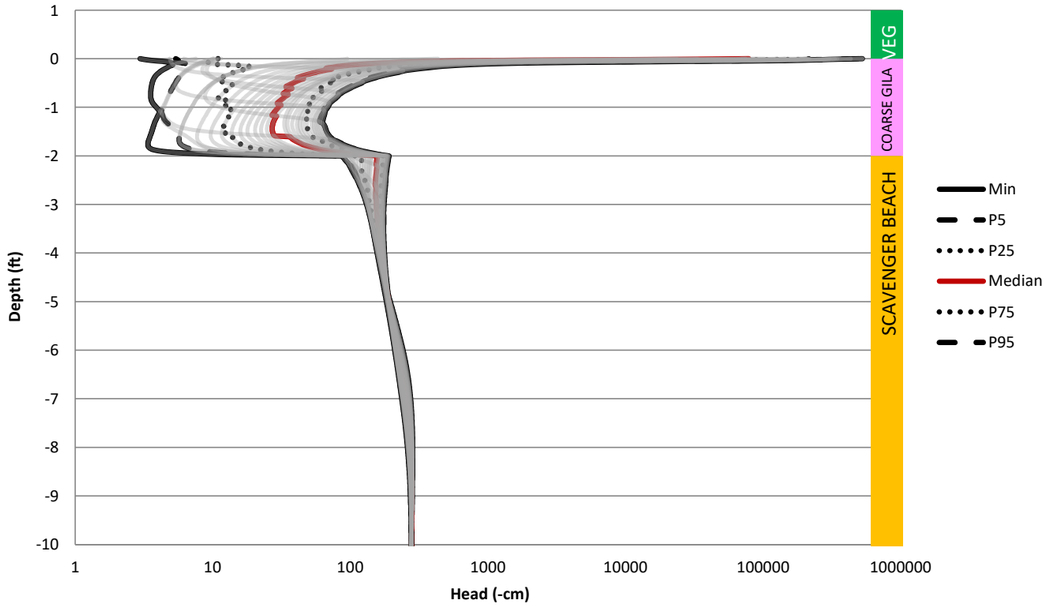
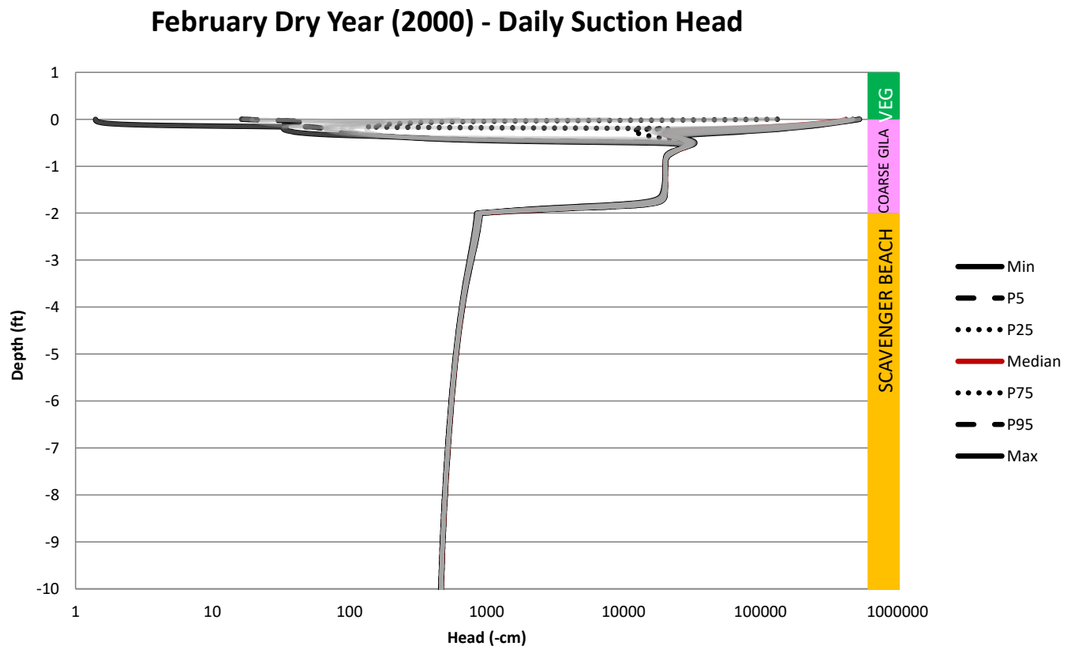
SKUNK CAMP TSF RECLAMATION PLAN
TITLE
DC4 - 9.8ft Scavenger Beach / 2ft Coarse Gila / Veg
Water Balance Results
PROJECT No.
M09441A23
FIG. No.
IV-B.112







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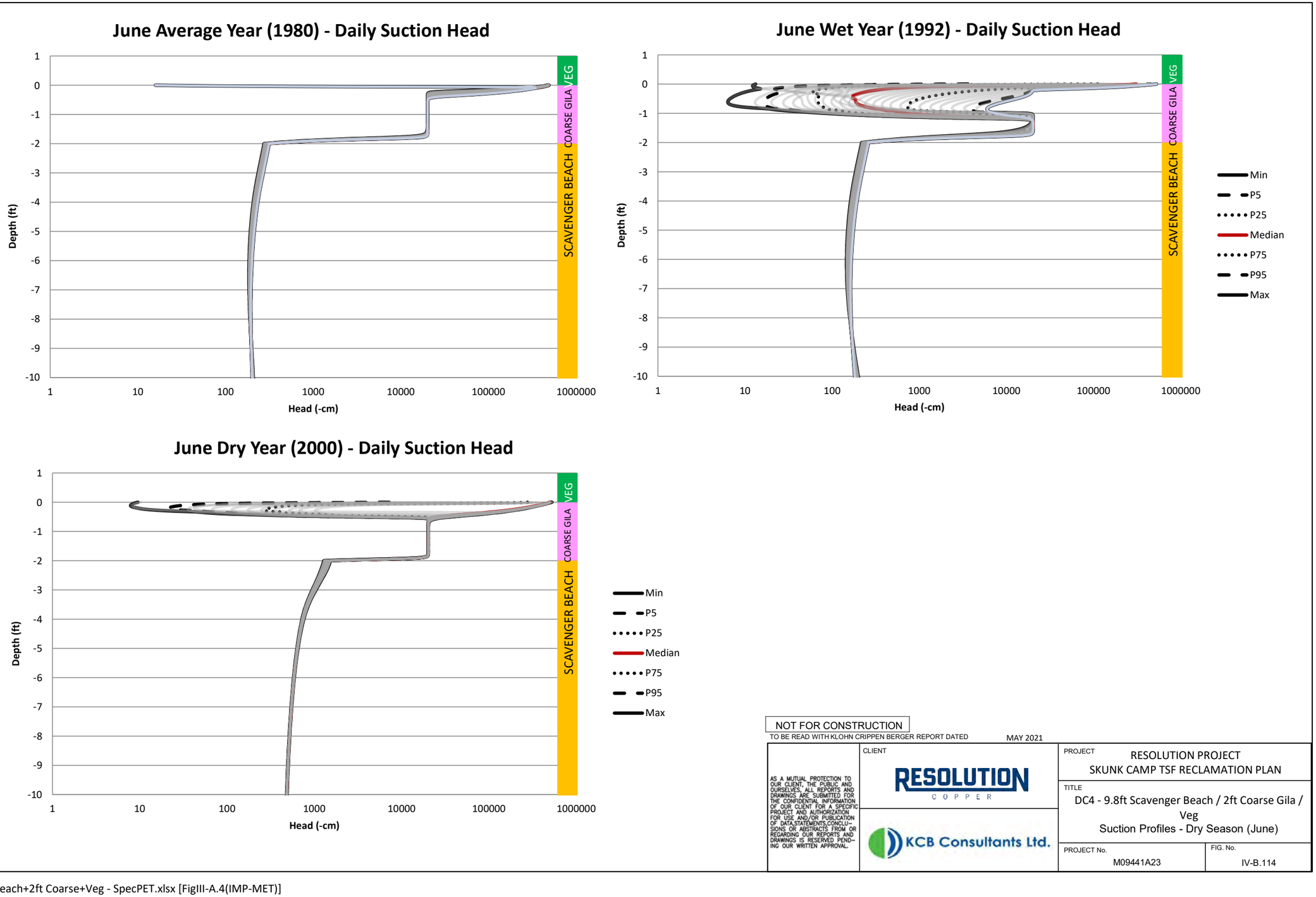
KCB Consultants Ltd.

PROJECT: RESOLUTION PROJECT
SKUNK CAMP TSF RECLAMATION PLAN

TITLE: DC4 - 9.8ft Scavenger Beach / 2ft Coarse Gila / Veg
Suction Profiles - Winter (February)

PROJECT No. M09441A23

FIG. No. IV-B.113



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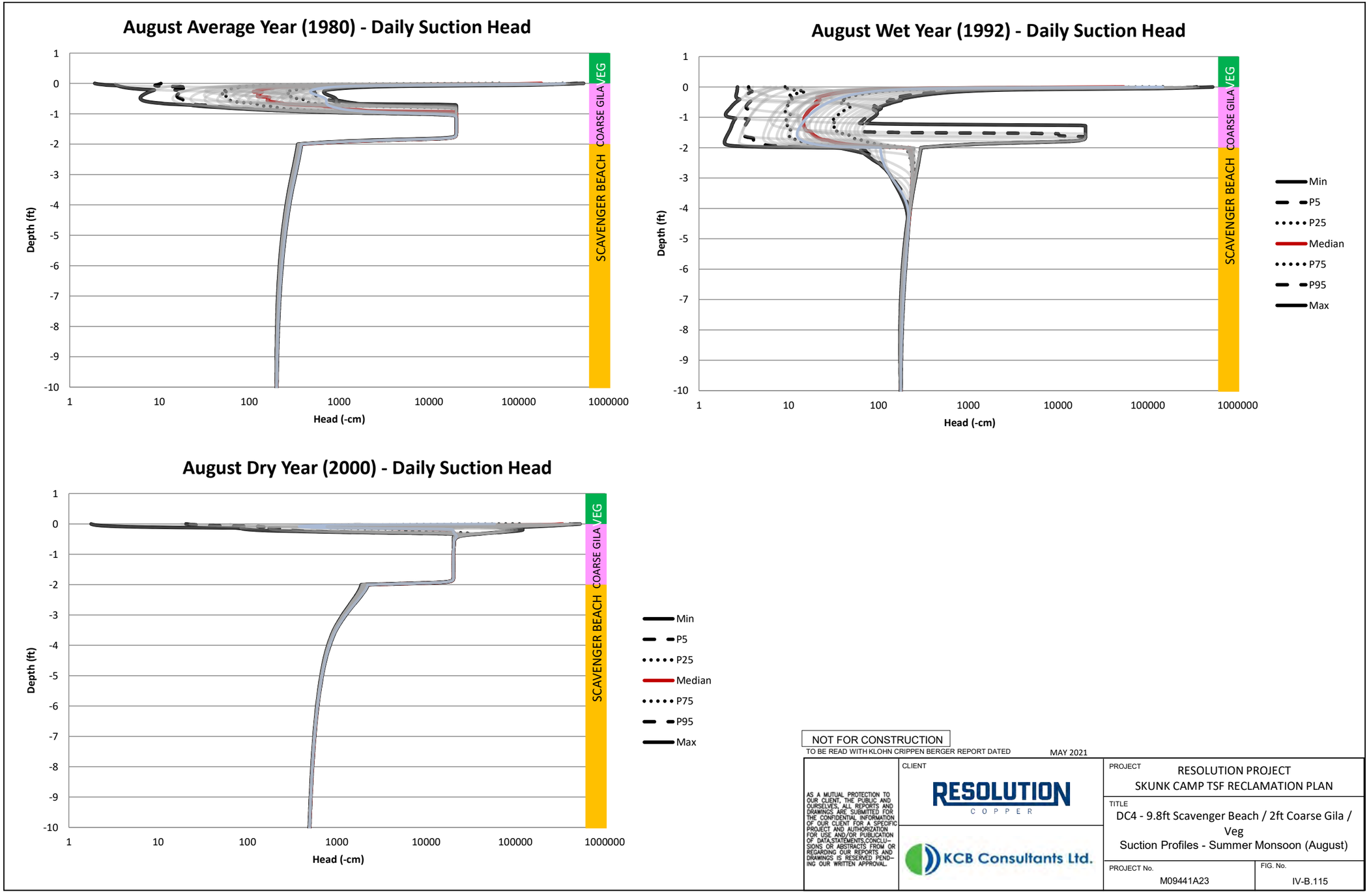
PROJECT: RESOLUTION PROJECT
SKUNK CAMP TSF RECLAMATION PLAN

TITLE: DC4 - 9.8ft Scavenger Beach / 2ft Coarse Gila / Veg
Suction Profiles - Dry Season (June)

PROJECT No. M09441A23

FIG. No. IV-B.114



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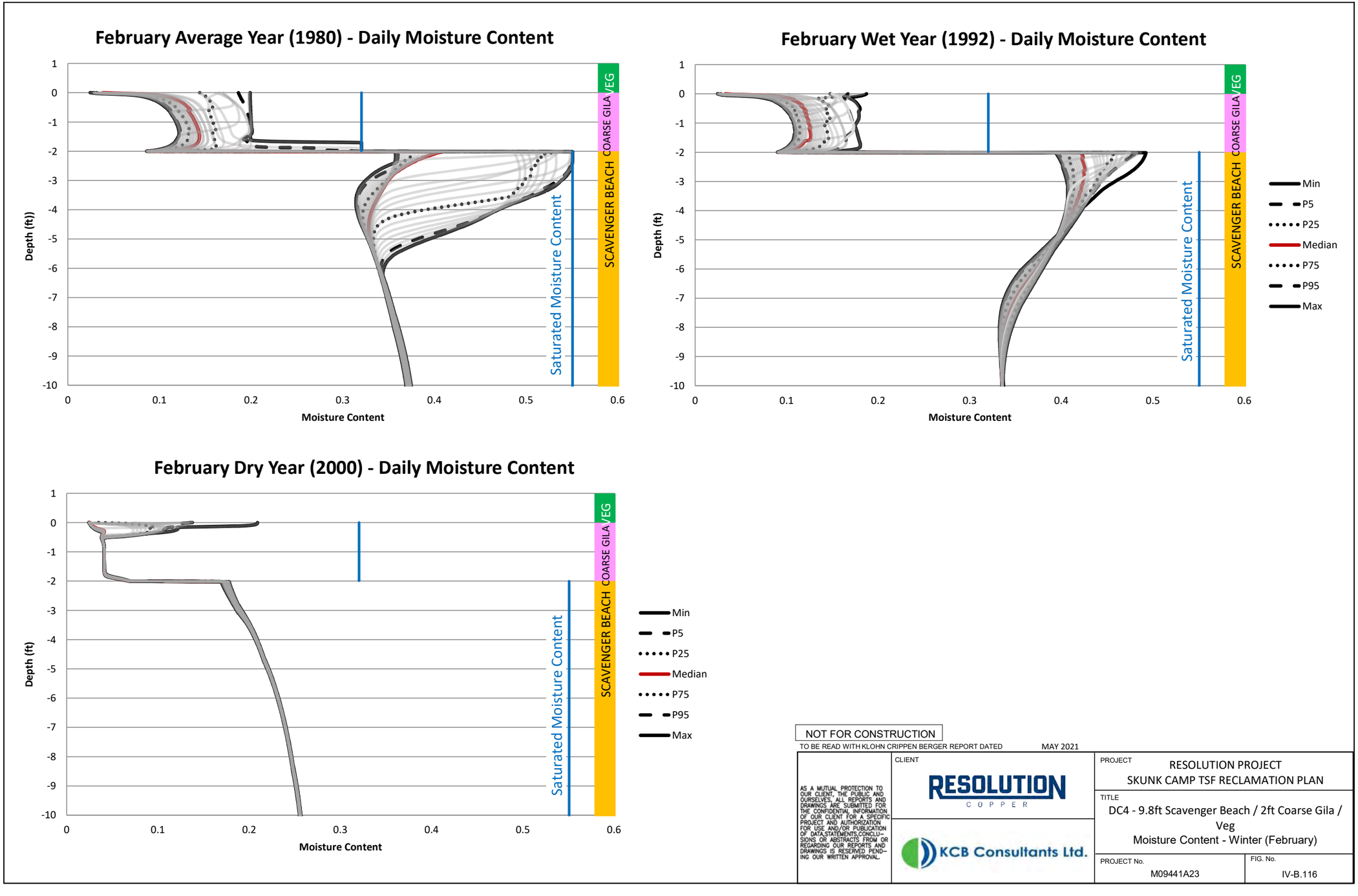
PROJECT: RESOLUTION PROJECT
SKUNK CAMP TSF RECLAMATION PLAN

TITLE: DC4 - 9.8ft Scavenger Beach / 2ft Coarse Gila / Veg
Suction Profiles - Summer Monsoon (August)

PROJECT No. M09441A23

FIG. No. IV-B.115



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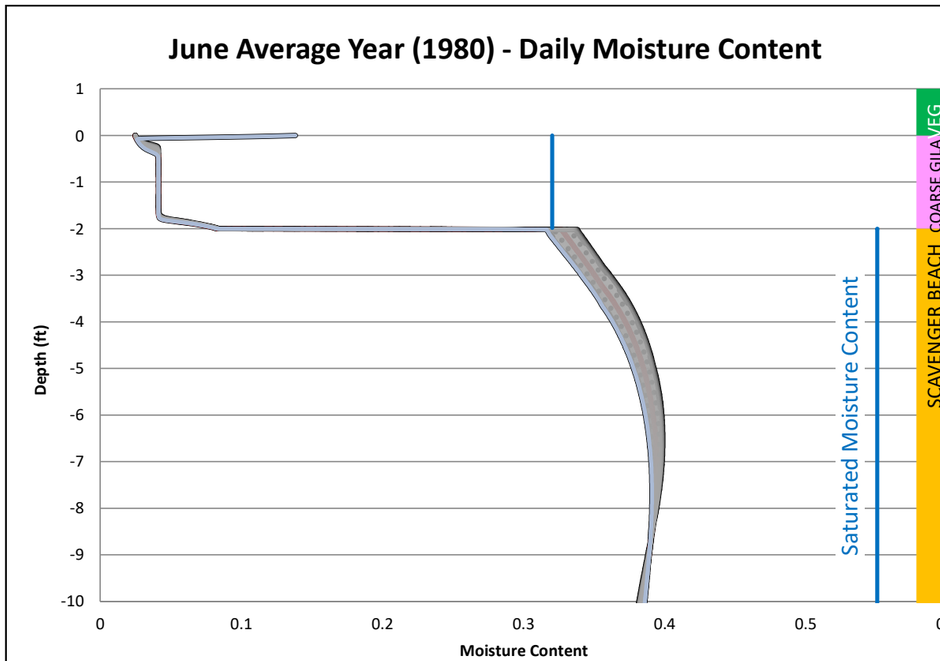
KCB Consultants Ltd.

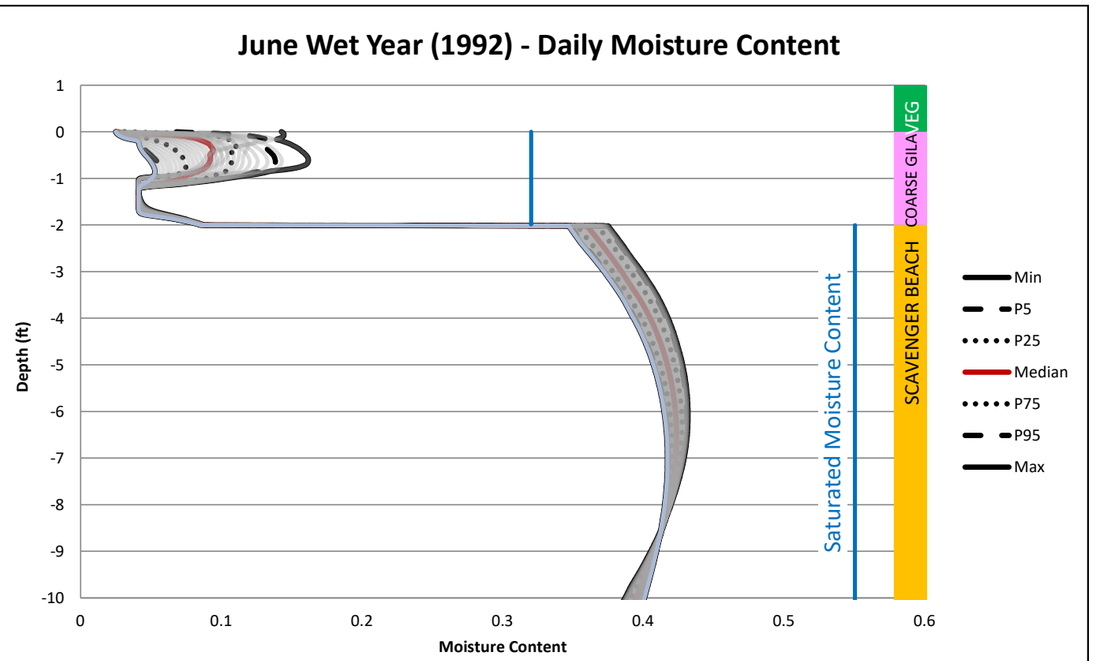
PROJECT: RESOLUTION PROJECT
SKUNK CAMP TSF RECLAMATION PLAN

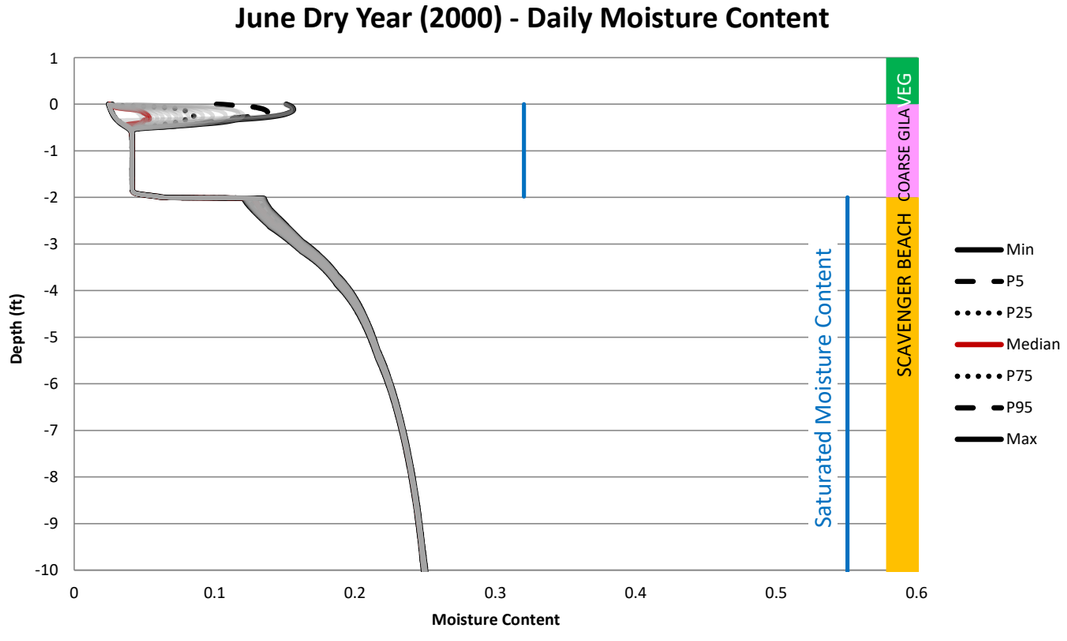
TITLE: DC4 - 9.8ft Scavenger Beach / 2ft Coarse Gila / Veg
Moisture Content - Winter (February)

PROJECT No. M09441A23

FIG. No. IV-B.116







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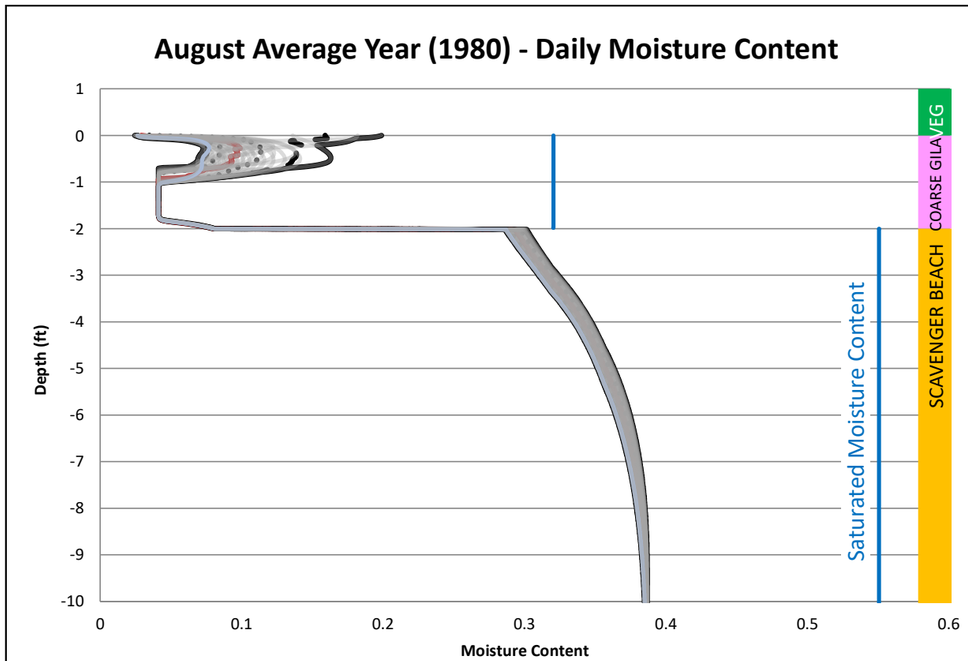
KCB Consultants Ltd.

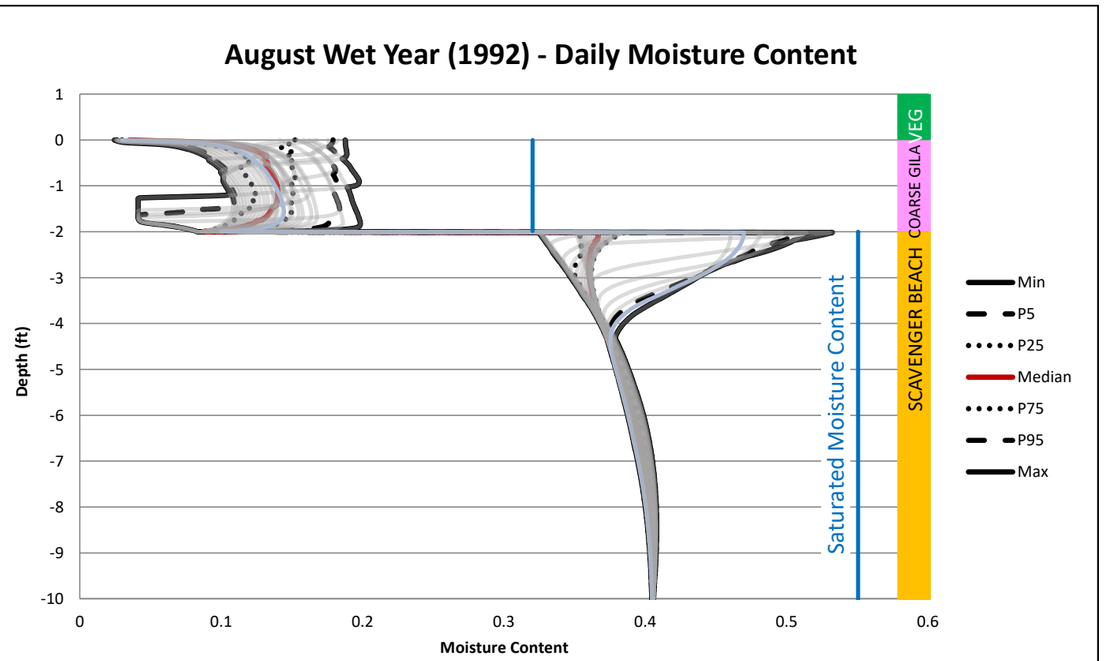
PROJECT: RESOLUTION PROJECT
SKUNK CAMP TSF RECLAMATION PLAN

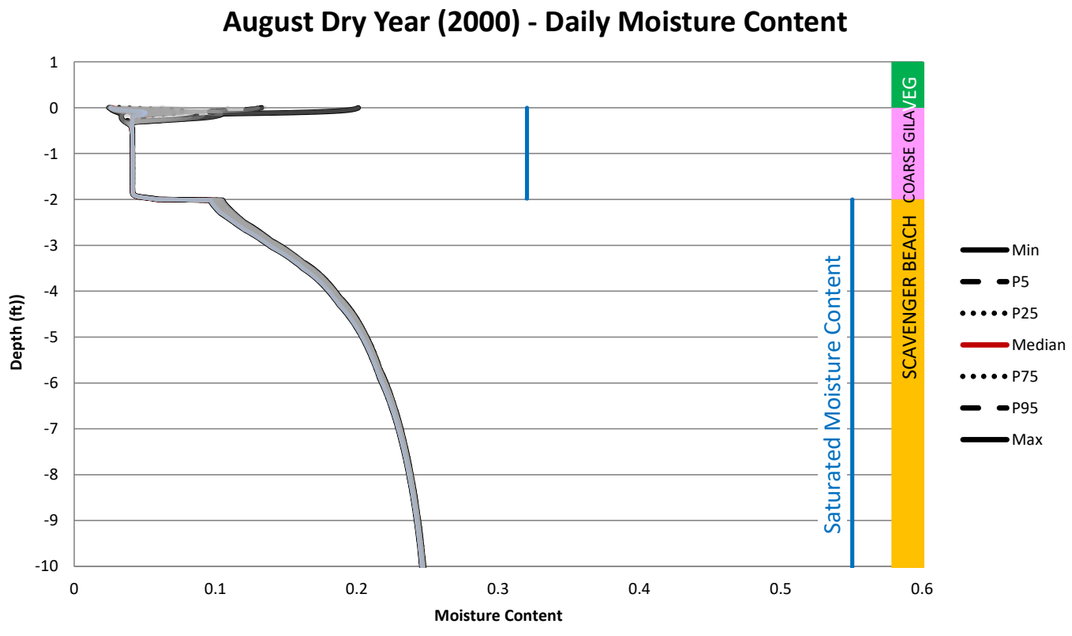
TITLE: DC4 - 9.8ft Scavenger Beach / 2ft Coarse Gila / Veg
Moisture Content - Dry Season(June)

PROJECT No. M09441A23

FIG. No. IV-B.117







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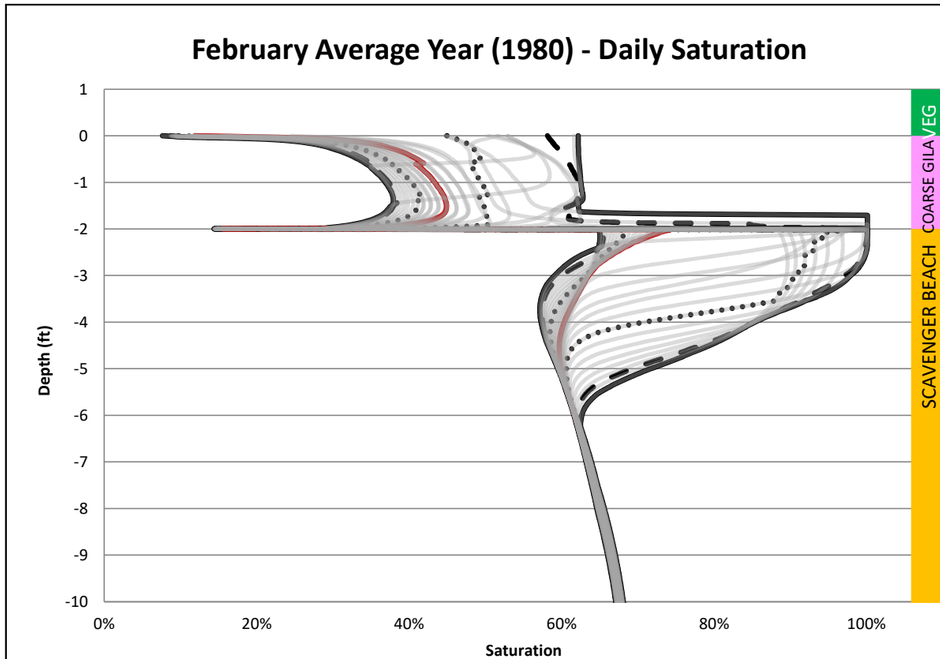
KCB Consultants Ltd.

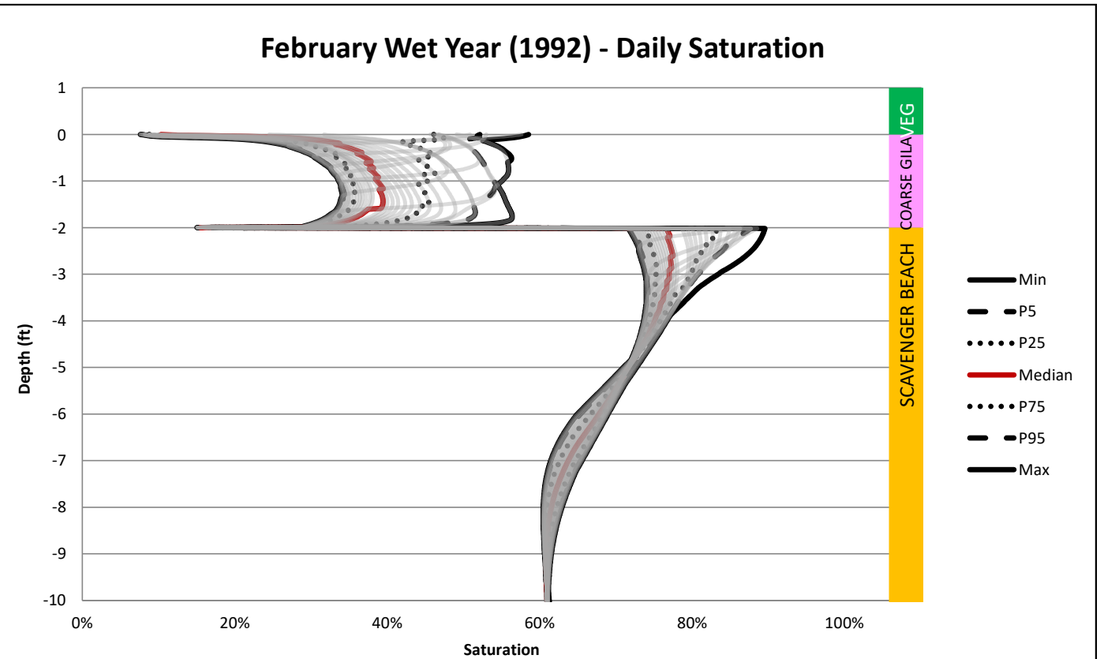
PROJECT: RESOLUTION PROJECT
SKUNK CAMP TSF RECLAMATION PLAN

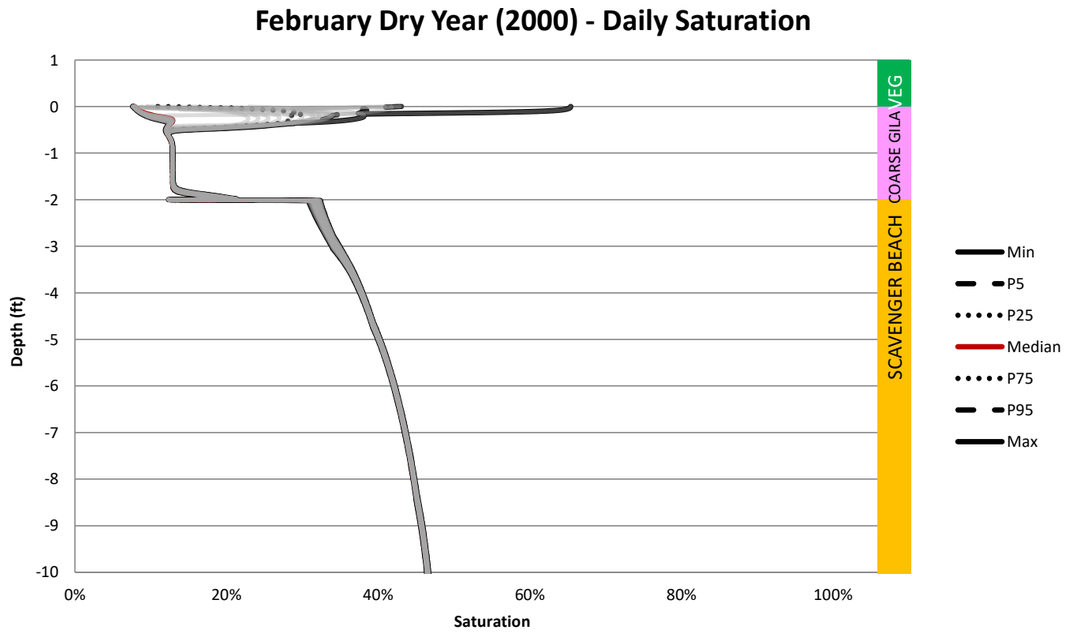
TITLE: DC4 - 9.8ft Scavenger Beach / 2ft Coarse Gila / Veg
Moisture Content - Summer Monsoon (August)

PROJECT No. M09441A23

FIG. No. IV-B.118







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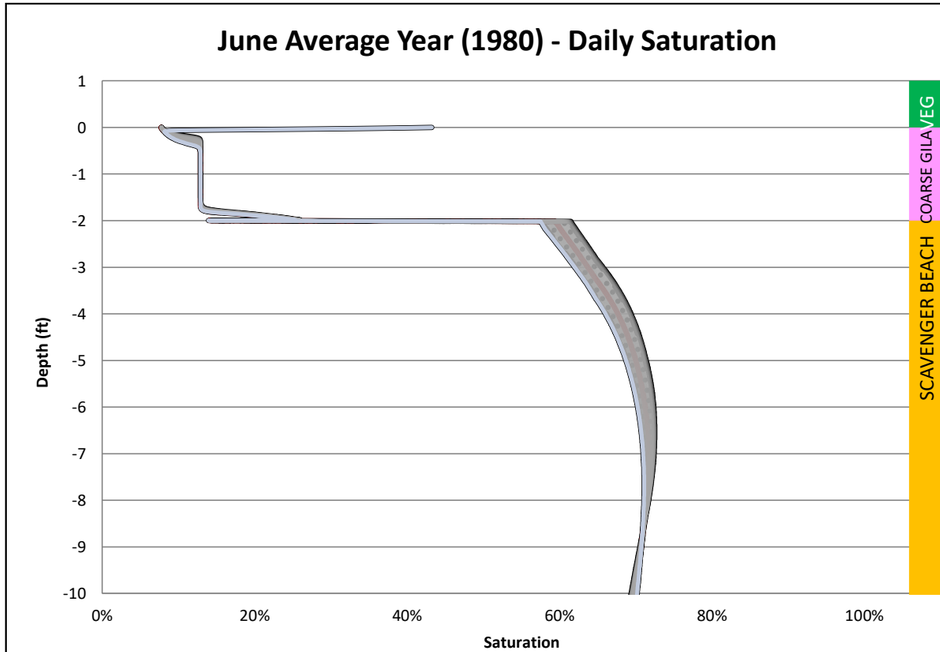
KCB Consultants Ltd.

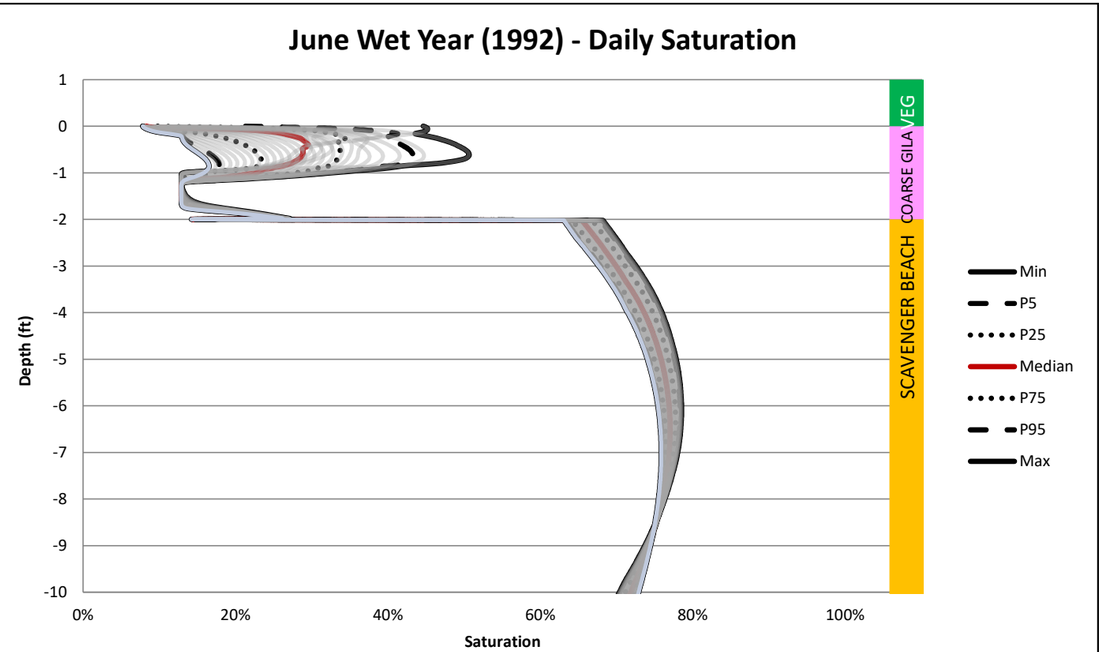
PROJECT: RESOLUTION PROJECT
SKUNK CAMP TSF RECLAMATION PLAN

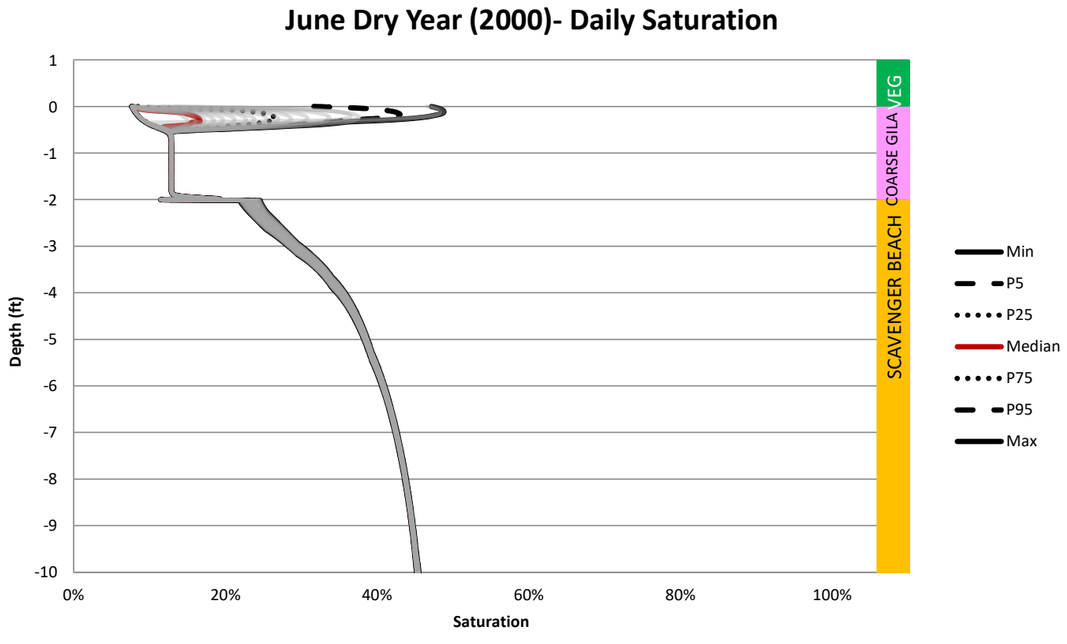
TITLE: DC4 - 9.8ft Scavenger Beach / 2ft Coarse Gila / Veg
Saturation - Winter (February)

PROJECT No. M09441A23

FIG. No. IV-B.119







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CLIENT: RESOLUTION COPPER

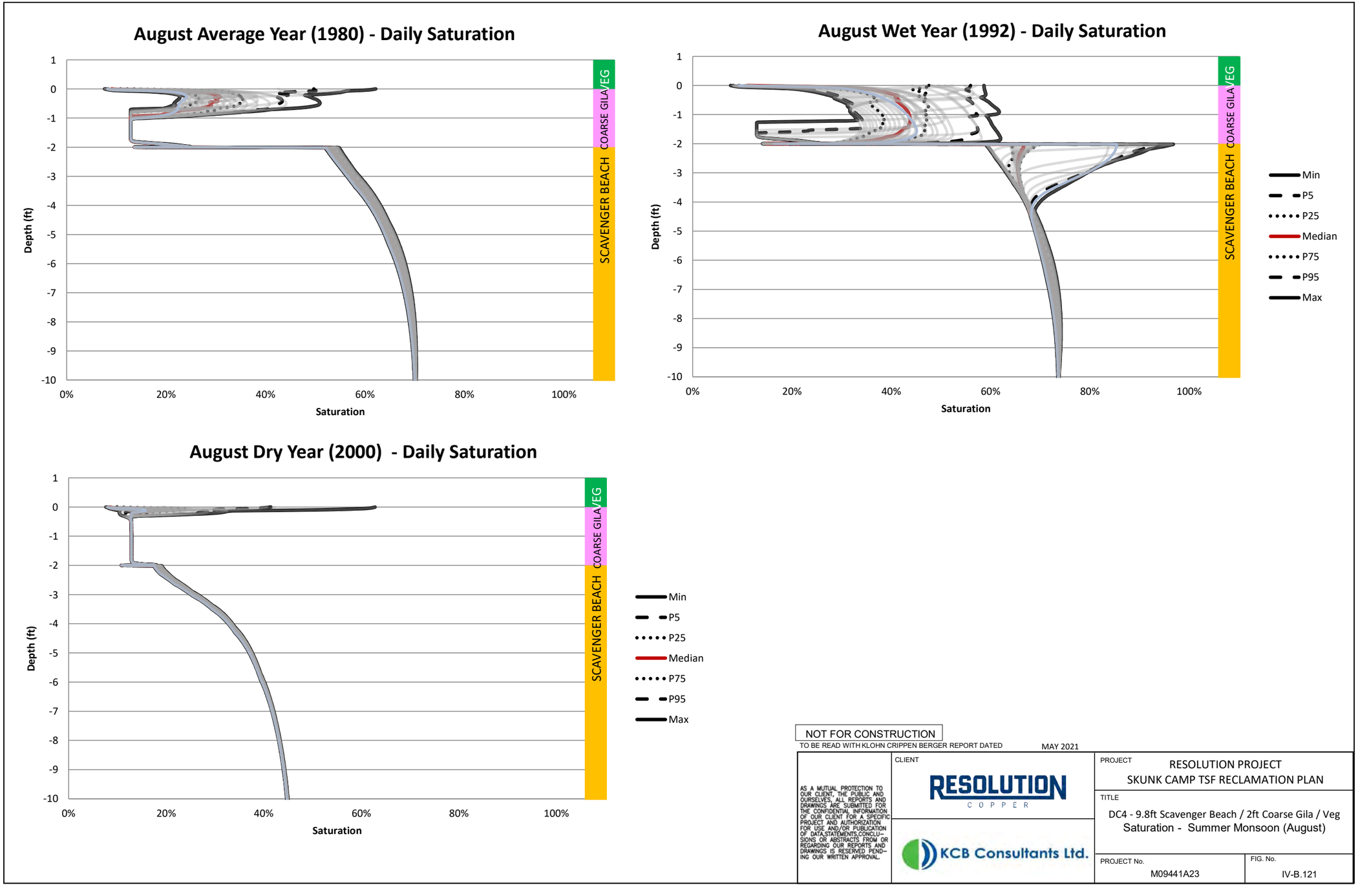
KCB Consultants Ltd.

PROJECT: RESOLUTION PROJECT
SKUNK CAMP TSF RECLAMATION PLAN

TITLE: DC4 - 9.8ft Scavenger Beach / 2ft Coarse Gila / Veg
Saturation - Dry Season (June)

PROJECT No. M09441A23

FIG. No. IV-B.120



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KCB Consultants Ltd.

PROJECT: RESOLUTION PROJECT
SKUNK CAMP TSF RECLAMATION PLAN

TITLE: DC4 - 9.8ft Scavenger Beach / 2ft Coarse Gila / Veg
Saturation - Summer Monsoon (August)

PROJECT No. M09441A23

FIG. No. IV-B.121

Table IV-B.45 SC5 Annual Water Balance

Water Year	Result Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
		(in)	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
1951	1951-10-01	14	14	2.6	0	-1.7	0	14	17	36
1952	1952-10-01	0	11	-0.84	0	-2.2	0	20	20	41
1953	1953-10-01	15	16	0.46	0	-2.0	0	15	16	41
1954	1954-10-01	21	11	-0.94	0	-1.5	0	21	20	41
1955	1955-10-01	13	17	2.1	0	-1.1	0	13	16	39
1956	1956-10-01	13	20	1.5	0	-0.81	0	13	14	42
1957	1957-10-01	15	15	0.23	0	-0.65	0	15	15	39
1958	1958-10-01	19	12	-1.9	0	-0.51	0	19	17	40
1959	1959-10-01	16	17	1.1	0	-0.46	0	16	17	42
1960	1960-10-01	19	14	-3.2	0	-0.43	0	19	16	42
1961	1961-10-01	9.8	22	2.1	0	-0.59	0	9.8	12	40
1962	1962-10-01	14	17	-1.2	0	-0.58	0	14	13	40
1963	1963-10-01	24	8.2	-5.7	0	-0.50	0	24	18	41
1964	1964-10-01	11	19	4.8	0	-0.49	0	11	16	39
1965	1965-10-01	18	13	-0.92	0	-0.50	0	18	17	39
1966	1966-10-01	23	9.0	-6.4	0	-0.54	0	23	16	41
1967	1967-10-01	14	16	2.9	0	-0.97	0	14	17	39
1968	1968-10-01	22	8.3	-4.6	0	-0.90	0	22	18	39
1969	1969-10-01	19	13	-1.1	0	-1.2	0	19	17	40
1970	1970-10-01	16	16	0.65	0	-1.3	0	16	16	40
1971	1971-10-01	12	19	-0.21	0	-0.98	0	12	12	40
1972	1972-10-01	11	22	2.7	0	-0.74	0	11	14	43
1973	1973-10-01	31	-1.1	-8.9	0	-0.68	0	31	22	38
1974	1974-10-01	15	15	1.1	0	-1.4	0	15	16	39
1975	1975-10-01	19	10	0.20	0	-1.2	0	19	19	37
1976	1976-10-01	16	15	-0.64	0	-1.0	0	16	15	40
1977	1977-10-01	16	15	1.3	0	-0.80	0	16	17	40
1978	1978-10-01	24	7.6	-4.2	0	-0.65	0	24	20	40
1979	1979-10-01	30	2.1	-9.6	0	-1.6	0	30	20	41
1980	1980-10-01	20	11	-0.83	0	-3.4	0	20	19	40
1981	1981-10-01	15	18	2.0	0	-2.5	0	15	17	43
1982	1982-10-01	23	6.5	-1.8	0	-1.5	0	23	21	38
1983	1983-10-01	27	2.5	-5.4	0	-1.1	0	27	22	38
1984	1984-10-01	18	13	3.2	0	-1.3	0	18	21	39
1985	1985-10-01	22	5.5	-3.7	0	-1.3	0	22	19	36
1986	1986-10-01	21	9.3	0.53	0	-1.4	0	21	22	39
1987	1987-10-01	20	9.8	-0.45	0	-1.2	0	20	19	38
1988	1988-10-01	23	8.0	-2.1	0	-1.2	0	23	21	39
1989	1989-10-01	12	22	2.9	0	-1.1	0	12	14	43
1990	1990-10-01	23	7.8	-5.1	0	-0.93	0	23	18	39
1991	1991-10-01	23	7.7	-0.063	0	-0.76	0	23	23	39
1992	1992-10-01	36	-5.4	-9.6	0	-1.3	0	36	27	40
1993	1993-10-01	33	-2.0	-10	0	-7.0	0	33	22	39
1994	1994-10-01	15	17	2.8	0	-5.4	0	15	18	41
1995	1995-10-01	25	5.7	-4.6	0	-2.6	0	25	20	39
1996	1996-10-01	13	20	4.0	0	-2.2	0	13	17	42
1997	1997-10-01	10	23	2.5	0	-1.4	0	10	13	42
1998	1998-10-01	20	9.7	-2.4	0	-0.91	0	20	18	39
1999	1999-10-01	15	16	1.1	0	-0.79	0	15	16	40
2000	2000-10-01	5.4	30	2.8	0	-0.67	0	5.4	8.2	45
2001	2001-10-01	23	8.6	-4.1	0	-0.51	0	23	19	41
2002	2002-10-01	5.4	29	2.9	0	-0.48	0	5.4	8.2	44
2003	2003-10-01	13	20	-0.071	0	-0.46	0	13	13	43
2004	2004-10-01	12	21	0.43	0	-0.40	0	12	13	44

Table IV-B.45 SC5 Annual Water Balance

Water Year	Result Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
		(in)	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
2005	2005-10-01	24	7.0	-5.5	0	-0.33	0	24	18	39
2006	2006-10-01	12	20	1.5	0	-0.42	0	12	14	41

Table IV-B.46 SC5 Monthly Water Balance 9 Wet Years (1983 to 1991)

Month	Result Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
		[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
Nov-82	1982-11-30	0	0.83	-0.28	0	-0.20	0	2.5	2.2	4.9
Dec-82	1982-12-30	2.5	-1.7	-1.7	0	-0.099	0	2.5	0.79	0.97
Jan-83	1983-01-29	0.67	0.28	0.26	0	-0.097	0	0.67	0.91	1.0
Feb-83	1983-02-28	3.5	-2.5	-2.5	0	-0.096	0	3.5	1.1	1.0
Mar-83	1983-03-30	5.4	-4.1	-4.1	0	-0.094	0	5.4	1.3	1.7
Apr-83	1983-04-29	0.83	1.4	1.4	0	-0.092	0	0.83	2.2	2.5
May-83	1983-05-29	0	3.5	3.0	0	-0.090	0	0	3.0	4.1
Jun-83	1983-06-28	0	4.4	1.4	0	-0.089	0	0	1.4	5.8
Jul-83	1983-07-28	2.1	2.4	-0.14	0	-0.088	0	2.1	2.0	6.0
Aug-83	1983-08-27	3.8	-0.43	-0.47	0	-0.089	0	3.8	3.3	4.3
Sep-83	1983-09-26	1.9	1.8	1.2	0	-0.092	0	1.9	3.1	4.9
Oct-83	1983-10-26	4.9	-2.8	-2.9	0	-0.096	0	4.9	2.0	3.1
Nov-83	1983-11-25	1.6	-0.20	-0.19	0	-0.099	0	1.6	1.4	2.1
Dec-83	1983-12-25	1.9	-1.1	-1.1	0	-0.10	0	1.9	0.79	0.94
Jan-84	1984-01-24	1.5	-0.79	-0.78	0	-0.10	0	1.5	0.75	0.88
Feb-84	1984-02-23	0	1.3	1.3	0	-0.10	0	0	1.3	1.4
Mar-84	1984-03-24	0	2.1	1.9	0	-0.10	0	0	1.9	2.2
Apr-84	1984-04-23	0.87	1.7	0.76	0	-0.11	0	0.87	1.7	3.2
May-84	1984-05-23	0.67	2.9	0.75	0	-0.11	0	0.67	1.4	4.3
Jun-84	1984-06-22	0.039	4.4	0.65	0	-0.11	0	0.039	0.67	5.8
Jul-84	1984-07-22	3.6	0.16	-1.1	0	-0.11	0	3.6	2.5	5.4
Aug-84	1984-08-21	3.9	-0.59	-0.77	0	-0.11	0	3.9	3.1	4.2
Sep-84	1984-09-20	1.1	2.6	1.7	0	-0.11	0	1.1	2.8	4.5
Oct-84	1984-10-20	2.5	-0.28	-0.48	0	-0.11	0	2.5	2.0	3.6
Nov-84	1984-11-19	0	1.6	1.2	0	-0.11	0	0	1.2	2.0
Dec-84	1984-12-19	4.8	-4.1	-4.1	0	-0.11	0	4.8	0.71	1.2
Jan-85	1985-01-18	3.9	-3.3	-3.3	0	-0.11	0	3.9	0.59	0.67
Feb-85	1985-02-17	2.9	-2.2	-2.2	0	-0.11	0	2.9	0.67	0.63
Mar-85	1985-03-19	1.7	-0.47	-0.48	0	-0.10	0	1.7	1.2	1.5
Apr-85	1985-04-18	0.47	2.0	2.0	0	-0.10	0	0.47	2.4	2.5
May-85	1985-05-18	0.43	2.4	2.1	0	-0.100	0	0.43	2.6	3.7
Jun-85	1985-06-17	0	3.8	1.3	0	-0.100	0	0	1.3	4.5
Jul-85	1985-07-17	0.24	4.0	0.63	0	-0.10	0	0.24	0.83	5.4
Aug-85	1985-08-16	2.1	1.5	0.18	0	-0.11	0	2.1	2.3	4.7
Sep-85	1985-09-15	2.2	1.4	0.019	0	-0.11	0	2.2	2.2	5.2
Oct-85	1985-10-15	3.1	-0.83	-0.86	0	-0.11	0	3.1	2.3	3.5
Nov-85	1985-11-14	1.4	0.12	0.15	0	-0.11	0	1.4	1.6	2.0
Dec-85	1985-12-14	2.7	-1.9	-1.9	0	-0.12	0	2.7	0.87	1.2
Jan-86	1986-01-13	0	1.1	1.0	0	-0.12	0	0	1.1	1.2
Feb-86	1986-02-12	2.4	-1.3	-1.3	0	-0.12	0	2.4	1.1	1.5
Mar-86	1986-03-14	1.9	-0.20	-0.18	0	-0.12	0	1.9	1.7	1.7
Apr-86	1986-04-13	3.1	-0.87	-0.85	0	-0.12	0	3.1	2.2	2.7
May-86	1986-05-13	0	3.4	2.6	0	-0.11	0	0	2.6	4.2
Jun-86	1986-06-12	0.039	4.3	1.1	0	-0.11	0	0.039	1.1	5.2
Jul-86	1986-07-12	2.2	2.3	-0.56	0	-0.11	0	2.2	1.6	6.1
Aug-86	1986-08-11	2.8	0.59	0.039	0	-0.11	0	2.8	2.9	4.1
Sep-86	1986-09-10	3.0	0.59	-0.39	0	-0.11	0	3.0	2.6	4.8
Oct-86	1986-10-10	0.91	1.7	1.3	0	-0.11	0	0.91	2.2	3.9
Nov-86	1986-11-09	2.8	-1.1	-1.2	0	-0.11	0	2.8	1.5	2.4
Dec-86	1986-12-09	2.6	-1.5	-1.5	0	-0.11	0	2.6	1.1	1.4
Jan-87	1987-01-08	1.5	-0.75	-0.73	0	-0.11	0	1.5	0.75	0.93
Feb-87	1987-02-07	3.1	-2.2	-2.3	0	-0.10	0	3.1	0.83	0.93
Mar-87	1987-03-09	2.3	-0.94	-0.95	0	-0.11	0	2.3	1.3	1.3
Apr-87	1987-04-08	0.94	0.94	0.95	0	-0.10	0	0.94	1.9	2.3

Table IV-B.46 SC5 Monthly Water Balance 9 Wet Years (1983 to 1991)

Month	Result Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
		[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
May-87	1987-05-08	0.039	2.4	2.3	0	-0.098	0	0.039	2.3	3.0
Jun-87	1987-06-07	0.31	3.5	1.3	0	-0.098	0	0.31	1.6	4.7
Jul-87	1987-07-07	0.20	4.5	0.78	0	-0.098	0	0.20	0.98	5.9
Aug-87	1987-08-06	3.1	1.2	-0.98	0	-0.098	0	3.1	2.1	5.8
Sep-87	1987-09-05	2.4	1.3	0.45	0	-0.098	0	2.4	2.8	4.5
Oct-87	1987-10-05	0.79	2.2	1.0	0	-0.10	0	0.79	1.8	4.2
Nov-87	1987-11-04	1.4	1.0	-0.36	0	-0.098	0	1.4	1.0	3.6
Dec-87	1987-12-04	0.71	0.51	0.50	0	-0.10	0	0.71	1.2	1.7
Jan-88	1988-01-03	4.0	-3.3	-3.3	0	-0.10	0	4.0	0.75	1.0
Feb-88	1988-02-02	3.6	-3.0	-3.0	0	-0.098	0	3.6	0.63	0.65
Mar-88	1988-03-03	0.75	0.71	0.69	0	-0.10	0	0.75	1.4	1.3
Apr-88	1988-04-02	0.12	1.9	2.0	0	-0.098	0	0.12	2.1	2.4
May-88	1988-05-02	2.4	0.24	-0.34	0	-0.098	0	2.4	2.1	3.6
Jun-88	1988-06-01	0	3.9	2.0	0	-0.094	0	0	2.0	4.5
Jul-88	1988-07-01	0.16	4.3	0.84	0	-0.098	0	0.16	0.98	5.6
Aug-88	1988-07-31	2.4	1.6	-0.90	0	-0.094	0	2.4	1.6	5.4
Sep-88	1988-08-30	6.7	-3.3	-3.3	0	-0.094	0	6.7	3.4	4.5
Oct-88	1988-10-29	2.0	3.8	3.0	0	-0.19	0	2.0	5.0	7.9
Nov-88	1988-11-28	1.7	-0.31	-0.47	0	-0.094	0	1.7	1.3	2.2
Dec-88	1988-12-28	1.1	-0.28	-0.31	0	-0.094	0	1.1	0.83	1.1
Jan-89	1989-01-27	2.0	-1.3	-1.2	0	-0.094	0	2.0	0.71	0.66
Feb-89	1989-02-26	0.55	0.67	0.68	0	-0.094	0	0.55	1.2	1.1
Mar-89	1989-03-28	1.7	0.75	0.15	0	-0.094	0	1.7	1.9	2.8
Apr-89	1989-04-27	0	3.5	2.0	0	-0.091	0	0	2.0	4.2
May-89	1989-05-27	0.16	3.7	0.75	0	-0.094	0	0.16	0.91	5.0
Jun-89	1989-06-26	0	4.6	0.52	0	-0.087	0	0	0.51	5.7
Jul-89	1989-07-26	0.079	4.5	0.40	0	-0.091	0	0.079	0.47	6.1
Aug-89	1989-08-25	1.3	2.2	0.096	0	-0.087	0	1.3	1.5	4.9
Sep-89	1989-09-24	1.5	2.2	-0.00079	0	-0.087	0	1.5	1.5	4.7
Oct-89	1989-10-24	1.1	1.6	0.15	0	-0.087	0	1.1	1.2	4.0
Nov-89	1989-11-23	0.28	1.3	0.31	0	-0.087	0	0.28	0.63	2.2
Dec-89	1989-12-23	0	0.94	0.57	0	-0.083	0	0	0.55	1.3
Jan-90	1990-01-22	2.2	-1.4	-1.5	0	-0.079	0	2.2	0.63	0.94
Feb-90	1990-02-21	2.5	-1.7	-1.7	0	-0.079	0	2.5	0.79	0.83
Mar-90	1990-03-23	0.83	0.98	0.97	0	-0.079	0	0.83	1.8	1.8
Apr-90	1990-04-22	1.0	1.9	1.1	0	-0.075	0	1.0	2.1	3.2
May-90	1990-05-22	1.1	2.2	0.52	0	-0.071	0	1.1	1.6	4.5
Jun-90	1990-06-21	0.39	4.1	0.53	0	-0.071	0	0.39	0.94	5.4
Jul-90	1990-07-21	0.94	3.3	0.20	0	-0.071	0	0.94	1.1	5.7
Aug-90	1990-08-20	9.6	-6.4	-7.8	0	-0.071	0	9.6	1.8	4.6
Sep-90	1990-09-19	2.5	1.1	1.1	0	-0.067	0	2.5	3.6	4.3
Oct-90	1990-10-19	0.43	2.2	2.2	0	-0.067	0	0.43	2.6	3.8
Nov-90	1990-11-18	1.5	0.12	0.15	0	-0.063	0	1.5	1.7	2.4
Dec-90	1990-12-18	2.8	-1.7	-1.8	0	-0.063	0	2.8	0.98	1.4
Jan-91	1991-01-17	4.7	-4.1	-4.1	0	-0.063	0	4.7	0.63	0.79
Feb-91	1991-02-16	0.16	0.94	0.94	0	-0.063	0	0.16	1.1	1.0
Mar-91	1991-03-18	3.6	-2.2	-2.2	0	-0.059	0	3.6	1.4	1.8
Apr-91	1991-04-17	3.2	-1.1	-1.1	0	-0.059	0	3.2	2.1	2.2
May-91	1991-05-17	0	3.1	3.1	0	-0.059	0	0	3.1	3.9
Jun-91	1991-06-16	0.71	3.5	1.6	0	-0.059	0	0.71	2.2	5.1
Jul-91	1991-07-16	0.47	4.0	0.99	0	-0.063	0	0.47	1.5	5.8
Aug-91	1991-08-15	3.3	0.43	-1.0	0	-0.063	0	3.3	2.3	5.1
Sep-91	1991-09-14	2.0	1.6	1.0	0	-0.067	0	2.0	3.0	4.9
Oct-91	1991-10-01	0.24	1.5	0.84	0	-0.043	0	0.24	1.1	2.3

Table IV-B.47 SC5 Monsoon Period Water Balance

Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
1951-07-01	0	4.4	1.2	0	-0.19	0	0	1.2	5.7
1951-08-01	1.1	3.9	0.59	0	-0.20	0	1.1	1.6	6.3
1951-09-01	3.6	0.34	-2.0	0	-0.21	0	3.6	1.6	5.1
1951-10-01	0.65	3.0	1.9	0	-0.20	0	0.65	2.6	4.7
1951-11-01	1.6	0.88	-0.26	0	-0.21	0	1.6	1.4	3.1
1951	7.0	13	1.4	0	-1.0	0	7.0	8.4	25
1952-07-01	0.63	3.9	1.5	0	-0.16	0	0.63	2.2	5.8
1952-08-01	0.56	3.8	0.92	0	-0.17	0	0.56	1.5	5.6
1952-09-01	0.45	3.8	0.79	0	-0.17	0	0.45	1.2	5.4
1952-10-01	0.70	3.1	0.46	0	-0.17	0	0.70	1.2	4.9
1952-11-01	0	3.0	0.63	0	-0.18	0	0	0.63	3.8
1952	2.3	18	4.3	0	-0.86	0	2.3	6.7	25
1953-07-01	0	4.7	0.71	0	-0.15	0	0	0.71	5.9
1953-08-01	2.7	1.6	-1.1	0	-0.16	0	2.7	1.6	5.6
1953-09-01	1.8	2.2	0.52	0	-0.15	0	1.8	2.3	5.0
1953-10-01	0	3.8	1.4	0	-0.15	0	0	1.4	5.0
1953-11-01	0.012	2.7	0.58	0	-0.15	0	0.012	0.59	3.4
1953	4.5	15	2.1	0	-0.76	0	4.5	6.6	25
1954-07-01	0.13	4.2	0.67	0	-0.11	0	0.13	0.80	5.5
1954-08-01	4.5	-0.64	-1.7	0	-0.12	0	4.5	2.8	4.9
1954-09-01	5.3	-1.9	-1.9	0	-0.11	0	5.3	3.3	4.3
1954-10-01	1.3	2.2	1.7	0	-0.11	0	1.3	3.0	4.5
1954-11-01	0	2.8	1.4	0	-0.11	0	0	1.4	3.5
1954	11	6.6	0.18	0	-0.55	0	11	11	23
1955-07-01	2.1	2.2	-0.44	0	-0.083	0	2.1	1.6	5.5
1955-08-01	4.5	-0.70	-2.7	0	-0.083	0	4.5	1.8	4.8
1955-09-01	2.7	0.57	0.57	0	-0.080	0	2.7	3.3	4.3
1955-10-01	0.13	3.5	1.7	0	-0.076	0	0.13	1.9	4.7
1955-11-01	0.020	2.8	0.68	0	-0.076	0	0.020	0.70	3.6
1955	9.4	8.5	-0.15	0	-0.40	0	9.4	9.2	23
1956-07-01	0.24	4.6	0.31	0	-0.063	0	0.24	0.55	6.2
1956-08-01	2.8	1.3	-0.92	0	-0.064	0	2.8	1.8	5.2
1956-09-01	1.7	1.8	0.63	0	-0.063	0	1.7	2.4	4.5
1956-10-01	0.075	3.7	0.64	0	-0.060	0	0.075	0.71	4.9
1956-11-01	0.53	1.8	0.079	0	-0.061	0	0.53	0.61	3.1
1956	5.4	13	0.73	0	-0.31	0	5.4	6.1	24
1957-07-01	0.031	4.6	0.68	0	-0.051	0	0.031	0.71	5.9
1957-08-01	1.1	3.0	0.10	0	-0.052	0	1.1	1.2	5.3
1957-09-01	3.4	0.26	-0.93	0	-0.050	0	3.4	2.5	4.8
1957-10-01	0.57	2.9	1.0	0	-0.048	0	0.57	1.6	4.5
1957-11-01	3.2	-1.3	-2.1	0	-0.048	0	3.2	1.2	2.6
1957	8.3	9.6	-1.2	0	-0.25	0	8.3	7.1	23
1958-07-01	0.70	3.9	0.65	0	-0.040	0	0.70	1.3	5.9
1958-08-01	0.78	3.7	0.37	0	-0.041	0	0.78	1.2	5.9
1958-09-01	0.85	3.2	0.62	0	-0.041	0	0.85	1.5	5.0
1958-10-01	3.0	0.27	-1.1	0	-0.039	0	3.0	1.9	4.4
1958-11-01	1.9	0.44	0.40	0	-0.040	0	1.9	2.3	3.1
1958	7.3	12	0.91	0	-0.20	0	7.3	8.2	24
1959-07-01	1.0	3.7	0	0	-0.037	0	1.0	1.0	6.0
1959-08-01	3.8	1.00	-1.8	0	-0.038	0	3.8	2.0	6.1
1959-09-01	5.3	-2.0	-2.0	0	-0.039	0	5.3	3.3	4.3
1959-10-01	0.051	3.4	2.2	0	-0.037	0	0.051	2.2	4.6
1959-11-01	4.8	-2.4	-3.6	0	-0.038	0	4.8	1.1	3.2
1959	15	3.7	-5.2	0	-0.19	0	15	9.8	24
1960-07-01	0	4.9	0.78	0	-0.034	0	0	0.78	6.2
1960-08-01	0.74	3.8	0.42	0	-0.036	0	0.74	1.2	5.9
1960-09-01	1.5	2.3	0.29	0	-0.038	0	1.5	1.8	4.9

Table IV-B.47 SC5 Monsoon Period Water Balance

Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
1960-10-01	0.27	3.4	0.60	0	-0.038	0	0.27	0.87	4.8
1960-11-01	2.1	0.091	-0.60	0	-0.041	0	2.1	1.5	2.9
1960	4.6	14	1.5	0	-0.19	0	4.6	6.1	25
1961-07-01	0	4.8	0.27	0	-0.053	0	0	0.28	6.1
1961-08-01	0.67	3.7	0.11	0	-0.054	0	0.67	0.78	5.8
1961-09-01	3.0	0.80	-1.3	0	-0.054	0	3.0	1.7	4.9
1961-10-01	0.50	2.6	1.2	0	-0.053	0	0.50	1.7	3.9
1961-11-01	0.45	1.9	0.11	0	-0.054	0	0.45	0.56	3.3
1961	4.6	14	0.38	0	-0.27	0	4.6	5.0	24
1962-07-01	0	4.4	0.65	0	-0.045	0	0	0.65	5.7
1962-08-01	0.61	3.9	0.42	0	-0.046	0	0.61	1.0	5.7
1962-09-01	0.49	3.9	0.37	0	-0.045	0	0.49	0.86	5.6
1962-10-01	1.2	2.1	-0.10	0	-0.043	0	1.2	1.1	4.5
1962-11-01	0.87	1.5	0.25	0	-0.043	0	0.87	1.1	3.0
1962	3.2	16	1.6	0	-0.22	0	3.2	4.8	25
1963-07-01	0	4.2	0.63	0	-0.041	0	0	0.63	5.4
1963-08-01	0.079	4.6	0.46	0	-0.041	0	0.079	0.54	6.1
1963-09-01	10	-7.2	-7.8	0	-0.041	0	10	2.6	4.3
1963-10-01	1.0	2.4	2.4	0	-0.040	0	1.0	3.5	4.4
1963-11-01	0.67	2.0	1.9	0	-0.041	0	0.67	2.5	3.6
1963	12	6.1	-2.5	0	-0.20	0	12	9.8	24
1964-07-01	0	4.3	0.42	0	-0.041	0	0	0.42	5.4
1964-08-01	1.5	2.8	-0.19	0	-0.042	0	1.5	1.3	5.6
1964-09-01	2.2	1.4	0.12	0	-0.042	0	2.2	2.3	4.6
1964-10-01	1.6	1.3	0.13	0	-0.041	0	1.6	1.7	3.8
1964-11-01	1.5	1.2	-0.17	0	-0.043	0	1.5	1.4	3.6
1964	6.8	11	0.32	0	-0.21	0	6.8	7.1	23
1965-07-01	0.10	4.0	0.81	0	-0.041	0	0.10	0.91	5.2
1965-08-01	1.4	2.7	0.16	0	-0.042	0	1.4	1.6	5.4
1965-09-01	0.90	3.1	0.56	0	-0.042	0	0.90	1.5	5.0
1965-10-01	1.0	2.2	0.34	0	-0.040	0	1.0	1.4	4.3
1965-11-01	0.46	2.2	0.33	0	-0.042	0	0.46	0.79	3.5
1965	3.9	14	2.2	0	-0.21	0	3.9	6.1	23
1966-07-01	0.18	4.2	0.84	0	-0.044	0	0.18	1.0	5.8
1966-08-01	0.84	3.4	0.57	0	-0.049	0	0.84	1.4	5.3
1966-09-01	1.6	2.3	-0.059	0	-0.056	0	1.6	1.6	5.1
1966-10-01	2.7	0.54	-0.28	0	-0.061	0	2.7	2.4	4.3
1966-11-01	1.4	0.99	0.71	0	-0.069	0	1.4	2.1	2.9
1966	6.7	11	1.8	0	-0.28	0	6.7	8.4	23
1967-07-01	0.079	4.1	0.42	0	-0.084	0	0.079	0.50	5.2
1967-08-01	4.0	-0.11	-1.4	0	-0.086	0	4.0	2.6	5.0
1967-09-01	2.5	1.5	0.31	0	-0.085	0	2.5	2.8	4.8
1967-10-01	0.55	2.7	0.80	0	-0.081	0	0.55	1.3	4.4
1967-11-01	0.42	2.1	0.51	0	-0.081	0	0.42	0.93	3.5
1967	7.5	10	0.65	0	-0.42	0	7.5	8.2	23
1968-07-01	0	4.6	0.99	0	-0.070	0	0	0.99	6.0
1968-08-01	1.8	2.2	-0.088	0	-0.075	0	1.8	1.7	5.3
1968-09-01	2.5	0.70	0.32	0	-0.080	0	2.5	2.9	4.1
1968-10-01	0.047	3.2	1.0	0	-0.084	0	0.047	1.1	4.3
1968-11-01	0.39	1.9	0.54	0	-0.093	0	0.39	0.93	3.0
1968	4.8	13	2.8	0	-0.40	0	4.8	7.6	23
1969-07-01	0	4.3	0.96	0	-0.10	0	0	0.96	5.6
1969-08-01	0.33	4.0	0.65	0	-0.11	0	0.33	0.98	5.6
1969-09-01	2.6	1.7	-0.065	0	-0.11	0	2.6	2.5	5.4
1969-10-01	1.2	2.2	0.39	0	-0.11	0	1.2	1.6	4.6
1969-11-01	0.83	1.4	0.23	0	-0.11	0	0.83	1.1	3.2
1969	5.0	14	2.2	0	-0.53	0	5.0	7.1	24

Table IV-B.47 SC5 Monsoon Period Water Balance

Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
1970-07-01	0.079	4.5	0.58	0	-0.10	0	0.079	0.65	5.7
1970-08-01	1.0	3.4	0.32	0	-0.10	0	1.0	1.4	6.0
1970-09-01	1.7	2.4	0.014	0	-0.10	0	1.7	1.7	5.1
1970-10-01	3.4	-0.071	-0.74	0	-0.094	0	3.4	2.6	4.7
1970-11-01	0	2.3	0.91	0	-0.096	0	0	0.91	3.0
1970	6.2	12	1.1	0	-0.49	0	6.2	7.3	24
1971-07-01	0	4.4	0.28	0	-0.074	0	0	0.28	5.4
1971-08-01	0.39	4.3	0.19	0	-0.075	0	0.39	0.58	6.0
1971-09-01	4.7	-1.3	-1.8	0	-0.073	0	4.7	2.8	4.5
1971-10-01	3.1	0.41	-1.3	0	-0.069	0	3.1	1.8	4.7
1971-11-01	4.2	-2.2	-2.2	0	-0.070	0	4.2	2.0	2.9
1971	12	5.7	-4.8	0	-0.36	0	12	7.5	24
1972-07-01	1.7	2.9	-0.25	0	-0.057	0	1.7	1.4	5.8
1972-08-01	0.27	4.7	0.63	0	-0.058	0	0.27	0.90	6.2
1972-09-01	2.0	1.8	-0.26	0	-0.057	0	2.0	1.7	5.3
1972-10-01	0.67	2.9	0.59	0	-0.055	0	0.67	1.3	4.6
1972-11-01	8.7	-6.7	-7.0	0	-0.056	0	8.7	1.7	2.9
1972	13	5.6	-6.3	0	-0.28	0	13	7.0	25
1973-07-01	0.87	3.8	1.7	0	-0.053	0	0.87	2.6	5.8
1973-08-01	2.7	1.3	-0.51	0	-0.059	0	2.7	2.2	5.7
1973-09-01	1.4	2.7	1.7	0	-0.069	0	1.4	3.1	5.2
1973-10-01	0	3.5	1.0	0	-0.076	0	0	1.0	4.6
1973-11-01	0	2.4	0.68	0	-0.093	0	0	0.68	3.4
1973	5.0	14	4.6	0	-0.35	0	5.0	9.6	25
1974-07-01	0	5.1	0.65	0	-0.12	0	0	0.65	6.2
1974-08-01	2.4	1.7	-0.30	0	-0.12	0	2.4	2.1	5.5
1974-09-01	1.4	2.7	0.59	0	-0.12	0	1.4	2.0	5.3
1974-10-01	3.4	-0.14	-0.71	0	-0.11	0	3.4	2.7	4.5
1974-11-01	3.4	-1.3	-1.8	0	-0.12	0	3.4	1.6	3.2
1974	11	8.0	-1.6	0	-0.59	0	11	9.0	25
1975-07-01	0	4.6	1.1	0	-0.094	0	0	1.1	5.8
1975-08-01	2.2	1.6	0.11	0	-0.095	0	2.2	2.3	5.2
1975-09-01	2.0	2.2	0.39	0	-0.093	0	2.0	2.4	5.0
1975-10-01	0.91	2.6	0.64	0	-0.089	0	0.91	1.6	4.7
1975-11-01	0.28	2.2	0.53	0	-0.091	0	0.28	0.79	3.5
1975	5.4	13	2.8	0	-0.46	0	5.4	8.1	24
1976-07-01	0	4.8	0.57	0	-0.080	0	0	0.55	5.8
1976-08-01	2.8	1.1	-1.1	0	-0.080	0	2.8	1.7	5.6
1976-09-01	0.83	3.3	0.90	0	-0.078	0	0.83	1.7	4.9
1976-10-01	4.0	-1.0	-1.7	0	-0.074	0	4.0	2.2	4.3
1976-11-01	0.87	1.0	0.94	0	-0.075	0	0.87	1.9	2.7
1976	8.5	9.2	-0.42	0	-0.39	0	8.5	8.1	23
1977-07-01	0.039	4.8	0.43	0	-0.063	0	0.039	0.47	5.9
1977-08-01	2.6	2.0	-0.69	0	-0.063	0	2.6	1.9	6.1
1977-09-01	2.4	1.7	0.0043	0	-0.062	0	2.4	2.4	5.3
1977-10-01	3.5	-0.43	-0.84	0	-0.059	0	3.5	2.6	4.3
1977-11-01	1.3	1.2	0.69	0	-0.060	0	1.3	2.0	3.5
1977	9.8	9.3	-0.41	0	-0.31	0	9.8	9.4	25
1978-07-01	0.55	4.2	1.2	0	-0.050	0	0.55	1.7	6.0
1978-08-01	0.98	3.7	0.71	0	-0.051	0	0.98	1.7	6.3
1978-09-01	1.1	2.6	0.91	0	-0.054	0	1.1	2.0	4.4
1978-10-01	0.39	2.9	0.64	0	-0.056	0	0.39	1.0	4.5
1978-11-01	1.9	0.90	-1.0	0	-0.063	0	1.9	0.91	4.1
1978	4.9	14	2.4	0	-0.27	0	4.9	7.3	25
1979-07-01	0.35	4.4	2.3	0	-0.16	0	0.35	2.6	5.5
1979-08-01	0.16	4.4	1.2	0	-0.23	0	0.16	1.3	6.2
1979-09-01	1.5	2.2	0.62	0	-0.30	0	1.5	2.2	4.9

Table IV-B.47 SC5 Monsoon Period Water Balance

Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
1979-10-01	0.12	3.7	0.89	0	-0.32	0	0.12	0.98	5.2
1979-11-01	0.67	2.1	0.42	0	-0.35	0	0.67	1.1	4.0
1979	2.8	17	5.4	0	-1.4	0	2.8	8.2	26
1980-07-01	0.16	4.6	1.2	0	-0.24	0	0.16	1.4	5.6
1980-08-01	1.9	2.3	0.25	0	-0.25	0	1.9	2.2	5.8
1980-09-01	1.3	2.7	1.1	0	-0.26	0	1.3	2.4	5.1
1980-10-01	0.55	3.0	0.71	0	-0.26	0	0.55	1.3	4.8
1980-11-01	0.039	2.6	0.62	0	-0.26	0	0.039	0.67	3.8
1980	4.0	15	3.9	0	-1.3	0	4.0	7.9	25
1981-07-01	0.16	4.8	0.78	0	-0.19	0	0.16	0.91	5.9
1981-08-01	2.1	2.0	-0.69	0	-0.18	0	2.1	1.5	5.9
1981-09-01	2.6	1.6	0.55	0	-0.18	0	2.6	3.2	4.9
1981-10-01	0.51	3.1	0.64	0	-0.16	0	0.51	1.1	5.2
1981-11-01	0.94	1.2	0.46	0	-0.16	0	0.94	1.4	3.1
1981	6.4	13	1.7	0	-0.87	0	6.4	8.1	25
1982-07-01	0.079	4.3	0.98	0	-0.11	0	0.079	1.0	5.4
1982-08-01	2.6	1.2	-0.49	0	-0.11	0	2.6	2.2	5.3
1982-09-01	3.8	-0.24	-0.52	0	-0.11	0	3.8	3.3	4.4
1982-10-01	3.0	0.20	-0.066	0	-0.11	0	3.0	2.9	4.5
1982-11-01	0	2.3	1.5	0	-0.11	0	0	1.5	3.2
1982	9.6	7.8	1.4	0	-0.55	0	9.6	11	23
1983-07-01	0	4.4	1.3	0	-0.089	0	0	1.3	5.9
1983-08-01	2.8	1.7	-0.48	0	-0.091	0	2.8	2.3	5.9
1983-09-01	3.6	-0.079	-0.21	0	-0.093	0	3.6	3.4	4.4
1983-10-01	5.1	-1.7	-2.3	0	-0.093	0	5.1	2.8	4.8
1983-11-01	1.1	0.98	0.95	0	-0.100	0	1.1	2.1	3.0
1983	13	5.3	-0.70	0	-0.46	0	13	12	24
1984-07-01	1.3	3.0	-0.38	0	-0.11	0	1.3	0.94	5.8
1984-08-01	3.3	0.35	-0.13	0	-0.11	0	3.3	3.2	4.9
1984-09-01	3.3	0.079	-0.11	0	-0.11	0	3.3	3.1	4.4
1984-10-01	1.9	1.5	0.43	0	-0.11	0	1.9	2.3	4.8
1984-11-01	1.3	0.55	0.54	0	-0.11	0	1.3	1.9	2.7
1984	11	5.5	0.34	0	-0.56	0	11	12	23
1985-07-01	0	3.9	1.0	0	-0.100	0	0	1.0	5.0
1985-08-01	1.3	3.1	0.12	0	-0.11	0	1.3	1.4	5.3
1985-09-01	2.1	1.8	0.32	0	-0.11	0	2.1	2.4	4.9
1985-10-01	3.6	-0.63	-0.98	0	-0.11	0	3.6	2.6	4.3
1985-11-01	1.2	0.63	0.60	0	-0.12	0	1.2	1.9	2.5
1985	8.1	8.8	1.1	0	-0.55	0	8.1	9.2	22
1986-07-01	0.039	4.7	0.79	0	-0.11	0	0.039	0.79	5.9
1986-08-01	4.7	-1.4	-1.7	0	-0.11	0	4.7	3.0	5.0
1986-09-01	2.0	1.9	0.59	0	-0.11	0	2.0	2.6	5.1
1986-10-01	2.1	0.94	0.46	0	-0.11	0	2.1	2.5	4.3
1986-11-01	1.7	0.28	0.18	0	-0.11	0	1.7	1.9	2.5
1986	11	6.4	0.30	0	-0.57	0	11	11	23
1987-07-01	0.20	4.4	0.84	0	-0.098	0	0.20	1.0	5.5
1987-08-01	2.0	2.5	-0.18	0	-0.10	0	2.0	1.9	5.9
1987-09-01	2.9	0.83	0.021	0	-0.10	0	2.9	2.9	5.0
1987-10-01	1.3	1.9	0.60	0	-0.098	0	1.3	1.9	4.5
1987-11-01	0.31	2.4	0.79	0	-0.11	0	0.31	1.1	3.8
1987	6.7	12	2.1	0	-0.51	0	6.7	8.8	25
1988-07-01	0.16	4.3	0.84	0	-0.098	0	0.16	0.98	5.6
1988-08-01	3.4	0.67	-1.8	0	-0.094	0	3.4	1.6	5.6
1988-09-01	5.9	-2.3	-2.3	0	-0.098	0	5.9	3.5	4.6
1988-10-01	0.31	2.9	2.8	0	-0.098	0	0.31	3.1	4.3
1988-11-01	1.5	1.1	0.37	0	-0.094	0	1.5	1.9	3.6
1988	11	6.5	-0.16	0	-0.48	0	11	11	24

Table IV-B.47 SC5 Monsoon Period Water Balance

Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
1989-07-01	0	4.7	0.50	0	-0.091	0	0	0.47	5.9
1989-08-01	0.51	3.9	0.26	0	-0.094	0	0.51	0.75	6.1
1989-09-01	0.91	2.9	0.30	0	-0.087	0	0.91	1.2	4.7
1989-10-01	1.5	2.0	0.012	0	-0.087	0	1.5	1.5	4.8
1989-11-01	1.1	1.2	0.24	0	-0.091	0	1.1	1.3	3.7
1989	4.0	15	1.3	0	-0.45	0	4.0	5.3	25
1990-07-01	0.28	4.6	0.45	0	-0.071	0	0.28	0.75	5.8
1990-08-01	1.5	2.4	0.071	0	-0.075	0	1.5	1.5	5.6
1990-09-01	9.0	-5.6	-6.2	0	-0.071	0	9.0	2.8	4.3
1990-10-01	2.8	0.28	0.27	0	-0.067	0	2.8	3.1	4.5
1990-11-01	0.28	2.1	2.1	0	-0.067	0	0.28	2.4	3.3
1990	14	3.8	-3.3	0	-0.35	0	14	11	23
1991-07-01	0.63	3.7	1.2	0	-0.059	0	0.63	1.8	5.6
1991-08-01	1.7	2.6	-0.12	0	-0.067	0	1.7	1.6	5.7
1991-09-01	2.8	1.1	0.57	0	-0.067	0	2.8	3.3	5.1
1991-10-01	1.6	1.7	0.72	0	-0.071	0	1.6	2.3	4.3
1991-11-01	1.2	1.5	-0.39	0	-0.075	0	1.2	0.83	4.3
1991	7.9	11	2.0	0	-0.34	0	7.9	9.8	25
1992-07-01	1.3	3.1	2.5	0	-0.10	0	1.3	3.9	5.3
1992-08-01	3.3	0.98	-0.67	0	-0.13	0	3.3	2.6	5.9
1992-09-01	5.3	-1.7	-1.7	0	-0.16	0	5.3	3.6	4.8
1992-10-01	0.87	2.6	2.6	0	-0.19	0	0.87	3.5	4.4
1992-11-01	1.2	1.3	0.53	0	-0.21	0	1.2	1.8	4.0
1992	12	6.3	3.3	0	-0.79	0	12	15	24
1993-07-01	0	4.5	1.9	0	-1.1	0	0	2.0	5.5
1993-08-01	0.24	3.9	1.2	0	-1.1	0	0.24	1.5	5.7
1993-09-01	3.4	0.20	-1.1	0	-0.97	0	3.4	2.3	5.4
1993-10-01	0.16	3.1	2.2	0	-0.82	0	0.16	2.4	4.0
1993-11-01	0.79	1.7	0.78	0	-0.75	0	0.79	1.6	3.9
1993	4.6	13	5.0	0	-4.8	0	4.6	9.6	24
1994-07-01	0.39	4.3	0.83	0	-0.34	0	0.39	1.2	5.6
1994-08-01	1.5	3.1	-0.48	0	-0.33	0	1.5	0.98	6.0
1994-09-01	0.71	3.5	1.3	0	-0.31	0	0.71	2.0	5.5
1994-10-01	1.9	1.3	0.13	0	-0.29	0	1.9	2.1	4.5
1994-11-01	1.9	0.28	-0.51	0	-0.28	0	1.9	1.3	3.4
1994	6.3	12	1.3	0	-1.6	0	6.3	7.7	25
1995-07-01	0	4.4	1.2	0	-0.19	0	0	1.3	5.1
1995-08-01	0.039	4.6	0.86	0	-0.20	0	0.039	0.87	5.8
1995-09-01	3.9	0.24	-1.3	0	-0.21	0	3.9	2.5	5.8
1995-10-01	2.8	0.67	-0.051	0	-0.20	0	2.8	2.7	4.9
1995-11-01	0	2.6	1.9	0	-0.21	0	0	1.9	3.7
1995	6.7	12	2.6	0	-1.0	0	6.7	9.3	25
1996-07-01	0.39	4.3	0.32	0	-0.17	0	0.39	0.71	5.8
1996-08-01	2.4	2.1	-0.19	0	-0.17	0	2.4	2.2	5.7
1996-09-01	1.3	2.6	0.34	0	-0.16	0	1.3	1.6	5.2
1996-10-01	3.0	-0.20	-0.43	0	-0.15	0	3.0	2.6	4.3
1996-11-01	0.39	2.2	0.63	0	-0.15	0	0.39	1.0	4.0
1996	7.4	11	0.67	0	-0.78	0	7.4	8.1	25
1997-07-01	0	4.4	0.41	0	-0.10	0	0	0.43	5.5
1997-08-01	0.12	4.6	0.32	0	-0.11	0	0.12	0.43	6.4
1997-09-01	2.6	1.3	-0.39	0	-0.098	0	2.6	2.2	5.0
1997-10-01	0	3.7	0.58	0	-0.094	0	0	0.55	4.9
1997-11-01	0.71	1.5	0.051	0	-0.091	0	0.71	0.79	3.9
1997	3.4	16	0.97	0	-0.49	0	3.4	4.4	26
1998-07-01	0	4.3	1.0	0	-0.067	0	0	0.98	5.3
1998-08-01	1.7	2.8	0.35	0	-0.071	0	1.7	2.1	6.0
1998-09-01	2.4	1.7	0.28	0	-0.067	0	2.4	2.7	5.1

Table IV-B.47 SC5 Monsoon Period Water Balance

Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
1998-10-01	1.3	2.2	0.41	0	-0.063	0	1.3	1.7	5.1
1998-11-01	0	2.4	0.61	0	-0.067	0	0	0.59	4.0
1998	5.4	13	2.7	0	-0.33	0	5.4	8.1	25
1999-07-01	0	4.4	0.42	0	-0.067	0	0	0.43	5.4
1999-08-01	5.8	-2.2	-2.9	0	-0.063	0	5.8	2.9	5.5
1999-09-01	2.8	0.94	0.43	0	-0.067	0	2.8	3.2	4.6
1999-10-01	1.1	2.1	1.5	0	-0.063	0	1.1	2.6	4.5
1999-11-01	0	2.8	0.80	0	-0.063	0	0	0.79	4.0
1999	9.8	8.1	0.21	0	-0.32	0	9.8	10.0	24
2000-07-01	0.83	3.7	0.087	0	-0.055	0	0.83	0.91	6.3
2000-08-01	0.079	4.9	0.34	0	-0.051	0	0.079	0.39	6.0
2000-09-01	0.67	3.1	0.16	0	-0.051	0	0.67	0.83	5.7
2000-10-01	0	3.8	0.26	0	-0.047	0	0	0.28	4.8
2000-11-01	5.3	-3.3	-4.4	0	-0.051	0	5.3	0.94	3.9
2000	6.9	12	-3.5	0	-0.26	0	6.9	3.3	27
2001-07-01	0.039	4.8	0.85	0	-0.039	0	0.039	0.87	6.0
2001-08-01	2.7	1.7	-1.6	0	-0.039	0	2.7	1.1	6.4
2001-09-01	3.3	0.43	0.23	0	-0.039	0	3.3	3.6	4.5
2001-10-01	0.12	3.7	1.3	0	-0.039	0	0.12	1.5	5.2
2001-11-01	0.39	2.0	0.61	0	-0.039	0	0.39	0.98	3.8
2001	6.6	13	1.4	0	-0.20	0	6.6	8.0	26
2002-07-01	0	5.2	0.24	0	-0.043	0	0	0.24	6.0
2002-08-01	0.31	4.5	0.19	0	-0.039	0	0.31	0.51	6.8
2002-09-01	0.47	3.6	0.079	0	-0.043	0	0.47	0.55	5.3
2002-10-01	1.2	2.3	-0.031	0	-0.039	0	1.2	1.1	4.9
2002-11-01	0.079	2.2	0.30	0	-0.039	0	0.079	0.43	3.9
2002	2.0	18	0.78	0	-0.20	0	2.0	2.9	27
2003-07-01	0	5.0	0.48	0	-0.035	0	0	0.47	6.5
2003-08-01	0.51	4.2	0.28	0	-0.039	0	0.51	0.79	6.6
2003-09-01	1.3	2.8	-0.024	0	-0.035	0	1.3	1.3	5.3
2003-10-01	2.0	1.7	0.087	0	-0.035	0	2.0	2.0	4.7
2003-11-01	0.039	2.8	0.47	0	-0.035	0	0.039	0.55	4.0
2003	3.8	16	1.3	0	-0.18	0	3.8	5.1	27
2004-07-01	0	4.9	0.37	0	-0.031	0	0	0.39	5.9
2004-08-01	0.55	3.9	0.20	0	-0.031	0	0.55	0.75	6.1
2004-09-01	2.1	2.0	-0.39	0	-0.031	0	2.1	1.7	5.3
2004-10-01	1.5	2.0	-0.10	0	-0.031	0	1.5	1.4	5.3
2004-11-01	1.2	0.94	-0.37	0	-0.028	0	1.2	0.83	3.6
2004	5.4	14	-0.28	0	-0.15	0	5.4	5.1	26
2005-07-01	0.079	4.6	0.94	0	-0.024	0	0.079	1.0	5.5
2005-08-01	1.4	3.4	-0.24	0	-0.028	0	1.4	1.1	7.1
2005-09-01	4.7	-1.1	-1.1	0	-0.028	0	4.7	3.5	4.2
2005-10-01	0.079	3.4	1.7	0	-0.024	0	0.079	1.8	4.9
2005-11-01	0.43	2.0	0.64	0	-0.031	0	0.43	1.1	3.9
2005	6.7	12	1.9	0	-0.13	0	6.7	8.5	26
2006-07-01	0.51	4.4	0.23	0	-0.039	0	0.51	0.71	6.1
2006-08-01	3.1	0.75	-2.2	0	-0.039	0	3.1	0.98	5.8
2006-09-01	2.9	0.63	0.54	0	-0.039	0	2.9	3.4	4.3
2006-10-01	1.1	1.7	0.85	0	-0.035	0	1.1	2.0	4.1
2006-11-01	1.1	1.1	0.49	0	-0.039	0	1.1	1.5	3.4
2006	8.7	8.6	-0.11	0	-0.19	0	8.7	8.6	24

Table IV-B.48 SC5 Winter Storm Period Water Balance

Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
1951-11-01	0	0.88	-0.26	0	-0.21	0	1.6	1.4	3.1
1951-12-01	1.7	-0.40	-0.40	0	-0.20	0	1.7	1.3	1.6
1952-01-01	3.0	-2.2	-2.2	0	-0.20	0	3.0	0.86	1.0
1952-02-01	2.8	-1.9	-1.9	0	-0.20	0	2.8	0.84	0.98
1952-03-01	0.50	0.55	0.55	0	-0.18	0	0.50	1.0	1.3
1952	8.0	-3.1	-4.2	0	-0.98	0	9.7	5.4	8.0
1952-11-01	0	3.0	0.63	0	-0.18	0	0	0.63	3.8
1952-12-01	4.3	-3.2	-3.6	0	-0.18	0	4.3	0.76	1.4
1953-01-01	2.0	-1.2	-1.2	0	-0.18	0	2.0	0.76	0.90
1953-02-01	0.74	0.30	0.30	0	-0.18	0	0.74	1.0	1.2
1953-03-01	0.60	0.50	0.50	0	-0.16	0	0.60	1.1	1.3
1953	7.6	-0.57	-3.3	0	-0.88	0	7.6	4.3	8.5
1953-11-01	0.012	2.7	0.58	0	-0.15	0	0.012	0.59	3.4
1953-12-01	0.56	0.94	0.11	0	-0.14	0	0.56	0.67	1.8
1954-01-01	0.19	0.64	0.47	0	-0.14	0	0.19	0.67	1.0
1954-02-01	2.4	-1.4	-1.6	0	-0.14	0	2.4	0.76	1.1
1954-03-01	0.72	0.74	0.74	0	-0.12	0	0.72	1.5	1.8
1954	3.9	3.6	0.26	0	-0.68	0	3.9	4.2	9.2
1954-11-01	0	2.8	1.4	0	-0.11	0	0	1.4	3.5
1954-12-01	0.091	1.5	0.56	0	-0.100	0	0.091	0.65	1.9
1955-01-01	0.29	0.76	0.44	0	-0.100	0	0.29	0.74	1.2
1955-02-01	3.4	-2.8	-2.8	0	-0.097	0	3.4	0.62	0.73
1955-03-01	0.28	0.76	0.76	0	-0.085	0	0.28	1.0	1.3
1955	4.1	3.0	0.34	0	-0.49	0	4.1	4.4	8.6
1955-11-01	0.020	2.8	0.68	0	-0.076	0	0.020	0.70	3.6
1955-12-01	0.96	0.37	-0.13	0	-0.072	0	0.96	0.83	1.6
1956-01-01	1.4	-0.32	-0.32	0	-0.073	0	1.4	1.0	1.2
1956-02-01	2.6	-1.6	-1.7	0	-0.072	0	2.6	0.92	1.3
1956-03-01	2.0	-1.1	-1.1	0	-0.066	0	2.0	0.86	1.0
1956	7.0	0.20	-2.6	0	-0.36	0	7.0	4.4	8.7
1956-11-01	0.53	1.8	0.079	0	-0.061	0	0.53	0.61	3.1
1956-12-01	0	1.3	0.59	0	-0.058	0	0	0.59	1.5
1957-01-01	0.47	0.46	0.12	0	-0.059	0	0.47	0.59	1.1
1957-02-01	4.8	-4.1	-4.2	0	-0.057	0	4.8	0.61	0.85
1957-03-01	0.73	0.61	0.61	0	-0.052	0	0.73	1.3	1.5
1957	6.5	0.043	-2.8	0	-0.29	0	6.5	3.7	8.0
1957-11-01	3.2	-1.3	-2.1	0	-0.048	0	3.2	1.2	2.6
1957-12-01	0.61	0.44	0.44	0	-0.046	0	0.61	1.1	1.3
1958-01-01	1.1	-0.063	-0.063	0	-0.046	0	1.1	1.0	1.2
1958-02-01	0.012	0.96	0.96	0	-0.045	0	0.012	0.97	1.1
1958-03-01	2.5	-1.5	-1.5	0	-0.040	0	2.5	1.0	1.3
1958	7.4	-1.4	-2.2	0	-0.23	0	7.4	5.2	7.4
1958-11-01	1.9	0.44	0.40	0	-0.040	0	1.9	2.3	3.1
1958-12-01	1.5	-0.24	-0.46	0	-0.039	0	1.5	1.1	1.5
1959-01-01	0	1.2	1.2	0	-0.039	0	0	1.2	1.5
1959-02-01	0.21	0.85	0.54	0	-0.039	0	0.21	0.76	1.2
1959-03-01	1.4	-0.44	-0.60	0	-0.035	0	1.4	0.82	1.2
1959	5.1	1.8	1.1	0	-0.19	0	5.1	6.2	8.5
1959-11-01	4.8	-2.4	-3.6	0	-0.038	0	4.8	1.1	3.2
1959-12-01	0.38	0.96	0.96	0	-0.036	0	0.38	1.3	1.5
1960-01-01	5.2	-4.5	-4.5	0	-0.037	0	5.2	0.75	0.93
1960-02-01	4.2	-3.5	-3.5	0	-0.037	0	4.2	0.68	0.76
1960-03-01	0.87	0.063	0.059	0	-0.034	0	0.87	0.93	1.1

Table IV-B.48 SC5 Winter Storm Period Water Balance

Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
1960	15	-9.3	-11	0	-0.18	0	15	4.8	7.6
1960-11-01	2.1	0.091	-0.60	0	-0.041	0	2.1	1.5	2.9
1960-12-01	0.48	0.81	0.71	0	-0.042	0	0.48	1.2	1.6
1961-01-01	0.47	0.52	0.33	0	-0.046	0	0.47	0.80	1.2
1961-02-01	0.70	0.28	-0.078	0	-0.048	0	0.70	0.62	1.1
1961-03-01	0.23	1.0	0.68	0	-0.046	0	0.23	0.91	1.4
1961	3.9	2.7	1.0	0	-0.22	0	3.9	5.0	8.2
1961-11-01	0.45	1.9	0.11	0	-0.054	0	0.45	0.56	3.3
1961-12-01	0.32	0.72	0.40	0	-0.052	0	0.32	0.72	1.2
1962-01-01	3.9	-3.1	-3.2	0	-0.052	0	3.9	0.64	0.91
1962-02-01	3.2	-2.5	-2.5	0	-0.052	0	3.2	0.74	0.83
1962-03-01	1.7	-0.67	-0.67	0	-0.046	0	1.7	1.00	1.2
1962	9.5	-3.6	-5.9	0	-0.26	0	9.5	3.7	7.4
1962-11-01	0.87	1.5	0.25	0	-0.043	0	0.87	1.1	3.0
1962-12-01	0.83	0.76	0.068	0	-0.042	0	0.83	0.90	1.9
1963-01-01	1.8	-0.79	-1.1	0	-0.043	0	1.8	0.72	1.3
1963-02-01	2.1	-1.3	-1.3	0	-0.043	0	2.1	0.81	0.89
1963-03-01	4.2	-2.9	-2.9	0	-0.038	0	4.2	1.3	1.5
1963	9.8	-2.7	-4.9	0	-0.21	0	9.8	4.9	8.7
1963-11-01	0.67	2.0	1.9	0	-0.041	0	0.67	2.5	3.6
1963-12-01	2.3	-1.2	-1.2	0	-0.039	0	2.3	1.2	1.5
1964-01-01	0.34	0.67	0.67	0	-0.041	0	0.34	1.0	1.2
1964-02-01	0.58	0.22	0.22	0	-0.041	0	0.58	0.80	0.92
1964-03-01	0	1.1	1.1	0	-0.038	0	0	1.1	1.2
1964	3.9	2.8	2.6	0	-0.20	0	3.9	6.6	8.5
1964-11-01	1.5	1.2	-0.17	0	-0.043	0	1.5	1.4	3.6
1964-12-01	1.4	-0.20	-0.46	0	-0.042	0	1.4	0.92	1.5
1965-01-01	1.7	-0.80	-0.80	0	-0.044	0	1.7	0.89	1.1
1965-02-01	2.9	-2.0	-2.0	0	-0.044	0	2.9	0.84	0.89
1965-03-01	2.8	-1.7	-1.7	0	-0.039	0	2.8	1.1	1.2
1965	10	-3.6	-5.2	0	-0.21	0	10	5.1	8.3
1965-11-01	0.46	2.2	0.33	0	-0.042	0	0.46	0.79	3.5
1965-12-01	2.4	-0.91	-1.9	0	-0.041	0	2.4	0.49	1.9
1966-01-01	10	-9.7	-9.7	0	-0.042	0	10	0.70	0.84
1966-02-01	1.8	-1.1	-1.1	0	-0.042	0	1.8	0.73	0.87
1966-03-01	2.0	-1.1	-1.1	0	-0.038	0	2.0	0.89	1.0
1966	17	-11	-14	0	-0.20	0	17	3.6	8.1
1966-11-01	1.4	0.99	0.71	0	-0.069	0	1.4	2.1	2.9
1966-12-01	0.88	0.48	0.29	0	-0.071	0	0.88	1.2	1.9
1967-01-01	1.3	-0.35	-0.37	0	-0.077	0	1.3	0.89	1.1
1967-02-01	0.79	0.094	0.096	0	-0.081	0	0.79	0.89	0.85
1967-03-01	0	1.2	1.1	0	-0.076	0	0	1.1	1.5
1967	4.3	2.4	1.8	0	-0.37	0	4.3	6.1	8.2
1967-11-01	0.42	2.1	0.51	0	-0.081	0	0.42	0.93	3.5
1967-12-01	2.1	-0.64	-1.6	0	-0.077	0	2.1	0.49	1.9
1968-01-01	10	-9.3	-9.3	0	-0.077	0	10	0.66	0.73
1968-02-01	0.63	0.30	0.30	0	-0.075	0	0.63	0.93	1.1
1968-03-01	1.9	-0.64	-0.64	0	-0.069	0	1.9	1.3	1.4
1968	15	-8.2	-11	0	-0.38	0	15	4.3	8.6
1968-11-01	0.39	1.9	0.54	0	-0.093	0	0.39	0.93	3.0
1968-12-01	2.5	-1.3	-1.4	0	-0.096	0	2.5	1.1	1.7
1969-01-01	3.3	-2.5	-2.5	0	-0.10	0	3.3	0.76	0.97
1969-02-01	4.2	-3.4	-3.4	0	-0.10	0	4.2	0.78	0.85

Table IV-B.48 SC5 Winter Storm Period Water Balance

Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
1969-03-01	1.4	-0.48	-0.48	0	-0.095	0	1.4	0.87	0.96
1969	12	-5.8	-7.2	0	-0.49	0	12	4.5	7.5
1969-11-01	0.83	1.4	0.23	0	-0.11	0	0.83	1.1	3.2
1969-12-01	2.1	-0.97	-1.1	0	-0.11	0	2.1	0.99	1.5
1970-01-01	1.3	-0.34	-0.34	0	-0.11	0	1.3	0.98	1.2
1970-02-01	0.50	0.35	0.34	0	-0.11	0	0.50	0.84	0.85
1970-03-01	0.41	0.84	0.84	0	-0.10	0	0.41	1.2	1.4
1970	5.2	1.3	-0.059	0	-0.55	0	5.2	5.1	8.2
1970-11-01	0	2.3	0.91	0	-0.096	0	0	0.91	3.0
1970-12-01	0.65	0.81	-0.096	0	-0.091	0	0.65	0.55	1.9
1971-01-01	1.2	-0.39	-0.41	0	-0.091	0	1.2	0.80	1.0
1971-02-01	0.85	0.16	0.16	0	-0.089	0	0.85	1.0	0.98
1971-03-01	0.82	0.33	0.14	0	-0.079	0	0.82	0.96	1.5
1971	3.5	3.2	0.70	0	-0.45	0	3.5	4.2	8.4
1971-11-01	4.2	-2.2	-2.2	0	-0.070	0	4.2	2.0	2.9
1971-12-01	0.039	1.2	1.2	0	-0.067	0	0.039	1.2	1.5
1972-01-01	2.1	-1.3	-1.3	0	-0.067	0	2.1	0.78	0.92
1972-02-01	0	1.0	1.0	0	-0.066	0	0	1.0	1.1
1972-03-01	0	1.5	1.4	0	-0.061	0	0	1.4	1.5
1972	6.4	0.16	0.087	0	-0.33	0	6.4	6.5	8.0
1972-11-01	8.7	-6.7	-7.0	0	-0.056	0	8.7	1.7	2.9
1972-12-01	2.8	-1.8	-1.8	0	-0.054	0	2.8	1.0	1.3
1973-01-01	3.0	-2.3	-2.3	0	-0.054	0	3.0	0.71	0.92
1973-02-01	0.74	-0.024	-0.023	0	-0.054	0	0.74	0.71	0.78
1973-03-01	3.2	-2.3	-2.3	0	-0.048	0	3.2	0.89	0.88
1973	18	-13	-13	0	-0.27	0	18	5.0	6.7
1973-11-01	0	2.4	0.68	0	-0.093	0	0	0.68	3.4
1973-12-01	1.8	-0.51	-1.1	0	-0.10	0	1.8	0.68	1.8
1974-01-01	0.098	0.89	0.89	0	-0.11	0	0.098	0.98	1.1
1974-02-01	3.4	-2.6	-2.6	0	-0.12	0	3.4	0.77	0.93
1974-03-01	0.12	0.89	0.88	0	-0.11	0	0.12	1.0	1.1
1974	5.4	1.0	-1.3	0	-0.54	0	5.4	4.1	8.3
1974-11-01	3.4	-1.3	-1.8	0	-0.12	0	3.4	1.6	3.2
1974-12-01	0.12	1.2	1.2	0	-0.11	0	0.12	1.4	1.6
1975-01-01	0.75	0.043	0.042	0	-0.11	0	0.75	0.83	1.1
1975-02-01	0.43	0.33	0.33	0	-0.11	0	0.43	0.71	0.80
1975-03-01	3.9	-2.9	-2.9	0	-0.098	0	3.9	1.1	1.00
1975	8.6	-2.5	-3.1	0	-0.55	0	8.6	5.5	7.7
1975-11-01	0.28	2.2	0.53	0	-0.091	0	0.28	0.79	3.5
1975-12-01	2.1	-0.73	-1.7	0	-0.087	0	2.1	0.43	2.1
1976-01-01	1.3	-0.34	-0.34	0	-0.089	0	1.3	0.91	1.1
1976-02-01	0.24	0.55	0.55	0	-0.089	0	0.24	0.79	0.89
1976-03-01	1.6	-0.48	-0.48	0	-0.082	0	1.6	1.1	1.1
1976	5.5	1.3	-1.4	0	-0.44	0	5.5	4.1	8.6
1976-11-01	0.87	1.0	0.94	0	-0.075	0	0.87	1.9	2.7
1976-12-01	0.55	0.85	0.70	0	-0.071	0	0.55	1.3	1.8
1977-01-01	1.9	-0.95	-0.97	0	-0.072	0	1.9	0.87	1.1
1977-02-01	1.9	-1.2	-1.2	0	-0.071	0	1.9	0.67	0.68
1977-03-01	0.079	1.3	1.3	0	-0.063	0	0.079	1.4	1.6
1977	5.2	1.0	0.78	0	-0.35	0	5.2	6.1	7.9
1977-11-01	1.3	1.2	0.69	0	-0.060	0	1.3	2.0	3.5
1977-12-01	0.31	1.1	0.85	0	-0.057	0	0.31	1.2	1.9
1978-01-01	0.67	0.33	-0.13	0	-0.058	0	0.67	0.51	1.4

Table IV-B.48 SC5 Winter Storm Period Water Balance

Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
1978-02-01	6.4	-5.7	-5.7	0	-0.057	0	6.4	0.67	0.72
1978-03-01	5.5	-4.6	-4.6	0	-0.050	0	5.5	0.83	0.90
1978	14	-7.7	-9.0	0	-0.28	0	14	5.2	8.3
1978-11-01	1.9	0.90	-1.0	0	-0.063	0	1.9	0.91	4.1
1978-12-01	5.6	-4.5	-4.5	0	-0.066	0	5.6	1.1	1.5
1979-01-01	6.6	-5.8	-5.8	0	-0.072	0	6.6	0.75	0.88
1979-02-01	6.0	-5.6	-5.6	0	-0.075	0	6.0	0.47	0.63
1979-03-01	1.3	0.043	0.041	0	-0.070	0	1.3	1.3	1.2
1979	21	-15	-17	0	-0.35	0	21	4.5	8.4
1979-11-01	0.67	2.1	0.42	0	-0.35	0	0.67	1.1	4.0
1979-12-01	0.67	0.55	0.47	0	-0.33	0	0.67	1.1	1.7
1980-01-01	0.71	0.39	0.059	0	-0.33	0	0.71	0.75	1.3
1980-02-01	4.1	-3.4	-3.4	0	-0.32	0	4.1	0.67	0.84
1980-03-01	6.0	-5.0	-5.0	0	-0.29	0	6.0	1.1	0.89
1980	12	-5.4	-7.5	0	-1.6	0	12	4.7	8.8
1980-11-01	0.039	2.6	0.62	0	-0.26	0	0.039	0.67	3.8
1980-12-01	0	1.5	0.49	0	-0.25	0	0	0.47	2.0
1981-01-01	0.55	0.71	0.23	0	-0.25	0	0.55	0.83	1.3
1981-02-01	1.3	-0.31	-0.50	0	-0.24	0	1.3	0.79	1.3
1981-03-01	2.7	-1.4	-1.4	0	-0.20	0	2.7	1.3	1.4
1981	4.6	3.1	-0.52	0	-1.2	0	4.6	4.1	9.8
1981-11-01	0.94	1.2	0.46	0	-0.16	0	0.94	1.4	3.1
1981-12-01	2.4	-0.79	-1.9	0	-0.15	0	2.4	0.47	2.2
1982-01-01	0	1.1	1.1	0	-0.15	0	0	1.1	1.3
1982-02-01	2.7	-1.9	-2.0	0	-0.14	0	2.7	0.79	0.85
1982-03-01	1.8	-0.75	-0.74	0	-0.12	0	1.8	1.1	1.1
1982	7.8	-1.2	-3.0	0	-0.72	0	7.8	4.8	8.5
1982-11-01	0	2.3	1.5	0	-0.11	0	0	1.5	3.2
1982-12-01	3.3	-2.3	-2.5	0	-0.10	0	3.3	0.75	1.7
1983-01-01	1.7	-0.91	-0.91	0	-0.10	0	1.7	0.79	0.96
1983-02-01	1.9	-0.94	-0.94	0	-0.10	0	1.9	0.98	1.1
1983-03-01	2.3	-1.3	-1.3	0	-0.089	0	2.3	1.0	0.99
1983	9.2	-3.1	-4.2	0	-0.50	0	9.2	5.0	7.9
1983-11-01	1.1	0.98	0.95	0	-0.100	0	1.1	2.1	3.0
1983-12-01	2.0	-0.83	-0.82	0	-0.100	0	2.0	1.2	1.8
1984-01-01	2.5	-1.7	-1.7	0	-0.11	0	2.5	0.75	0.94
1984-02-01	0.47	0.43	0.44	0	-0.11	0	0.47	0.91	0.88
1984-03-01	0	1.3	1.3	0	-0.10	0	0	1.3	1.5
1984	6.1	0.16	0.13	0	-0.51	0	6.1	6.3	8.0
1984-11-01	1.3	0.55	0.54	0	-0.11	0	1.3	1.9	2.7
1984-12-01	2.1	-0.83	-1.2	0	-0.11	0	2.1	0.87	1.7
1985-01-01	5.8	-5.1	-5.1	0	-0.11	0	5.8	0.71	0.85
1985-02-01	2.7	-2.1	-2.1	0	-0.11	0	2.7	0.55	0.71
1985-03-01	1.7	-0.79	-0.78	0	-0.098	0	1.7	0.87	0.89
1985	14	-8.3	-8.7	0	-0.54	0	14	4.9	6.9
1985-11-01	1.2	0.63	0.60	0	-0.12	0	1.2	1.9	2.5
1985-12-01	2.8	-1.7	-1.7	0	-0.12	0	2.8	1.1	1.8
1986-01-01	0.87	0.12	0.13	0	-0.13	0	0.87	0.98	1.0
1986-02-01	0.12	1.2	1.2	0	-0.12	0	0.12	1.3	1.4
1986-03-01	3.1	-2.0	-2.0	0	-0.11	0	3.1	1.1	1.1
1986	8.0	-1.7	-1.7	0	-0.59	0	8.0	6.3	7.9
1986-11-01	1.7	0.28	0.18	0	-0.11	0	1.7	1.9	2.5
1986-12-01	1.4	-0.31	-0.32	0	-0.11	0	1.4	1.1	1.6

Table IV-B.48 SC5 Winter Storm Period Water Balance

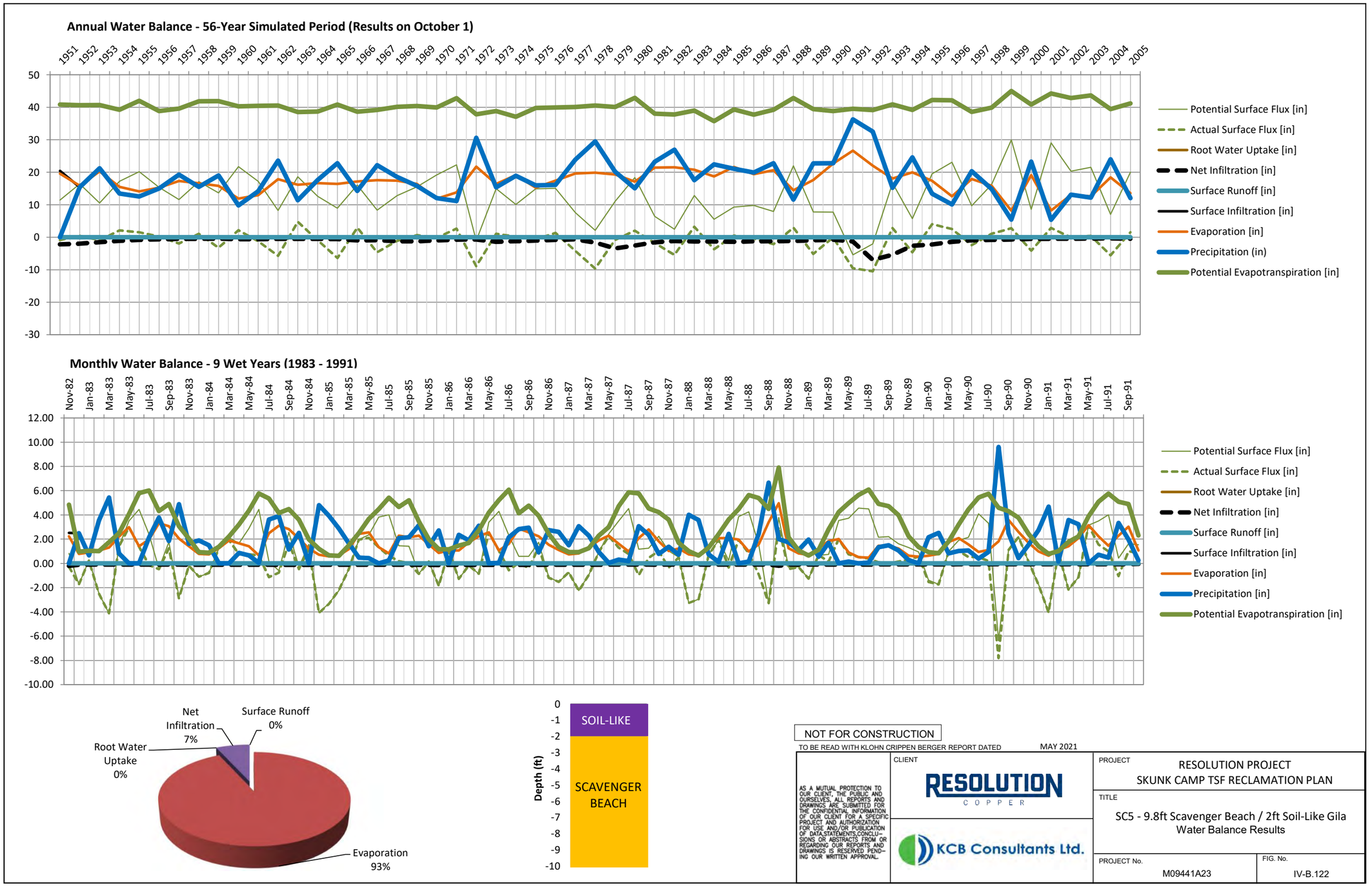
Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
1987-01-01	3.0	-2.2	-2.2	0	-0.11	0	3.0	0.87	1.1
1987-02-01	3.3	-2.6	-2.5	0	-0.11	0	3.3	0.83	0.87
1987-03-01	2.7	-1.7	-1.7	0	-0.098	0	2.7	0.94	1.3
1987	12	-6.5	-6.6	0	-0.54	0	12	5.6	7.4
1987-11-01	0.31	2.4	0.79	0	-0.11	0	0.31	1.1	3.8
1987-12-01	1.8	-0.51	-0.55	0	-0.098	0	1.8	1.2	1.7
1988-01-01	4.0	-3.2	-3.2	0	-0.11	0	4.0	0.83	1.1
1988-02-01	3.6	-3.0	-2.9	0	-0.10	0	3.6	0.63	0.69
1988-03-01	0.75	0.63	0.61	0	-0.098	0	0.75	1.3	1.2
1988	10	-3.7	-5.3	0	-0.51	0	10	5.1	8.5
1988-11-01	1.5	1.1	0.37	0	-0.094	0	1.5	1.9	3.6
1988-12-01	1.7	-0.39	-0.55	0	-0.098	0	1.7	1.2	2.0
1989-01-01	1.1	-0.31	-0.33	0	-0.098	0	1.1	0.79	1.0
1989-02-01	2.2	-1.5	-1.4	0	-0.094	0	2.2	0.75	0.80
1989-03-01	0.31	1.0	1.0	0	-0.091	0	0.31	1.3	1.1
1989	6.9	-0.079	-0.91	0	-0.48	0	6.9	5.9	8.5
1989-11-01	1.1	1.2	0.24	0	-0.091	0	1.1	1.3	3.7
1989-12-01	0.28	1.1	0.33	0	-0.083	0	0.28	0.59	2.0
1990-01-01	0.87	0.079	-0.45	0	-0.087	0	0.87	0.43	1.1
1990-02-01	1.3	-0.51	-0.50	0	-0.083	0	1.3	0.79	0.94
1990-03-01	2.5	-1.5	-1.5	0	-0.071	0	2.5	0.98	0.89
1990	6.0	0.39	-1.9	0	-0.41	0	6.0	4.1	8.7
1990-11-01	0.28	2.1	2.1	0	-0.067	0	0.28	2.4	3.3
1990-12-01	2.2	-0.87	-0.87	0	-0.063	0	2.2	1.3	2.1
1991-01-01	4.8	-4.1	-4.1	0	-0.067	0	4.8	0.75	1.1
1991-02-01	1.8	-0.98	-1.0	0	-0.063	0	1.8	0.75	0.77
1991-03-01	0.94	0.43	0.46	0	-0.055	0	0.94	1.4	1.3
1991	10	-3.4	-3.4	0	-0.31	0	10	6.6	8.5
1991-11-01	1.2	1.5	-0.39	0	-0.075	0	1.2	0.83	4.3
1991-12-01	3.3	-2.1	-2.1	0	-0.079	0	3.3	1.1	1.6
1992-01-01	4.0	-3.2	-3.3	0	-0.087	0	4.0	0.71	0.99
1992-02-01	3.0	-2.2	-2.2	0	-0.091	0	3.0	0.79	0.64
1992-03-01	2.8	-1.7	-1.7	0	-0.091	0	2.8	1.1	1.0
1992	14	-7.8	-9.7	0	-0.42	0	14	4.5	8.5
1992-11-01	1.2	1.3	0.53	0	-0.21	0	1.2	1.8	4.0
1992-12-01	0.51	0.59	0.56	0	-0.22	0	0.51	1.1	1.6
1993-01-01	6.3	-5.7	-5.7	0	-0.23	0	6.3	0.59	0.73
1993-02-01	11	-11	-11	0	-0.24	0	11	0.63	0.58
1993-03-01	6.0	-5.3	-5.3	0	-0.21	0	6.0	0.75	0.95
1993	25	-20	-21	0	-1.1	0	25	4.8	7.8
1993-11-01	0.79	1.7	0.78	0	-0.75	0	0.79	1.6	3.9
1993-12-01	4.2	-3.1	-3.3	0	-0.63	0	4.2	0.91	1.6
1994-01-01	0.28	0.59	0.62	0	-0.58	0	0.28	0.91	1.2
1994-02-01	0.28	0.75	0.74	0	-0.52	0	0.28	1.0	1.1
1994-03-01	2.6	-1.7	-1.6	0	-0.43	0	2.6	0.94	1.0
1994	8.1	-1.7	-2.8	0	-2.9	0	8.1	5.4	8.9
1994-11-01	1.9	0.28	-0.51	0	-0.28	0	1.9	1.3	3.4
1994-12-01	3.4	-2.4	-2.4	0	-0.26	0	3.4	0.94	1.7
1995-01-01	2.6	-1.9	-1.9	0	-0.24	0	2.6	0.83	1.0
1995-02-01	3.7	-2.9	-2.9	0	-0.23	0	3.7	0.71	0.77
1995-03-01	2.7	-1.5	-1.5	0	-0.19	0	2.7	1.2	1.1
1995	14	-8.4	-9.2	0	-1.2	0	14	5.0	8.0
1995-11-01	0	2.6	1.9	0	-0.21	0	0	1.9	3.7

Table IV-B.48 SC5 Winter Storm Period Water Balance

Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
1995-12-01	1.3	0.12	0.091	0	-0.21	0	1.3	1.4	1.9
1996-01-01	0.87	0.039	0	0	-0.21	0	0.87	0.91	1.4
1996-02-01	0.039	1.1	1.0	0	-0.20	0	0.039	1.0	1.2
1996-03-01	3.1	-1.9	-1.9	0	-0.19	0	3.1	1.3	1.3
1996	5.4	1.9	1.1	0	-1.0	0	5.4	6.5	9.5
1996-11-01	0.39	2.2	0.63	0	-0.15	0	0.39	1.0	4.0
1996-12-01	1.3	0.039	-0.44	0	-0.13	0	1.3	0.79	1.6
1997-01-01	0	0.91	0.89	0	-0.13	0	0	0.94	1.2
1997-02-01	2.9	-2.0	-2.1	0	-0.13	0	2.9	0.71	0.93
1997-03-01	1.7	-0.55	-0.52	0	-0.11	0	1.7	1.1	1.2
1997	6.2	0.55	-1.5	0	-0.65	0	6.2	4.6	8.9
1997-11-01	0.71	1.5	0.051	0	-0.091	0	0.71	0.79	3.9
1997-12-01	0.83	0.51	0.0039	0	-0.087	0	0.83	0.83	1.7
1998-01-01	2.7	-2.0	-2.0	0	-0.087	0	2.7	0.71	1.1
1998-02-01	0.39	0.51	0.53	0	-0.087	0	0.39	0.91	0.82
1998-03-01	6.4	-5.7	-5.7	0	-0.071	0	6.4	0.71	0.98
1998	11	-5.2	-7.1	0	-0.42	0	11	3.9	8.5
1998-11-01	0	2.4	0.61	0	-0.067	0	0	0.59	4.0
1998-12-01	1.1	0.20	-0.55	0	-0.067	0	1.1	0.51	1.7
1999-01-01	0.75	0.20	0.19	0	-0.067	0	0.75	0.94	1.2
1999-02-01	0.039	1.1	0.83	0	-0.067	0	0.039	0.87	1.3
1999-03-01	0.20	1.2	0.41	0	-0.063	0	0.20	0.63	1.3
1999	2.0	5.1	1.5	0	-0.33	0	2.0	3.5	9.5
1999-11-01	0	2.8	0.80	0	-0.063	0	0	0.79	4.0
1999-12-01	0	1.8	0.44	0	-0.059	0	0	0.43	2.6
2000-01-01	0.039	1.0	0.29	0	-0.059	0	0.039	0.35	1.4
2000-02-01	0.28	0.91	0.23	0	-0.059	0	0.28	0.51	1.2
2000-03-01	0.71	0.63	-0.19	0	-0.055	0	0.71	0.47	1.6
2000	1.0	7.2	1.6	0	-0.30	0	1.0	2.6	11
2000-11-01	5.3	-3.1	-4.3	0	-0.051	0	5.3	0.94	4.0
2000-12-01	2.1	-1.2	-1.2	0	-0.047	0	2.1	0.94	1.0
2001-01-01	0.079	0.98	0.97	0	-0.047	0	0.079	1.1	1.4
2001-02-01	3.4	-2.7	-2.6	0	-0.043	0	3.4	0.71	0.98
2001-03-01	1.7	-0.75	-0.74	0	-0.039	0	1.7	1.0	0.93
2001	13	-6.8	-7.9	0	-0.23	0	13	4.7	8.4
2001-11-01	0.39	2.1	0.63	0	-0.043	0	0.39	1.0	4.0
2001-12-01	0.28	1.2	0.41	0	-0.039	0	0.28	0.71	2.6
2002-01-01	1.9	-1.1	-1.1	0	-0.039	0	1.9	0.71	1.0
2002-02-01	0.24	0.75	0.74	0	-0.039	0	0.24	0.94	1.1
2002-03-01	0	1.4	0.78	0	-0.039	0	0	0.79	1.2
2002	2.8	4.4	1.4	0	-0.20	0	2.8	4.2	9.8
2002-11-01	0.079	2.3	0.32	0	-0.039	0	0.079	0.43	4.1
2002-12-01	0.87	0.63	-0.46	0	-0.039	0	0.87	0.39	2.1
2003-01-01	0.98	-0.16	-0.22	0	-0.039	0	0.98	0.75	1.3
2003-02-01	0.39	0.94	0.63	0	-0.043	0	0.39	1.0	1.1
2003-03-01	4.9	-3.9	-4.1	0	-0.035	0	4.9	0.79	1.4
2003	7.2	-0.16	-3.9	0	-0.20	0	7.2	3.4	9.9
2003-11-01	0.039	3.0	0.50	0	-0.039	0	0.039	0.59	4.2
2003-12-01	0.91	0.28	-0.15	0	-0.035	0	0.91	0.71	2.2
2004-01-01	0.94	0.079	-0.19	0	-0.035	0	0.94	0.79	1.5
2004-02-01	1.5	-0.67	-0.71	0	-0.035	0	1.5	0.75	1.1
2004-03-01	0.67	0.35	0.31	0	-0.031	0	0.67	0.98	1.0
2004	4.0	3.0	-0.23	0	-0.18	0	4.0	3.8	9.9

Table IV-B.48 SC5 Winter Storm Period Water Balance

Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
2004-11-01	1.2	1.0	-0.33	0	-0.031	0	1.2	0.87	3.8
2004-12-01	0.67	0.28	0.28	0	-0.031	0	0.67	0.94	1.4
2005-01-01	2.8	-1.9	-1.9	0	-0.028	0	2.8	0.87	0.93
2005-02-01	4.2	-3.5	-3.4	0	-0.031	0	4.2	0.79	0.89
2005-03-01	7.4	-6.7	-6.7	0	-0.024	0	7.4	0.67	0.82
2005	16	-11	-12	0	-0.15	0	16	4.1	7.9
2005-11-01	0.43	2.1	0.67	0	-0.031	0	0.43	1.1	4.1
2005-12-01	0	1.5	0.58	0	-0.028	0	0	0.59	2.2
2006-01-01	0	1.1	0.44	0	-0.031	0	0	0.43	1.5
2006-02-01	0	1.2	0.36	0	-0.031	0	0	0.35	1.4
2006-03-01	0.12	1.5	0.28	0	-0.031	0	0.12	0.39	1.6
2006	0.55	7.4	2.3	0	-0.15	0	0.55	2.8	11


Annual Water Balance - 56-Year Simulated Period (Results on October 1)
Potential Surface Flux [in]
Actual Surface Flux [in]
Root Water Uptake [in]
Net Infiltration [in]
Surface Runoff [in]
Surface Infiltration [in]
Evaporation [in]
Precipitation (in)
Potential Evapotranspiration [in]
Monthly Water Balance - 9 Wet Years (1983 - 1991)
Potential Surface Flux [in]
Actual Surface Flux [in]
Root Water Uptake [in]
Net Infiltration [in]
Surface Runoff [in]
Surface Infiltration [in]
Evaporation [in]
Precipitation [in]
Potential Evapotranspiration [in]
Net Infiltration 7%
Surface Runoff 0%
Root Water Uptake 0%
Evaporation 93%
Depth (ft)
SOIL-LIKE
SCAVENGER BEACH
NOT FOR CONSTRUCTION
TO BE READ WITH KLOHN CRIPPEN BERGER REPORT DATED MAY 2021
AS A MUTUAL PROTECTION TO OUR CLIENT, THE PUBLIC AND OURSELVES, ALL REPORTS AND DRAWINGS ARE SUBMITTED FOR THE CONFIDENTIAL INFORMATION OF OUR CLIENT FOR A SPECIFIC PROJECT AND AUTHORIZATION FOR USE AND/OR PUBLICATION OF DATA,STATEMENTS,CONCLUSIONS OR ABSTRACTS FROM OR REGARDING OUR REPORTS AND DRAWINGS IS RESERVED PENDING OUR WRITTEN APPROVAL.
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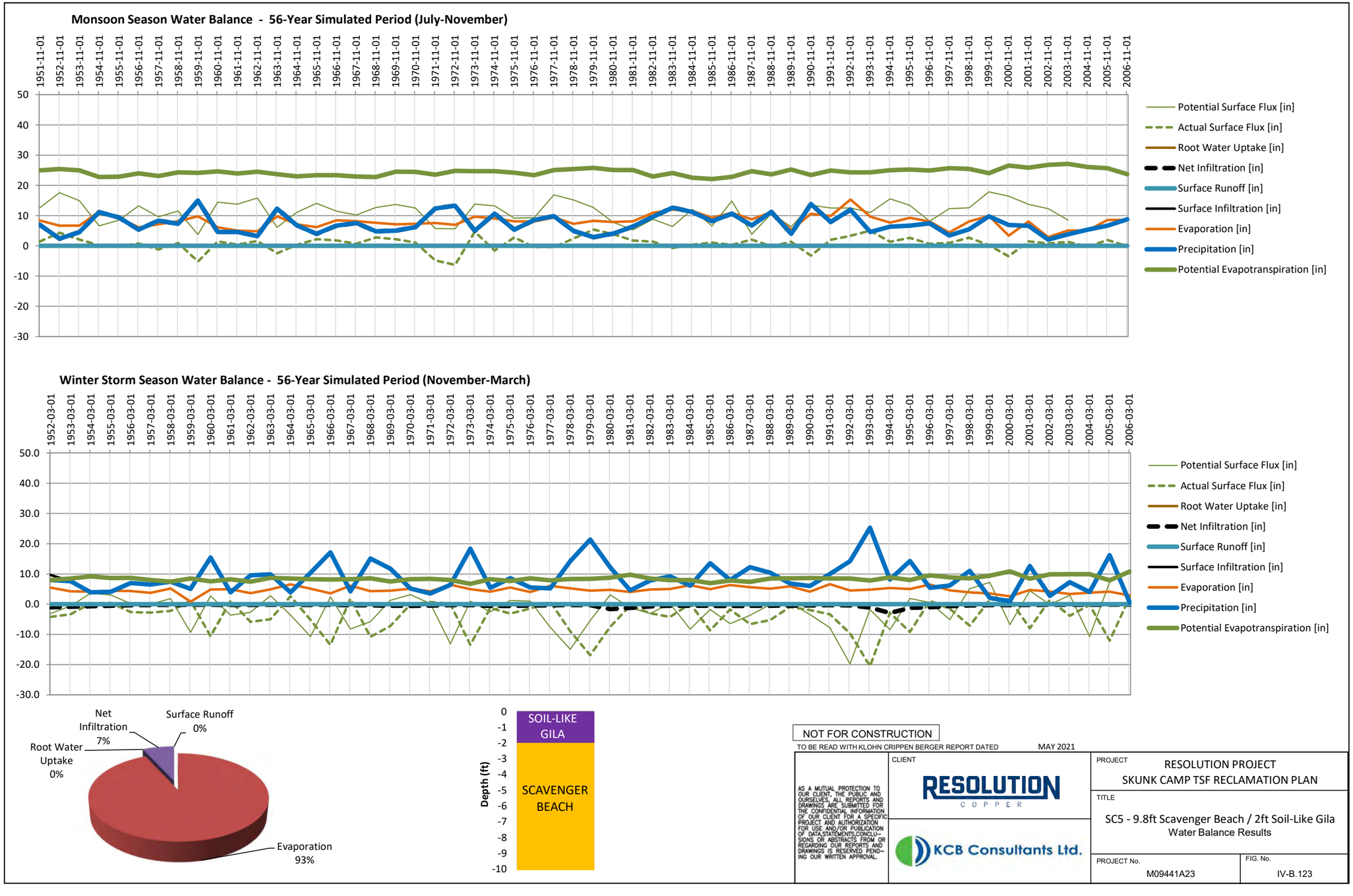
PROJECT
RESOLUTION PROJECT
SKUNK CAMP TSF RECLAMATION PLAN
TITLE
SC5 - 9.8ft Scavenger Beach / 2ft Soil-Like Gila Water Balance Results
PROJECT No.
M09441A23
FIG. No.
IV-B.122


Monsoon Season Water Balance - 56-Year Simulated Period (July-November)
Potential Surface Flux [in]
Actual Surface Flux [in]
Root Water Uptake [in]
Net Infiltration [in]
Surface Runoff [in]
Surface Infiltration [in]
Evaporation [in]
Precipitation [in]
Potential Evapotranspiration [in]
Winter Storm Season Water Balance - 56-Year Simulated Period (November-March)
Net Infiltration 7%
Surface Runoff 0%
Root Water Uptake 0%
Evaporation 93%
SOIL-LIKE GILA
SCAVENGER BEACH
Depth (ft)
NOT FOR CONSTRUCTION
TO BE READ WITH KLOHN CRIPPEN BERGER REPORT DATED MAY 2021
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CLIENT
RESOLUTION COPPER
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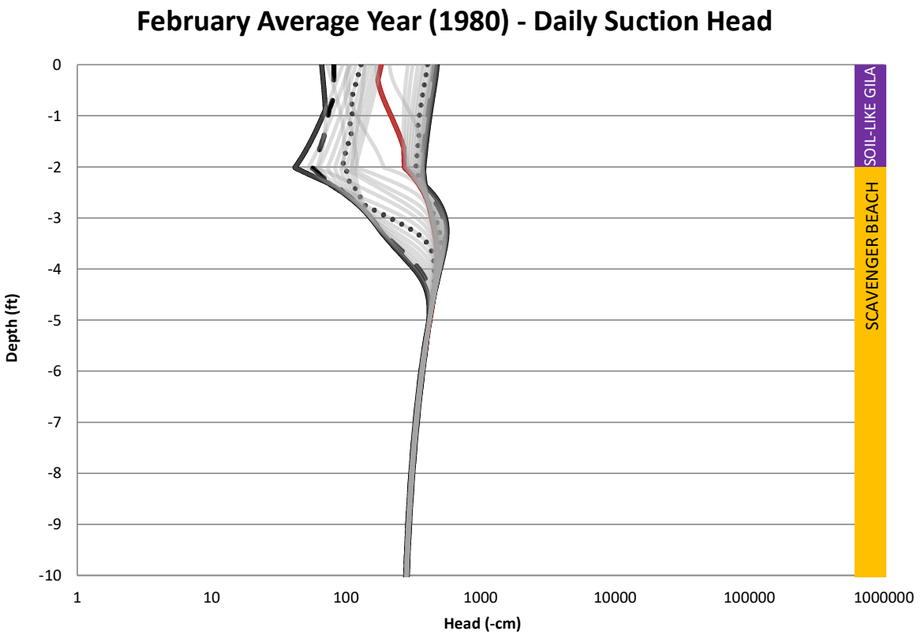
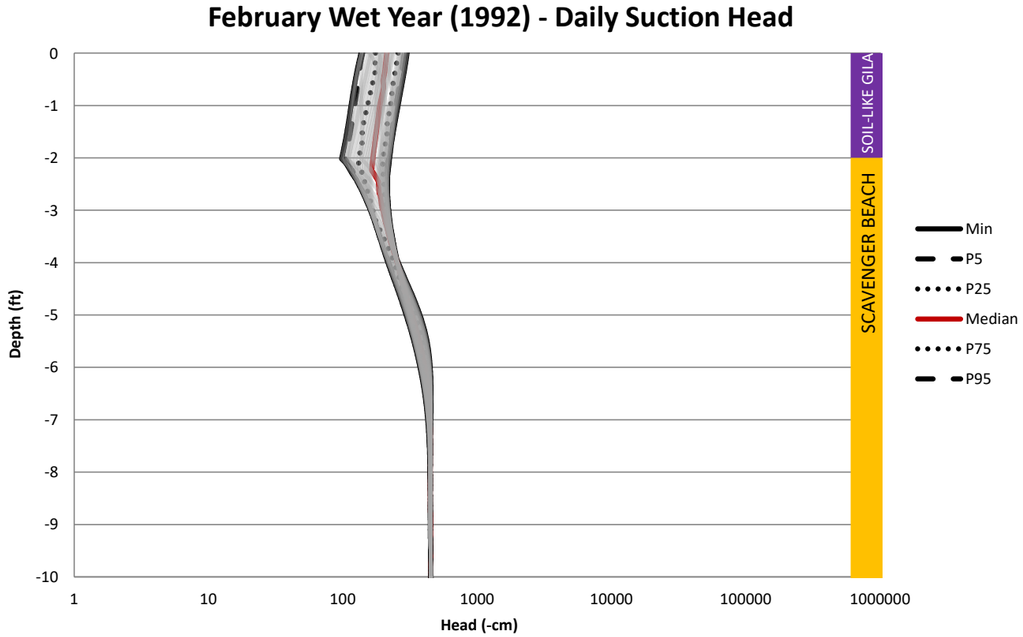
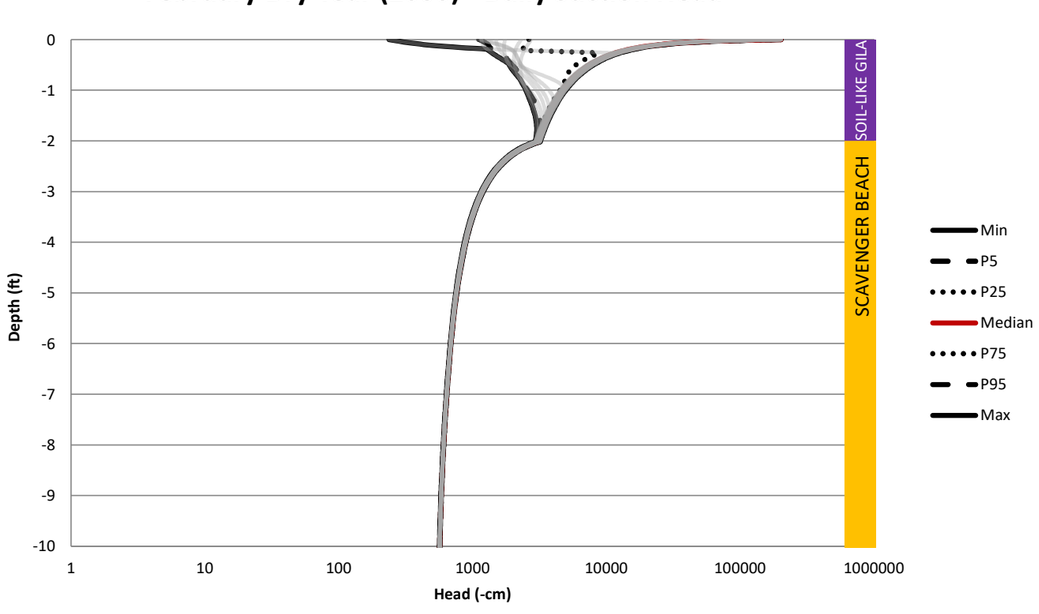
PROJECT
RESOLUTION PROJECT
SKUNK CAMP TSF RECLAMATION PLAN
TITLE
SC5 - 9.8ft Scavenger Beach / 2ft Soil-Like Gila
Water Balance Results
PROJECT No.
M09441A23
FIG. No.
IV-B.123







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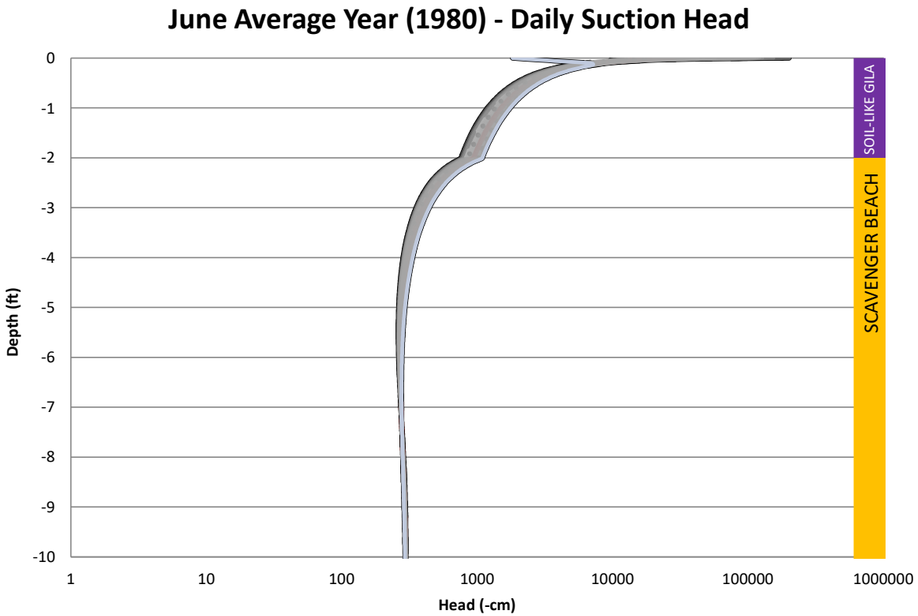
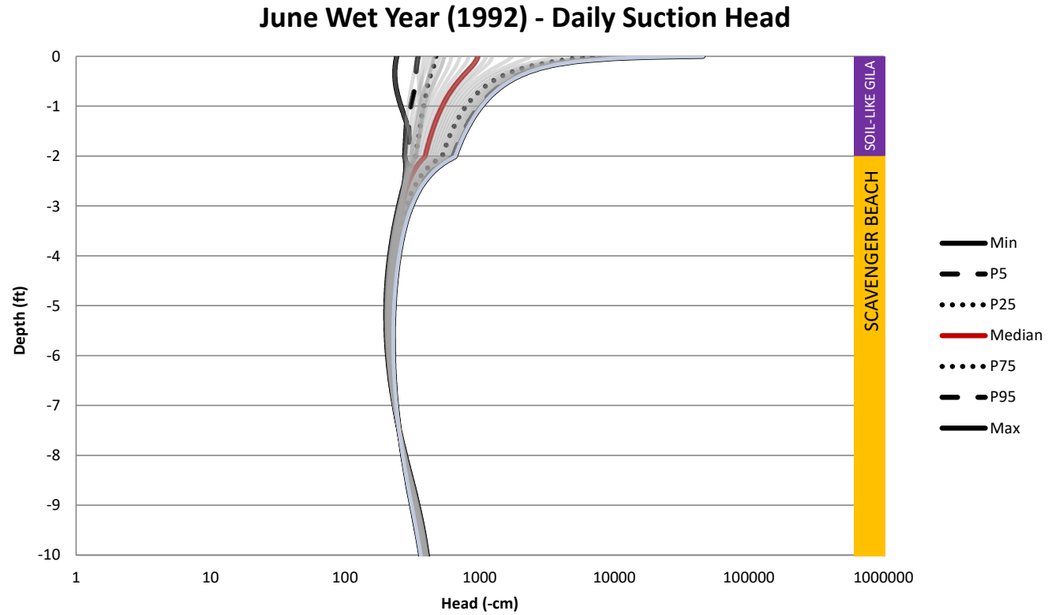
SKUNK CAMP TSF RECLAMATION PLAN

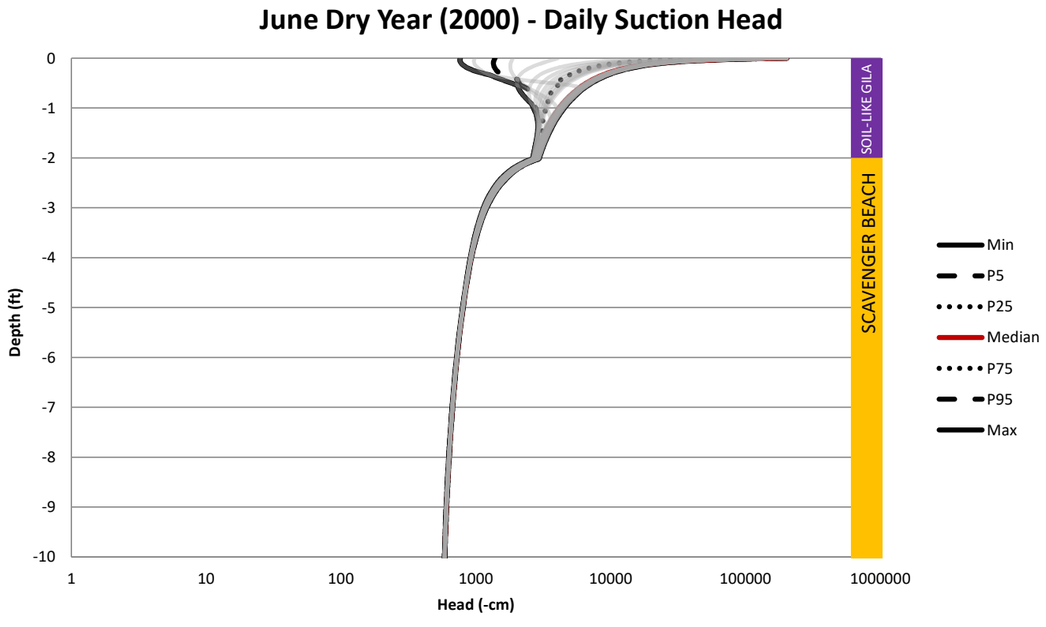
TITLE: SC5 - 9.8ft Scavenger Beach / 2ft Soil-Like Gila Suction Profiles - Winter (February)

PROJECT No. M09441A23

FIG. No. IV-B-124







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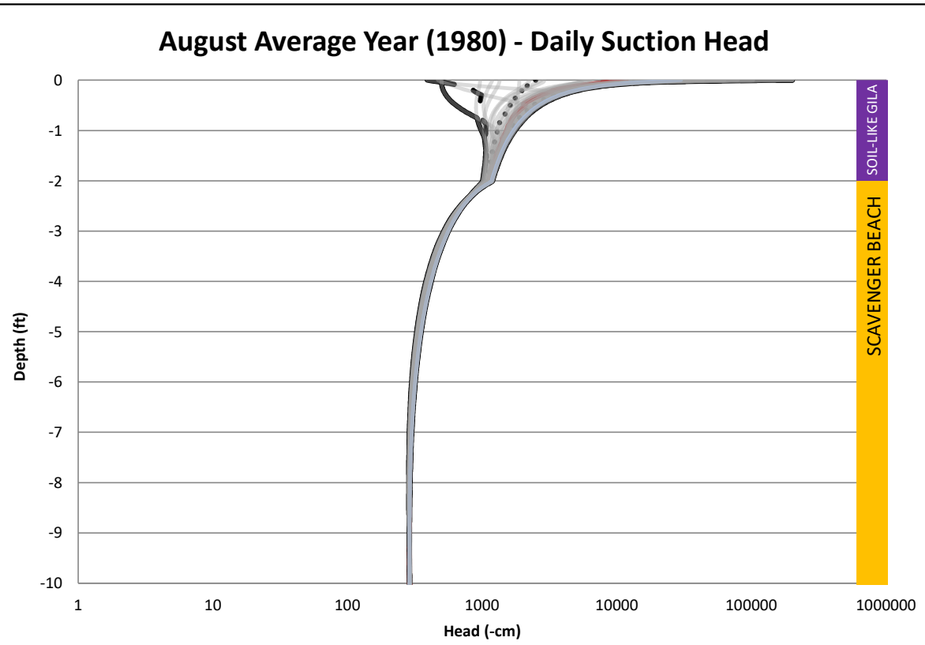
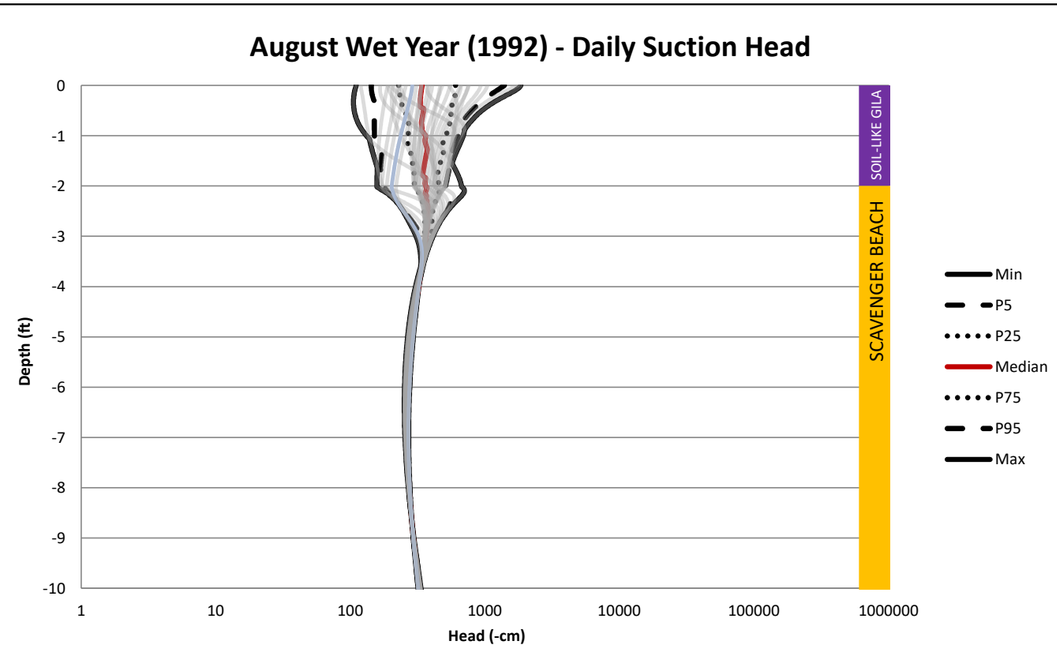
SKUNK CAMP TSF RECLAMATION PLAN

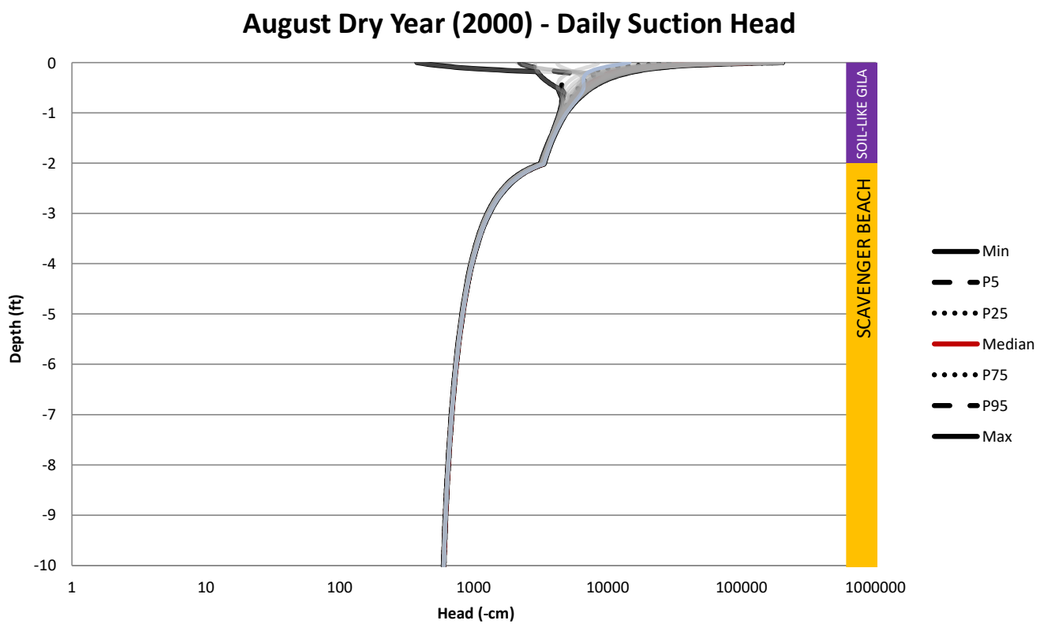
TITLE: SC5 - 9.8ft Scavenger Beach / 2ft Soil-Like Gila Suction Profiles - Dry Season (June)

PROJECT No. M09441A23

FIG. No. IV-B.125







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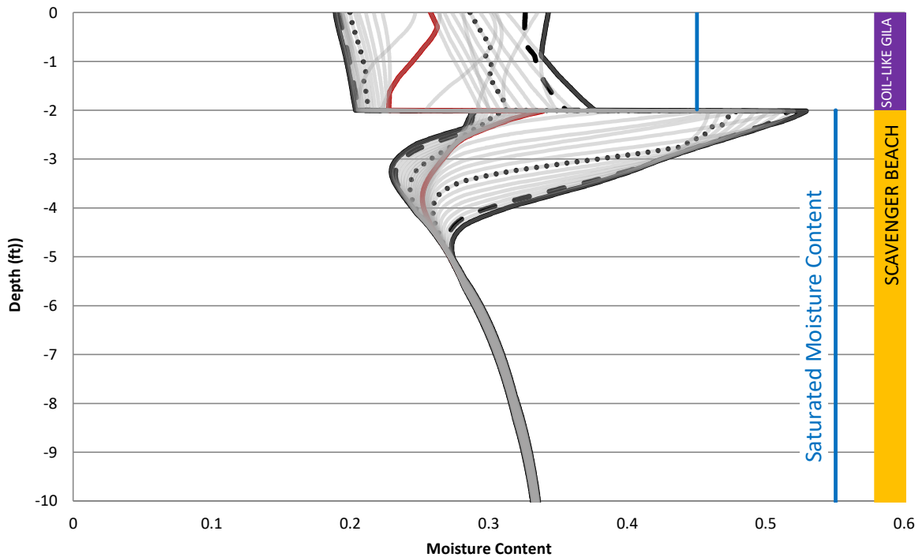
SKUNK CAMP TSF RECLAMATION PLAN

TITLE: SC5 - 9.8ft Scavenger Beach / 2ft Soil-Like Gila Suction Profiles - Summer Monsoon (August)

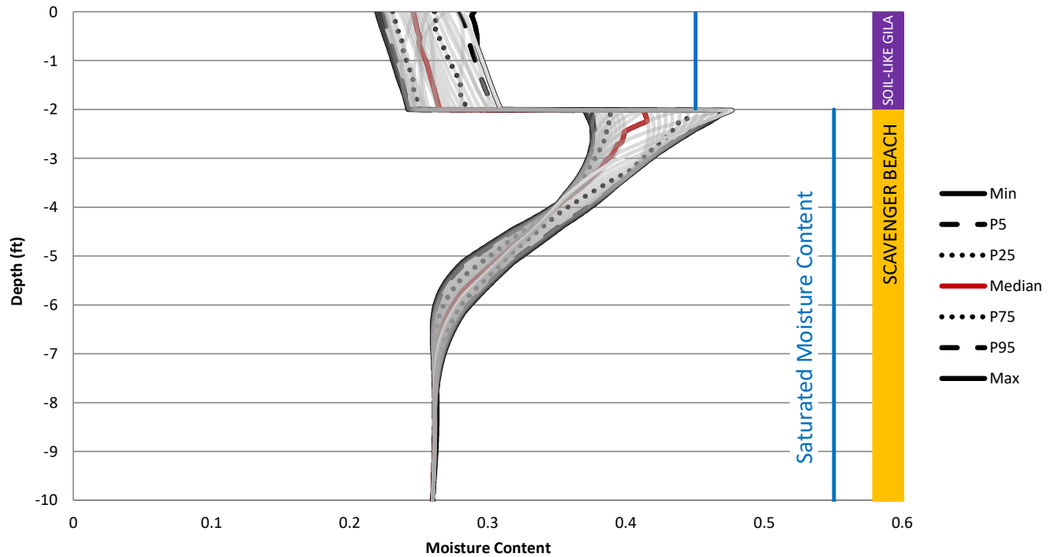
PROJECT No. M09441A23

FIG. No. IV-B.126

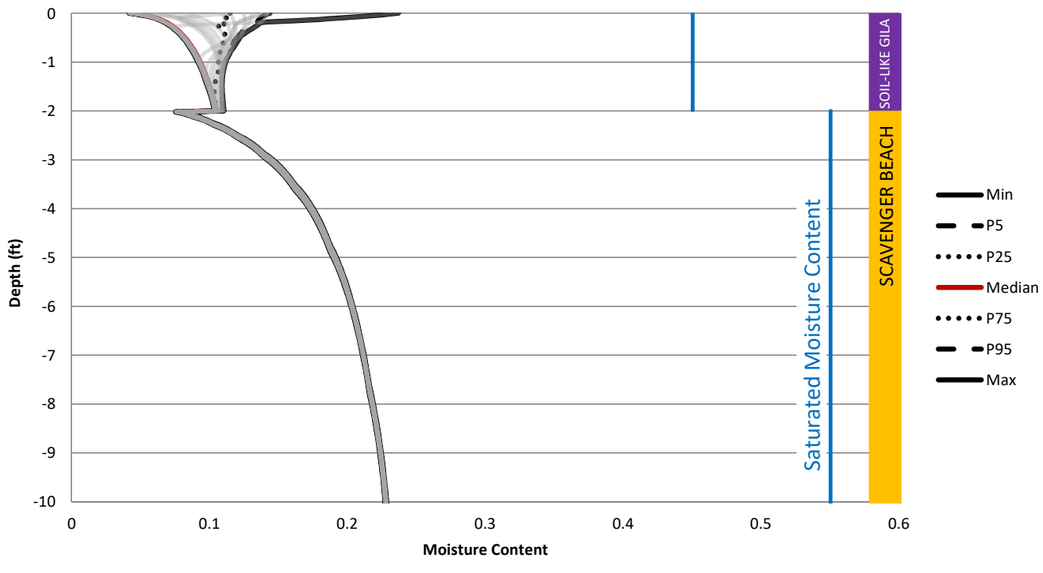
February Average Year (1980) - Daily Moisture Content



February Wet Year (1992) - Daily Moisture Content



February Dry Year (2000) - Daily Moisture Content



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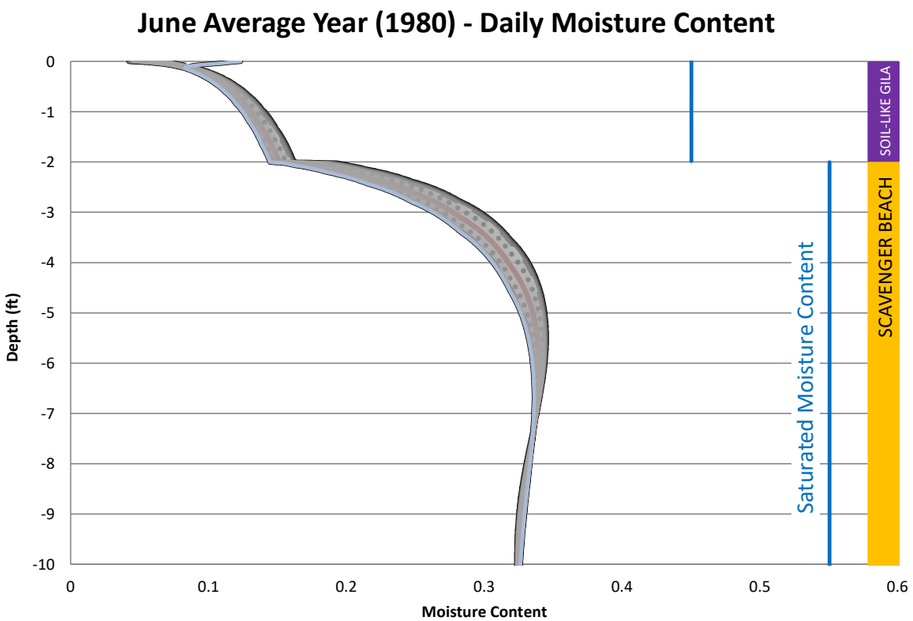
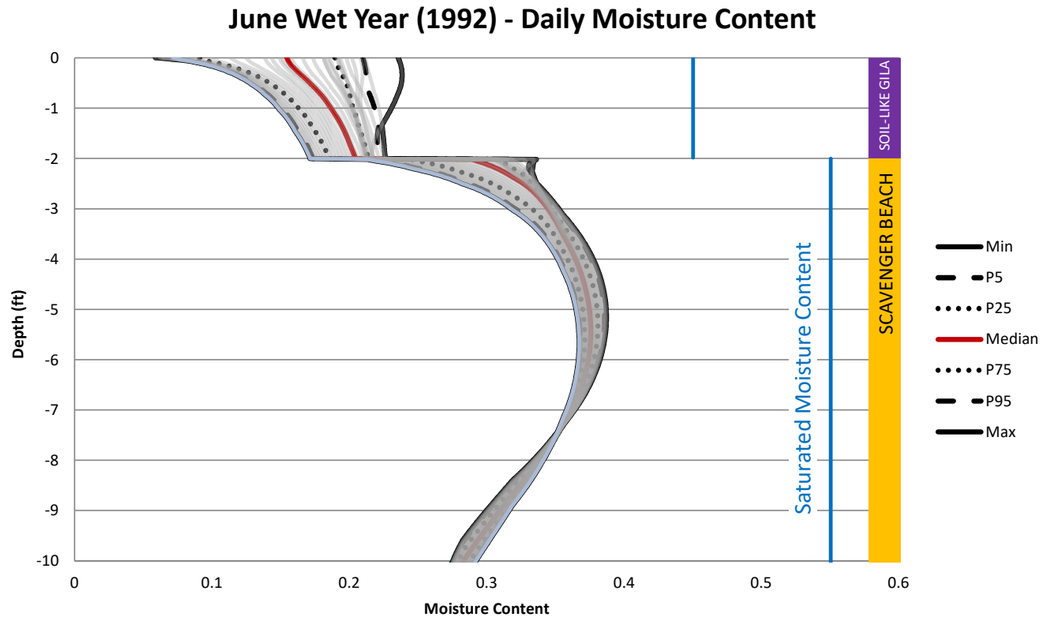
SKUNK CAMP TSF RECLAMATION PLAN

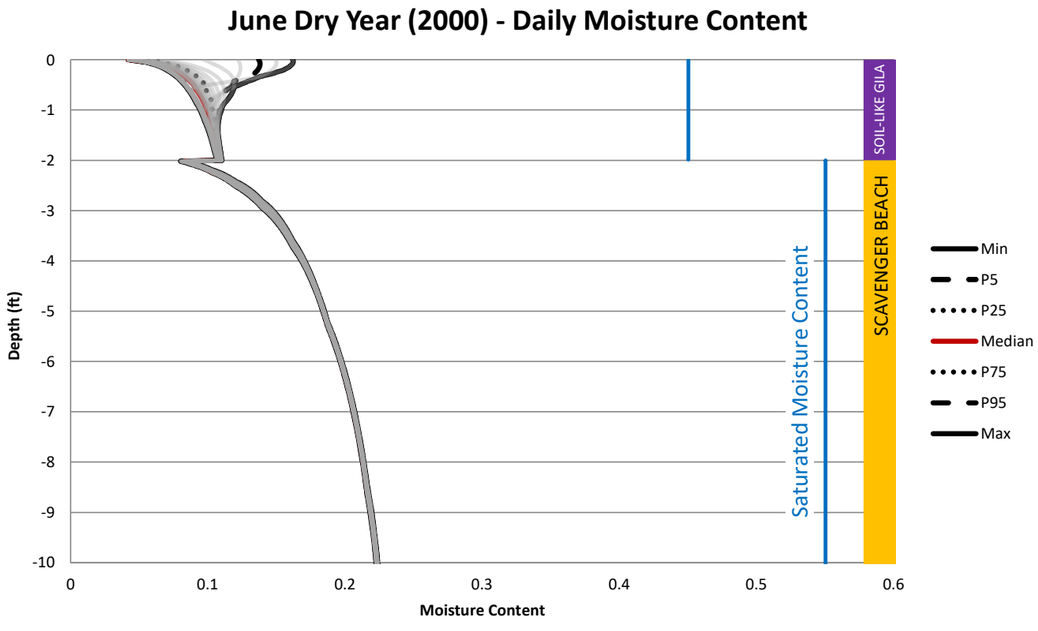
TITLE: SC5 - 9.8ft Scavenger Beach / 2ft Soil-Like Gila Moisture Content - Winter (February)

PROJECT No. M09441A23

FIG. No. IV-B.127







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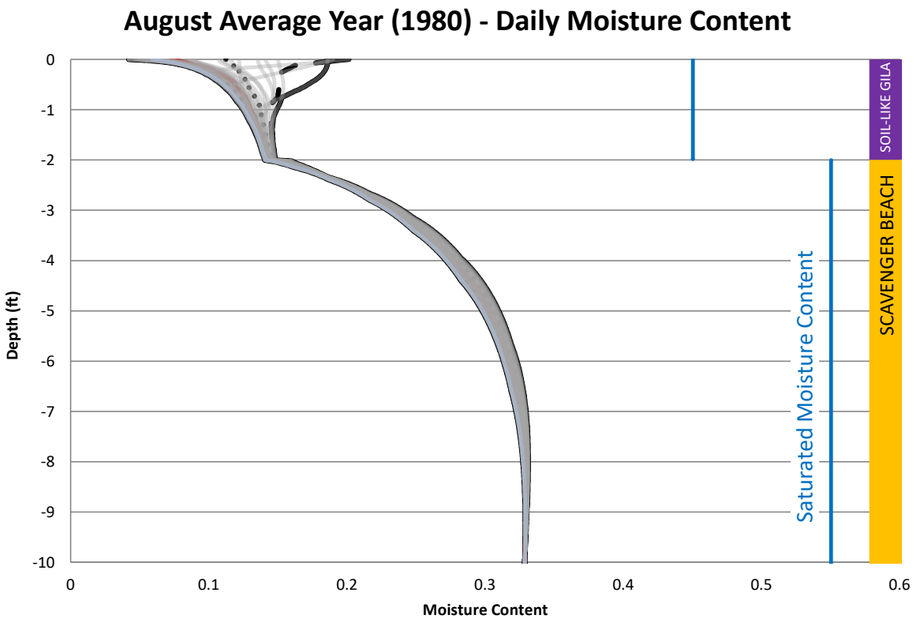
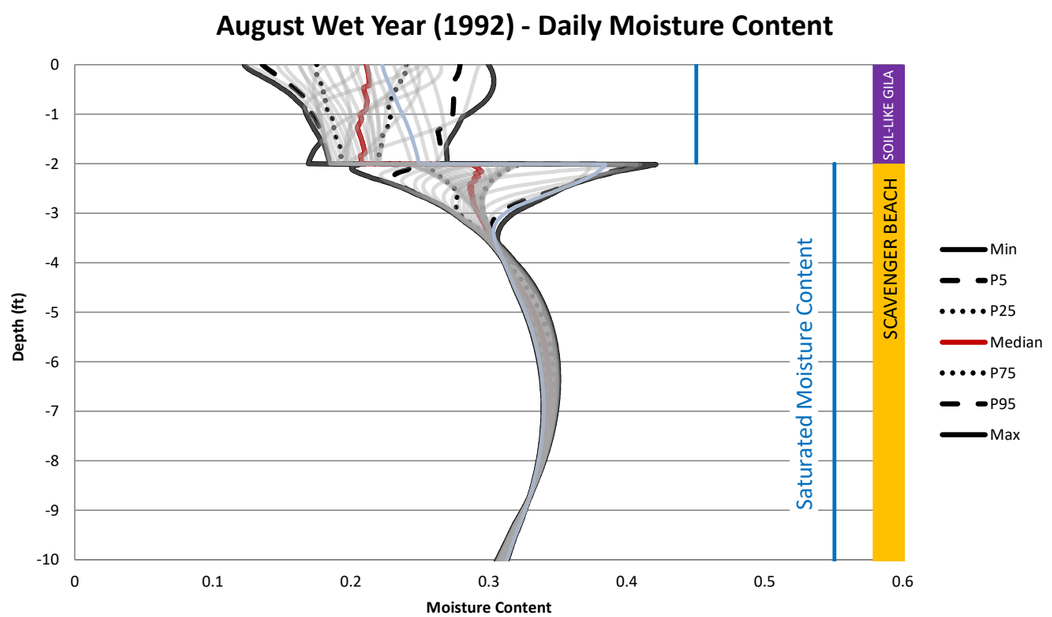
SKUNK CAMP TSF RECLAMATION PLAN

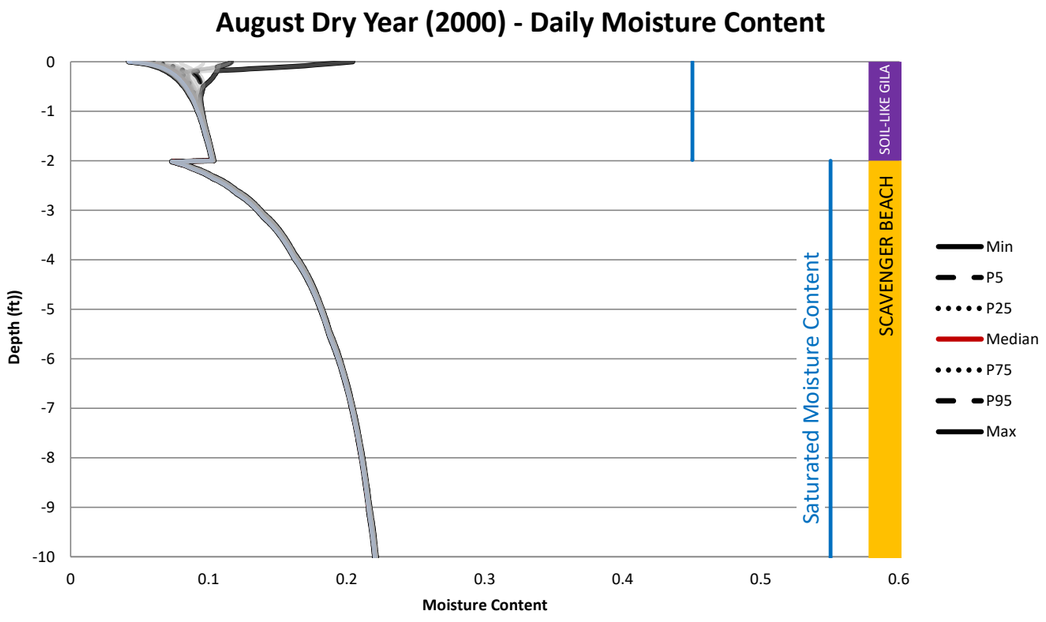
TITLE: SC5 - 9.8ft Scavenger Beach / 2ft Soil-Like Gila Moisture Content - Dry Season(June)

PROJECT No. M09441A23

FIG. No. IV-B.128







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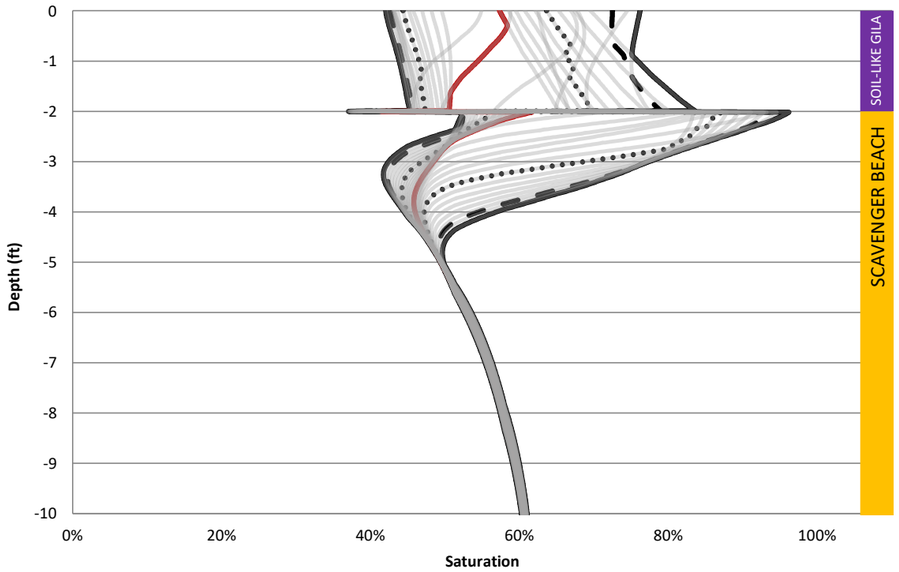
TITLE: SC5 - 9.8ft Scavenger Beach / 2ft Soil-Like Gila Moisture Content - Summer Monsoon (August)

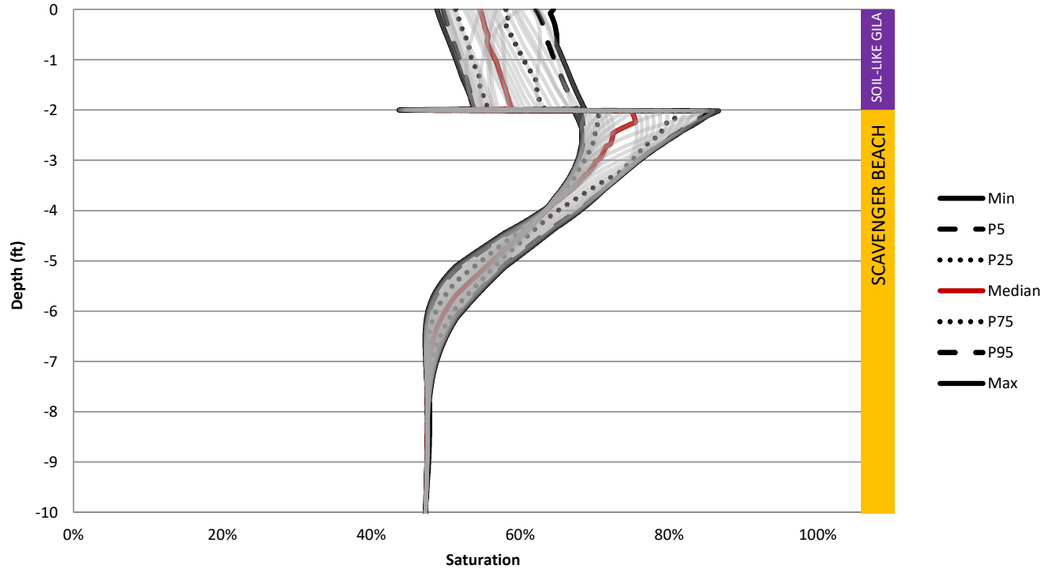
PROJECT No. M09441A23

FIG. No. IV-B.129

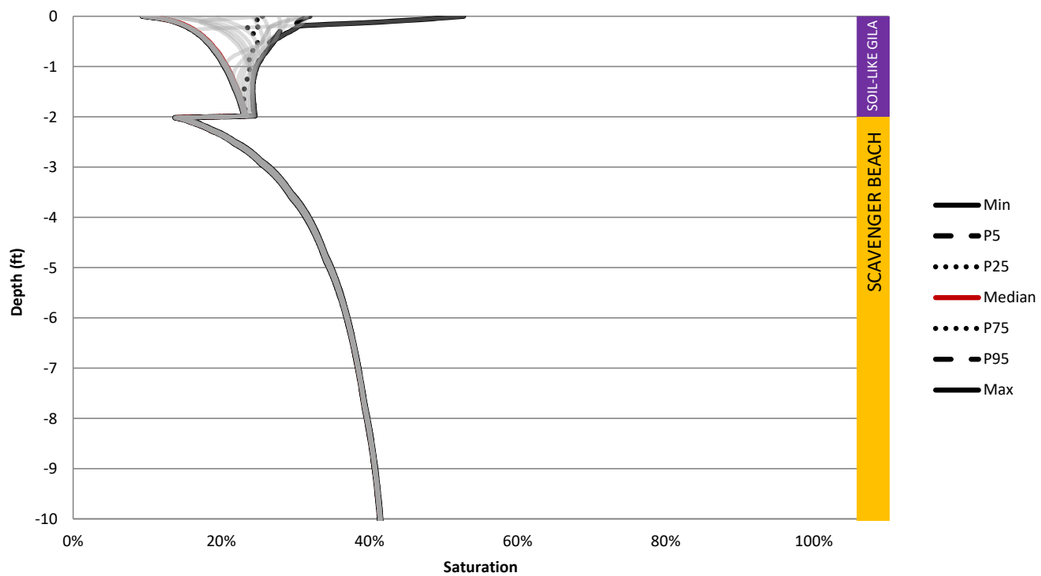
February Average Year (1980) - Daily Saturation



February Wet Year (1992) - Daily Saturation



February Dry Year (2000) - Daily Saturation



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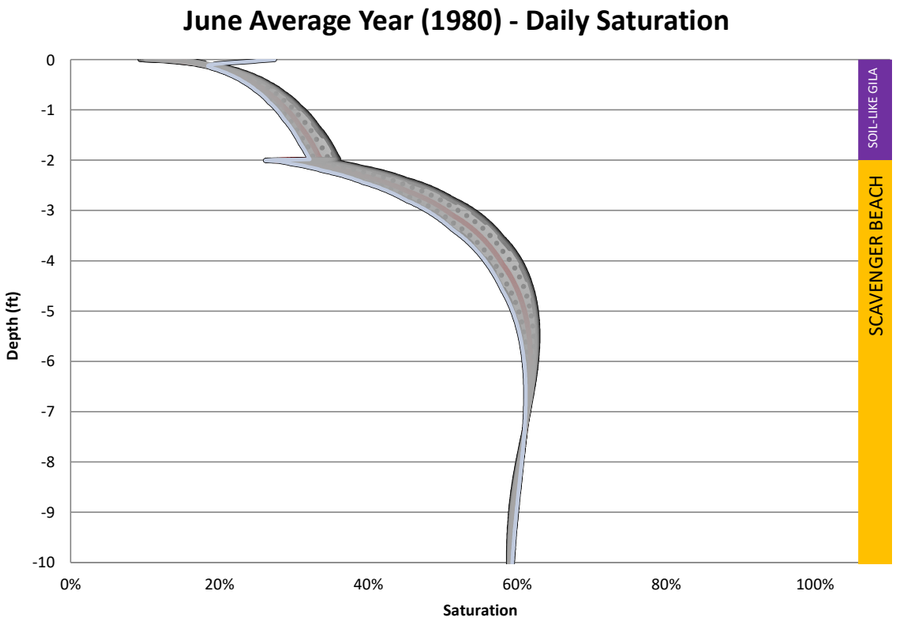
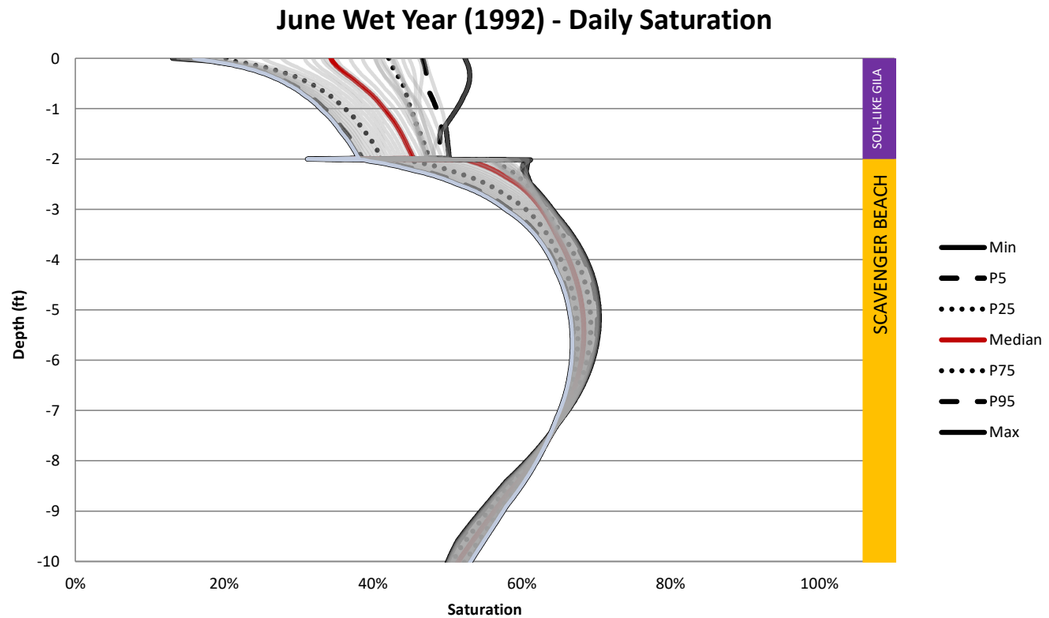
SKUNK CAMP TSF RECLAMATION PLAN

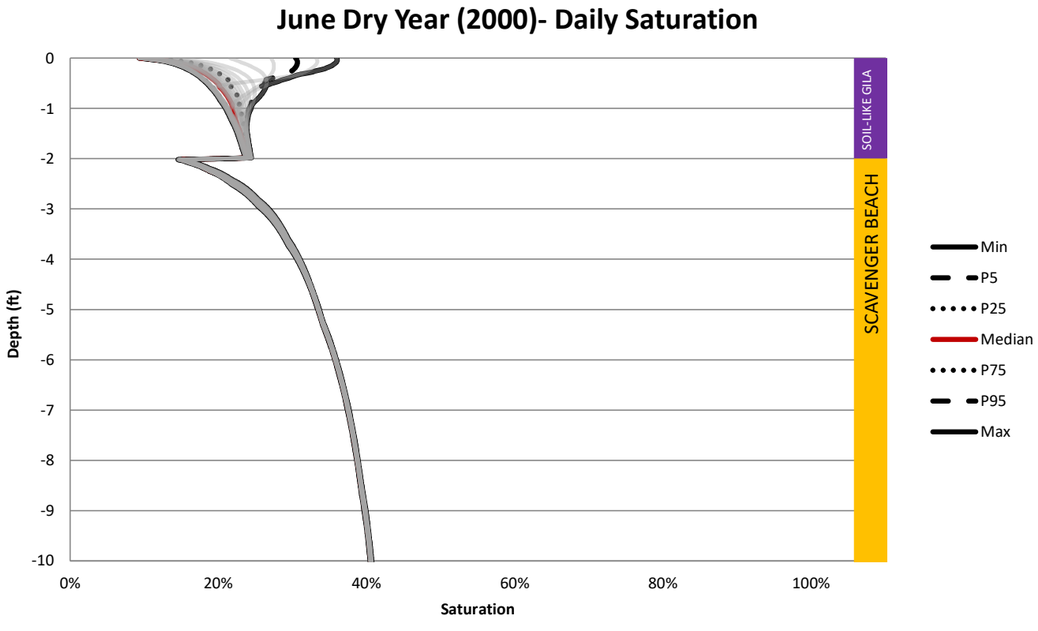
TITLE: SC5 - 9.8ft Scavenger Beach / 2ft Soil-Like Gila Saturation - Winter (February)

PROJECT No. M09441A23

FIG. No. IV-B.130







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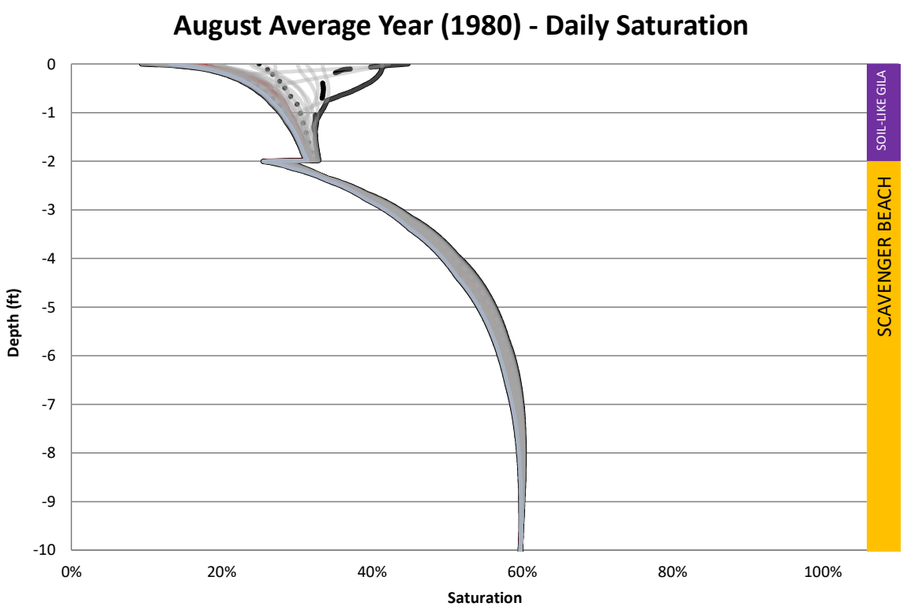
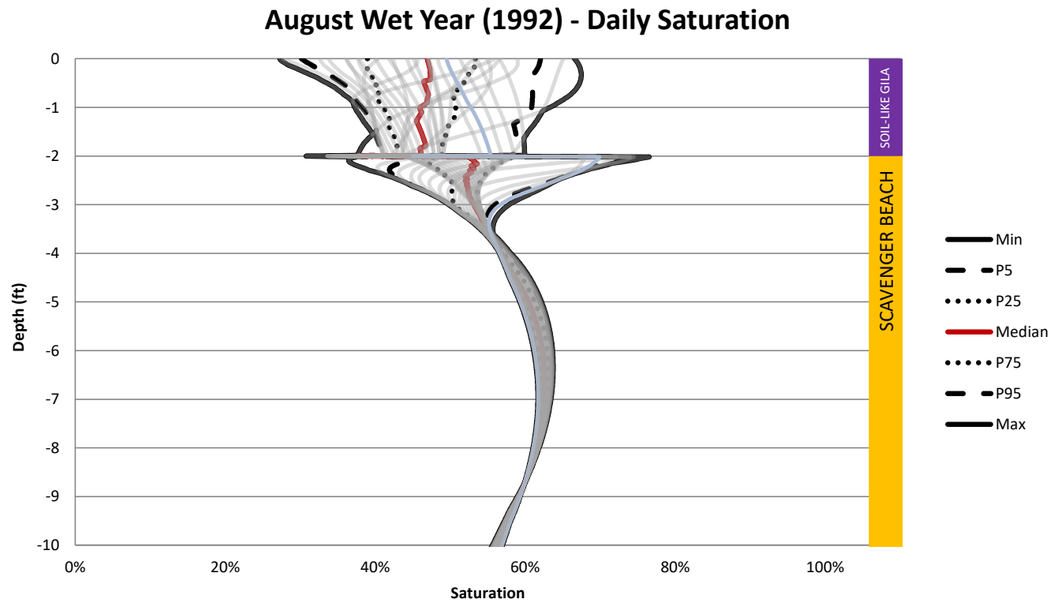
SKUNK CAMP TSF RECLAMATION PLAN

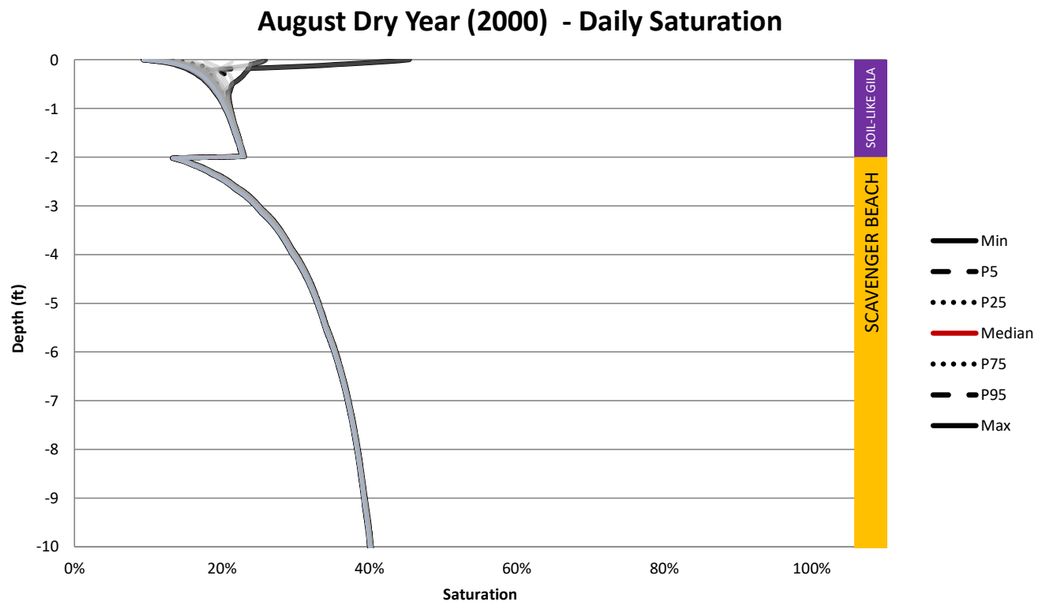
TITLE: SC5 - 9.8ft Scavenger Beach / 2ft Soil-Like Gila Saturation - Dry Season (June)

PROJECT No. M09441A23

FIG. No. IV-B.131







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SKUNK CAMP TSF RECLAMATION PLAN

TITLE: SC5 - 9.8ft Scavenger Beach / 2ft Soil-Like Gila Saturation - Summer Monsoon (August)

PROJECT No. M09441A23

FIG. No. IV-B.132

Table IV-M.1 SC6 Annual Water Balance

Water Year	Result Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
		(in)	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
1951	1951-10-01	14	14	-8.9	0	-2.1	0	14	5.1	36
1952	1952-10-01	0	11	-14	0	-9.6	0	20	6.8	41
1953	1953-10-01	15	16	-11	0	-12	0	15	4.3	41
1954	1954-10-01	21	11	-15	0	-9.4	0	21	6.2	41
1955	1955-10-01	13	17	-8.8	0	-13	0	13	4.6	39
1956	1956-10-01	13	20	-7.9	0	-11	0	13	4.7	42
1957	1957-10-01	15	15	-8.8	0	-8.7	0	15	6.2	39
1958	1958-10-01	19	12	-12	0	-10	0	19	7.2	40
1959	1959-10-01	16	17	-9.7	0	-9.7	0	16	5.8	42
1960	1960-10-01	19	14	-14	0	-16	0	19	5.1	42
1961	1961-10-01	9.8	22	-4.1	0	-8.1	0	9.8	5.6	40
1962	1962-10-01	14	17	-9.3	0	-7.0	0	14	4.8	40
1963	1963-10-01	24	8.2	-18	0	-8.7	0	24	5.8	41
1964	1964-10-01	11	19	-5.1	0	-13	0	11	6.3	39
1965	1965-10-01	18	13	-12	0	-10	0	18	5.8	39
1966	1966-10-01	23	9.0	-18	0	-16	0	23	4.8	41
1967	1967-10-01	14	16	-8.6	0	-9.7	0	14	5.7	39
1968	1968-10-01	22	8.3	-17	0	-16	0	22	5.2	39
1969	1969-10-01	19	13	-13	0	-13	0	19	5.8	40
1970	1970-10-01	16	16	-9.8	0	-10	0	16	6.0	40
1971	1971-10-01	12	19	-7.5	0	-8.3	0	12	4.6	40
1972	1972-10-01	11	22	-6.4	0	-9.2	0	11	4.8	43
1973	1973-10-01	31	-1.1	-23	0	-16	0	31	7.5	38
1974	1974-10-01	15	15	-10	0	-12	0	15	5.3	39
1975	1975-10-01	19	10	-12	0	-12	0	19	6.7	37
1976	1976-10-01	16	15	-10	0	-10	0	16	5.7	40
1977	1977-10-01	16	15	-10	0	-9.7	0	16	5.7	40
1978	1978-10-01	24	7.6	-18	0	-19	0	24	6.1	40
1979	1979-10-01	30	2.1	-23	0	-24	0	30	6.6	41
1980	1980-10-01	20	11	-14	0	-14	0	20	6.5	40
1981	1981-10-01	15	18	-9.5	0	-9.9	0	15	5.6	43
1982	1982-10-01	23	6.5	-16	0	-11	0	23	7.7	38
1983	1983-10-01	27	2.5	-20	0	-17	0	27	7.1	38
1984	1984-10-01	18	13	-9.8	0	-16	0	18	7.7	39
1985	1985-10-01	22	5.5	-16	0	-15	0	22	6.8	36
1986	1986-10-01	21	9.3	-15	0	-13	0	21	6.5	39
1987	1987-10-01	20	9.7	-14	0	-15	0	20	6.1	38
1988	1988-10-01	23	8.0	-16	0	-13	0	23	6.9	39
1989	1989-10-01	12	22	-6.9	0	-13	0	12	4.7	43
1990	1990-10-01	23	7.8	-16	0	-7.8	0	23	6.6	39
1991	1991-10-01	23	7.7	-16	0	-19	0	23	7.0	39
1992	1992-10-01	36	-5.4	-28	0	-22	0	36	8.6	40
1993	1993-10-01	33	-2.0	-27	0	-33	0	33	5.6	39
1994	1994-10-01	15	17	-9.1	0	-12	0	15	6.1	41
1995	1995-10-01	25	5.8	-18	0	-13	0	25	6.5	39
1996	1996-10-01	13	19	-7.7	0	-11	0	13	5.7	42
1997	1997-10-01	10	23	-5.4	0	-8.7	0	10	4.7	42
1998	1998-10-01	20	9.7	-14	0	-9.1	0	20	6.5	39
1999	1999-10-01	15	16	-9.1	0	-9.2	0	15	5.8	40
2000	2000-10-01	5.4	30	-2.4	0	-8.6	0	5.4	3.1	45
2001	2001-10-01	23	8.6	-17	0	-9.1	0	23	6.2	41
2002	2002-10-01	5.4	29	-2.0	0	-10	0	5.4	3.4	44
2003	2003-10-01	13	20	-7.8	0	-5.8	0	13	5.3	43
2004	2004-10-01	12	22	-7.2	0	-6.3	0	12	5.0	44

Table IV-M.1 SC6 Annual Water Balance

Water Year	Result Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
		(in)	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
2005	2005-10-01	24	7.0	-19	0	-12	0	24	5.4	39
2006	2006-10-01	12	20	-7.4	0	-10	0	12	4.7	41

Table IV-M.2 SC6 Monthly Water Balance 9 Wet Years (1983 to 1991)

Month	Result Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
		[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
Nov-82	1982-11-30	0	0.83	-1.8	0	-2.2	0	2.5	0.68	4.9
Dec-82	1982-12-30	2.5	-1.7	-1.9	0	-1.2	0	2.5	0.60	0.97
Jan-83	1983-01-29	0.71	0.28	-0.40	0	-1.2	0	0.71	0.29	1.0
Feb-83	1983-02-28	3.5	-2.5	-3.1	0	-1.3	0	3.5	0.40	1.0
Mar-83	1983-03-30	5.4	-4.1	-4.7	0	-1.3	0	5.4	0.73	1.7
Apr-83	1983-04-29	0.83	1.4	-0.079	0	-1.6	0	0.83	0.75	2.5
May-83	1983-05-29	0	3.5	0.16	0	-2.0	0	0	0.16	4.1
Jun-83	1983-06-28	0	4.4	0.079	0	-1.9	0	0	0.091	5.8
Jul-83	1983-07-28	2.1	2.4	-1.5	0	-1.6	0	2.1	0.68	6.0
Aug-83	1983-08-27	3.8	-0.47	-2.3	0	-1.4	0	3.8	1.5	4.3
Sep-83	1983-09-26	1.8	1.8	-0.83	0	-1.2	0	1.8	1.0	4.9
Oct-83	1983-10-26	4.9	-2.7	-4.1	0	-1.2	0	4.9	0.76	3.1
Nov-83	1983-11-25	1.6	-0.20	-1.3	0	-1.4	0	1.6	0.29	2.1
Dec-83	1983-12-25	1.9	-1.1	-1.5	0	-1.6	0	1.9	0.46	0.94
Jan-84	1984-01-24	1.5	-0.79	-0.94	0	-1.6	0	1.5	0.57	0.88
Feb-84	1984-02-23	0	1.3	0.16	0	-1.7	0	0	0.13	1.4
Mar-84	1984-03-24	0	2.1	0.079	0	-1.6	0	0	0.075	2.2
Apr-84	1984-04-23	0.87	1.7	-0.47	0	-1.4	0	0.87	0.39	3.2
May-84	1984-05-23	0.67	2.9	-0.12	0	-1.2	0	0.67	0.59	4.3
Jun-84	1984-06-22	0.039	4.4	0.16	0	-1.1	0	0.039	0.17	5.8
Jul-84	1984-07-22	3.6	0.16	-2.3	0	-0.98	0	3.6	1.3	5.4
Aug-84	1984-08-21	3.9	-0.59	-2.2	0	-0.91	0	3.9	1.7	4.2
Sep-84	1984-09-20	1.1	2.6	-0.16	0	-0.87	0	1.1	0.99	4.5
Oct-84	1984-10-20	2.5	-0.28	-1.5	0	-0.83	0	2.5	1.0	3.6
Nov-84	1984-11-19	0	1.6	0.16	0	-0.83	0	0	0.16	2.0
Dec-84	1984-12-19	4.8	-4.1	-4.3	0	-0.87	0	4.8	0.50	1.2
Jan-85	1985-01-18	3.9	-3.3	-3.4	0	-0.91	0	3.9	0.57	0.67
Feb-85	1985-02-17	2.9	-2.2	-2.4	0	-1.1	0	2.9	0.42	0.63
Mar-85	1985-03-19	1.7	-0.47	-0.98	0	-1.5	0	1.7	0.68	1.5
Apr-85	1985-04-18	0.43	2.0	0.12	0	-1.8	0	0.43	0.57	2.5
May-85	1985-05-18	0.47	2.3	-0.079	0	-1.7	0	0.47	0.39	3.7
Jun-85	1985-06-17	0	3.8	0.12	0	-1.6	0	0	0.10	4.5
Jul-85	1985-07-17	0.20	4.0	-0.12	0	-1.3	0	0.20	0.098	5.4
Aug-85	1985-08-16	2.1	1.5	-1.2	0	-1.2	0	2.1	0.92	4.7
Sep-85	1985-09-15	2.2	1.4	-1.1	0	-1.1	0	2.2	1.1	5.2
Oct-85	1985-10-15	3.1	-0.83	-2.1	0	-0.98	0	3.1	1.0	3.5
Nov-85	1985-11-14	1.4	0.16	-0.94	0	-0.91	0	1.4	0.46	2.0
Dec-85	1985-12-14	2.8	-1.9	-2.2	0	-0.87	0	2.8	0.54	1.2
Jan-86	1986-01-13	0	1.1	0.35	0	-0.94	0	0	0.33	1.2
Feb-86	1986-02-12	2.3	-1.3	-2.1	0	-0.94	0	2.3	0.22	1.5
Mar-86	1986-03-14	1.9	-0.20	-1.4	0	-0.98	0	1.9	0.51	1.7
Apr-86	1986-04-13	3.1	-0.87	-2.4	0	-1.0	0	3.1	0.70	2.7
May-86	1986-05-13	0	3.4	0.16	0	-1.1	0	0	0.14	4.2
Jun-86	1986-06-12	0	4.3	0.079	0	-1.3	0	0	0.091	5.2
Jul-86	1986-07-12	2.2	2.3	-1.7	0	-1.3	0	2.2	0.53	6.1
Aug-86	1986-08-11	2.8	0.55	-1.9	0	-1.2	0	2.8	0.93	4.1
Sep-86	1986-09-10	3.0	0.63	-1.8	0	-1.1	0	3.0	1.1	4.8
Oct-86	1986-10-10	0.91	1.7	-0.31	0	-1.1	0	0.91	0.59	3.9
Nov-86	1986-11-09	2.8	-1.2	-2.2	0	-1.1	0	2.8	0.57	2.4
Dec-86	1986-12-09	2.6	-1.5	-2.1	0	-1.1	0	2.6	0.51	1.4
Jan-87	1987-01-08	1.5	-0.75	-0.94	0	-1.2	0	1.5	0.55	0.93
Feb-87	1987-02-07	3.1	-2.2	-2.5	0	-1.2	0	3.1	0.61	0.93
Mar-87	1987-03-09	2.3	-0.94	-1.8	0	-1.3	0	2.3	0.50	1.3
Apr-87	1987-04-08	0.94	0.94	-0.39	0	-1.5	0	0.94	0.54	2.3

Table IV-M.2 SC6 Monthly Water Balance 9 Wet Years (1983 to 1991)

Month	Result Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
		[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
May-87	1987-05-08	0.039	2.4	0.12	0	-1.6	0	0.039	0.14	3.0
Jun-87	1987-06-07	0.31	3.5	0.039	0	-1.5	0	0.31	0.35	4.7
Jul-87	1987-07-07	0.20	4.5	0	0	-1.4	0	0.20	0.23	5.9
Aug-87	1987-08-06	3.1	1.2	-2.4	0	-1.2	0	3.1	0.62	5.8
Sep-87	1987-09-05	2.3	1.2	-1.6	0	-1.1	0	2.3	0.77	4.5
Oct-87	1987-10-05	0.83	2.2	-0.12	0	-1.0	0	0.83	0.69	4.2
Nov-87	1987-11-04	1.4	1.1	-0.94	0	-0.98	0	1.4	0.44	3.6
Dec-87	1987-12-04	0.71	0.51	-0.20	0	-0.94	0	0.71	0.50	1.7
Jan-88	1988-01-03	4.0	-3.3	-3.4	0	-0.94	0	4.0	0.60	1.0
Feb-88	1988-02-02	3.6	-3.0	-3.1	0	-0.91	0	3.6	0.49	0.65
Mar-88	1988-03-03	0.71	0.71	-0.39	0	-0.98	0	0.71	0.34	1.3
Apr-88	1988-04-02	0.16	1.9	0.079	0	-1.3	0	0.16	0.22	2.4
May-88	1988-05-02	2.4	0.24	-1.7	0	-1.4	0	2.4	0.71	3.6
Jun-88	1988-06-01	0	3.9	0.24	0	-1.3	0	0	0.22	4.5
Jul-88	1988-07-01	0.12	4.2	0.079	0	-1.2	0	0.12	0.21	5.6
Aug-88	1988-07-31	2.5	1.6	-1.7	0	-1.2	0	2.5	0.82	5.4
Sep-88	1988-08-30	6.7	-3.3	-5.0	0	-1.0	0	6.7	1.7	4.5
Oct-88	1988-10-29	2.0	3.8	-0.87	0	-2.1	0	2.0	1.1	7.9
Nov-88	1988-11-28	1.7	-0.31	-1.4	0	-1.2	0	1.7	0.34	2.2
Dec-88	1988-12-28	1.1	-0.31	-0.59	0	-1.3	0	1.1	0.49	1.1
Jan-89	1989-01-27	2.0	-1.2	-1.5	0	-1.2	0	2.0	0.46	0.66
Feb-89	1989-02-26	0.51	0.67	-0.079	0	-1.2	0	0.51	0.44	1.1
Mar-89	1989-03-28	1.7	0.75	-1.5	0	-1.2	0	1.7	0.25	2.8
Apr-89	1989-04-27	0	3.5	0.35	0	-1.2	0	0	0.34	4.2
May-89	1989-05-27	0.16	3.7	0.079	0	-1.1	0	0.16	0.24	5.0
Jun-89	1989-06-26	0	4.6	0.079	0	-1.1	0	0	0.071	5.7
Jul-89	1989-07-26	0.079	4.4	0.039	0	-0.98	0	0.079	0.11	6.1
Aug-89	1989-08-25	1.3	2.2	-0.43	0	-0.91	0	1.3	0.93	4.9
Sep-89	1989-09-24	1.5	2.2	-0.98	0	-0.83	0	1.5	0.48	4.7
Oct-89	1989-10-24	1.1	1.6	-0.51	0	-0.79	0	1.1	0.56	4.0
Nov-89	1989-11-23	0.28	1.3	-0.079	0	-0.75	0	0.28	0.23	2.2
Dec-89	1989-12-23	0	0.98	0.28	0	-0.71	0	0	0.26	1.3
Jan-90	1990-01-22	2.2	-1.4	-1.7	0	-0.67	0	2.2	0.42	0.94
Feb-90	1990-02-21	2.5	-1.7	-1.9	0	-0.63	0	2.5	0.64	0.83
Mar-90	1990-03-23	0.83	0.94	-0.31	0	-0.59	0	0.83	0.48	1.8
Apr-90	1990-04-22	1.0	1.9	-0.51	0	-0.55	0	1.0	0.52	3.2
May-90	1990-05-22	1.1	2.2	-0.67	0	-0.59	0	1.1	0.40	4.5
Jun-90	1990-06-21	0.39	4.1	0	0	-0.59	0	0.39	0.41	5.4
Jul-90	1990-07-21	0.94	3.3	-0.31	0	-0.63	0	0.94	0.60	5.7
Aug-90	1990-08-20	9.6	-6.3	-8.6	0	-0.63	0	9.6	1.1	4.6
Sep-90	1990-09-19	2.4	1.1	-1.8	0	-0.63	0	2.4	0.64	4.3
Oct-90	1990-10-19	0.43	2.2	0.20	0	-0.79	0	0.43	0.59	3.8
Nov-90	1990-11-18	1.5	0.16	-0.98	0	-1.2	0	1.5	0.57	2.4
Dec-90	1990-12-18	2.8	-1.8	-2.1	0	-1.4	0	2.8	0.65	1.4
Jan-91	1991-01-17	4.7	-4.0	-4.1	0	-1.4	0	4.7	0.56	0.79
Feb-91	1991-02-16	0.12	0.94	0.12	0	-1.5	0	0.12	0.26	1.0
Mar-91	1991-03-18	3.6	-2.2	-3.0	0	-1.8	0	3.6	0.65	1.8
Apr-91	1991-04-17	3.2	-1.1	-2.6	0	-1.8	0	3.2	0.69	2.2
May-91	1991-05-17	0	3.2	0.12	0	-2.0	0	0	0.12	3.9
Jun-91	1991-06-16	0.71	3.5	-0.12	0	-2.0	0	0.71	0.58	5.1
Jul-91	1991-07-16	0.47	4.0	-0.079	0	-1.8	0	0.47	0.38	5.8
Aug-91	1991-08-15	3.3	0.47	-2.2	0	-1.5	0	3.3	1.1	5.1
Sep-91	1991-09-14	2.0	1.6	-1.1	0	-1.3	0	2.0	0.95	4.9
Oct-91	1991-10-01	0.20	1.5	0.079	0	-0.71	0	0.20	0.28	2.3

Table IV-M.3 SC6 Monsoon Period Water Balance

Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
1951-07-01	0	4.4	0.096	0	-0.23	0	0	0.097	5.7
1951-08-01	1.1	3.9	-0.42	0	-0.28	0	1.1	0.63	6.3
1951-09-01	3.6	0.34	-2.9	0	-0.32	0	3.6	0.77	5.1
1951-10-01	0.65	3.0	-0.16	0	-0.34	0	0.65	0.49	4.7
1951-11-01	1.6	0.88	-1.1	0	-0.37	0	1.6	0.56	3.1
1951	7.0	13	-4.4	0	-1.5	0	7.0	2.5	25
1952-07-01	0.63	3.9	-0.094	0	-1.2	0	0.63	0.54	5.8
1952-08-01	0.56	3.8	-0.029	0	-1.4	0	0.56	0.53	5.6
1952-09-01	0.45	3.8	0.054	0	-1.3	0	0.45	0.50	5.4
1952-10-01	0.70	3.1	-0.18	0	-1.2	0	0.70	0.53	4.9
1952-11-01	0	3.0	0.14	0	-1.1	0	0	0.14	3.8
1952	2.3	18	-0.11	0	-6.3	0	2.3	2.2	25
1953-07-01	0	4.7	0.050	0	-1.1	0	0	0.050	5.9
1953-08-01	2.7	1.6	-2.0	0	-1.0	0	2.7	0.67	5.6
1953-09-01	1.8	2.2	-0.93	0	-0.97	0	1.8	0.87	5.0
1953-10-01	0	3.8	0.21	0	-0.87	0	0	0.21	5.0
1953-11-01	0.012	2.7	0.087	0	-0.86	0	0.012	0.099	3.4
1953	4.5	15	-2.6	0	-4.8	0	4.5	1.9	25
1954-07-01	0.13	4.2	0.11	0	-0.79	0	0.13	0.24	5.5
1954-08-01	4.5	-0.63	-3.3	0	-0.87	0	4.5	1.2	4.9
1954-09-01	5.3	-1.9	-4.2	0	-0.88	0	5.3	1.1	4.3
1954-10-01	1.3	2.2	-0.57	0	-0.89	0	1.3	0.71	4.5
1954-11-01	0	2.8	0.18	0	-1.2	0	0	0.18	3.5
1954	11	6.6	-7.8	0	-4.6	0	11	3.4	23
1955-07-01	2.1	2.2	-1.6	0	-0.91	0	2.1	0.46	5.5
1955-08-01	4.5	-0.70	-3.5	0	-0.87	0	4.5	0.98	4.8
1955-09-01	2.7	0.57	-1.5	0	-0.83	0	2.7	1.2	4.3
1955-10-01	0.12	3.6	0.16	0	-0.78	0	0.12	0.28	4.7
1955-11-01	0.020	2.8	0.094	0	-0.87	0	0.020	0.11	3.6
1955	9.4	8.5	-6.3	0	-4.3	0	9.4	3.1	23
1956-07-01	0.24	4.6	-0.063	0	-0.91	0	0.24	0.18	6.2
1956-08-01	2.8	1.3	-1.7	0	-0.91	0	2.8	1.1	5.2
1956-09-01	1.8	1.8	-0.99	0	-0.87	0	1.8	0.75	4.5
1956-10-01	0.075	3.7	0.059	0	-0.79	0	0.075	0.14	4.9
1956-11-01	0.53	1.8	-0.23	0	-0.78	0	0.53	0.30	3.1
1956	5.4	13	-2.9	0	-4.3	0	5.4	2.5	24
1957-07-01	0.031	4.6	0.12	0	-0.74	0	0.031	0.15	5.9
1957-08-01	1.1	3.0	-0.39	0	-0.77	0	1.1	0.70	5.3
1957-09-01	3.4	0.26	-2.1	0	-0.77	0	3.4	1.3	4.8
1957-10-01	0.57	2.9	-0.18	0	-0.73	0	0.57	0.39	4.5
1957-11-01	3.2	-1.3	-2.6	0	-0.73	0	3.2	0.65	2.6
1957	8.3	9.6	-5.1	0	-3.7	0	8.3	3.2	23
1958-07-01	0.70	3.9	-0.31	0	-0.96	0	0.70	0.39	5.9
1958-08-01	0.78	3.7	-0.20	0	-1.1	0	0.78	0.57	5.9
1958-09-01	0.85	3.2	-0.012	0	-1.1	0	0.85	0.84	5.0
1958-10-01	3.0	0.27	-2.1	0	-0.95	0	3.0	0.87	4.4
1958-11-01	1.9	0.44	-1.4	0	-0.91	0	1.9	0.51	3.1
1958	7.3	12	-4.1	0	-4.9	0	7.3	3.2	24
1959-07-01	1.0	3.7	-0.44	0	-0.76	0	1.0	0.59	6.0
1959-08-01	3.8	1.00	-2.8	0	-0.74	0	3.8	0.97	6.1
1959-09-01	5.3	-2.0	-3.6	0	-0.70	0	5.3	1.7	4.3
1959-10-01	0.047	3.4	0.15	0	-0.63	0	0.047	0.20	4.6
1959-11-01	4.8	-2.4	-4.4	0	-0.69	0	4.8	0.40	3.2
1959	15	3.7	-11	0	-3.5	0	15	3.9	24
1960-07-01	0	4.9	0.091	0	-1.4	0	0	0.091	6.2
1960-08-01	0.74	3.8	-0.31	0	-1.3	0	0.74	0.43	5.9
1960-09-01	1.5	2.3	-0.57	0	-1.1	0	1.5	0.96	4.9

Table IV-M.3 SC6 Monsoon Period Water Balance

Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
1960-10-01	0.27	3.4	0.11	0	-0.99	0	0.27	0.39	4.8
1960-11-01	2.1	0.091	-1.4	0	-0.91	0	2.1	0.68	2.9
1960	4.6	14	-2.1	0	-5.8	0	4.6	2.6	25
1961-07-01	0	4.8	0.063	0	-0.57	0	0	0.059	6.1
1961-08-01	0.67	3.7	-0.13	0	-0.57	0	0.67	0.54	5.8
1961-09-01	3.0	0.79	-1.9	0	-0.54	0	3.0	1.1	4.9
1961-10-01	0.50	2.6	0.26	0	-0.52	0	0.50	0.75	3.9
1961-11-01	0.45	1.9	-0.20	0	-0.52	0	0.45	0.25	3.3
1961	4.6	14	-1.9	0	-2.7	0	4.6	2.7	24
1962-07-01	0	4.4	0.059	0	-0.71	0	0	0.055	5.7
1962-08-01	0.61	3.9	-0.094	0	-0.79	0	0.61	0.52	5.7
1962-09-01	0.50	3.9	-0.043	0	-0.80	0	0.50	0.45	5.6
1962-10-01	1.2	2.1	-0.49	0	-0.76	0	1.2	0.74	4.5
1962-11-01	0.87	1.5	-0.39	0	-0.74	0	0.87	0.49	3.0
1962	3.2	16	-0.96	0	-3.8	0	3.2	2.3	25
1963-07-01	0	4.2	0.087	0	-0.85	0	0	0.083	5.4
1963-08-01	0.079	4.6	0.055	0	-0.90	0	0.079	0.13	6.1
1963-09-01	10	-7.2	-8.7	0	-0.87	0	10	1.8	4.3
1963-10-01	1.1	2.4	-0.24	0	-0.84	0	1.1	0.81	4.4
1963-11-01	0.67	2.0	-0.28	0	-1.1	0	0.67	0.39	3.6
1963	12	6.1	-9.1	0	-4.6	0	12	3.2	24
1964-07-01	0	4.3	0.063	0	-0.91	0	0	0.063	5.4
1964-08-01	1.5	2.8	-0.60	0	-0.88	0	1.5	0.89	5.6
1964-09-01	2.2	1.4	-0.88	0	-0.83	0	2.2	1.3	4.6
1964-10-01	1.6	1.3	-0.57	0	-0.76	0	1.6	1.0	3.8
1964-11-01	1.5	1.2	-1.1	0	-0.74	0	1.5	0.42	3.6
1964	6.8	11	-3.1	0	-4.1	0	6.8	3.7	23
1965-07-01	0.10	4.0	0.063	0	-1.1	0	0.10	0.17	5.2
1965-08-01	1.4	2.7	-0.61	0	-1.2	0	1.4	0.83	5.4
1965-09-01	0.90	3.1	-0.16	0	-1.1	0	0.90	0.74	5.0
1965-10-01	1.0	2.2	-0.40	0	-0.98	0	1.0	0.64	4.3
1965-11-01	0.46	2.2	-0.12	0	-0.93	0	0.46	0.34	3.5
1965	3.9	14	-1.2	0	-5.3	0	3.9	2.7	23
1966-07-01	0.18	4.2	-0.0039	0	-1.5	0	0.18	0.18	5.8
1966-08-01	0.84	3.4	-0.23	0	-1.3	0	0.84	0.61	5.3
1966-09-01	1.6	2.3	-0.94	0	-1.2	0	1.6	0.67	5.1
1966-10-01	2.7	0.54	-2.0	0	-1.0	0	2.7	0.67	4.3
1966-11-01	1.4	1.00	-0.81	0	-0.94	0	1.4	0.55	2.9
1966	6.7	11	-4.0	0	-6.0	0	6.7	2.7	23
1967-07-01	0.079	4.1	0.067	0	-0.74	0	0.079	0.15	5.2
1967-08-01	4.0	-0.11	-2.9	0	-0.74	0	4.0	1.0	5.0
1967-09-01	2.5	1.5	-1.7	0	-0.72	0	2.5	0.79	4.8
1967-10-01	0.55	2.7	-0.059	0	-0.68	0	0.55	0.50	4.4
1967-11-01	0.42	2.1	-0.016	0	-0.73	0	0.42	0.41	3.5
1967	7.5	10	-4.6	0	-3.6	0	7.5	2.9	23
1968-07-01	0	4.6	0.059	0	-1.6	0	0	0.055	6.0
1968-08-01	1.8	2.2	-1.1	0	-1.4	0	1.8	0.75	5.3
1968-09-01	2.5	0.70	-1.4	0	-1.3	0	2.5	1.1	4.1
1968-10-01	0.047	3.2	0.15	0	-1.1	0	0.047	0.19	4.3
1968-11-01	0.39	1.9	-0.063	0	-1.0	0	0.39	0.33	3.0
1968	4.8	13	-2.4	0	-6.4	0	4.8	2.4	23
1969-07-01	0	4.3	0.098	0	-1.3	0	0	0.098	5.6
1969-08-01	0.33	4.0	0.0039	0	-1.2	0	0.33	0.33	5.6
1969-09-01	2.6	1.7	-1.4	0	-1.1	0	2.6	1.2	5.4
1969-10-01	1.2	2.2	-0.63	0	-1.0	0	1.2	0.62	4.6
1969-11-01	0.83	1.4	-0.46	0	-0.97	0	0.83	0.36	3.2
1969	5.0	14	-2.4	0	-5.7	0	5.0	2.6	24

Table IV-M.3 SC6 Monsoon Period Water Balance

Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
1970-07-01	0.079	4.5	0.059	0	-0.86	0	0.079	0.14	5.7
1970-08-01	1.0	3.4	-0.25	0	-0.89	0	1.0	0.79	6.0
1970-09-01	1.7	2.4	-0.69	0	-0.86	0	1.7	1.0	5.1
1970-10-01	3.4	-0.063	-2.7	0	-0.79	0	3.4	0.63	4.7
1970-11-01	0	2.3	0.11	0	-0.78	0	0	0.11	3.0
1970	6.2	12	-3.5	0	-4.2	0	6.2	2.7	24
1971-07-01	0	4.4	0.059	0	-0.65	0	0	0.059	5.4
1971-08-01	0.39	4.3	-0.059	0	-0.65	0	0.39	0.33	6.0
1971-09-01	4.7	-1.3	-3.2	0	-0.59	0	4.7	1.5	4.5
1971-10-01	3.1	0.42	-2.4	0	-0.56	0	3.1	0.65	4.7
1971-11-01	4.2	-2.2	-3.4	0	-0.56	0	4.2	0.81	2.9
1971	12	5.7	-9.0	0	-3.0	0	12	3.3	24
1972-07-01	1.7	2.9	-1.0	0	-0.81	0	1.7	0.63	5.8
1972-08-01	0.27	4.7	0.094	0	-0.80	0	0.27	0.37	6.2
1972-09-01	2.0	1.8	-1.1	0	-0.73	0	2.0	0.92	5.3
1972-10-01	0.67	2.9	0.0039	0	-0.67	0	0.67	0.67	4.6
1972-11-01	8.7	-6.7	-7.6	0	-0.62	0	8.7	1.0	2.9
1972	13	5.6	-9.7	0	-3.6	0	13	3.6	25
1973-07-01	0.87	3.8	-0.30	0	-2.0	0	0.87	0.57	5.8
1973-08-01	2.7	1.3	-2.0	0	-1.8	0	2.7	0.74	5.7
1973-09-01	1.4	2.7	-0.50	0	-1.6	0	1.4	0.92	5.2
1973-10-01	0	3.5	0.15	0	-1.4	0	0	0.14	4.6
1973-11-01	0	2.4	0.083	0	-1.3	0	0	0.083	3.4
1973	5.0	14	-2.5	0	-8.1	0	5.0	2.5	25
1974-07-01	0	5.1	0.059	0	-0.93	0	0	0.059	6.2
1974-08-01	2.4	1.7	-1.6	0	-0.93	0	2.4	0.89	5.5
1974-09-01	1.4	2.7	-0.56	0	-0.89	0	1.4	0.82	5.3
1974-10-01	3.4	-0.13	-2.3	0	-0.81	0	3.4	1.1	4.5
1974-11-01	3.4	-1.3	-2.7	0	-0.81	0	3.4	0.66	3.2
1974	11	8.0	-7.1	0	-4.4	0	11	3.5	25
1975-07-01	0	4.6	0.075	0	-1.3	0	0	0.075	5.8
1975-08-01	2.2	1.6	-0.93	0	-1.3	0	2.2	1.3	5.2
1975-09-01	2.0	2.2	-1.1	0	-1.2	0	2.0	0.90	5.0
1975-10-01	0.91	2.6	-0.20	0	-1.1	0	0.91	0.70	4.7
1975-11-01	0.28	2.2	0.059	0	-1.0	0	0.28	0.32	3.5
1975	5.4	13	-2.1	0	-5.9	0	5.4	3.3	24
1976-07-01	0	4.8	0.12	0	-0.77	0	0	0.12	5.8
1976-08-01	2.8	1.1	-2.0	0	-0.78	0	2.8	0.73	5.6
1976-09-01	0.87	3.3	-0.37	0	-0.76	0	0.87	0.48	4.9
1976-10-01	4.0	-1.0	-3.0	0	-0.70	0	4.0	0.98	4.3
1976-11-01	0.91	1.0	-0.44	0	-0.72	0	0.91	0.46	2.7
1976	8.5	9.2	-5.7	0	-3.7	0	8.5	2.8	23
1977-07-01	0.039	4.8	0.067	0	-0.85	0	0.039	0.12	5.9
1977-08-01	2.6	2.0	-1.7	0	-0.85	0	2.6	0.81	6.1
1977-09-01	2.4	1.7	-1.6	0	-0.83	0	2.4	0.79	5.3
1977-10-01	3.4	-0.42	-2.4	0	-0.77	0	3.4	1.0	4.3
1977-11-01	1.3	1.2	-0.74	0	-0.78	0	1.3	0.57	3.5
1977	9.8	9.3	-6.5	0	-4.1	0	9.8	3.3	25
1978-07-01	0.55	4.2	-0.27	0	-2.2	0	0.55	0.27	6.0
1978-08-01	0.98	3.7	-0.34	0	-1.8	0	0.98	0.63	6.3
1978-09-01	1.1	2.6	-0.37	0	-1.6	0	1.1	0.69	4.4
1978-10-01	0.39	2.9	-0.039	0	-1.3	0	0.39	0.35	4.5
1978-11-01	1.9	0.90	-1.5	0	-1.2	0	1.9	0.40	4.1
1978	4.9	14	-2.6	0	-8.0	0	4.9	2.3	25
1979-07-01	0.35	4.4	0.12	0	-2.1	0	0.35	0.47	5.5
1979-08-01	0.16	4.4	0.047	0	-1.8	0	0.16	0.21	6.2
1979-09-01	1.5	2.2	-0.55	0	-1.5	0	1.5	0.99	4.9

Table IV-M.3 SC6 Monsoon Period Water Balance

Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
1979-10-01	0.12	3.7	0.13	0	-1.3	0	0.12	0.23	5.2
1979-11-01	0.67	2.1	-0.32	0	-1.2	0	0.67	0.36	4.0
1979	2.8	17	-0.57	0	-7.8	0	2.8	2.3	26
1980-07-01	0.16	4.6	-0.016	0	-1.5	0	0.16	0.15	5.6
1980-08-01	1.9	2.3	-0.88	0	-1.4	0	1.9	1.1	5.8
1980-09-01	1.3	2.7	-0.47	0	-1.3	0	1.3	0.84	5.1
1980-10-01	0.59	3.0	-0.12	0	-1.1	0	0.59	0.46	4.8
1980-11-01	0.039	2.6	0.10	0	-1.1	0	0.039	0.14	3.8
1980	4.1	15	-1.4	0	-6.4	0	4.1	2.6	25
1981-07-01	0.12	4.7	0.15	0	-0.78	0	0.12	0.29	5.9
1981-08-01	2.2	2.0	-1.5	0	-0.83	0	2.2	0.66	5.9
1981-09-01	2.6	1.6	-1.6	0	-0.82	0	2.6	1.1	4.9
1981-10-01	0.51	3.1	-0.11	0	-0.79	0	0.51	0.41	5.2
1981-11-01	0.94	1.2	-0.39	0	-0.81	0	0.94	0.57	3.1
1981	6.4	13	-3.4	0	-4.0	0	6.4	3.0	25
1982-07-01	0.039	4.3	0.079	0	-1.0	0	0.039	0.13	5.4
1982-08-01	2.6	1.2	-1.5	0	-1.1	0	2.6	1.1	5.3
1982-09-01	3.8	-0.24	-2.7	0	-1.1	0	3.8	1.1	4.4
1982-10-01	3.0	0.20	-2.1	0	-0.98	0	3.0	0.90	4.5
1982-11-01	0	2.3	0.15	0	-1.1	0	0	0.15	3.2
1982	9.5	7.8	-6.2	0	-5.2	0	9.5	3.4	23
1983-07-01	0	4.5	0.079	0	-1.8	0	0	0.075	5.9
1983-08-01	2.8	1.7	-1.9	0	-1.6	0	2.8	0.89	5.9
1983-09-01	3.6	-0.12	-2.3	0	-1.4	0	3.6	1.3	4.4
1983-10-01	5.1	-1.7	-3.9	0	-1.2	0	5.1	1.2	4.8
1983-11-01	1.1	0.94	-0.47	0	-1.3	0	1.1	0.64	3.0
1983	13	5.4	-8.6	0	-7.4	0	13	4.1	24
1984-07-01	1.3	3.0	-0.94	0	-1.1	0	1.3	0.42	5.8
1984-08-01	3.3	0.35	-1.8	0	-0.98	0	3.3	1.5	4.9
1984-09-01	3.3	0.079	-1.7	0	-0.91	0	3.3	1.6	4.4
1984-10-01	1.9	1.5	-0.94	0	-0.83	0	1.9	0.94	4.8
1984-11-01	1.3	0.55	-0.67	0	-0.87	0	1.3	0.70	2.7
1984	11	5.5	-6.0	0	-4.7	0	11	5.2	23
1985-07-01	0	3.9	0.079	0	-1.5	0	0	0.079	5.0
1985-08-01	1.2	3.1	-0.71	0	-1.3	0	1.2	0.53	5.3
1985-09-01	2.1	1.8	-1.2	0	-1.2	0	2.1	0.91	4.9
1985-10-01	3.5	-0.59	-2.2	0	-1.0	0	3.5	1.3	4.3
1985-11-01	1.2	0.59	-0.51	0	-0.94	0	1.2	0.70	2.5
1985	8.1	8.8	-4.6	0	-5.9	0	8.1	3.5	22
1986-07-01	0	4.7	0.079	0	-1.3	0	0	0.071	5.9
1986-08-01	4.8	-1.4	-3.5	0	-1.3	0	4.8	1.3	5.0
1986-09-01	2.0	1.9	-1.1	0	-1.2	0	2.0	0.97	5.1
1986-10-01	2.1	0.94	-1.3	0	-1.1	0	2.1	0.81	4.3
1986-11-01	1.7	0.28	-1.3	0	-1.1	0	1.7	0.46	2.5
1986	11	6.4	-7.0	0	-6.0	0	11	3.6	23
1987-07-01	0.20	4.5	0.039	0	-1.4	0	0.20	0.24	5.5
1987-08-01	2.0	2.5	-1.6	0	-1.3	0	2.0	0.44	5.9
1987-09-01	2.9	0.87	-2.0	0	-1.2	0	2.9	0.92	5.0
1987-10-01	1.3	1.8	-0.59	0	-1.0	0	1.3	0.68	4.5
1987-11-01	0.31	2.4	0.039	0	-1.1	0	0.31	0.39	3.8
1987	6.7	12	-4.1	0	-6.0	0	6.7	2.7	25
1988-07-01	0.12	4.2	0.079	0	-1.2	0	0.12	0.21	5.6
1988-08-01	3.4	0.71	-2.6	0	-1.2	0	3.4	0.85	5.6
1988-09-01	5.9	-2.3	-4.1	0	-1.1	0	5.9	1.8	4.6
1988-10-01	0.31	2.9	0.16	0	-1.0	0	0.31	0.48	4.3
1988-11-01	1.5	1.0	-0.94	0	-1.2	0	1.5	0.56	3.6
1988	11	6.5	-7.4	0	-5.7	0	11	3.9	24

Table IV-M.3 SC6 Monsoon Period Water Balance

Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
1989-07-01	0	4.7	0.079	0	-1.1	0	0	0.063	5.9
1989-08-01	0.51	3.9	-0.16	0	-1.0	0	0.51	0.35	6.1
1989-09-01	0.91	2.9	-0.16	0	-0.91	0	0.91	0.74	4.7
1989-10-01	1.5	2.0	-1.0	0	-0.83	0	1.5	0.46	4.8
1989-11-01	1.1	1.2	-0.43	0	-0.79	0	1.1	0.63	3.7
1989	4.0	15	-1.7	0	-4.6	0	4.0	2.2	25
1990-07-01	0.31	4.6	0.039	0	-0.59	0	0.31	0.31	5.8
1990-08-01	1.5	2.4	-0.67	0	-0.67	0	1.5	0.83	5.6
1990-09-01	9.0	-5.6	-8.0	0	-0.63	0	9.0	0.94	4.3
1990-10-01	2.8	0.28	-1.9	0	-0.67	0	2.8	0.91	4.5
1990-11-01	0.28	2.1	0.12	0	-0.98	0	0.28	0.37	3.3
1990	14	3.8	-10	0	-3.5	0	14	3.3	23
1991-07-01	0.59	3.7	-0.039	0	-1.9	0	0.59	0.57	5.6
1991-08-01	1.7	2.6	-1.0	0	-1.7	0	1.7	0.68	5.7
1991-09-01	2.8	1.2	-1.6	0	-1.4	0	2.8	1.2	5.1
1991-10-01	1.5	1.6	-0.79	0	-1.2	0	1.5	0.76	4.3
1991-11-01	1.2	1.5	-1.0	0	-1.2	0	1.2	0.23	4.3
1991	7.8	11	-4.4	0	-7.4	0	7.8	3.4	25
1992-07-01	1.3	3.1	-0.47	0	-2.4	0	1.3	0.83	5.3
1992-08-01	3.3	0.98	-2.3	0	-2.0	0	3.3	0.96	5.9
1992-09-01	5.3	-1.7	-4.0	0	-1.7	0	5.3	1.3	4.8
1992-10-01	0.87	2.6	-0.39	0	-1.7	0	0.87	0.46	4.4
1992-11-01	1.3	1.3	-0.83	0	-2.0	0	1.3	0.40	4.0
1992	12	6.3	-8.0	0	-9.8	0	12	3.9	24
1993-07-01	0	4.5	0.12	0	-2.0	0	0	0.13	5.5
1993-08-01	0.24	4.0	0	0	-1.8	0	0.24	0.27	5.7
1993-09-01	3.4	0.20	-2.1	0	-1.5	0	3.4	1.3	5.4
1993-10-01	0.16	3.1	0.28	0	-1.3	0	0.16	0.41	4.0
1993-11-01	0.79	1.7	-0.20	0	-1.2	0	0.79	0.61	3.9
1993	4.6	14	-1.9	0	-7.8	0	4.6	2.7	24
1994-07-01	0.35	4.3	0.039	0	-0.98	0	0.35	0.40	5.6
1994-08-01	1.5	3.1	-1.1	0	-0.91	0	1.5	0.42	6.0
1994-09-01	0.71	3.5	0.12	0	-0.91	0	0.71	0.81	5.5
1994-10-01	1.9	1.3	-1.1	0	-0.79	0	1.9	0.80	4.5
1994-11-01	1.9	0.28	-1.5	0	-0.79	0	1.9	0.39	3.4
1994	6.3	12	-3.5	0	-4.4	0	6.3	2.8	25
1995-07-01	0	4.4	0.12	0	-1.5	0	0	0.12	5.1
1995-08-01	0.039	4.6	0.079	0	-1.4	0	0.039	0.11	5.8
1995-09-01	3.9	0.24	-2.8	0	-1.2	0	3.9	1.1	5.8
1995-10-01	2.8	0.71	-2.0	0	-1.1	0	2.8	0.69	4.9
1995-11-01	0	2.6	0.24	0	-1.0	0	0	0.24	3.7
1995	6.7	13	-4.4	0	-6.2	0	6.7	2.2	25
1996-07-01	0.39	4.3	-0.12	0	-0.91	0	0.39	0.28	5.8
1996-08-01	2.4	2.1	-1.3	0	-0.87	0	2.4	1.1	5.7
1996-09-01	1.2	2.6	-0.51	0	-0.87	0	1.2	0.76	5.2
1996-10-01	3.0	-0.20	-1.9	0	-0.75	0	3.0	1.1	4.3
1996-11-01	0.43	2.2	-0.079	0	-0.79	0	0.43	0.36	4.0
1996	7.5	11	-3.9	0	-4.2	0	7.5	3.6	25
1997-07-01	0.039	4.4	0.12	0	-0.75	0	0.039	0.11	5.5
1997-08-01	0.079	4.6	0	0	-0.75	0	0.079	0.14	6.4
1997-09-01	2.6	1.3	-1.5	0	-0.71	0	2.6	1.1	5.0
1997-10-01	0	3.7	0.16	0	-0.71	0	0	0.16	4.9
1997-11-01	0.75	1.5	-0.31	0	-0.63	0	0.75	0.44	3.9
1997	3.5	16	-1.5	0	-3.5	0	3.5	1.9	26
1998-07-01	0	4.3	0.079	0	-1.0	0	0	0.063	5.3
1998-08-01	1.7	2.8	-0.94	0	-1.1	0	1.7	0.78	6.0
1998-09-01	2.4	1.7	-1.2	0	-1.1	0	2.4	1.2	5.1

Table IV-M.3 SC6 Monsoon Period Water Balance

Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
1998-10-01	1.3	2.2	-0.71	0	-0.98	0	1.3	0.59	5.1
1998-11-01	0	2.4	0.12	0	-0.98	0	0	0.11	4.0
1998	5.4	13	-2.7	0	-5.2	0	5.4	2.7	25
1999-07-01	0	4.5	0.079	0	-0.63	0	0	0.067	5.4
1999-08-01	5.8	-2.2	-4.3	0	-0.67	0	5.8	1.6	5.5
1999-09-01	2.8	0.91	-1.7	0	-0.63	0	2.8	1.2	4.6
1999-10-01	1.1	2.1	-0.16	0	-0.63	0	1.1	0.91	4.5
1999-11-01	0	2.8	0.12	0	-0.71	0	0	0.15	4.0
1999	9.7	8.2	-5.9	0	-3.3	0	9.7	3.9	24
2000-07-01	0.79	3.8	-0.28	0	-0.67	0	0.79	0.49	6.3
2000-08-01	0.079	4.9	0.079	0	-0.67	0	0.079	0.19	6.0
2000-09-01	0.67	3.1	-0.039	0	-0.67	0	0.67	0.62	5.7
2000-10-01	0	3.8	0.12	0	-0.59	0	0	0.11	4.8
2000-11-01	5.3	-3.3	-4.6	0	-0.55	0	5.3	0.68	3.9
2000	6.9	12	-4.8	0	-3.1	0	6.9	2.1	27
2001-07-01	0.039	4.8	0.079	0	-0.94	0	0.039	0.13	6.0
2001-08-01	2.7	1.7	-2.2	0	-1.0	0	2.7	0.43	6.4
2001-09-01	3.3	0.39	-2.2	0	-1.0	0	3.3	1.1	4.5
2001-10-01	0.12	3.7	0.12	0	-0.94	0	0.12	0.24	5.2
2001-11-01	0.39	2.0	-0.079	0	-1.1	0	0.39	0.32	3.8
2001	6.6	13	-4.4	0	-5.0	0	6.6	2.2	26
2002-07-01	0	5.2	0.039	0	-0.71	0	0	0.047	6.0
2002-08-01	0.35	4.5	-0.039	0	-0.71	0	0.35	0.30	6.8
2002-09-01	0.43	3.6	-0.12	0	-0.63	0	0.43	0.34	5.3
2002-10-01	1.2	2.3	-0.51	0	-0.59	0	1.2	0.66	4.9
2002-11-01	0.079	2.2	0.079	0	-0.55	0	0.079	0.19	3.9
2002	2.1	18	-0.55	0	-3.2	0	2.1	1.5	27
2003-07-01	0	5.0	0.039	0	-0.43	0	0	0.071	6.5
2003-08-01	0.47	4.2	-0.039	0	-0.55	0	0.47	0.44	6.6
2003-09-01	1.3	2.7	-0.55	0	-0.51	0	1.3	0.74	5.3
2003-10-01	1.9	1.7	-0.83	0	-0.55	0	1.9	1.1	4.7
2003-11-01	0.079	2.8	0.16	0	-0.55	0	0.079	0.23	4.0
2003	3.8	16	-1.2	0	-2.6	0	3.8	2.6	27
2004-07-01	0	4.9	0.079	0	-0.51	0	0	0.063	5.9
2004-08-01	0.55	3.9	-0.079	0	-0.55	0	0.55	0.48	6.1
2004-09-01	2.1	2.0	-1.2	0	-0.59	0	2.1	0.90	5.3
2004-10-01	1.5	2.0	-0.94	0	-0.55	0	1.5	0.59	5.3
2004-11-01	1.2	0.91	-0.75	0	-0.55	0	1.2	0.44	3.6
2004	5.4	14	-2.9	0	-2.8	0	5.4	2.5	26
2005-07-01	0.079	4.6	0.079	0	-1.6	0	0.079	0.13	5.5
2005-08-01	1.4	3.4	-1.0	0	-1.5	0	1.4	0.38	7.1
2005-09-01	4.7	-1.2	-3.4	0	-1.3	0	4.7	1.3	4.2
2005-10-01	0.079	3.4	0.16	0	-1.1	0	0.079	0.25	4.9
2005-11-01	0.43	2.0	-0.12	0	-1.2	0	0.43	0.31	3.9
2005	6.7	12	-4.3	0	-6.7	0	6.7	2.4	26
2006-07-01	0.51	4.3	-0.12	0	-0.71	0	0.51	0.36	6.1
2006-08-01	3.1	0.79	-2.6	0	-0.71	0	3.1	0.65	5.8
2006-09-01	2.9	0.63	-1.5	0	-0.71	0	2.9	1.4	4.3
2006-10-01	1.1	1.7	-0.55	0	-0.63	0	1.1	0.57	4.1
2006-11-01	1.0	1.1	-0.28	0	-0.67	0	1.0	0.76	3.4
2006	8.7	8.6	-5.0	0	-3.4	0	8.7	3.7	24

Table IV-M.4 SC6 Winter Storm Period Water Balance

Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
1951-11-01	0	0.88	-1.08	0	-0.37	0	1.6	0.6	3.1
1951-12-01	1.7	-0.40	-1.01	0	-0.39	0	1.7	0.7	1.6
1952-01-01	3.0	-2.2	-2.4	0	-0.44	0	3.0	0.59	1.0
1952-02-01	2.8	-1.9	-2.2	0	-0.47	0	2.8	0.61	0.98
1952-03-01	0.50	0.55	-0.12	0	-0.48	0	0.50	0.4	1.3
1952	8.0	-3.1	-6.8	0	-2.14	0	9.7	2.8	8.0
1952-11-01	0	3.0	0.14	0	-1.13	0	0	0.14	3.8
1952-12-01	4.3	-3.2	-3.8	0	-0.98	0	4.3	0.53	1.4
1953-01-01	2.0	-1.2	-1.5	0	-0.91	0	2.0	0.49	0.90
1953-02-01	0.74	0.30	-0.30	0	-0.86	0	0.74	0.4	1.2
1953-03-01	0.60	0.50	-0.34	0	-0.80	0	0.60	0.3	1.3
1953	7.6	-0.57	-5.8	0	-4.68	0	7.6	1.8	8.5
1953-11-01	0.012	2.7	0.09	0	-0.86	0	0.012	0.10	3.4
1953-12-01	0.56	0.94	-0.30	0	-0.81	0	0.56	0.26	1.8
1954-01-01	0.19	0.65	0.08	0	-0.81	0	0.19	0.28	1.0
1954-02-01	2.4	-1.4	-1.9	0	-0.78	0	2.4	0.51	1.1
1954-03-01	0.72	0.74	-0.32	0	-0.67	0	0.72	0.4	1.8
1954	3.9	3.6	-2.36	0	-3.93	0	3.9	1.5	9.2
1954-11-01	0	2.8	0.2	0	-1.17	0	0	0.2	3.5
1954-12-01	0.091	1.5	0.02	0	-1.282	0	0.091	0.11	1.9
1955-01-01	0.29	0.76	0.00	0	-1.314	0	0.29	0.29	1.2
1955-02-01	3.4	-2.8	-3.0	0	-1.235	0	3.4	0.44	0.73
1955-03-01	0.28	0.76	0.06	0	-1.027	0	0.28	0.3	1.3
1955	4.1	3.0	-2.70	0	-6.03	0	4.1	1.4	8.6
1955-11-01	0.020	2.8	0.09	0	-0.866	0	0.020	0.11	3.6
1955-12-01	0.96	0.37	-0.61	0	-0.906	0	0.96	0.36	1.6
1956-01-01	1.4	-0.33	-1.01	0	-0.953	0	1.4	0.4	1.2
1956-02-01	2.6	-1.6	-2.2	0	-0.917	0	2.6	0.38	1.3
1956-03-01	2.0	-1.1	-1.5	0	-0.835	0	2.0	0.55	1.0
1956	7.0	0.19	-5.2	0	-4.48	0	7.0	1.8	8.7
1956-11-01	0.53	1.8	-0.228	0	-0.783	0	0.53	0.30	3.1
1956-12-01	0	1.3	0.25	0	-0.744	0	0	0.25	1.5
1957-01-01	0.47	0.45	-0.18	0	-0.752	0	0.47	0.29	1.1
1957-02-01	4.8	-4.1	-4.3	0	-0.728	0	4.8	0.45	0.85
1957-03-01	0.73	0.61	-0.12	0	-0.630	0	0.73	0.6	1.5
1957	6.5	0.039	-4.6	0	-3.64	0	6.5	1.9	8.0
1957-11-01	3.2	-1.3	-2.6	0	-0.728	0	3.2	0.6	2.6
1957-12-01	0.61	0.44	-0.12	0	-0.705	0	0.61	0.5	1.3
1958-01-01	1.1	-0.063	-0.555	0	-0.736	0	1.1	0.5	1.2
1958-02-01	0.012	0.96	0.13	0	-0.768	0	0.012	0.14	1.1
1958-03-01	2.5	-1.5	-2.0	0	-0.720	0	2.5	0.6	1.3
1958	7.4	-1.4	-5.1	0	-3.66	0	7.4	2.3	7.4
1958-11-01	1.9	0.44	-1.40	0	-0.909	0	1.9	0.5	3.1
1958-12-01	1.5	-0.24	-1.13	0	-0.846	0	1.5	0.4	1.5
1959-01-01	0	1.2	0.1	0	-0.878	0	0	0.1	1.5
1959-02-01	0.21	0.85	0.03	0	-0.902	0	0.21	0.24	1.2
1959-03-01	1.4	-0.44	-0.92	0	-0.819	0	1.4	0.50	1.2
1959	5.1	1.8	-3.3	0	-4.35	0	5.1	1.8	8.5
1959-11-01	4.8	-2.4	-4.4	0	-0.693	0	4.8	0.4	3.2
1959-12-01	0.38	0.96	0.16	0	-0.776	0	0.38	0.5	1.5
1960-01-01	5.2	-4.5	-4.8	0	-0.921	0	5.2	0.43	0.93
1960-02-01	4.2	-3.5	-3.7	0	-1.134	0	4.2	0.47	0.76

Table IV-M.4 SC6 Winter Storm Period Water Balance

Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
1960-03-01	0.87	0.059	-0.358	0	-1.803	0	0.87	0.51	1.1
1960	15	-9.3	-13	0	-5.33	0	15	2.3	7.6
1960-11-01	2.1	0.091	-1.38	0	-0.913	0	2.1	0.7	2.9
1960-12-01	0.48	0.81	-0.09	0	-0.819	0	0.48	0.4	1.6
1961-01-01	0.47	0.52	-0.13	0	-0.795	0	0.47	0.34	1.2
1961-02-01	0.70	0.28	-0.398	0	-0.752	0	0.70	0.31	1.1
1961-03-01	0.23	1.0	0.19	0	-0.650	0	0.23	0.41	1.4
1961	3.9	2.7	-1.8	0	-3.93	0	3.9	2.1	8.2
1961-11-01	0.45	1.9	-0.20	0	-0.516	0	0.45	0.25	3.3
1961-12-01	0.32	0.72	0.14	0	-0.480	0	0.32	0.46	1.2
1962-01-01	3.9	-3.1	-3.4	0	-0.484	0	3.9	0.44	0.91
1962-02-01	3.2	-2.5	-2.8	0	-0.465	0	3.2	0.41	0.83
1962-03-01	1.7	-0.67	-1.22	0	-0.421	0	1.7	0.44	1.2
1962	9.5	-3.6	-7.5	0	-2.37	0	9.5	2.0	7.4
1962-11-01	0.87	1.5	-0.39	0	-0.744	0	0.87	0.5	3.0
1962-12-01	0.83	0.76	-0.472	0	-0.681	0	0.83	0.35	1.9
1963-01-01	1.8	-0.79	-1.4	0	-0.657	0	1.8	0.43	1.3
1963-02-01	2.1	-1.3	-1.6	0	-0.614	0	2.1	0.52	0.89
1963-03-01	4.2	-2.9	-3.9	0	-0.528	0	4.2	0.3	1.5
1963	9.8	-2.7	-7.7	0	-3.22	0	9.8	2.1	8.7
1963-11-01	0.67	2.0	-0.3	0	-1.110	0	0.67	0.4	3.6
1963-12-01	2.3	-1.2	-1.6	0	-1.382	0	2.3	0.7	1.5
1964-01-01	0.34	0.67	0.01	0	-1.449	0	0.34	0.4	1.2
1964-02-01	0.58	0.22	-0.30	0	-1.382	0	0.58	0.28	0.92
1964-03-01	0	1.1	0.2	0	-1.220	0	0	0.2	1.2
1964	3.9	2.8	-2.0	0	-6.54	0	3.9	1.9	8.5
1964-11-01	1.5	1.2	-1.12	0	-0.736	0	1.5	0.4	3.6
1964-12-01	1.4	-0.20	-1.02	0	-0.665	0	1.4	0.36	1.5
1965-01-01	1.7	-0.80	-1.30	0	-0.661	0	1.7	0.39	1.1
1965-02-01	2.9	-2.0	-2.3	0	-0.646	0	2.9	0.57	0.89
1965-03-01	2.8	-1.7	-2.5	0	-0.591	0	2.8	0.4	1.2
1965	10	-3.6	-8.2	0	-3.30	0	10	2.1	8.3
1965-11-01	0.46	2.2	-0.12	0	-0.929	0	0.46	0.34	3.5
1965-12-01	2.4	-0.91	-2.1	0	-0.839	0	2.4	0.27	1.9
1966-01-01	10	-9.7	-10.0	0	-0.823	0	10	0.48	0.84
1966-02-01	1.8	-1.1	-1.4	0	-0.890	0	1.8	0.45	0.87
1966-03-01	2.0	-1.1	-1.5	0	-1.535	0	2.0	0.52	1.0
1966	17	-11	-15	0	-5.02	0	17	2.1	8.1
1966-11-01	1.4	1.00	-0.81	0	-0.941	0	1.4	0.6	2.9
1966-12-01	0.88	0.47	-0.54	0	-0.858	0	0.88	0.3	1.9
1967-01-01	1.2	-0.35	-0.84	0	-0.882	0	1.2	0.41	1.1
1967-02-01	0.79	0.098	-0.374	0	-0.878	0	0.79	0.41	0.85
1967-03-01	0	1.2	0.2	0	-0.783	0	0	0.2	1.5
1967	4.3	2.4	-2.4	0	-4.34	0	4.3	1.9	8.2
1967-11-01	0.42	2.1	-0.02	0	-0.732	0	0.42	0.41	3.5
1967-12-01	2.1	-0.64	-1.8	0	-0.752	0	2.1	0.27	1.9
1968-01-01	10	-9.3	-9.5	0	-0.791	0	10	0.49	0.73
1968-02-01	0.63	0.30	-0.28	0	-1.047	0	0.63	0.35	1.1
1968-03-01	1.9	-0.64	-1.43	0	-1.811	0	1.9	0.5	1.4
1968	15	-8.2	-13	0	-5.13	0	15	2.0	8.6
1968-11-01	0.39	1.9	-0.06	0	-1.035	0	0.39	0.33	3.0
1968-12-01	2.5	-1.3	-2.0	0	-0.933	0	2.5	0.6	1.7

Table IV-M.4 SC6 Winter Storm Period Water Balance

Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
1969-01-01	3.3	-2.5	-2.9	0	-0.92	0	3.3	0.40	0.97
1969-02-01	4.2	-3.4	-3.7	0	-0.88	0	4.2	0.50	0.85
1969-03-01	1.4	-0.48	-0.72	0	-0.807	0	1.4	0.63	0.96
1969	12	-5.8	-9.3	0	-4.57	0	12	2.4	7.5
1969-11-01	0.83	1.4	-0.46	0	-0.97	0	0.83	0.4	3.2
1969-12-01	2.1	-0.96	-1.6	0	-0.87	0	2.1	0.54	1.5
1970-01-01	1.3	-0.34	-0.91	0	-0.86	0	1.3	0.41	1.2
1970-02-01	0.50	0.34	0.01	0	-0.84	0	0.50	0.51	0.85
1970-03-01	0.41	0.84	0.00	0	-0.75	0	0.41	0.4	1.4
1970	5.2	1.3	-2.937	0	-4.30	0	5.2	2.2	8.2
1970-11-01	0	2.3	0.11	0	-0.783	0	0	0.11	3.0
1970-12-01	0.65	0.81	-0.476	0	-0.740	0	0.65	0.17	1.9
1971-01-01	1.2	-0.39	-0.71	0	-0.776	0	1.2	0.50	1.0
1971-02-01	0.85	0.16	-0.51	0	-0.772	0	0.85	0.3	0.98
1971-03-01	0.82	0.33	-0.52	0	-0.681	0	0.82	0.30	1.5
1971	3.5	3.2	-2.10	0	-3.75	0	3.5	1.4	8.4
1971-11-01	4.2	-2.2	-3.4	0	-0.555	0	4.2	0.8	2.9
1971-12-01	0.039	1.2	0.2	0	-0.551	0	0.039	0.2	1.5
1972-01-01	2.1	-1.3	-1.6	0	-0.673	0	2.1	0.52	0.92
1972-02-01	0	1.0	0.3	0	-0.819	0	0	0.3	1.1
1972-03-01	0	1.5	0.1	0	-0.839	0	0	0.1	1.5
1972	6.4	0.16	-4.433	0	-3.44	0	6.4	1.9	8.0
1972-11-01	8.7	-6.7	-7.6	0	-0.618	0	8.7	1.0	2.9
1972-12-01	2.8	-1.8	-2.2	0	-0.594	0	2.8	0.6	1.3
1973-01-01	3.0	-2.3	-2.6	0	-0.748	0	3.0	0.39	0.92
1973-02-01	0.74	-0.020	-0.130	0	-1.122	0	0.74	0.61	0.78
1973-03-01	3.2	-2.3	-2.5	0	-1.272	0	3.2	0.62	0.88
1973	18	-13	-15	0	-4.35	0	18	3.3	6.7
1973-11-01	0	2.4	0.08	0	-1.311	0	0	0.08	3.4
1973-12-01	1.8	-0.51	-1.4	0	-1.20	0	1.8	0.38	1.8
1974-01-01	0.094	0.89	0.19	0	-1.15	0	0.094	0.29	1.1
1974-02-01	3.4	-2.6	-2.9	0	-1.04	0	3.4	0.50	0.93
1974-03-01	0.12	0.88	0.16	0	-0.87	0	0.12	0.3	1.1
1974	5.4	1.0	-3.9	0	-5.57	0	5.4	1.6	8.3
1974-11-01	3.4	-1.3	-2.7	0	-0.81	0	3.4	0.7	3.2
1974-12-01	0.12	1.2	0.3	0	-0.79	0	0.12	0.4	1.6
1975-01-01	0.75	0.039	-0.370	0	-0.85	0	0.75	0.38	1.1
1975-02-01	0.43	0.33	-0.14	0	-0.91	0	0.43	0.27	0.80
1975-03-01	3.9	-2.9	-3.4	0	-0.854	0	3.9	0.6	1.00
1975	8.6	-2.5	-6.3	0	-4.20	0	8.6	2.3	7.7
1975-11-01	0.28	2.2	0.06	0	-1.047	0	0.28	0.32	3.5
1975-12-01	2.2	-0.73	-2.0	0	-0.949	0	2.2	0.14	2.1
1976-01-01	1.2	-0.34	-0.67	0	-0.925	0	1.2	0.59	1.1
1976-02-01	0.24	0.55	0.09	0	-0.878	0	0.24	0.32	0.89
1976-03-01	1.6	-0.48	-1.11	0	-0.795	0	1.6	0.5	1.1
1976	5.5	1.2	-3.6	0	-4.59	0	5.5	1.9	8.6
1976-11-01	0.91	1.0	-0.44	0	-0.724	0	0.91	0.5	2.7
1976-12-01	0.55	0.85	-0.20	0	-0.717	0	0.55	0.4	1.8
1977-01-01	1.8	-0.94	-1.42	0	-0.791	0	1.8	0.41	1.1
1977-02-01	1.9	-1.2	-1.4	0	-0.823	0	1.9	0.56	0.68
1977-03-01	0.079	1.3	0.1	0	-0.756	0	0.079	0.2	1.6
1977	5.3	1.0	-3.27	0	-3.81	0	5.3	2.0	7.9

Table IV-M.4 SC6 Winter Storm Period Water Balance

Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
1977-11-01	1.3	1.2	-0.74	0	-0.780	0	1.3	0.6	3.5
1977-12-01	0.35	1.1	0.08	0	-0.799	0	0.35	0.4	1.9
1978-01-01	0.67	0.33	-0.46	0	-0.886	0	0.67	0.19	1.4
1978-02-01	6.4	-5.7	-5.9	0	-0.917	0	6.4	0.50	0.72
1978-03-01	5.5	-4.6	-4.9	0	-0.827	0	5.5	0.60	0.90
1978	14	-7.7	-11.9	0	-4.21	0	14	2.3	8.3
1978-11-01	1.9	0.90	-1.5	0	-1.197	0	1.9	0.40	4.1
1978-12-01	5.6	-4.5	-5.1	0	-1.043	0	5.6	0.5	1.5
1979-01-01	6.5	-5.8	-6.0	0	-0.992	0	6.5	0.57	0.88
1979-02-01	6.0	-5.6	-5.6	0	-1.508	0	6.0	0.47	0.63
1979-03-01	1.3	0.043	-0.736	0	-3.610	0	1.3	0.5	1.2
1979	21	-15	-19	0	-8.35	0	21	2.5	8.4
1979-11-01	0.67	2.1	-0.32	0	-1.17	0	0.67	0.4	4.0
1979-12-01	0.67	0.55	-0.22	0	-1.01	0	0.67	0.4	1.7
1980-01-01	0.71	0.39	-0.417	0	-0.93	0	0.71	0.29	1.3
1980-02-01	4.1	-3.4	-3.6	0	-0.85	0	4.1	0.54	0.84
1980-03-01	6.1	-5.0	-5.5	0	-0.75	0	6.1	0.5	0.89
1980	12	-5.4	-10.0	0	-4.7	0	12	2.2	8.8
1980-11-01	0.039	2.6	0.10	0	-1.05	0	0.039	0.14	3.8
1980-12-01	0	1.5	0.07	0	-0.93	0	0	0.07	2.0
1981-01-01	0.55	0.67	-0.21	0	-0.90	0	0.55	0.35	1.3
1981-02-01	1.3	-0.31	-0.93	0	-0.85	0	1.3	0.39	1.3
1981-03-01	2.7	-1.3	-2.2	0	-0.71	0	2.7	0.5	1.4
1981	4.6	3.1	-3.15	0	-4.4	0	4.6	1.4	9.8
1981-11-01	0.94	1.2	-0.39	0	-0.81	0	0.94	0.6	3.1
1981-12-01	2.3	-0.75	-2.2	0	-0.79	0	2.3	0.12	2.2
1982-01-01	0	1.1	0.3	0	-0.83	0	0	0.3	1.3
1982-02-01	2.7	-2.0	-2.1	0	-0.82	0	2.7	0.62	0.85
1982-03-01	1.8	-0.75	-1.11	0	-0.74	0	1.8	0.7	1.1
1982	7.8	-1.2	-5.5	0	-3.99	0	7.8	2.3	8.5
1982-11-01	0	2.3	0.1	0	-1.09	0	0	0.1	3.2
1982-12-01	3.3	-2.3	-2.8	0	-1.20	0	3.3	0.53	1.7
1983-01-01	1.7	-0.91	-1.06	0	-1.28	0	1.7	0.63	0.96
1983-02-01	1.9	-0.94	-1.60	0	-1.28	0	1.9	0.30	1.1
1983-03-01	2.4	-1.3	-2.0	0	-1.165	0	2.4	0.4	0.99
1983	9.3	-3.1	-7.3	0	-6.01	0	9.3	2.0	7.9
1983-11-01	1.1	0.94	-0.47	0	-1.256	0	1.1	0.6	3.0
1983-12-01	2.0	-0.83	-1.65	0	-1.476	0	2.0	0.4	1.8
1984-01-01	2.5	-1.7	-2.1	0	-1.69	0	2.5	0.43	0.94
1984-02-01	0.47	0.43	0.04	0	-1.71	0	0.47	0.50	0.88
1984-03-01	0	1.3	0.1	0	-1.58	0	0	0.1	1.5
1984	6.1	0.12	-4.09	0	-7.72	0	6.1	2.1	8.0
1984-11-01	1.3	0.55	-0.67	0	-0.87	0	1.3	0.7	2.7
1984-12-01	2.1	-0.83	-1.8	0	-0.87	0	2.1	0.26	1.7
1985-01-01	5.8	-5.1	-5.2	0	-0.91	0	5.8	0.58	0.85
1985-02-01	2.7	-2.2	-2.2	0	-0.94	0	2.7	0.48	0.71
1985-03-01	1.7	-0.79	-1.14	0	-1.181	0	1.7	0.50	0.89
1985	14	-8.3	-11.1	0	-4.76	0	14	2.5	6.9
1985-11-01	1.2	0.59	-0.51	0	-0.94	0	1.2	0.7	2.5
1985-12-01	2.8	-1.7	-2.4	0	-0.91	0	2.8	0.4	1.8
1986-01-01	0.91	0.16	-0.35	0	-0.91	0	0.91	0.52	1.0
1986-02-01	0.08	1.2	0.0	0	-0.98	0	0.08	0.1	1.4

Table IV-M.4 SC6 Winter Storm Period Water Balance

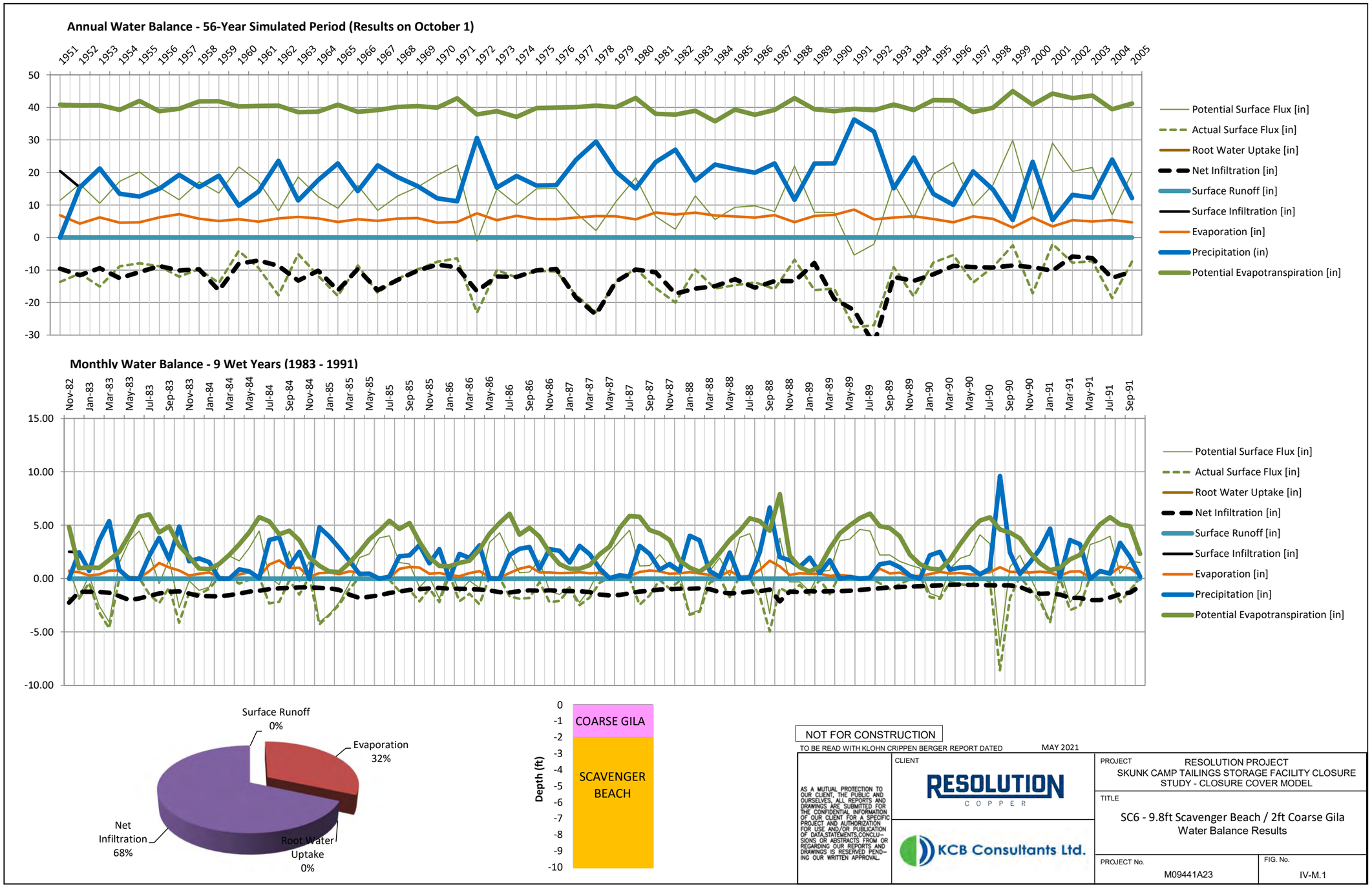
Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
1986-03-01	3.1	-2.0	-2.5	0	-0.91	0	3.1	0.6	1.1
1986	8.0	-1.8	-5.7	0	-4.65	0	8.0	2.3	7.9
1986-11-01	1.7	0.28	-1.26	0	-1.14	0	1.7	0.5	2.5
1986-12-01	1.4	-0.31	-0.79	0	-1.14	0	1.4	0.6	1.6
1987-01-01	3.0	-2.2	-2.5	0	-1.22	0	3.0	0.54	1.1
1987-02-01	3.3	-2.6	-2.8	0	-1.22	0	3.3	0.52	0.87
1987-03-01	2.7	-1.7	-2.2	0	-1.142	0	2.7	0.47	1.3
1987	12	-6.5	-9.6	0	-5.87	0	12	2.6	7.4
1987-11-01	0.31	2.4	0.04	0	-1.06	0	0.31	0.4	3.8
1987-12-01	1.8	-0.55	-1.14	0	-0.945	0	1.8	0.6	1.7
1988-01-01	4.0	-3.2	-3.4	0	-0.94	0	4.0	0.59	1.1
1988-02-01	3.6	-3.0	-3.1	0	-0.94	0	3.6	0.52	0.69
1988-03-01	0.71	0.63	-0.39	0	-0.945	0	0.71	0.3	1.2
1988	10	-3.6	-8.0	0	-4.84	0	10	2.4	8.5
1988-11-01	1.5	1.0	-0.94	0	-1.181	0	1.5	0.6	3.6
1988-12-01	1.7	-0.35	-1.30	0	-1.220	0	1.7	0.4	2.0
1989-01-01	1.1	-0.35	-0.63	0	-1.299	0	1.1	0.47	1.0
1989-02-01	2.2	-1.4	-1.7	0	-1.220	0	2.2	0.50	0.80
1989-03-01	0.28	1.0	0.0	0	-1.142	0	0.28	0.3	1.1
1989	6.8	-0.079	-4.53	0	-6.06	0	6.8	2.3	8.5
1989-11-01	1.1	1.2	-0.43	0	-0.787	0	1.1	0.6	3.7
1989-12-01	0.28	1.1	0.00	0	-0.748	0	0.28	0.28	2.0
1990-01-01	0.87	0.118	-0.71	0	-0.709	0	0.87	0.17	1.1
1990-02-01	1.3	-0.51	-0.75	0	-0.669	0	1.3	0.52	0.94
1990-03-01	2.5	-1.5	-1.9	0	-0.591	0	2.5	0.64	0.89
1990	6.0	0.39	-3.8	0	-3.50	0	6.0	2.2	8.7
1990-11-01	0.28	2.1	0.1	0	-0.984	0	0.28	0.4	3.3
1990-12-01	2.2	-0.87	-1.38	0	-1.339	0	2.2	0.8	2.1
1991-01-01	4.8	-4.1	-4.4	0	-1.457	0	4.8	0.46	1.1
1991-02-01	1.8	-0.98	-1.3	0	-1.378	0	1.8	0.45	0.77
1991-03-01	0.94	0.43	-0.51	0	-1.614	0	0.94	0.4	1.3
1991	10	-3.4	-7.4	0	-6.77	0	10	2.5	8.5
1991-11-01	1.2	1.5	-1.02	0	-1.181	0	1.2	0.23	4.3
1991-12-01	3.3	-2.1	-2.6	0	-1.063	0	3.3	0.6	1.6
1992-01-01	4.0	-3.3	-3.4	0	-1.102	0	4.0	0.60	0.99
1992-02-01	3.0	-2.2	-2.4	0	-1.142	0	3.0	0.58	0.64
1992-03-01	2.8	-1.7	-2.4	0	-1.457	0	2.8	0.4	1.0
1992	14	-7.7	-11.8	0	-5.94	0	14	2.4	8.5
1992-11-01	1.3	1.3	-0.83	0	-2.05	0	1.3	0.4	4.0
1992-12-01	0.47	0.55	-0.04	0	-1.85	0	0.47	0.5	1.6
1993-01-01	6.4	-5.7	-5.9	0	-1.69	0	6.4	0.46	0.73
1993-02-01	11	-11	-11	0	-3.70	0	11	0.52	0.58
1993-03-01	6.0	-5.3	-5.5	0	-5.91	0	6.0	0.49	0.95
1993	25	-20	-23	0	-15.2	0	25	2.3	7.8
1993-11-01	0.79	1.7	-0.20	0	-1.18	0	0.79	0.6	3.9
1993-12-01	4.2	-3.1	-3.8	0	-1.06	0	4.2	0.35	1.6
1994-01-01	0.31	0.63	0.00	0	-1.06	0	0.31	0.30	1.2
1994-02-01	0.24	0.71	-0.08	0	-1.06	0	0.24	0.2	1.1
1994-03-01	2.6	-1.6	-2.0	0	-1.02	0	2.6	0.56	1.0
1994	8.1	-1.7	-6.1	0	-5.4	0	8.1	2.0	8.9
1994-11-01	1.9	0.28	-1.46	0	-0.79	0	1.9	0.4	3.4
1994-12-01	3.3	-2.4	-2.7	0	-0.71	0	3.3	0.70	1.7

Table IV-M.4 SC6 Winter Storm Period Water Balance

Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
1995-01-01	2.7	-1.9	-2.2	0	-0.71	0	2.7	0.47	1.0
1995-02-01	3.7	-2.9	-3.0	0	-0.79	0	3.7	0.67	0.77
1995-03-01	2.7	-1.5	-2.2	0	-0.83	0	2.7	0.5	1.1
1995	14	-8.4	-11.5	0	-3.8	0	14	2.7	8.0
1995-11-01	0	2.6	0.2	0	-1.02	0	0	0.2	3.7
1995-12-01	1.3	0.08	-0.827	0	-1.02	0	1.3	0.5	1.9
1996-01-01	0.91	0.079	-1	0	-1.06	0	0.91	0.30	1.4
1996-02-01	0.039	1.0	0.1	0	-1.02	0	0.039	0.2	1.2
1996-03-01	3.1	-1.9	-2.7	0	-0.94	0	3.1	0.5	1.3
1996	5.4	1.8	-3.7	0	-5.1	0	5.4	1.6	9.5
1996-11-01	0.43	2.2	-0.08	0	-0.79	0	0.43	0.4	4.0
1996-12-01	1.2	0.079	-0.87	0	-0.71	0	1.2	0.35	1.6
1997-01-01	0	0.91	0.31	0	-0.75	0	0	0.35	1.2
1997-02-01	2.8	-2.1	-2.2	0	-0.71	0	2.8	0.55	0.93
1997-03-01	1.7	-0.51	-1.34	0	-0.67	0	1.7	0.4	1.2
1997	6.1	0.59	-4.2	0	-3.62	0	6.1	2.0	8.9
1997-11-01	0.75	1.5	-0.315	0	-0.630	0	0.75	0.44	3.9
1997-12-01	0.79	0.51	-0.3937	0	-0.630	0	0.79	0.43	1.7
1998-01-01	2.7	-2.0	-2.1	0	-0.551	0	2.7	0.58	1.1
1998-02-01	0.39	0.55	0.04	0	-0.591	0	0.39	0.43	0.82
1998-03-01	6.4	-5.7	-5.8	0	-0.472	0	6.4	0.58	0.98
1998	11	-5.2	-8.5	0	-2.87	0	11	2.5	8.5
1998-11-01	0	2.4	0.12	0	-0.984	0	0	0.11	4.0
1998-12-01	1.1	0.24	-0.91	0	-0.866	0	1.1	0.18	1.7
1999-01-01	0.71	0.20	-0.20	0	-0.906	0	0.71	0.54	1.2
1999-02-01	0.079	1.1	0.12	0	-0.866	0	0.079	0.15	1.3
1999-03-01	0.20	1.2	0.00	0	-0.787	0	0.20	0.22	1.3
1999	2.0	5.1	-0.9	0	-4.41	0	2.0	1.2	9.5
1999-11-01	0	2.8	0.12	0	-0.709	0	0	0.15	4.0
1999-12-01	0	1.8	0.08	0	-0.709	0	0	0.08	2.6
2000-01-01	0.039	1.0	0.04	0	-0.827	0	0.039	0.06	1.4
2000-02-01	0.28	0.91	-0.04	0	-0.827	0	0.28	0.24	1.2
2000-03-01	0.71	0.63	-0.39	0	-0.748	0	0.71	0.31	1.6
2000	1.0	7.2	-0.2	0	-3.82	0	1.0	0.8	11
2000-11-01	5.3	-3.1	-4.6	0	-0.551	0	5.3	0.69	4.0
2000-12-01	2.1	-1.2	-1.6	0	-0.551	0	2.1	0.48	1.0
2001-01-01	0.118	0.98	0.08	0	-0.551	0	0.118	0.2	1.4
2001-02-01	3.3	-2.6	-2.9	0	-0.551	0	3.3	0.45	0.98
2001-03-01	1.8	-0.75	-1.14	0	-0.591	0	1.8	0.6	0.93
2001	13	-6.7	-10.2	0	-2.80	0	13	2.4	8.4
2001-11-01	0.39	2.2	-0.08	0	-1.102	0	0.39	0.3	4.0
2001-12-01	0.28	1.2	0.04	0	-1.063	0	0.28	0.30	2.6
2002-01-01	1.9	-1.1	-1.4	0	-1.063	0	1.9	0.46	1.0
2002-02-01	0.20	0.75	-0.08	0	-1.024	0	0.20	0.15	1.1
2002-03-01	0	1.4	0.24	0	-0.827	0	0	0.21	1.2
2002	2.7	4.4	-1.3	0	-5.08	0	2.7	1.4	9.8
2002-11-01	0.079	2.3	0.08	0	-0.591	0	0.079	0.20	4.1
2002-12-01	0.87	0.67	-0.63	0	-0.512	0	0.87	0.24	2.1
2003-01-01	0.98	-0.16	-0.39	0	-0.512	0	0.98	0.57	1.3
2003-02-01	0.39	0.94	0.08	0	-0.512	0	0.39	0.5	1.1
2003-03-01	4.9	-3.9	-4.5	0	-0.394	0	4.9	0.42	1.4
2003	7.2	-0.20	-5.4	0	-2.52	0	7.2	1.9	9.9

Table IV-M.4 SC6 Winter Storm Period Water Balance

Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
2003-11-01	0.079	2.9	0.20	0	-0.591	0	0.079	0.24	4.2
2003-12-01	0.87	0.28	-0.59	0	-0.551	0	0.87	0.31	2.2
2004-01-01	0.98	0.079	-0.51	0	-0.512	0	0.98	0.44	1.5
2004-02-01	1.5	-0.67	-1.02	0	-0.551	0	1.5	0.44	1.1
2004-03-01	0.67	0.35	-0.24	0	-0.472	0	0.67	0.44	1.0
2004	4.1	3.0	-2.17	0	-2.68	0	4.1	1.9	9.9
2004-11-01	1.2	1.0	-0.75	0	-0.591	0	1.2	0.46	3.8
2004-12-01	0.67	0.31	-0.24	0	-0.551	0	0.67	0.43	1.4
2005-01-01	2.8	-1.9	-2.4	0	-0.551	0	2.8	0.41	0.93
2005-02-01	4.2	-3.4	-3.8	0	-0.551	0	4.2	0.42	0.89
2005-03-01	7.4	-6.7	-6.7	0	-0.472	0	7.4	0.63	0.82
2005	16	-11	-14	0	-2.72	0	16	2.4	7.9
2005-11-01	0.43	2.1	-0.12	0	-1.220	0	0.43	0.3	4.1
2005-12-01	0	1.5	0.12	0	-1.102	0	0	0.11	2.2
2006-01-01	0	1.1	0.08	0	-1.142	0	0	0.07	1.5
2006-02-01	0	1.2	0.04	0	-1.024	0	0	0.05	1.4
2006-03-01	0.12	1.5	0.00	0	-0.827	0	0.12	0.13	1.6
2006	0.55	7.4	0.1	0	-5.31	0	0.55	0.7	11


Annual Water Balance - 56-Year Simulated Period (Results on October 1)
Potential Surface Flux [in]
Actual Surface Flux [in]
Root Water Uptake [in]
Net Infiltration [in]
Surface Runoff [in]
Surface Infiltration [in]
Evaporation [in]
Precipitation (in)
Potential Evapotranspiration [in]
Monthly Water Balance - 9 Wet Years (1983 - 1991)
Potential Surface Flux [in]
Actual Surface Flux [in]
Root Water Uptake [in]
Net Infiltration [in]
Surface Runoff [in]
Surface Infiltration [in]
Evaporation [in]
Precipitation [in]
Potential Evapotranspiration [in]
Surface Runoff 0%
Evaporation 32%
Net Infiltration 68%
Root Water Uptake 0%
Depth (ft)
COARSE GILA
SCAVENGER BEACH
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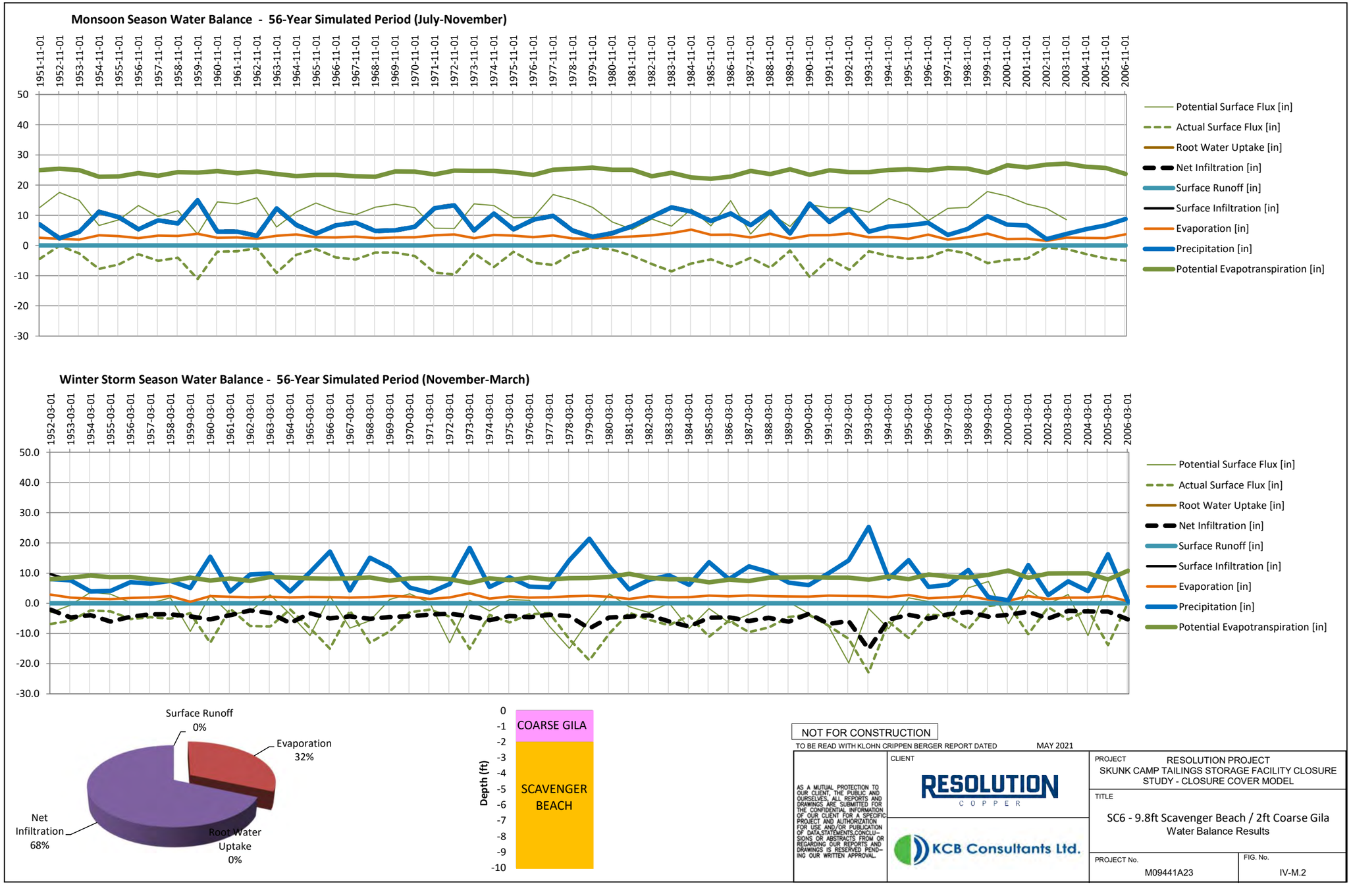
SKUNK CAMP TAILINGS STORAGE FACILITY CLOSURE STUDY - CLOSURE COVER MODEL
TITLE
SC6 - 9.8ft Scavenger Beach / 2ft Coarse Gila Water Balance Results
PROJECT No.
M09441A23
FIG. No.
IV-M.1


Monsoon Season Water Balance - 56-Year Simulated Period (July-November)
Potential Surface Flux [in]
Actual Surface Flux [in]
Root Water Uptake [in]
Net Infiltration [in]
Surface Runoff [in]
Surface Infiltration [in]
Evaporation [in]
Precipitation [in]
Potential Evapotranspiration [in]
Winter Storm Season Water Balance - 56-Year Simulated Period (November-March)
Surface Runoff 0%
Evaporation 32%
Net Infiltration 68%
Root Water Uptake 0%
COARSE GILA
SCAVENGER BEACH
Depth (ft)
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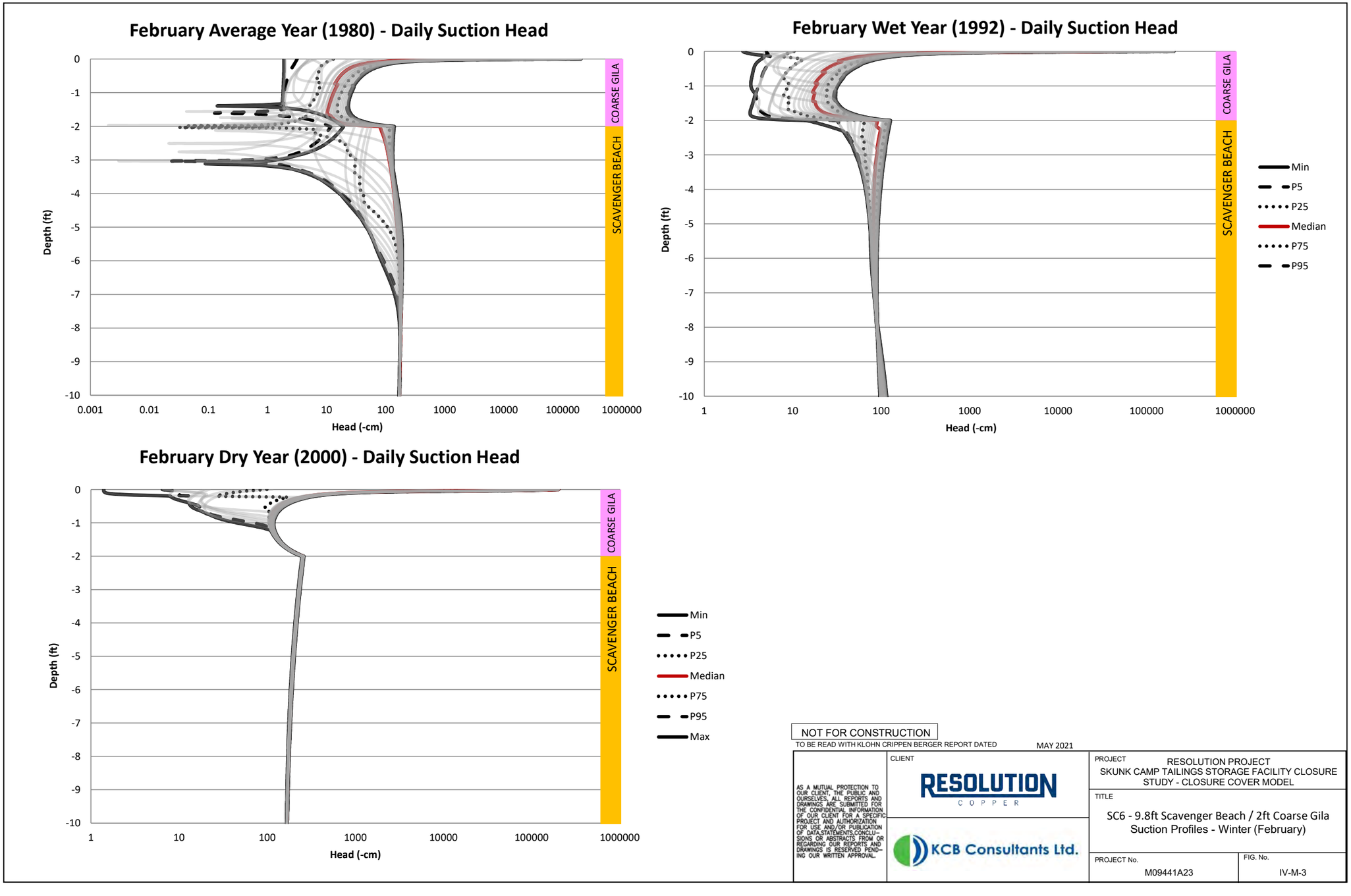
PROJECT
RESOLUTION PROJECT
SKUNK CAMP TAILINGS STORAGE FACILITY CLOSURE STUDY - CLOSURE COVER MODEL
TITLE
SC6 - 9.8ft Scavenger Beach / 2ft Coarse Gila
Water Balance Results
PROJECT No.
M09441A23
FIG. No.
IV-M.2



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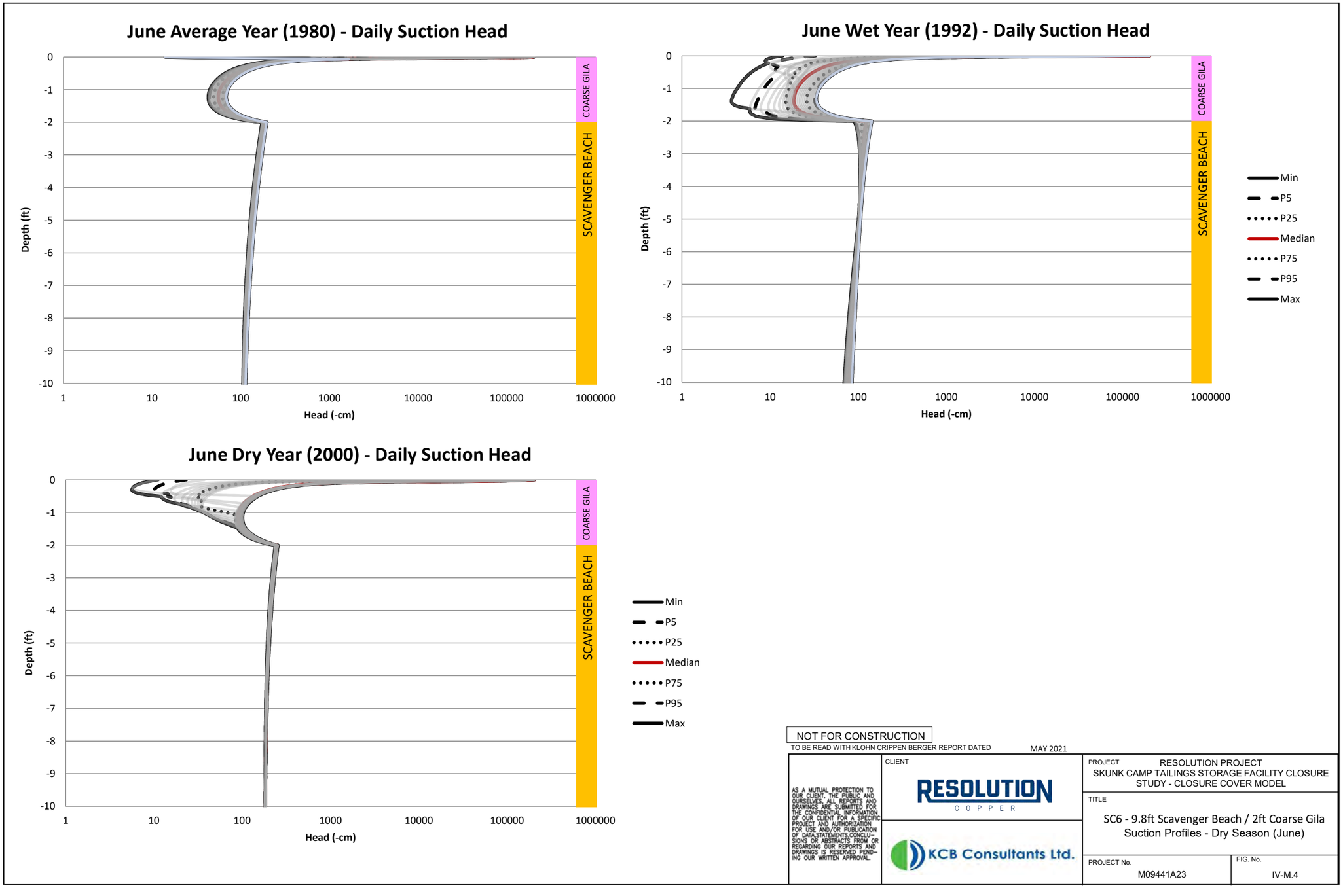
SKUNK CAMP TAILINGS STORAGE FACILITY CLOSURE STUDY - CLOSURE COVER MODEL

TITLE: SC6 - 9.8ft Scavenger Beach / 2ft Coarse Gila Suction Profiles - Winter (February)

PROJECT No. M09441A23

FIG. No. IV-M-3



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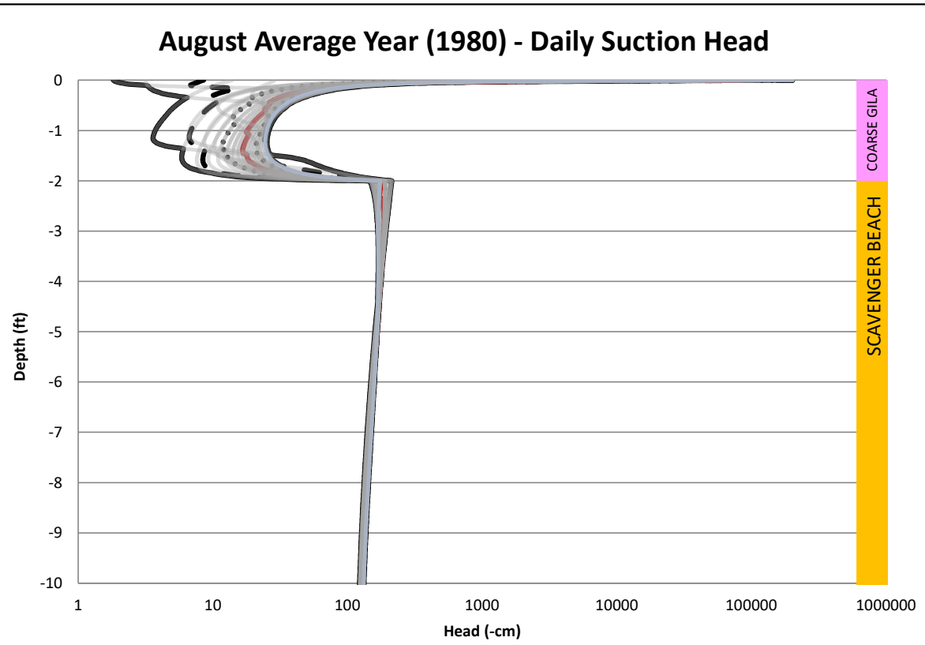
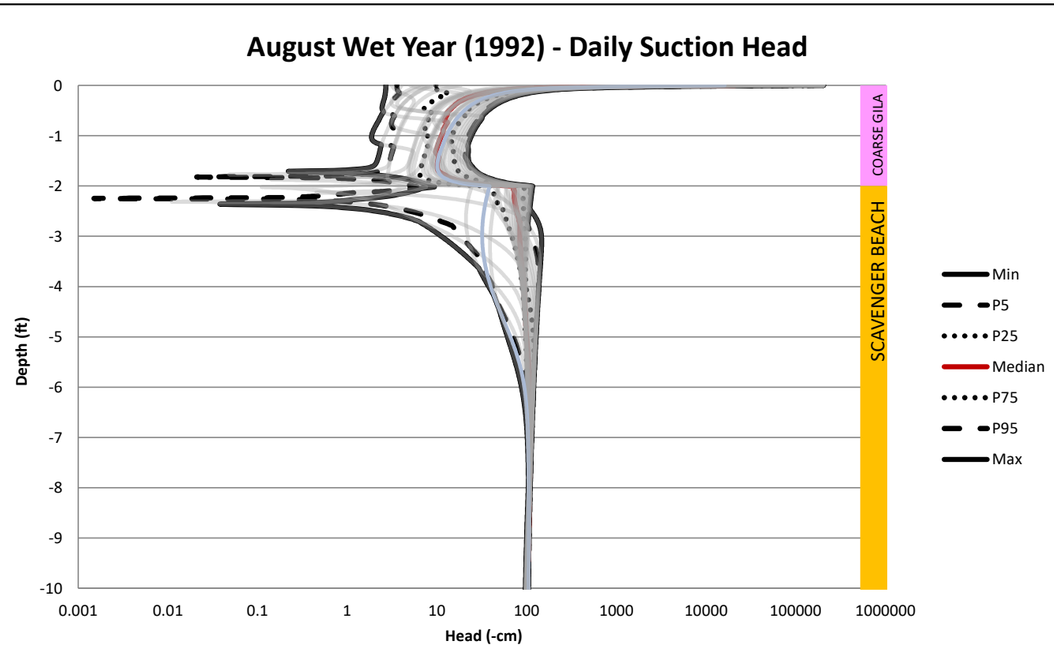
SKUNK CAMP TAILINGS STORAGE FACILITY CLOSURE STUDY - CLOSURE COVER MODEL

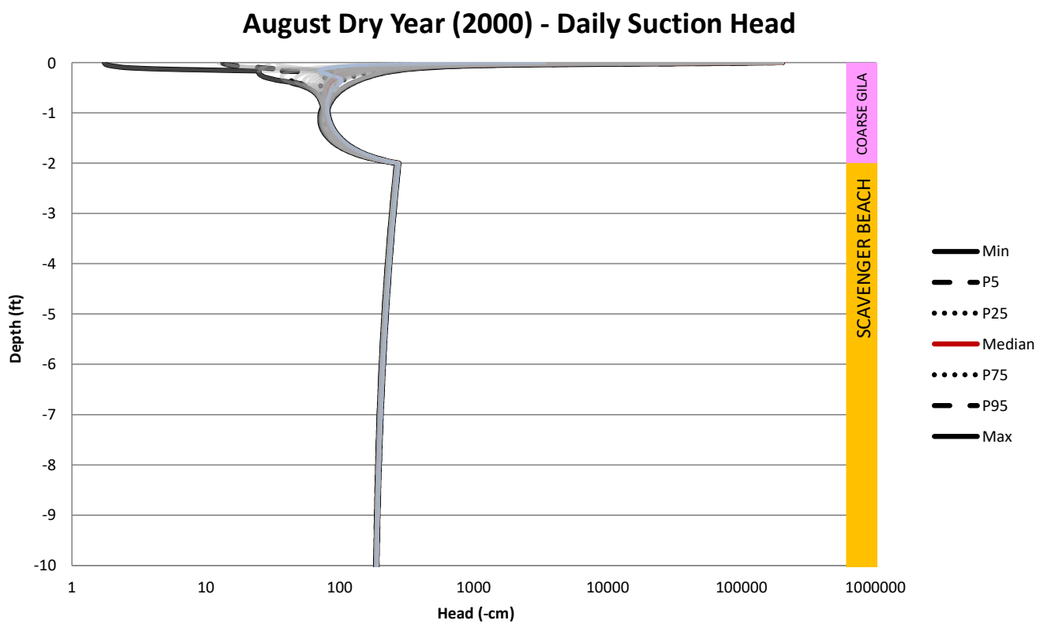
TITLE: SC6 - 9.8ft Scavenger Beach / 2ft Coarse Gila Suction Profiles - Dry Season (June)

PROJECT No. M09441A23

FIG. No. IV-M.4







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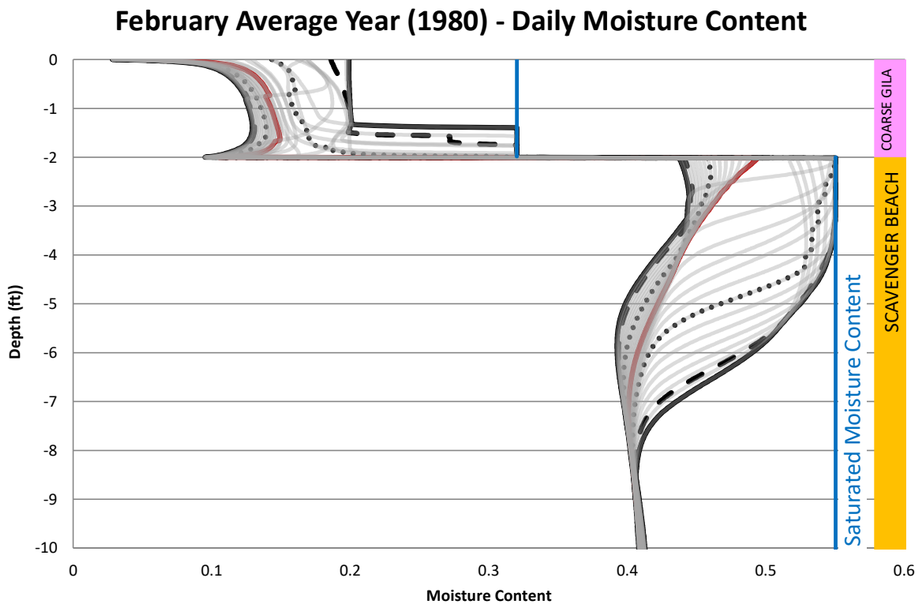
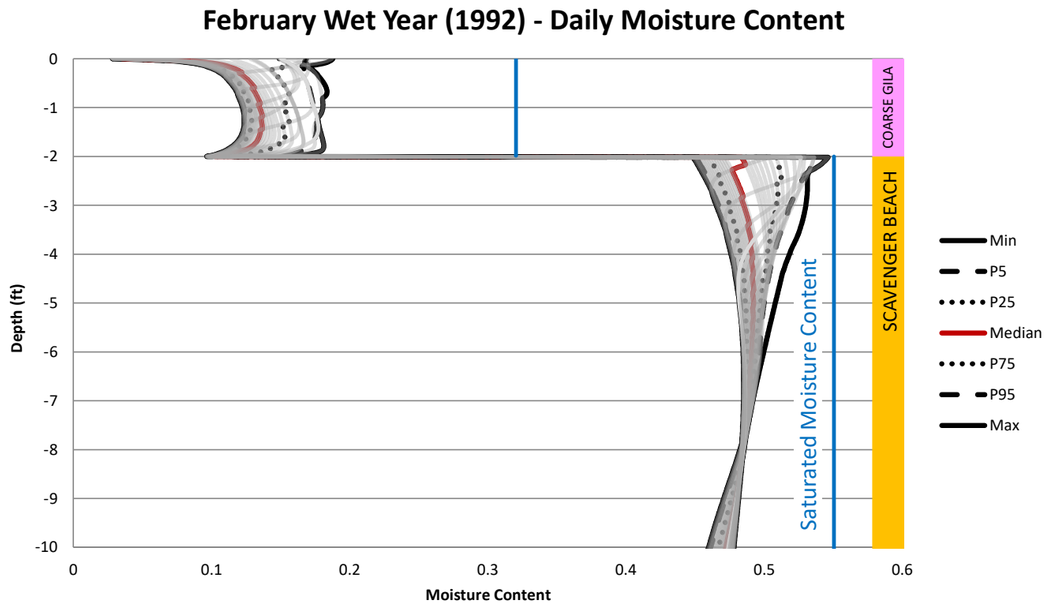
SKUNK CAMP TAILINGS STORAGE FACILITY CLOSURE STUDY - CLOSURE COVER MODEL

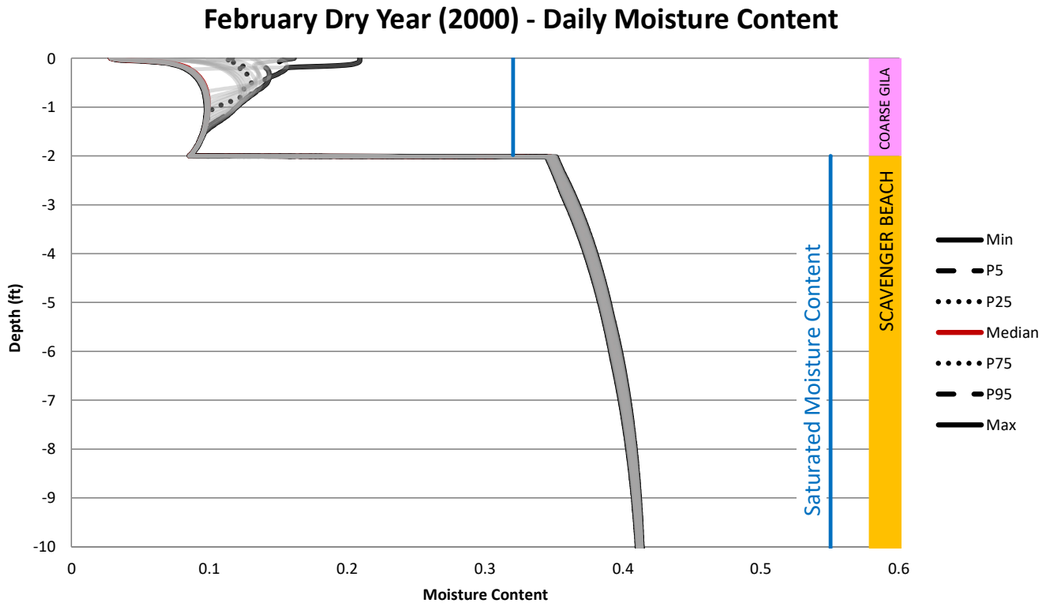
TITLE: SC6 - 9.8ft Scavenger Beach / 2ft Coarse Gila Suction Profiles - Summer Monsoon (August)

PROJECT No. M09441A23

FIG. No. IV-M.5







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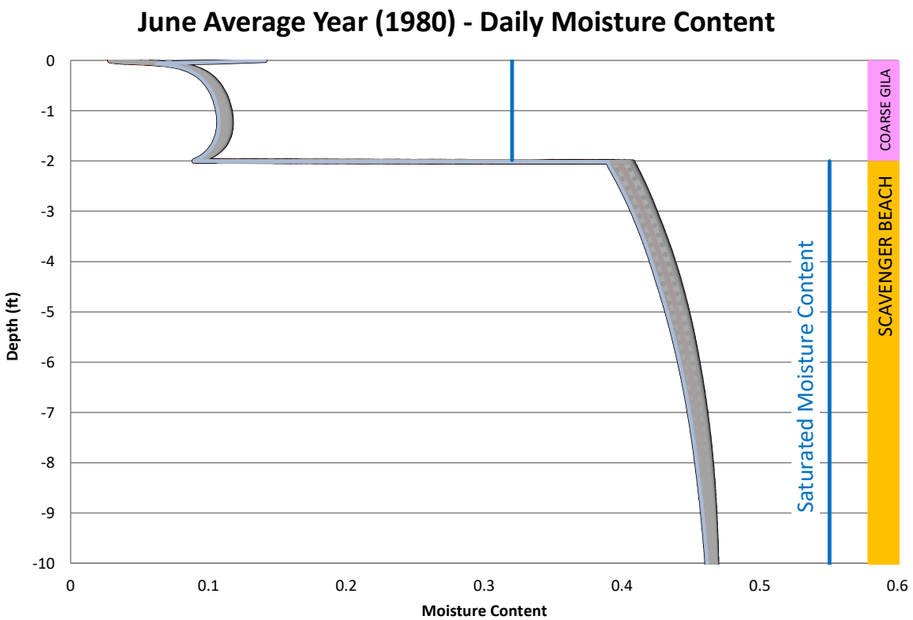
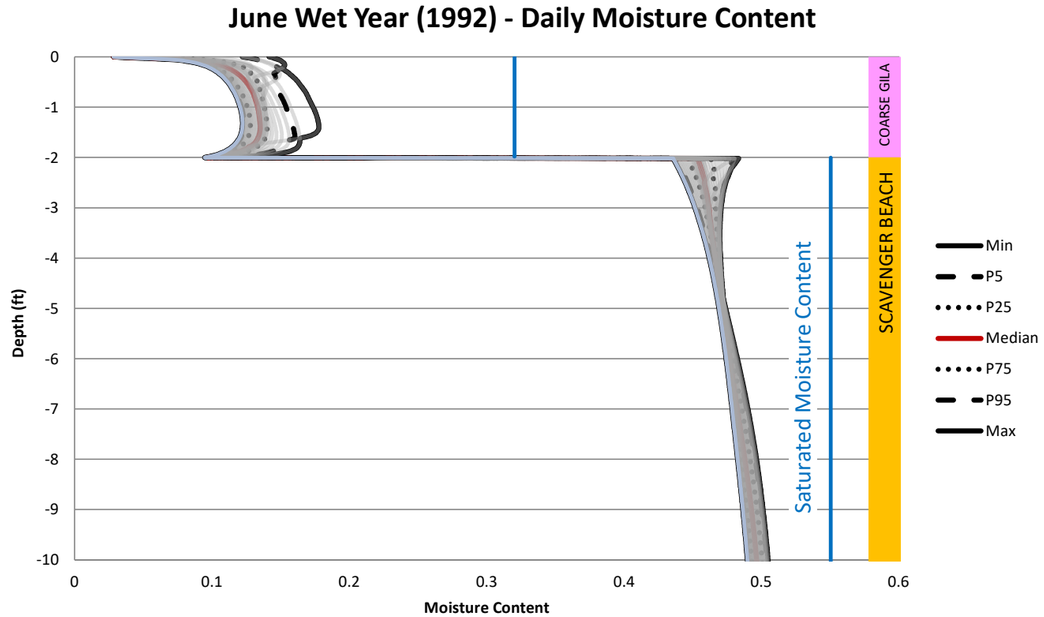
SKUNK CAMP TAILINGS STORAGE FACILITY CLOSURE STUDY - CLOSURE COVER MODEL

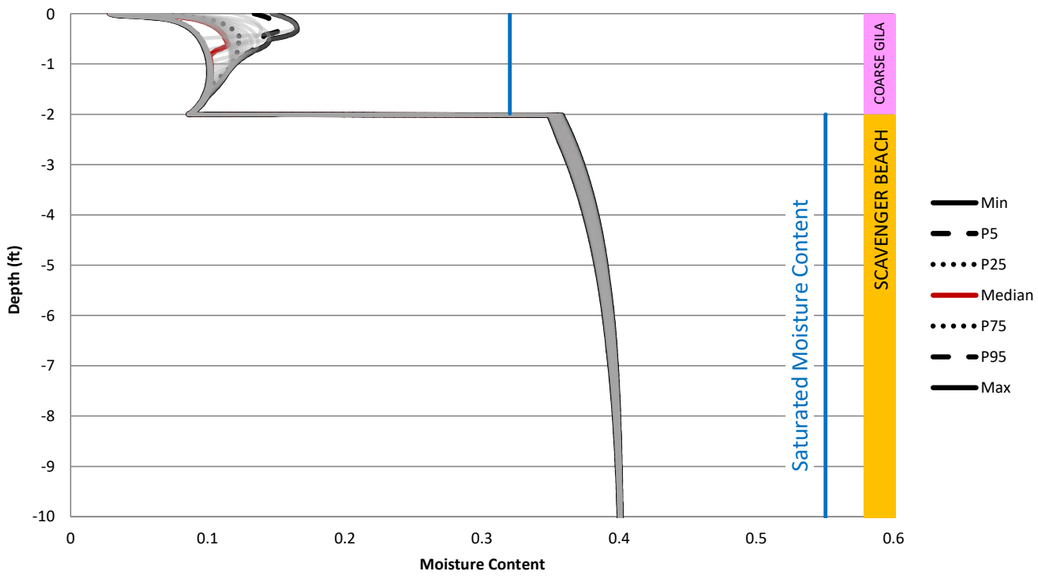
TITLE: SC6 - 9.8ft Scavenger Beach / 2ft Coarse Gila Moisture Content - Winter (February)

PROJECT No. M09441A23

FIG. No. IV-M.6







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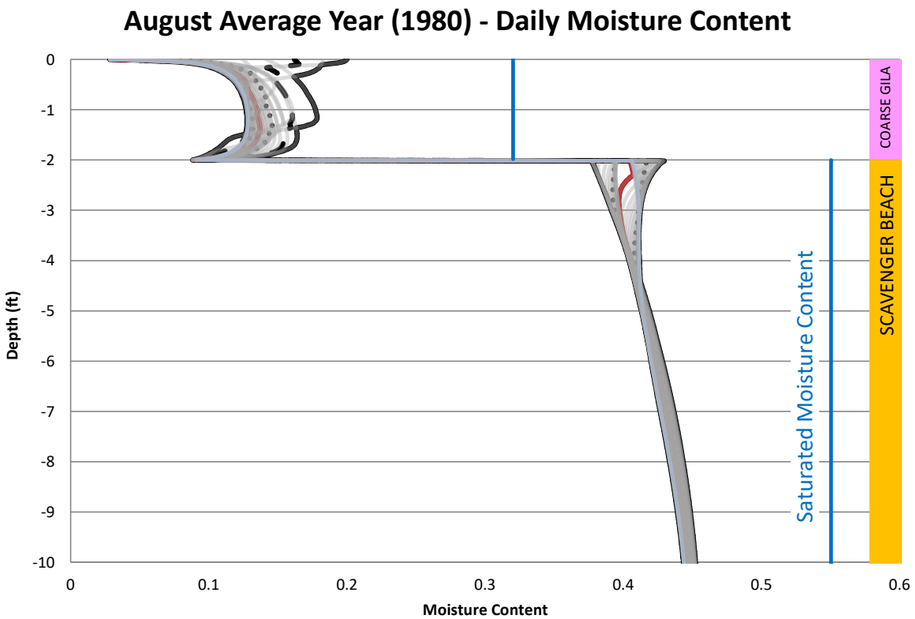
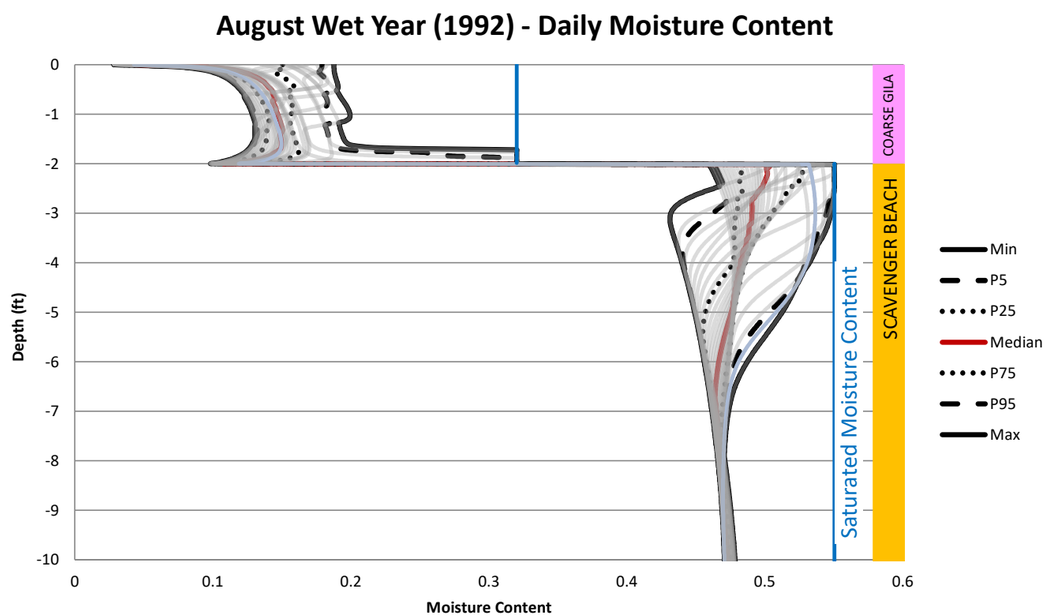
SKUNK CAMP TAILINGS STORAGE FACILITY CLOSURE STUDY - CLOSURE COVER MODEL

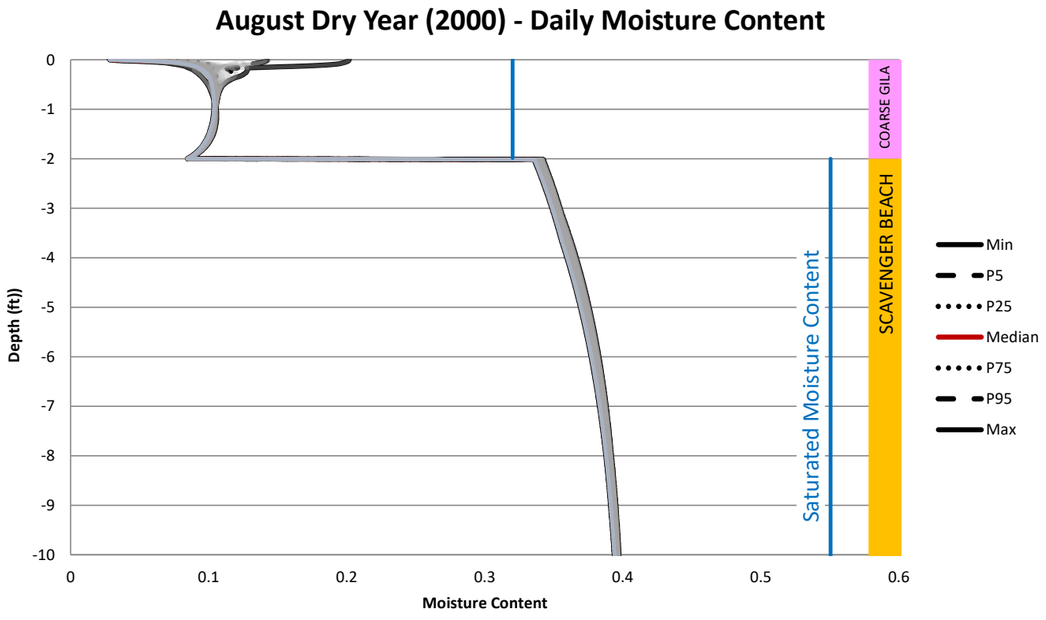
TITLE: SC6 - 9.8ft Scavenger Beach / 2ft Coarse Gila Moisture Content - Dry Season(June)

PROJECT No. M09441A23

FIG. No. IV-M..7







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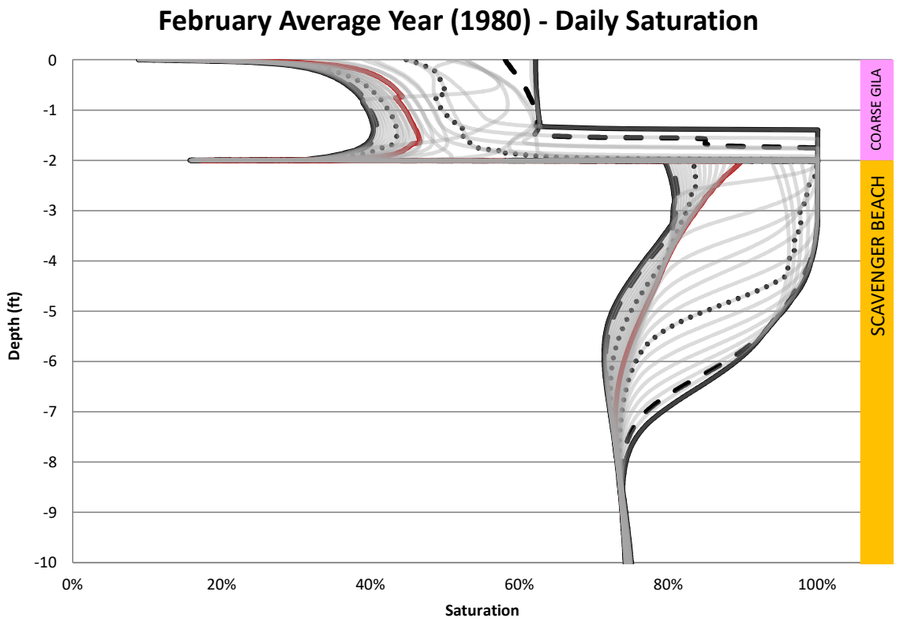
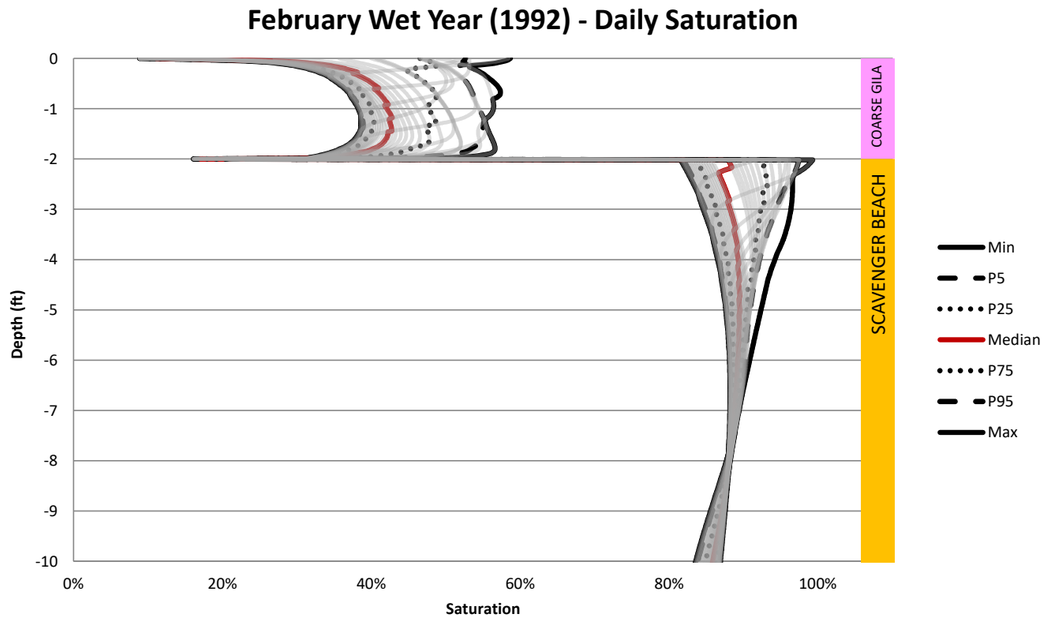
SKUNK CAMP TAILINGS STORAGE FACILITY CLOSURE STUDY - CLOSURE COVER MODEL

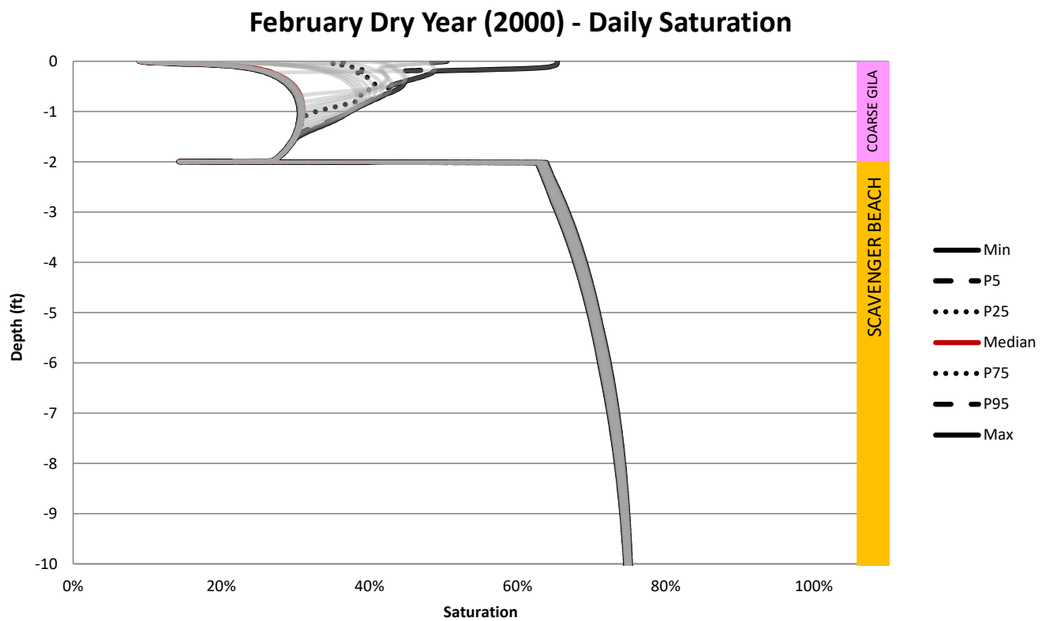
TITLE: SC6 - 9.8ft Scavenger Beach / 2ft Coarse Gila Moisture Content - Summer Monsoon (August)

PROJECT No. M09441A23

FIG. No. IV-M.8







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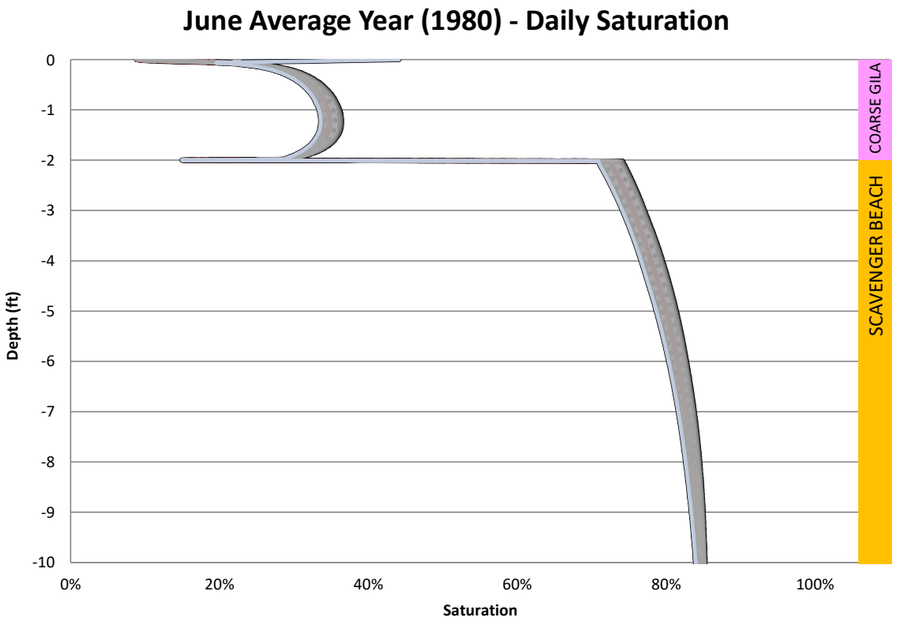
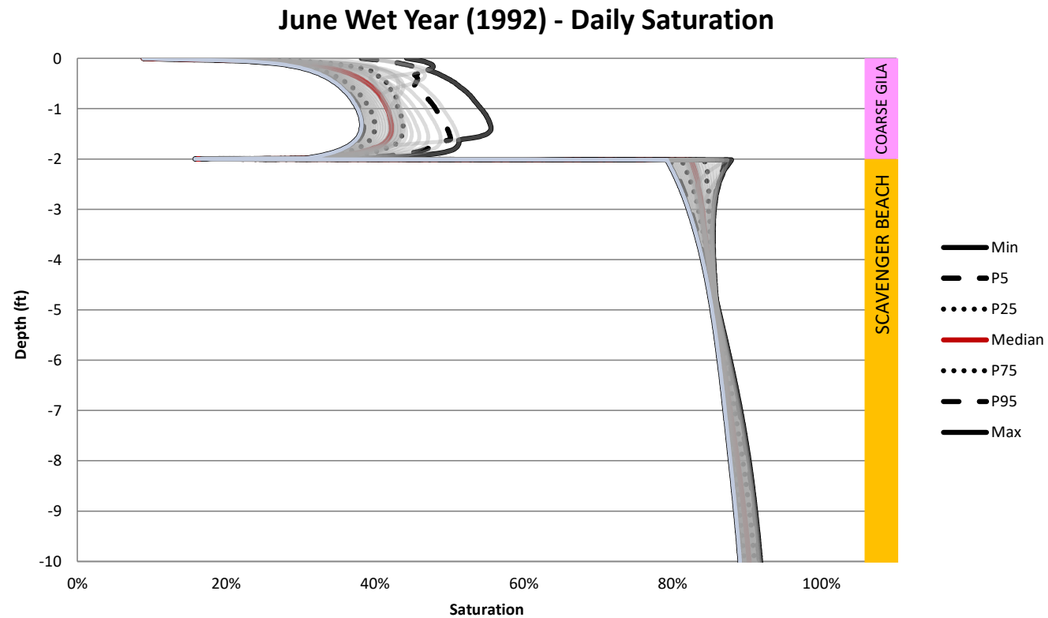
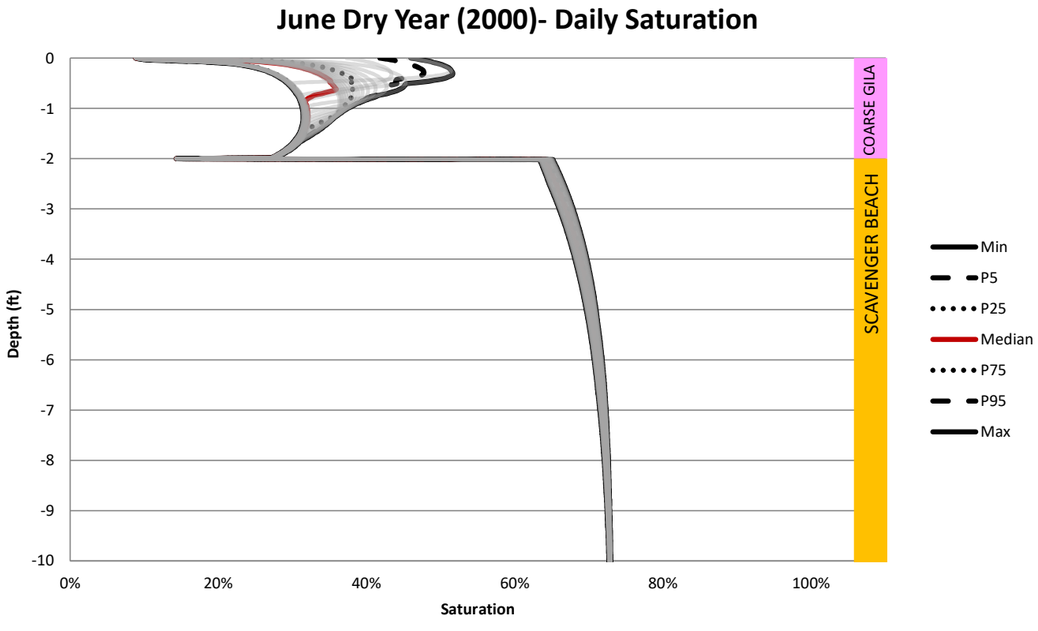
TITLE: SC6 - 9.8ft Scavenger Beach / 2ft Coarse Gila Saturation - Winter (February)

PROJECT No. M09441A23

FIG. No. IV-M.9







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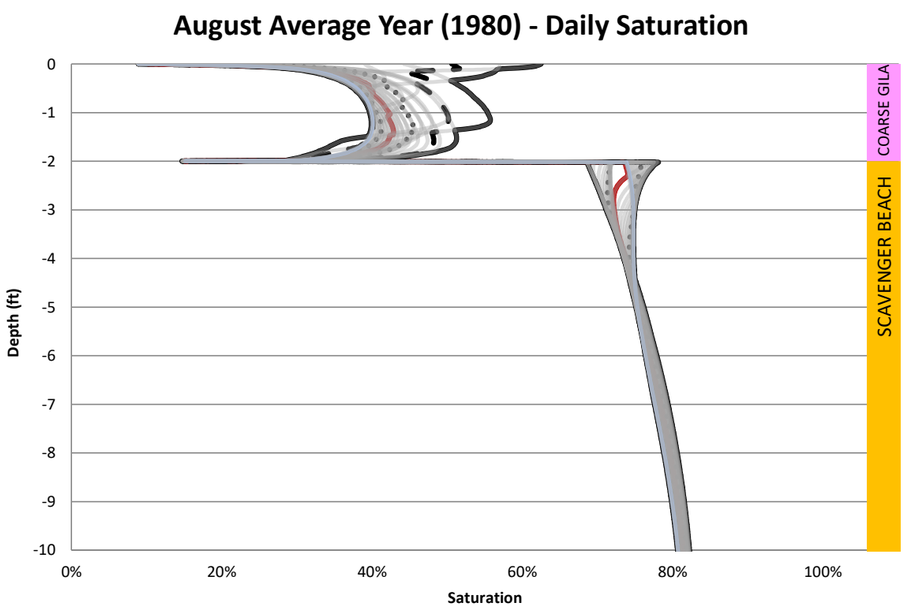
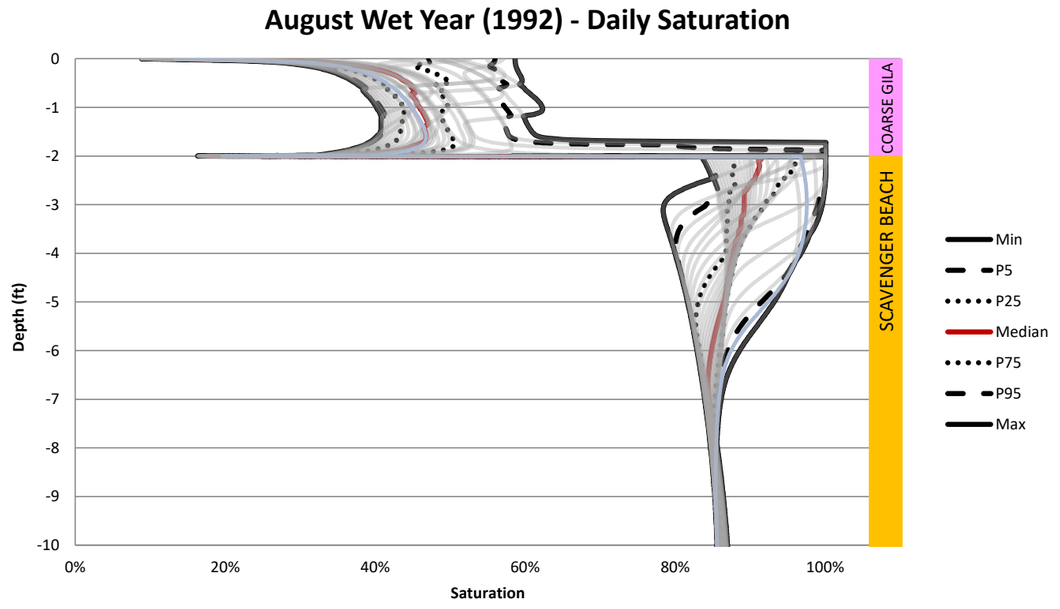
SKUNK CAMP TAILINGS STORAGE FACILITY CLOSURE STUDY - CLOSURE COVER MODEL

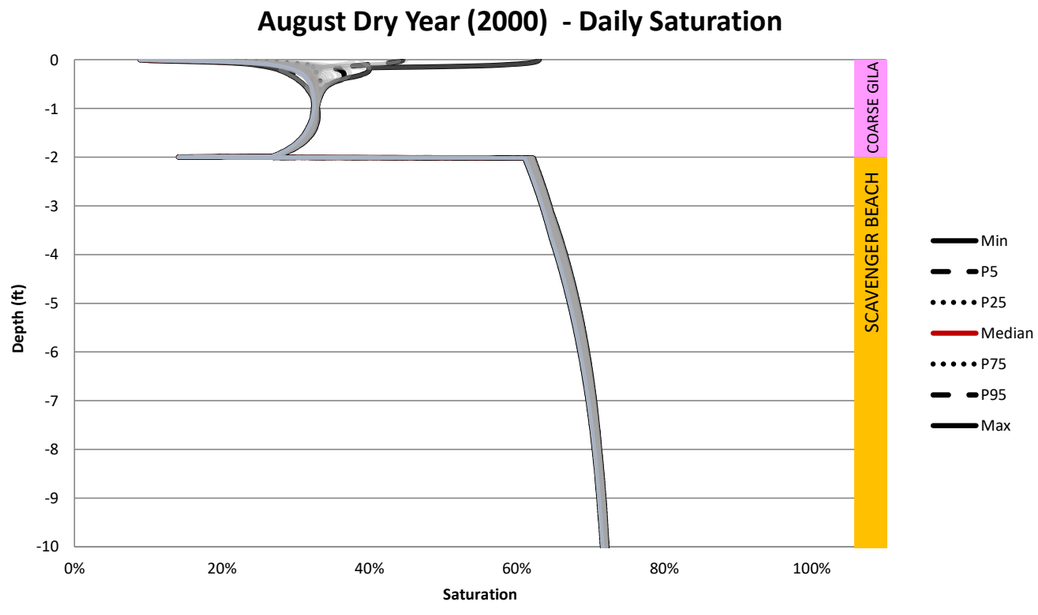
TITLE: SC6 - 9.8ft Scavenger Beach / 2ft Coarse Gila Saturation - Dry Season (June)

PROJECT No. M09441A23

FIG. No. IV-M.10







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SKUNK CAMP TAILINGS STORAGE FACILITY CLOSURE STUDY - CLOSURE COVER MODEL

TITLE: SC6 - 9.8ft Scavenger Beach / 2ft Coarse Gila Saturation - Summer Monsoon (August)

PROJECT No. M09441A23

FIG. No. IV-M.11

Table IV-B.53 BC4 Annual Water Balance

Water Year	Result Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
		(in)	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
1951	1951-10-01	14	46	-2.8	0	-23	0	14	11	60
1952	1952-10-01	0	51	-5.3	0	-6.8	0	20	15	72
1953	1953-10-01	15	57	-5.1	0	-4.5	0	15	10	72
1954	1954-10-01	21	51	-7.0	0	-5.4	0	21	14	72
1955	1955-10-01	13	58	-3.2	0	-4.1	0	13	10	72
1956	1956-10-01	13	61	-2.7	0	-3.5	0	13	9.9	74
1957	1957-10-01	15	56	-3.3	0	-3.1	0	15	12	71
1958	1958-10-01	19	51	-4.8	0	-4.1	0	19	14	70
1959	1959-10-01	16	59	-3.1	0	-2.9	0	16	12	75
1960	1960-10-01	19	54	-8.2	0	-9.8	0	19	11	73
1961	1961-10-01	9.8	62	-1.3	0	-1.00	0	9.8	8.4	73
1962	1962-10-01	14	56	-4.4	0	-4.4	0	14	9.8	71
1963	1963-10-01	24	49	-8.9	0	-5.9	0	24	15	73
1964	1964-10-01	11	60	-1.2	0	-3.8	0	11	10	72
1965	1965-10-01	18	53	-4.7	0	-4.9	0	18	13	71
1966	1966-10-01	23	48	-12	0	-11	0	23	11	72
1967	1967-10-01	14	58	-2.3	0	-2.6	0	14	12	72
1968	1968-10-01	22	49	-11	0	-11	0	22	12	71
1969	1969-10-01	19	53	-5.9	0	-5.7	0	19	13	72
1970	1970-10-01	16	56	-4.2	0	-3.2	0	16	12	72
1971	1971-10-01	12	59	-3.9	0	-2.1	0	12	8.2	73
1972	1972-10-01	11	62	-1.4	0	-4.5	0	11	9.7	76
1973	1973-10-01	31	38	-11	0	-11	0	31	20	69
1974	1974-10-01	15	56	-3.8	0	-2.9	0	15	12	72
1975	1975-10-01	19	50	-4.9	0	-5.8	0	19	14	69
1976	1976-10-01	16	55	-4.3	0	-2.4	0	16	12	72
1977	1977-10-01	16	56	-3.4	0	-3.7	0	16	13	73
1978	1978-10-01	24	47	-9.7	0	-12	0	24	14	71
1979	1979-10-01	30	42	-14	0	-14	0	30	16	71
1980	1980-10-01	20	51	-7.4	0	-7.1	0	20	13	71
1981	1981-10-01	15	59	-3.9	0	-3.2	0	15	11	75
1982	1982-10-01	23	46	-6.3	0	-4.6	0	23	17	69
1983	1983-10-01	27	42	-10	0	-8.2	0	27	17	69
1984	1984-10-01	18	53	-2.6	0	-5.8	0	18	15	71
1985	1985-10-01	22	44	-7.7	0	-7.4	0	22	15	67
1986	1986-10-01	21	49	-5.5	0	-5.4	0	21	16	70
1987	1987-10-01	20	50	-5.4	0	-5.9	0	20	14	70
1988	1988-10-01	23	48	-7.0	0	-6.1	0	23	16	71
1989	1989-10-01	12	62	-2.2	0	-3.8	0	12	9.4	74
1990	1990-10-01	23	48	-9.0	0	-5.7	0	23	14	71
1991	1991-10-01	23	48	-6.8	0	-9.2	0	23	16	71
1992	1992-10-01	36	34	-14	0	-13	0	36	22	70
1993	1993-10-01	33	37	-18	0	-20	0	33	14	70
1994	1994-10-01	15	57	-4.1	0	-4.0	0	15	11	73
1995	1995-10-01	25	44	-8.7	0	-6.9	0	25	16	71
1996	1996-10-01	13	59	-1.9	0	-3.0	0	13	11	74
1997	1997-10-01	10	64	-1.5	0	-2.5	0	10	8.6	75
1998	1998-10-01	20	49	-6.4	0	-5.7	0	20	14	69
1999	1999-10-01	15	58	-3.1	0	-2.2	0	15	12	73
2000	2000-10-01	5.4	69	-0.45	0	-2.1	0	5.4	5.0	77
2001	2001-10-01	23	47	-7.7	0	-6.2	0	23	16	71
2002	2002-10-01	5.4	65	-0.43	0	-1.7	0	5.4	4.9	75
2003	2003-10-01	13	61	-3.4	0	-2.8	0	13	9.6	76
2004	2004-10-01	12	64	-2.5	0	-2.1	0	12	9.8	77

Table IV-B.53 BC4 Annual Water Balance

Water Year	Result Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
		(in)	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
2005	2005-10-01	24	47	-10	0	-9.9	0	24	14	72
2006	2006-10-01	12	59	-2.8	0	-2.4	0	12	9.3	75

Table IV-B.54 BC4 Monthly Water Balance 9 Wet Years (1983 to 1991)

Month	Result Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
		[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
Nov-82	1982-11-30	0.0	5.6	-0.72	0	-1.4	0	2.5	1.8	8.8
Dec-82	1982-12-30	2.5	0.12	-0.78	0	-0.46	0	2.5	1.7	2.7
Jan-83	1983-01-29	0.67	2.6	-0.16	0	-0.61	0	0.67	0.51	3.0
Feb-83	1983-02-28	3.5	-0.16	-1.9	0	-0.70	0	3.5	1.6	2.9
Mar-83	1983-03-30	5.4	-1.5	-2.8	0	-1.3	0	5.4	2.6	4.0
Apr-83	1983-04-29	0.79	5.2	0.60	0	-1.6	0	0.79	1.4	5.3
May-83	1983-05-29	0	8.5	0.27	0	-0.89	0	0	0.28	7.9
Jun-83	1983-06-28	0.039	9.4	0.14	0	-0.43	0	0.039	0.12	9.4
Jul-83	1983-07-28	2.1	6.6	-0.79	0	-0.24	0	2.1	1.3	9.6
Aug-83	1983-08-27	3.8	3.4	-0.65	0	-0.17	0	3.8	3.1	7.2
Sep-83	1983-09-26	1.9	5.2	-0.10	0	-0.30	0	1.9	1.7	7.5
Oct-83	1983-10-26	4.9	-0.35	-2.8	0	-0.77	0	4.9	2.1	5.1
Nov-83	1983-11-25	1.6	2.2	-0.87	0	-1.4	0	1.6	0.75	4.2
Dec-83	1983-12-25	1.9	0.79	-0.43	0	-0.77	0	1.9	1.5	2.6
Jan-84	1984-01-24	1.5	1.2	-0.28	0	-0.94	0	1.5	1.2	2.7
Feb-84	1984-02-23	0	4.1	0.24	0	-0.65	0	0	0.24	3.7
Mar-84	1984-03-24	0	5.6	0.14	0	-0.36	0	0	0.16	5.0
Apr-84	1984-04-23	0.87	5.9	-0.15	0	-0.23	0	0.87	0.71	6.5
May-84	1984-05-23	0.67	7.3	0.043	0	-0.15	0	0.67	0.71	7.5
Jun-84	1984-06-22	0.039	9.3	0.11	0	-0.12	0	0.039	0.16	9.3
Jul-84	1984-07-22	3.6	4.1	-1.3	0	-0.091	0	3.6	2.3	8.5
Aug-84	1984-08-21	3.9	3.2	-0.56	0	-0.091	0	3.9	3.3	6.9
Sep-84	1984-09-20	1.2	5.9	0.22	0	-0.24	0	1.2	1.4	7.0
Oct-84	1984-10-20	2.5	2.4	-0.62	0	-0.30	0	2.5	1.9	5.6
Nov-84	1984-11-19	0	4.3	0.29	0	-0.34	0	0	0.28	4.2
Dec-84	1984-12-19	4.8	-2.3	-3.2	0	-0.31	0	4.8	1.6	3.1
Jan-85	1985-01-18	3.9	-1.5	-1.9	0	-1.2	0	3.9	2.1	2.3
Feb-85	1985-02-17	2.9	-0.35	-1.3	0	-2.0	0	2.9	1.6	2.3
Mar-85	1985-03-19	1.7	2.2	-0.20	0	-1.5	0	1.7	1.5	3.6
Apr-85	1985-04-18	0.47	5.7	0.40	0	-0.75	0	0.47	0.87	5.4
May-85	1985-05-18	0.43	6.6	0.094	0	-0.44	0	0.43	0.55	6.7
Jun-85	1985-06-17	0	8.7	0.13	0	-0.28	0	0	0.12	8.6
Jul-85	1985-07-17	0.24	8.1	-0.11	0	-0.18	0	0.24	0.12	8.4
Aug-85	1985-08-16	2.1	5.7	-0.40	0	-0.12	0	2.1	1.7	7.8
Sep-85	1985-09-15	2.2	4.9	-0.48	0	-0.098	0	2.2	1.7	7.9
Oct-85	1985-10-15	3.1	2.0	-0.86	0	-0.12	0	3.1	2.3	5.7
Nov-85	1985-11-14	1.4	2.5	-0.54	0	-0.28	0	1.4	0.87	3.9
Dec-85	1985-12-14	2.8	0.16	-1.2	0	-0.33	0	2.8	1.6	3.1
Jan-86	1986-01-13	0	3.3	0.80	0	-0.51	0	0	0.79	3.3
Feb-86	1986-02-12	2.3	0.83	-1.6	0	-0.48	0	2.3	0.75	3.6
Mar-86	1986-03-14	1.9	2.6	-0.41	0	-0.37	0	1.9	1.5	3.7
Apr-86	1986-04-13	3.1	2.4	-0.96	0	-0.76	0	3.1	2.2	4.9
May-86	1986-05-13	0	7.8	0.33	0	-1.0	0	0	0.31	7.4
Jun-86	1986-06-12	0.039	9.4	0.16	0	-0.50	0	0.039	0.16	9.1
Jul-86	1986-07-12	2.2	6.5	-0.85	0	-0.27	0	2.2	1.3	9.2
Aug-86	1986-08-11	2.8	4.6	-0.53	0	-0.21	0	2.8	2.3	7.5
Sep-86	1986-09-10	3.0	4.0	-1.1	0	-0.33	0	3.0	1.9	7.3
Oct-86	1986-10-10	0.91	4.8	0.53	0	-0.35	0	0.91	1.5	6.1
Nov-86	1986-11-09	2.8	1.2	-1.1	0	-0.40	0	2.8	1.7	4.6
Dec-86	1986-12-09	2.6	0.63	-1.8	0	-0.48	0	2.6	0.83	3.4
Jan-87	1987-01-08	1.5	1.3	0.15	0	-0.52	0	1.5	1.7	2.7
Feb-87	1987-02-07	3.1	-0.16	-1.2	0	-0.74	0	3.1	1.9	2.9
Mar-87	1987-03-09	2.3	1.9	-0.82	0	-0.98	0	2.3	1.5	3.4
Apr-87	1987-04-08	0.94	4.4	0.20	0	-0.88	0	0.94	1.1	5.0

Table IV-B.54 BC4 Monthly Water Balance 9 Wet Years (1983 to 1991)

Month	Result Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
		[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
May-87	1987-05-08	0.039	7.2	0.24	0	-0.65	0	0.039	0.28	6.8
Jun-87	1987-06-07	0.31	8.1	0.12	0	-0.36	0	0.31	0.43	8.2
Jul-87	1987-07-07	0.20	8.5	0.063	0	-0.22	0	0.20	0.24	9.2
Aug-87	1987-08-06	3.0	5.4	-1.5	0	-0.14	0	3.0	1.6	8.9
Sep-87	1987-09-05	2.4	5.0	-0.36	0	-0.16	0	2.4	2.0	7.5
Oct-87	1987-10-05	0.79	5.5	0.39	0	-0.26	0	0.79	1.2	6.7
Nov-87	1987-11-04	1.4	3.5	-0.74	0	-0.28	0	1.4	0.63	5.8
Dec-87	1987-12-04	0.71	3.1	0.41	0	-0.23	0	0.71	1.1	3.8
Jan-88	1988-01-03	4.0	-1.3	-2.4	0	-0.23	0	4.0	1.7	3.0
Feb-88	1988-02-02	3.6	-0.94	-1.8	0	-0.70	0	3.6	1.8	2.4
Mar-88	1988-03-03	0.71	3.5	0.22	0	-1.6	0	0.71	0.94	3.6
Apr-88	1988-04-02	0.16	5.8	0.22	0	-0.89	0	0.16	0.35	5.5
May-88	1988-05-02	2.4	3.7	-0.81	0	-0.43	0	2.4	1.6	6.1
Jun-88	1988-06-01	0	8.7	0.37	0	-0.32	0	0	0.35	8.0
Jul-88	1988-07-01	0.12	8.5	0.13	0	-0.28	0	0.12	0.28	8.9
Aug-88	1988-07-31	2.4	5.7	-1.1	0	-0.19	0	2.4	1.3	8.5
Sep-88	1988-08-30	6.7	0.59	-2.3	0	-0.15	0	6.7	4.4	7.3
Oct-88	1988-10-29	2.0	9.8	0.38	0	-1.4	0	2.0	2.4	13
Nov-88	1988-11-28	1.7	1.9	-1.1	0	-0.46	0	1.7	0.63	4.1
Dec-88	1988-12-28	1.1	1.8	0.20	0	-0.34	0	1.1	1.3	3.1
Jan-89	1989-01-27	2.0	0.71	-0.59	0	-0.40	0	2.0	1.4	2.4
Feb-89	1989-02-26	0.51	3.3	0.18	0	-0.57	0	0.51	0.71	3.3
Mar-89	1989-03-28	1.7	4.1	-1.2	0	-0.41	0	1.7	0.43	5.3
Apr-89	1989-04-27	0	7.6	0.93	0	-0.27	0	0	0.94	6.9
May-89	1989-05-27	0.20	8.3	0.15	0	-0.26	0	0.20	0.31	8.3
Jun-89	1989-06-26	0	8.9	0.098	0	-0.19	0	0	0.079	9.1
Jul-89	1989-07-26	0.079	8.3	0.055	0	-0.13	0	0.079	0.12	9.0
Aug-89	1989-08-25	1.3	6.1	-0.20	0	-0.094	0	1.3	1.1	8.0
Sep-89	1989-09-24	1.5	5.7	-0.39	0	-0.071	0	1.5	1.1	7.3
Oct-89	1989-10-24	1.1	4.4	-0.14	0	-0.075	0	1.1	0.94	6.1
Nov-89	1989-11-23	0.31	3.8	0.0079	0	-0.10	0	0.31	0.28	4.5
Dec-89	1989-12-23	0	3.1	0.24	0	-0.10	0	0	0.24	3.5
Jan-90	1990-01-22	2.1	0.47	-0.93	0	-0.087	0	2.1	1.2	2.9
Feb-90	1990-02-21	2.6	0.35	-0.96	0	-0.098	0	2.6	1.6	2.5
Mar-90	1990-03-23	0.79	3.9	0.14	0	-0.23	0	0.79	0.94	4.2
Apr-90	1990-04-22	1.0	5.8	0.024	0	-0.30	0	1.0	1.1	6.0
May-90	1990-05-22	1.1	6.9	-0.13	0	-0.28	0	1.1	0.94	7.7
Jun-90	1990-06-21	0.39	8.9	0.079	0	-0.25	0	0.39	0.47	9.0
Jul-90	1990-07-21	0.94	7.4	-0.11	0	-0.19	0	0.94	0.83	8.6
Aug-90	1990-08-20	9.6	-2.6	-7.3	0	-0.13	0	9.6	2.3	7.8
Sep-90	1990-09-19	2.4	4.7	-0.53	0	-3.1	0	2.4	1.9	7.1
Oct-90	1990-10-19	0.43	4.8	1.0	0	-1.6	0	0.43	1.5	5.9
Nov-90	1990-11-18	1.5	2.6	-0.49	0	-0.89	0	1.5	1.1	4.2
Dec-90	1990-12-18	2.8	0.28	-1.5	0	-0.51	0	2.8	1.2	3.5
Jan-91	1991-01-17	4.6	-2.3	-2.5	0	-0.62	0	4.6	2.2	2.3
Feb-91	1991-02-16	0.16	3.4	0.57	0	-2.0	0	0.16	0.71	3.3
Mar-91	1991-03-18	3.6	0.87	-1.8	0	-0.88	0	3.6	1.9	4.3
Apr-91	1991-04-17	3.2	2.5	-0.81	0	-0.89	0	3.2	2.4	4.8
May-91	1991-05-17	0	7.8	0.35	0	-1.2	0	0	0.35	7.4
Jun-91	1991-06-16	0.71	8.4	0.024	0	-0.56	0	0.71	0.75	8.7
Jul-91	1991-07-16	0.43	8.9	0.094	0	-0.30	0	0.43	0.55	9.4
Aug-91	1991-08-15	3.3	4.7	-1.1	0	-0.19	0	3.3	2.2	8.4
Sep-91	1991-09-14	2.0	4.9	-0.17	0	-0.15	0	2.0	1.9	7.5
Oct-91	1991-10-01	0.24	3.2	0.24	0	-0.13	0	0.24	0.43	3.5

Table IV-B.55 BC4 Monsoon Period Water Balance

Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
1951-07-01	0	9.2	0.14	0	-0.29	0	0	0.14	9.2
1951-08-01	1.1	8.4	-0.19	0	-0.21	0	1.1	0.86	9.5
1951-09-01	3.6	4.2	-2.2	0	-0.14	0	3.6	1.5	7.8
1951-10-01	0.65	6.0	0.56	0	-0.19	0	0.65	1.2	6.6
1951-11-01	1.6	3.7	-0.81	0	-0.39	0	1.6	0.83	5.4
1951	7.0	32	-2.5	0	-1.2	0	7.0	4.5	39
1952-07-01	0.63	9.0	0.15	0	-0.65	0	0.63	0.78	9.6
1952-08-01	0.56	8.3	0.015	0	-0.36	0	0.56	0.57	8.8
1952-09-01	0.45	7.3	0.092	0	-0.23	0	0.45	0.54	7.8
1952-10-01	0.70	6.3	-0.069	0	-0.14	0	0.70	0.63	7.0
1952-11-01	0	5.9	0.14	0	-0.11	0	0	0.14	5.9
1952	2.3	37	0.33	0	-1.5	0	2.3	2.7	39
1953-07-01	0	9.1	0.099	0	-0.25	0	0	0.099	9.1
1953-08-01	2.7	5.8	-1.4	0	-0.16	0	2.7	1.3	8.8
1953-09-01	1.8	6.0	-0.10	0	-0.13	0	1.8	1.7	7.7
1953-10-01	0	6.8	0.51	0	-0.18	0	0	0.51	6.8
1953-11-01	0.012	5.4	0.15	0	-0.24	0	0.012	0.16	5.5
1953	4.5	33	-0.74	0	-0.95	0	4.5	3.8	38
1954-07-01	0.13	8.9	0.17	0	-0.43	0	0.13	0.30	9.0
1954-08-01	4.5	3.2	-1.6	0	-0.27	0	4.5	2.9	7.8
1954-09-01	5.3	2.1	-2.1	0	-0.41	0	5.3	3.1	7.4
1954-10-01	1.3	5.4	0.11	0	-1.3	0	1.3	1.4	6.6
1954-11-01	0	5.6	0.37	0	-0.78	0	0	0.37	5.6
1954	11	25	-3.1	0	-3.2	0	11	8.1	36
1955-07-01	2.1	7.0	-0.73	0	-0.12	0	2.1	1.3	9.1
1955-08-01	4.5	3.4	-2.1	0	-0.12	0	4.5	2.3	7.9
1955-09-01	2.7	4.4	-0.13	0	-0.36	0	2.7	2.6	7.2
1955-10-01	0.13	6.7	0.36	0	-0.73	0	0.13	0.48	6.8
1955-11-01	0.020	5.8	0.17	0	-0.50	0	0.020	0.19	5.9
1955	9.4	27	-2.5	0	-1.8	0	9.4	6.9	37
1956-07-01	0.24	9.2	-0.023	0	-0.19	0	0.24	0.22	9.4
1956-08-01	2.8	6.2	-0.74	0	-0.13	0	2.8	2.0	9.0
1956-09-01	1.8	5.7	-0.090	0	-0.11	0	1.8	1.7	7.5
1956-10-01	0.075	6.8	0.16	0	-0.14	0	0.075	0.24	6.8
1956-11-01	0.53	4.5	-0.097	0	-0.16	0	0.53	0.43	5.2
1956	5.4	32	-0.79	0	-0.74	0	5.4	4.6	38
1957-07-01	0.031	9.3	0.18	0	-0.24	0	0.031	0.22	9.3
1957-08-01	1.1	7.3	-0.21	0	-0.18	0	1.1	0.87	8.5
1957-09-01	3.4	4.4	-0.81	0	-0.13	0	3.4	2.6	8.1
1957-10-01	0.57	6.1	0.23	0	-0.15	0	0.57	0.80	6.6
1957-11-01	3.2	1.1	-1.9	0	-0.22	0	3.2	1.3	4.6
1957	8.3	28	-2.5	0	-0.92	0	8.3	5.8	37
1958-07-01	0.70	8.5	-0.039	0	-0.38	0	0.70	0.66	9.3
1958-08-01	0.78	8.2	-0.079	0	-0.24	0	0.78	0.70	9.1
1958-09-01	0.85	7.2	0.080	0	-0.17	0	0.85	0.93	8.0
1958-10-01	3.0	3.2	-1.3	0	-0.12	0	3.0	1.8	6.4
1958-11-01	1.9	3.3	-0.35	0	-0.19	0	1.9	1.6	5.3
1958	7.3	30	-1.6	0	-1.1	0	7.3	5.6	38
1959-07-01	1.0	8.0	-0.19	0	-0.091	0	1.0	0.84	9.1
1959-08-01	3.8	5.7	-1.7	0	-0.067	0	3.8	2.1	9.6
1959-09-01	5.3	2.0	-1.1	0	-0.091	0	5.3	4.2	7.4
1959-10-01	0.047	6.6	0.44	0	-0.65	0	0.047	0.49	6.9
1959-11-01	4.8	0.35	-4.0	0	-0.58	0	4.8	0.76	5.3
1959	15	23	-6.6	0	-1.5	0	15	8.4	38
1960-07-01	0	9.2	0.098	0	-0.17	0	0	0.098	9.2
1960-08-01	0.74	8.3	-0.13	0	-0.13	0	0.74	0.61	9.2
1960-09-01	1.5	6.5	-0.15	0	-0.098	0	1.5	1.4	8.1

Table IV-B.55 BC4 Monsoon Period Water Balance

Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
1960-10-01	0.27	6.6	0.11	0	-0.079	0	0.27	0.38	7.0
1960-11-01	2.1	2.8	-0.74	0	-0.075	0	2.1	1.3	5.0
1960	4.6	33	-0.81	0	-0.55	0	4.6	3.8	38
1961-07-01	0	9.3	0.059	0	-0.075	0	0	0.059	9.3
1961-08-01	0.67	7.9	-0.083	0	-0.059	0	0.67	0.59	8.9
1961-09-01	3.0	5.1	-1.5	0	-0.051	0	3.0	1.5	8.1
1961-10-01	0.50	5.9	0.85	0	-0.043	0	0.50	1.3	6.3
1961-11-01	0.45	4.5	-0.15	0	-0.075	0	0.45	0.30	5.4
1961	4.6	33	-0.78	0	-0.30	0	4.6	3.8	38
1962-07-01	0	9.0	0.10	0	-0.27	0	0	0.11	9.1
1962-08-01	0.61	8.2	-0.024	0	-0.18	0	0.61	0.58	8.9
1962-09-01	0.49	7.7	0.024	0	-0.12	0	0.49	0.52	8.4
1962-10-01	1.2	5.2	-0.30	0	-0.091	0	1.2	0.93	6.6
1962-11-01	0.87	4.2	-0.051	0	-0.071	0	0.87	0.82	5.1
1962	3.2	34	-0.25	0	-0.73	0	3.2	3.0	38
1963-07-01	0	9.0	0.12	0	-0.28	0	0	0.13	9.0
1963-08-01	0.079	9.1	0.083	0	-0.20	0	0.079	0.16	9.4
1963-09-01	10	-3.3	-6.1	0	-0.13	0	10	4.3	7.5
1963-10-01	1.0	5.7	1.1	0	-1.9	0	1.0	2.2	6.6
1963-11-01	0.67	4.9	0.094	0	-1.3	0	0.67	0.76	5.8
1963	12	25	-4.7	0	-3.8	0	12	7.6	38
1964-07-01	0	9.3	0.083	0	-0.13	0	0	0.079	9.4
1964-08-01	1.5	7.1	-0.37	0	-0.098	0	1.5	1.1	8.8
1964-09-01	2.2	5.6	-0.29	0	-0.071	0	2.2	1.9	7.7
1964-10-01	1.6	4.4	-0.14	0	-0.071	0	1.6	1.4	6.1
1964-11-01	1.5	4.2	-0.48	0	-0.10	0	1.5	1.1	5.8
1964	6.8	31	-1.2	0	-0.47	0	6.8	5.6	38
1965-07-01	0.10	8.8	0.12	0	-0.33	0	0.10	0.22	8.8
1965-08-01	1.4	7.0	-0.24	0	-0.22	0	1.4	1.2	8.9
1965-09-01	0.90	7.0	0.016	0	-0.14	0	0.90	0.92	8.0
1965-10-01	1.0	5.4	-0.071	0	-0.12	0	1.0	0.97	6.6
1965-11-01	0.46	5.0	-0.0039	0	-0.12	0	0.46	0.46	5.7
1965	3.9	33	-0.18	0	-0.93	0	3.9	3.8	38
1966-07-01	0.16	8.5	0.047	0	-0.19	0	0.16	0.22	9.1
1966-08-01	0.84	7.3	-0.13	0	-0.13	0	0.84	0.71	8.3
1966-09-01	1.6	6.3	-0.50	0	-0.094	0	1.6	1.1	8.1
1966-10-01	2.7	3.7	-0.91	0	-0.075	0	2.7	1.8	6.5
1966-11-01	1.4	3.8	-0.11	0	-0.22	0	1.4	1.2	5.1
1966	6.6	30	-1.6	0	-0.71	0	6.6	5.0	37
1967-07-01	0.079	8.8	0.087	0	-0.14	0	0.079	0.17	9.0
1967-08-01	4.0	4.2	-1.3	0	-0.12	0	4.0	2.6	8.3
1967-09-01	2.5	5.6	-0.48	0	-0.18	0	2.5	2.0	8.0
1967-10-01	0.56	5.7	0.16	0	-0.37	0	0.56	0.71	6.5
1967-11-01	0.42	4.8	0.11	0	-0.33	0	0.42	0.53	5.6
1967	7.5	29	-1.4	0	-1.1	0	7.5	6.1	37
1968-07-01	0	9.4	0.11	0	-0.27	0	0	0.11	9.3
1968-08-01	1.8	6.9	-0.67	0	-0.17	0	1.8	1.2	8.9
1968-09-01	2.5	4.6	-0.26	0	-0.13	0	2.5	2.3	7.3
1968-10-01	0.047	6.7	0.24	0	-0.17	0	0.047	0.29	6.9
1968-11-01	0.39	4.6	0.031	0	-0.19	0	0.39	0.42	5.1
1968	4.8	32	-0.54	0	-0.91	0	4.8	4.3	38
1969-07-01	0	9.3	0.16	0	-0.28	0	0	0.16	9.4
1969-08-01	0.33	8.1	0.047	0	-0.21	0	0.33	0.38	8.7
1969-09-01	2.6	5.7	-0.57	0	-0.14	0	2.6	2.0	8.3
1969-10-01	1.2	5.3	-0.16	0	-0.12	0	1.2	1.1	6.8
1969-11-01	0.83	4.1	-0.15	0	-0.15	0	0.83	0.67	5.2
1969	5.0	33	-0.67	0	-0.90	0	5.0	4.3	38

Table IV-B.55 BC4 Monsoon Period Water Balance

Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
1970-07-01	0.079	9.1	0.11	0	-0.26	0	0.079	0.18	9.1
1970-08-01	1.0	7.6	-0.087	0	-0.17	0	1.0	0.96	9.1
1970-09-01	1.7	6.4	-0.33	0	-0.12	0	1.7	1.4	8.0
1970-10-01	3.4	3.2	-1.4	0	-0.11	0	3.4	2.0	7.0
1970-11-01	0	5.1	0.28	0	-0.42	0	0	0.28	5.3
1970	6.2	31	-1.4	0	-1.1	0	6.2	4.8	39
1971-07-01	0	8.8	0.059	0	-0.087	0	0	0.059	9.0
1971-08-01	0.39	8.2	-0.024	0	-0.063	0	0.39	0.37	9.2
1971-09-01	4.7	2.6	-1.7	0	-0.047	0	4.7	3.0	7.8
1971-10-01	3.1	3.7	-2.1	0	-0.12	0	3.1	0.93	7.1
1971-11-01	4.2	0.55	-1.3	0	-0.81	0	4.2	2.9	5.1
1971	12	24	-5.1	0	-1.1	0	12	7.3	38
1972-07-01	1.7	7.7	-0.53	0	-0.071	0	1.7	1.1	9.3
1972-08-01	0.27	9.2	0.21	0	-0.059	0	0.27	0.48	9.5
1972-09-01	2.0	6.0	-0.45	0	-0.063	0	2.0	1.5	8.4
1972-10-01	0.67	6.0	0.16	0	-0.075	0	0.67	0.82	6.8
1972-11-01	8.7	-4.2	-5.5	0	-0.14	0	8.7	3.2	4.9
1972	13	25	-6.1	0	-0.41	0	13	7.2	39
1973-07-01	0.87	8.3	0.047	0	-0.54	0	0.87	0.92	9.0
1973-08-01	2.7	5.7	-1.2	0	-0.32	0	2.7	1.5	8.9
1973-09-01	1.4	6.7	0.41	0	-0.25	0	1.4	1.8	8.1
1973-10-01	0	6.6	0.24	0	-0.27	0	0	0.24	6.7
1973-11-01	0	5.1	0.12	0	-0.24	0	0	0.12	5.6
1973	5.0	32	-0.39	0	-1.6	0	5.0	4.6	38
1974-07-01	0	9.5	0.098	0	-0.24	0	0	0.098	9.4
1974-08-01	2.4	6.0	-0.66	0	-0.15	0	2.4	1.8	8.6
1974-09-01	1.4	6.5	-0.016	0	-0.13	0	1.4	1.4	8.3
1974-10-01	3.4	2.9	-1.1	0	-0.16	0	3.4	2.3	6.5
1974-11-01	3.4	1.4	-2.1	0	-0.31	0	3.4	1.3	5.3
1974	11	26	-3.8	0	-0.98	0	11	6.9	38
1975-07-01	0	9.5	0.15	0	-0.45	0	0	0.15	9.6
1975-08-01	2.2	5.5	-0.45	0	-0.26	0	2.2	1.7	8.3
1975-09-01	2.0	6.3	-0.25	0	-0.19	0	2.0	1.7	8.0
1975-10-01	0.91	5.6	0.071	0	-0.19	0	0.91	0.98	6.8
1975-11-01	0.24	4.8	0.094	0	-0.20	0	0.24	0.35	5.4
1975	5.4	32	-0.39	0	-1.3	0	5.4	5.0	38
1976-07-01	0	9.5	0.13	0	-0.16	0	0	0.13	9.7
1976-08-01	2.8	5.3	-1.1	0	-0.14	0	2.8	1.7	8.7
1976-09-01	0.87	7.3	0.091	0	-0.16	0	0.87	0.94	7.9
1976-10-01	4.0	1.9	-1.8	0	-0.22	0	4.0	2.2	6.4
1976-11-01	0.91	3.8	0.24	0	-0.42	0	0.91	1.1	5.1
1976	8.5	28	-2.4	0	-1.1	0	8.5	6.1	38
1977-07-01	0.039	9.5	0.091	0	-0.20	0	0.039	0.14	9.5
1977-08-01	2.6	6.3	-0.85	0	-0.13	0	2.6	1.7	9.4
1977-09-01	2.4	5.6	-0.49	0	-0.12	0	2.4	1.9	8.1
1977-10-01	3.5	2.4	-1.1	0	-0.23	0	3.5	2.3	6.4
1977-11-01	1.3	3.9	-0.020	0	-0.49	0	1.3	1.3	5.5
1977	9.8	28	-2.4	0	-1.2	0	9.8	7.4	39
1978-07-01	0.55	8.7	-0.079	0	-0.42	0	0.55	0.46	9.4
1978-08-01	0.94	7.9	-0.20	0	-0.26	0	0.94	0.78	9.4
1978-09-01	1.1	6.4	0.12	0	-0.17	0	1.1	1.2	7.3
1978-10-01	0.39	5.9	0.039	0	-0.15	0	0.39	0.43	6.6
1978-11-01	1.9	3.5	-1.0	0	-0.13	0	1.9	0.90	5.9
1978	4.9	32	-1.1	0	-1.1	0	4.9	3.7	39
1979-07-01	0.35	9.1	0.20	0	-0.41	0	0.35	0.55	9.2
1979-08-01	0.16	8.6	0.075	0	-0.26	0	0.16	0.24	9.3
1979-09-01	1.5	6.1	-0.20	0	-0.17	0	1.5	1.3	7.8

Table IV-B.55 BC4 Monsoon Period Water Balance

Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
1979-10-01	0.12	6.7	0.13	0	-0.12	0	0.12	0.24	7.2
1979-11-01	0.67	4.7	-0.17	0	-0.11	0	0.67	0.52	5.9
1979	2.8	35	0.035	0	-1.1	0	2.8	2.9	39
1980-07-01	0.16	8.9	0.024	0	-0.33	0	0.16	0.18	9.0
1980-08-01	2.0	6.7	-0.48	0	-0.22	0	2.0	1.5	9.1
1980-09-01	1.3	6.7	0.13	0	-0.14	0	1.3	1.4	7.9
1980-10-01	0.59	6.2	0.071	0	-0.14	0	0.59	0.65	7.0
1980-11-01	0.039	5.2	0.11	0	-0.13	0	0.039	0.15	5.9
1980	4.1	34	-0.14	0	-0.96	0	4.1	3.9	39
1981-07-01	0.16	9.2	0.20	0	-0.32	0	0.16	0.34	9.3
1981-08-01	2.2	6.7	-1.1	0	-0.23	0	2.2	1.0	9.3
1981-09-01	2.6	5.7	-0.035	0	-0.16	0	2.6	2.6	7.9
1981-10-01	0.51	6.4	0.031	0	-0.28	0	0.51	0.54	7.5
1981-11-01	0.98	3.7	0.020	0	-0.28	0	0.98	0.98	5.2
1981	6.4	32	-0.89	0	-1.3	0	6.4	5.5	39
1982-07-01	0.039	9.2	0.16	0	-0.44	0	0.039	0.21	9.1
1982-08-01	2.6	5.5	-0.81	0	-0.29	0	2.6	1.8	8.8
1982-09-01	3.8	3.3	-1.1	0	-0.21	0	3.8	2.7	6.9
1982-10-01	3.0	3.1	-0.99	0	-0.54	0	3.0	2.0	6.7
1982-11-01	0	5.1	0.37	0	-0.89	0	0	0.37	5.4
1982	9.5	26	-2.4	0	-2.4	0	9.5	7.2	37
1983-07-01	0	9.3	0.13	0	-0.40	0	0	0.16	9.4
1983-08-01	2.8	6.1	-1.0	0	-0.24	0	2.8	1.8	9.5
1983-09-01	3.6	4.0	-0.82	0	-0.19	0	3.6	2.8	7.5
1983-10-01	5.1	1.4	-3.2	0	-0.32	0	5.1	1.9	7.3
1983-11-01	1.1	3.3	0.81	0	-1.1	0	1.1	2.0	4.9
1983	13	24	-4.1	0	-2.2	0	13	8.6	39
1984-07-01	1.3	7.7	-0.68	0	-0.12	0	1.3	0.67	9.3
1984-08-01	3.3	4.5	-0.48	0	-0.083	0	3.3	2.8	7.8
1984-09-01	3.3	3.7	-0.43	0	-0.13	0	3.3	2.8	7.4
1984-10-01	1.9	4.6	-0.45	0	-0.29	0	1.9	1.5	6.9
1984-11-01	1.3	3.1	0.012	0	-0.32	0	1.3	1.4	4.9
1984	11	24	-2.0	0	-0.94	0	11	9.2	36
1985-07-01	0	8.2	0.10	0	-0.23	0	0	0.079	8.6
1985-08-01	1.3	7.5	-0.53	0	-0.15	0	1.3	0.71	8.7
1985-09-01	2.1	5.8	-0.36	0	-0.11	0	2.1	1.7	8.1
1985-10-01	3.6	2.4	-1.0	0	-0.10	0	3.6	2.6	6.6
1985-11-01	1.2	3.1	0.19	0	-0.20	0	1.2	1.4	4.6
1985	8.1	27	-1.6	0	-0.79	0	8.1	6.5	37
1986-07-01	0.039	8.9	0.11	0	-0.31	0	0.039	0.12	9.3
1986-08-01	4.7	3.1	-1.5	0	-0.21	0	4.7	3.2	8.5
1986-09-01	2.0	5.6	-0.34	0	-0.31	0	2.0	1.7	8.0
1986-10-01	2.1	4.1	-0.32	0	-0.35	0	2.1	1.8	6.5
1986-11-01	1.7	3.0	-0.43	0	-0.39	0	1.7	1.3	4.8
1986	11	25	-2.5	0	-1.6	0	11	8.1	37
1987-07-01	0.20	8.7	0.067	0	-0.24	0	0.20	0.28	9.0
1987-08-01	2.0	6.7	-0.83	0	-0.15	0	2.0	1.2	9.0
1987-09-01	2.9	4.9	-0.61	0	-0.15	0	2.9	2.3	8.1
1987-10-01	1.3	5.2	-0.043	0	-0.25	0	1.3	1.2	7.1
1987-11-01	0.35	5.2	0.17	0	-0.29	0	0.35	0.51	6.0
1987	6.7	31	-1.2	0	-1.1	0	6.7	5.5	39
1988-07-01	0.12	8.5	0.13	0	-0.28	0	0.12	0.28	8.9
1988-08-01	3.4	4.8	-2.0	0	-0.20	0	3.4	1.4	8.8
1988-09-01	5.9	1.7	-1.4	0	-0.16	0	5.9	4.6	7.5
1988-10-01	0.31	6.2	0.69	0	-0.74	0	0.31	0.98	6.9
1988-11-01	1.5	3.7	-0.33	0	-0.69	0	1.5	1.2	5.8
1988	11	25	-2.8	0	-2.1	0	11	8.4	38

Table IV-B.55 BC4 Monsoon Period Water Balance

Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
1989-07-01	0	9.3	0.094	0	-0.19	0	0	0.079	9.2
1989-08-01	0.47	7.8	-0.075	0	-0.12	0	0.47	0.43	9.3
1989-09-01	0.94	6.9	-0.028	0	-0.094	0	0.94	0.91	7.8
1989-10-01	1.5	5.2	-0.39	0	-0.067	0	1.5	1.1	7.3
1989-11-01	1.1	4.1	-0.091	0	-0.087	0	1.1	0.98	5.9
1989	3.9	33	-0.48	0	-0.56	0	3.9	3.5	39
1990-07-01	0.28	8.9	0.063	0	-0.23	0	0.28	0.35	9.3
1990-08-01	1.5	6.5	-0.25	0	-0.17	0	1.5	1.2	8.6
1990-09-01	9.0	-1.5	-6.2	0	-0.95	0	9.0	2.8	7.4
1990-10-01	2.8	3.5	-0.83	0	-3.0	0	2.8	2.0	6.8
1990-11-01	0.28	4.6	0.42	0	-1.4	0	0.28	0.67	5.3
1990	14	22	-6.7	0	-5.7	0	14	7.1	37
1991-07-01	0.63	8.8	0.059	0	-0.40	0	0.63	0.67	9.2
1991-08-01	1.7	7.1	-0.64	0	-0.25	0	1.7	1.1	9.3
1991-09-01	2.8	5.2	-0.30	0	-0.15	0	2.8	2.5	8.3
1991-10-01	1.6	4.7	-0.16	0	-0.20	0	1.6	1.4	6.5
1991-11-01	1.2	4.6	-0.69	0	-0.29	0	1.2	0.55	6.6
1991	7.9	30	-1.7	0	-1.3	0	7.9	6.1	40
1992-07-01	1.3	7.9	0.12	0	-0.59	0	1.3	1.4	8.9
1992-08-01	3.3	5.5	-1.6	0	-0.42	0	3.3	1.7	9.3
1992-09-01	5.3	2.1	-1.7	0	-0.34	0	5.3	3.6	7.8
1992-10-01	0.91	5.9	0.38	0	-1.1	0	0.91	1.3	6.7
1992-11-01	1.2	4.1	-0.41	0	-0.81	0	1.2	0.83	6.2
1992	12	26	-3.2	0	-3.2	0	12	8.8	39
1993-07-01	0	9.2	0.22	0	-0.39	0	0	0.24	9.3
1993-08-01	0.24	8.1	0.079	0	-0.26	0	0.24	0.31	8.9
1993-09-01	3.4	4.1	-1.2	0	-0.17	0	3.4	2.2	8.5
1993-10-01	0.16	6.3	0.56	0	-0.14	0	0.16	0.71	6.4
1993-11-01	0.83	4.4	-0.0079	0	-0.19	0	0.83	0.79	6.0
1993	4.6	32	-0.31	0	-1.1	0	4.6	4.3	39
1994-07-01	0.35	8.6	0.12	0	-0.19	0	0.35	0.51	8.9
1994-08-01	1.5	7.4	-0.88	0	-0.14	0	1.5	0.59	9.1
1994-09-01	0.67	7.5	0.63	0	-0.11	0	0.67	1.3	8.6
1994-10-01	2.0	4.4	-0.43	0	-0.10	0	2.0	1.5	6.6
1994-11-01	1.9	2.8	-0.76	0	-0.14	0	1.9	1.1	5.3
1994	6.3	31	-1.3	0	-0.69	0	6.3	5.0	39
1995-07-01	0	8.5	0.13	0	-0.27	0	0	0.12	9.0
1995-08-01	0.039	8.7	0.091	0	-0.20	0	0.039	0.12	9.3
1995-09-01	3.9	3.8	-1.4	0	-0.11	0	3.9	2.4	8.8
1995-10-01	2.8	3.8	-1.1	0	-0.19	0	2.8	1.6	7.2
1995-11-01	0	5.3	0.80	0	-0.35	0	0	0.83	5.8
1995	6.7	30	-1.5	0	-1.1	0	6.7	5.1	40
1996-07-01	0.43	8.3	-0.055	0	-0.16	0	0.43	0.35	9.1
1996-08-01	2.3	6.3	-0.54	0	-0.11	0	2.3	1.8	8.9
1996-09-01	1.3	6.6	-0.10	0	-0.11	0	1.3	1.1	8.1
1996-10-01	3.0	2.8	-0.70	0	-0.11	0	3.0	2.3	6.7
1996-11-01	0.39	5.1	0.14	0	-0.23	0	0.39	0.55	6.0
1996	7.4	29	-1.3	0	-0.73	0	7.4	6.2	39
1997-07-01	0	8.9	0.094	0	-0.18	0	0	0.12	9.0
1997-08-01	0.12	9.1	0.051	0	-0.13	0	0.12	0.16	9.9
1997-09-01	2.6	5.4	-0.63	0	-0.091	0	2.6	2.0	8.5
1997-10-01	0	7.0	0.22	0	-0.083	0	0	0.24	7.3
1997-11-01	0.71	4.0	-0.14	0	-0.098	0	0.71	0.55	6.0
1997	3.4	34	-0.40	0	-0.57	0	3.4	3.0	41
1998-07-01	0	9.3	0.15	0	-0.44	0	0	0.16	9.2
1998-08-01	1.7	7.0	-0.34	0	-0.25	0	1.7	1.3	9.1
1998-09-01	2.4	5.5	-0.35	0	-0.19	0	2.4	2.1	8.3

Table IV-B.55 BC4 Monsoon Period Water Balance

Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
1998-10-01	1.3	5.3	-0.12	0	-0.20	0	1.3	1.2	7.0
1998-11-01	0	5.4	0.17	0	-0.22	0	0	0.16	6.3
1998	5.4	32	-0.50	0	-1.3	0	5.4	4.9	40
1999-07-01	0	9.1	0.11	0	-0.20	0	0	0.12	9.1
1999-08-01	5.8	2.0	-2.4	0	-0.13	0	5.8	3.4	8.7
1999-09-01	2.8	4.8	-0.43	0	-0.25	0	2.8	2.4	7.8
1999-10-01	1.1	5.4	0.59	0	-0.48	0	1.1	1.7	6.8
1999-11-01	0	5.6	0.25	0	-0.46	0	0	0.24	6.2
1999	9.8	27	-1.9	0	-1.5	0	9.8	7.9	39
2000-07-01	0.79	8.3	-0.12	0	-0.15	0	0.79	0.67	9.5
2000-08-01	0.079	8.9	0.11	0	-0.11	0	0.079	0.20	9.5
2000-09-01	0.67	6.8	-0.031	0	-0.094	0	0.67	0.67	8.7
2000-10-01	0	6.3	0.094	0	-0.071	0	0	0.079	6.8
2000-11-01	5.3	-0.83	-3.8	0	-0.051	0	5.3	1.5	5.9
2000	6.8	29	-3.7	0	-0.48	0	6.8	3.1	40
2001-07-01	0	9.3	0.15	0	-0.35	0	0	0.20	9.2
2001-08-01	2.7	5.9	-1.8	0	-0.22	0	2.7	0.91	9.7
2001-09-01	3.4	4.3	-0.17	0	-0.20	0	3.4	3.2	7.6
2001-10-01	0.12	6.3	0.30	0	-0.59	0	0.12	0.43	7.3
2001-11-01	0.35	4.5	0.075	0	-0.41	0	0.35	0.43	5.5
2001	6.6	30	-1.4	0	-1.8	0	6.6	5.2	39
2002-07-01	0	9.3	0.043	0	-0.059	0	0	0.039	9.2
2002-08-01	0.31	8.3	-0.012	0	-0.047	0	0.31	0.31	9.7
2002-09-01	0.47	7.0	-0.087	0	-0.039	0	0.47	0.39	8.1
2002-10-01	1.2	5.4	-0.19	0	-0.031	0	1.2	0.98	7.1
2002-11-01	0.079	4.7	0.087	0	-0.028	0	0.079	0.20	6.1
2002	2.0	35	-0.16	0	-0.20	0	2.0	1.9	40
2003-07-01	0	9.9	0.11	0	-0.30	0	0	0.12	10.0
2003-08-01	0.47	8.4	0.028	0	-0.19	0	0.47	0.51	10
2003-09-01	1.3	6.8	-0.24	0	-0.13	0	1.3	1.1	8.5
2003-10-01	1.9	5.0	-0.22	0	-0.091	0	1.9	1.7	7.4
2003-11-01	0.039	5.2	0.18	0	-0.094	0	0.039	0.28	6.0
2003	3.7	35	-0.15	0	-0.80	0	3.7	3.7	42
2004-07-01	0	9.9	0.11	0	-0.26	0	0	0.12	10
2004-08-01	0.55	8.3	-0.0079	0	-0.16	0	0.55	0.55	9.8
2004-09-01	2.1	5.9	-0.41	0	-0.11	0	2.1	1.7	8.6
2004-10-01	1.5	5.5	-0.39	0	-0.094	0	1.5	1.1	7.9
2004-11-01	1.2	3.8	-0.31	0	-0.12	0	1.2	0.87	6.1
2004	5.4	34	-1.0	0	-0.74	0	5.4	4.4	42
2005-07-01	0.079	9.7	0.10	0	-0.28	0	0.079	0.16	9.7
2005-08-01	1.4	7.0	-0.54	0	-0.17	0	1.4	0.87	11
2005-09-01	4.7	3.0	-1.2	0	-0.12	0	4.7	3.5	7.3
2005-10-01	0.12	6.6	0.33	0	-0.37	0	0.12	0.43	7.4
2005-11-01	0.39	4.8	0.047	0	-0.36	0	0.39	0.47	6.1
2005	6.7	31	-1.3	0	-1.3	0	6.7	5.4	41
2006-07-01	0.51	8.4	-0.071	0	-0.18	0	0.51	0.43	10
2006-08-01	3.2	4.8	-2.1	0	-0.13	0	3.2	1.1	9.2
2006-09-01	2.9	5.0	0.22	0	-0.16	0	2.9	3.1	7.4
2006-10-01	1.1	5.3	0.0079	0	-0.50	0	1.1	1.1	6.9
2006-11-01	1.0	3.9	-0.024	0	-0.43	0	1.0	0.98	5.9
2006	8.7	27	-1.9	0	-1.4	0	8.7	6.8	40

Table IV-B.56 BC4 Winter Storm Period Water Balance

Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
1951-11-01	0	3.7	-0.81	0	-0.39	0	1.6	0.83	5.4
1951-12-01	1.7	2.0	0.094	0	-0.30	0	1.7	1.8	3.7
1952-01-01	3.0	-0.26	-1.8	0	-0.33	0	3.0	1.3	2.8
1952-02-01	2.8	0.10	-0.67	0	-0.48	0	2.8	2.1	2.9
1952-03-01	0.50	3.3	0.34	0	-1.1	0	0.50	0.84	3.8
1952	8.0	8.9	-2.8	0	-2.6	0	9.7	6.9	19
1952-11-01	0	5.9	0.14	0	-0.11	0	0	0.14	5.9
1952-12-01	4.3	-1.0	-3.0	0	-0.090	0	4.3	1.3	3.3
1953-01-01	2.0	0.63	-0.35	0	-0.43	0	2.0	1.6	2.7
1953-02-01	0.74	2.7	0.19	0	-0.86	0	0.74	0.93	3.3
1953-03-01	0.60	3.2	-0.064	0	-0.56	0	0.60	0.54	3.8
1953	7.6	11	-3.0	0	-2.0	0	7.6	4.6	19
1953-11-01	0.012	5.4	0.15	0	-0.24	0	0.012	0.16	5.5
1953-12-01	0.56	3.3	-0.11	0	-0.16	0	0.56	0.45	3.9
1954-01-01	0.19	2.7	0.10	0	-0.13	0	0.19	0.30	2.9
1954-02-01	2.4	0.88	-1.1	0	-0.11	0	2.4	1.3	3.2
1954-03-01	0.72	3.5	0.11	0	-0.10	0	0.72	0.84	4.2
1954	3.9	16	-0.88	0	-0.74	0	3.9	3.0	20
1954-11-01	0	5.6	0.37	0	-0.78	0	0	0.37	5.6
1954-12-01	0.091	4.1	0.094	0	-0.42	0	0.091	0.19	4.3
1955-01-01	0.29	3.2	0.093	0	-0.26	0	0.29	0.38	3.5
1955-02-01	3.4	-1.0	-1.9	0	-0.17	0	3.4	1.5	2.4
1955-03-01	0.28	3.3	0.37	0	-0.31	0	0.28	0.65	3.5
1955	4.1	15	-0.94	0	-1.9	0	4.1	3.1	19
1955-11-01	0.020	5.8	0.17	0	-0.50	0	0.020	0.19	5.9
1955-12-01	0.96	2.7	-0.27	0	-0.28	0	0.96	0.70	3.7
1956-01-01	1.4	1.8	-0.43	0	-0.21	0	1.4	0.94	3.1
1956-02-01	2.6	0.85	-1.8	0	-0.25	0	2.6	0.84	3.5
1956-03-01	2.0	1.2	-0.18	0	-0.27	0	2.0	1.8	3.1
1956	7.0	12	-2.5	0	-1.5	0	7.0	4.5	19
1956-11-01	0.53	4.5	-0.097	0	-0.16	0	0.53	0.43	5.2
1956-12-01	0	3.8	0.25	0	-0.13	0	0	0.26	3.8
1957-01-01	0.47	2.6	-0.052	0	-0.11	0	0.47	0.41	3.1
1957-02-01	4.8	-2.3	-3.3	0	-0.094	0	4.8	1.5	2.7
1957-03-01	0.73	2.9	0.68	0	-0.47	0	0.73	1.4	3.4
1957	6.5	12	-2.5	0	-0.97	0	6.5	4.0	18
1957-11-01	3.2	1.1	-1.9	0	-0.22	0	3.2	1.3	4.6
1957-12-01	0.61	2.5	0.66	0	-0.26	0	0.61	1.3	3.0
1958-01-01	1.1	2.1	-0.12	0	-0.46	0	1.1	0.94	3.2
1958-02-01	0.012	3.4	0.20	0	-0.35	0	0.012	0.21	3.3
1958-03-01	2.5	0.68	-1.1	0	-0.24	0	2.5	1.4	3.2
1958	7.4	9.8	-2.3	0	-1.5	0	7.4	5.1	17
1958-11-01	1.9	3.3	-0.35	0	-0.19	0	1.9	1.6	5.3
1958-12-01	1.5	2.1	-0.52	0	-0.43	0	1.5	1.0	3.6
1959-01-01	0	3.5	0.32	0	-0.42	0	0	0.32	3.6
1959-02-01	0.21	3.4	0.11	0	-0.33	0	0.21	0.33	3.5
1959-03-01	1.4	1.9	-0.46	0	-0.20	0	1.4	0.96	3.3
1959	5.1	14	-0.90	0	-1.6	0	5.1	4.2	19
1959-11-01	4.8	0.35	-4.0	0	-0.58	0	4.8	0.76	5.3
1959-12-01	0.38	3.3	1.3	0	-0.98	0	0.38	1.6	3.7
1960-01-01	5.2	-2.6	-3.7	0	-1.2	0	5.2	1.5	2.7
1960-02-01	4.2	-1.7	-2.2	0	-2.4	0	4.2	1.9	2.5

Table IV-B.56 BC4 Winter Storm Period Water Balance

Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
1960-03-01	0.87	2.5	0.24	0	-2.5	0	0.87	1.1	3.4
1960	15	2.0	-8.5	0	-7.6	0	15	7.0	18
1960-11-01	2.1	2.8	-0.74	0	-0.075	0	2.1	1.3	5.0
1960-12-01	0.48	3.1	0.13	0	-0.091	0	0.48	0.62	3.7
1961-01-01	0.46	2.7	-0.0079	0	-0.13	0	0.46	0.46	3.3
1961-02-01	0.69	2.4	-0.24	0	-0.12	0	0.69	0.45	3.2
1961-03-01	0.23	3.8	0.22	0	-0.094	0	0.23	0.45	3.7
1961	3.9	15	-0.63	0	-0.52	0	3.9	3.3	19
1961-11-01	0.45	4.5	-0.15	0	-0.075	0	0.45	0.30	5.4
1961-12-01	0.32	2.9	0.22	0	-0.091	0	0.32	0.54	3.1
1962-01-01	3.9	-1.3	-2.4	0	-0.083	0	3.9	1.5	2.6
1962-02-01	3.2	-0.51	-1.9	0	-0.49	0	3.2	1.3	2.7
1962-03-01	1.7	1.5	-0.36	0	-0.96	0	1.7	1.3	3.2
1962	9.5	7.1	-4.6	0	-1.7	0	9.5	4.9	17
1962-11-01	0.87	4.2	-0.051	0	-0.071	0	0.87	0.82	5.1
1962-12-01	0.83	3.1	-0.17	0	-0.067	0	0.83	0.67	3.9
1963-01-01	1.8	1.3	-0.74	0	-0.075	0	1.8	1.1	3.3
1963-02-01	2.1	0.98	-0.58	0	-0.11	0	2.1	1.5	3.0
1963-03-01	4.2	-0.28	-2.8	0	-0.34	0	4.2	1.5	3.8
1963	9.8	9.3	-4.3	0	-0.66	0	9.8	5.5	19
1963-11-01	0.67	4.9	0.094	0	-1.3	0	0.67	0.76	5.8
1963-12-01	2.3	1.3	-0.78	0	-0.58	0	2.3	1.6	3.6
1964-01-01	0.34	2.9	0.31	0	-0.45	0	0.34	0.65	3.3
1964-02-01	0.58	2.4	-0.063	0	-0.36	0	0.58	0.52	3.0
1964-03-01	0	3.7	0.20	0	-0.24	0	0	0.20	3.6
1964	3.9	15	-0.23	0	-3.0	0	3.9	3.7	19
1964-11-01	1.5	4.2	-0.48	0	-0.10	0	1.5	1.1	5.8
1964-12-01	1.4	2.1	-0.43	0	-0.13	0	1.4	0.96	3.6
1965-01-01	1.7	1.3	-0.71	0	-0.22	0	1.7	0.98	3.3
1965-02-01	2.9	0	-1.1	0	-0.30	0	2.9	1.8	2.6
1965-03-01	2.8	0.83	-1.4	0	-0.70	0	2.8	1.4	3.4
1965	10	8.4	-4.1	0	-1.5	0	10	6.2	19
1965-11-01	0.46	5.0	-0.0039	0	-0.12	0	0.46	0.46	5.7
1965-12-01	2.4	1.4	-1.6	0	-0.10	0	2.4	0.75	3.9
1966-01-01	10	-7.9	-8.7	0	-0.81	0	10	1.7	2.7
1966-02-01	1.8	0.94	-0.020	0	-5.1	0	1.8	1.8	2.8
1966-03-01	2.0	1.3	-0.47	0	-1.7	0	2.0	1.6	3.1
1966	17	0.63	-11	0	-7.9	0	17	6.3	18
1966-11-01	1.4	3.8	-0.11	0	-0.22	0	1.4	1.2	5.1
1966-12-01	0.88	2.9	-0.11	0	-0.35	0	0.88	0.77	4.1
1967-01-01	1.3	1.8	-0.35	0	-0.31	0	1.3	0.90	3.1
1967-02-01	0.79	2.4	-0.10	0	-0.26	0	0.79	0.69	2.9
1967-03-01	0	3.9	0.26	0	-0.19	0	0	0.26	3.9
1967	4.3	15	-0.41	0	-1.3	0	4.3	3.9	19
1967-11-01	0.42	4.8	0.11	0	-0.33	0	0.42	0.53	5.6
1967-12-01	2.1	1.3	-1.4	0	-0.21	0	2.1	0.66	3.9
1968-01-01	10	-7.6	-8.2	0	-1.8	0	10	1.8	2.3
1968-02-01	0.63	2.5	0.44	0	-4.8	0	0.63	1.1	3.1
1968-03-01	1.9	1.8	-0.55	0	-1.1	0	1.9	1.4	3.4
1968	15	2.8	-9.7	0	-8.3	0	15	5.4	18
1968-11-01	0.39	4.6	0.031	0	-0.19	0	0.39	0.42	5.1
1968-12-01	2.5	0.91	-1.1	0	-0.14	0	2.5	1.4	3.8

Table IV-B.56 BC4 Winter Storm Period Water Balance

Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
1969-01-01	3.3	-0.43	-2.1	0	-0.20	0	3.3	1.2	2.9
1969-02-01	4.2	-1.5	-2.3	0	-0.55	0	4.2	1.9	2.6
1969-03-01	1.4	1.9	0.22	0	-1.7	0	1.4	1.6	3.0
1969	12	5.5	-5.3	0	-2.8	0	12	6.4	17
1969-11-01	0.83	4.1	-0.15	0	-0.15	0	0.83	0.67	5.2
1969-12-01	2.1	1.2	-0.73	0	-0.15	0	2.1	1.4	3.6
1970-01-01	1.3	1.9	-0.33	0	-0.24	0	1.3	0.99	3.4
1970-02-01	0.50	2.7	0.24	0	-0.29	0	0.50	0.74	2.9
1970-03-01	0.41	3.3	0.11	0	-0.22	0	0.41	0.51	3.6
1970	5.2	13	-0.87	0	-1.0	0	5.2	4.3	19
1970-11-01	0	5.1	0.28	0	-0.42	0	0	0.28	5.3
1970-12-01	0.65	3.1	-0.33	0	-0.33	0	0.65	0.31	3.9
1971-01-01	1.2	1.7	-0.17	0	-0.23	0	1.2	1.0	3.0
1971-02-01	0.85	2.7	-0.039	0	-0.17	0	0.85	0.81	3.1
1971-03-01	0.82	2.9	-0.19	0	-0.20	0	0.82	0.63	4.0
1971	3.5	15	-0.45	0	-1.4	0	3.5	3.1	19
1971-11-01	4.2	0.55	-1.3	0	-0.81	0	4.2	2.9	5.1
1971-12-01	0.039	3.7	0.52	0	-1.4	0	0.039	0.56	3.7
1972-01-01	2.1	0.79	-0.73	0	-0.73	0	2.1	1.4	3.0
1972-02-01	0	3.3	0.41	0	-0.48	0	0	0.41	3.2
1972-03-01	0	4.6	0.14	0	-0.31	0	0	0.14	4.1
1972	6.4	13	-0.97	0	-3.8	0	6.4	5.4	19
1972-11-01	8.7	-4.2	-5.5	0	-0.14	0	8.7	3.2	4.9
1972-12-01	2.8	0.31	-0.82	0	-2.4	0	2.8	2.0	3.2
1973-01-01	3.0	-0.28	-1.6	0	-1.7	0	3.0	1.3	2.9
1973-02-01	0.74	2.0	0.62	0	-1.1	0	0.74	1.4	2.6
1973-03-01	3.2	0.079	-1.4	0	-0.69	0	3.2	1.8	2.8
1973	18	-2.1	-8.7	0	-6.1	0	18	9.7	16
1973-11-01	0	5.1	0.12	0	-0.24	0	0	0.12	5.6
1973-12-01	1.8	1.8	-0.81	0	-0.15	0	1.8	0.95	3.9
1974-01-01	0.098	3.3	0.36	0	-0.13	0	0.098	0.46	3.3
1974-02-01	3.4	-0.55	-1.6	0	-0.15	0	3.4	1.8	2.9
1974-03-01	0.16	3.6	0.30	0	-0.41	0	0.16	0.44	3.3
1974	5.4	13	-1.7	0	-1.1	0	5.4	3.7	19
1974-11-01	3.4	1.4	-2.1	0	-0.31	0	3.4	1.3	5.3
1974-12-01	0.12	3.6	1.1	0	-0.44	0	0.12	1.2	3.6
1975-01-01	0.75	2.0	-0.020	0	-0.60	0	0.75	0.74	3.1
1975-02-01	0.39	2.3	0.0039	0	-0.39	0	0.39	0.41	2.6
1975-03-01	3.9	-0.35	-2.3	0	-0.24	0	3.9	1.6	3.0
1975	8.6	9.0	-3.4	0	-2.0	0	8.6	5.3	18
1975-11-01	0.24	4.8	0.094	0	-0.20	0	0.24	0.35	5.4
1975-12-01	2.2	1.5	-1.8	0	-0.13	0	2.2	0.32	4.2
1976-01-01	1.3	1.8	0.37	0	-0.14	0	1.3	1.6	3.1
1976-02-01	0.20	2.8	0.28	0	-0.29	0	0.20	0.51	2.9
1976-03-01	1.6	2.2	-0.43	0	-0.28	0	1.6	1.2	3.4
1976	5.5	13	-1.5	0	-1.0	0	5.5	4.0	19
1976-11-01	0.91	3.8	0.24	0	-0.42	0	0.91	1.1	5.1
1976-12-01	0.55	3.2	0.083	0	-0.51	0	0.55	0.63	4.0
1977-01-01	1.8	1.2	-1.3	0	-0.35	0	1.8	0.53	3.1
1977-02-01	1.9	0.87	-0.16	0	-0.30	0	1.9	1.7	2.5
1977-03-01	0.079	4.3	0.32	0	-0.49	0	0.079	0.40	4.1
1977	5.3	13	-0.83	0	-2.1	0	5.3	4.4	19

Table IV-B.56 BC4 Winter Storm Period Water Balance

Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
1977-11-01	1.3	3.9	-0.020	0	-0.49	0	1.3	1.3	5.5
1977-12-01	0.35	3.5	0.30	0	-0.43	0	0.35	0.65	3.9
1978-01-01	0.67	2.5	-0.23	0	-0.31	0	0.67	0.42	3.5
1978-02-01	6.4	-3.7	-4.7	0	-0.24	0	6.4	1.7	2.5
1978-03-01	5.5	-2.2	-3.2	0	-1.9	0	5.5	2.3	2.9
1978	14	3.9	-7.9	0	-3.3	0	14	6.3	18
1978-11-01	1.9	3.5	-1.0	0	-0.13	0	1.9	0.90	5.9
1978-12-01	5.6	-2.4	-3.9	0	-0.16	0	5.6	1.8	3.7
1979-01-01	6.6	-3.9	-4.5	0	-1.9	0	6.6	2.0	2.5
1979-02-01	6.0	-3.8	-3.9	0	-4.0	0	6.0	2.1	2.3
1979-03-01	1.2	2.8	0.31	0	-3.5	0	1.2	1.5	3.3
1979	21	-3.9	-13	0	-9.8	0	21	8.4	18
1979-11-01	0.67	4.7	-0.17	0	-0.11	0	0.67	0.52	5.9
1979-12-01	0.67	3.1	-0.012	0	-0.087	0	0.67	0.66	4.0
1980-01-01	0.71	2.7	-0.22	0	-0.079	0	0.71	0.48	3.7
1980-02-01	4.1	-1.7	-2.5	0	-0.071	0	4.1	1.6	2.4
1980-03-01	6.1	-2.9	-4.2	0	-0.33	0	6.1	1.8	2.4
1980	12	5.9	-7.2	0	-0.67	0	12	5.0	18
1980-11-01	0.039	5.2	0.11	0	-0.13	0	0.039	0.15	5.9
1980-12-01	0	3.5	0.067	0	-0.10	0	0	0.063	4.3
1981-01-01	0.55	3.1	-0.067	0	-0.091	0	0.55	0.50	3.5
1981-02-01	1.3	1.7	-0.53	0	-0.067	0	1.3	0.79	3.5
1981-03-01	2.7	1.3	-1.4	0	-0.059	0	2.7	1.3	3.6
1981	4.6	15	-1.8	0	-0.45	0	4.6	2.8	21
1981-11-01	0.98	3.7	0.020	0	-0.28	0	0.98	0.98	5.2
1981-12-01	2.3	1.6	-2.1	0	-0.23	0	2.3	0.28	4.4
1982-01-01	0	3.5	1.1	0	-0.23	0	0	1.0	3.3
1982-02-01	2.7	0	-0.97	0	-0.37	0	2.7	1.8	2.8
1982-03-01	1.8	1.7	-0.35	0	-0.38	0	1.8	1.5	3.1
1982	7.8	11	-2.3	0	-1.5	0	7.8	5.5	19
1982-11-01	0	5.1	0.37	0	-0.89	0	0	0.37	5.4
1982-12-01	3.3	-0.31	-1.9	0	-0.51	0	3.3	1.5	3.6
1983-01-01	1.7	1.1	0.063	0	-0.49	0	1.7	1.8	2.7
1983-02-01	1.9	1.3	-1.3	0	-0.62	0	1.9	0.63	3.2
1983-03-01	2.3	0.98	-0.88	0	-0.69	0	2.3	1.4	2.8
1983	9.2	8.1	-3.6	0	-3.2	0	9.2	5.6	18
1983-11-01	1.1	3.3	0.81	0	-1.1	0	1.1	2.0	4.9
1983-12-01	2.0	1.6	-0.98	0	-1.2	0	2.0	1.0	3.8
1984-01-01	2.5	0.12	-1.1	0	-0.86	0	2.5	1.5	2.7
1984-02-01	0.47	2.8	0.42	0	-0.89	0	0.47	0.87	2.8
1984-03-01	0	4.0	0.19	0	-0.56	0	0	0.20	3.9
1984	6.1	12	-0.63	0	-4.5	0	6.1	5.5	18
1984-11-01	1.3	3.1	0.012	0	-0.32	0	1.3	1.4	4.9
1984-12-01	2.1	1.7	-1.4	0	-0.33	0	2.1	0.71	4.2
1985-01-01	5.8	-3.3	-3.8	0	-0.40	0	5.8	2.0	2.5
1985-02-01	2.7	-0.31	-0.92	0	-2.1	0	2.7	1.8	2.5
1985-03-01	1.7	1.2	-0.11	0	-1.6	0	1.7	1.5	2.5
1985	14	2.4	-6.2	0	-4.7	0	14	7.4	17
1985-11-01	1.2	3.1	0.19	0	-0.20	0	1.2	1.4	4.6
1985-12-01	2.8	0.43	-1.8	0	-0.33	0	2.8	0.98	3.9
1986-01-01	0.91	2.5	0.57	0	-0.41	0	0.91	1.4	3.1
1986-02-01	0.079	3.7	0.17	0	-0.57	0	0.079	0.28	3.6

Table IV-B.56 BC4 Winter Storm Period Water Balance

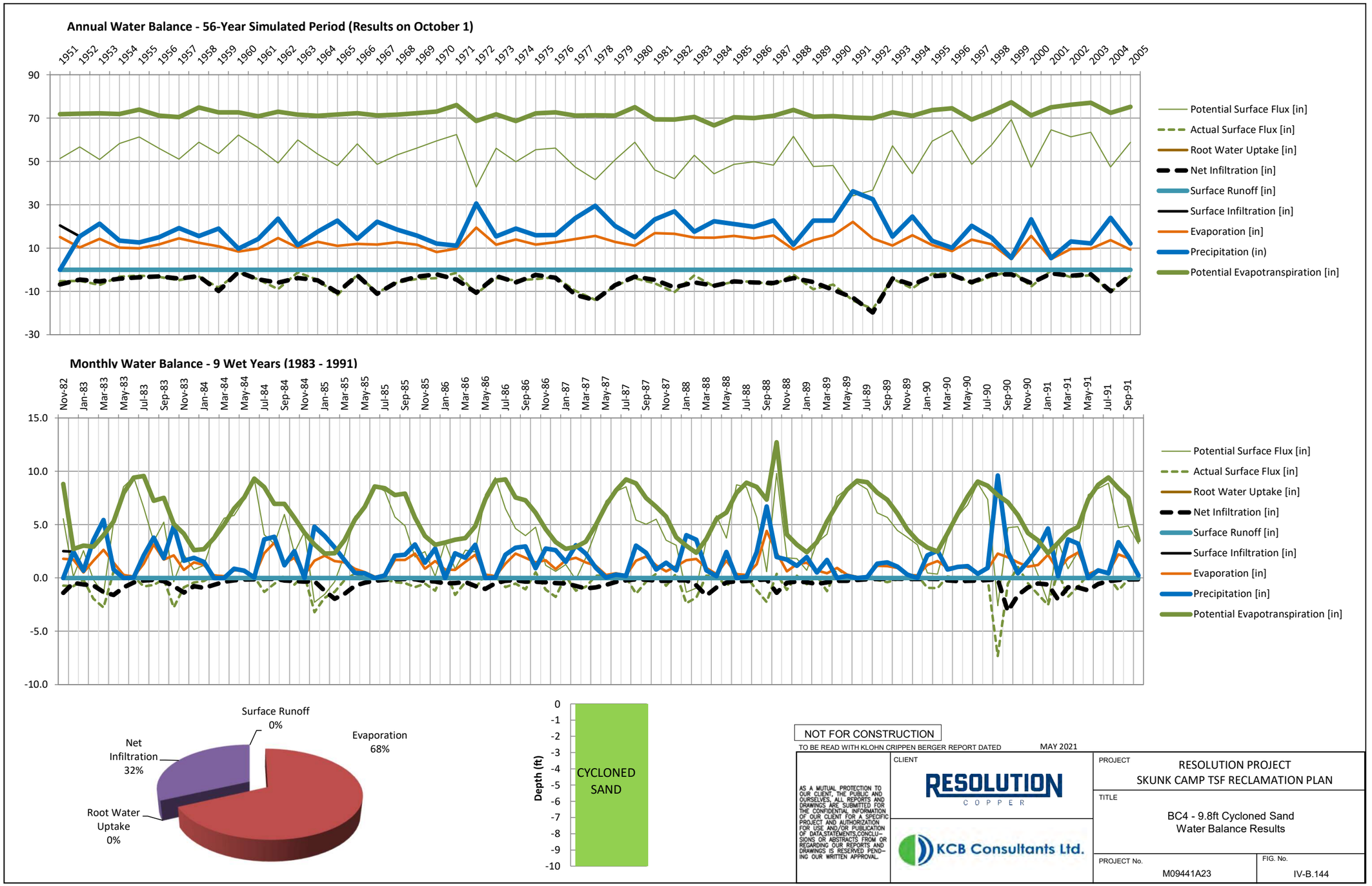
Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
1986-03-01	3.1	0.12	-1.3	0	-0.33	0	3.1	1.8	2.9
1986	8.0	9.8	-2.2	0	-1.9	0	8.0	5.9	18
1986-11-01	1.7	3.0	-0.43	0	-0.39	0	1.7	1.3	4.8
1986-12-01	1.4	1.9	-0.16	0	-0.48	0	1.4	1.2	3.7
1987-01-01	3.0	-0.20	-1.5	0	-0.47	0	3.0	1.5	2.9
1987-02-01	3.3	-0.35	-1.6	0	-0.76	0	3.3	1.7	2.8
1987-03-01	2.7	0.51	-1.5	0	-0.91	0	2.7	1.2	3.5
1987	12	4.8	-5.2	0	-3.0	0	12	7.0	18
1987-11-01	0.35	5.2	0.17	0	-0.29	0	0.35	0.51	6.0
1987-12-01	1.8	1.9	-0.46	0	-0.23	0	1.8	1.3	3.8
1988-01-01	4.0	-1.1	-2.5	0	-0.24	0	4.0	1.5	3.2
1988-02-01	3.6	-0.87	-1.7	0	-0.67	0	3.6	1.9	2.5
1988-03-01	0.71	3.3	0.24	0	-1.6	0	0.71	0.94	3.4
1988	10	8.4	-4.3	0	-3.0	0	10	6.1	19
1988-11-01	1.5	3.7	-0.33	0	-0.69	0	1.5	1.2	5.8
1988-12-01	1.7	1.9	-0.85	0	-0.44	0	1.7	0.87	4.0
1989-01-01	1.1	1.8	0.098	0	-0.35	0	1.1	1.2	3.1
1989-02-01	2.2	0.55	-0.85	0	-0.44	0	2.2	1.3	2.7
1989-03-01	0.28	3.6	0.24	0	-0.53	0	0.28	0.55	3.1
1989	6.8	12	-1.7	0	-2.5	0	6.8	5.2	19
1989-11-01	1.1	4.1	-0.091	0	-0.087	0	1.1	0.98	5.9
1989-12-01	0.31	3.5	0.047	0	-0.11	0	0.31	0.31	4.2
1990-01-01	0.87	2.3	-0.59	0	-0.098	0	0.87	0.28	3.4
1990-02-01	1.3	1.5	-0.063	0	-0.087	0	1.3	1.2	2.7
1990-03-01	2.6	0.67	-0.88	0	-0.11	0	2.6	1.7	2.6
1990	6.1	12	-1.6	0	-0.49	0	6.1	4.4	19
1990-11-01	0.28	4.6	0.42	0	-1.4	0	0.28	0.67	5.3
1990-12-01	2.2	1.5	-0.60	0	-0.65	0	2.2	1.6	4.2
1991-01-01	4.8	-2.3	-3.5	0	-0.46	0	4.8	1.3	3.0
1991-02-01	1.8	1.3	-0.075	0	-1.6	0	1.8	1.7	2.6
1991-03-01	0.94	3.2	-0.10	0	-1.3	0	0.94	0.83	3.3
1991	10.0	8.2	-3.9	0	-5.4	0	10.0	6.1	18
1991-11-01	1.2	4.6	-0.69	0	-0.29	0	1.2	0.55	6.6
1991-12-01	3.2	0.12	-1.7	0	-0.23	0	3.2	1.5	3.6
1992-01-01	4.0	-1.4	-1.9	0	-0.61	0	4.0	2.1	2.9
1992-02-01	3.0	-0.24	-1.2	0	-1.8	0	3.0	1.9	2.2
1992-03-01	2.8	0.63	-1.2	0	-1.5	0	2.8	1.6	3.0
1992	14	3.7	-6.7	0	-4.5	0	14	7.6	18
1992-11-01	1.2	4.1	-0.41	0	-0.81	0	1.2	0.83	6.2
1992-12-01	0.47	2.8	0.39	0	-0.44	0	0.47	0.87	3.6
1993-01-01	6.3	-4.0	-4.6	0	-0.48	0	6.3	1.7	2.5
1993-02-01	11	-9.1	-9.2	0	-7.0	0	11	2.0	1.9
1993-03-01	6.0	-3.5	-4.1	0	-4.6	0	6.0	1.9	2.7
1993	25	-9.6	-18	0	-13	0	25	7.4	17
1993-11-01	0.83	4.4	-0.0079	0	-0.19	0	0.83	0.79	6.0
1993-12-01	4.2	-0.87	-2.9	0	-0.17	0	4.2	1.3	3.6
1994-01-01	0.28	2.8	0.40	0	-1.0	0	0.28	0.67	3.4
1994-02-01	0.28	3.2	0.13	0	-0.67	0	0.28	0.39	3.3
1994-03-01	2.6	0.59	-1.2	0	-0.33	0	2.6	1.5	3.0
1994	8.1	10	-3.6	0	-2.4	0	8.1	4.6	19
1994-11-01	1.9	2.8	-0.76	0	-0.14	0	1.9	1.1	5.3
1994-12-01	3.3	-0.39	-1.5	0	-0.23	0	3.3	1.9	3.5

Table IV-B.56 BC4 Winter Storm Period Water Balance

Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
1995-01-01	2.7	0.039	-1.2	0	-0.73	0	2.7	1.5	3.0
1995-02-01	3.7	-0.75	-1.6	0	-1.1	0	3.7	2.0	2.6
1995-03-01	2.7	0.75	-1.2	0	-1.2	0	2.7	1.5	3.1
1995	14	2.4	-6.3	0	-3.4	0	14	8.0	18
1995-11-01	0	5.3	0.80	0	-0.35	0	0	0.83	5.8
1995-12-01	1.3	2.4	-0.27	0	-0.35	0	1.3	1.0	3.9
1996-01-01	0.91	2.3	-0.20	0	-0.32	0	0.91	0.71	3.5
1996-02-01	0	3.5	0.22	0	-0.26	0	0	0.24	3.3
1996-03-01	3.2	0.59	-1.7	0	-0.21	0	3.2	1.5	3.6
1996	5.4	14	-1.1	0	-1.5	0	5.4	4.3	20
1996-11-01	0.39	5.1	0.14	0	-0.23	0	0.39	0.55	6.0
1996-12-01	1.3	2.4	-0.57	0	-0.24	0	1.3	0.67	3.8
1997-01-01	0	3.1	0.52	0	-0.18	0	0	0.55	3.2
1997-02-01	2.8	-0.079	-1.4	0	-0.15	0	2.8	1.4	2.7
1997-03-01	1.7	2.1	-1.0	0	-0.22	0	1.7	0.67	3.4
1997	6.2	13	-2.3	0	-1.0	0	6.2	3.9	19
1997-11-01	0.71	4.0	-0.14	0	-0.098	0	0.71	0.55	6.0
1997-12-01	0.83	2.6	-0.14	0	-0.087	0	0.83	0.67	3.7
1998-01-01	2.7	-0.039	-1.2	0	-0.083	0	2.7	1.5	3.1
1998-02-01	0.39	2.7	0.33	0	-0.16	0	0.39	0.71	2.4
1998-03-01	6.4	-3.8	-4.2	0	-0.26	0	6.4	2.2	2.9
1998	11	5.4	-5.4	0	-0.69	0	11	5.6	18
1998-11-01	0	5.4	0.17	0	-0.22	0	0	0.16	6.3
1998-12-01	1.1	2.7	-0.76	0	-0.17	0	1.1	0.31	3.9
1999-01-01	0.71	2.5	0.35	0	-0.13	0	0.71	1.1	3.3
1999-02-01	0.079	3.4	0.14	0	-0.14	0	0.079	0.20	3.6
1999-03-01	0.20	3.9	0.047	0	-0.11	0	0.20	0.24	3.6
1999	2.0	18	-0.059	0	-0.76	0	2.0	2.0	21
1999-11-01	0	5.6	0.25	0	-0.46	0	0	0.24	6.2
1999-12-01	0	4.1	0.12	0	-0.29	0	0	0.12	4.7
2000-01-01	0.039	3.0	0.051	0	-0.19	0	0.039	0.079	3.7
2000-02-01	0.28	3.2	0.031	0	-0.13	0	0.28	0.31	3.4
2000-03-01	0.71	3.2	-0.15	0	-0.087	0	0.71	0.55	3.9
2000	1.0	19	0.31	0	-1.2	0	1.0	1.3	22
2000-11-01	5.3	-0.63	-3.8	0	-0.055	0	5.3	1.5	6.1
2000-12-01	2.1	1.1	-0.33	0	-0.59	0	2.1	1.8	2.9
2001-01-01	0.12	3.4	0.34	0	-1.3	0	0.12	0.43	3.7
2001-02-01	3.4	-0.67	-1.9	0	-0.59	0	3.4	1.5	3.0
2001-03-01	1.7	1.7	-0.12	0	-0.49	0	1.7	1.6	2.8
2001	13	4.8	-5.8	0	-3.0	0	13	6.9	19
2001-11-01	0.35	4.7	0.083	0	-0.43	0	0.35	0.43	5.7
2001-12-01	0.28	3.6	0.063	0	-0.25	0	0.28	0.35	4.6
2002-01-01	1.9	0.94	-0.70	0	-0.17	0	1.9	1.1	2.9
2002-02-01	0.24	3.0	0.083	0	-0.18	0	0.24	0.31	3.2
2002-03-01	0	4.3	0.21	0	-0.17	0	0	0.20	3.4
2002	2.7	17	-0.26	0	-1.2	0	2.7	2.4	20
2002-11-01	0.079	4.9	0.094	0	-0.031	0	0.079	0.20	6.3
2002-12-01	0.87	2.6	-0.58	0	-0.028	0	0.87	0.28	4.4
2003-01-01	0.98	2.0	0.067	0	-0.035	0	0.98	1.0	3.4
2003-02-01	0.35	3.6	0.14	0	-0.031	0	0.35	0.51	3.1
2003-03-01	5.0	-1.7	-3.8	0	-0.035	0	5.0	1.2	3.6
2003	7.2	11	-4.0	0	-0.16	0	7.2	3.2	21

Table IV-B.56 BC4 Winter Storm Period Water Balance

Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
2003-11-01	0.039	5.5	0.19	0	-0.094	0	0.039	0.28	6.3
2003-12-01	0.91	2.4	-0.23	0	-0.094	0	0.91	0.63	3.9
2004-01-01	0.94	2.4	-0.22	0	-0.091	0	0.94	0.75	3.9
2004-02-01	1.5	1.4	-0.53	0	-0.091	0	1.5	0.91	3.1
2004-03-01	0.67	2.8	0.087	0	-0.094	0	0.67	0.79	3.0
2004	4.0	14	-0.70	0	-0.46	0	4.0	3.3	20
2004-11-01	1.2	4.0	-0.29	0	-0.12	0	1.2	0.91	6.4
2004-12-01	0.67	2.4	0.091	0	-0.13	0	0.67	0.75	3.5
2005-01-01	2.8	0.43	-1.7	0	-0.14	0	2.8	1.0	3.0
2005-02-01	4.2	-1.5	-2.5	0	-0.75	0	4.2	1.7	2.7
2005-03-01	7.3	-4.7	-5.3	0	-2.1	0	7.3	2.0	2.7
2005	16	0.67	-9.8	0	-3.2	0	16	6.5	18
2005-11-01	0.39	5.0	0.055	0	-0.37	0	0.39	0.47	6.4
2005-12-01	0	3.8	0.13	0	-0.22	0	0	0.12	4.4
2006-01-01	0	3.0	0.079	0	-0.15	0	0	0.079	3.5
2006-02-01	0	2.7	0.051	0	-0.091	0	0	0.079	3.8
2006-03-01	0.12	3.2	0.024	0	-0.063	0	0.12	0.12	4.1
2006	0.51	18	0.33	0	-0.90	0	0.51	0.87	22


Annual Water Balance - 56-Year Simulated Period (Results on October 1)
Potential Surface Flux [in]
Actual Surface Flux [in]
Root Water Uptake [in]
Net Infiltration [in]
Surface Runoff [in]
Surface Infiltration [in]
Evaporation [in]
Precipitation (in)
Potential Evapotranspiration [in]
Monthly Water Balance - 9 Wet Years (1983 - 1991)
Surface Runoff 0%
Evaporation 68%
Net Infiltration 32%
Root Water Uptake 0%
Depth (ft)
CYCLONED SAND
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CLIENT
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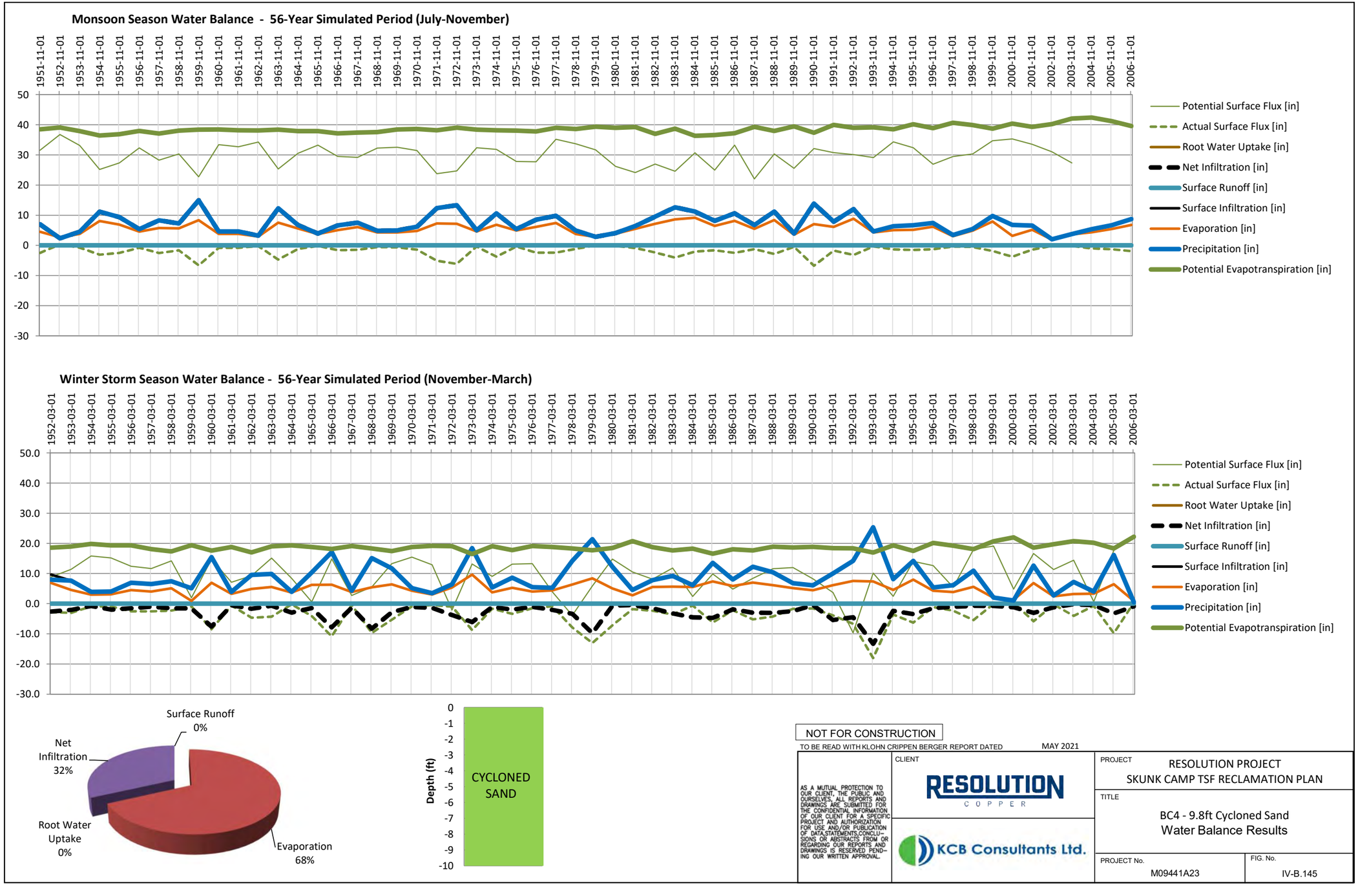
KCB Consultants Ltd.
PROJECT
RESOLUTION PROJECT
SKUNK CAMP TSF RECLAMATION PLAN
TITLE
BC4 - 9.8ft Cycloned Sand
Water Balance Results
PROJECT No.
M09441A23
FIG. No.
IV-B.144



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CLIENT: RESOLUTION COPPER

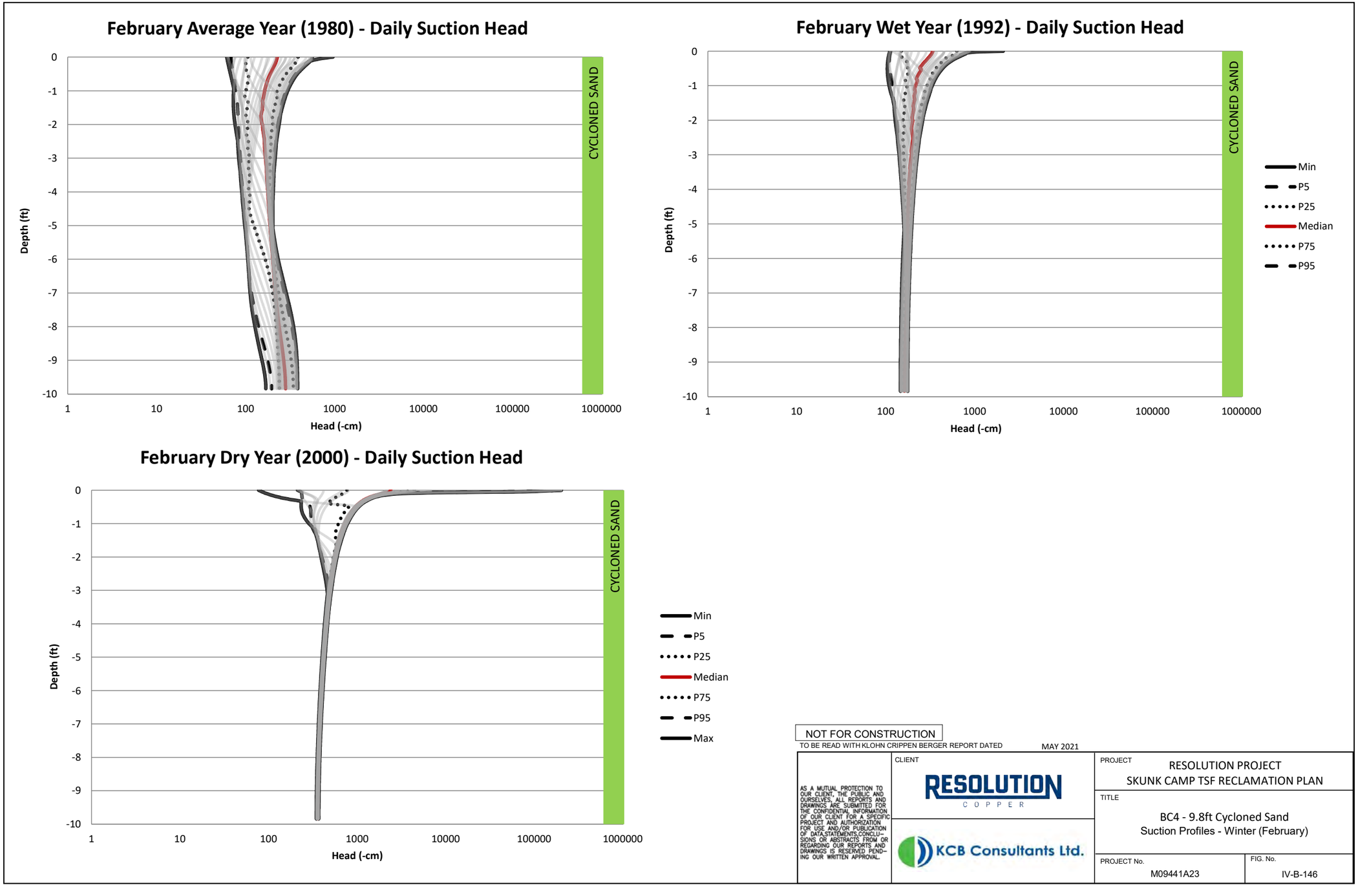
KCB Consultants Ltd.

PROJECT: RESOLUTION PROJECT
SKUNK CAMP TSF RECLAMATION PLAN

TITLE: BC4 - 9.8ft Cycloned Sand
Water Balance Results

PROJECT No. M09441A23

FIG. No. IV-B.145



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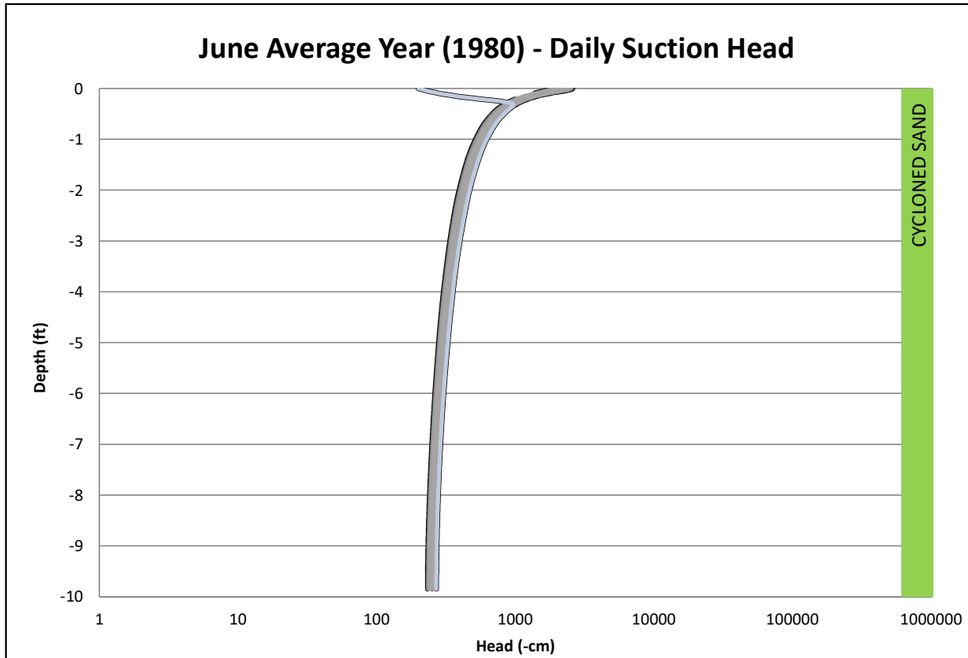
KCB Consultants Ltd.

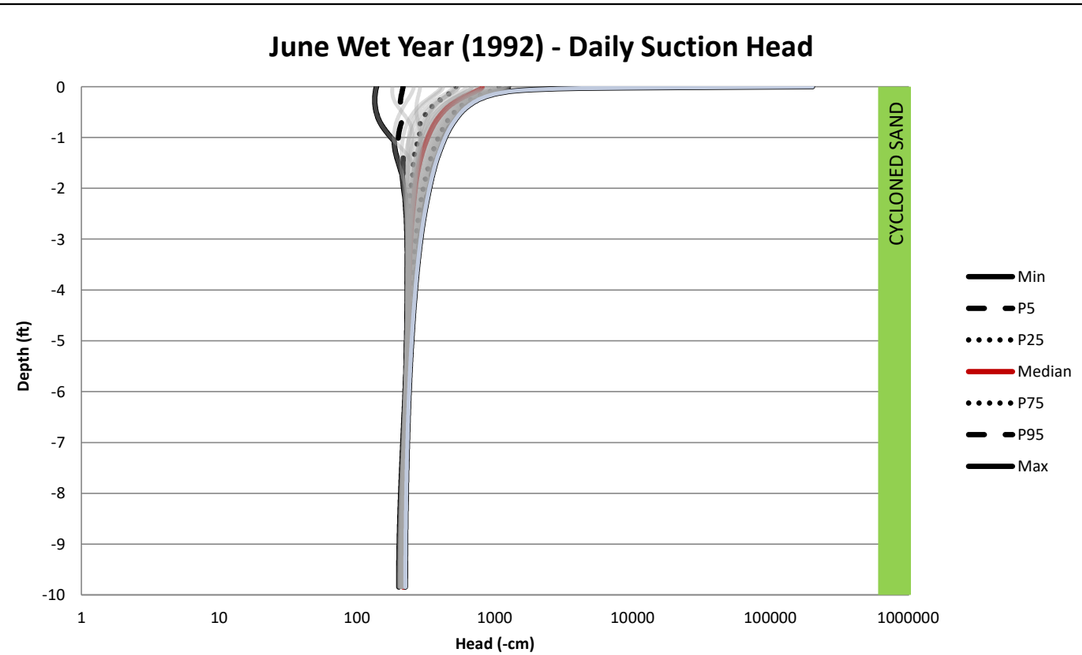
PROJECT: RESOLUTION PROJECT
SKUNK CAMP TSF RECLAMATION PLAN

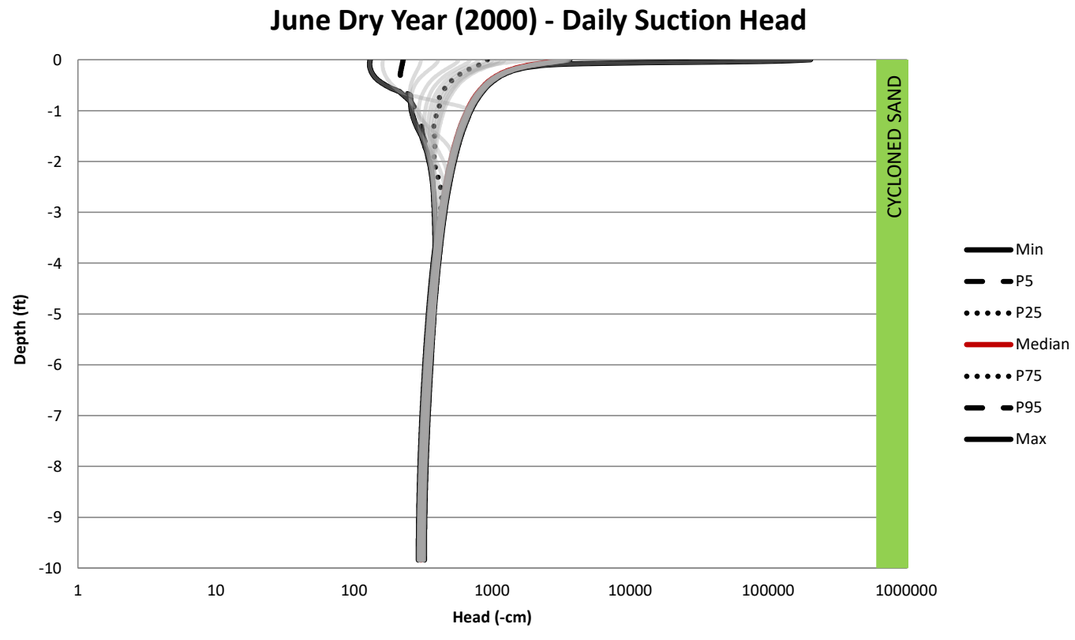
TITLE: BC4 - 9.8ft Cycloned Sand
Suction Profiles - Winter (February)

PROJECT No. M09441A23

FIG. No. IV-B-146







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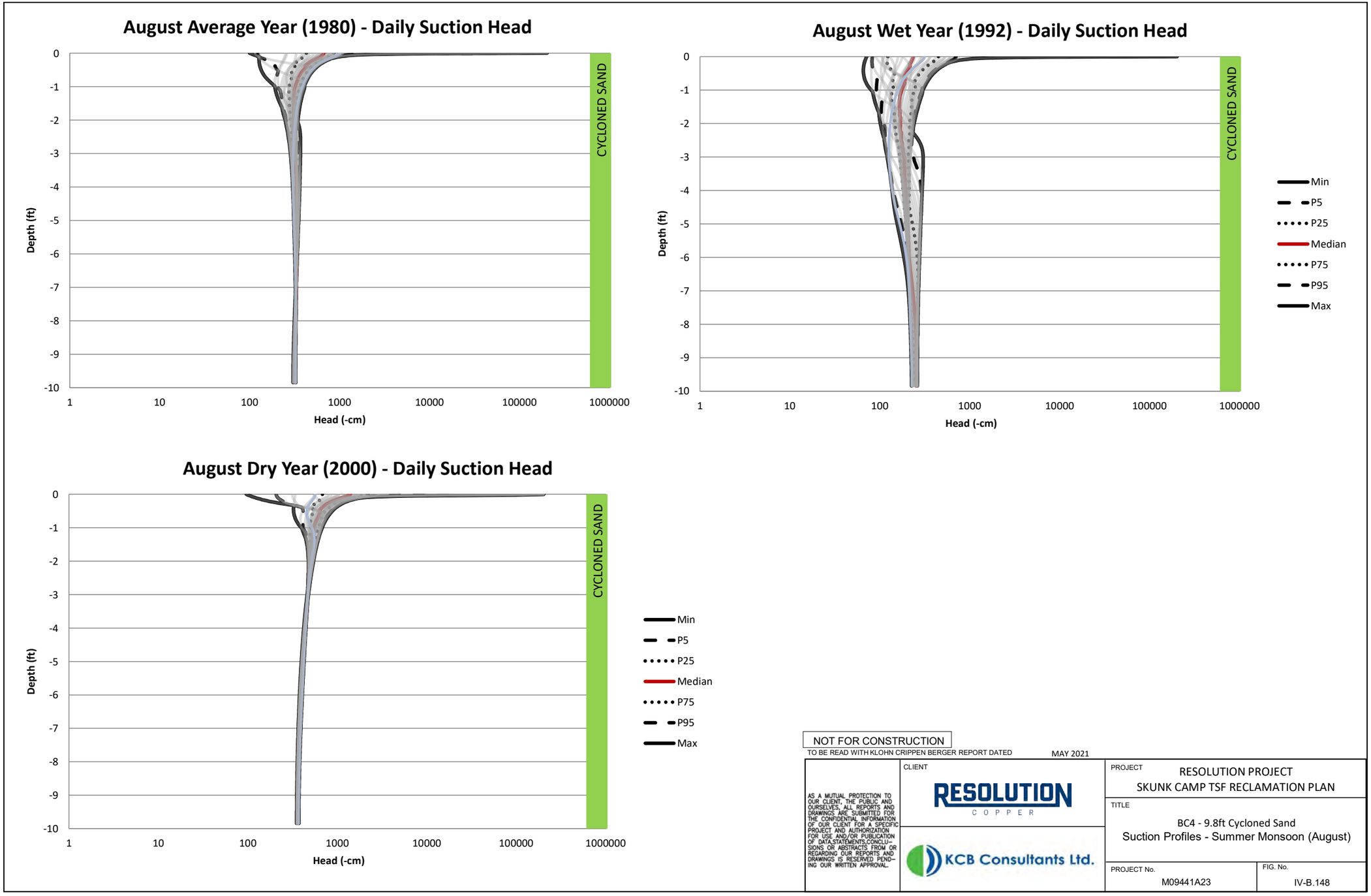
KCB Consultants Ltd.

PROJECT: RESOLUTION PROJECT
SKUNK CAMP TSF RECLAMATION PLAN

TITLE: BC4 - 9.8ft Cycloned Sand
Suction Profiles - Dry Season (June)

PROJECT No. M09441A23

FIG. No. IV-B.147



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CLIENT: RESOLUTION COPPER

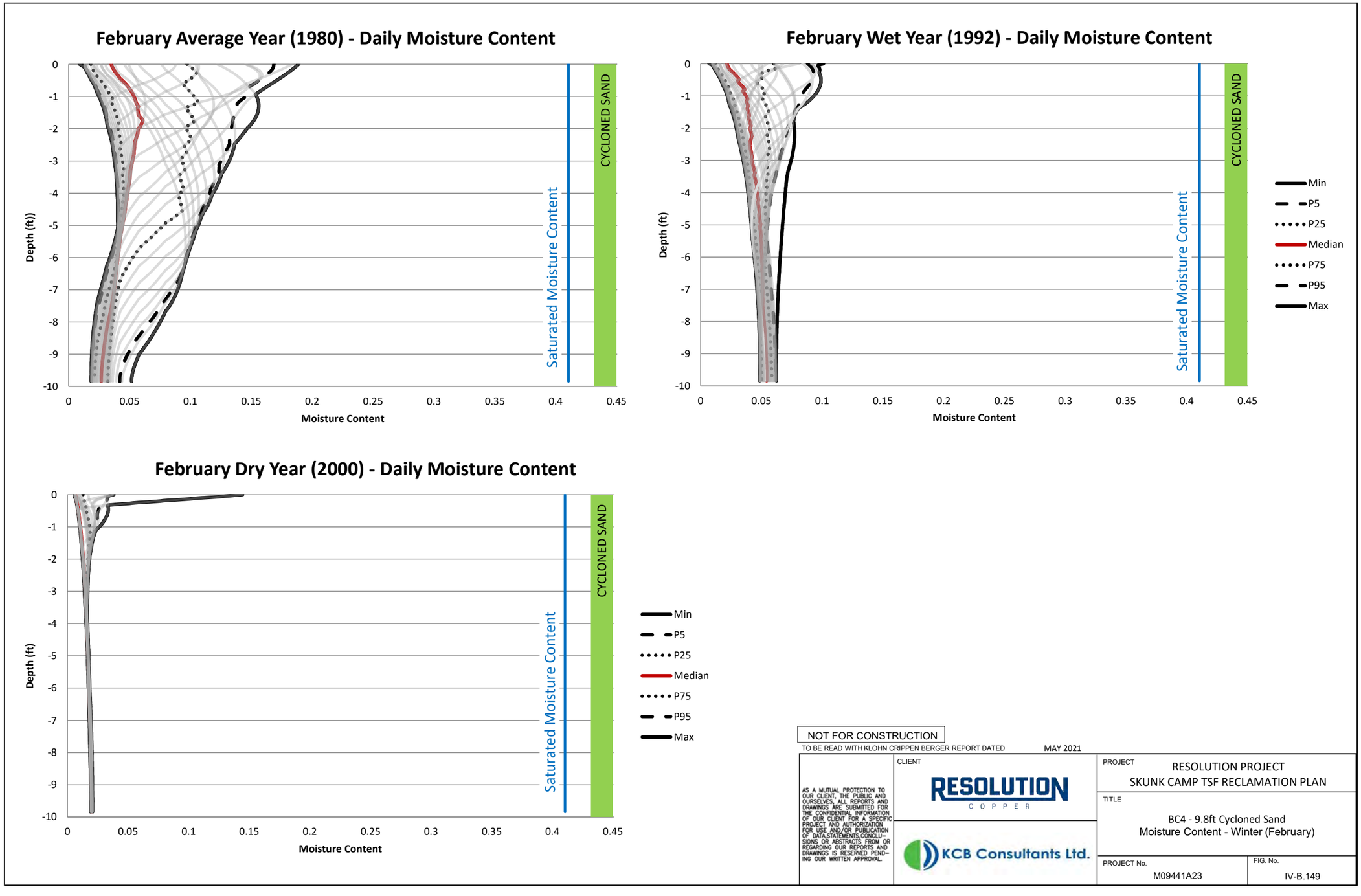
KCB Consultants Ltd.

PROJECT: RESOLUTION PROJECT
SKUNK CAMP TSF RECLAMATION PLAN

TITLE: BC4 - 9.8ft Cycloned Sand
Suction Profiles - Summer Monsoon (August)

PROJECT No. M09441A23

FIG. No. IV-B.148



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CLIENT: RESOLUTION COPPER

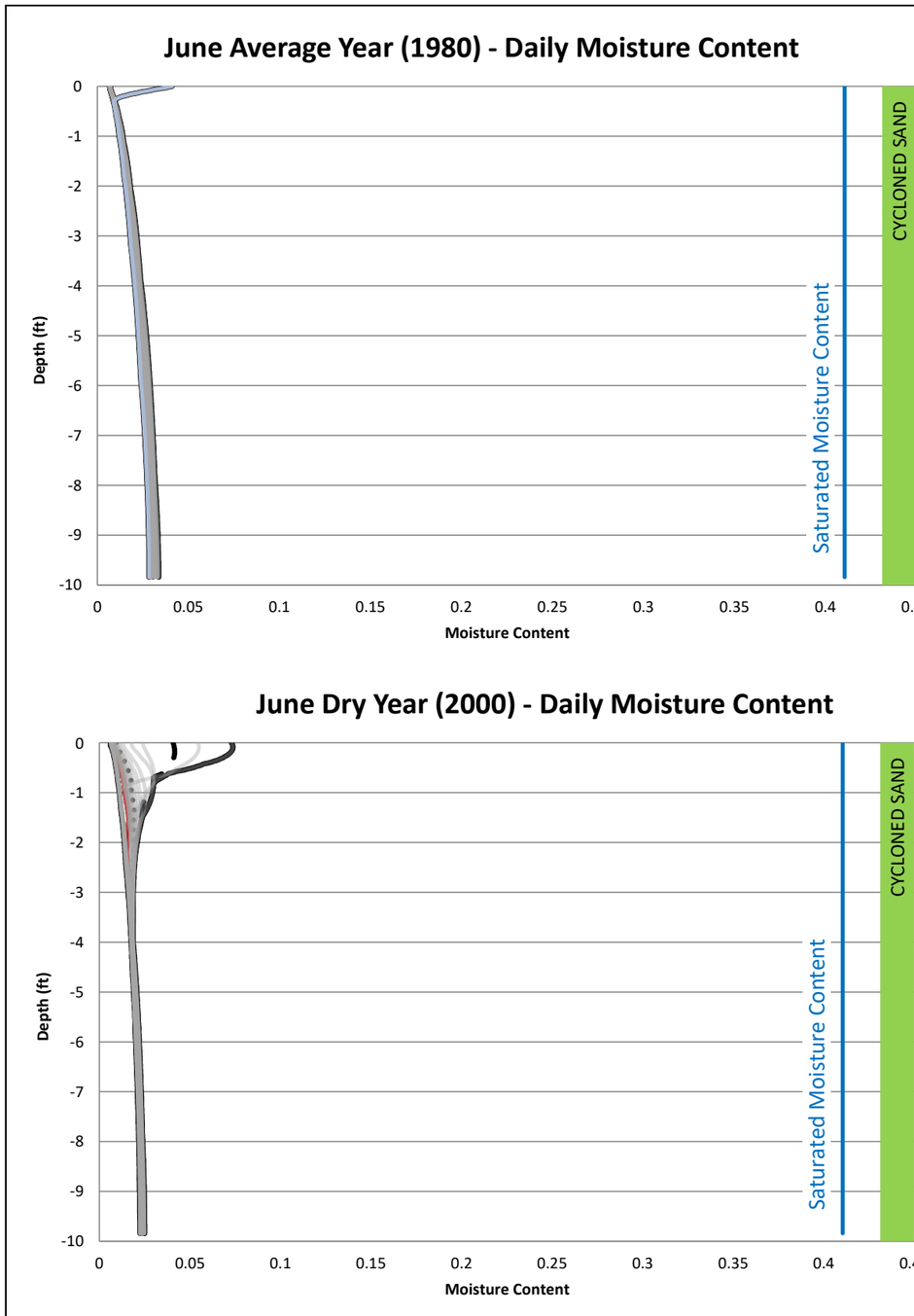
KCB Consultants Ltd.

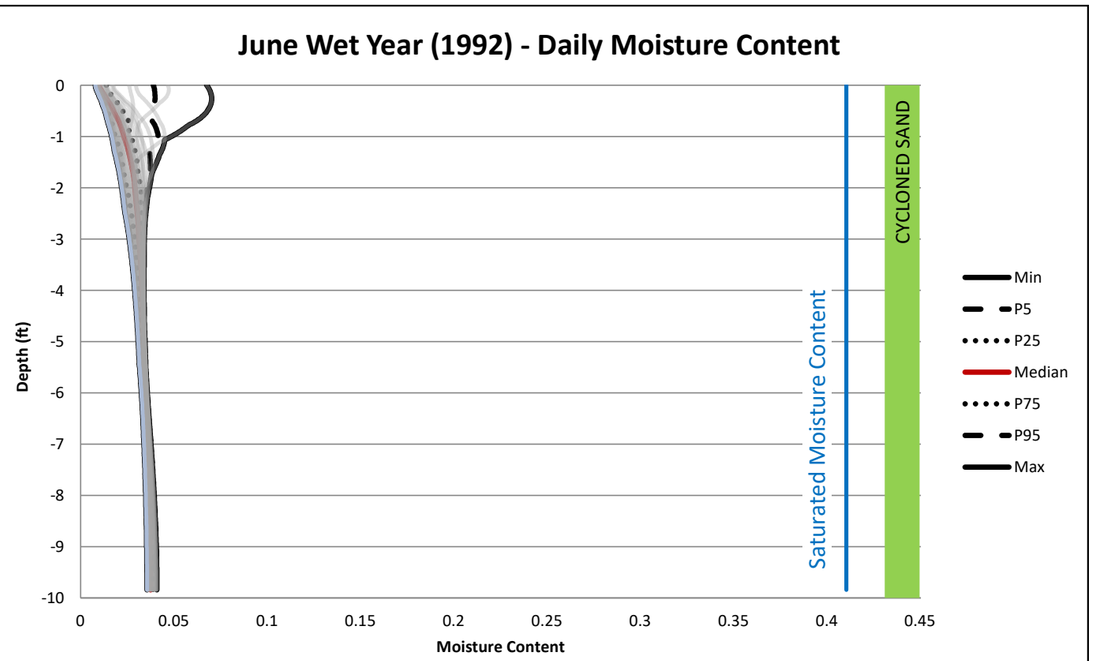
PROJECT: RESOLUTION PROJECT
SKUNK CAMP TSF RECLAMATION PLAN

TITLE: BC4 - 9.8ft Cycloned Sand
Moisture Content - Winter (February)

PROJECT No. M09441A23

FIG. No. IV-B.149





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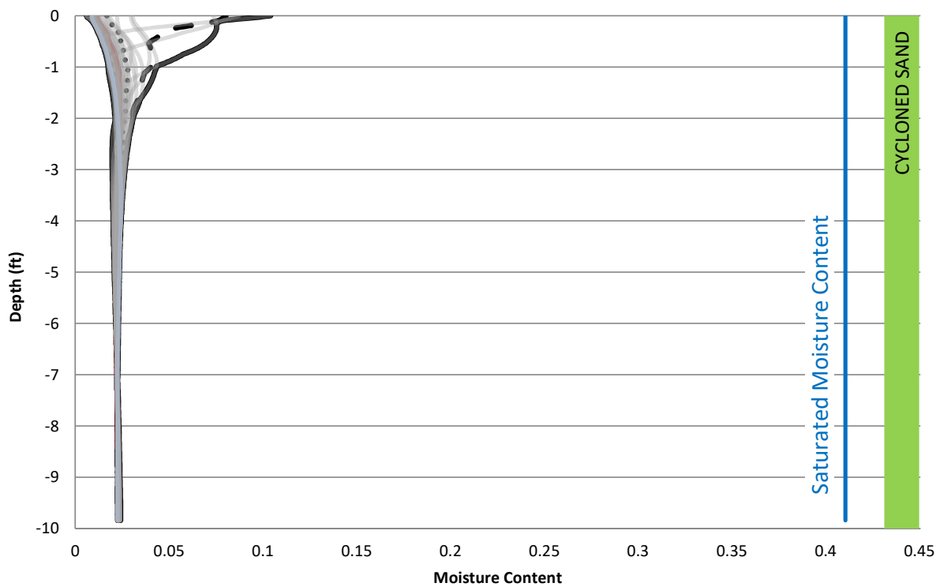
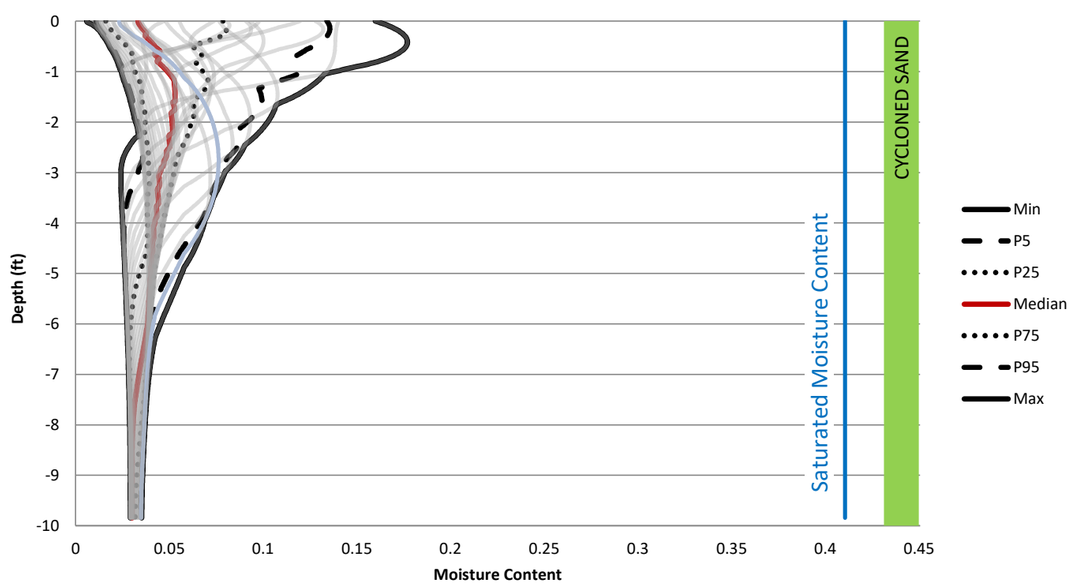
PROJECT: RESOLUTION PROJECT
SKUNK CAMP TSF RECLAMATION PLAN

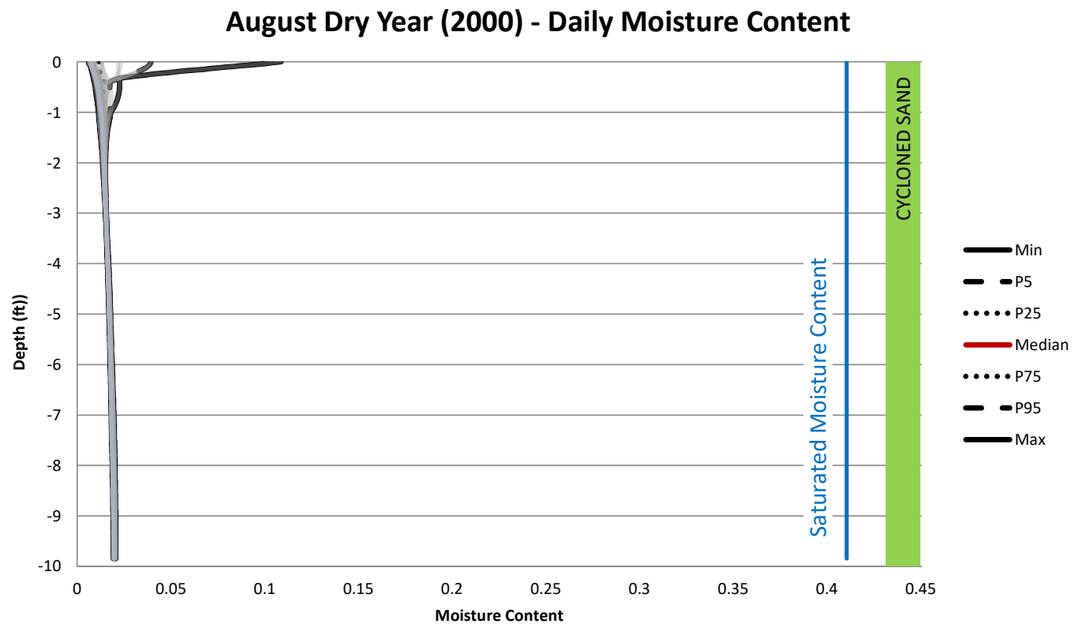
TITLE: BC4 - 9.8ft Cycloned Sand
Moisture Content - Dry Season(June)

PROJECT No. M09441A23

FIG. No. IV-B.150







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CLIENT: RESOLUTION COPPER

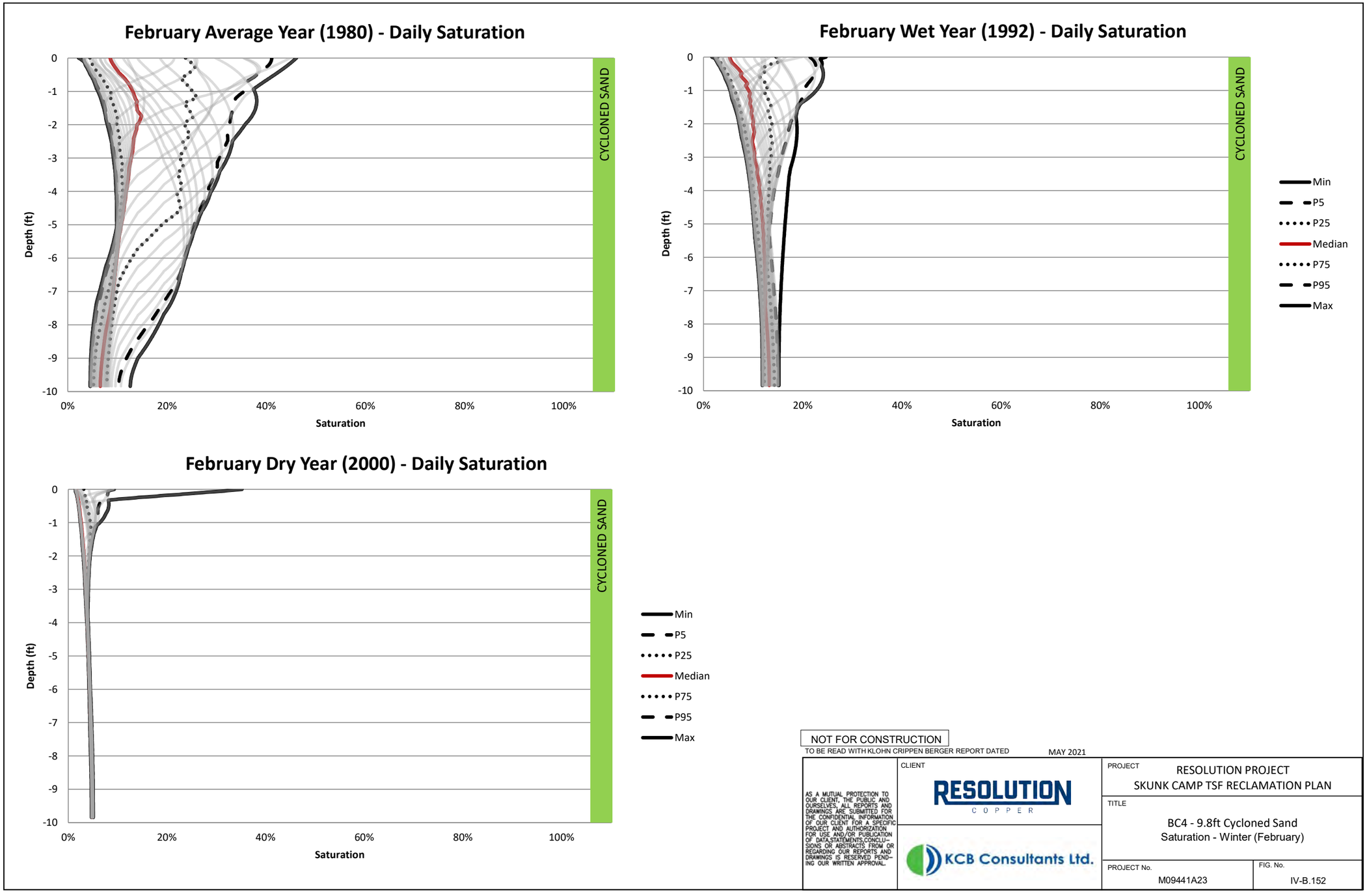
KCB Consultants Ltd.

PROJECT: RESOLUTION PROJECT
SKUNK CAMP TSF RECLAMATION PLAN

TITLE: BC4 - 9.8ft Cycloned Sand
Moisture Content - Summer Monsoon (August)

PROJECT No. M09441A23

FIG. No. IV-B.151



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CLIENT: RESOLUTION COPPER

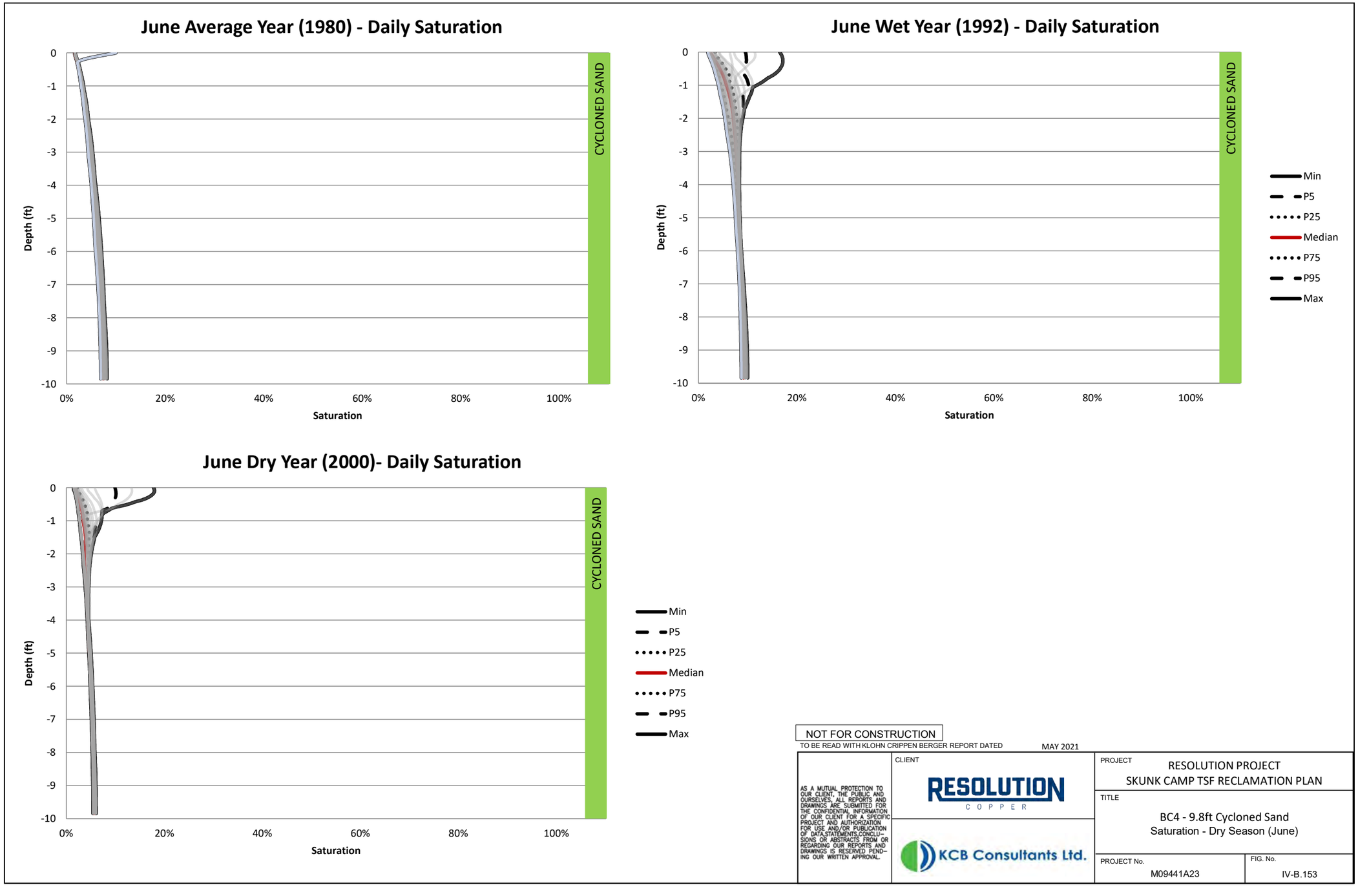
KCB Consultants Ltd.

PROJECT: RESOLUTION PROJECT
SKUNK CAMP TSF RECLAMATION PLAN

TITLE: BC4 - 9.8ft Cycloned Sand
Saturation - Winter (February)

PROJECT No. M09441A23

FIG. No. IV-B.152



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CLIENT: RESOLUTION COPPER

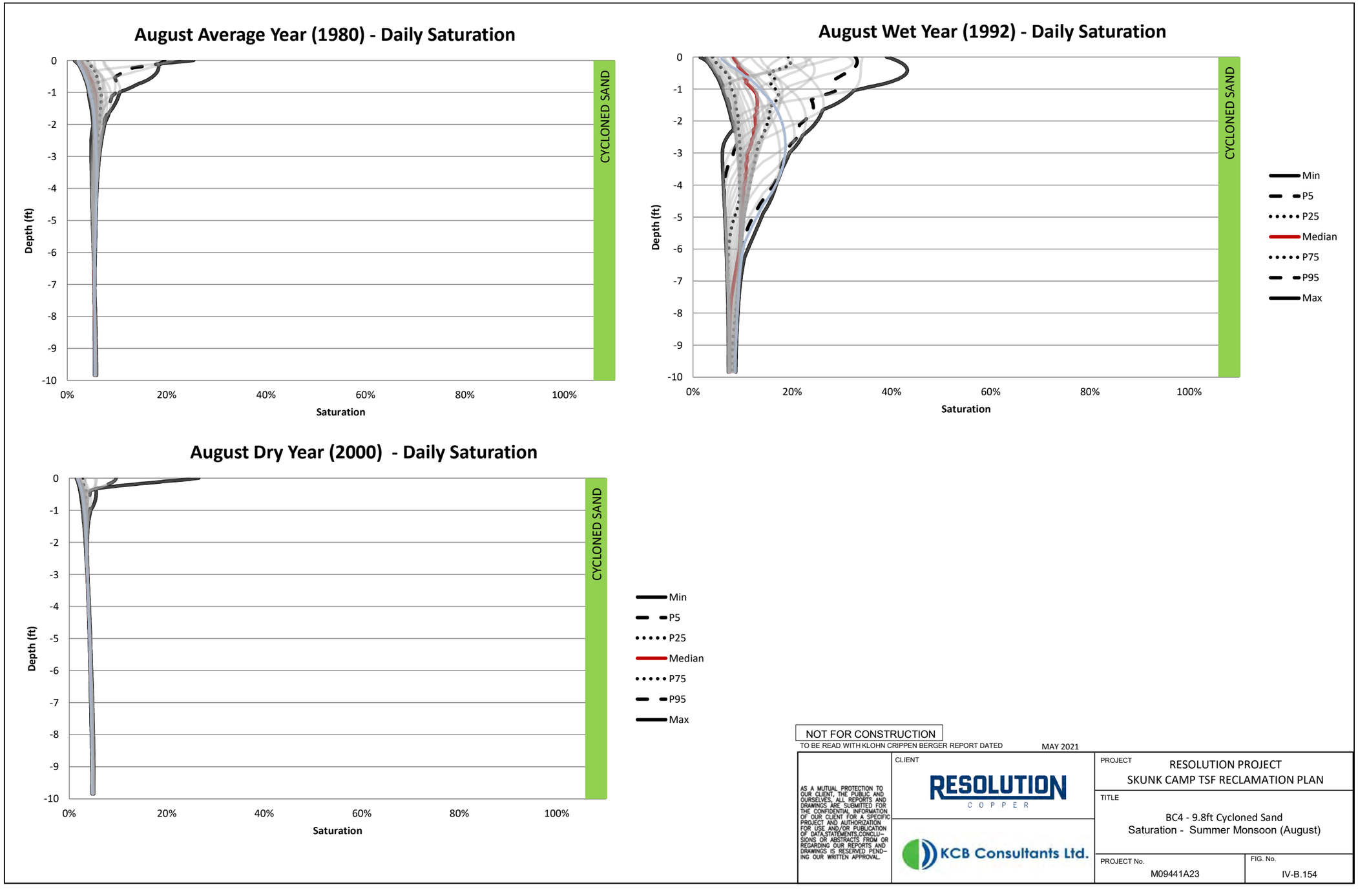
KCB Consultants Ltd.

PROJECT: RESOLUTION PROJECT
SKUNK CAMP TSF RECLAMATION PLAN

TITLE: BC4 - 9.8ft Cycloned Sand
Saturation - Dry Season (June)

PROJECT No. M09441A23

FIG. No. IV-B.153



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PROJECT: RESOLUTION PROJECT
SKUNK CAMP TSF RECLAMATION PLAN

TITLE: BC4 - 9.8ft Cycloned Sand
Saturation - Summer Monsoon (August)

PROJECT No. M09441A23

FIG. No. IV-B.154

Table IV-B.57 DC5 Annual Water Balance

Water Year	Result Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
		(in)	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
1951	1951-10-01	14	32	-2.3	5.8	-3.4	0	14	12	60
1952	1952-10-01	0	35	-5.7	6.6	-0.18	0	20	15	72
1953	1953-10-01	15	40	-4.9	4.9	-0.052	0	15	11	72
1954	1954-10-01	21	34	-8.3	7.6	-0.024	0	21	13	72
1955	1955-10-01	13	42	-4.3	4.8	-0.016	0	13	9.1	72
1956	1956-10-01	13	45	-3.8	3.9	-0.0092	0	13	8.8	74
1957	1957-10-01	15	40	-4.4	4.3	-0.0057	0	15	11	71
1958	1958-10-01	19	35	-6.4	5.6	-0.0043	0	19	13	70
1959	1959-10-01	16	42	-4.6	5.2	-0.0031	0	16	11	75
1960	1960-10-01	19	37	-5.6	4.9	-0.45	0	19	13	73
1961	1961-10-01	9.8	46	-2.2	2.3	-0.14	0	9.8	7.5	73
1962	1962-10-01	14	40	-3.9	3.8	-0.038	0	14	10	71
1963	1963-10-01	24	33	-8.4	6.7	-0.022	0	24	15	73
1964	1964-10-01	11	44	-2.1	3.7	-0.050	0	11	9.3	72
1965	1965-10-01	18	37	-5.2	5.4	-0.025	0	18	12	71
1966	1966-10-01	23	32	-9.5	5.5	-2.7	0	23	13	72
1967	1967-10-01	14	42	-4.1	4.9	-0.21	0	14	10	72
1968	1968-10-01	22	33	-8.4	5.9	-2.3	0	22	14	71
1969	1969-10-01	19	37	-5.5	5.5	-0.22	0	19	13	72
1970	1970-10-01	16	40	-5.2	4.6	-0.069	0	16	11	72
1971	1971-10-01	12	44	-4.8	3.0	-0.024	0	12	7.2	73
1972	1972-10-01	11	48	-0.80	3.3	-0.014	0	11	10	76
1973	1973-10-01	31	22	-8.9	8.5	-0.23	0	31	22	69
1974	1974-10-01	15	40	-5.2	4.9	-0.10	0	15	10	72
1975	1975-10-01	19	34	-6.0	6.4	-0.030	0	19	13	69
1976	1976-10-01	16	40	-5.6	4.2	-0.016	0	16	10	72
1977	1977-10-01	16	40	-4.9	5.5	-0.0083	0	16	11	73
1978	1978-10-01	24	31	-8.7	7.2	-1.6	0	24	15	71
1979	1979-10-01	30	25	-12	6.9	-5.1	0	30	18	71
1980	1980-10-01	20	35	-6.6	6.1	-0.64	0	20	14	71
1981	1981-10-01	15	43	-5.3	5.3	-0.18	0	15	9.7	75
1982	1982-10-01	23	31	-8.2	7.6	-0.041	0	23	15	69
1983	1983-10-01	27	27	-11	7.9	-0.021	0	27	16	69
1984	1984-10-01	18	37	-2.5	5.6	-0.025	0	18	15	71
1985	1985-10-01	22	29	-7.0	6.2	-0.16	0	22	15	67
1986	1986-10-01	21	33	-7.0	7.6	-0.098	0	21	14	70
1987	1987-10-01	20	34	-6.2	6.5	-0.032	0	20	14	70
1988	1988-10-01	23	32	-7.3	7.0	-0.023	0	23	15	71
1989	1989-10-01	12	45	-3.1	3.5	-0.022	0	12	8.5	74
1990	1990-10-01	23	32	-8.7	5.9	-0.010	0	23	14	71
1991	1991-10-01	23	32	-5.9	8.1	-0.27	0	23	17	71
1992	1992-10-01	36	18	-12	11	-0.61	0	36	24	70
1993	1993-10-01	33	21	-17	7.6	-9.7	0	33	16	70
1994	1994-10-01	15	41	-4.3	4.5	-0.27	0	15	11	73
1995	1995-10-01	25	30	-8.1	6.9	-0.064	0	25	17	71
1996	1996-10-01	13	43	-3.5	4.6	-0.036	0	13	9.8	74
1997	1997-10-01	10	48	-2.7	3.0	-0.014	0	10	7.4	75
1998	1998-10-01	20	33	-6.6	6.5	-0.0079	0	20	14	69
1999	1999-10-01	15	42	-4.9	4.8	-0.018	0	15	10.0	73
2000	2000-10-01	5.4	54	-1.3	1.6	-0.0091	0	5.4	4.2	77
2001	2001-10-01	23	31	-7.4	7.1	-0.010	0	23	16	71
2002	2002-10-01	5.4	53	-0.77	0.94	-0.014	0	5.4	4.6	75
2003	2003-10-01	13	46	-4.1	4.0	-0.0059	0	13	9.0	76
2004	2004-10-01	12	47	-3.9	3.7	-0.0039	0	12	8.3	77

Table IV-B.57 DC5 Annual Water Balance

Water Year	Result Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
		(in)	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
2005	2005-10-01	24	32	-8.8	7.4	-0.90	0	24	15	72
2006	2006-10-01	12	46	-4.1	4.2	-0.21	0	12	8.0	75

Table IV-B.58 DC5 Annual Water Balance

Month	Result Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
		[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
Nov-82	1982-11-30	0	4.1	-0.85	0.66	-0.0035	0	2.5	1.7	8.8
Dec-82	1982-12-30	2.5	-0.24	-0.71	0.36	-0.0016	0	2.5	1.8	2.7
Jan-83	1983-01-29	0.71	2.0	-0.028	0.34	-0.0016	0	0.71	0.66	3.0
Feb-83	1983-02-28	3.5	-0.94	-1.5	0.73	-0.0016	0	3.5	2.1	2.9
Mar-83	1983-03-30	5.4	-2.6	-3.0	1.1	-0.0012	0	5.4	2.4	4.0
Apr-83	1983-04-29	0.83	3.5	1.2	1.5	-0.0016	0	0.83	2.1	5.3
May-83	1983-05-29	0	6.5	0.23	0.59	-0.0016	0	0	0.20	7.9
Jun-83	1983-06-28	0	7.3	0.11	0.059	-0.0016	0	0	0.16	9.4
Jul-83	1983-07-28	2.1	4.9	-0.96	0.37	-0.0020	0	2.1	1.1	9.6
Aug-83	1983-08-27	3.8	1.6	-1.2	1.5	-0.0020	0	3.8	2.6	7.2
Sep-83	1983-09-26	1.8	3.5	-0.51	0.67	-0.0024	0	1.8	1.3	7.5
Oct-83	1983-10-26	4.9	-1.3	-2.4	0.72	-0.0024	0	4.9	2.5	5.1
Nov-83	1983-11-25	1.6	1.6	-0.70	0.46	-0.0020	0	1.6	0.91	4.2
Dec-83	1983-12-25	1.9	0.35	0.028	0.37	-0.0020	0	1.9	1.9	2.6
Jan-84	1984-01-24	1.5	0.79	0.091	0.39	-0.0020	0	1.5	1.6	2.7
Feb-84	1984-02-23	0	3.2	0.37	0.42	-0.0024	0	0	0.35	3.7
Mar-84	1984-03-24	0	4.1	0.15	0.17	-0.0020	0	0	0.16	5.0
Apr-84	1984-04-23	0.87	4.0	-0.26	0.26	-0.0024	0	0.87	0.59	6.5
May-84	1984-05-23	0.67	5.4	-0.043	0.079	-0.0024	0	0.67	0.63	7.5
Jun-84	1984-06-22	0.039	7.1	0.098	0	-0.0020	0	0.039	0.16	9.3
Jul-84	1984-07-22	3.6	2.4	-1.6	0.71	-0.0020	0	3.6	2.0	8.5
Aug-84	1984-08-21	3.9	1.5	-1.1	1.4	-0.0020	0	3.9	2.8	6.9
Sep-84	1984-09-20	1.1	4.3	-0.11	0.54	-0.0016	0	1.1	1.1	7.0
Oct-84	1984-10-20	2.5	1.4	-0.87	0.62	-0.0016	0	2.5	1.7	5.6
Nov-84	1984-11-19	0	3.6	0.19	0.11	-0.0020	0	0	0.16	4.2
Dec-84	1984-12-19	4.8	-2.6	-3.3	0.29	-0.0012	0	4.8	1.5	3.1
Jan-85	1985-01-18	3.9	-1.9	-1.9	0.37	-0.0016	0	3.9	2.0	2.3
Feb-85	1985-02-17	2.9	-0.87	-0.87	0.50	-0.0016	0	2.9	2.0	2.3
Mar-85	1985-03-19	1.7	1.1	0.96	1.0	-0.0020	0	1.7	2.6	3.6
Apr-85	1985-04-18	0.43	4.0	0.63	1.2	-0.013	0	0.43	1.1	5.4
May-85	1985-05-18	0.47	4.8	0.020	0.45	-0.026	0	0.47	0.51	6.7
Jun-85	1985-06-17	0	6.7	0.11	0.059	-0.028	0	0	0.079	8.6
Jul-85	1985-07-17	0.24	6.3	-0.10	0.0079	-0.026	0	0.24	0.12	8.4
Aug-85	1985-08-16	2.1	3.9	-0.66	0.62	-0.023	0	2.1	1.5	7.8
Sep-85	1985-09-15	2.1	3.1	-0.79	0.50	-0.020	0	2.1	1.3	7.9
Oct-85	1985-10-15	3.1	0.87	-1.2	0.90	-0.017	0	3.1	2.0	5.7
Nov-85	1985-11-14	1.4	1.8	-0.65	0.36	-0.014	0	1.4	0.79	3.9
Dec-85	1985-12-14	2.8	-0.24	-1.2	0.37	-0.012	0	2.8	1.5	3.1
Jan-86	1986-01-13	0	2.8	0.92	0.37	-0.011	0	0	0.91	3.3
Feb-86	1986-02-12	2.3	0.28	-1.7	0.28	-0.0091	0	2.3	0.67	3.6
Mar-86	1986-03-14	1.9	1.5	-0.40	0.90	-0.0083	0	1.9	1.5	3.7
Apr-86	1986-04-13	3.1	0.87	-0.99	1.4	-0.0071	0	3.1	2.1	4.9
May-86	1986-05-13	0	5.7	0.26	0.68	-0.0067	0	0	0.28	7.4
Jun-86	1986-06-12	0	7.2	0.11	0.079	-0.0055	0	0	0.12	9.1
Jul-86	1986-07-12	2.2	4.8	-1.0	0.46	-0.0055	0	2.2	1.1	9.2
Aug-86	1986-08-11	2.8	2.9	-0.93	1.1	-0.0047	0	2.8	1.9	7.5
Sep-86	1986-09-10	3.0	2.2	-1.4	0.77	-0.0043	0	3.0	1.5	7.3
Oct-86	1986-10-10	0.91	3.6	0.20	0.65	-0.0039	0	0.91	1.1	6.1
Nov-86	1986-11-09	2.8	0.43	-1.3	0.52	-0.0035	0	2.8	1.5	4.6
Dec-86	1986-12-09	2.6	0.16	-1.8	0.31	-0.0035	0	2.6	0.75	3.4
Jan-87	1987-01-08	1.5	0.87	0.33	0.38	-0.0035	0	1.5	1.9	2.7
Feb-87	1987-02-07	3.1	-0.67	-0.95	0.51	-0.0028	0	3.1	2.1	2.9
Mar-87	1987-03-09	2.3	0.83	-0.56	0.96	-0.0024	0	2.3	1.7	3.4
Apr-87	1987-04-08	0.94	2.9	0.15	1.1	-0.0024	0	0.94	1.1	5.0

Table IV-B.58 DC5 Annual Water Balance

Month	Result Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
		[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
May-87	1987-05-08	0	5.3	0.17	0.31	-0.0024	0	0	0.20	6.8
Jun-87	1987-06-07	0.31	6.1	0.075	0.028	-0.0024	0	0.31	0.39	8.2
Jul-87	1987-07-07	0.20	6.9	0.039	0.012	-0.0024	0	0.20	0.24	9.2
Aug-87	1987-08-06	3.1	3.5	-1.8	0.73	-0.0020	0	3.1	1.3	8.9
Sep-87	1987-09-05	2.4	3.2	-0.81	1.1	-0.0020	0	2.4	1.5	7.5
Oct-87	1987-10-05	0.79	4.1	0.12	0.39	-0.0020	0	0.79	0.94	6.7
Nov-87	1987-11-04	1.4	2.6	-0.86	0.063	-0.0016	0	1.4	0.51	5.8
Dec-87	1987-12-04	0.67	2.5	0.32	0.36	-0.0016	0	0.67	1.0	3.8
Jan-88	1988-01-03	4.1	-1.7	-2.5	0.26	-0.0016	0	4.1	1.5	3.0
Feb-88	1988-02-02	3.6	-1.4	-1.4	0.43	-0.0016	0	3.6	2.1	2.4
Mar-88	1988-03-03	0.71	2.6	1.2	0.90	-0.0016	0	0.71	1.9	3.6
Apr-88	1988-04-02	0.16	4.1	0.30	0.81	-0.0016	0	0.16	0.43	5.5
May-88	1988-05-02	2.4	2.0	-1.1	0.84	-0.0016	0	2.4	1.4	6.1
Jun-88	1988-06-01	0	6.6	0.21	0.26	-0.0024	0	0	0.20	8.0
Jul-88	1988-07-01	0.12	6.6	0.083	0.0079	-0.0020	0	0.12	0.20	8.9
Aug-88	1988-07-31	2.4	3.9	-1.3	0.24	-0.0028	0	2.4	1.1	8.5
Sep-88	1988-08-30	6.7	-1.2	-2.9	1.7	-0.0020	0	6.7	3.8	7.3
Oct-88	1988-10-29	2.0	7.3	0.15	1.5	-0.0051	0	2.0	2.1	13
Nov-88	1988-11-28	1.7	1.3	-1.2	0.18	-0.0020	0	1.7	0.51	4.1
Dec-88	1988-12-28	1.1	1.4	0.19	0.36	-0.0024	0	1.1	1.3	3.1
Jan-89	1989-01-27	2.0	0.31	-0.50	0.39	-0.0020	0	2.0	1.5	2.4
Feb-89	1989-02-26	0.51	2.5	0.22	0.51	-0.0016	0	0.51	0.75	3.3
Mar-89	1989-03-28	1.7	2.4	-1.3	0.24	-0.0016	0	1.7	0.35	5.3
Apr-89	1989-04-27	0	5.6	0.72	0.69	-0.0020	0	0	0.75	6.9
May-89	1989-05-27	0.20	6.3	0.094	0.016	-0.0016	0	0.20	0.24	8.3
Jun-89	1989-06-26	0	7.0	0.071	0	-0.0020	0	0	0.079	9.1
Jul-89	1989-07-26	0.079	6.7	0.043	0.0039	-0.0016	0	0.079	0.12	9.0
Aug-89	1989-08-25	1.3	4.3	-0.34	0.18	-0.0012	0	1.3	0.98	8.0
Sep-89	1989-09-24	1.5	3.9	-0.57	0.46	-0.0012	0	1.5	0.94	7.3
Oct-89	1989-10-24	1.1	3.4	-0.28	0.21	-0.0012	0	1.1	0.79	6.1
Nov-89	1989-11-23	0.31	3.1	-0.035	0.016	-0.0012	0	0.31	0.24	4.5
Dec-89	1989-12-23	0	2.8	0.24	0.012	-0.0012	0	0	0.28	3.5
Jan-90	1990-01-22	2.1	0.039	-0.97	0.26	-0.00079	0	2.1	1.1	2.9
Feb-90	1990-02-21	2.6	-0.24	-1.1	0.50	-0.00079	0	2.6	1.5	2.5
Mar-90	1990-03-23	0.79	2.6	0.028	0.82	-0.00079	0	0.79	0.83	4.2
Apr-90	1990-04-22	1.0	3.9	-0.23	0.55	-0.00079	0	1.0	0.79	6.0
May-90	1990-05-22	1.1	4.8	-0.39	0.43	-0.00079	0	1.1	0.71	7.7
Jun-90	1990-06-21	0.39	6.7	0.0039	0.031	-0.00079	0	0.39	0.39	9.0
Jul-90	1990-07-21	0.91	5.6	-0.23	0.17	-0.00079	0	0.91	0.71	8.6
Aug-90	1990-08-20	9.6	-4.3	-7.8	0.67	-0.00079	0	9.6	1.8	7.8
Sep-90	1990-09-19	2.4	3.0	1.2	1.7	-0.00039	0	2.4	3.6	7.1
Oct-90	1990-10-19	0.43	3.7	1.5	0.98	-0.0035	0	0.43	1.9	5.9
Nov-90	1990-11-18	1.5	2.0	-0.38	0.54	-0.018	0	1.5	1.1	4.2
Dec-90	1990-12-18	2.8	-0.16	-1.6	0.36	-0.026	0	2.8	1.2	3.5
Jan-91	1991-01-17	4.7	-2.7	-2.7	0.37	-0.025	0	4.7	2.0	2.3
Feb-91	1991-02-16	0.16	2.7	2.1	0.68	-0.024	0	0.16	2.2	3.3
Mar-91	1991-03-18	3.6	-0.28	-1.7	1.1	-0.026	0	3.6	1.9	4.3
Apr-91	1991-04-17	3.2	0.87	-0.61	1.5	-0.029	0	3.2	2.6	4.8
May-91	1991-05-17	0	5.8	0.35	0.91	-0.028	0	0	0.35	7.4
Jun-91	1991-06-16	0.71	6.3	-0.043	0.21	-0.026	0	0.71	0.67	8.7
Jul-91	1991-07-16	0.43	6.8	0	0.11	-0.023	0	0.43	0.47	9.4
Aug-91	1991-08-15	3.3	2.8	-1.5	0.69	-0.020	0	3.3	1.9	8.4
Sep-91	1991-09-14	2.0	3.2	-0.55	0.95	-0.018	0	2.0	1.5	7.5
Oct-91	1991-10-01	0.20	2.4	0.094	0.21	-0.0087	0	0.20	0.31	3.5

Table IV-B.59 DC5 Monsoon Period Water Balance

Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
1951-07-01	0	7.2	0.098	0.043	-0.10	0	0	0.098	9.2
1951-08-01	1.1	6.3	-0.30	0.21	-0.071	0	1.1	0.75	9.5
1951-09-01	3.6	2.2	-2.5	0.43	-0.054	0	3.6	1.2	7.8
1951-10-01	0.65	4.4	0.48	0.99	-0.041	0	0.65	1.1	6.6
1951-11-01	1.6	2.7	-0.94	0.31	-0.032	0	1.6	0.70	5.4
1951	7.0	23	-3.1	2.0	-0.30	0	7.0	3.9	39
1952-07-01	0.63	6.8	-0.014	0.25	-0.0098	0	0.63	0.62	9.6
1952-08-01	0.56	6.3	-0.031	0.021	-0.0093	0	0.56	0.53	8.8
1952-09-01	0.45	5.4	0.038	0.022	-0.0085	0	0.45	0.49	7.8
1952-10-01	0.70	4.7	-0.13	0.093	-0.0073	0	0.70	0.58	7.0
1952-11-01	0	4.8	0.13	0	-0.0067	0	0	0.13	5.9
1952	2.3	28	-0.0059	0.39	-0.041	0	2.3	2.3	39
1953-07-01	0	7.0	0.076	0.00079	-0.0037	0	0	0.076	9.1
1953-08-01	2.7	3.9	-1.6	0.37	-0.0036	0	2.7	1.1	8.8
1953-09-01	1.8	4.0	-0.38	0.75	-0.0034	0	1.8	1.4	7.7
1953-10-01	0	5.2	0.33	0.38	-0.0031	0	0	0.33	6.8
1953-11-01	0.012	4.4	0.095	0.0075	-0.0030	0	0.012	0.11	5.5
1953	4.5	25	-1.5	1.5	-0.017	0	4.5	3.1	38
1954-07-01	0.13	6.8	0.096	0.037	-0.0017	0	0.13	0.22	9.0
1954-08-01	4.5	1.5	-2.0	1.1	-0.0017	0	4.5	2.5	7.8
1954-09-01	5.3	0.20	-2.5	1.7	-0.0017	0	5.3	2.8	7.4
1954-10-01	1.3	3.8	-0.062	1.1	-0.0016	0	1.3	1.2	6.6
1954-11-01	0	4.6	0.25	0.29	-0.0017	0	0	0.25	5.6
1954	11	17	-4.2	4.2	-0.0083	0	11	7.0	36
1955-07-01	2.1	5.0	-0.94	0.65	-0.0011	0	2.1	1.1	9.1
1955-08-01	4.5	1.6	-2.5	0.58	-0.0011	0	4.5	2.0	7.9
1955-09-01	2.7	2.6	-0.40	1.6	-0.00098	0	2.7	2.3	7.2
1955-10-01	0.12	5.1	0.22	0.48	-0.00094	0	0.12	0.34	6.8
1955-11-01	0.020	4.7	0.12	0.041	-0.00094	0	0.020	0.14	5.9
1955	9.4	19	-3.5	3.3	-0.0051	0	9.4	5.9	37
1956-07-01	0.24	7.1	-0.054	0.016	-0.00067	0	0.24	0.19	9.4
1956-08-01	2.8	4.2	-1.0	0.49	-0.00063	0	2.8	1.7	9.0
1956-09-01	1.7	3.8	-0.46	0.83	-0.00067	0	1.7	1.3	7.5
1956-10-01	0.075	5.2	0.056	0.030	-0.00067	0	0.075	0.13	6.8
1956-11-01	0.53	3.6	-0.15	0.021	-0.00063	0	0.53	0.39	5.2
1956	5.4	24	-1.6	1.4	-0.0033	0	5.4	3.7	38
1957-07-01	0.031	7.2	0.11	0.012	-0.00043	0	0.031	0.14	9.3
1957-08-01	1.1	5.5	-0.30	0.11	-0.00043	0	1.1	0.79	8.5
1957-09-01	3.4	2.4	-1.2	0.89	-0.00035	0	3.4	2.2	8.1
1957-10-01	0.57	4.5	-0.0079	0.39	-0.00047	0	0.57	0.56	6.6
1957-11-01	3.2	0.30	-2.1	0.30	-0.00039	0	3.2	1.2	4.6
1957	8.3	20	-3.4	1.7	-0.0021	0	8.3	4.9	37
1958-07-01	0.70	6.4	-0.18	0.14	-0.00035	0	0.70	0.52	9.3
1958-08-01	0.78	6.2	-0.17	0.071	-0.00035	0	0.78	0.61	9.1
1958-09-01	0.85	5.1	-0.053	0.18	-0.00031	0	0.85	0.80	8.0
1958-10-01	3.0	1.8	-1.5	0.69	-0.00028	0	3.0	1.5	6.4
1958-11-01	1.9	2.3	-0.50	0.74	-0.00028	0	1.9	1.4	5.3
1958	7.3	22	-2.4	1.8	-0.0016	0	7.3	4.9	38
1959-07-01	1.0	6.1	-0.30	0.18	-0.00020	0	1.0	0.74	9.1
1959-08-01	3.8	3.7	-2.1	0.74	-0.00024	0	3.8	1.7	9.6
1959-09-01	5.3	0.15	-1.7	1.7	-0.00012	0	5.3	3.6	7.4
1959-10-01	0.051	5.1	0.30	0.67	-0.00024	0	0.051	0.35	6.9
1959-11-01	4.8	-0.59	-4.2	0.24	-0.00020	0	4.8	0.63	5.3
1959	15	14	-7.9	3.6	-0.00098	0	15	7.1	38
1960-07-01	0	7.2	0.091	0.024	-0.064	0	0	0.094	9.2
1960-08-01	0.74	6.4	-0.19	0.12	-0.052	0	0.74	0.54	9.2
1960-09-01	1.5	4.4	-0.35	0.39	-0.041	0	1.5	1.2	8.1

Table IV-B.59 DC5 Monsoon Period Water Balance

Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
1960-10-01	0.27	5.0	0.075	0.043	-0.030	0	0.27	0.34	7.0
1960-11-01	2.1	1.9	-0.84	0.37	-0.026	0	2.1	1.2	5.0
1960	4.6	25	-1.2	0.95	-0.21	0	4.6	3.4	38
1961-07-01	0	7.2	0.063	0	-0.0075	0	0	0.059	9.3
1961-08-01	0.67	6.1	-0.11	0.031	-0.0067	0	0.67	0.56	8.9
1961-09-01	3.0	3.0	-1.6	0.41	-0.0055	0	3.0	1.3	8.1
1961-10-01	0.50	4.4	0.61	0.52	-0.0051	0	0.50	1.1	6.3
1961-11-01	0.45	3.6	-0.20	0.012	-0.0047	0	0.45	0.25	5.4
1961	4.6	24	-1.3	0.97	-0.030	0	4.6	3.3	38
1962-07-01	0	7.0	0.079	0	-0.0024	0	0	0.075	9.1
1962-08-01	0.61	6.3	-0.063	0.035	-0.0031	0	0.61	0.55	8.9
1962-09-01	0.49	5.6	-0.035	0.051	-0.0024	0	0.49	0.46	8.4
1962-10-01	1.2	3.7	-0.37	0.16	-0.0024	0	1.2	0.86	6.6
1962-11-01	0.87	3.2	-0.14	0.19	-0.0024	0	0.87	0.73	5.1
1962	3.2	26	-0.54	0.43	-0.013	0	3.2	2.7	38
1963-07-01	0	7.0	0.083	0.0039	-0.0016	0	0	0.087	9.0
1963-08-01	0.079	7.2	0.059	0	-0.0020	0	0.079	0.14	9.4
1963-09-01	10	-5.1	-7.0	1.2	-0.0016	0	10	3.5	7.5
1963-10-01	1.0	4.1	2.4	1.5	-0.0020	0	1.0	3.4	6.6
1963-11-01	0.67	3.9	0.20	0.74	-0.0020	0	0.67	0.87	5.8
1963	12	17	-4.3	3.4	-0.0091	0	12	8.0	38
1964-07-01	0	7.2	0.071	0	-0.0039	0	0	0.071	9.4
1964-08-01	1.5	5.3	-0.51	0.17	-0.0043	0	1.5	0.98	8.8
1964-09-01	2.2	3.6	-0.60	0.66	-0.0035	0	2.2	1.6	7.7
1964-10-01	1.6	3.1	-0.34	0.37	-0.0035	0	1.6	1.2	6.1
1964-11-01	1.5	3.1	-0.62	0.35	-0.0028	0	1.5	0.92	5.8
1964	6.8	22	-2.0	1.5	-0.018	0	6.8	4.8	38
1965-07-01	0.10	6.8	0.079	0.0079	-0.0016	0	0.10	0.18	8.8
1965-08-01	1.4	5.2	-0.41	0.23	-0.0020	0	1.4	1.0	8.9
1965-09-01	0.90	5.0	-0.13	0.22	-0.0020	0	0.90	0.77	8.0
1965-10-01	1.0	3.9	-0.20	0.22	-0.0016	0	1.0	0.83	6.6
1965-11-01	0.46	4.0	-0.055	0.051	-0.0016	0	0.46	0.41	5.7
1965	3.9	25	-0.72	0.73	-0.0087	0	3.9	3.2	38
1966-07-01	0.18	6.6	0.051	0.047	-0.14	0	0.18	0.23	9.1
1966-08-01	0.84	5.8	-0.17	0.13	-0.10	0	0.84	0.68	8.3
1966-09-01	1.6	4.3	-0.60	0.36	-0.071	0	1.6	1.0	8.1
1966-10-01	2.7	2.2	-1.2	0.87	-0.052	0	2.7	1.5	6.5
1966-11-01	1.4	2.8	-0.26	0.62	-0.042	0	1.4	1.1	5.1
1966	6.7	22	-2.1	2.0	-0.41	0	6.7	4.5	37
1967-07-01	0.079	6.9	0.067	0	-0.0098	0	0.079	0.15	9.0
1967-08-01	4.0	2.4	-1.6	0.98	-0.0087	0	4.0	2.3	8.3
1967-09-01	2.5	3.5	-0.91	1.2	-0.0075	0	2.5	1.6	8.0
1967-10-01	0.56	4.3	-0.031	0.20	-0.0067	0	0.56	0.52	6.5
1967-11-01	0.42	3.8	0.012	0.094	-0.0055	0	0.42	0.44	5.6
1967	7.5	21	-2.5	2.5	-0.038	0	7.5	5.0	37
1968-07-01	0	7.3	0.091	0.039	-0.10	0	0	0.091	9.3
1968-08-01	1.8	5.0	-0.79	0.37	-0.074	0	1.8	1.1	8.9
1968-09-01	2.5	2.8	-0.74	1.0	-0.056	0	2.5	1.8	7.3
1968-10-01	0.047	5.2	0.14	0.071	-0.042	0	0.047	0.19	6.9
1968-11-01	0.39	3.7	-0.024	0.055	-0.033	0	0.39	0.37	5.1
1968	4.8	24	-1.3	1.6	-0.31	0	4.8	3.5	38
1969-07-01	0	7.2	0.10	0.020	-0.017	0	0	0.098	9.4
1969-08-01	0.33	6.3	0.016	0.012	-0.015	0	0.33	0.35	8.7
1969-09-01	2.6	3.6	-0.90	0.73	-0.013	0	2.6	1.7	8.3
1969-10-01	1.2	3.8	-0.37	0.39	-0.011	0	1.2	0.87	6.8
1969-11-01	0.83	3.1	-0.26	0.16	-0.010	0	0.83	0.57	5.2
1969	5.0	24	-1.4	1.3	-0.065	0	5.0	3.6	38

Table IV-B.59 DC5 Monsoon Period Water Balance

Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
1970-07-01	0.079	7.1	0.079	0	-0.0043	0	0.079	0.16	9.1
1970-08-01	1.0	5.7	-0.19	0.12	-0.0039	0	1.0	0.85	9.1
1970-09-01	1.7	4.4	-0.49	0.32	-0.0035	0	1.7	1.2	8.0
1970-10-01	3.4	1.7	-1.6	1.0	-0.0031	0	3.4	1.8	7.0
1970-11-01	0	4.2	0.22	0.30	-0.0031	0	0	0.22	5.3
1970	6.2	23	-2.0	1.7	-0.018	0	6.2	4.2	39
1971-07-01	0	7.0	0.059	0	-0.0016	0	0	0.059	9.0
1971-08-01	0.39	6.7	-0.031	0.016	-0.0016	0	0.39	0.36	9.2
1971-09-01	4.7	0.94	-2.1	1.2	-0.0012	0	4.7	2.6	7.8
1971-10-01	3.1	2.1	-2.4	0.56	-0.0012	0	3.1	0.71	7.1
1971-11-01	4.2	-0.35	-0.87	0.86	-0.0016	0	4.2	3.3	5.1
1971	12	16	-5.3	2.6	-0.0071	0	12	7.0	38
1972-07-01	1.7	5.6	-0.67	0.37	-0.0012	0	1.7	1.0	9.3
1972-08-01	0.27	7.1	0.10	0.079	-0.0012	0	0.27	0.38	9.5
1972-09-01	2.0	4.0	-0.73	0.52	-0.00079	0	2.0	1.3	8.4
1972-10-01	0.67	4.4	0.016	0.19	-0.0012	0	0.67	0.68	6.8
1972-11-01	8.7	-5.0	-5.7	0.67	-0.00079	0	8.7	3.0	4.9
1972	13	16	-7.0	1.8	-0.0051	0	13	6.3	39
1973-07-01	0.87	6.2	-0.15	0.34	-0.028	0	0.87	0.73	9.0
1973-08-01	2.7	3.8	-1.4	0.53	-0.026	0	2.7	1.3	8.9
1973-09-01	1.4	4.6	-0.0039	0.89	-0.023	0	1.4	1.4	8.1
1973-10-01	0	5.1	0.13	0.031	-0.019	0	0	0.13	6.7
1973-11-01	0	4.1	0.079	0	-0.017	0	0	0.079	5.6
1973	5.0	24	-1.4	1.8	-0.11	0	5.0	3.6	38
1974-07-01	0	7.4	0.071	0	-0.0055	0	0	0.071	9.4
1974-08-01	2.4	4.1	-0.93	0.64	-0.0047	0	2.4	1.5	8.6
1974-09-01	1.4	4.5	-0.33	0.49	-0.0047	0	1.4	1.1	8.3
1974-10-01	3.4	1.4	-1.4	1.0	-0.0043	0	3.4	2.0	6.5
1974-11-01	3.4	0.51	-2.3	0.39	-0.0035	0	3.4	1.1	5.3
1974	11	18	-4.9	2.6	-0.023	0	11	5.7	38
1975-07-01	0	7.4	0.10	0.039	-0.0024	0	0	0.10	9.6
1975-08-01	2.2	3.8	-0.66	0.47	-0.0016	0	2.2	1.5	8.3
1975-09-01	2.0	4.2	-0.65	0.70	-0.0020	0	2.0	1.3	8.0
1975-10-01	0.87	4.1	-0.14	0.23	-0.0020	0	0.87	0.76	6.8
1975-11-01	0.28	3.9	0.047	0.0039	-0.0020	0	0.28	0.31	5.4
1975	5.4	23	-1.3	1.4	-0.0098	0	5.4	4.1	38
1976-07-01	0	7.6	0.10	0.0039	-0.0012	0	0	0.098	9.7
1976-08-01	2.8	3.5	-1.3	0.57	-0.0012	0	2.8	1.5	8.7
1976-09-01	0.83	5.2	-0.13	0.60	-0.00079	0	0.83	0.72	7.9
1976-10-01	4.0	0.59	-2.0	0.82	-0.00079	0	4.0	2.0	6.4
1976-11-01	0.91	2.9	0.11	0.62	-0.00079	0	0.91	1.0	5.1
1976	8.5	20	-3.2	2.6	-0.0047	0	8.5	5.3	38
1977-07-01	0.039	7.4	0.067	0	-0.00039	0	0.039	0.12	9.5
1977-08-01	2.6	4.5	-1.1	0.57	-0.00079	0	2.6	1.4	9.4
1977-09-01	2.4	3.5	-0.87	0.99	-0.00039	0	2.4	1.6	8.1
1977-10-01	3.5	1.1	-1.5	0.99	-0.00039	0	3.5	2.0	6.4
1977-11-01	1.3	2.9	-0.26	0.54	-0.00039	0	1.3	1.1	5.5
1977	9.8	19	-3.6	3.1	-0.0024	0	9.8	6.2	39
1978-07-01	0.55	6.7	-0.15	0.28	-0.24	0	0.55	0.39	9.4
1978-08-01	0.98	5.9	-0.28	0.20	-0.15	0	0.98	0.70	9.4
1978-09-01	1.0	4.4	-0.12	0.53	-0.10	0	1.0	0.93	7.3
1978-10-01	0.39	4.4	-0.031	0.083	-0.069	0	0.39	0.36	6.6
1978-11-01	1.9	2.5	-1.1	0.22	-0.055	0	1.9	0.87	5.9
1978	4.9	24	-1.6	1.3	-0.62	0	4.9	3.3	39
1979-07-01	0.35	7.0	0.11	0.17	-0.18	0	0.35	0.46	9.2
1979-08-01	0.16	6.8	0.059	0.039	-0.12	0	0.16	0.22	9.3
1979-09-01	1.5	4.1	-0.39	0.38	-0.083	0	1.5	1.1	7.8

Table IV-B.59 DC5 Monsoon Period Water Balance

Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
1979-10-01	0.079	5.1	0.11	0.024	-0.057	0	0.079	0.21	7.2
1979-11-01	0.71	3.9	-0.20	0.10	-0.047	0	0.71	0.47	5.9
1979	2.8	27	-0.31	0.71	-0.48	0	2.8	2.5	39
1980-07-01	0.16	6.9	-0.0039	0.098	-0.098	0	0.16	0.16	9.0
1980-08-01	1.9	4.8	-0.65	0.31	-0.073	0	1.9	1.3	9.1
1980-09-01	1.3	4.6	-0.17	0.63	-0.056	0	1.3	1.1	7.9
1980-10-01	0.59	4.6	-0.063	0.17	-0.043	0	0.59	0.52	7.0
1980-11-01	0.039	4.3	0.087	0.0039	-0.033	0	0.039	0.13	5.9
1980	4.0	25	-0.81	1.2	-0.30	0	4.0	3.2	39
1981-07-01	0.12	7.1	0.13	0.024	-0.0091	0	0.12	0.26	9.3
1981-08-01	2.2	4.7	-1.2	0.26	-0.0079	0	2.2	0.95	9.3
1981-09-01	2.6	3.6	-0.58	1.3	-0.0075	0	2.6	2.0	7.9
1981-10-01	0.51	4.8	-0.12	0.10	-0.0059	0	0.51	0.39	7.5
1981-11-01	0.94	2.9	-0.12	0.28	-0.0055	0	0.94	0.83	5.2
1981	6.4	23	-1.9	2.0	-0.036	0	6.4	4.5	39
1982-07-01	0.039	7.1	0.075	0.043	-0.0028	0	0.039	0.13	9.1
1982-08-01	2.7	3.7	-1.1	0.44	-0.0024	0	2.7	1.6	8.8
1982-09-01	3.8	1.5	-1.5	1.4	-0.0020	0	3.8	2.3	6.9
1982-10-01	3.0	2.2	-1.2	1.1	-0.0020	0	3.0	1.8	6.7
1982-11-01	0	4.1	0.28	0.37	-0.0020	0	0	0.28	5.4
1982	9.5	19	-3.5	3.4	-0.011	0	9.5	6.1	37
1983-07-01	0	7.4	0.10	0.043	-0.0020	0	0	0.12	9.4
1983-08-01	2.8	4.1	-1.3	0.54	-0.0020	0	2.8	1.5	9.5
1983-09-01	3.7	2.1	-1.4	1.4	-0.0020	0	3.7	2.2	7.5
1983-10-01	5.1	-0.079	-3.6	0.64	-0.0024	0	5.1	1.5	7.3
1983-11-01	1.1	2.5	1.4	0.79	-0.0024	0	1.1	2.5	4.9
1983	13	16	-4.7	3.4	-0.011	0	13	7.9	39
1984-07-01	1.3	5.6	-0.75	0.087	-0.0024	0	1.3	0.59	9.3
1984-08-01	3.3	2.8	-0.88	1.1	-0.0020	0	3.3	2.4	7.8
1984-09-01	3.3	1.9	-0.99	1.2	-0.0016	0	3.3	2.3	7.4
1984-10-01	1.9	3.1	-0.73	0.43	-0.0016	0	1.9	1.1	6.9
1984-11-01	1.3	2.3	-0.19	0.51	-0.0020	0	1.3	1.2	4.9
1984	11	16	-3.5	3.3	-0.0094	0	11	7.6	36
1985-07-01	0	6.3	0.091	0.020	-0.028	0	0	0.079	8.6
1985-08-01	1.2	5.6	-0.60	0.10	-0.026	0	1.2	0.67	8.7
1985-09-01	2.1	3.8	-0.68	0.72	-0.022	0	2.1	1.4	8.1
1985-10-01	3.5	1.1	-1.4	0.90	-0.019	0	3.5	2.1	6.6
1985-11-01	1.3	2.3	-0.0039	0.59	-0.016	0	1.3	1.3	4.6
1985	8.1	19	-2.6	2.3	-0.11	0	8.1	5.6	37
1986-07-01	0	7.1	0.087	0.0079	-0.0055	0	0	0.079	9.3
1986-08-01	4.8	1.4	-2.0	1.3	-0.0051	0	4.8	2.8	8.5
1986-09-01	2.0	3.6	-0.69	0.76	-0.0043	0	2.0	1.3	8.0
1986-10-01	2.0	2.6	-0.69	0.80	-0.0043	0	2.0	1.4	6.5
1986-11-01	1.8	2.1	-0.61	0.55	-0.0039	0	1.8	1.1	4.8
1986	11	17	-3.9	3.4	-0.023	0	11	6.7	37
1987-07-01	0.20	6.9	0.043	0.012	-0.0024	0	0.20	0.28	9.0
1987-08-01	2.1	4.9	-1.0	0.63	-0.0020	0	2.1	1.0	9.0
1987-09-01	2.9	2.9	-1.1	1.1	-0.0020	0	2.9	1.8	8.1
1987-10-01	1.3	3.7	-0.34	0.42	-0.0020	0	1.3	0.91	7.1
1987-11-01	0.35	4.2	0.051	0.063	-0.0020	0	0.35	0.39	6.0
1987	6.8	23	-2.4	2.3	-0.010	0	6.8	4.4	39
1988-07-01	0.12	6.6	0.083	0.0079	-0.0020	0	0.12	0.20	8.9
1988-08-01	3.4	3.1	-2.2	0.26	-0.0028	0	3.4	1.2	8.8
1988-09-01	5.9	-0.24	-1.9	1.8	-0.0024	0	5.9	4.0	7.5
1988-10-01	0.31	4.7	0.56	0.99	-0.0024	0	0.31	0.87	6.9
1988-11-01	1.5	2.7	-0.46	0.47	-0.0024	0	1.5	1.0	5.8
1988	11	17	-3.9	3.6	-0.012	0	11	7.3	38

Table IV-B.59 DC5 Monsoon Period Water Balance

Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
1989-07-01	0	7.2	0.067	0	-0.0020	0	0	0.039	9.2
1989-08-01	0.47	6.3	-0.12	0.043	-0.0012	0	0.47	0.39	9.3
1989-09-01	0.91	4.9	-0.14	0.14	-0.0016	0	0.91	0.79	7.8
1989-10-01	1.5	3.7	-0.57	0.47	-0.0012	0	1.5	0.91	7.3
1989-11-01	1.1	3.1	-0.22	0.20	-0.0012	0	1.1	0.83	5.9
1989	3.9	25	-0.99	0.86	-0.0071	0	3.9	3.0	39
1990-07-01	0.28	6.9	0.0039	0.012	-0.00079	0	0.28	0.31	9.3
1990-08-01	1.5	4.8	-0.43	0.36	-0.00079	0	1.5	1.0	8.6
1990-09-01	9.0	-3.4	-5.4	1.3	-0.00039	0	9.0	3.6	7.4
1990-10-01	2.8	2.0	-0.11	1.4	-0.00079	0	2.8	2.7	6.8
1990-11-01	0.24	3.7	0.71	0.71	-0.0091	0	0.24	0.98	5.3
1990	14	14	-5.2	3.8	-0.012	0	14	8.7	37
1991-07-01	0.63	6.7	0	0.11	-0.025	0	0.63	0.63	9.2
1991-08-01	1.7	5.1	-0.78	0.17	-0.022	0	1.7	0.91	9.3
1991-09-01	2.8	3.1	-0.77	1.2	-0.020	0	2.8	2.0	8.3
1991-10-01	1.5	3.3	-0.47	0.59	-0.016	0	1.5	1.1	6.5
1991-11-01	1.2	3.5	-0.82	0.075	-0.014	0	1.2	0.39	6.6
1991	7.8	22	-2.8	2.1	-0.097	0	7.8	5.0	40
1992-07-01	1.3	5.8	-0.21	0.83	-0.13	0	1.3	1.1	8.9
1992-08-01	3.3	3.5	-1.9	0.50	-0.11	0	3.3	1.4	9.3
1992-09-01	5.3	0.28	-2.1	1.7	-0.074	0	5.3	3.2	7.8
1992-10-01	0.87	4.3	0.24	1.2	-0.054	0	0.87	1.1	6.7
1992-11-01	1.2	3.1	-0.55	0.36	-0.045	0	1.2	0.71	6.2
1992	12	17	-4.5	4.5	-0.41	0	12	7.5	39
1993-07-01	0	7.1	0.14	0.20	-0.26	0	0	0.16	9.3
1993-08-01	0.24	6.6	0.039	0.079	-0.16	0	0.24	0.28	8.9
1993-09-01	3.4	2.2	-1.5	0.59	-0.11	0	3.4	2.0	8.5
1993-10-01	0.16	4.8	0.43	0.50	-0.070	0	0.16	0.59	6.4
1993-11-01	0.83	3.5	-0.11	0.15	-0.055	0	0.83	0.67	6.0
1993	4.6	24	-0.98	1.5	-0.64	0	4.6	3.7	39
1994-07-01	0.35	6.5	0.024	0.059	-0.012	0	0.35	0.43	8.9
1994-08-01	1.5	5.5	-0.95	0.051	-0.011	0	1.5	0.51	9.1
1994-09-01	0.71	5.4	0.40	0.49	-0.0094	0	0.71	1.1	8.6
1994-10-01	1.9	2.9	-0.70	0.66	-0.0083	0	1.9	1.2	6.6
1994-11-01	1.9	1.9	-0.87	0.35	-0.0075	0	1.9	0.98	5.3
1994	6.3	22	-2.1	1.6	-0.048	0	6.3	4.3	39
1995-07-01	0	7.2	0.10	0.012	-0.0055	0	0	0.079	9.0
1995-08-01	0.039	7.1	0.071	0	-0.0055	0	0.039	0.12	9.3
1995-09-01	3.8	2.2	-1.8	1.1	-0.0051	0	3.8	2.1	8.8
1995-10-01	2.8	2.3	-1.5	0.78	-0.0047	0	2.8	1.3	7.2
1995-11-01	0	4.3	0.66	0.47	-0.0051	0	0	0.67	5.8
1995	6.7	23	-2.4	2.4	-0.026	0	6.7	4.2	40
1996-07-01	0.39	6.6	-0.11	0.051	-0.0028	0	0.39	0.31	9.1
1996-08-01	2.4	4.4	-0.80	0.63	-0.0016	0	2.4	1.5	8.9
1996-09-01	1.3	4.6	-0.32	0.32	-0.0016	0	1.3	0.94	8.1
1996-10-01	3.0	1.4	-1.1	0.92	-0.0016	0	3.0	2.0	6.7
1996-11-01	0.39	4.1	0.016	0.13	-0.0016	0	0.39	0.43	6.0
1996	7.4	21	-2.3	2.0	-0.0091	0	7.4	5.2	39
1997-07-01	0.039	7.0	0.079	0	-0.00079	0	0.039	0.12	9.0
1997-08-01	0.079	7.3	0.035	0.0039	-0.0012	0	0.079	0.12	9.9
1997-09-01	2.6	3.4	-0.97	0.70	-0.00079	0	2.6	1.6	8.5
1997-10-01	0	5.4	0.14	0.024	-0.00079	0	0	0.16	7.3
1997-11-01	0.75	3.2	-0.19	0.067	-0.00079	0	0.75	0.55	6.0
1997	3.5	26	-0.91	0.80	-0.0043	0	3.5	2.6	41
1998-07-01	0	7.1	0.11	0.059	-0.0012	0	0	0.12	9.2
1998-08-01	1.7	5.1	-0.55	0.44	-0.0012	0	1.7	1.1	9.1
1998-09-01	2.4	3.5	-0.80	0.80	-0.0016	0	2.4	1.6	8.3

Table IV-B.59 DC5 Monsoon Period Water Balance

Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
1998-10-01	1.3	3.7	-0.38	0.43	-0.0016	0	1.3	0.94	7.0
1998-11-01	0	4.4	0.11	0.0079	-0.0020	0	0	0.12	6.3
1998	5.4	24	-1.5	1.7	-0.0075	0	5.4	3.9	40
1999-07-01	0	7.1	0.083	0.0039	-0.0020	0	0	0.079	9.1
1999-08-01	5.8	0.35	-2.8	1.2	-0.00079	0	5.8	3.0	8.7
1999-09-01	2.8	2.9	-0.93	1.3	-0.00039	0	2.8	1.9	7.8
1999-10-01	1.1	3.9	0.22	0.78	-0.0012	0	1.1	1.3	6.8
1999-11-01	0	4.5	0.13	0.035	-0.00079	0	0	0.16	6.2
1999	9.8	19	-3.3	3.3	-0.0051	0	9.8	6.5	39
2000-07-01	0.79	6.3	-0.21	0.14	-0.00079	0	0.79	0.59	9.5
2000-08-01	0.079	7.4	0.091	0	-0.00079	0	0.079	0.16	9.5
2000-09-01	0.67	4.9	-0.067	0.035	-0.00039	0	0.67	0.59	8.7
2000-10-01	0	5.3	0.098	0	-0.00079	0	0	0.12	6.8
2000-11-01	5.3	-1.7	-4.0	0.30	-0.00039	0	5.3	1.3	5.9
2000	6.9	22	-4.1	0.47	-0.0031	0	6.9	2.8	40
2001-07-01	0	7.2	0.091	0.0079	-0.0020	0	0	0.12	9.2
2001-08-01	2.7	4.3	-1.9	0.20	-0.0016	0	2.7	0.79	9.7
2001-09-01	3.4	2.4	-0.54	1.6	-0.0012	0	3.4	2.8	7.6
2001-10-01	0.12	4.8	0.17	0.31	-0.0016	0	0.12	0.31	7.3
2001-11-01	0.35	3.6	0.0079	0.075	-0.0020	0	0.35	0.39	5.5
2001	6.6	22	-2.2	2.2	-0.0083	0	6.6	4.4	39
2002-07-01	0	7.4	0.047	0	-0.0012	0	0	0.079	9.2
2002-08-01	0.35	6.8	-0.0079	0.0039	-0.00079	0	0.35	0.31	9.7
2002-09-01	0.43	5.4	-0.098	0.031	-0.00079	0	0.43	0.35	8.1
2002-10-01	1.2	3.9	-0.33	0.26	-0.00079	0	1.2	0.87	7.1
2002-11-01	0.12	4.1	0.067	0	-0.00079	0	0.12	0.16	6.1
2002	2.1	28	-0.32	0.30	-0.0043	0	2.1	1.8	40
2003-07-01	0	7.9	0.083	0	-0.00079	0	0	0.079	10.0
2003-08-01	0.47	6.7	-0.0079	0.0079	-0.00079	0	0.47	0.47	10
2003-09-01	1.3	4.8	-0.38	0.20	-0.00039	0	1.3	0.91	8.5
2003-10-01	2.0	3.3	-0.53	0.52	-0.00039	0	2.0	1.4	7.4
2003-11-01	0.039	4.4	0.13	0.0039	-0.00079	0	0.039	0.20	6.0
2003	3.8	27	-0.70	0.74	-0.0031	0	3.8	3.1	42
2004-07-01	0	7.8	0.071	0	0	0	0	0.079	10
2004-08-01	0.59	6.7	-0.055	0.024	0	0	0.59	0.51	9.8
2004-09-01	2.1	4.0	-0.68	0.52	0	0	2.1	1.4	8.6
2004-10-01	1.5	3.9	-0.57	0.39	0	0	1.5	0.94	7.9
2004-11-01	1.2	2.9	-0.46	0.18	0	0	1.2	0.75	6.1
2004	5.4	25	-1.7	1.1	0	0	5.4	3.7	42
2005-07-01	0.079	7.6	0.091	0.079	-0.15	0	0.079	0.16	9.7
2005-08-01	1.4	5.8	-0.63	0.18	-0.11	0	1.4	0.75	11
2005-09-01	4.7	1.0	-1.8	1.7	-0.074	0	4.7	3.0	7.3
2005-10-01	0.079	5.0	0.19	0.34	-0.054	0	0.079	0.28	7.4
2005-11-01	0.43	3.8	-0.024	0.087	-0.044	0	0.43	0.39	6.1
2005	6.7	23	-2.1	2.4	-0.43	0	6.7	4.5	41
2006-07-01	0.51	7.0	-0.11	0.028	-0.0098	0	0.51	0.39	10
2006-08-01	3.1	3.1	-2.2	0.16	-0.0087	0	3.1	0.94	9.2
2006-09-01	2.9	3.0	-0.13	1.7	-0.0071	0	2.9	2.8	7.4
2006-10-01	1.1	3.8	-0.23	0.64	-0.0067	0	1.1	0.87	6.9
2006-11-01	1.0	3.0	-0.17	0.22	-0.0055	0	1.0	0.87	5.9
2006	8.7	20	-2.9	2.7	-0.038	0	8.7	5.9	40

Table IV-B.60 DC5 Winter Storm Period Water Balance

Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
1951-11-01	0	2.7	-0.94	0.31	-0.032	0	1.6	0.70	5.4
1951-12-01	1.7	1.5	-0.026	0.47	-0.025	0	1.7	1.7	3.7
1952-01-01	3.0	-0.66	-1.8	0.34	-0.022	0	3.0	1.3	2.8
1952-02-01	2.8	-0.36	-0.46	0.46	-0.019	0	2.8	2.3	2.9
1952-03-01	0.50	2.4	0.77	0.72	-0.014	0	0.50	1.3	3.8
1952	8.0	5.6	-2.4	2.3	-0.11	0	9.7	7.2	19
1952-11-01	0	4.8	0.13	0	-0.0067	0	0	0.13	5.9
1952-12-01	4.3	-1.5	-3.1	0.19	-0.0055	0	4.3	1.3	3.3
1953-01-01	2.0	0.26	0.11	0.37	-0.0052	0	2.0	2.1	2.7
1953-02-01	0.74	2.1	0.78	0.48	-0.0048	0	0.74	1.5	3.3
1953-03-01	0.60	2.4	-0.0079	0.48	-0.0041	0	0.60	0.59	3.8
1953	7.6	8.0	-2.0	1.5	-0.026	0	7.6	5.6	19
1953-11-01	0.012	4.4	0.095	0.0075	-0.0030	0	0.012	0.11	5.5
1953-12-01	0.56	2.8	-0.16	0.053	-0.0026	0	0.56	0.41	3.9
1954-01-01	0.19	2.3	0.088	0.0067	-0.0024	0	0.19	0.28	2.9
1954-02-01	2.4	0.35	-1.2	0.25	-0.0022	0	2.4	1.2	3.2
1954-03-01	0.72	2.5	0.019	0.57	-0.0019	0	0.72	0.74	4.2
1954	3.9	12	-1.1	0.89	-0.012	0	3.9	2.7	20
1954-11-01	0	4.6	0.25	0.29	-0.0017	0	0	0.25	5.6
1954-12-01	0.091	3.5	0.050	0.025	-0.0016	0	0.091	0.14	4.3
1955-01-01	0.29	2.7	0.064	0.015	-0.0016	0	0.29	0.35	3.5
1955-02-01	3.4	-1.4	-1.9	0.31	-0.0015	0	3.4	1.6	2.4
1955-03-01	0.28	2.5	0.42	0.53	-0.0013	0	0.28	0.70	3.5
1955	4.1	12	-1.1	1.2	-0.0077	0	4.1	3.0	19
1955-11-01	0.020	4.7	0.12	0.041	-0.00094	0	0.020	0.14	5.9
1955-12-01	0.96	2.1	-0.33	0.14	-0.00091	0	0.96	0.63	3.7
1956-01-01	1.4	1.4	-0.45	0.29	-0.00091	0	1.4	0.92	3.1
1956-02-01	2.6	0.30	-1.9	0.20	-0.00083	0	2.6	0.76	3.5
1956-03-01	2.0	0.49	-0.11	0.70	-0.00075	0	2.0	1.9	3.1
1956	7.0	9.0	-2.6	1.4	-0.0043	0	7.0	4.3	19
1956-11-01	0.53	3.6	-0.15	0.021	-0.00063	0	0.53	0.39	5.2
1956-12-01	0	3.2	0.23	0.016	-0.00059	0	0	0.23	3.8
1957-01-01	0.47	2.2	-0.074	0.031	-0.00059	0	0.47	0.39	3.1
1957-02-01	4.8	-2.7	-3.2	0.31	-0.00047	0	4.8	1.6	2.7
1957-03-01	0.73	2.1	0.93	0.76	-0.00047	0	0.73	1.7	3.4
1957	6.5	8.4	-2.3	1.1	-0.0028	0	6.5	4.3	18
1957-11-01	3.2	0.30	-2.1	0.30	-0.00039	0	3.2	1.2	4.6
1957-12-01	0.61	2.0	0.70	0.39	-0.00039	0	0.61	1.3	3.0
1958-01-01	1.1	1.6	-0.098	0.33	-0.00043	0	1.1	0.96	3.2
1958-02-01	0.012	2.9	0.21	0.13	-0.00047	0	0.012	0.22	3.3
1958-03-01	2.5	-0.035	-1.2	0.53	-0.00031	0	2.5	1.3	3.2
1958	7.4	6.8	-2.5	1.7	-0.0020	0	7.4	4.9	17
1958-11-01	1.9	2.3	-0.50	0.74	-0.00028	0	1.9	1.4	5.3
1958-12-01	1.5	1.6	-0.56	0.31	-0.00028	0	1.5	0.96	3.6
1959-01-01	0	3.0	0.31	0.21	-0.00031	0	0	0.31	3.6
1959-02-01	0.21	2.8	0.11	0.083	-0.00031	0	0.21	0.32	3.5
1959-03-01	1.4	1.1	-0.55	0.35	-0.00028	0	1.4	0.87	3.3
1959	5.1	11	-1.2	1.7	-0.0015	0	5.1	3.9	19
1959-11-01	4.8	-0.59	-4.2	0.24	-0.00020	0	4.8	0.63	5.3
1959-12-01	0.38	2.8	2.0	0.54	-0.00024	0	0.38	2.4	3.7
1960-01-01	5.2	-3.0	-3.6	0.35	-0.00016	0	5.2	1.7	2.7
1960-02-01	4.2	-2.0	-2.0	0.41	-0.00020	0	4.2	2.1	2.5

Table IV-B.60 DC5 Winter Storm Period Water Balance

Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
1960-03-01	0.87	1.8	1.7	0.76	-0.0022	0	0.87	2.6	3.4
1960	15	-1.1	-6.0	2.3	-0.0030	0	15	9.4	18
1960-11-01	2.1	1.9	-0.84	0.37	-0.026	0	2.1	1.2	5.0
1960-12-01	0.48	2.6	0.083	0.21	-0.021	0	0.48	0.57	3.7
1961-01-01	0.47	2.2	-0.028	0.075	-0.018	0	0.47	0.44	3.3
1961-02-01	0.70	1.9	-0.27	0.035	-0.015	0	0.70	0.43	3.2
1961-03-01	0.23	2.9	0.22	0.15	-0.011	0	0.23	0.44	3.7
1961	3.9	12	-0.83	0.85	-0.091	0	3.9	3.1	19
1961-11-01	0.45	3.6	-0.20	0.012	-0.0047	0	0.45	0.25	5.4
1961-12-01	0.32	2.4	0.20	0.028	-0.0039	0	0.32	0.52	3.1
1962-01-01	3.9	-1.7	-2.2	0.27	-0.0039	0	3.9	1.6	2.6
1962-02-01	3.2	-0.94	-1.7	0.40	-0.0035	0	3.2	1.5	2.7
1962-03-01	1.7	0.75	0.16	0.67	-0.0031	0	1.7	1.8	3.2
1962	9.5	4.2	-3.8	1.4	-0.019	0	9.5	5.7	17
1962-11-01	0.87	3.2	-0.14	0.19	-0.0024	0	0.87	0.73	5.1
1962-12-01	0.83	2.5	-0.22	0.14	-0.0024	0	0.83	0.61	3.9
1963-01-01	1.8	0.83	-0.81	0.16	-0.0020	0	1.8	1.00	3.3
1963-02-01	2.1	0.51	-0.50	0.44	-0.0020	0	2.1	1.6	3.0
1963-03-01	4.2	-1.2	-2.4	0.72	-0.0016	0	4.2	1.8	3.8
1963	9.8	5.9	-4.1	1.7	-0.010	0	9.8	5.8	19
1963-11-01	0.67	3.9	0.20	0.74	-0.0020	0	0.67	0.87	5.8
1963-12-01	2.3	0.71	-0.80	0.46	-0.0028	0	2.3	1.6	3.6
1964-01-01	0.34	2.5	0.34	0.30	-0.0043	0	0.34	0.68	3.3
1964-02-01	0.58	1.9	-0.071	0.18	-0.0051	0	0.58	0.51	3.0
1964-03-01	0	2.8	0.19	0.11	-0.0051	0	0	0.19	3.6
1964	3.9	12	-0.13	1.8	-0.019	0	3.9	3.8	19
1964-11-01	1.5	3.1	-0.62	0.35	-0.0028	0	1.5	0.92	5.8
1964-12-01	1.4	1.6	-0.50	0.28	-0.0028	0	1.4	0.89	3.6
1965-01-01	1.7	0.87	-0.77	0.27	-0.0028	0	1.7	0.92	3.3
1965-02-01	2.9	-0.47	-0.90	0.44	-0.0020	0	2.9	2.0	2.6
1965-03-01	2.8	0	-1.0	0.77	-0.0020	0	2.8	1.8	3.4
1965	10	5.1	-3.8	2.1	-0.012	0	10	6.5	19
1965-11-01	0.46	4.0	-0.055	0.051	-0.0016	0	0.46	0.41	5.7
1965-12-01	2.4	0.83	-1.7	0.094	-0.0016	0	2.4	0.67	3.9
1966-01-01	10	-8.3	-8.8	0.34	-0.0016	0	10	1.6	2.7
1966-02-01	1.8	0.51	0.50	0.45	-0.14	0	1.8	2.3	2.8
1966-03-01	2.0	0.51	0.52	0.74	-0.76	0	2.0	2.5	3.1
1966	17	-2.4	-9.5	1.7	-0.91	0	17	7.6	18
1966-11-01	1.4	2.8	-0.26	0.62	-0.042	0	1.4	1.1	5.1
1966-12-01	0.88	2.3	-0.18	0.29	-0.031	0	0.88	0.70	4.1
1967-01-01	1.3	1.3	-0.41	0.23	-0.026	0	1.3	0.85	3.1
1967-02-01	0.79	1.9	-0.14	0.22	-0.022	0	0.79	0.65	2.9
1967-03-01	0	3.1	0.22	0.16	-0.017	0	0	0.22	3.9
1967	4.3	11	-0.75	1.5	-0.14	0	4.3	3.5	19
1967-11-01	0.42	3.8	0.012	0.094	-0.0055	0	0.42	0.44	5.6
1967-12-01	2.1	1.0	-1.5	0.075	-0.0051	0	2.1	0.58	3.9
1968-01-01	10	-8.0	-8.3	0.32	-0.0047	0	10	1.7	2.3
1968-02-01	0.63	2.0	2.0	0.50	-0.43	0	0.63	2.6	3.1
1968-03-01	1.9	0.98	0.66	0.84	-0.72	0	1.9	2.6	3.4
1968	15	-0.16	-7.2	1.8	-1.2	0	15	7.9	18
1968-11-01	0.39	3.7	-0.024	0.055	-0.033	0	0.39	0.37	5.1
1968-12-01	2.5	0.43	-1.1	0.30	-0.026	0	2.5	1.4	3.8

Table IV-B.60 DC5 Winter Storm Period Water Balance

Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
1969-01-01	3.3	-0.87	-2.2	0.29	-0.022	0	3.3	1.1	2.9
1969-02-01	4.2	-1.9	-2.2	0.43	-0.019	0	4.2	2.0	2.6
1969-03-01	1.4	1.1	1.1	0.71	-0.014	0	1.4	2.5	3.0
1969	12	2.4	-4.4	1.8	-0.11	0	12	7.3	17
1969-11-01	0.83	3.1	-0.26	0.16	-0.010	0	0.83	0.57	5.2
1969-12-01	2.1	0.71	-0.79	0.31	-0.0087	0	2.1	1.3	3.6
1970-01-01	1.3	1.5	-0.38	0.31	-0.0083	0	1.3	0.94	3.4
1970-02-01	0.50	2.2	0.22	0.25	-0.0071	0	0.50	0.72	2.9
1970-03-01	0.41	2.4	0.059	0.13	-0.0051	0	0.41	0.46	3.6
1970	5.2	10.0	-1.1	1.2	-0.039	0	5.2	4.0	19
1970-11-01	0	4.2	0.22	0.30	-0.0031	0	0	0.22	5.3
1970-12-01	0.65	2.5	-0.36	0.055	-0.0024	0	0.65	0.29	3.9
1971-01-01	1.2	1.2	-0.22	0.17	-0.0024	0	1.2	0.99	3.0
1971-02-01	0.85	2.1	-0.055	0.32	-0.0024	0	0.85	0.80	3.1
1971-03-01	0.82	2.1	-0.26	0.26	-0.0020	0	0.82	0.56	4.0
1971	3.5	12	-0.67	1.1	-0.012	0	3.5	2.9	19
1971-11-01	4.2	-0.35	-0.87	0.86	-0.0016	0	4.2	3.3	5.1
1971-12-01	0.039	3.1	1.1	0.48	-0.0012	0	0.039	1.1	3.7
1972-01-01	2.1	0.35	-0.62	0.36	-0.00079	0	2.1	1.5	3.0
1972-02-01	0	2.8	0.52	0.31	-0.0012	0	0	0.52	3.2
1972-03-01	0	3.6	0.17	0.16	-0.0012	0	0	0.17	4.1
1972	6.4	9.4	0.28	2.2	-0.0059	0	6.4	6.6	19
1972-11-01	8.7	-5.0	-5.7	0.67	-0.00079	0	8.7	3.0	4.9
1972-12-01	2.8	-0.16	-0.17	0.48	-0.00079	0	2.8	2.7	3.2
1973-01-01	3.0	-0.71	-0.69	0.38	-0.0012	0	3.0	2.3	2.9
1973-02-01	0.74	1.6	1.6	0.44	-0.0091	0	0.74	2.3	2.6
1973-03-01	3.2	-0.67	-0.92	0.72	-0.022	0	3.2	2.3	2.8
1973	18	-4.9	-5.9	2.7	-0.033	0	18	12	16
1973-11-01	0	4.1	0.079	0	-0.017	0	0	0.079	5.6
1973-12-01	1.8	1.3	-0.87	0.12	-0.013	0	1.8	0.90	3.9
1974-01-01	0.094	2.8	0.34	0.17	-0.012	0	0.094	0.44	3.3
1974-02-01	3.4	-1.0	-1.6	0.42	-0.011	0	3.4	1.8	2.9
1974-03-01	0.12	2.8	0.38	0.51	-0.0083	0	0.12	0.53	3.3
1974	5.4	9.9	-1.6	1.2	-0.061	0	5.4	3.8	19
1974-11-01	3.4	0.51	-2.3	0.39	-0.0035	0	3.4	1.1	5.3
1974-12-01	0.12	3.0	1.2	0.45	-0.0035	0	0.12	1.3	3.6
1975-01-01	0.79	1.7	0.0039	0.26	-0.0031	0	0.79	0.76	3.1
1975-02-01	0.39	1.9	0.0079	0.13	-0.0031	0	0.39	0.42	2.6
1975-03-01	3.9	-1.2	-2.3	0.57	-0.0024	0	3.9	1.7	3.0
1975	8.6	5.9	-3.4	1.8	-0.016	0	8.6	5.2	18
1975-11-01	0.28	3.9	0.047	0.0039	-0.0020	0	0.28	0.31	5.4
1975-12-01	2.2	1.2	-1.9	0.028	-0.0016	0	2.2	0.27	4.2
1976-01-01	1.2	1.3	0.45	0.40	-0.0016	0	1.2	1.7	3.1
1976-02-01	0.24	2.3	0.32	0.26	-0.0016	0	0.24	0.55	2.9
1976-03-01	1.6	1.4	-0.52	0.57	-0.0016	0	1.6	1.1	3.4
1976	5.5	10	-1.6	1.3	-0.0083	0	5.5	3.9	19
1976-11-01	0.91	2.9	0.11	0.62	-0.00079	0	0.91	1.0	5.1
1976-12-01	0.55	2.6	0.0079	0.22	-0.00079	0	0.55	0.56	4.0
1977-01-01	1.8	0.79	-1.3	0.11	-0.00079	0	1.8	0.48	3.1
1977-02-01	1.9	0.43	-0.075	0.43	-0.00079	0	1.9	1.8	2.5
1977-03-01	0.079	3.3	0.37	0.52	-0.00079	0	0.079	0.46	4.1
1977	5.3	10.0	-0.93	1.9	-0.0039	0	5.3	4.3	19

Table IV-B.60 DC5 Winter Storm Period Water Balance

Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
1977-11-01	1.3	2.9	-0.26	0.54	-0.00039	0	1.3	1.1	5.5
1977-12-01	0.35	3.0	0.20	0.18	-0.00039	0	0.35	0.55	3.9
1978-01-01	0.67	2.0	-0.29	0.043	-0.00039	0	0.67	0.37	3.5
1978-02-01	6.4	-4.2	-4.7	0.32	-0.00039	0	6.4	1.7	2.5
1978-03-01	5.5	-3.0	-3.0	0.73	-0.00039	0	5.5	2.5	2.9
1978	14	0.75	-8.1	1.8	-0.0020	0	14	6.2	18
1978-11-01	1.9	2.5	-1.1	0.22	-0.055	0	1.9	0.87	5.9
1978-12-01	5.6	-2.9	-3.8	0.43	-0.041	0	5.6	1.8	3.7
1979-01-01	6.6	-4.3	-4.3	0.38	-0.032	0	6.6	2.3	2.5
1979-02-01	6.0	-4.2	-4.2	0.35	-0.15	0	6.0	1.8	2.3
1979-03-01	1.2	1.9	1.9	0.90	-2.0	0	1.2	3.1	3.3
1979	21	-7.0	-12	2.3	-2.2	0	21	9.9	18
1979-11-01	0.71	3.9	-0.20	0.10	-0.047	0	0.71	0.47	5.9
1979-12-01	0.67	2.5	-0.055	0.12	-0.035	0	0.67	0.63	4.0
1980-01-01	0.71	2.2	-0.24	0.051	-0.028	0	0.71	0.46	3.7
1980-02-01	4.1	-2.1	-2.7	0.28	-0.023	0	4.1	1.4	2.4
1980-03-01	6.0	-3.6	-4.0	0.69	-0.019	0	6.0	2.1	2.4
1980	12	2.9	-7.1	1.2	-0.15	0	12	5.1	18
1980-11-01	0.039	4.3	0.087	0.0039	-0.033	0	0.039	0.13	5.9
1980-12-01	0	3.5	0.071	0	-0.026	0	0	0.071	4.3
1981-01-01	0.55	2.6	-0.079	0.035	-0.023	0	0.55	0.48	3.5
1981-02-01	1.3	1.5	-0.54	0.22	-0.019	0	1.3	0.78	3.5
1981-03-01	2.6	0.39	-1.4	0.64	-0.014	0	2.6	1.2	3.6
1981	4.6	12	-1.9	0.90	-0.12	0	4.6	2.7	21
1981-11-01	0.94	2.9	-0.12	0.28	-0.0055	0	0.94	0.83	5.2
1981-12-01	2.3	0.98	-2.1	0.024	-0.0047	0	2.3	0.22	4.4
1982-01-01	0	3.0	1.1	0.38	-0.0047	0	0	1.1	3.3
1982-02-01	2.8	-0.43	-0.95	0.41	-0.0043	0	2.8	1.8	2.8
1982-03-01	1.8	0.91	-0.43	0.68	-0.0031	0	1.8	1.4	3.1
1982	7.8	7.3	-2.5	1.8	-0.022	0	7.8	5.4	19
1982-11-01	0	4.1	0.28	0.37	-0.0020	0	0	0.28	5.4
1982-12-01	3.3	-0.75	-1.9	0.30	-0.0016	0	3.3	1.4	3.6
1983-01-01	1.7	0.63	0.16	0.38	-0.0016	0	1.7	1.9	2.7
1983-02-01	1.9	0.83	-1.2	0.35	-0.0020	0	1.9	0.71	3.2
1983-03-01	2.4	0.28	-0.36	0.72	-0.0012	0	2.4	2.0	2.8
1983	9.3	5.1	-3.0	2.1	-0.0083	0	9.3	6.2	18
1983-11-01	1.1	2.5	1.4	0.79	-0.0024	0	1.1	2.5	4.9
1983-12-01	2.0	1.0	-0.90	0.43	-0.0020	0	2.0	1.1	3.8
1984-01-01	2.5	-0.24	-0.61	0.37	-0.0020	0	2.5	1.9	2.7
1984-02-01	0.51	2.2	0.85	0.44	-0.0024	0	0.51	1.3	2.8
1984-03-01	0	3.1	0.27	0.35	-0.0020	0	0	0.24	3.9
1984	6.1	8.6	0.99	2.4	-0.011	0	6.1	7.1	18
1984-11-01	1.3	2.3	-0.19	0.51	-0.0020	0	1.3	1.2	4.9
1984-12-01	2.1	1.1	-1.5	0.12	-0.0016	0	2.1	0.59	4.2
1985-01-01	5.8	-3.7	-3.9	0.35	-0.0016	0	5.8	1.9	2.5
1985-02-01	2.7	-0.67	-0.70	0.38	-0.0016	0	2.7	2.0	2.5
1985-03-01	1.7	0.55	0.54	0.64	-0.0012	0	1.7	2.2	2.5
1985	14	-0.35	-5.7	2.0	-0.0079	0	14	7.8	17
1985-11-01	1.3	2.3	-0.0039	0.59	-0.016	0	1.3	1.3	4.6
1985-12-01	2.8	-0.039	-1.9	0.26	-0.012	0	2.8	0.87	3.9
1986-01-01	0.87	2.0	0.71	0.43	-0.011	0	0.87	1.6	3.1
1986-02-01	0.079	3.1	0.22	0.27	-0.010	0	0.079	0.35	3.6

Table IV-B.60 DC5 Winter Storm Period Water Balance

Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
1986-03-01	3.1	-0.63	-1.4	0.67	-0.0079	0	3.1	1.7	2.9
1986	8.0	6.7	-2.3	2.2	-0.057	0	8.0	5.7	18
1986-11-01	1.8	2.1	-0.61	0.55	-0.0039	0	1.8	1.1	4.8
1986-12-01	1.4	1.4	-0.27	0.37	-0.0035	0	1.4	1.1	3.7
1987-01-01	3.0	-0.59	-1.4	0.33	-0.0035	0	3.0	1.7	2.9
1987-02-01	3.3	-0.87	-1.4	0.46	-0.0028	0	3.3	1.9	2.8
1987-03-01	2.7	-0.20	-1.3	0.65	-0.0024	0	2.7	1.4	3.5
1987	12	1.9	-4.9	2.4	-0.016	0	12	7.3	18
1987-11-01	0.35	4.2	0.051	0.063	-0.0020	0	0.35	0.39	6.0
1987-12-01	1.7	1.3	-0.57	0.37	-0.0016	0	1.7	1.2	3.8
1988-01-01	4.1	-1.5	-2.7	0.24	-0.0016	0	4.1	1.4	3.2
1988-02-01	3.6	-1.3	-1.4	0.43	-0.0016	0	3.6	2.2	2.5
1988-03-01	0.71	2.4	1.2	0.85	-0.0016	0	0.71	1.9	3.4
1988	10	5.1	-3.3	2.0	-0.0083	0	10	7.1	19
1988-11-01	1.5	2.7	-0.46	0.47	-0.0024	0	1.5	1.0	5.8
1988-12-01	1.7	1.3	-0.96	0.20	-0.0024	0	1.7	0.79	4.0
1989-01-01	1.1	1.4	0.10	0.35	-0.0020	0	1.1	1.2	3.1
1989-02-01	2.2	0.12	-0.74	0.40	-0.0020	0	2.2	1.5	2.7
1989-03-01	0.28	2.8	0.26	0.48	-0.0020	0	0.28	0.55	3.1
1989	6.8	8.3	-1.8	1.9	-0.011	0	6.8	5.0	19
1989-11-01	1.1	3.1	-0.22	0.20	-0.0012	0	1.1	0.83	5.9
1989-12-01	0.31	3.0	0.012	0.020	-0.0012	0	0.31	0.31	4.2
1990-01-01	0.87	2.0	-0.61	0.016	-0.00079	0	0.87	0.28	3.4
1990-02-01	1.3	1.0	-0.083	0.34	-0.0012	0	1.3	1.2	2.7
1990-03-01	2.6	-0.079	-0.97	0.64	-0.00039	0	2.6	1.6	2.6
1990	6.1	9.0	-1.9	1.2	-0.0047	0	6.1	4.2	19
1990-11-01	0.24	3.7	0.71	0.71	-0.0091	0	0.24	0.98	5.3
1990-12-01	2.2	0.94	-0.56	0.48	-0.023	0	2.2	1.6	4.2
1991-01-01	4.8	-2.7	-3.7	0.28	-0.027	0	4.8	1.2	3.0
1991-02-01	1.8	0.75	0.76	0.48	-0.025	0	1.8	2.5	2.6
1991-03-01	0.94	2.3	0.65	0.85	-0.022	0	0.94	1.6	3.3
1991	10.0	5.0	-2.1	2.8	-0.11	0	10.0	7.9	18
1991-11-01	1.2	3.5	-0.82	0.075	-0.014	0	1.2	0.39	6.6
1991-12-01	3.3	-0.43	-1.7	0.40	-0.011	0	3.3	1.5	3.6
1992-01-01	4.0	-1.7	-1.9	0.37	-0.010	0	4.0	2.1	2.9
1992-02-01	3.0	-0.71	-0.70	0.44	-0.0094	0	3.0	2.3	2.2
1992-03-01	2.8	-0.12	-0.19	0.76	-0.0087	0	2.8	2.6	3.0
1992	14	0.55	-5.3	2.0	-0.053	0	14	8.9	18
1992-11-01	1.2	3.1	-0.55	0.36	-0.045	0	1.2	0.71	6.2
1992-12-01	0.51	2.3	0.31	0.30	-0.033	0	0.51	0.79	3.6
1993-01-01	6.3	-4.3	-4.6	0.30	-0.027	0	6.3	1.8	2.5
1993-02-01	11	-9.4	-9.4	0.35	-0.37	0	11	1.9	1.9
1993-03-01	6.0	-4.1	-4.1	0.56	-3.8	0	6.0	1.9	2.7
1993	25	-12	-18	1.9	-4.3	0	25	7.1	17
1993-11-01	0.83	3.5	-0.11	0.15	-0.055	0	0.83	0.67	6.0
1993-12-01	4.2	-1.3	-2.6	0.28	-0.042	0	4.2	1.6	3.6
1994-01-01	0.31	2.3	1.0	0.39	-0.033	0	0.31	1.3	3.4
1994-02-01	0.24	2.6	0.27	0.32	-0.027	0	0.24	0.51	3.3
1994-03-01	2.6	-0.12	-1.2	0.59	-0.021	0	2.6	1.5	3.0
1994	8.2	7.0	-2.6	1.7	-0.18	0	8.2	5.5	19
1994-11-01	1.9	1.9	-0.87	0.35	-0.0075	0	1.9	0.98	5.3
1994-12-01	3.4	-0.83	-1.4	0.42	-0.0059	0	3.4	2.0	3.5

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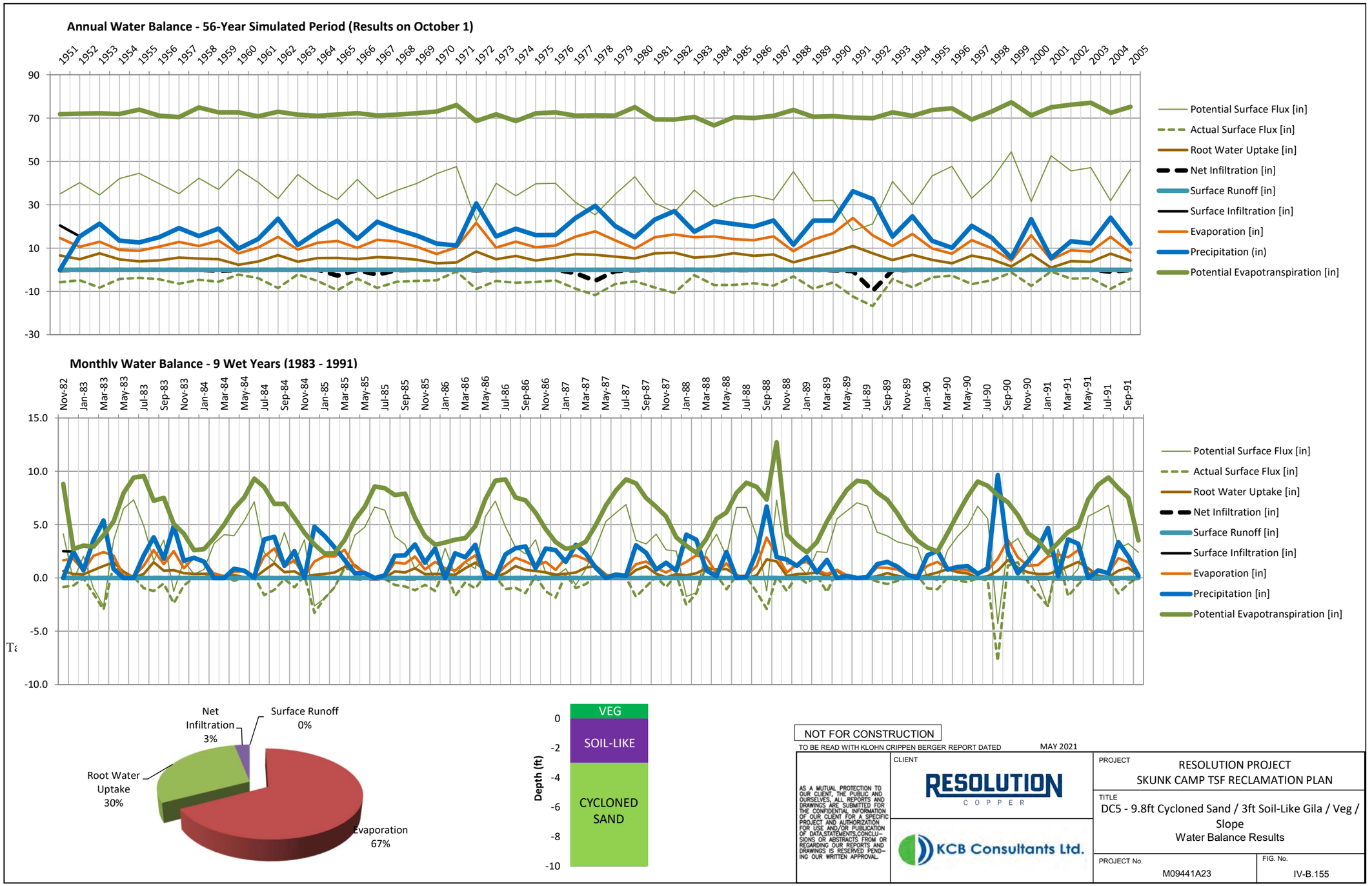
Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
1995-01-01	2.6	-0.31	-0.94	0.37	-0.0055	0	2.6	1.7	3.0
1995-02-01	3.7	-1.3	-1.2	0.46	-0.0047	0	3.7	2.4	2.6
1995-03-01	2.7	0	-0.57	0.76	-0.0039	0	2.7	2.1	3.1
1995	14	-0.47	-5.0	2.4	-0.028	0	14	9.2	18
1995-11-01	0	4.3	0.66	0.47	-0.0051	0	0	0.67	5.8
1995-12-01	1.3	1.8	-0.36	0.30	-0.0043	0	1.3	0.94	3.9
1996-01-01	0.91	1.9	-0.26	0.17	-0.0039	0	0.91	0.63	3.5
1996-02-01	0	2.9	0.20	0.079	-0.0035	0	0	0.20	3.3
1996-03-01	3.1	-0.28	-1.7	0.68	-0.0028	0	3.1	1.5	3.6
1996	5.4	11	-1.5	1.7	-0.020	0	5.4	3.9	20
1996-11-01	0.39	4.1	0.016	0.13	-0.0016	0	0.39	0.43	6.0
1996-12-01	1.3	1.9	-0.65	0.091	-0.0016	0	1.3	0.59	3.8
1997-01-01	0	2.6	0.48	0.13	-0.0016	0	0	0.51	3.2
1997-02-01	2.9	-0.51	-1.4	0.28	-0.0016	0	2.9	1.4	2.7
1997-03-01	1.7	1.3	-1.1	0.50	-0.0012	0	1.7	0.63	3.4
1997	6.2	9.3	-2.6	1.1	-0.0075	0	6.2	3.6	19
1997-11-01	0.75	3.2	-0.19	0.067	-0.00079	0	0.75	0.55	6.0
1997-12-01	0.79	2.1	-0.18	0.11	-0.00039	0	0.79	0.63	3.7
1998-01-01	2.7	-0.43	-1.3	0.29	0	0	2.7	1.4	3.1
1998-02-01	0.35	2.2	0.39	0.32	-0.00039	0	0.35	0.79	2.4
1998-03-01	6.4	-4.4	-4.7	0.52	0	0	6.4	1.7	2.9
1998	11	2.7	-5.9	1.3	-0.0016	0	11	5.1	18
1998-11-01	0	4.4	0.11	0.0079	-0.0020	0	0	0.12	6.3
1998-12-01	1.1	2.1	-0.80	0.012	-0.0016	0	1.1	0.24	3.9
1999-01-01	0.71	2.0	0.31	0.24	-0.0020	0	0.71	1.1	3.3
1999-02-01	0.079	3.0	0.13	0.035	-0.0016	0	0.079	0.20	3.6
1999-03-01	0.20	3.2	0.043	0.016	-0.0016	0	0.20	0.24	3.6
1999	2.1	15	-0.21	0.31	-0.0087	0	2.1	1.9	21
1999-11-01	0	4.5	0.13	0.035	-0.00079	0	0	0.16	6.2
1999-12-01	0	3.7	0.079	0	-0.0012	0	0	0.079	4.7
2000-01-01	0.039	2.8	0.028	0	-0.00079	0	0.039	0.039	3.7
2000-02-01	0.28	2.9	0.0079	0.012	-0.0012	0	0.28	0.31	3.4
2000-03-01	0.71	2.5	-0.20	0.079	-0.00039	0	0.71	0.47	3.9
2000	1.0	16	0.043	0.13	-0.0043	0	1.0	1.1	22
2000-11-01	5.3	-1.5	-4.0	0.30	-0.00039	0	5.3	1.3	6.1
2000-12-01	2.1	0.63	0.50	0.48	0	0	2.1	2.6	2.9
2001-01-01	0.079	2.9	1.0	0.42	0	0	0.079	1.1	3.7
2001-02-01	3.4	-1.1	-1.9	0.37	0	0	3.4	1.5	3.0
2001-03-01	1.8	0.91	0.10	0.73	-0.00039	0	1.8	1.9	2.8
2001	13	1.8	-4.2	2.3	-0.00079	0	13	8.4	19
2001-11-01	0.35	3.7	0.012	0.079	-0.0020	0	0.35	0.39	5.7
2001-12-01	0.31	3.1	0.035	0.012	-0.0016	0	0.31	0.31	4.6
2002-01-01	1.9	0.51	-0.72	0.25	-0.0016	0	1.9	1.1	2.9
2002-02-01	0.20	2.6	0.059	0.12	-0.0016	0	0.20	0.28	3.2
2002-03-01	0	3.3	0.22	0.051	-0.0012	0	0	0.24	3.4
2002	2.7	13	-0.40	0.51	-0.0079	0	2.7	2.3	20
2002-11-01	0.12	4.2	0.071	0	-0.0012	0	0.12	0.16	6.3
2002-12-01	0.87	2.5	-0.59	0.0079	-0.00039	0	0.87	0.28	4.4
2003-01-01	0.98	1.5	0.024	0.16	-0.00039	0	0.98	1.0	3.4
2003-02-01	0.35	3.0	0.12	0.091	-0.00079	0	0.35	0.47	3.1
2003-03-01	5.0	-2.4	-3.9	0.37	0	0	5.0	1.1	3.6
2003	7.3	8.8	-4.2	0.63	-0.0028	0	7.3	3.0	21

Table IV-B.60 DC5 Winter Storm Period Water Balance

Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
2003-11-01	0.039	4.6	0.15	0.0039	-0.00079	0	0.039	0.20	6.3
2003-12-01	0.87	2.0	-0.27	0.13	-0.00079	0	0.87	0.59	3.9
2004-01-01	0.98	1.9	-0.27	0.14	-0.00039	0	0.98	0.71	3.9
2004-02-01	1.5	0.94	-0.59	0.13	-0.00039	0	1.5	0.87	3.1
2004-03-01	0.67	2.0	0.016	0.35	-0.00039	0	0.67	0.71	3.0
2004	4.0	12	-0.97	0.75	-0.0028	0	4.0	3.1	20
2004-11-01	1.2	3.1	-0.45	0.19	0	0	1.2	0.75	6.4
2004-12-01	0.63	1.9	0.024	0.18	0	0	0.63	0.67	3.5
2005-01-01	2.8	0	-1.8	0.28	0	0	2.8	0.94	3.0
2005-02-01	4.2	-2.0	-2.0	0.44	0	0	4.2	2.2	2.7
2005-03-01	7.3	-5.3	-5.3	0.60	0	0	7.3	2.1	2.7
2005	16	-2.2	-9.5	1.7	0	0	16	6.7	18
2005-11-01	0.43	4.0	-0.020	0.091	-0.046	0	0.43	0.39	6.4
2005-12-01	0	3.5	0.11	0.012	-0.032	0	0	0.12	4.4
2006-01-01	0	2.8	0.079	0.0039	-0.027	0	0	0.079	3.5
2006-02-01	0	3.4	0.067	0	-0.022	0	0	0.079	3.8
2006-03-01	0.079	3.3	0.035	0	-0.017	0	0.079	0.16	4.1
2006	0.51	17	0.28	0.11	-0.14	0	0.51	0.83	22


Annual Water Balance - 56-Year Simulated Period (Results on October 1)
Potential Surface Flux [in]
Actual Surface Flux [in]
Root Water Uptake [in]
Net Infiltration [in]
Surface Runoff [in]
Surface Infiltration [in]
Evaporation [in]
Precipitation (in)
Potential Evapotranspiration [in]
Monthly Water Balance - 9 Wet Years (1983 - 1991)
Net Infiltration 3%
Surface Runoff 0%
Root Water Uptake 30%
Evaporation 67%
VEG
SOIL-LIKE
CYCLONED SAND
Depth (ft)
NOT FOR CONSTRUCTION
TO BE READ WITH KLOHN CRIPPEN BERGER REPORT DATED MAY 2021
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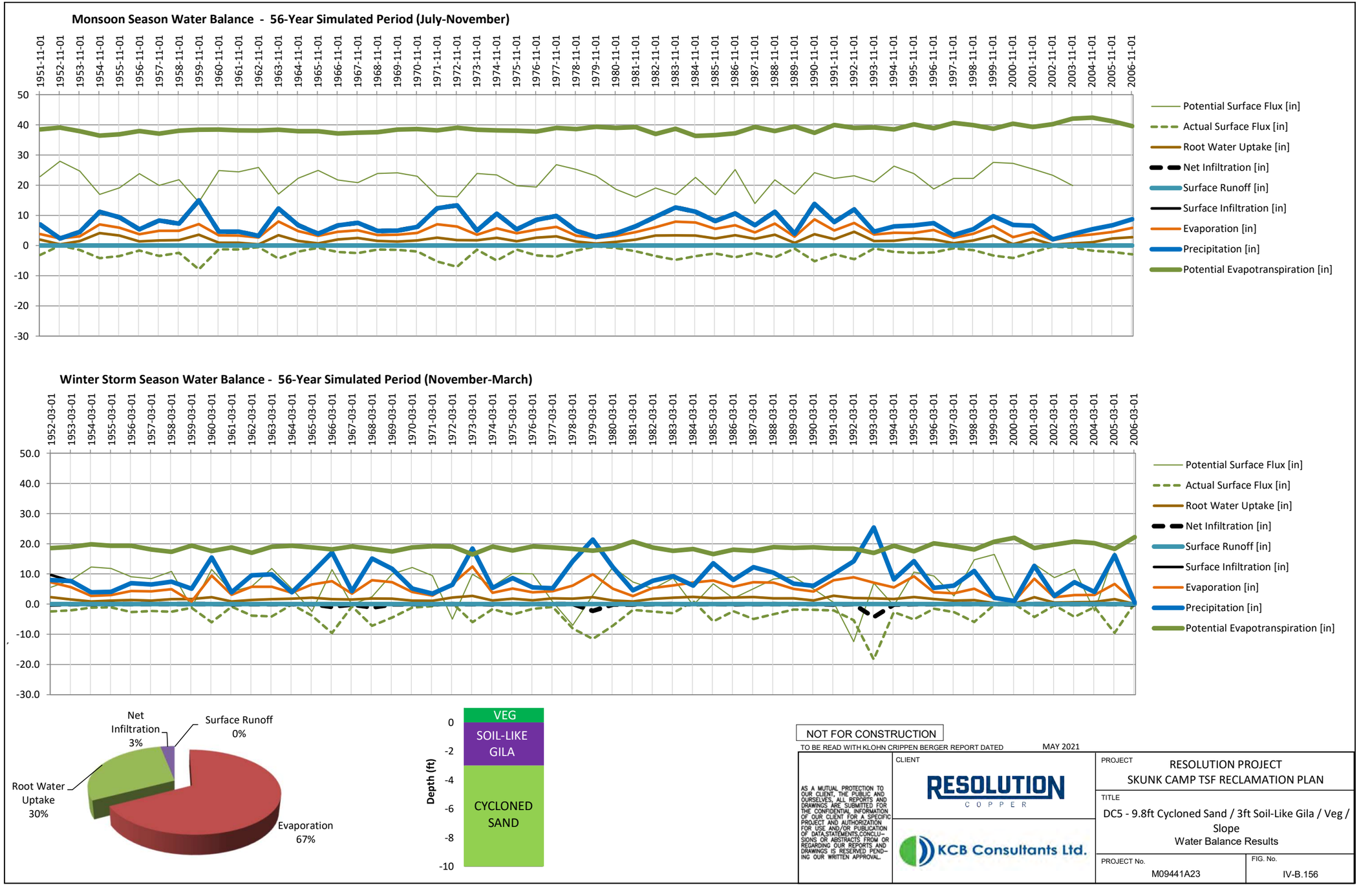
CLIENT
RESOLUTION COPPER
KCB Consultants Ltd.
PROJECT
RESOLUTION PROJECT
SKUNK CAMP TSF RECLAMATION PLAN
TITLE
DC5 - 9.8ft Cycloned Sand / 3ft Soil-Like Gila / Veg / Slope
Water Balance Results
PROJECT No.
M09441A23
FIG. No.
IV-B.155


Monsoon Season Water Balance - 56-Year Simulated Period (July-November)
Winter Storm Season Water Balance - 56-Year Simulated Period (November-March)
Potential Surface Flux [in]
Actual Surface Flux [in]
Root Water Uptake [in]
Net Infiltration [in]
Surface Runoff [in]
Surface Infiltration [in]
Evaporation [in]
Precipitation [in]
Potential Evapotranspiration [in]
Net Infiltration 3%
Surface Runoff 0%
Root Water Uptake 30%
Evaporation 67%
VEG
SOIL-LIKE GILA
CYCLONED SAND
Depth (ft)
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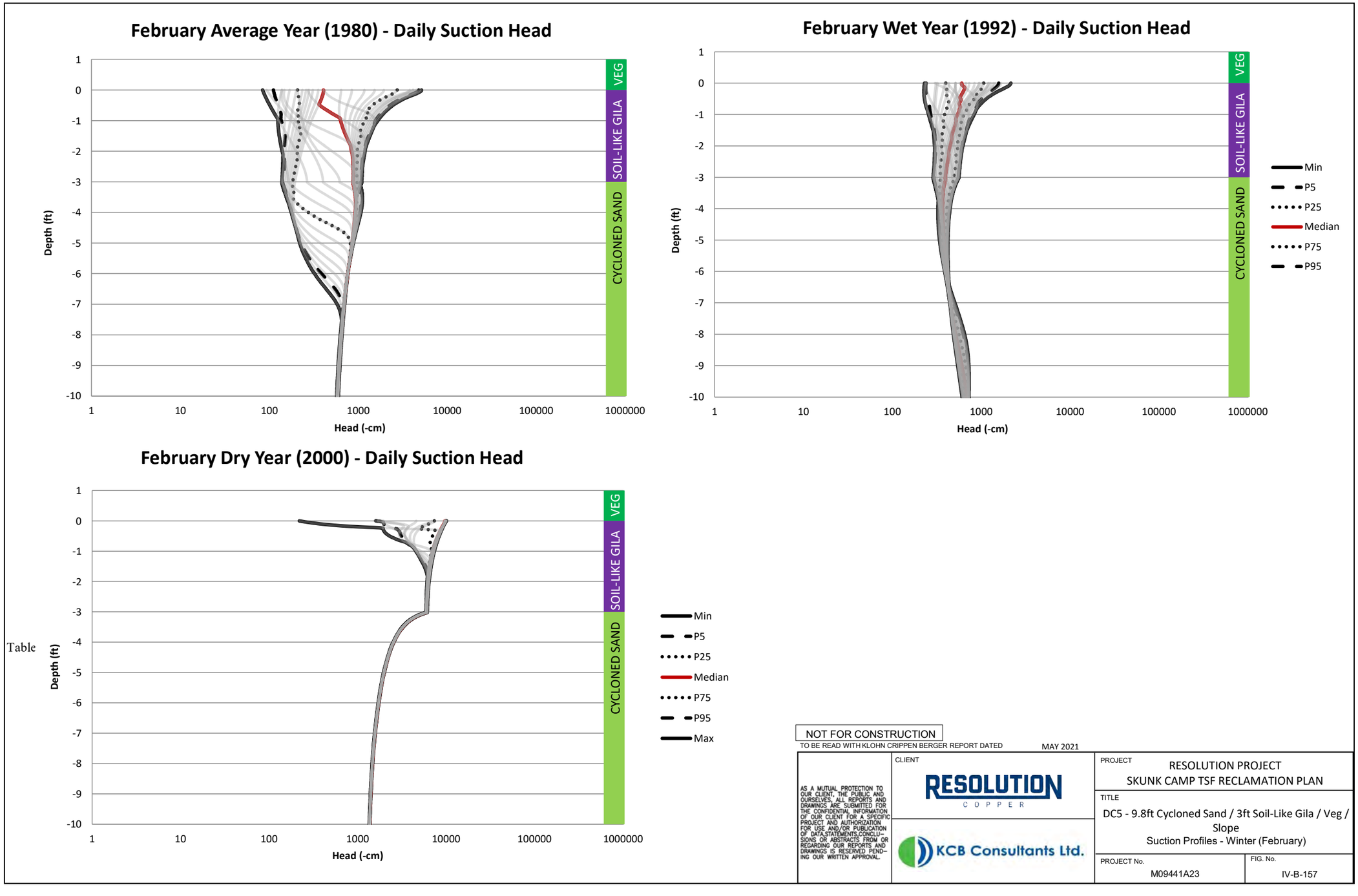
CLIENT
RESOLUTION COPPER
KCB Consultants Ltd.
PROJECT
RESOLUTION PROJECT
SKUNK CAMP TSF RECLAMATION PLAN
TITLE
DC5 - 9.8ft Cycloned Sand / 3ft Soil-Like Gila / Veg / Slope
Water Balance Results
PROJECT No.
M09441A23
FIG. No.
IV-B.156



Table

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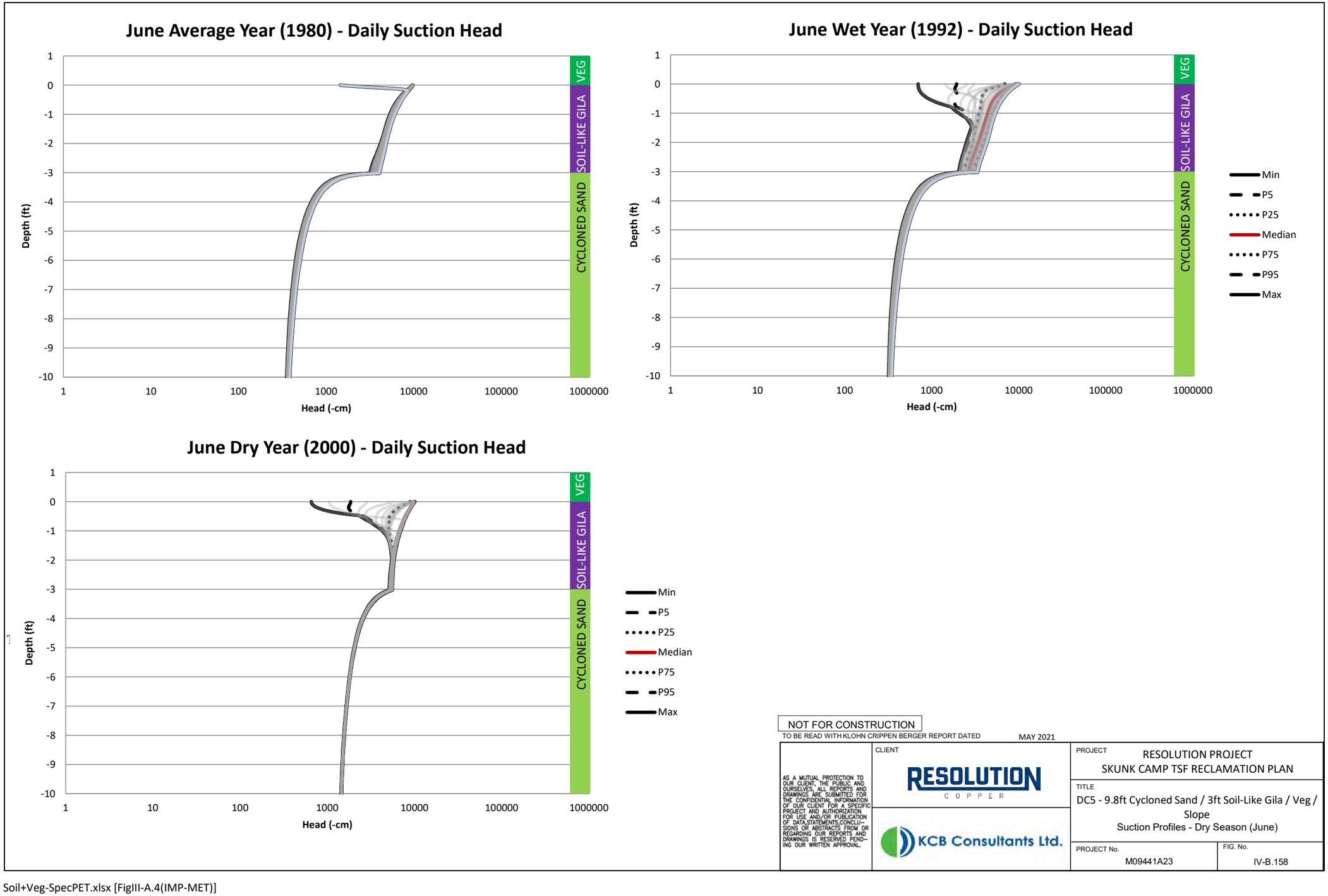
KCB Consultants Ltd.

PROJECT: RESOLUTION PROJECT
SKUNK CAMP TSF RECLAMATION PLAN

TITLE: DC5 - 9.8ft Cycloned Sand / 3ft Soil-Like Gila / Veg / Slope
Suction Profiles - Winter (February)

PROJECT No. M09441A23

FIG. No. IV-B-157



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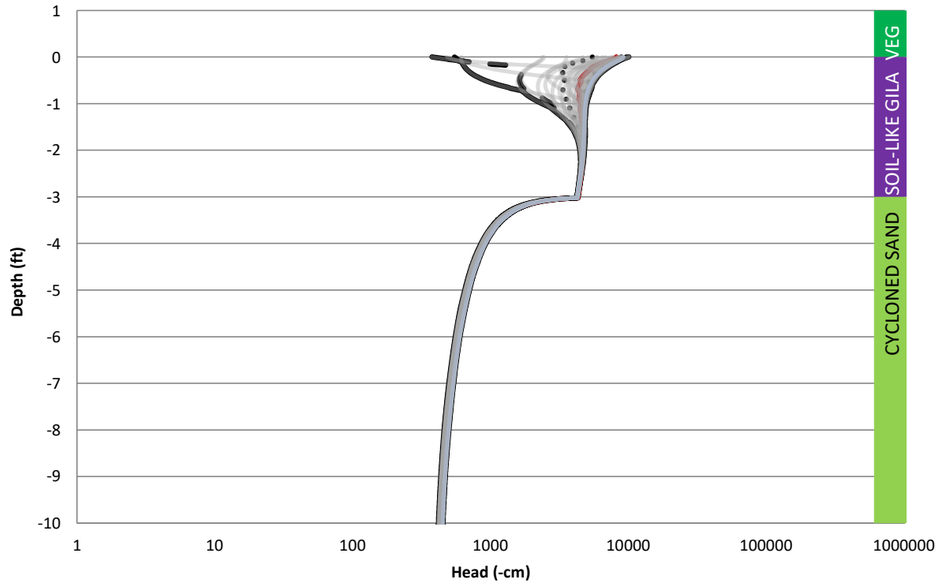
PROJECT: RESOLUTION PROJECT
SKUNK CAMP TSF RECLAMATION PLAN

TITLE: DC5 - 9.8ft Cycloned Sand / 3ft Soil-Like Gila / Veg / Slope
Suction Profiles - Dry Season (June)

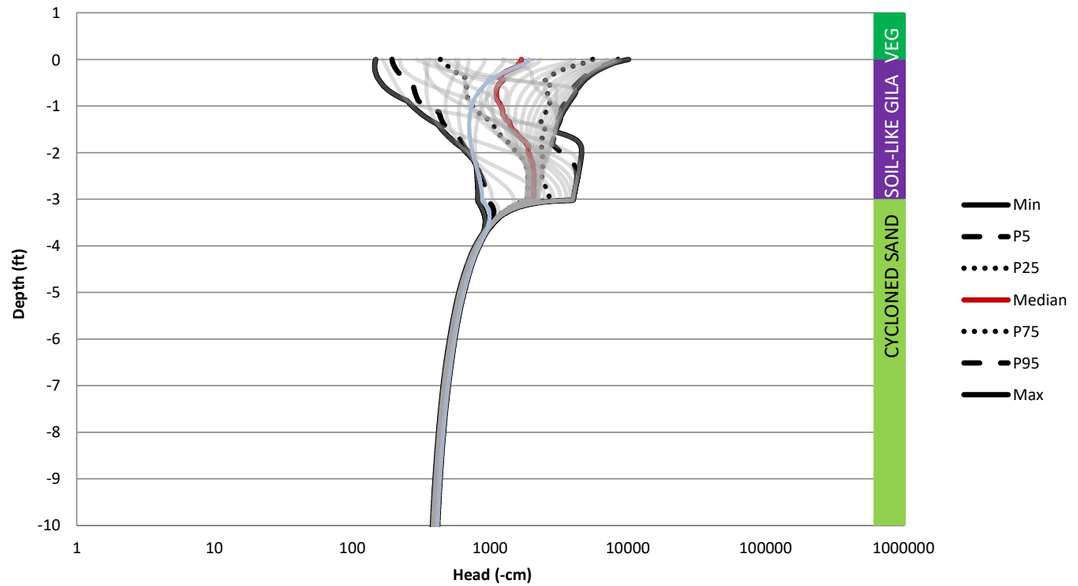
PROJECT No. M09441A23

FIG. No. IV-B.158

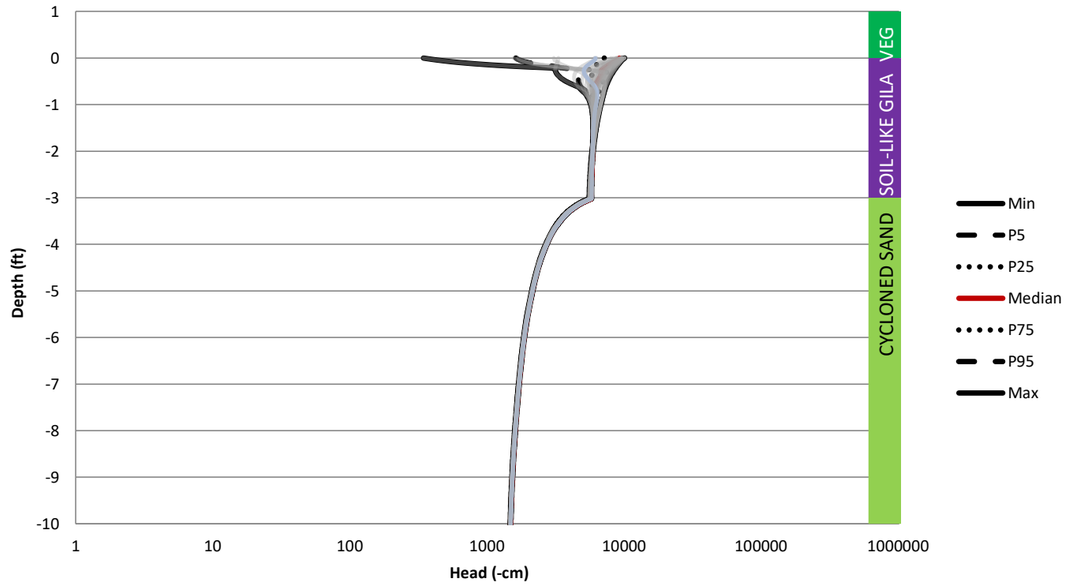
August Average Year (1980) - Daily Suction Head



August Wet Year (1992) - Daily Suction Head



August Dry Year (2000) - Daily Suction Head



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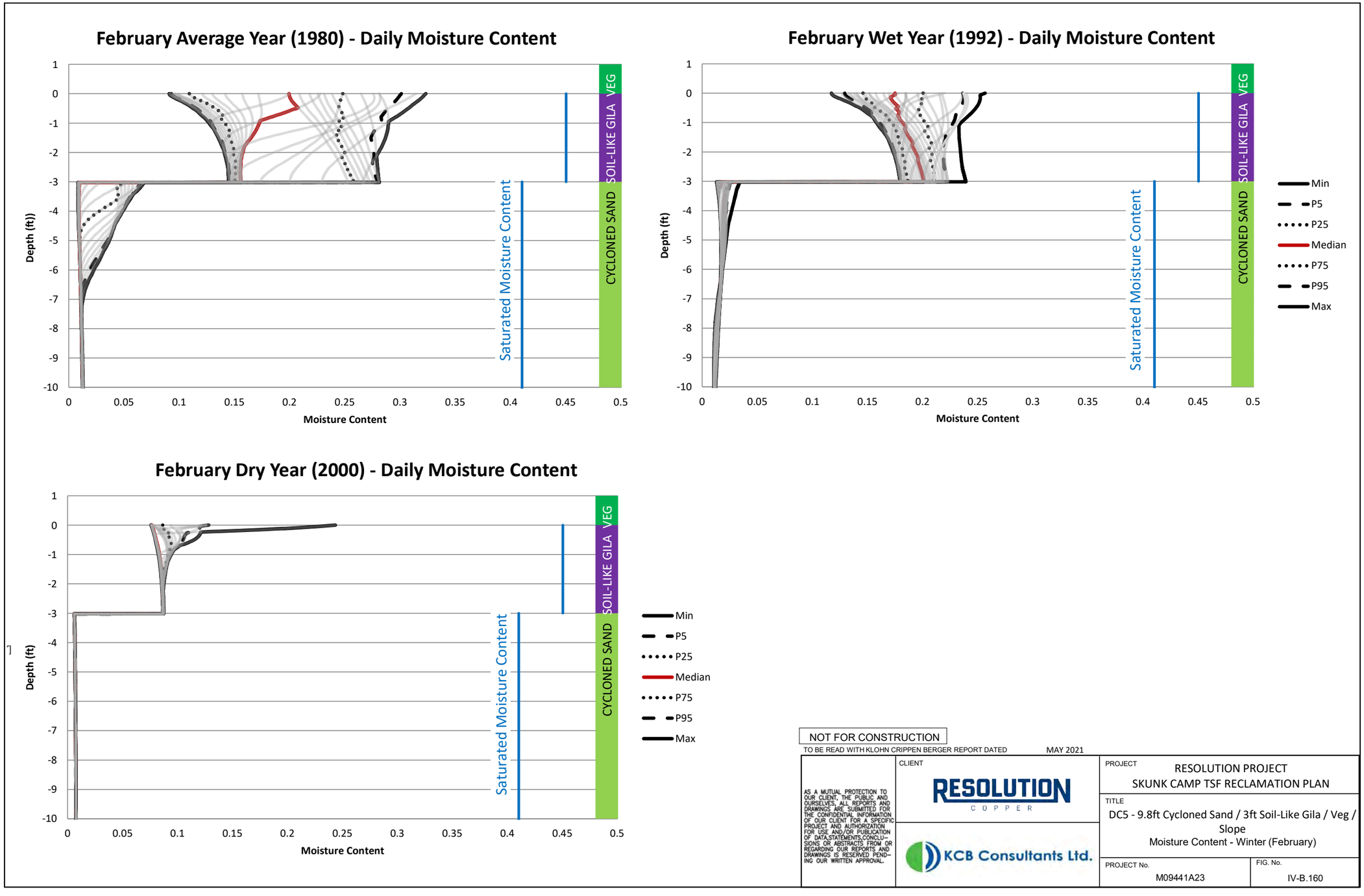
PROJECT: RESOLUTION PROJECT
SKUNK CAMP TSF RECLAMATION PLAN

TITLE: DC5 - 9.8ft Cycloned Sand / 3ft Soil-Like Gila / Veg / Slope
Suction Profiles - Summer Monsoon (August)

PROJECT No. M09441A23

FIG. No. IV-B.159



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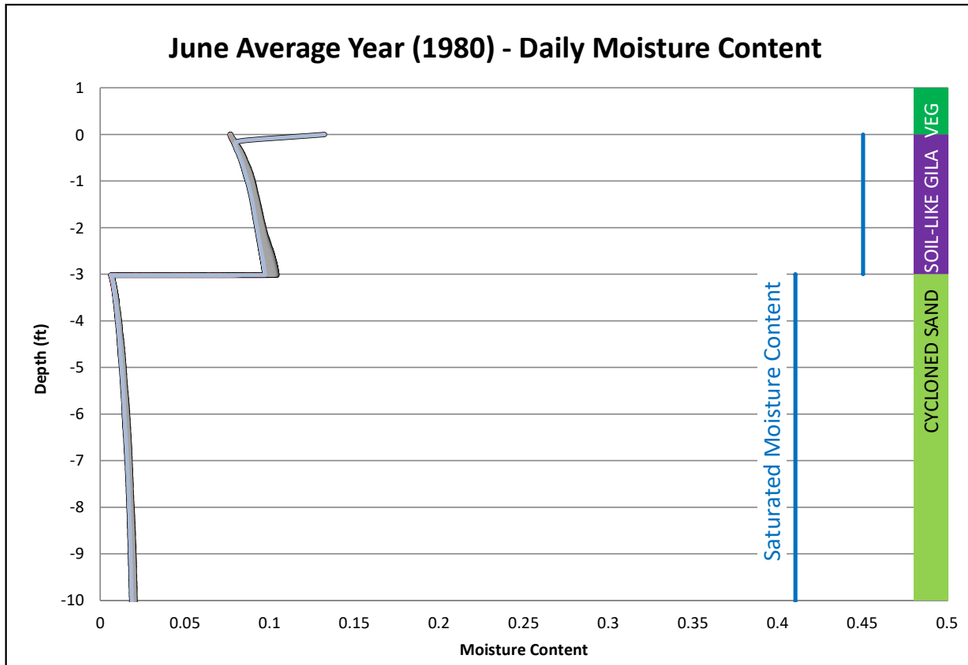
KCB Consultants Ltd.

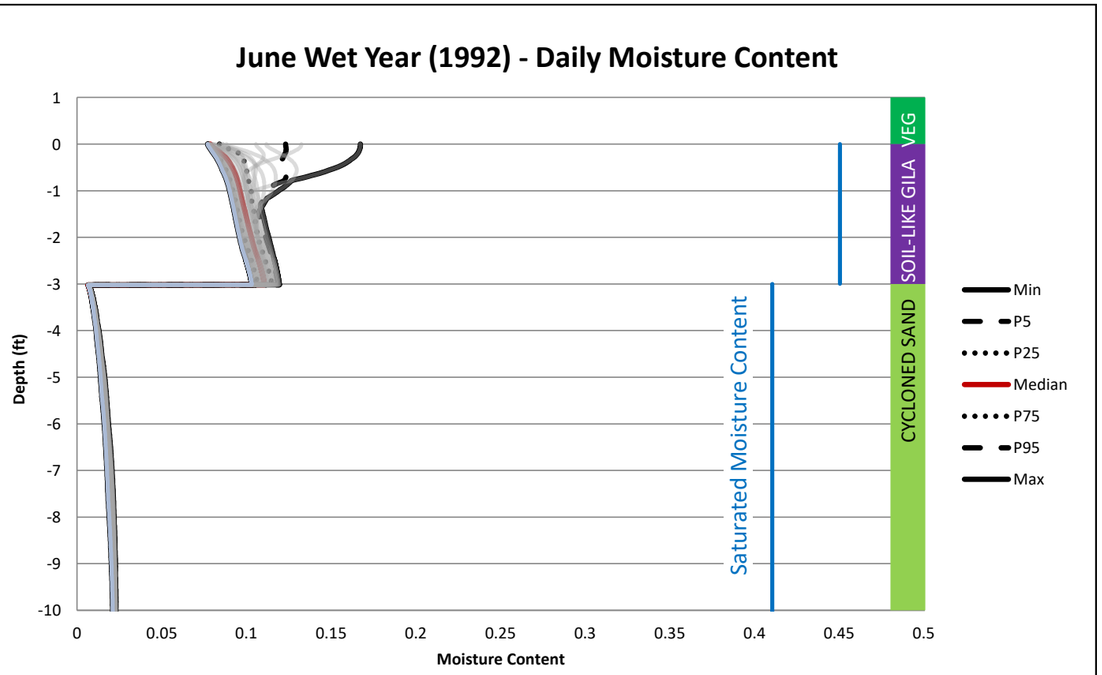
PROJECT: RESOLUTION PROJECT
SKUNK CAMP TSF RECLAMATION PLAN

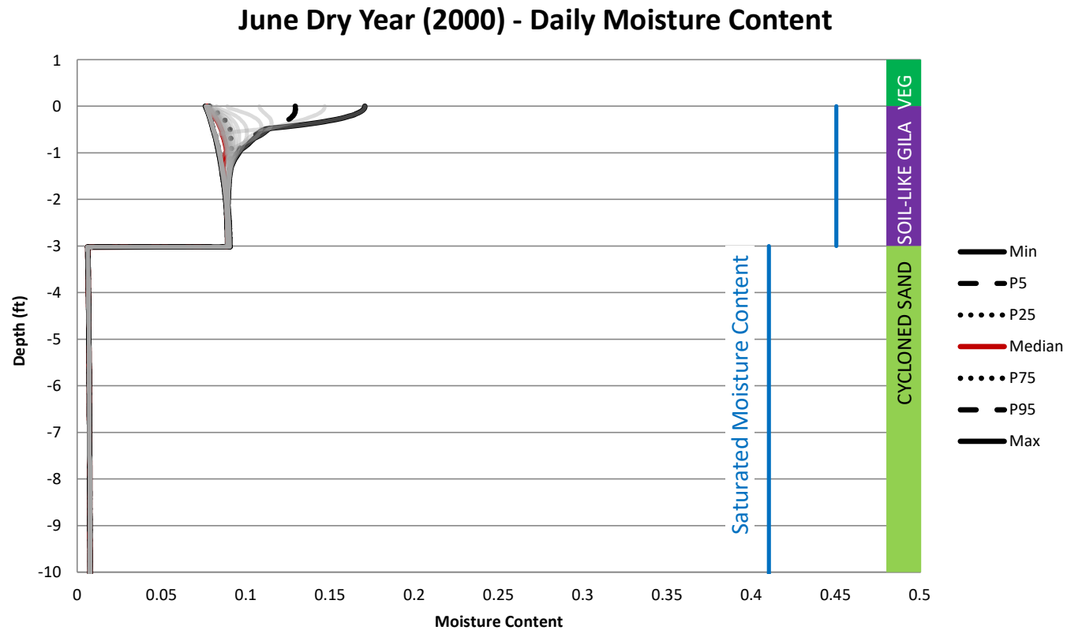
TITLE: DC5 - 9.8ft Cycloned Sand / 3ft Soil-Like Gila / Veg / Slope
Moisture Content - Winter (February)

PROJECT No. M09441A23

FIG. No. IV-B.160







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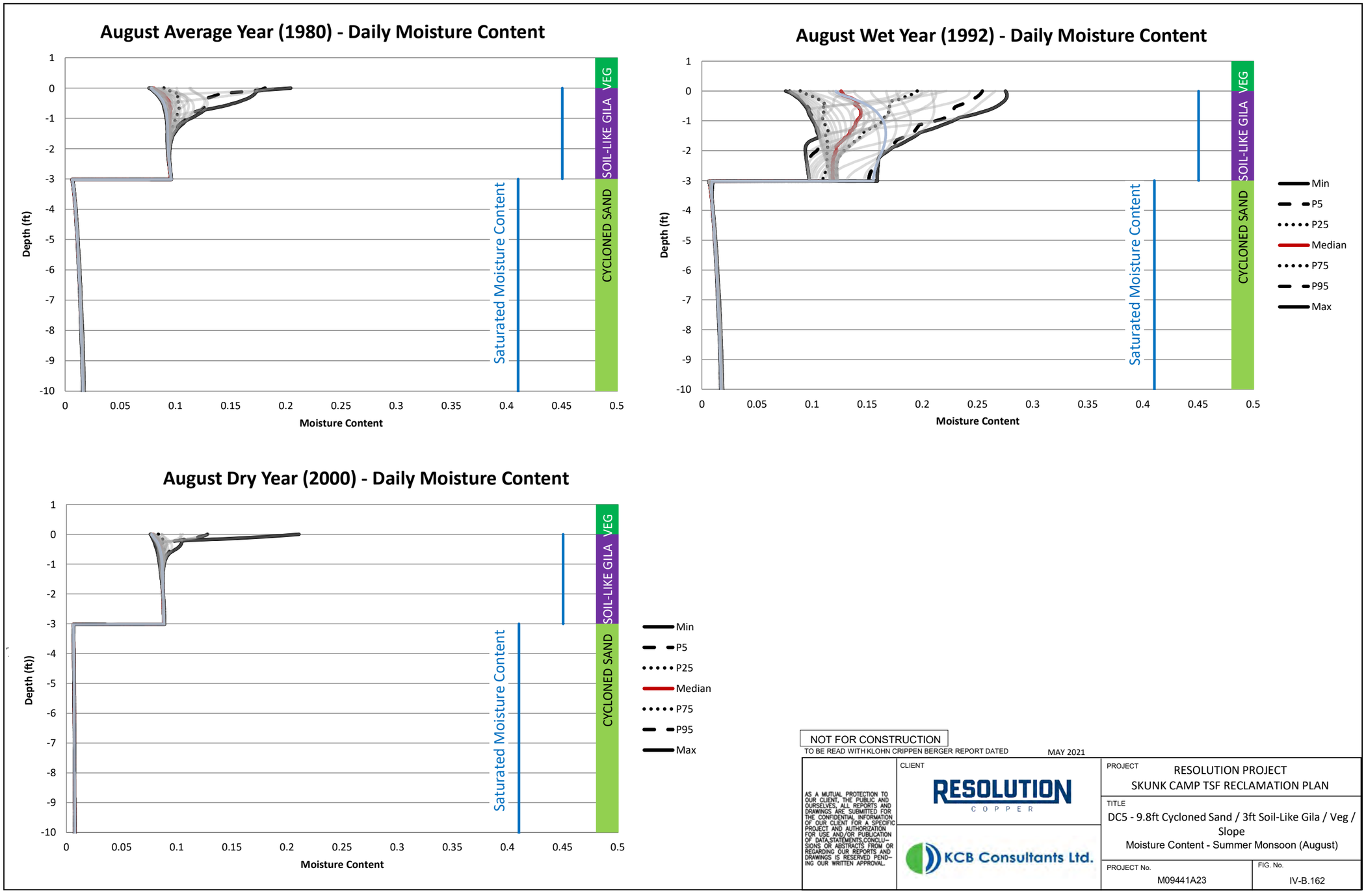
PROJECT: RESOLUTION PROJECT
SKUNK CAMP TSF RECLAMATION PLAN

TITLE: DC5 - 9.8ft Cycloned Sand / 3ft Soil-Like Gila / Veg / Slope
Moisture Content - Dry Season(June)

PROJECT No. M09441A23

FIG. No. IV-B.161



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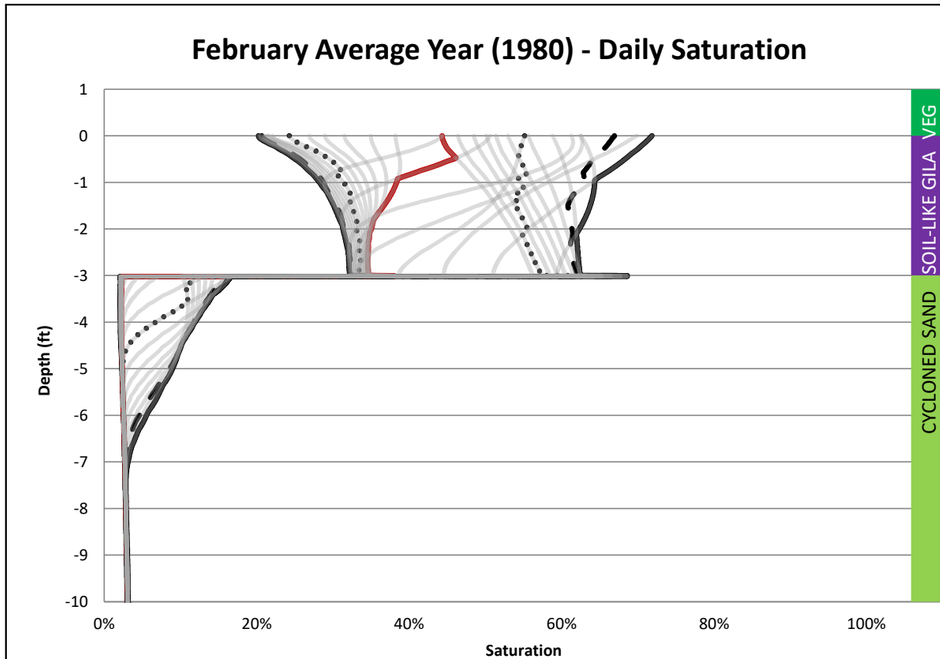
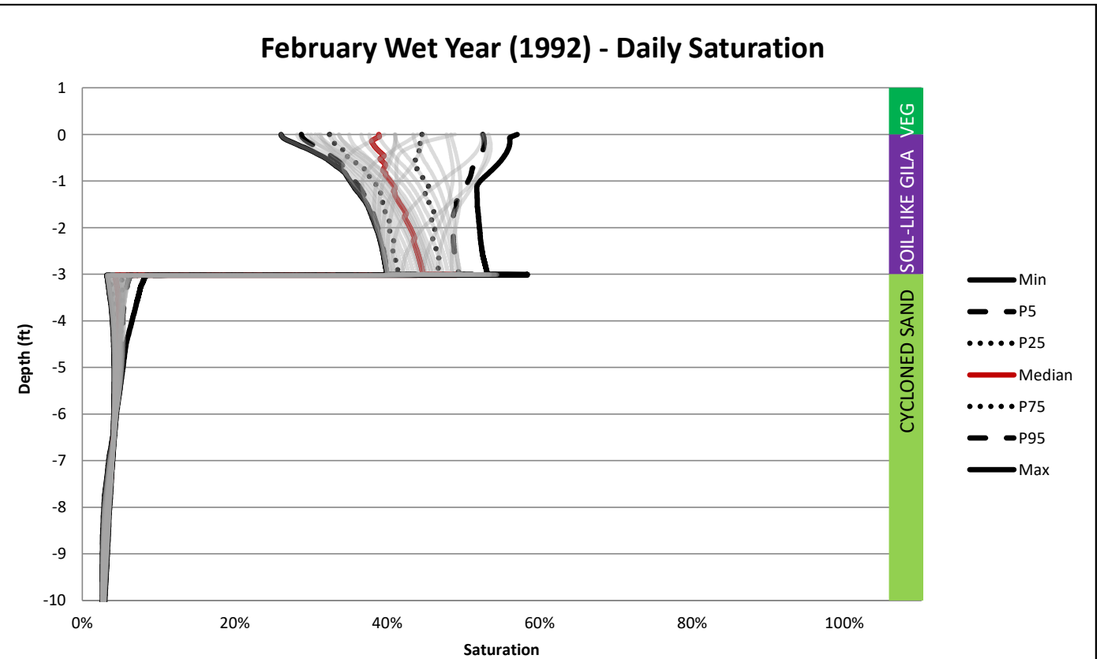
PROJECT: RESOLUTION PROJECT
SKUNK CAMP TSF RECLAMATION PLAN

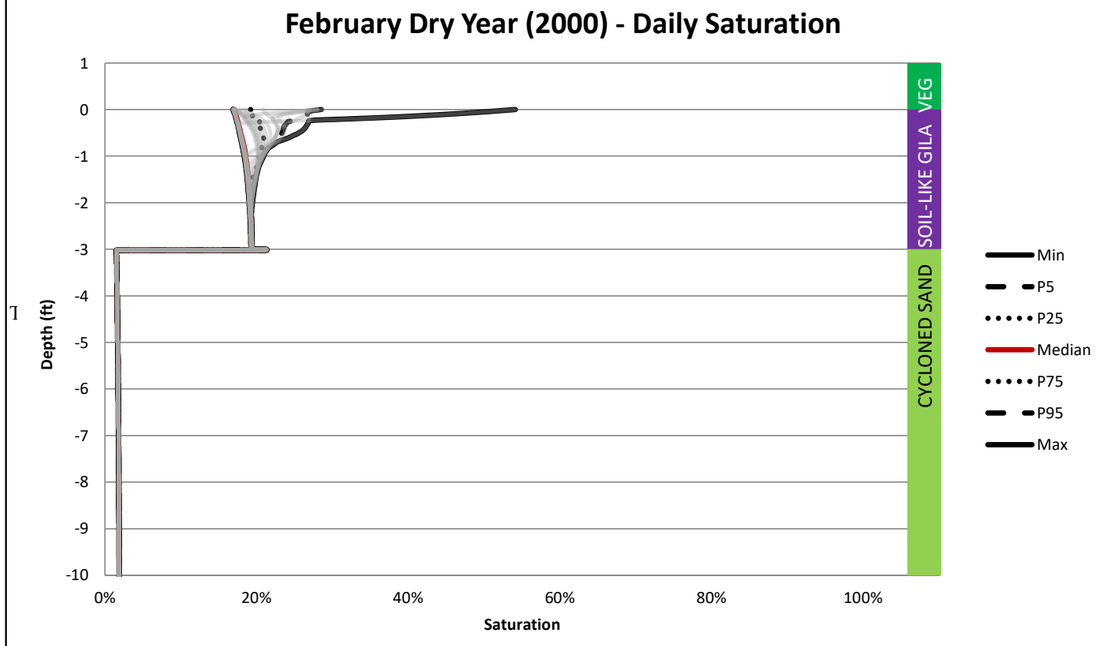
TITLE: DC5 - 9.8ft Cycloned Sand / 3ft Soil-Like Gila / Veg / Slope
Moisture Content - Summer Monsoon (August)

PROJECT No. M09441A23

FIG. No. IV-B.162







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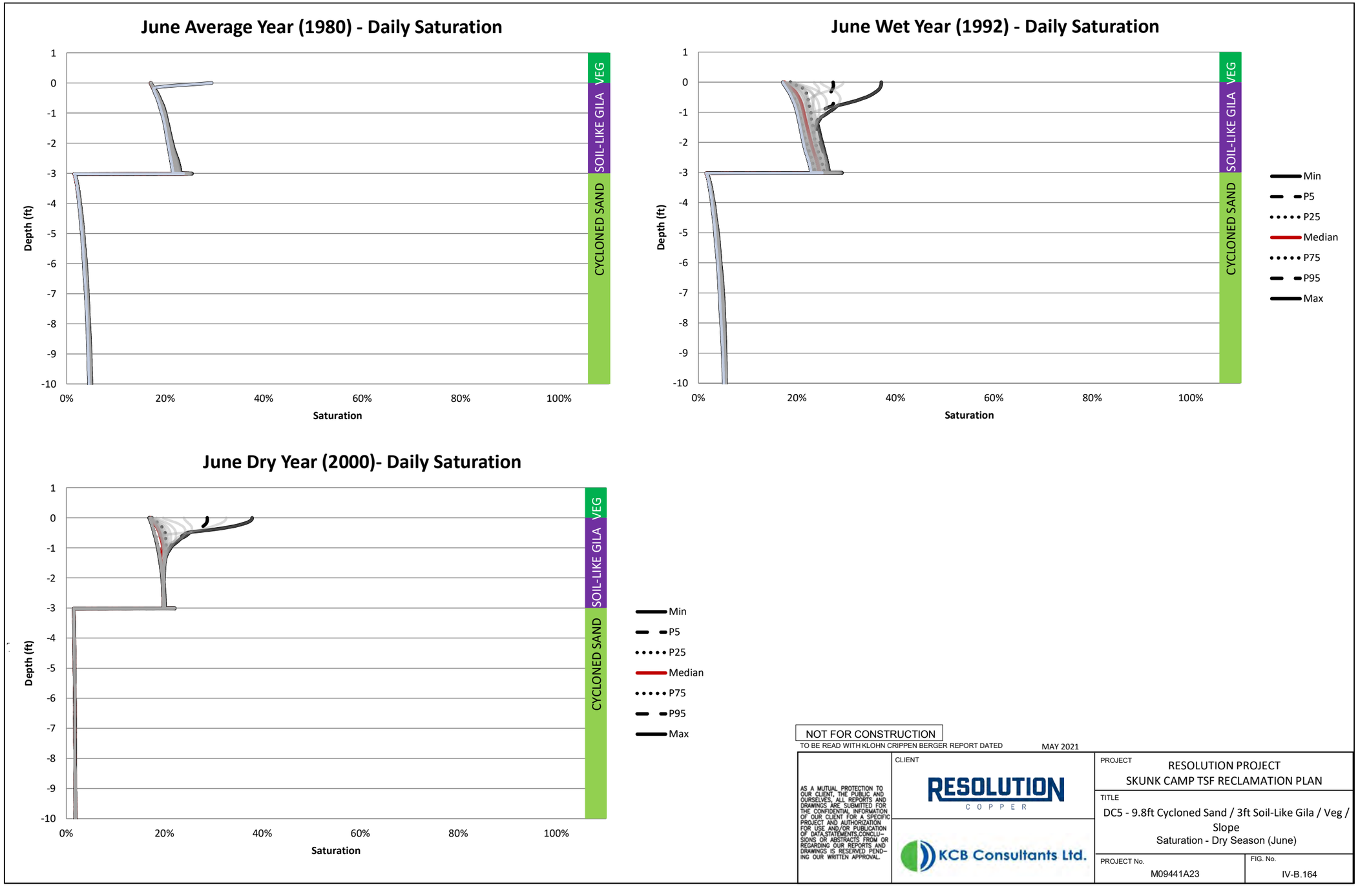
KCB Consultants Ltd.

PROJECT: RESOLUTION PROJECT
SKUNK CAMP TSF RECLAMATION PLAN

TITLE: DC5 - 9.8ft Cycloned Sand / 3ft Soil-Like Gila / Veg / Slope
Saturation - Winter (February)

PROJECT No. M09441A23

FIG. No. IV-B.163



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CLIENT: RESOLUTION COPPER

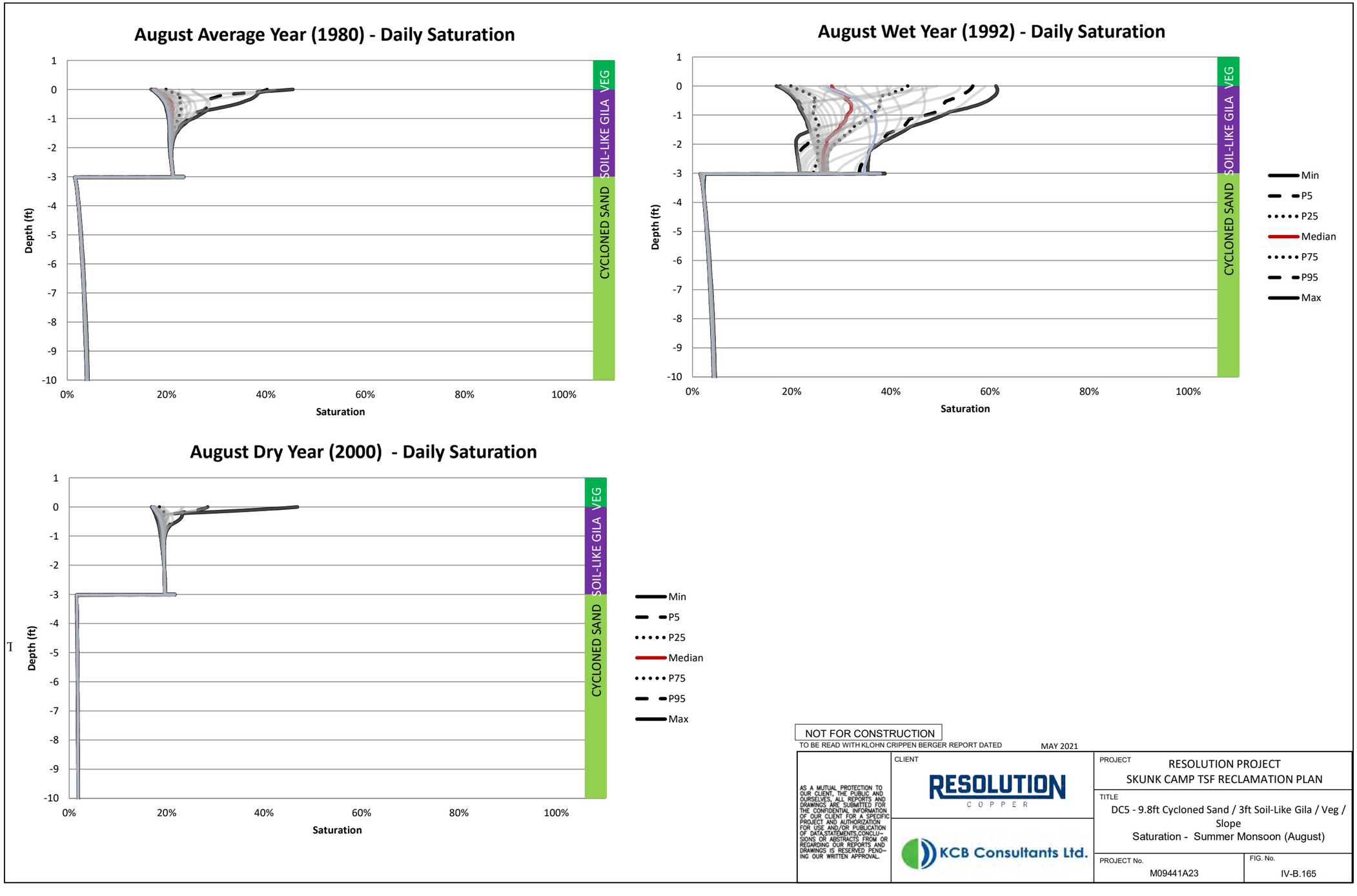
KCB Consultants Ltd.

PROJECT: RESOLUTION PROJECT
SKUNK CAMP TSF RECLAMATION PLAN

TITLE: DC5 - 9.8ft Cycloned Sand / 3ft Soil-Like Gila / Veg / Slope
Saturation - Dry Season (June)

PROJECT No. M09441A23

FIG. No. IV-B.164


August Average Year (1980) - Daily Saturation
August Wet Year (1992) - Daily Saturation
August Dry Year (2000) - Daily Saturation
Depth (ft)
Saturation
VEG
SOIL-LIKE GILA
CYCLONED SAND
Min
P5
P25
Median
P75
P95
Max
NOT FOR CONSTRUCTION
TO BE READ WITH KLOHN CRIPPEN BERGER REPORT DATED MAY 2021
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CLIENT
RESOLUTION COPPER
KCB Consultants Ltd.
PROJECT
RESOLUTION PROJECT
SKUNK CAMP TSF RECLAMATION PLAN
TITLE
DC5 - 9.8ft Cycloned Sand / 3ft Soil-Like Gila / Veg / Slope
Saturation - Summer Monsoon (August)
PROJECT No.
M09441A23
FIG. No.
IV-B.165

Table IV-B.61 SC8 Annual Water Balance

Water Year	Result Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
		(in)	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
1951	1951-10-01	14	32	-9.8	7.8	-8.7	0	14	4.2	60
1952	1952-10-01	0	35	-15	9.4	-5.9	0	20	5.8	72
1953	1953-10-01	15	40	-12	8.0	-4.3	0	15	3.4	72
1954	1954-10-01	21	34	-17	10	-2.6	0	21	4.6	72
1955	1955-10-01	13	42	-10	9.1	-3.3	0	13	3.4	72
1956	1956-10-01	13	45	-9.0	8.1	-2.3	0	13	3.6	74
1957	1957-10-01	15	40	-10	8.6	-1.4	0	15	4.7	71
1958	1958-10-01	19	35	-13	9.7	-2.1	0	19	6.0	70
1959	1959-10-01	16	42	-11	9.2	-1.5	0	16	4.1	75
1960	1960-10-01	19	37	-15	6.5	-11	0	19	4.1	73
1961	1961-10-01	9.8	46	-6.0	5.8	-0.59	0	9.8	3.8	73
1962	1962-10-01	14	40	-10	6.3	-2.9	0	14	3.9	71
1963	1963-10-01	24	33	-19	9.2	-4.9	0	24	4.7	73
1964	1964-10-01	11	44	-6.6	7.6	-4.2	0	11	4.8	72
1965	1965-10-01	18	37	-13	9.2	-3.6	0	18	4.7	71
1966	1966-10-01	23	32	-19	6.0	-11	0	23	4.0	72
1967	1967-10-01	14	42	-10	11	-0.82	0	14	3.9	72
1968	1968-10-01	22	33	-18	8.4	-10	0	22	4.1	71
1969	1969-10-01	19	37	-14	8.6	-4.9	0	19	4.7	72
1970	1970-10-01	16	40	-11	8.3	-1.3	0	16	4.6	72
1971	1971-10-01	12	44	-8.8	6.9	-0.98	0	12	3.3	73
1972	1972-10-01	11	48	-7.7	7.1	-3.7	0	11	3.4	76
1973	1973-10-01	31	22	-24	11	-12	0	31	7.1	69
1974	1974-10-01	15	40	-11	8.7	-1.3	0	15	4.3	72
1975	1975-10-01	19	34	-13	10	-3.8	0	19	5.6	69
1976	1976-10-01	16	40	-12	9.0	-0.88	0	16	4.4	72
1977	1977-10-01	16	40	-11	10	-1.0	0	16	4.6	73
1978	1978-10-01	24	31	-19	9.6	-11	0	24	5.2	71
1979	1979-10-01	30	25	-23	8.1	-15	0	30	6.1	71
1980	1980-10-01	20	35	-15	8.1	-6.9	0	20	5.1	71
1981	1981-10-01	15	43	-11	9.1	-1.9	0	15	3.8	75
1982	1982-10-01	23	31	-17	12	-2.0	0	23	6.5	69
1983	1983-10-01	27	27	-21	11	-8.4	0	27	6.4	69
1984	1984-10-01	18	37	-11	9.7	-5.2	0	18	6.1	71
1985	1985-10-01	22	29	-16	8.5	-7.1	0	22	5.9	67
1986	1986-10-01	21	33	-15	11	-4.2	0	21	5.8	70
1987	1987-10-01	20	34	-15	10	-5.3	0	20	5.2	70
1988	1988-10-01	23	32	-17	9.9	-4.4	0	23	5.8	71
1989	1989-10-01	12	45	-8.1	7.5	-3.8	0	12	3.5	74
1990	1990-10-01	23	32	-17	9.9	-2.3	0	23	5.3	71
1991	1991-10-01	23	32	-17	11	-10	0	23	5.8	71
1992	1992-10-01	36	18	-28	13	-13	0	36	8.2	70
1993	1993-10-01	33	21	-27	9.5	-21	0	33	5.4	70
1994	1994-10-01	15	41	-11	8.8	-2.4	0	15	4.1	73
1995	1995-10-01	25	30	-19	9.1	-7.0	0	25	5.8	71
1996	1996-10-01	13	43	-9.2	9.4	-1.4	0	13	4.2	74
1997	1997-10-01	10	48	-6.9	8.0	-0.49	0	10	3.2	75
1998	1998-10-01	20	33	-15	9.3	-4.3	0	20	5.6	69
1999	1999-10-01	15	42	-10	8.4	-0.77	0	15	4.5	73
2000	2000-10-01	5.4	54	-3.7	5.1	-0.61	0	5.4	1.7	77
2001	2001-10-01	23	31	-18	11	-4.4	0	23	5.8	71
2002	2002-10-01	5.4	53	-3.3	3.8	-1.6	0	5.4	2.1	75
2003	2003-10-01	13	46	-9.3	6.8	-1.5	0	13	3.8	76
2004	2004-10-01	12	47	-8.4	7.6	-0.85	0	12	3.8	77

Table IV-B.61 SC8 Annual Water Balance

Water Year	Result Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
		(in)	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
2005	2005-10-01	24	32	-19	8.7	-9.1	0	24	4.7	72
2006	2006-10-01	12	46	-8.7	7.7	-1.5	0	12	3.4	75

Table IV-B.62 SC8 Annual Water Balance

Month	Result Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
		[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
Nov-82	1982-11-30	0	4.1	-1.9	1.2	-0.68	0	2.6	0.71	8.8
Dec-82	1982-12-30	2.5	-0.28	-1.7	0.37	-0.33	0	2.5	0.78	2.7
Jan-83	1983-01-29	0.67	2.0	-0.51	0.52	-0.37	0	0.67	0.17	3.0
Feb-83	1983-02-28	3.5	-0.91	-3.0	0.74	-0.69	0	3.5	0.51	2.9
Mar-83	1983-03-30	5.4	-2.7	-4.4	1.1	-1.6	0	5.4	0.96	4.0
Apr-83	1983-04-29	0.83	3.5	-0.31	1.6	-1.9	0	0.83	0.51	5.3
May-83	1983-05-29	0	6.5	0	0.73	-1.3	0	0	0.0039	7.9
Jun-83	1983-06-28	0.039	7.3	0	0.20	-0.69	0	0.039	0.012	9.4
Jul-83	1983-07-28	2.1	4.9	-1.7	0.70	-0.41	0	2.1	0.48	9.6
Aug-83	1983-08-27	3.8	1.7	-2.5	1.6	-0.28	0	3.8	1.3	7.2
Sep-83	1983-09-26	1.9	3.5	-1.1	1.6	-0.21	0	1.9	0.76	7.5
Oct-83	1983-10-26	4.8	-1.2	-4.2	0.88	-0.17	0	4.8	0.70	5.1
Nov-83	1983-11-25	1.6	1.6	-1.3	0.59	-0.79	0	1.6	0.26	4.2
Dec-83	1983-12-25	1.9	0.39	-1.4	0.38	-0.73	0	1.9	0.48	2.6
Jan-84	1984-01-24	1.5	0.75	-0.94	0.43	-0.89	0	1.5	0.60	2.7
Feb-84	1984-02-23	0	3.2	0.039	0.78	-0.78	0	0	0.020	3.7
Mar-84	1984-03-24	0	4.1	0	0.74	-0.59	0	0	0	5.0
Apr-84	1984-04-23	0.87	4.0	-0.59	0.81	-0.40	0	0.87	0.26	6.5
May-84	1984-05-23	0.67	5.4	-0.35	0.48	-0.29	0	0.67	0.33	7.5
Jun-84	1984-06-22	0.039	7.1	0	0.031	-0.22	0	0.039	0.039	9.3
Jul-84	1984-07-22	3.6	2.4	-2.6	1.0	-0.15	0	3.6	1.1	8.5
Aug-84	1984-08-21	3.9	1.5	-2.3	1.6	-0.12	0	3.9	1.6	6.9
Sep-84	1984-09-20	1.1	4.2	-0.47	1.7	-0.11	0	1.1	0.67	7.0
Oct-84	1984-10-20	2.5	1.4	-1.7	1.00	-0.083	0	2.5	0.87	5.6
Nov-84	1984-11-19	0	3.6	0.039	0.68	-0.071	0	0	0.028	4.2
Dec-84	1984-12-19	4.8	-2.6	-4.2	0.35	-0.051	0	4.8	0.63	3.1
Jan-85	1985-01-18	3.9	-1.9	-3.2	0.37	-0.27	0	3.9	0.70	2.3
Feb-85	1985-02-17	2.9	-0.87	-2.2	0.50	-1.8	0	2.9	0.64	2.3
Mar-85	1985-03-19	1.7	1.1	-0.94	1.0	-2.0	0	1.7	0.72	3.6
Apr-85	1985-04-18	0.43	4.0	-0.12	1.6	-1.1	0	0.43	0.34	5.4
May-85	1985-05-18	0.47	4.8	-0.28	0.56	-0.62	0	0.47	0.18	6.7
Jun-85	1985-06-17	0	6.6	0	0.079	-0.39	0	0	0.0039	8.6
Jul-85	1985-07-17	0.24	6.4	-0.20	0.043	-0.28	0	0.24	0.039	8.4
Aug-85	1985-08-16	2.1	3.8	-1.4	0.94	-0.20	0	2.1	0.68	7.8
Sep-85	1985-09-15	2.2	3.1	-1.4	1.2	-0.14	0	2.2	0.80	7.9
Oct-85	1985-10-15	3.1	0.91	-2.2	0.96	-0.11	0	3.1	0.93	5.7
Nov-85	1985-11-14	1.4	1.8	-0.98	0.67	-0.098	0	1.4	0.44	3.9
Dec-85	1985-12-14	2.7	-0.24	-2.0	0.43	-0.079	0	2.7	0.70	3.1
Jan-86	1986-01-13	0	2.8	0.24	0.50	-0.079	0	0	0.22	3.3
Feb-86	1986-02-12	2.3	0.28	-1.9	0.52	-0.18	0	2.3	0.43	3.6
Mar-86	1986-03-14	1.9	1.5	-1.5	1.1	-0.27	0	1.9	0.44	3.7
Apr-86	1986-04-13	3.1	0.87	-2.5	1.6	-0.50	0	3.1	0.61	4.9
May-86	1986-05-13	0	5.7	0	0.98	-1.2	0	0	0.0039	7.4
Jun-86	1986-06-12	0	7.2	0	0.30	-0.73	0	0	0.012	9.1
Jul-86	1986-07-12	2.2	4.8	-1.8	0.51	-0.46	0	2.2	0.41	9.2
Aug-86	1986-08-11	2.8	2.9	-1.9	1.6	-0.30	0	2.8	0.87	7.5
Sep-86	1986-09-10	3.0	2.2	-2.0	1.7	-0.22	0	3.0	0.92	7.3
Oct-86	1986-10-10	0.91	3.6	-0.47	1.2	-0.16	0	0.91	0.41	6.1
Nov-86	1986-11-09	2.8	0.47	-2.1	0.69	-0.13	0	2.8	0.63	4.6
Dec-86	1986-12-09	2.6	0.12	-2.2	0.49	-0.11	0	2.6	0.40	3.4
Jan-87	1987-01-08	1.5	0.87	-0.75	0.40	-0.11	0	1.5	0.76	2.7
Feb-87	1987-02-07	3.1	-0.67	-2.3	0.51	-0.33	0	3.1	0.76	2.9
Mar-87	1987-03-09	2.3	0.87	-1.9	1.0	-1.1	0	2.3	0.41	3.4
Apr-87	1987-04-08	0.94	2.8	-0.55	1.5	-1.2	0	0.94	0.40	5.0

Table IV-B.62 SC8 Annual Water Balance

Month	Result Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
		[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
May-87	1987-05-08	0	5.3	0	0.80	-0.87	0	0	0.016	6.8
Jun-87	1987-06-07	0.31	6.1	-0.079	0.29	-0.56	0	0.31	0.22	8.2
Jul-87	1987-07-07	0.24	6.9	-0.12	0.15	-0.35	0	0.24	0.11	9.2
Aug-87	1987-08-06	3.0	3.5	-2.6	1.2	-0.25	0	3.0	0.45	8.9
Sep-87	1987-09-05	2.4	3.2	-1.8	1.7	-0.19	0	2.4	0.53	7.5
Oct-87	1987-10-05	0.79	4.1	-0.31	1.3	-0.14	0	0.79	0.51	6.7
Nov-87	1987-11-04	1.4	2.6	-1.1	0.64	-0.11	0	1.4	0.33	5.8
Dec-87	1987-12-04	0.71	2.5	-0.31	0.45	-0.094	0	0.71	0.37	3.8
Jan-88	1988-01-03	4.0	-1.7	-3.2	0.35	-0.071	0	4.0	0.81	3.0
Feb-88	1988-02-02	3.6	-1.3	-3.0	0.43	-0.067	0	3.6	0.59	2.4
Mar-88	1988-03-03	0.71	2.6	-0.43	0.96	-1.1	0	0.71	0.26	3.6
Apr-88	1988-04-02	0.16	4.1	-0.079	1.0	-1.1	0	0.16	0.071	5.5
May-88	1988-05-02	2.4	2.0	-1.7	0.96	-0.64	0	2.4	0.76	6.1
Jun-88	1988-06-01	0	6.6	0.039	1.1	-0.41	0	0	0.024	8.0
Jul-88	1988-07-01	0.12	6.6	-0.039	0.059	-0.28	0	0.12	0.11	8.9
Aug-88	1988-07-31	2.4	3.9	-1.8	0.33	-0.21	0	2.4	0.65	8.5
Sep-88	1988-08-30	6.7	-1.3	-5.2	1.8	-0.14	0	6.7	1.5	7.3
Oct-88	1988-10-29	2.0	7.3	-1.3	2.3	-0.85	0	2.0	0.73	13
Nov-88	1988-11-28	1.7	1.3	-1.5	0.55	-0.53	0	1.7	0.27	4.1
Dec-88	1988-12-28	1.1	1.4	-0.63	0.43	-0.35	0	1.1	0.50	3.1
Jan-89	1989-01-27	2.0	0.31	-1.4	0.42	-0.26	0	2.0	0.59	2.4
Feb-89	1989-02-26	0.51	2.5	-0.20	0.83	-0.35	0	0.51	0.34	3.3
Mar-89	1989-03-28	1.7	2.4	-1.5	0.97	-0.48	0	1.7	0.21	5.3
Apr-89	1989-04-27	0	5.5	0.12	1.6	-0.37	0	0	0.11	6.9
May-89	1989-05-27	0.16	6.3	0	0.11	-0.28	0	0.16	0.15	8.3
Jun-89	1989-06-26	0	7.0	0	0.028	-0.22	0	0	0	9.1
Jul-89	1989-07-26	0.079	6.8	-0.039	0.055	-0.15	0	0.079	0.039	9.0
Aug-89	1989-08-25	1.3	4.3	-0.75	0.57	-0.13	0	1.3	0.61	8.0
Sep-89	1989-09-24	1.5	4.0	-1.2	0.98	-0.11	0	1.5	0.25	7.3
Oct-89	1989-10-24	1.1	3.3	-0.67	0.75	-0.083	0	1.1	0.43	6.1
Nov-89	1989-11-23	0.28	3.1	-0.16	0.28	-0.067	0	0.28	0.10	4.5
Dec-89	1989-12-23	0	2.8	0.039	0.16	-0.063	0	0	0.071	3.5
Jan-90	1990-01-22	2.2	0.039	-1.5	0.24	-0.047	0	2.2	0.65	2.9
Feb-90	1990-02-21	2.5	-0.24	-1.7	0.56	-0.043	0	2.5	0.82	2.5
Mar-90	1990-03-23	0.83	2.6	-0.47	1.3	-0.039	0	0.83	0.31	4.2
Apr-90	1990-04-22	1.0	3.9	-0.63	1.8	-0.035	0	1.0	0.43	6.0
May-90	1990-05-22	1.1	4.8	-0.87	1.2	-0.031	0	1.1	0.22	7.7
Jun-90	1990-06-21	0.39	6.7	-0.20	0.26	-0.028	0	0.39	0.18	9.0
Jul-90	1990-07-21	0.94	5.5	-0.59	0.43	-0.028	0	0.94	0.37	8.6
Aug-90	1990-08-20	9.6	-4.3	-8.6	1.0	-0.020	0	9.6	0.96	7.8
Sep-90	1990-09-19	2.5	3.0	-2.0	1.6	-1.1	0	2.5	0.43	7.1
Oct-90	1990-10-19	0.43	3.7	0.039	1.1	-1.5	0	0.43	0.44	5.9
Nov-90	1990-11-18	1.5	2.0	-1.1	0.69	-0.80	0	1.5	0.45	4.2
Dec-90	1990-12-18	2.8	-0.16	-2.1	0.45	-0.54	0	2.8	0.69	3.5
Jan-91	1991-01-17	4.7	-2.7	-3.8	0.36	-0.41	0	4.7	0.87	2.3
Feb-91	1991-02-16	0.16	2.7	-0.039	0.69	-2.1	0	0.16	0.14	3.3
Mar-91	1991-03-18	3.6	-0.31	-3.0	1.2	-1.3	0	3.6	0.65	4.3
Apr-91	1991-04-17	3.2	0.87	-2.6	1.6	-0.83	0	3.2	0.65	4.8
May-91	1991-05-17	0	5.8	0.039	1.0	-1.4	0	0	0.0039	7.4
Jun-91	1991-06-16	0.71	6.3	-0.31	0.52	-0.88	0	0.71	0.42	8.7
Jul-91	1991-07-16	0.43	6.8	-0.31	0.48	-0.53	0	0.43	0.15	9.4
Aug-91	1991-08-15	3.3	2.8	-2.5	0.83	-0.32	0	3.3	0.87	8.4
Sep-91	1991-09-14	2.0	3.2	-1.3	1.6	-0.24	0	2.0	0.68	7.5
Oct-91	1991-10-01	0.24	2.4	-0.12	0.75	-0.11	0	0.24	0.13	3.5

Table IV-B.63 SC8 Monsoon Period Water Balance

Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
1951-07-01	0	7.2	0.0024	0.037	-0.32	0	0	0.0023	9.2
1951-08-01	1.1	6.3	-0.62	0.41	-0.24	0	1.1	0.43	9.5
1951-09-01	3.6	2.2	-3.0	0.87	-0.17	0	3.6	0.62	7.8
1951-10-01	0.65	4.4	-0.38	1.4	-0.13	0	0.65	0.27	6.6
1951-11-01	1.6	2.7	-1.3	0.77	-0.11	0	1.6	0.35	5.4
1951	7.0	23	-5.3	3.5	-0.98	0	7.0	1.7	39
1952-07-01	0.63	6.8	-0.27	0.83	-0.69	0	0.63	0.36	9.6
1952-08-01	0.56	6.3	-0.21	0.29	-0.50	0	0.56	0.35	8.8
1952-09-01	0.45	5.4	-0.21	0.31	-0.33	0	0.45	0.24	7.8
1952-10-01	0.70	4.7	-0.38	0.25	-0.24	0	0.70	0.32	7.0
1952-11-01	0	4.8	0.0067	0.18	-0.18	0	0	0.0067	5.9
1952	2.3	28	-1.1	1.9	-1.9	0	2.3	1.3	39
1953-07-01	0	7.0	0.0016	0.070	-0.39	0	0	0.0016	9.1
1953-08-01	2.7	3.9	-2.1	0.62	-0.29	0	2.7	0.57	8.8
1953-09-01	1.8	4.0	-1.2	1.6	-0.21	0	1.8	0.60	7.7
1953-10-01	0	5.2	0.030	1.1	-0.15	0	0	0.030	6.8
1953-11-01	0.012	4.4	0.00079	0.085	-0.13	0	0.012	0.013	5.5
1953	4.5	25	-3.3	3.5	-1.2	0	4.5	1.2	38
1954-07-01	0.13	6.8	-0.051	0.22	-0.40	0	0.13	0.077	9.0
1954-08-01	4.5	1.5	-3.5	1.2	-0.31	0	4.5	0.96	7.8
1954-09-01	5.3	0.20	-4.4	1.9	-0.23	0	5.3	0.87	7.4
1954-10-01	1.3	3.8	-0.78	1.4	-0.69	0	1.3	0.50	6.6
1954-11-01	0	4.6	0.020	0.90	-0.90	0	0	0.018	5.6
1954	11	17	-8.7	5.6	-2.5	0	11	2.4	36
1955-07-01	2.1	5.0	-1.7	1.0	-0.13	0	2.1	0.31	9.1
1955-08-01	4.5	1.6	-3.6	1.2	-0.12	0	4.5	0.87	7.9
1955-09-01	2.7	2.6	-1.7	1.8	-0.10	0	2.7	0.96	7.2
1955-10-01	0.12	5.1	-0.055	1.3	-0.12	0	0.12	0.070	6.8
1955-11-01	0.020	4.7	-0.0039	0.36	-0.20	0	0.020	0.015	5.9
1955	9.4	19	-7.1	5.7	-0.68	0	9.4	2.2	37
1956-07-01	0.24	7.1	-0.15	0.059	-0.25	0	0.24	0.092	9.4
1956-08-01	2.8	4.2	-1.9	0.75	-0.19	0	2.8	0.88	9.0
1956-09-01	1.8	3.8	-1.2	1.6	-0.14	0	1.8	0.51	7.5
1956-10-01	0.075	5.2	-0.071	0.87	-0.12	0	0.075	0.0035	6.8
1956-11-01	0.53	3.6	-0.31	0.15	-0.10	0	0.53	0.22	5.2
1956	5.4	24	-3.7	3.4	-0.80	0	5.4	1.7	38
1957-07-01	0.031	7.2	0	0.20	-0.17	0	0.031	0.034	9.3
1957-08-01	1.1	5.5	-0.63	0.31	-0.14	0	1.1	0.46	8.5
1957-09-01	3.4	2.4	-2.3	1.2	-0.12	0	3.4	1.0	8.1
1957-10-01	0.57	4.5	-0.35	1.3	-0.096	0	0.57	0.22	6.6
1957-11-01	3.2	0.31	-2.5	0.59	-0.081	0	3.2	0.73	4.6
1957	8.3	20	-5.8	3.6	-0.61	0	8.3	2.5	37
1958-07-01	0.70	6.4	-0.48	0.60	-0.37	0	0.70	0.23	9.3
1958-08-01	0.78	6.2	-0.48	0.41	-0.30	0	0.78	0.31	9.1
1958-09-01	0.85	5.1	-0.41	0.73	-0.23	0	0.85	0.43	8.0
1958-10-01	3.0	1.8	-2.3	0.72	-0.16	0	3.0	0.68	6.4
1958-11-01	1.9	2.3	-1.5	0.94	-0.13	0	1.9	0.38	5.3
1958	7.3	22	-5.2	3.4	-1.2	0	7.3	2.0	38
1959-07-01	1.0	6.1	-0.63	0.52	-0.098	0	1.0	0.40	9.1
1959-08-01	3.8	3.7	-3.1	1.1	-0.082	0	3.8	0.71	9.6
1959-09-01	5.3	0.14	-3.8	1.8	-0.067	0	5.3	1.5	7.4
1959-10-01	0.051	5.1	-0.0039	1.1	-0.19	0	0.051	0.047	6.9
1959-11-01	4.8	-0.59	-4.4	0.68	-0.51	0	4.8	0.34	5.3
1959	15	14	-12	5.2	-0.95	0	15	3.0	38
1960-07-01	0	7.2	0.0039	0.031	-0.28	0	0	0	9.2
1960-08-01	0.74	6.4	-0.48	0.31	-0.22	0	0.74	0.26	9.2
1960-09-01	1.5	4.4	-0.81	0.92	-0.15	0	1.5	0.73	8.1

Table IV-B.63 SC8 Monsoon Period Water Balance

Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
1960-10-01	0.27	5.0	-0.11	0.22	-0.13	0	0.27	0.17	7.0
1960-11-01	2.1	1.9	-1.5	0.41	-0.10	0	2.1	0.59	5.0
1960	4.6	25	-2.9	1.9	-0.88	0	4.6	1.7	38
1961-07-01	0	7.2	0	0.0039	-0.028	0	0	0.0039	9.3
1961-08-01	0.67	6.1	-0.33	0.21	-0.028	0	0.67	0.34	8.9
1961-09-01	3.0	3.0	-2.2	0.91	-0.024	0	3.0	0.75	8.1
1961-10-01	0.50	4.4	0.0079	1.2	-0.024	0	0.50	0.50	6.3
1961-11-01	0.45	3.6	-0.34	0.31	-0.024	0	0.45	0.11	5.4
1961	4.6	24	-2.9	2.6	-0.13	0	4.6	1.7	38
1962-07-01	0	7.0	0.0039	0.13	-0.37	0	0	0.0039	9.1
1962-08-01	0.61	6.3	-0.29	0.28	-0.28	0	0.61	0.32	8.9
1962-09-01	0.49	5.6	-0.26	0.31	-0.21	0	0.49	0.23	8.4
1962-10-01	1.2	3.7	-0.66	0.27	-0.15	0	1.2	0.57	6.6
1962-11-01	0.87	3.2	-0.46	0.51	-0.13	0	0.87	0.41	5.1
1962	3.2	26	-1.7	1.5	-1.1	0	3.2	1.5	38
1963-07-01	0	7.0	0.0039	0.047	-0.34	0	0	0.0039	9.0
1963-08-01	0.079	7.2	-0.043	0.063	-0.26	0	0.079	0.039	9.4
1963-09-01	10	-5.1	-8.8	1.3	-0.19	0	10	1.6	7.5
1963-10-01	1.0	4.1	-0.47	1.6	-1.4	0	1.0	0.58	6.6
1963-11-01	0.67	3.9	-0.44	0.89	-1.6	0	0.67	0.23	5.8
1963	12	17	-9.8	3.9	-3.8	0	12	2.5	38
1964-07-01	0	7.2	0	0.016	-0.094	0	0	0.0039	9.4
1964-08-01	1.5	5.3	-0.81	0.36	-0.079	0	1.5	0.67	8.8
1964-09-01	2.2	3.6	-1.2	1.2	-0.063	0	2.2	0.97	7.7
1964-10-01	1.6	3.0	-0.76	0.83	-0.055	0	1.6	0.82	6.1
1964-11-01	1.5	3.1	-1.3	0.69	-0.051	0	1.5	0.26	5.8
1964	6.8	22	-4.1	3.1	-0.34	0	6.8	2.7	38
1965-07-01	0.10	6.8	-0.024	0.22	-0.34	0	0.10	0.075	8.8
1965-08-01	1.4	5.2	-0.81	0.47	-0.26	0	1.4	0.64	8.9
1965-09-01	0.90	5.0	-0.52	0.86	-0.19	0	0.90	0.38	8.0
1965-10-01	1.0	3.9	-0.63	0.67	-0.14	0	1.0	0.41	6.6
1965-11-01	0.46	4.0	-0.29	0.19	-0.12	0	0.46	0.17	5.7
1965	3.9	25	-2.3	2.4	-1.0	0	3.9	1.7	38
1966-07-01	0.18	6.6	-0.067	0.059	-0.35	0	0.18	0.11	9.1
1966-08-01	0.84	5.8	-0.44	0.34	-0.26	0	0.84	0.41	8.3
1966-09-01	1.6	4.3	-1.1	0.51	-0.19	0	1.6	0.46	8.1
1966-10-01	2.7	2.2	-2.2	1.3	-0.14	0	2.7	0.46	6.5
1966-11-01	1.4	2.8	-0.97	0.94	-0.11	0	1.4	0.39	5.1
1966	6.7	22	-4.8	3.1	-1.0	0	6.7	1.8	37
1967-07-01	0.079	6.9	-0.020	0.035	-0.055	0	0.079	0.055	9.0
1967-08-01	4.0	2.4	-3.1	1.1	-0.051	0	4.0	0.83	8.3
1967-09-01	2.5	3.5	-2.0	2.0	-0.043	0	2.5	0.52	8.0
1967-10-01	0.55	4.3	-0.30	1.1	-0.039	0	0.55	0.25	6.5
1967-11-01	0.42	3.8	-0.24	0.60	-0.047	0	0.42	0.18	5.6
1967	7.5	21	-5.7	4.8	-0.24	0	7.5	1.8	37
1968-07-01	0	7.3	0	0.087	-0.42	0	0	0	9.3
1968-08-01	1.8	5.0	-1.2	0.45	-0.30	0	1.8	0.60	8.9
1968-09-01	2.5	2.8	-1.6	1.5	-0.22	0	2.5	0.92	7.3
1968-10-01	0.047	5.1	0	0.90	-0.15	0	0.047	0.051	6.9
1968-11-01	0.39	3.7	-0.23	0.28	-0.13	0	0.39	0.16	5.1
1968	4.8	24	-3.1	3.2	-1.2	0	4.8	1.7	38
1969-07-01	0	7.2	0	0.063	-0.30	0	0	0.0039	9.4
1969-08-01	0.33	6.3	-0.13	0.14	-0.24	0	0.33	0.20	8.7
1969-09-01	2.6	3.6	-1.7	1.1	-0.17	0	2.6	0.87	8.3
1969-10-01	1.2	3.8	-0.83	1.1	-0.13	0	1.2	0.42	6.8
1969-11-01	0.82	3.2	-0.58	0.47	-0.11	0	0.82	0.24	5.2
1969	5.0	24	-3.2	2.9	-0.95	0	5.0	1.7	38

Table IV-B.63 SC8 Monsoon Period Water Balance

Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
1970-07-01	0.079	7.1	-0.0079	0.094	-0.19	0	0.079	0.071	9.1
1970-08-01	1.0	5.7	-0.57	0.58	-0.16	0	1.0	0.47	9.1
1970-09-01	1.7	4.4	-1.0	0.59	-0.14	0	1.7	0.70	8.0
1970-10-01	3.3	1.7	-2.9	1.3	-0.11	0	3.3	0.48	7.0
1970-11-01	0	4.2	0.0039	0.63	-0.11	0	0	0.0039	5.3
1970	6.2	23	-4.5	3.2	-0.71	0	6.2	1.7	39
1971-07-01	0	7.0	0	0.012	-0.059	0	0	0.0039	9.0
1971-08-01	0.39	6.7	-0.19	0.17	-0.051	0	0.39	0.20	9.2
1971-09-01	4.7	0.94	-3.4	1.4	-0.043	0	4.7	1.3	7.8
1971-10-01	3.1	2.1	-2.7	1.4	-0.039	0	3.1	0.37	7.1
1971-11-01	4.2	-0.31	-3.4	0.88	-0.051	0	4.2	0.80	5.1
1971	12	16	-9.7	3.8	-0.24	0	12	2.6	38
1972-07-01	1.7	5.6	-1.3	0.61	-0.15	0	1.7	0.41	9.3
1972-08-01	0.27	7.1	-0.16	0.89	-0.13	0	0.27	0.11	9.5
1972-09-01	2.0	4.0	-1.3	1.0	-0.10	0	2.0	0.65	8.4
1972-10-01	0.67	4.4	-0.26	0.58	-0.079	0	0.67	0.40	6.8
1972-11-01	8.7	-5.0	-7.6	0.66	-0.063	0	8.7	1.1	4.9
1972	13	16	-11	3.8	-0.52	0	13	2.7	39
1973-07-01	0.87	6.2	-0.54	0.74	-0.73	0	0.87	0.33	9.0
1973-08-01	2.7	3.8	-2.2	0.72	-0.45	0	2.7	0.56	8.9
1973-09-01	1.4	4.6	-0.77	1.7	-0.30	0	1.4	0.65	8.1
1973-10-01	0	5.1	0	0.62	-0.21	0	0	0.0039	6.7
1973-11-01	0	4.1	0	0.012	-0.16	0	0	0	5.6
1973	5.0	24	-3.5	3.8	-1.9	0	5.0	1.5	38
1974-07-01	0	7.4	0	0.063	-0.13	0	0	0	9.4
1974-08-01	2.5	4.2	-1.7	0.85	-0.11	0	2.5	0.72	8.6
1974-09-01	1.4	4.5	-0.78	1.5	-0.094	0	1.4	0.60	8.3
1974-10-01	3.4	1.5	-2.5	1.2	-0.071	0	3.4	0.94	6.5
1974-11-01	3.4	0.47	-2.8	0.85	-0.059	0	3.4	0.63	5.3
1974	11	18	-7.7	4.5	-0.46	0	11	2.9	38
1975-07-01	0	7.4	0	0.32	-0.63	0	0	0	9.6
1975-08-01	2.2	3.8	-1.1	0.72	-0.42	0	2.2	1.1	8.3
1975-09-01	2.0	4.2	-1.4	1.4	-0.29	0	2.0	0.63	8.0
1975-10-01	0.87	4.1	-0.41	0.85	-0.20	0	0.87	0.50	6.8
1975-11-01	0.28	3.9	-0.091	0.079	-0.16	0	0.28	0.17	5.4
1975	5.4	23	-3.0	3.4	-1.7	0	5.4	2.4	38
1976-07-01	0	7.6	0	0.031	-0.055	0	0	0.0039	9.7
1976-08-01	2.8	3.5	-2.2	0.66	-0.051	0	2.8	0.59	8.7
1976-09-01	0.83	5.2	-0.59	1.7	-0.047	0	0.83	0.26	7.9
1976-10-01	4.0	0.59	-3.2	1.2	-0.035	0	4.0	0.78	6.4
1976-11-01	0.91	2.9	-0.55	0.86	-0.039	0	0.91	0.35	5.1
1976	8.5	20	-6.5	4.5	-0.23	0	8.5	2.0	38
1977-07-01	0.039	7.4	-0.016	0.047	-0.14	0	0.039	0.035	9.5
1977-08-01	2.6	4.5	-1.9	0.62	-0.12	0	2.6	0.66	9.4
1977-09-01	2.4	3.5	-1.9	1.8	-0.10	0	2.4	0.59	8.1
1977-10-01	3.4	1.1	-2.6	1.4	-0.075	0	3.4	0.88	6.4
1977-11-01	1.3	2.9	-0.88	0.96	-0.067	0	1.3	0.44	5.5
1977	9.8	19	-7.2	4.8	-0.50	0	9.8	2.6	39
1978-07-01	0.55	6.7	-0.41	0.19	-0.56	0	0.55	0.14	9.4
1978-08-01	0.98	5.9	-0.61	0.50	-0.35	0	0.98	0.37	9.4
1978-09-01	1.1	4.4	-0.63	1.1	-0.26	0	1.1	0.43	7.3
1978-10-01	0.39	4.4	-0.22	0.25	-0.18	0	0.39	0.17	6.6
1978-11-01	1.9	2.5	-1.5	0.20	-0.14	0	1.9	0.37	5.9
1978	4.9	24	-3.4	2.2	-1.5	0	4.9	1.5	39
1979-07-01	0.35	7.0	-0.083	0.38	-0.56	0	0.35	0.27	9.2
1979-08-01	0.16	6.8	-0.071	0.094	-0.36	0	0.16	0.091	9.3
1979-09-01	1.5	4.1	-0.81	0.74	-0.26	0	1.5	0.73	7.8

Table IV-B.63 SC8 Monsoon Period Water Balance

Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
1979-10-01	0.12	5.1	-0.020	0.14	-0.19	0	0.12	0.087	7.2
1979-11-01	0.67	3.9	-0.46	0.16	-0.14	0	0.67	0.22	5.9
1979	2.8	27	-1.4	1.5	-1.5	0	2.8	1.4	39
1980-07-01	0.16	6.9	-0.12	0.12	-0.52	0	0.16	0.039	9.0
1980-08-01	1.9	4.8	-1.2	0.68	-0.33	0	1.9	0.73	9.1
1980-09-01	1.3	4.6	-0.80	1.3	-0.24	0	1.3	0.51	7.9
1980-10-01	0.55	4.6	-0.34	0.58	-0.17	0	0.55	0.22	7.0
1980-11-01	0.039	4.3	-0.039	0.020	-0.14	0	0.039	0.028	5.9
1980	4.0	25	-2.5	2.7	-1.4	0	4.0	1.5	39
1981-07-01	0.12	7.1	-0.039	0.28	-0.29	0	0.12	0.087	9.3
1981-08-01	2.2	4.7	-1.7	0.48	-0.23	0	2.2	0.47	9.3
1981-09-01	2.6	3.5	-1.9	1.9	-0.17	0	2.6	0.76	7.9
1981-10-01	0.51	4.8	-0.35	1.1	-0.13	0	0.51	0.17	7.5
1981-11-01	0.94	2.9	-0.55	0.74	-0.11	0	0.94	0.41	5.2
1981	6.4	23	-4.5	4.5	-0.92	0	6.4	1.9	39
1982-07-01	0.039	7.1	-0.039	0.45	-0.34	0	0.039	0.0039	9.1
1982-08-01	2.6	3.7	-1.8	0.72	-0.27	0	2.6	0.85	8.8
1982-09-01	3.8	1.5	-2.9	1.7	-0.20	0	3.8	0.89	6.9
1982-10-01	3.1	2.2	-2.4	1.4	-0.15	0	3.1	0.72	6.7
1982-11-01	0.039	4.1	0	0.79	-0.28	0	0.039	0.087	5.4
1982	9.6	19	-7.1	5.1	-1.2	0	9.6	2.6	37
1983-07-01	0	7.4	0	0.17	-0.65	0	0	0	9.4
1983-08-01	2.8	4.1	-2.1	0.84	-0.41	0	2.8	0.67	9.5
1983-09-01	3.6	2.1	-2.5	1.8	-0.28	0	3.6	1.1	7.5
1983-10-01	5.1	-0.039	-4.1	1.5	-0.19	0	5.1	0.95	7.3
1983-11-01	1.1	2.5	-0.63	0.83	-0.26	0	1.1	0.50	4.9
1983	13	16	-9.4	5.1	-1.8	0	13	3.3	39
1984-07-01	1.3	5.6	-1.1	0.098	-0.20	0	1.3	0.28	9.3
1984-08-01	3.3	2.8	-2.0	1.5	-0.15	0	3.3	1.2	7.8
1984-09-01	3.3	1.9	-1.9	1.7	-0.12	0	3.3	1.4	7.4
1984-10-01	1.9	3.1	-1.3	1.5	-0.094	0	1.9	0.63	6.9
1984-11-01	1.3	2.4	-0.75	0.84	-0.083	0	1.3	0.59	4.9
1984	11	16	-7.0	5.6	-0.64	0	11	4.2	36
1985-07-01	0	6.3	0	0.043	-0.32	0	0	0	8.6
1985-08-01	1.2	5.6	-0.91	0.30	-0.24	0	1.2	0.34	8.7
1985-09-01	2.1	3.7	-1.4	1.5	-0.17	0	2.1	0.67	8.1
1985-10-01	3.5	1.1	-2.4	0.99	-0.13	0	3.5	1.1	6.6
1985-11-01	1.3	2.3	-0.59	0.80	-0.11	0	1.3	0.65	4.6
1985	8.1	19	-5.4	3.6	-0.97	0	8.1	2.8	37
1986-07-01	0	7.1	0	0.11	-0.56	0	0	0.012	9.3
1986-08-01	4.8	1.4	-3.5	1.4	-0.34	0	4.8	1.2	8.5
1986-09-01	2.0	3.6	-1.3	1.9	-0.26	0	2.0	0.74	8.0
1986-10-01	2.0	2.6	-1.5	1.4	-0.17	0	2.0	0.64	6.5
1986-11-01	1.8	2.1	-1.4	0.88	-0.15	0	1.8	0.35	4.8
1986	11	17	-7.7	5.7	-1.5	0	11	3.0	37
1987-07-01	0.24	7.0	-0.12	0.16	-0.38	0	0.24	0.11	9.0
1987-08-01	2.0	4.9	-1.8	0.86	-0.28	0	2.0	0.30	9.0
1987-09-01	2.9	2.9	-2.2	1.8	-0.20	0	2.9	0.65	8.1
1987-10-01	1.3	3.7	-0.75	1.4	-0.14	0	1.3	0.52	7.1
1987-11-01	0.35	4.2	-0.16	0.77	-0.12	0	0.35	0.17	6.0
1987	6.8	23	-5.0	5.0	-1.1	0	6.8	1.8	39
1988-07-01	0.12	6.6	-0.039	0.059	-0.28	0	0.12	0.11	8.9
1988-08-01	3.4	3.1	-2.7	0.35	-0.21	0	3.4	0.70	8.8
1988-09-01	5.9	-0.24	-4.4	1.9	-0.15	0	5.9	1.5	7.5
1988-10-01	0.31	4.7	-0.079	1.5	-0.25	0	0.31	0.23	6.9
1988-11-01	1.5	2.8	-1.1	0.78	-0.65	0	1.5	0.41	5.8
1988	11	17	-8.3	4.6	-1.5	0	11	3.0	38

Table IV-B.63 SC8 Monsoon Period Water Balance

Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
1989-07-01	0	7.2	0	0.024	-0.20	0	0	0.0039	9.2
1989-08-01	0.47	6.3	-0.28	0.12	-0.15	0	0.47	0.22	9.3
1989-09-01	0.94	4.9	-0.51	0.66	-0.13	0	0.94	0.43	7.8
1989-10-01	1.5	3.6	-1.2	1.0	-0.098	0	1.5	0.25	7.3
1989-11-01	1.1	3.1	-0.63	0.64	-0.083	0	1.1	0.46	5.9
1989	4.0	25	-2.6	2.5	-0.67	0	4.0	1.4	39
1990-07-01	0.31	6.9	-0.20	0.21	-0.028	0	0.31	0.10	9.3
1990-08-01	1.5	4.8	-0.91	0.74	-0.028	0	1.5	0.54	8.6
1990-09-01	8.9	-3.4	-8.1	1.5	-0.039	0	8.9	0.81	7.4
1990-10-01	2.8	2.0	-2.1	1.3	-1.8	0	2.8	0.76	6.8
1990-11-01	0.28	3.7	-0.079	0.88	-1.2	0	0.28	0.17	5.3
1990	14	14	-11	4.7	-3.1	0	14	2.4	37
1991-07-01	0.63	6.7	-0.28	0.46	-0.67	0	0.63	0.35	9.2
1991-08-01	1.7	5.2	-1.2	0.46	-0.42	0	1.7	0.45	9.3
1991-09-01	2.8	3.1	-1.9	1.6	-0.29	0	2.8	0.85	8.3
1991-10-01	1.6	3.3	-1.1	1.4	-0.20	0	1.6	0.52	6.5
1991-11-01	1.2	3.5	-0.98	0.67	-0.15	0	1.2	0.24	6.6
1991	7.9	22	-5.5	4.6	-1.7	0	7.9	2.4	40
1992-07-01	1.3	5.9	-0.71	1.5	-0.80	0	1.3	0.61	8.9
1992-08-01	3.3	3.5	-2.6	0.71	-0.48	0	3.3	0.72	9.3
1992-09-01	5.2	0.24	-4.2	1.9	-0.29	0	5.2	1.1	7.8
1992-10-01	0.91	4.3	-0.63	1.5	-0.39	0	0.91	0.24	6.7
1992-11-01	1.2	3.1	-0.94	0.87	-0.70	0	1.2	0.30	6.2
1992	12	17	-9.0	6.4	-2.7	0	12	3.0	39
1993-07-01	0	7.1	0	0.31	-0.47	0	0	0	9.3
1993-08-01	0.28	6.6	-0.16	0.17	-0.31	0	0.28	0.10	8.9
1993-09-01	3.4	2.2	-2.2	0.73	-0.22	0	3.4	1.2	8.5
1993-10-01	0.16	4.8	0.039	1.2	-0.16	0	0.16	0.19	6.4
1993-11-01	0.79	3.5	-0.39	0.57	-0.13	0	0.79	0.39	6.0
1993	4.6	24	-2.8	3.0	-1.3	0	4.6	1.9	39
1994-07-01	0.39	6.5	-0.24	0.48	-0.20	0	0.39	0.13	8.9
1994-08-01	1.5	5.5	-1.2	0.18	-0.15	0	1.5	0.25	9.1
1994-09-01	0.71	5.4	-0.28	1.3	-0.12	0	0.71	0.45	8.6
1994-10-01	1.9	2.9	-1.3	0.98	-0.10	0	1.9	0.64	6.6
1994-11-01	1.8	1.9	-1.5	0.63	-0.079	0	1.8	0.32	5.3
1994	6.3	22	-4.5	3.5	-0.65	0	6.3	1.8	39
1995-07-01	0	7.2	0	0.12	-0.46	0	0	0	9.0
1995-08-01	0.039	7.1	0	0.039	-0.31	0	0.039	0.035	9.3
1995-09-01	3.9	2.2	-3.0	1.1	-0.22	0	3.9	0.87	8.8
1995-10-01	2.7	2.3	-2.2	1.5	-0.16	0	2.7	0.50	7.2
1995-11-01	0	4.3	0.079	0.98	-0.13	0	0	0.087	5.8
1995	6.6	23	-5.2	3.7	-1.3	0	6.6	1.5	40
1996-07-01	0.39	6.6	-0.24	0.12	-0.15	0	0.39	0.15	9.1
1996-08-01	2.4	4.4	-1.5	1.0	-0.13	0	2.4	0.83	8.9
1996-09-01	1.3	4.6	-0.79	1.2	-0.11	0	1.3	0.48	8.1
1996-10-01	3.0	1.4	-2.0	1.1	-0.083	0	3.0	0.96	6.7
1996-11-01	0.43	4.1	-0.20	0.87	-0.071	0	0.43	0.22	6.0
1996	7.5	21	-4.8	4.3	-0.53	0	7.5	2.7	39
1997-07-01	0	7.0	0	0.039	-0.035	0	0	0.020	9.0
1997-08-01	0.12	7.3	-0.039	0.079	-0.035	0	0.12	0.055	9.9
1997-09-01	2.6	3.3	-1.8	1.2	-0.028	0	2.6	0.77	8.5
1997-10-01	0	5.4	0	0.63	-0.031	0	0	0.0039	7.3
1997-11-01	0.71	3.3	-0.47	0.16	-0.028	0	0.71	0.28	6.0
1997	3.4	26	-2.3	2.1	-0.16	0	3.4	1.1	41
1998-07-01	0	7.2	0	0.24	-0.63	0	0	0	9.2
1998-08-01	1.7	5.1	-1.2	1.0	-0.40	0	1.7	0.54	9.1
1998-09-01	2.4	3.4	-1.5	1.5	-0.28	0	2.4	0.91	8.3

Table IV-B.63 SC8 Monsoon Period Water Balance

Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
1998-10-01	1.3	3.7	-0.91	0.98	-0.19	0	1.3	0.41	7.0
1998-11-01	0	4.4	0	0.16	-0.15	0	0	0.0039	6.3
1998	5.4	24	-3.6	3.9	-1.6	0	5.4	1.9	40
1999-07-01	0	7.1	0	0.039	-0.039	0	0	0	9.1
1999-08-01	5.8	0.35	-4.4	1.2	-0.024	0	5.8	1.4	8.7
1999-09-01	2.8	2.9	-1.9	2.0	-0.020	0	2.8	0.90	7.8
1999-10-01	1.1	3.9	-0.43	1.5	-0.031	0	1.1	0.69	6.8
1999-11-01	0	4.5	0	0.83	-0.055	0	0	0.0039	6.2
1999	9.8	19	-6.8	5.5	-0.17	0	9.8	3.0	39
2000-07-01	0.83	6.3	-0.47	0.35	-0.039	0	0.83	0.34	9.5
2000-08-01	0.079	7.4	-0.039	0.12	-0.039	0	0.079	0.043	9.5
2000-09-01	0.67	5.0	-0.31	0.31	-0.028	0	0.67	0.35	8.7
2000-10-01	0	5.3	0	0.039	-0.028	0	0	0.0079	6.8
2000-11-01	5.3	-1.7	-4.5	0.35	-0.016	0	5.3	0.80	5.9
2000	6.9	22	-5.4	1.2	-0.15	0	6.9	1.5	40
2001-07-01	0.039	7.2	-0.039	0.12	-0.33	0	0.039	0.016	9.2
2001-08-01	2.7	4.3	-2.4	0.28	-0.25	0	2.7	0.34	9.7
2001-09-01	3.4	2.4	-2.4	1.9	-0.17	0	3.4	0.93	7.6
2001-10-01	0.12	4.8	-0.039	0.91	-0.22	0	0.12	0.091	7.3
2001-11-01	0.39	3.6	-0.20	0.43	-0.32	0	0.39	0.17	5.5
2001	6.6	22	-5.0	3.6	-1.3	0	6.6	1.5	39
2002-07-01	0	7.4	0	0	-0.063	0	0	0	9.2
2002-08-01	0.31	6.8	-0.16	0.16	-0.055	0	0.31	0.19	9.7
2002-09-01	0.47	5.4	-0.24	0.12	-0.051	0	0.47	0.22	8.1
2002-10-01	1.2	3.9	-0.71	0.75	-0.039	0	1.2	0.49	7.1
2002-11-01	0.12	4.0	-0.039	0.12	-0.039	0	0.12	0.059	6.1
2002	2.1	28	-1.1	1.1	-0.25	0	2.1	0.96	40
2003-07-01	0	7.9	0	0.079	-0.30	0	0	0	10.0
2003-08-01	0.51	6.7	-0.12	0.12	-0.24	0	0.51	0.37	10
2003-09-01	1.3	4.8	-0.87	0.55	-0.17	0	1.3	0.43	8.5
2003-10-01	2.0	3.3	-1.1	1.1	-0.13	0	2.0	0.82	7.4
2003-11-01	0.079	4.4	0	0.39	-0.12	0	0.079	0.063	6.0
2003	3.8	27	-2.1	2.2	-0.96	0	3.8	1.7	42
2004-07-01	0	7.8	0	0.079	-0.083	0	0	0	10
2004-08-01	0.55	6.7	-0.28	0.20	-0.087	0	0.55	0.30	9.8
2004-09-01	2.1	4.0	-1.3	0.94	-0.075	0	2.1	0.77	8.6
2004-10-01	1.5	3.9	-1.1	0.91	-0.059	0	1.5	0.41	7.9
2004-11-01	1.2	2.9	-0.83	0.67	-0.059	0	1.2	0.37	6.1
2004	5.4	25	-3.5	2.8	-0.36	0	5.4	1.8	42
2005-07-01	0.039	7.6	-0.039	0.12	-0.46	0	0.039	0.039	9.7
2005-08-01	1.4	5.8	-1.1	0.16	-0.31	0	1.4	0.31	11
2005-09-01	4.8	0.98	-3.6	1.9	-0.21	0	4.8	1.1	7.3
2005-10-01	0.079	5.0	0	1.1	-0.21	0	0.079	0.075	7.4
2005-11-01	0.39	3.8	-0.28	0.39	-0.28	0	0.39	0.16	6.1
2005	6.7	23	-5.0	3.7	-1.5	0	6.7	1.7	41
2006-07-01	0.51	7.0	-0.24	0.079	-0.063	0	0.51	0.27	10
2006-08-01	3.2	3.1	-2.5	0.47	-0.059	0	3.2	0.66	9.2
2006-09-01	2.9	3.0	-1.9	2.0	-0.051	0	2.9	1.1	7.4
2006-10-01	1.1	3.8	-0.71	1.4	-0.055	0	1.1	0.40	6.9
2006-11-01	1.1	3.0	-0.47	0.79	-0.063	0	1.1	0.54	5.9
2006	8.7	20	-5.8	4.8	-0.29	0	8.7	2.9	40

Table IV-B.64 SC8 Winter Storm Period Water Balance

Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
1951-11-01	0	2.7	-1.3	0.77	-0.11	0	1.6	0.35	5.4
1951-12-01	1.7	1.5	-1.0	0.57	-0.089	0	1.7	0.68	3.7
1952-01-01	3.0	-0.66	-2.4	0.40	-0.074	0	3.0	0.63	2.8
1952-02-01	2.8	-0.36	-2.0	0.46	-0.072	0	2.8	0.76	2.9
1952-03-01	0.50	2.4	-0.20	0.85	-0.73	0	0.50	0.30	3.8
1952	8.0	5.6	-6.9	3.0	-1.1	0	9.7	2.7	19
1952-11-01	0	4.8	0.0067	0.18	-0.18	0	0	0.0067	5.9
1952-12-01	4.3	-1.5	-3.7	0.21	-0.13	0	4.3	0.56	3.3
1953-01-01	2.0	0.26	-1.3	0.37	-0.12	0	2.0	0.66	2.7
1953-02-01	0.74	2.1	-0.37	0.55	-0.34	0	0.74	0.37	3.3
1953-03-01	0.60	2.4	-0.39	0.79	-0.50	0	0.60	0.21	3.8
1953	7.6	8.0	-5.8	2.1	-1.3	0	7.6	1.8	19
1953-11-01	0.012	4.4	0.00079	0.085	-0.13	0	0.012	0.013	5.5
1953-12-01	0.56	2.8	-0.35	0.11	-0.10	0	0.56	0.21	3.9
1954-01-01	0.19	2.3	-0.052	0.21	-0.083	0	0.19	0.14	2.9
1954-02-01	2.4	0.35	-1.9	0.31	-0.067	0	2.4	0.55	3.2
1954-03-01	0.72	2.5	-0.45	0.92	-0.054	0	0.72	0.27	4.2
1954	3.9	12	-2.7	1.6	-0.43	0	3.9	1.2	20
1954-11-01	0	4.6	0.020	0.90	-0.90	0	0	0.018	5.6
1954-12-01	0.091	3.5	-0.067	0.17	-0.56	0	0.091	0.027	4.3
1955-01-01	0.29	2.7	-0.12	0.22	-0.36	0	0.29	0.17	3.5
1955-02-01	3.4	-1.4	-2.7	0.33	-0.27	0	3.4	0.74	2.4
1955-03-01	0.28	2.5	-0.079	0.79	-0.18	0	0.28	0.20	3.5
1955	4.1	12	-2.9	2.4	-2.3	0	4.1	1.2	19
1955-11-01	0.020	4.7	-0.0039	0.36	-0.20	0	0.020	0.015	5.9
1955-12-01	0.96	2.1	-0.67	0.27	-0.21	0	0.96	0.29	3.7
1956-01-01	1.4	1.3	-1.1	0.45	-0.18	0	1.4	0.31	3.1
1956-02-01	2.6	0.30	-2.2	0.55	-0.14	0	2.6	0.43	3.5
1956-03-01	2.0	0.49	-1.3	0.72	-0.12	0	2.0	0.69	3.1
1956	7.0	9.0	-5.2	2.4	-0.85	0	7.0	1.7	19
1956-11-01	0.53	3.6	-0.31	0.15	-0.10	0	0.53	0.22	5.2
1956-12-01	0	3.2	0.059	0.23	-0.078	0	0	0.058	3.8
1957-01-01	0.47	2.2	-0.29	0.17	-0.065	0	0.47	0.18	3.1
1957-02-01	4.8	-2.7	-4.2	0.34	-0.056	0	4.8	0.63	2.7
1957-03-01	0.73	2.1	-0.17	0.83	-0.049	0	0.73	0.56	3.4
1957	6.5	8.4	-4.9	1.7	-0.35	0	6.5	1.7	18
1957-11-01	3.2	0.31	-2.5	0.59	-0.081	0	3.2	0.73	4.6
1957-12-01	0.61	2.0	-0.14	0.47	-0.064	0	0.61	0.47	3.0
1958-01-01	1.1	1.6	-0.60	0.45	-0.059	0	1.1	0.46	3.2
1958-02-01	0.012	2.9	0.020	0.53	-0.060	0	0.012	0.032	3.3
1958-03-01	2.5	-0.039	-2.0	0.71	-0.059	0	2.5	0.55	3.2
1958	7.4	6.8	-5.2	2.8	-0.32	0	7.4	2.2	17
1958-11-01	1.9	2.3	-1.5	0.94	-0.13	0	1.9	0.38	5.3
1958-12-01	1.5	1.6	-1.2	0.54	-0.12	0	1.5	0.32	3.6
1959-01-01	0	3.0	0.035	0.50	-0.14	0	0	0.034	3.6
1959-02-01	0.21	2.8	-0.091	0.56	-0.15	0	0.21	0.12	3.5
1959-03-01	1.4	1.1	-0.97	0.67	-0.14	0	1.4	0.45	3.3
1959	5.1	11	-3.8	3.2	-0.68	0	5.1	1.3	19
1959-11-01	4.8	-0.59	-4.4	0.68	-0.51	0	4.8	0.34	5.3
1959-12-01	0.38	2.8	0.079	0.57	-0.53	0	0.38	0.46	3.7
1960-01-01	5.2	-3.0	-4.6	0.37	-0.92	0	5.2	0.61	2.7
1960-02-01	4.2	-2.0	-3.5	0.41	-2.5	0	4.2	0.70	2.5

Table IV-B.64 SC8 Winter Storm Period Water Balance

Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
1960-03-01	0.87	1.8	-0.43	0.76	-3.2	0	0.87	0.44	3.4
1960	15	-1.1	-13	2.8	-7.6	0	15	2.5	18
1960-11-01	2.1	1.9	-1.5	0.41	-0.10	0	2.1	0.59	5.0
1960-12-01	0.48	2.6	-0.20	0.49	-0.083	0	0.48	0.28	3.7
1961-01-01	0.47	2.2	-0.23	0.41	-0.067	0	0.47	0.24	3.3
1961-02-01	0.70	1.9	-0.41	0.44	-0.059	0	0.70	0.29	3.2
1961-03-01	0.23	2.9	-0.063	0.57	-0.051	0	0.23	0.17	3.7
1961	3.9	12	-2.4	2.3	-0.36	0	3.9	1.6	19
1961-11-01	0.45	3.6	-0.34	0.31	-0.024	0	0.45	0.11	5.4
1961-12-01	0.32	2.4	-0.024	0.18	-0.020	0	0.32	0.30	3.1
1962-01-01	3.9	-1.7	-3.3	0.29	-0.016	0	3.9	0.59	2.6
1962-02-01	3.2	-0.94	-2.7	0.43	-0.016	0	3.2	0.49	2.7
1962-03-01	1.7	0.71	-1.1	0.69	-0.11	0	1.7	0.54	3.2
1962	9.5	4.1	-7.5	1.9	-0.18	0	9.5	2.0	17
1962-11-01	0.87	3.2	-0.46	0.51	-0.13	0	0.87	0.41	5.1
1962-12-01	0.83	2.5	-0.58	0.38	-0.10	0	0.83	0.25	3.9
1963-01-01	1.8	0.87	-1.2	0.33	-0.083	0	1.8	0.60	3.3
1963-02-01	2.1	0.47	-1.6	0.48	-0.067	0	2.1	0.52	3.0
1963-03-01	4.2	-1.2	-3.9	0.88	-0.055	0	4.2	0.29	3.8
1963	9.8	5.9	-7.8	2.6	-0.43	0	9.8	2.1	19
1963-11-01	0.67	3.9	-0.44	0.89	-1.6	0	0.67	0.23	5.8
1963-12-01	2.4	0.67	-1.5	0.55	-0.77	0	2.4	0.80	3.6
1964-01-01	0.34	2.5	-0.083	0.47	-0.48	0	0.34	0.26	3.3
1964-02-01	0.58	2.0	-0.36	0.47	-0.31	0	0.58	0.22	3.0
1964-03-01	0	2.8	0.024	0.77	-0.22	0	0	0.024	3.6
1964	3.9	12	-2.4	3.1	-3.4	0	3.9	1.5	19
1964-11-01	1.5	3.1	-1.3	0.69	-0.051	0	1.5	0.26	5.8
1964-12-01	1.4	1.6	-1.00	0.47	-0.043	0	1.4	0.39	3.6
1965-01-01	1.7	0.91	-1.3	0.41	-0.039	0	1.7	0.39	3.3
1965-02-01	2.9	-0.51	-2.2	0.46	-0.031	0	2.9	0.66	2.6
1965-03-01	2.8	0	-2.5	0.81	-0.083	0	2.8	0.35	3.4
1965	10	5.1	-8.3	2.9	-0.25	0	10	2.1	19
1965-11-01	0.46	4.0	-0.29	0.19	-0.12	0	0.46	0.17	5.7
1965-12-01	2.4	0.87	-2.0	0.19	-0.094	0	2.4	0.33	3.9
1966-01-01	10	-8.3	-9.6	0.34	-0.11	0	10	0.80	2.7
1966-02-01	1.8	0.51	-1.3	0.45	-4.2	0	1.8	0.52	2.8
1966-03-01	2.0	0.51	-1.5	0.74	-2.0	0	2.0	0.50	3.1
1966	17	-2.4	-15	1.9	-6.6	0	17	2.3	18
1966-11-01	1.4	2.8	-0.97	0.94	-0.11	0	1.4	0.39	5.1
1966-12-01	0.87	2.3	-0.61	0.56	-0.094	0	0.87	0.26	4.1
1967-01-01	1.3	1.3	-0.80	0.43	-0.083	0	1.3	0.45	3.1
1967-02-01	0.79	1.9	-0.50	0.51	-0.079	0	0.79	0.29	2.9
1967-03-01	0	3.1	0.039	0.85	-0.071	0	0	0.039	3.9
1967	4.3	11	-2.8	3.3	-0.44	0	4.3	1.4	19
1967-11-01	0.42	3.8	-0.24	0.60	-0.047	0	0.42	0.18	5.6
1967-12-01	2.1	1.0	-1.7	0.17	-0.055	0	2.1	0.38	3.9
1968-01-01	10	-8.0	-9.4	0.34	-0.45	0	10	0.60	2.3
1968-02-01	0.63	2.0	-0.31	0.50	-4.8	0	0.63	0.31	3.1
1968-03-01	1.9	1.0	-1.5	0.85	-1.4	0	1.9	0.49	3.4
1968	15	-0.12	-13	2.5	-6.8	0	15	2.0	18
1968-11-01	0.39	3.7	-0.23	0.28	-0.13	0	0.39	0.16	5.1
1968-12-01	2.5	0.43	-2.0	0.35	-0.098	0	2.5	0.56	3.8

Table IV-B.64 SC8 Winter Storm Period Water Balance

Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
1969-01-01	3.3	-0.87	-2.8	0.40	-0.083	0	3.3	0.51	2.9
1969-02-01	4.2	-1.9	-3.5	0.43	-0.079	0	4.2	0.65	2.6
1969-03-01	1.4	1.1	-0.69	0.72	-1.1	0	1.4	0.68	3.0
1969	12	2.5	-9.2	2.2	-1.5	0	12	2.5	17
1969-11-01	0.82	3.2	-0.58	0.47	-0.11	0	0.82	0.24	5.2
1969-12-01	2.1	0.71	-1.5	0.39	-0.087	0	2.1	0.61	3.6
1970-01-01	1.3	1.5	-0.78	0.45	-0.075	0	1.3	0.55	3.4
1970-02-01	0.50	2.2	-0.12	0.52	-0.059	0	0.50	0.38	2.9
1970-03-01	0.41	2.4	-0.13	0.83	-0.051	0	0.41	0.28	3.6
1970	5.2	10	-3.1	2.7	-0.38	0	5.2	2.1	19
1970-11-01	0	4.2	0.0039	0.63	-0.11	0	0	0.0039	5.3
1970-12-01	0.65	2.5	-0.54	0.26	-0.11	0	0.65	0.11	3.9
1971-01-01	1.2	1.2	-0.63	0.35	-0.13	0	1.2	0.58	3.0
1971-02-01	0.85	2.1	-0.58	0.57	-0.12	0	0.85	0.27	3.1
1971-03-01	0.82	2.1	-0.54	0.78	-0.094	0	0.82	0.28	4.0
1971	3.5	12	-2.3	2.6	-0.56	0	3.5	1.2	19
1971-11-01	4.2	-0.31	-3.4	0.88	-0.051	0	4.2	0.80	5.1
1971-12-01	0.039	3.1	0.063	0.56	-0.62	0	0.039	0.10	3.7
1972-01-01	2.1	0.35	-1.4	0.41	-0.81	0	2.1	0.70	3.0
1972-02-01	0	2.8	0.12	0.53	-0.57	0	0	0.12	3.2
1972-03-01	0	3.5	0.0039	0.79	-0.38	0	0	0.0039	4.1
1972	6.4	9.4	-4.6	3.2	-2.4	0	6.4	1.7	19
1972-11-01	8.7	-5.0	-7.6	0.66	-0.063	0	8.7	1.1	4.9
1972-12-01	2.8	-0.20	-2.1	0.48	-1.3	0	2.8	0.75	3.2
1973-01-01	3.0	-0.67	-2.4	0.38	-2.0	0	3.0	0.56	2.9
1973-02-01	0.74	1.6	-0.055	0.44	-1.5	0	0.74	0.68	2.6
1973-03-01	3.2	-0.67	-2.4	0.73	-1.1	0	3.2	0.81	2.8
1973	18	-5.0	-15	2.7	-5.9	0	18	3.9	16
1973-11-01	0	4.1	0	0.012	-0.16	0	0	0	5.6
1973-12-01	1.8	1.3	-1.2	0.14	-0.12	0	1.8	0.54	3.9
1974-01-01	0.098	2.8	0.047	0.39	-0.11	0	0.098	0.15	3.3
1974-02-01	3.4	-0.98	-2.7	0.44	-0.079	0	3.4	0.72	2.9
1974-03-01	0.12	2.8	-0.035	0.83	-0.067	0	0.12	0.11	3.3
1974	5.4	10.0	-3.9	1.8	-0.53	0	5.4	1.5	19
1974-11-01	3.4	0.47	-2.8	0.85	-0.059	0	3.4	0.63	5.3
1974-12-01	0.12	3.1	0.21	0.57	-0.055	0	0.12	0.33	3.6
1975-01-01	0.75	1.6	-0.41	0.40	-0.063	0	0.75	0.34	3.1
1975-02-01	0.43	1.9	-0.19	0.43	-0.10	0	0.43	0.22	2.6
1975-03-01	3.9	-1.2	-3.4	0.80	-0.11	0	3.9	0.53	3.0
1975	8.6	5.9	-6.6	3.0	-0.39	0	8.6	2.0	18
1975-11-01	0.28	3.9	-0.091	0.079	-0.16	0	0.28	0.17	5.4
1975-12-01	2.2	1.2	-2.0	0.059	-0.12	0	2.2	0.16	4.2
1976-01-01	1.2	1.3	-0.61	0.42	-0.10	0	1.2	0.65	3.1
1976-02-01	0.24	2.3	-0.016	0.48	-0.083	0	0.24	0.21	2.9
1976-03-01	1.6	1.4	-1.1	0.86	-0.063	0	1.6	0.53	3.4
1976	5.5	10	-3.8	1.9	-0.52	0	5.5	1.7	19
1976-11-01	0.91	2.9	-0.55	0.86	-0.039	0	0.91	0.35	5.1
1976-12-01	0.55	2.6	-0.28	0.57	-0.031	0	0.55	0.28	4.0
1977-01-01	1.8	0.79	-1.6	0.43	-0.035	0	1.8	0.26	3.1
1977-02-01	1.9	0.43	-1.1	0.44	-0.031	0	1.9	0.83	2.5
1977-03-01	0.079	3.3	-0.012	0.93	-0.043	0	0.079	0.071	4.1
1977	5.2	10.0	-3.5	3.2	-0.18	0	5.2	1.8	19

Table IV-B.64 SC8 Winter Storm Period Water Balance

Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
1977-11-01	1.3	2.9	-0.88	0.96	-0.067	0	1.3	0.44	5.5
1977-12-01	0.35	3.0	-0.051	0.59	-0.067	0	0.35	0.30	3.9
1978-01-01	0.63	2.0	-0.47	0.43	-0.075	0	0.63	0.19	3.5
1978-02-01	6.4	-4.2	-5.7	0.42	-0.075	0	6.4	0.70	2.5
1978-03-01	5.5	-3.0	-4.7	0.72	-0.94	0	5.5	0.83	2.9
1978	14	0.75	-12	3.1	-1.2	0	14	2.5	18
1978-11-01	1.9	2.5	-1.5	0.20	-0.14	0	1.9	0.37	5.9
1978-12-01	5.7	-2.8	-5.0	0.46	-0.098	0	5.7	0.65	3.7
1979-01-01	6.5	-4.3	-5.9	0.37	-0.86	0	6.5	0.67	2.5
1979-02-01	6.0	-4.2	-4.9	0.35	-4.4	0	6.0	1.1	2.3
1979-03-01	1.3	1.9	-0.83	0.90	-4.2	0	1.3	0.41	3.3
1979	21	-7.0	-18	2.3	-9.7	0	21	3.2	18
1979-11-01	0.67	3.9	-0.46	0.16	-0.14	0	0.67	0.22	5.9
1979-12-01	0.67	2.5	-0.32	0.33	-0.11	0	0.67	0.36	4.0
1980-01-01	0.71	2.2	-0.44	0.28	-0.098	0	0.71	0.26	3.7
1980-02-01	4.1	-2.1	-3.3	0.30	-0.071	0	4.1	0.82	2.4
1980-03-01	6.1	-3.6	-5.5	0.70	-0.051	0	6.1	0.49	2.4
1980	12	2.9	-10	1.8	-0.48	0	12	2.1	18
1980-11-01	0.039	4.3	-0.039	0.020	-0.14	0	0.039	0.028	5.9
1980-12-01	0	3.5	0	0.0079	-0.11	0	0	0.0039	4.3
1981-01-01	0.59	2.6	-0.28	0.19	-0.094	0	0.59	0.28	3.5
1981-02-01	1.3	1.5	-0.98	0.32	-0.067	0	1.3	0.34	3.5
1981-03-01	2.7	0.39	-2.2	0.83	-0.055	0	2.7	0.39	3.6
1981	4.6	12	-3.5	1.4	-0.46	0	4.6	1.0	21
1981-11-01	0.94	2.9	-0.55	0.74	-0.11	0	0.94	0.41	5.2
1981-12-01	2.3	1.0	-2.2	0.25	-0.087	0	2.3	0.11	4.4
1982-01-01	0	3.0	0.20	0.50	-0.071	0	0	0.18	3.3
1982-02-01	2.7	-0.43	-1.8	0.43	-0.059	0	2.7	0.91	2.8
1982-03-01	1.8	0.91	-1.1	0.79	-0.047	0	1.8	0.69	3.1
1982	7.8	7.3	-5.6	2.7	-0.37	0	7.8	2.3	19
1982-11-01	0.039	4.1	0	0.79	-0.28	0	0.039	0.087	5.4
1982-12-01	3.3	-0.79	-2.6	0.37	-0.41	0	3.3	0.64	3.6
1983-01-01	1.7	0.67	-0.94	0.39	-0.34	0	1.7	0.79	2.7
1983-02-01	1.9	0.79	-1.6	0.52	-0.40	0	1.9	0.27	3.2
1983-03-01	2.3	0.28	-1.9	0.74	-0.68	0	2.3	0.39	2.8
1983	9.3	5.0	-7.1	2.8	-2.1	0	9.3	2.2	18
1983-11-01	1.1	2.5	-0.63	0.83	-0.26	0	1.1	0.50	4.9
1983-12-01	2.0	0.98	-1.6	0.53	-0.84	0	2.0	0.43	3.8
1984-01-01	2.5	-0.24	-2.0	0.37	-0.75	0	2.5	0.49	2.7
1984-02-01	0.51	2.2	-0.079	0.52	-0.93	0	0.51	0.40	2.8
1984-03-01	0	3.1	0	0.78	-0.71	0	0	0.0079	3.9
1984	6.1	8.6	-4.3	3.0	-3.5	0	6.1	1.8	18
1984-11-01	1.3	2.4	-0.75	0.84	-0.083	0	1.3	0.59	4.9
1984-12-01	2.1	1.1	-1.9	0.53	-0.059	0	2.1	0.24	4.2
1985-01-01	5.8	-3.6	-5.0	0.35	-0.055	0	5.8	0.80	2.5
1985-02-01	2.7	-0.71	-2.0	0.37	-1.1	0	2.7	0.70	2.5
1985-03-01	1.7	0.55	-1.1	0.64	-1.8	0	1.7	0.56	2.5
1985	14	-0.35	-11	2.7	-3.2	0	14	2.9	17
1985-11-01	1.3	2.3	-0.59	0.80	-0.11	0	1.3	0.65	4.6
1985-12-01	2.8	-0.079	-2.3	0.48	-0.087	0	2.8	0.46	3.9
1986-01-01	0.87	2.0	-0.31	0.49	-0.071	0	0.87	0.55	3.1
1986-02-01	0.079	3.1	-0.079	0.58	-0.13	0	0.079	0.024	3.6

Table IV-B.64 SC8 Winter Storm Period Water Balance

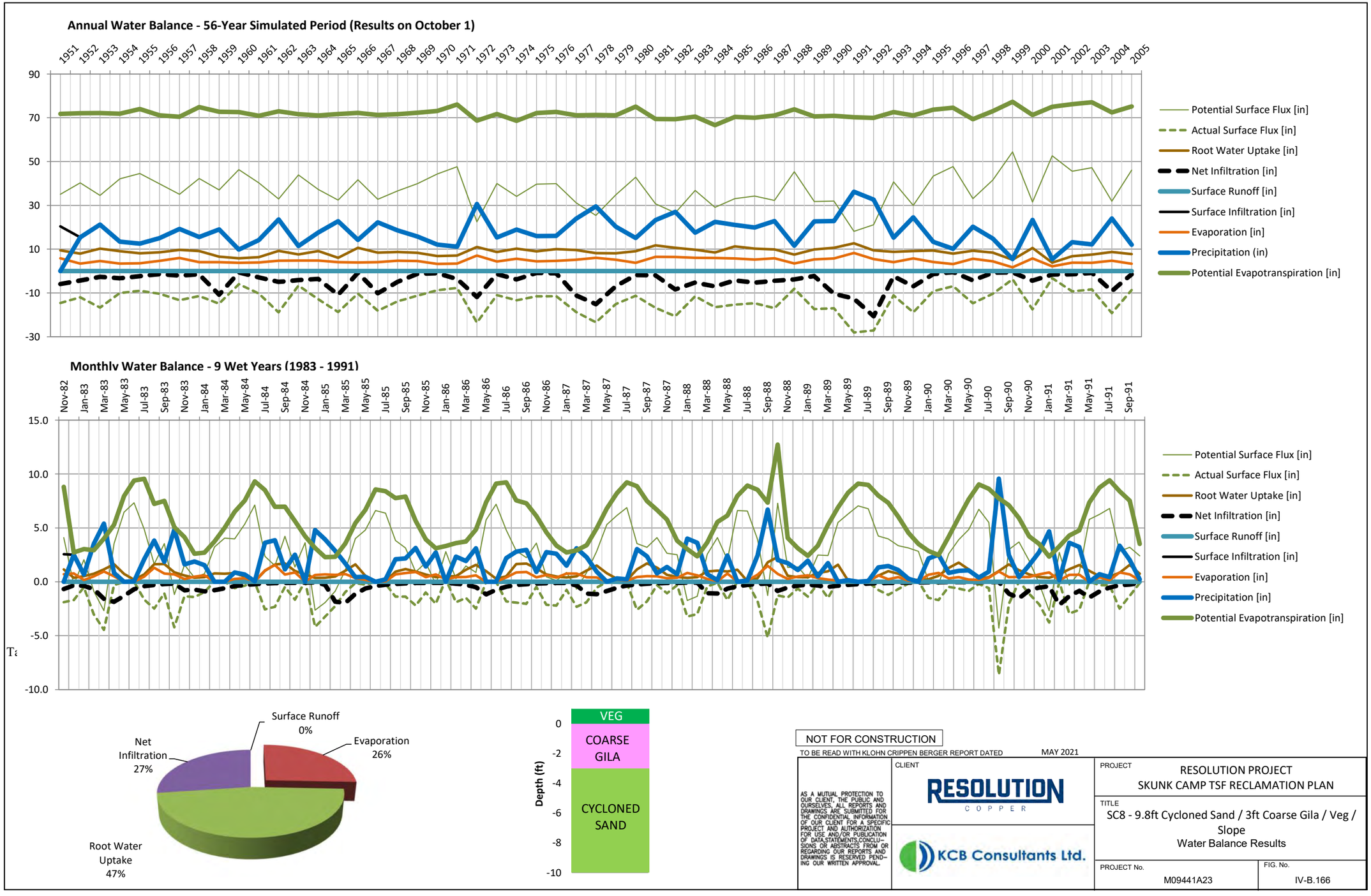
Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
1986-03-01	3.1	-0.63	-2.4	0.71	-0.24	0	3.1	0.73	2.9
1986	8.1	6.7	-5.6	3.1	-0.64	0	8.1	2.4	18
1986-11-01	1.8	2.1	-1.4	0.88	-0.15	0	1.8	0.35	4.8
1986-12-01	1.4	1.4	-0.79	0.50	-0.12	0	1.4	0.65	3.7
1987-01-01	3.0	-0.59	-2.4	0.40	-0.11	0	3.0	0.67	2.9
1987-02-01	3.4	-0.83	-2.6	0.47	-0.26	0	3.4	0.74	2.8
1987-03-01	2.7	-0.20	-2.2	0.72	-0.87	0	2.7	0.50	3.5
1987	12	1.9	-9.3	3.0	-1.5	0	12	2.9	18
1987-11-01	0.35	4.2	-0.16	0.77	-0.12	0	0.35	0.17	6.0
1987-12-01	1.7	1.3	-1.2	0.42	-0.094	0	1.7	0.54	3.8
1988-01-01	4.0	-1.5	-3.2	0.37	-0.071	0	4.0	0.80	3.2
1988-02-01	3.6	-1.3	-3.0	0.43	-0.071	0	3.6	0.61	2.5
1988-03-01	0.71	2.4	-0.43	0.90	-0.97	0	0.71	0.27	3.4
1988	10	5.1	-8.0	2.9	-1.3	0	10	2.4	19
1988-11-01	1.5	2.8	-1.1	0.78	-0.65	0	1.5	0.41	5.8
1988-12-01	1.7	1.3	-1.4	0.54	-0.52	0	1.7	0.34	4.0
1989-01-01	1.1	1.4	-0.55	0.42	-0.35	0	1.1	0.56	3.1
1989-02-01	2.2	0.12	-1.6	0.44	-0.27	0	2.2	0.58	2.7
1989-03-01	0.28	2.8	-0.12	0.87	-0.35	0	0.28	0.21	3.1
1989	6.8	8.3	-4.7	3.1	-2.1	0	6.8	2.1	19
1989-11-01	1.1	3.1	-0.63	0.64	-0.083	0	1.1	0.46	5.9
1989-12-01	0.28	3.0	-0.16	0.21	-0.067	0	0.28	0.13	4.2
1990-01-01	0.87	2.0	-0.71	0.13	-0.059	0	0.87	0.14	3.4
1990-02-01	1.3	1.0	-0.71	0.37	-0.047	0	1.3	0.60	2.7
1990-03-01	2.5	-0.079	-1.7	0.70	-0.039	0	2.5	0.83	2.6
1990	6.1	9.0	-3.9	2.1	-0.30	0	6.1	2.2	19
1990-11-01	0.28	3.7	-0.079	0.88	-1.2	0	0.28	0.17	5.3
1990-12-01	2.2	0.94	-1.4	0.56	-0.67	0	2.2	0.81	4.2
1991-01-01	4.9	-2.7	-4.1	0.36	-0.46	0	4.9	0.72	3.0
1991-02-01	1.8	0.75	-1.3	0.48	-1.2	0	1.8	0.45	2.6
1991-03-01	0.94	2.3	-0.59	0.93	-1.8	0	0.94	0.37	3.3
1991	10	5.0	-7.5	3.2	-5.4	0	10	2.5	18
1991-11-01	1.2	3.5	-0.98	0.67	-0.15	0	1.2	0.24	6.6
1991-12-01	3.2	-0.43	-2.7	0.48	-0.11	0	3.2	0.51	3.6
1992-01-01	4.0	-1.7	-3.1	0.37	-0.098	0	4.0	0.82	2.9
1992-02-01	3.0	-0.71	-2.1	0.43	-1.0	0	3.0	0.89	2.2
1992-03-01	2.8	-0.12	-2.1	0.76	-1.9	0	2.8	0.63	3.0
1992	14	0.55	-11	2.7	-3.3	0	14	3.1	18
1992-11-01	1.2	3.1	-0.94	0.87	-0.70	0	1.2	0.30	6.2
1992-12-01	0.47	2.2	-0.16	0.50	-0.51	0	0.47	0.33	3.6
1993-01-01	6.4	-4.3	-5.5	0.33	-0.32	0	6.4	0.87	2.5
1993-02-01	11	-9.4	-10	0.34	-6.2	0	11	0.84	1.9
1993-03-01	6.0	-4.1	-5.1	0.56	-5.2	0	6.0	0.86	2.7
1993	25	-12	-22	2.6	-13	0	25	3.2	17
1993-11-01	0.79	3.5	-0.39	0.57	-0.13	0	0.79	0.39	6.0
1993-12-01	4.2	-1.4	-3.9	0.36	-0.094	0	4.2	0.31	3.6
1994-01-01	0.28	2.3	-0.079	0.44	-0.14	0	0.28	0.20	3.4
1994-02-01	0.28	2.6	-0.12	0.53	-0.32	0	0.28	0.14	3.3
1994-03-01	2.6	-0.12	-2.1	0.72	-0.29	0	2.6	0.52	3.0
1994	8.2	6.9	-6.6	2.6	-0.98	0	8.2	1.6	19
1994-11-01	1.8	1.9	-1.5	0.63	-0.079	0	1.8	0.32	5.3
1994-12-01	3.4	-0.83	-2.6	0.43	-0.055	0	3.4	0.81	3.5

Table IV-B.64 SC8 Winter Storm Period Water Balance

Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
1995-01-01	2.7	-0.31	-2.1	0.39	-0.067	0	2.7	0.60	3.0
1995-02-01	3.7	-1.3	-2.8	0.43	-0.60	0	3.7	0.83	2.6
1995-03-01	2.7	0	-2.2	0.79	-1.5	0	2.7	0.47	3.1
1995	14	-0.47	-11	2.7	-2.3	0	14	3.0	18
1995-11-01	0	4.3	0.079	0.98	-0.13	0	0	0.087	5.8
1995-12-01	1.3	1.8	-0.91	0.55	-0.10	0	1.3	0.41	3.9
1996-01-01	0.91	1.9	-0.63	0.43	-0.094	0	0.91	0.25	3.5
1996-02-01	0	2.9	0	0.55	-0.091	0	0	0.043	3.3
1996-03-01	3.2	-0.24	-2.7	0.83	-0.071	0	3.2	0.48	3.6
1996	5.4	11	-4.1	3.3	-0.49	0	5.4	1.3	20
1996-11-01	0.43	4.1	-0.20	0.87	-0.071	0	0.43	0.22	6.0
1996-12-01	1.2	1.9	-0.98	0.43	-0.055	0	1.2	0.28	3.8
1997-01-01	0	2.6	0.24	0.43	-0.059	0	0	0.22	3.2
1997-02-01	2.8	-0.47	-2.2	0.43	-0.039	0	2.8	0.67	2.7
1997-03-01	1.7	1.3	-1.4	0.83	-0.035	0	1.7	0.24	3.4
1997	6.2	9.4	-4.6	3.0	-0.26	0	6.2	1.6	19
1997-11-01	0.71	3.3	-0.47	0.16	-0.028	0	0.71	0.28	6.0
1997-12-01	0.83	2.1	-0.47	0.31	-0.024	0	0.83	0.35	3.7
1998-01-01	2.7	-0.39	-1.9	0.31	-0.020	0	2.7	0.77	3.1
1998-02-01	0.39	2.2	-0.039	0.47	-0.024	0	0.39	0.35	2.4
1998-03-01	6.4	-4.5	-5.4	0.55	-0.0079	0	6.4	0.92	2.9
1998	11	2.7	-8.3	1.8	-0.10	0	11	2.7	18
1998-11-01	0	4.4	0	0.16	-0.15	0	0	0.0039	6.3
1998-12-01	1.1	2.1	-0.91	0.079	-0.11	0	1.1	0.16	3.9
1999-01-01	0.71	2.0	-0.20	0.35	-0.098	0	0.71	0.54	3.3
1999-02-01	0.079	2.9	0	0.43	-0.083	0	0.079	0.039	3.6
1999-03-01	0.20	3.2	-0.12	0.39	-0.059	0	0.20	0.091	3.6
1999	2.0	15	-1.2	1.4	-0.51	0	2.0	0.83	21
1999-11-01	0	4.5	0	0.83	-0.055	0	0	0.0039	6.2
1999-12-01	0	3.7	0	0.28	-0.067	0	0	0	4.7
2000-01-01	0.039	2.8	-0.039	0.12	-0.075	0	0.039	0.0039	3.7
2000-02-01	0.28	2.9	-0.16	0.24	-0.071	0	0.28	0.13	3.4
2000-03-01	0.71	2.5	-0.35	0.16	-0.055	0	0.71	0.34	3.9
2000	1.0	16	-0.55	1.6	-0.32	0	1.0	0.48	22
2000-11-01	5.3	-1.5	-4.5	0.35	-0.016	0	5.3	0.80	6.1
2000-12-01	2.1	0.59	-1.5	0.47	-0.028	0	2.1	0.63	2.9
2001-01-01	0.12	2.9	-0.039	0.47	-0.53	0	0.12	0.079	3.7
2001-02-01	3.4	-1.1	-2.6	0.43	-0.68	0	3.4	0.81	3.0
2001-03-01	1.7	0.91	-1.1	0.75	-0.46	0	1.7	0.65	2.8
2001	13	1.8	-9.7	2.5	-1.7	0	13	3.0	19
2001-11-01	0.39	3.7	-0.20	0.47	-0.33	0	0.39	0.17	5.7
2001-12-01	0.28	3.1	-0.16	0.24	-0.28	0	0.28	0.15	4.6
2002-01-01	1.9	0.55	-1.3	0.31	-0.22	0	1.9	0.53	2.9
2002-02-01	0.24	2.5	-0.12	0.51	-0.17	0	0.24	0.094	3.2
2002-03-01	0	3.3	0.039	0.71	-0.13	0	0	0.051	3.4
2002	2.8	13	-1.7	2.2	-1.1	0	2.8	1.00	20
2002-11-01	0.12	4.2	-0.039	0.12	-0.039	0	0.12	0.059	6.3
2002-12-01	0.87	2.6	-0.71	0.12	-0.031	0	0.87	0.15	4.4
2003-01-01	0.98	1.5	-0.43	0.24	-0.024	0	0.98	0.57	3.4
2003-02-01	0.35	3.0	-0.079	0.47	-0.028	0	0.35	0.28	3.1
2003-03-01	5.0	-2.4	-4.5	0.59	-0.016	0	5.0	0.42	3.6
2003	7.3	8.8	-5.7	1.5	-0.14	0	7.3	1.5	21

Table IV-B.64 SC8 Winter Storm Period Water Balance

Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
2003-11-01	0.079	4.6	0	0.43	-0.12	0	0.079	0.067	6.3
2003-12-01	0.87	2.0	-0.59	0.24	-0.091	0	0.87	0.26	3.9
2004-01-01	0.98	1.9	-0.63	0.31	-0.075	0	0.98	0.38	3.9
2004-02-01	1.4	0.94	-0.91	0.35	-0.059	0	1.4	0.53	3.1
2004-03-01	0.71	2.0	-0.28	0.63	-0.051	0	0.71	0.39	3.0
2004	4.1	11	-2.4	2.0	-0.40	0	4.1	1.6	20
2004-11-01	1.2	3.1	-0.83	0.71	-0.059	0	1.2	0.37	6.4
2004-12-01	0.63	2.0	-0.31	0.31	-0.051	0	0.63	0.34	3.5
2005-01-01	2.8	-0.079	-2.2	0.39	-0.039	0	2.8	0.49	3.0
2005-02-01	4.2	-2.0	-3.6	0.43	-0.063	0	4.2	0.58	2.7
2005-03-01	7.3	-5.2	-6.5	0.59	-1.3	0	7.3	0.89	2.7
2005	16	-2.2	-14	2.4	-1.5	0	16	2.7	18
2005-11-01	0.39	4.0	-0.28	0.43	-0.29	0	0.39	0.16	6.4
2005-12-01	0	3.5	0	0.24	-0.25	0	0	0.0039	4.4
2006-01-01	0	2.8	0	0.079	-0.20	0	0	0	3.5
2006-02-01	0	3.4	0	0.039	-0.16	0	0	0.0039	3.8
2006-03-01	0.12	3.3	-0.039	0.12	-0.12	0	0.12	0.055	4.1
2006	0.51	17	-0.31	0.91	-1.0	0	0.51	0.22	22


Annual Water Balance - 56-Year Simulated Period (Results on October 1)
Potential Surface Flux [in]
Actual Surface Flux [in]
Root Water Uptake [in]
Net Infiltration [in]
Surface Runoff [in]
Surface Infiltration [in]
Evaporation [in]
Precipitation (in)
Potential Evapotranspiration [in]
Monthly Water Balance - 9 Wet Years (1983 - 1991)
Potential Surface Flux [in]
Actual Surface Flux [in]
Root Water Uptake [in]
Net Infiltration [in]
Surface Runoff [in]
Surface Infiltration [in]
Evaporation [in]
Precipitation [in]
Potential Evapotranspiration [in]
Surface Runoff 0%
Evaporation 26%
Net Infiltration 27%
Root Water Uptake 47%
VEG
COARSE GILA
CYCLONED SAND
Depth (ft)
NOT FOR CONSTRUCTION
TO BE READ WITH KLOHN CRIPPEN BERGER REPORT DATED MAY 2021
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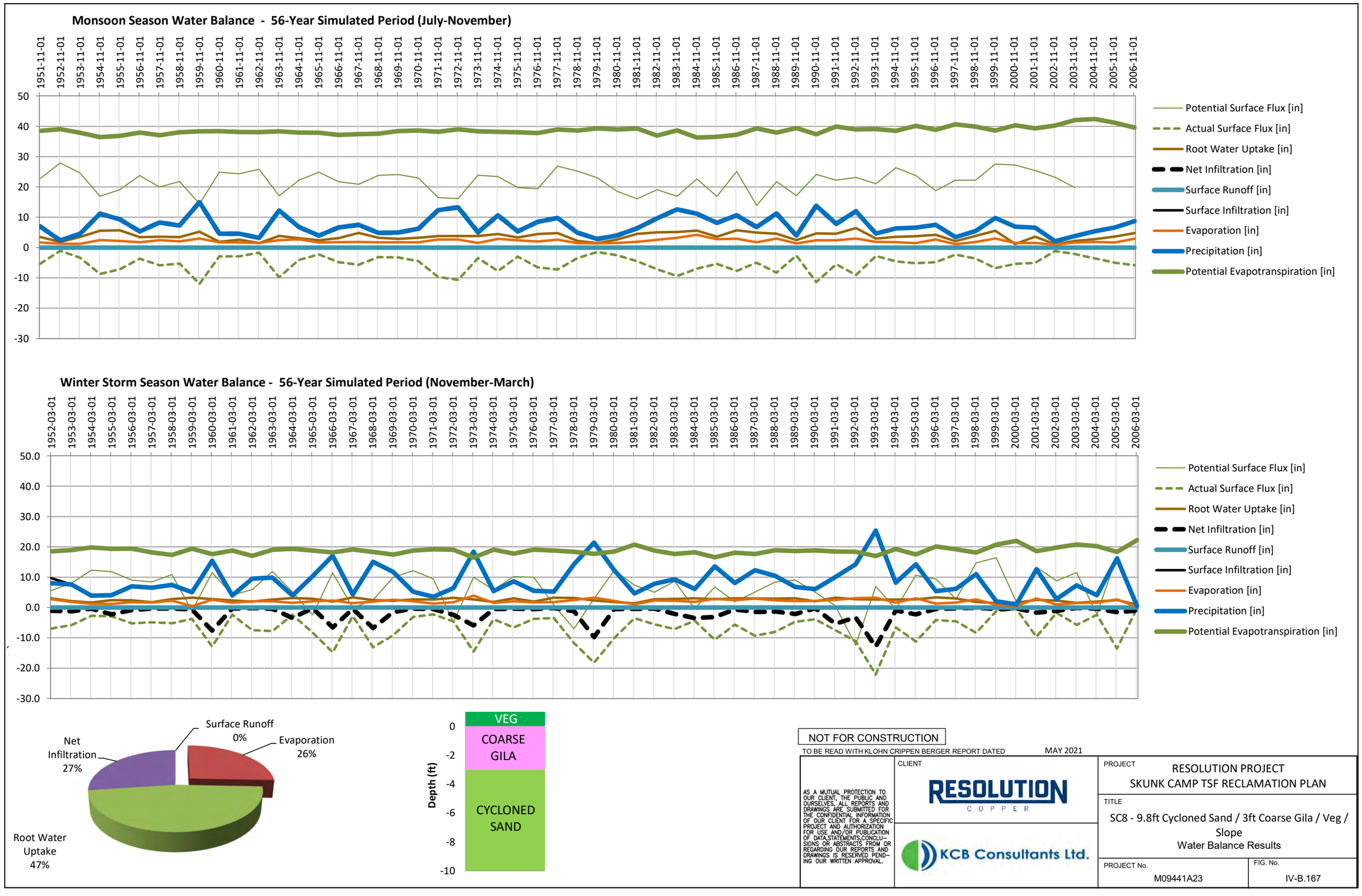
CLIENT
RESOLUTION COPPER
KCB Consultants Ltd.
PROJECT
RESOLUTION PROJECT
SKUNK CAMP TSF RECLAMATION PLAN
TITLE
SC8 - 9.8ft Cycloned Sand / 3ft Coarse Gila / Veg / Slope
Water Balance Results
PROJECT No.
M09441A23
FIG. No.
IV-B.166


Monsoon Season Water Balance - 56-Year Simulated Period (July-November)
Potential Surface Flux [in]
Actual Surface Flux [in]
Root Water Uptake [in]
Net Infiltration [in]
Surface Runoff [in]
Surface Infiltration [in]
Evaporation [in]
Precipitation [in]
Potential Evapotranspiration [in]
Winter Storm Season Water Balance - 56-Year Simulated Period (November-March)
Surface Runoff 0%
Evaporation 26%
Net Infiltration 27%
Root Water Uptake 47%
VEG
COARSE GILA
CYCLONED SAND
Depth (ft)
NOT FOR CONSTRUCTION
TO BE READ WITH KLOHN CRIPPEN BERGER REPORT DATED MAY 2021
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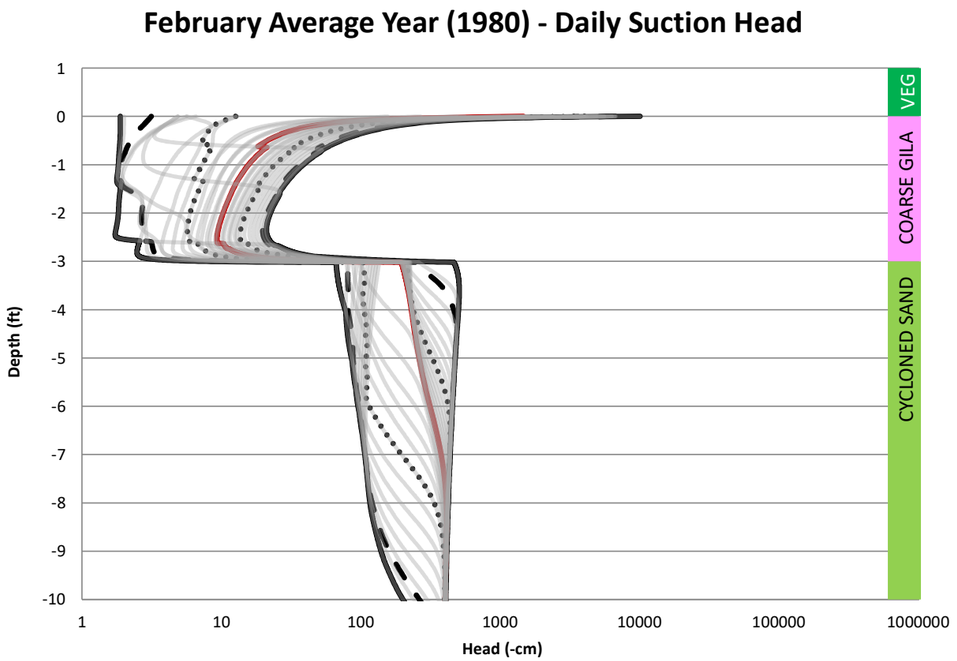
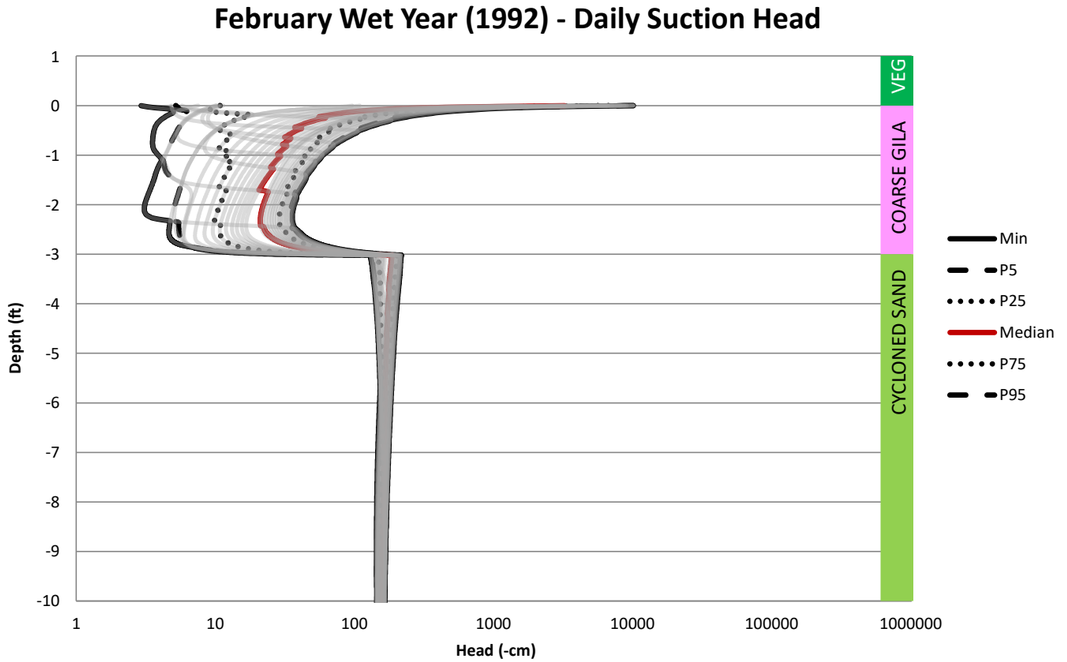
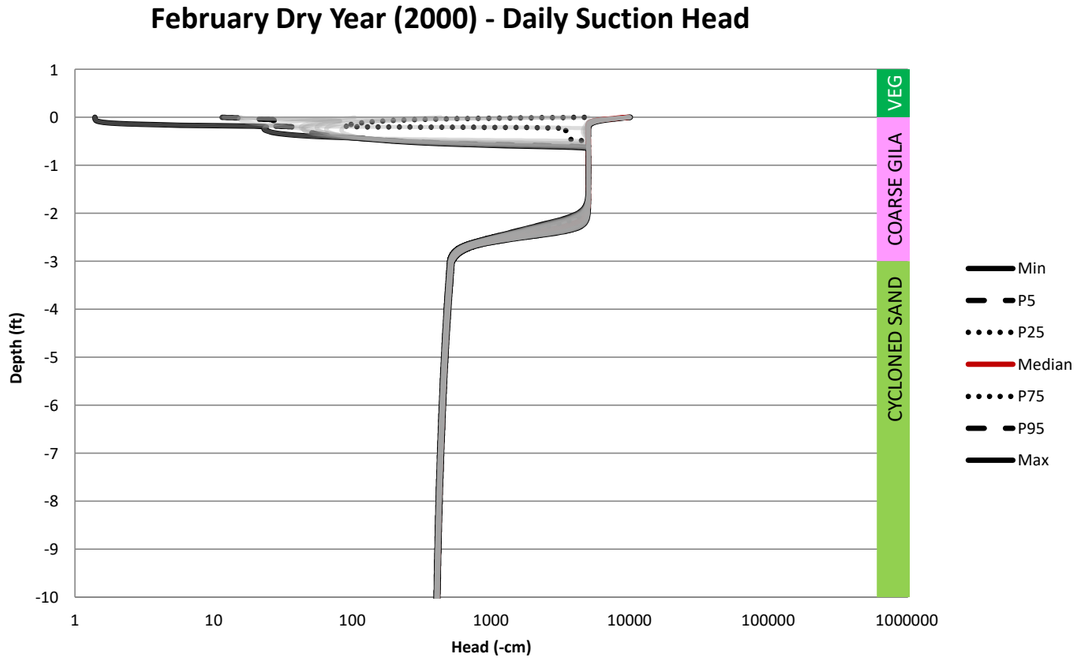
CLIENT
RESOLUTION COPPER
KCB Consultants Ltd.
PROJECT
RESOLUTION PROJECT
SKUNK CAMP TSF RECLAMATION PLAN
TITLE
SC8 - 9.8ft Cycloned Sand / 3ft Coarse Gila / Veg / Slope
Water Balance Results
PROJECT No.
M09441A23
FIG. No.
IV-B.167







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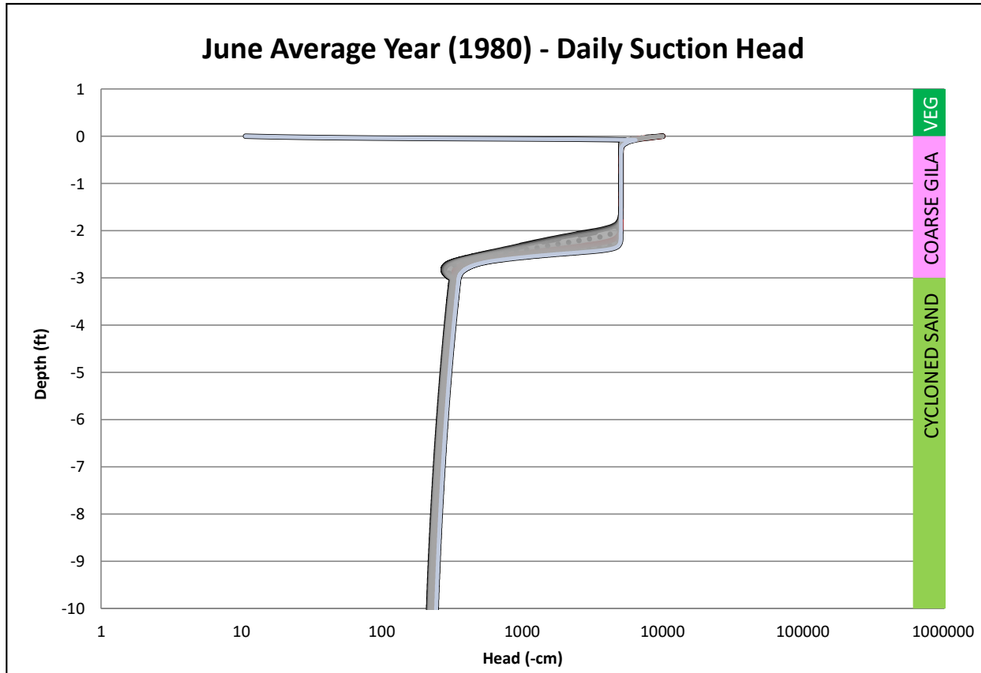
KCB Consultants Ltd.

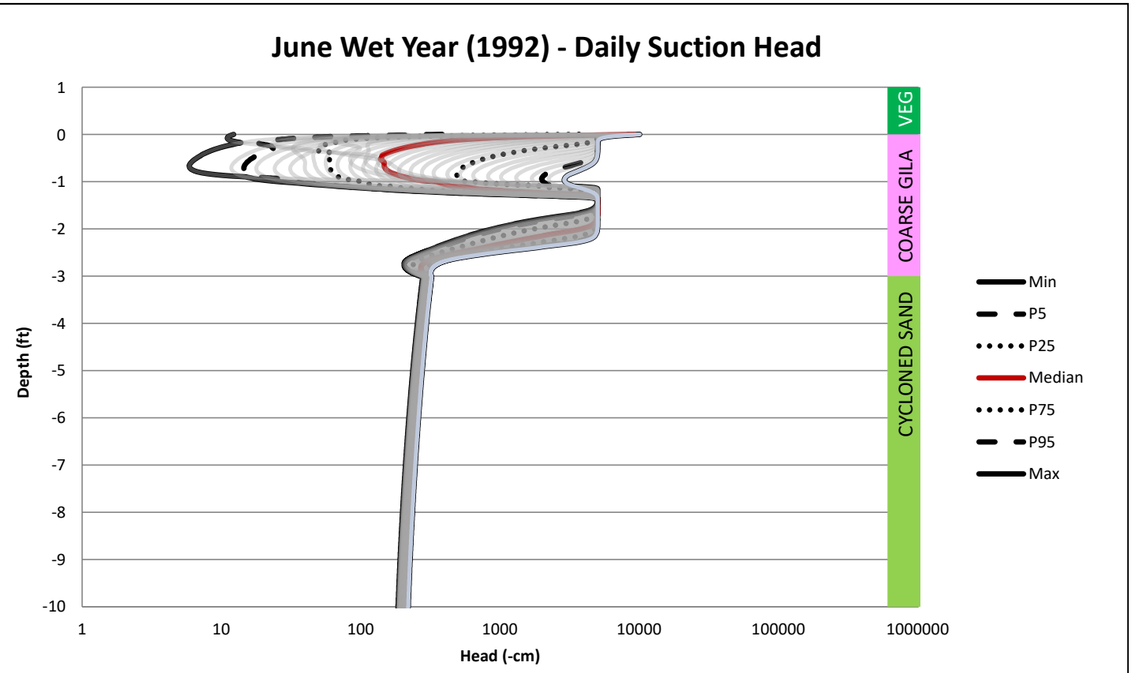
PROJECT: RESOLUTION PROJECT
SKUNK CAMP TSF RECLAMATION PLAN

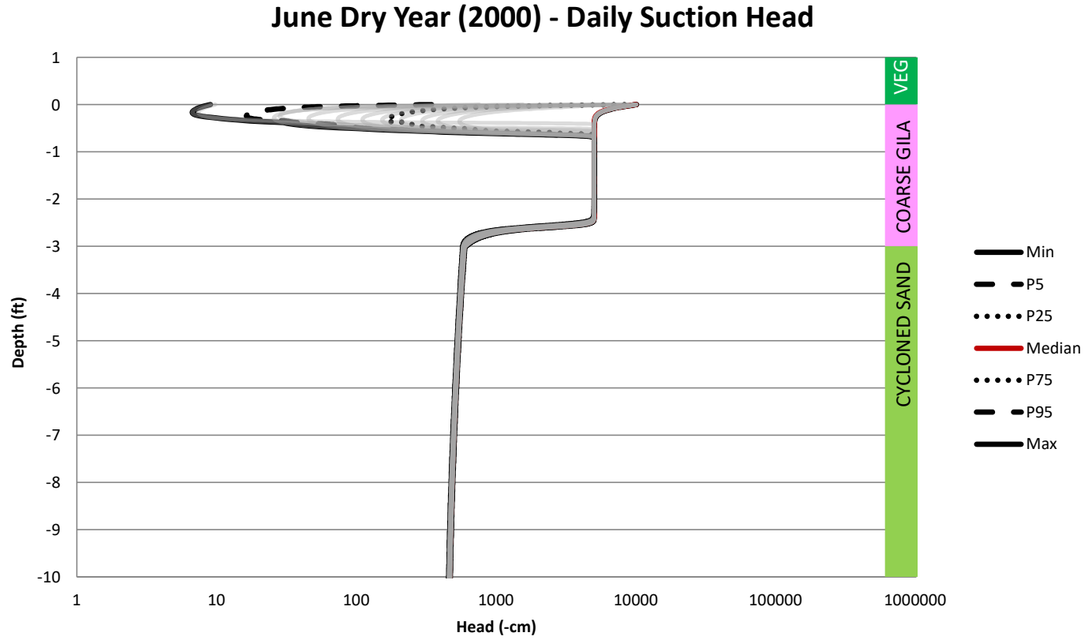
TITLE: SC8 - 9.8ft Cycloned Sand / 3ft Coarse Gila / Veg / Slope
Suction Profiles - Winter (February)

PROJECT No. M09441A23

FIG. No. IV-B-168







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CLIENT: RESOLUTION COPPER

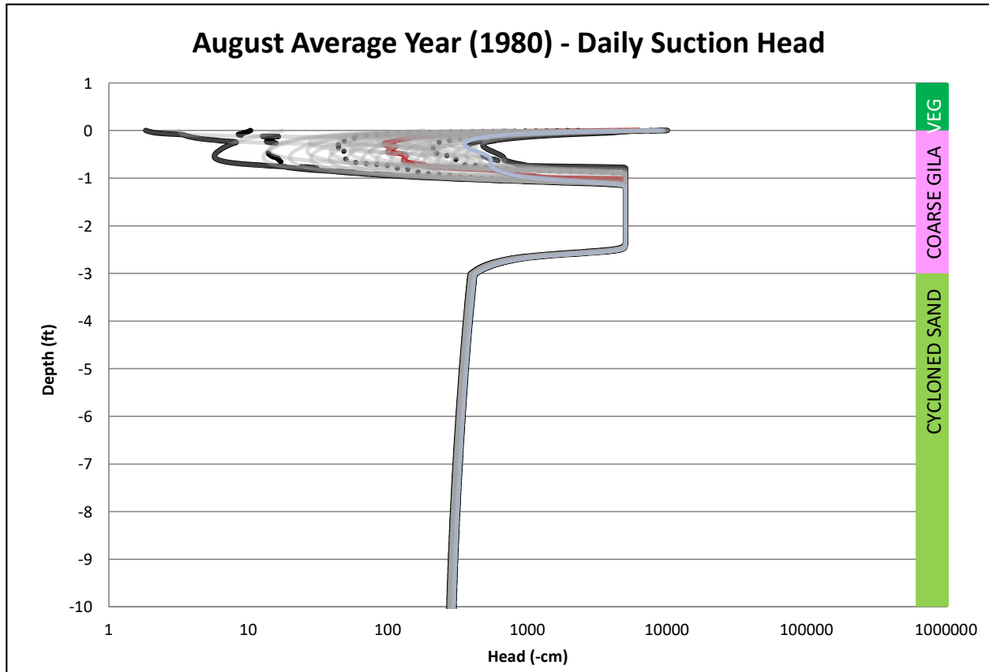
KCB Consultants Ltd.

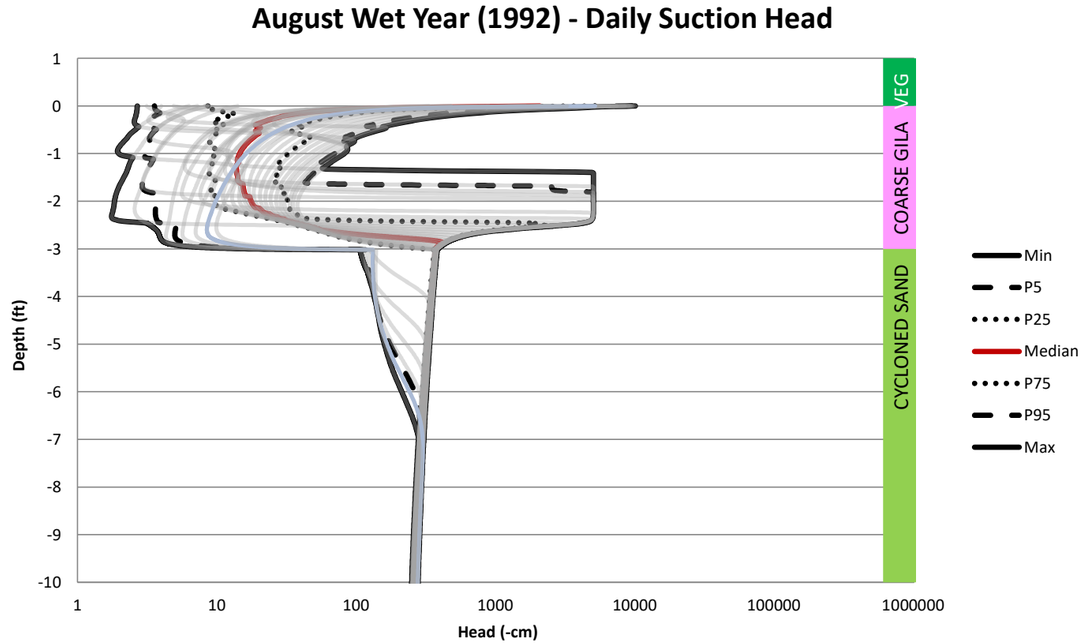
PROJECT: RESOLUTION PROJECT
SKUNK CAMP TSF RECLAMATION PLAN

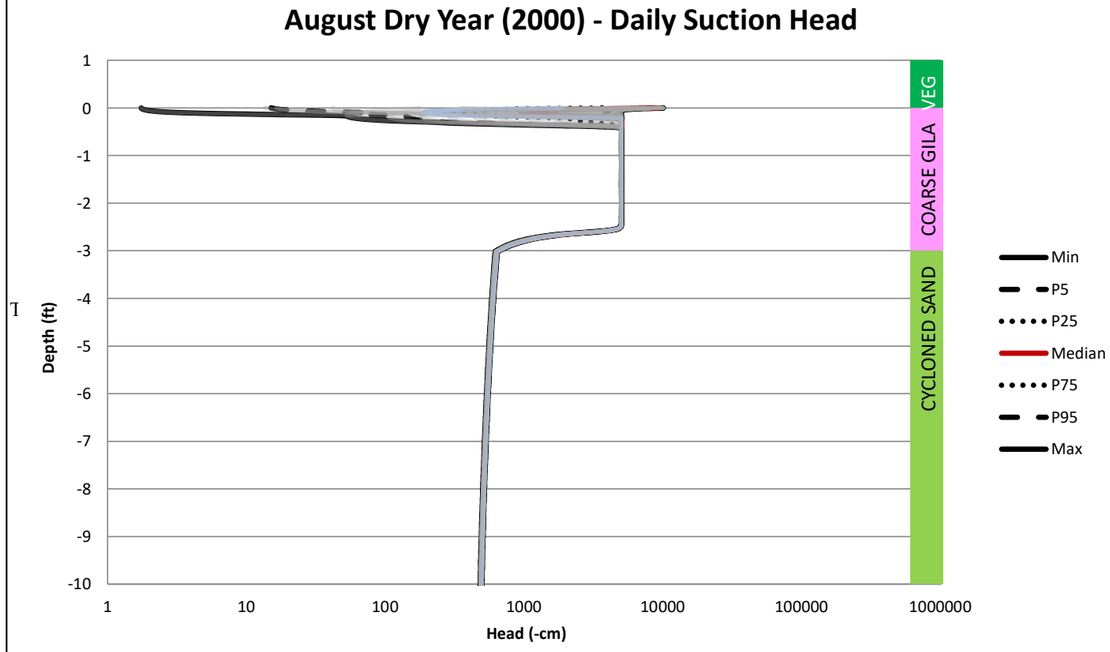
TITLE: SC8 - 9.8ft Cycloned Sand / 3ft Coarse Gila / Veg / Slope
Suction Profiles - Dry Season (June)

PROJECT No. M09441A23

FIG. No. IV-B.169







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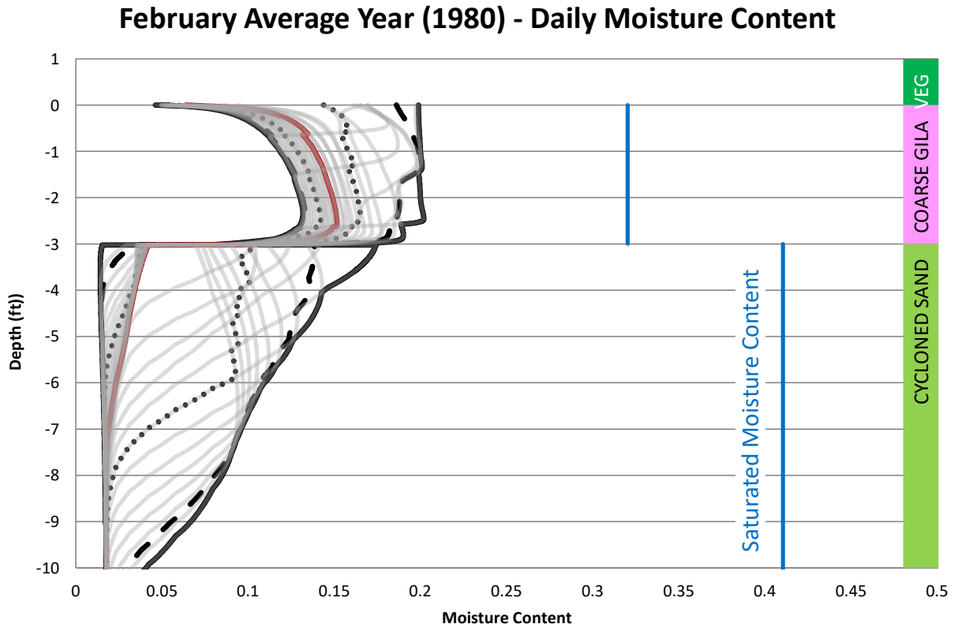
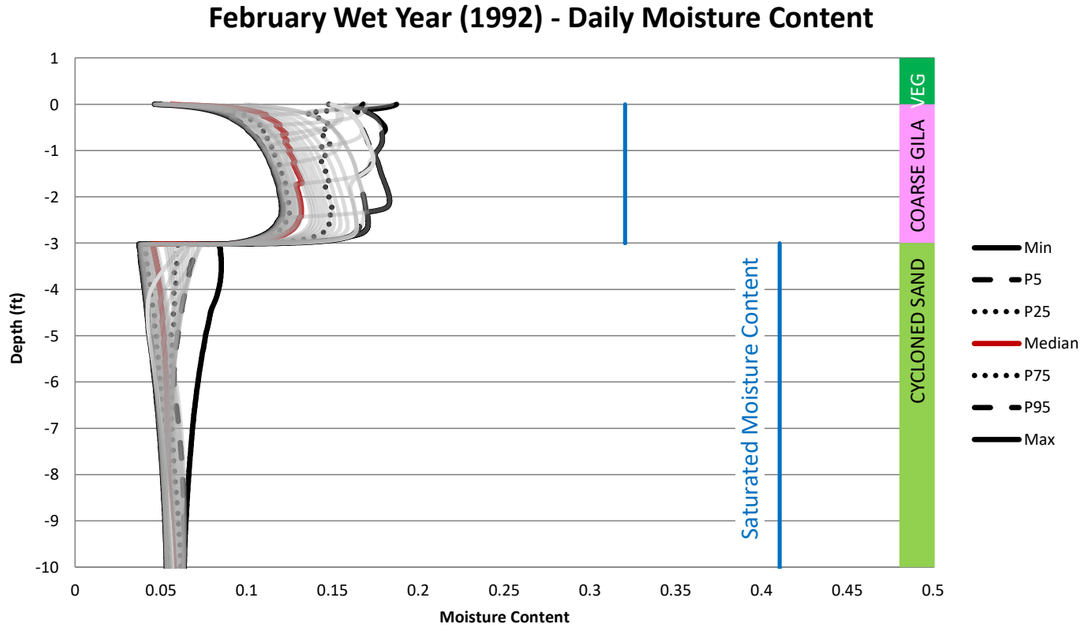
PROJECT: RESOLUTION PROJECT
SKUNK CAMP TSF RECLAMATION PLAN

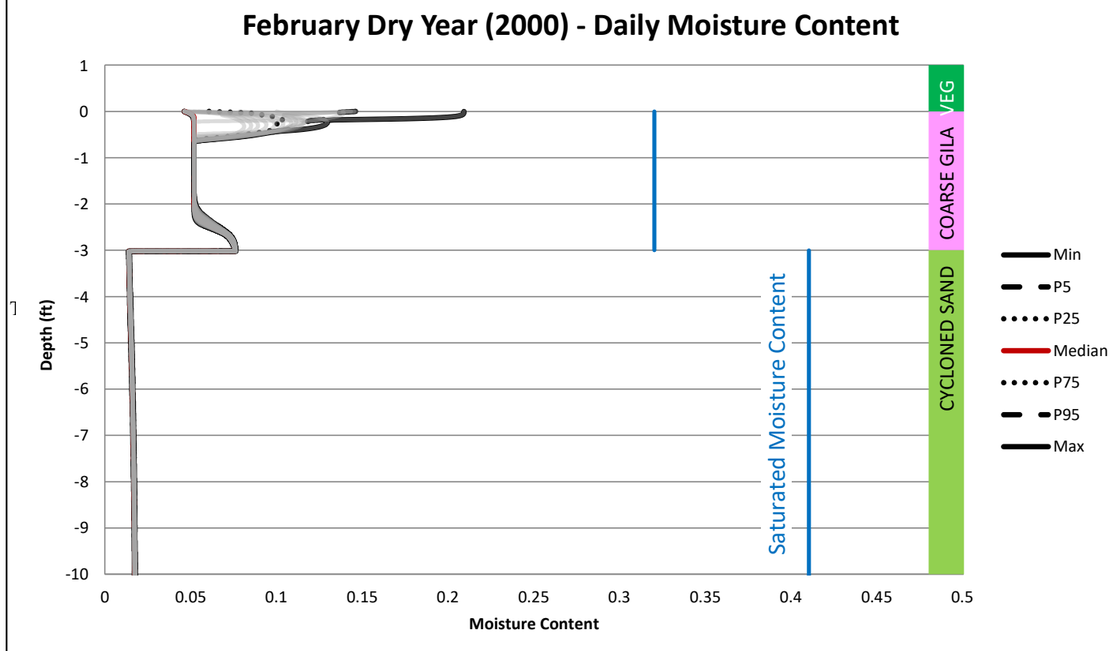
TITLE: SC8 - 9.8ft Cycloned Sand / 3ft Coarse Gila / Veg / Slope
Suction Profiles - Summer Monsoon (August)

PROJECT No. M09441A23

FIG. No. IV-B.170







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CLIENT: RESOLUTION COPPER

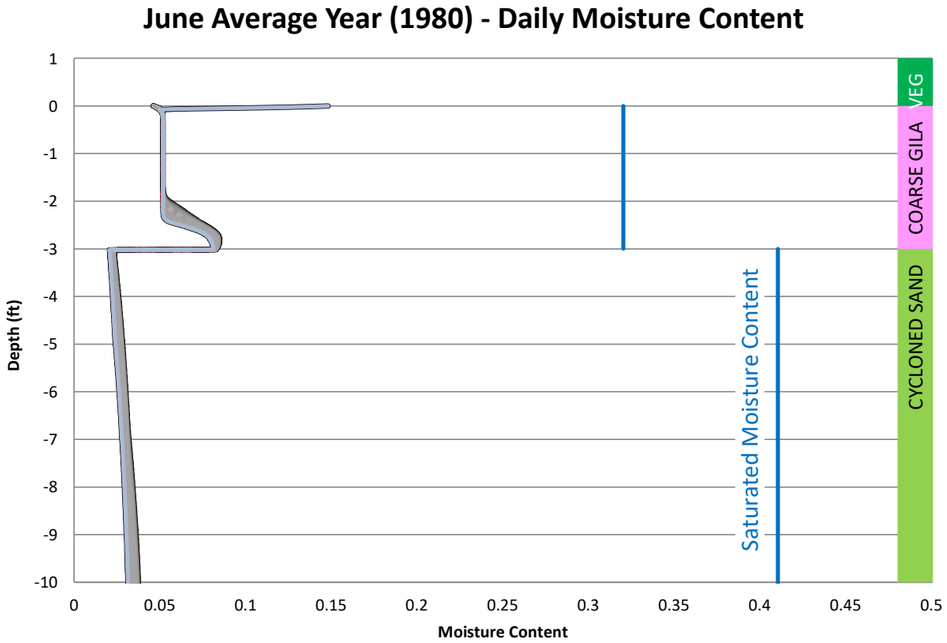
KCB Consultants Ltd.

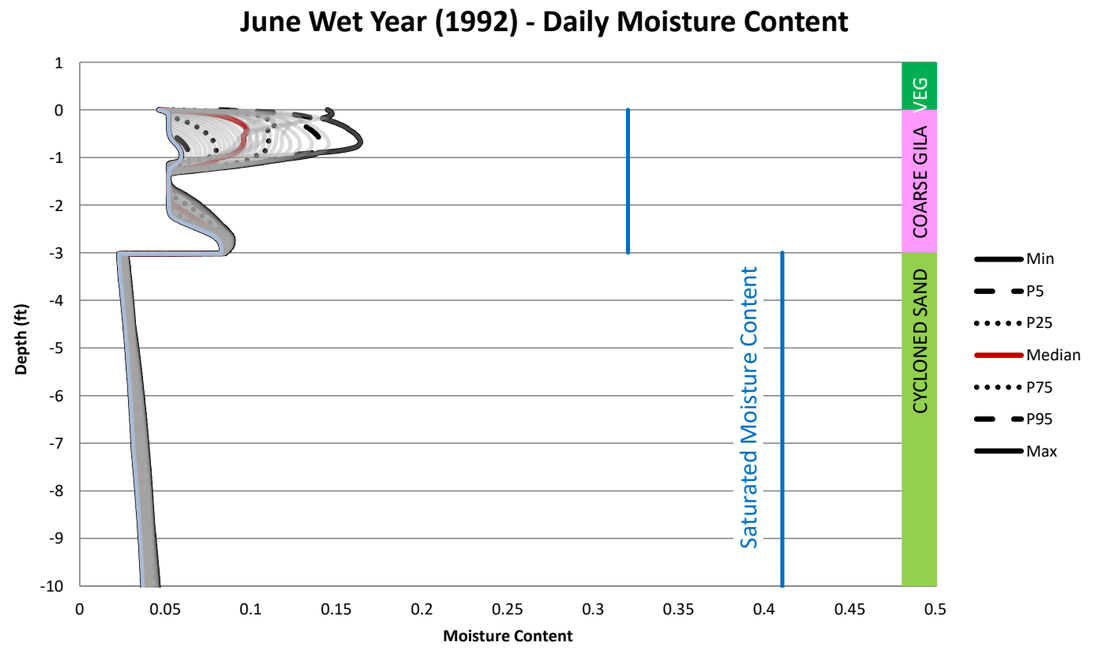
PROJECT: RESOLUTION PROJECT
SKUNK CAMP TSF RECLAMATION PLAN

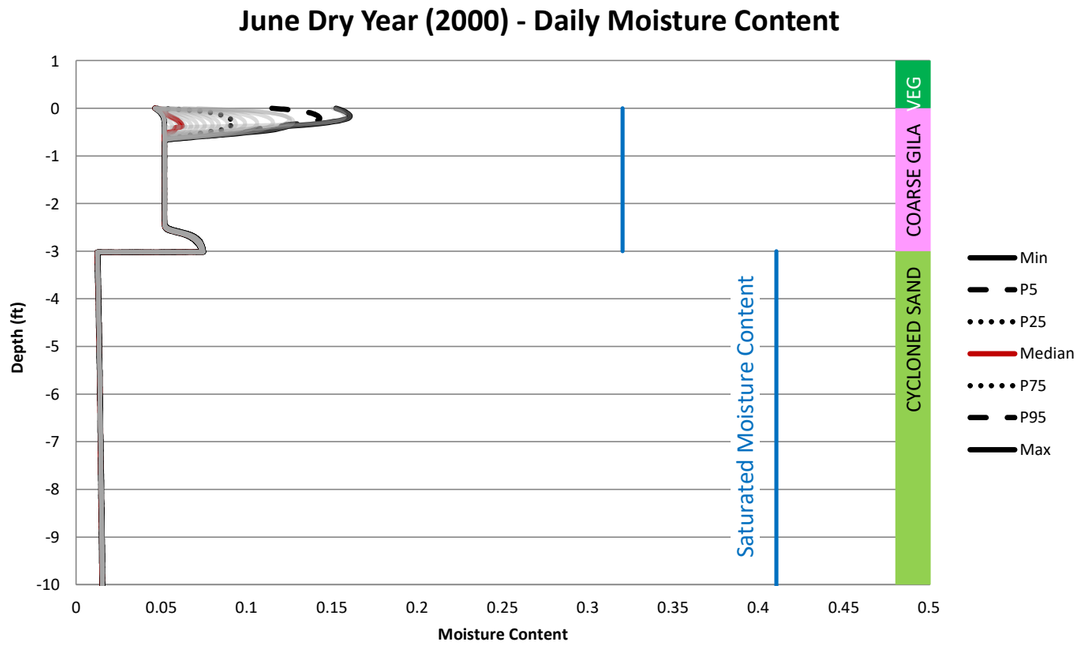
TITLE: SC8 - 9.8ft Cycloned Sand / 3ft Coarse Gila / Veg / Slope
Moisture Content - Winter (February)

PROJECT No. M09441A23

FIG. No. IV-B.171







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CLIENT: RESOLUTION COPPER

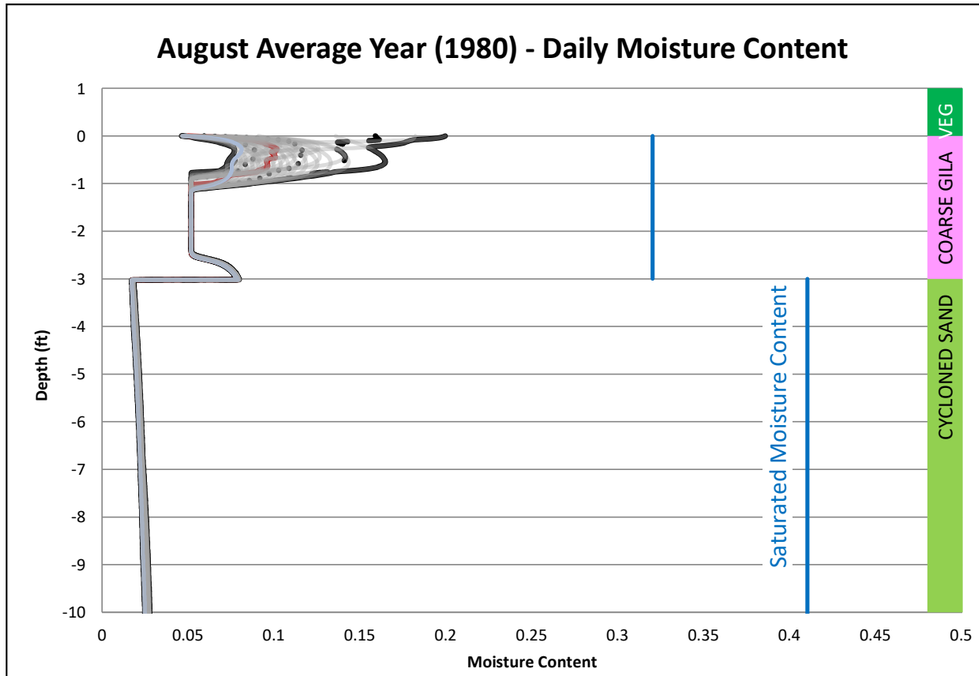
KCB Consultants Ltd.

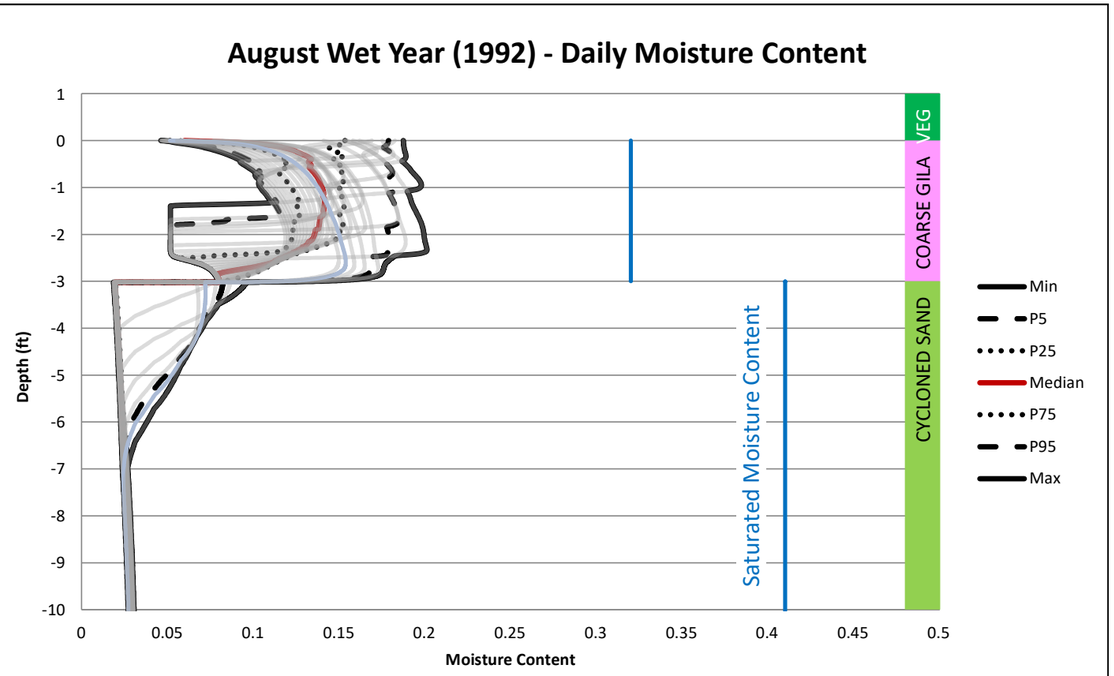
PROJECT: RESOLUTION PROJECT
SKUNK CAMP TSF RECLAMATION PLAN

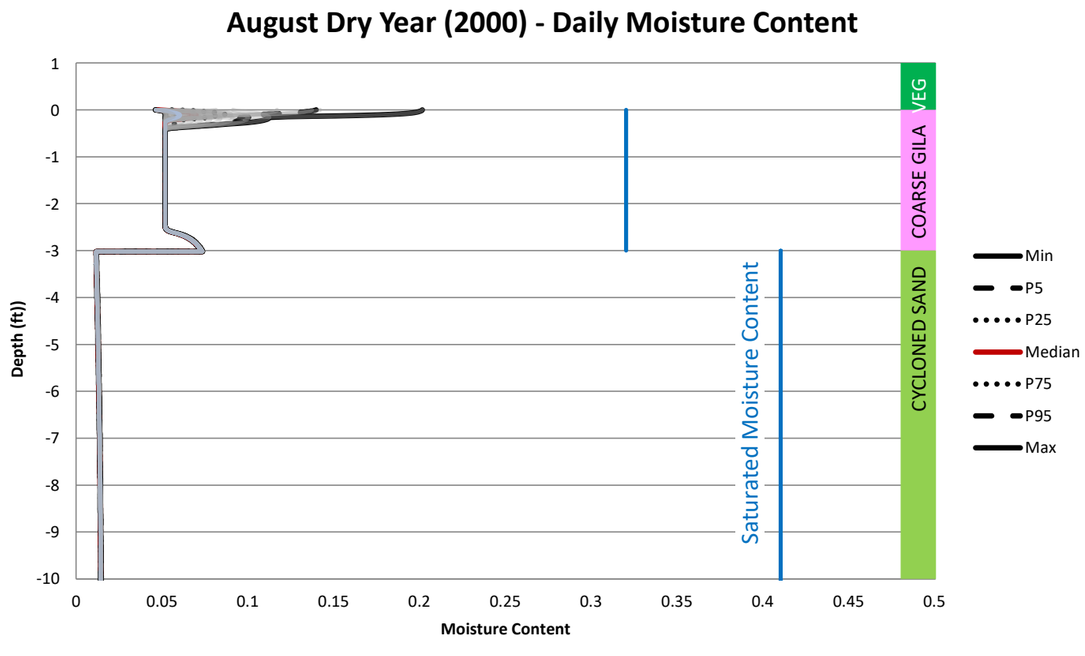
TITLE: SC8 - 9.8ft Cycloned Sand / 3ft Coarse Gila / Veg / Slope
Moisture Content - Dry Season(June)

PROJECT No. M09441A23

FIG. No. IV-B.172







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CLIENT: RESOLUTION COPPER

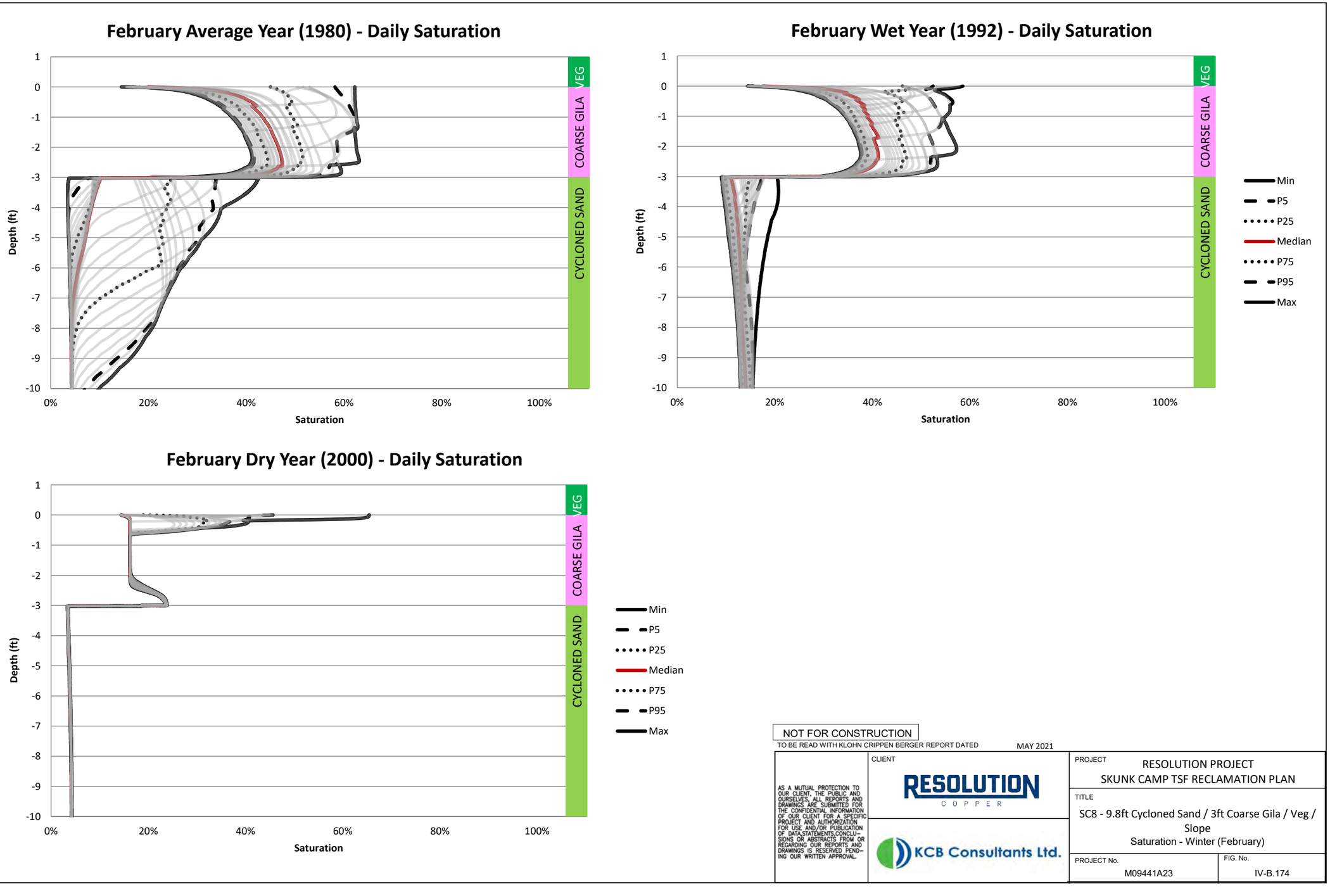
KCB Consultants Ltd.

PROJECT: RESOLUTION PROJECT
SKUNK CAMP TSF RECLAMATION PLAN

TITLE: SC8 - 9.8ft Cycloned Sand / 3ft Coarse Gila / Veg / Slope
Moisture Content - Summer Monsoon (August)

PROJECT No. M09441A23

FIG. No. IV-B.173



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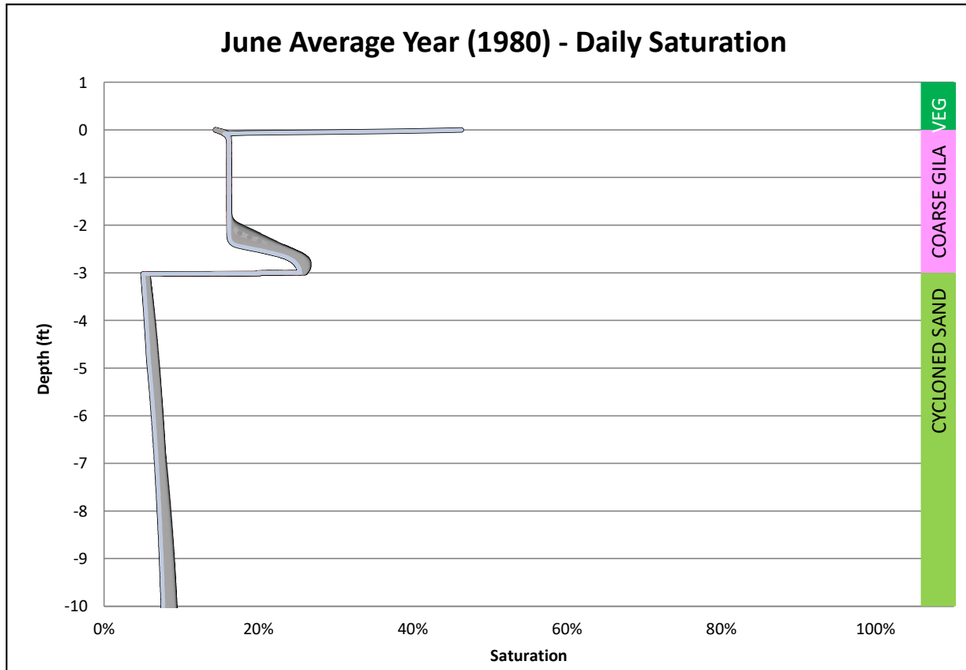
KCB Consultants Ltd.

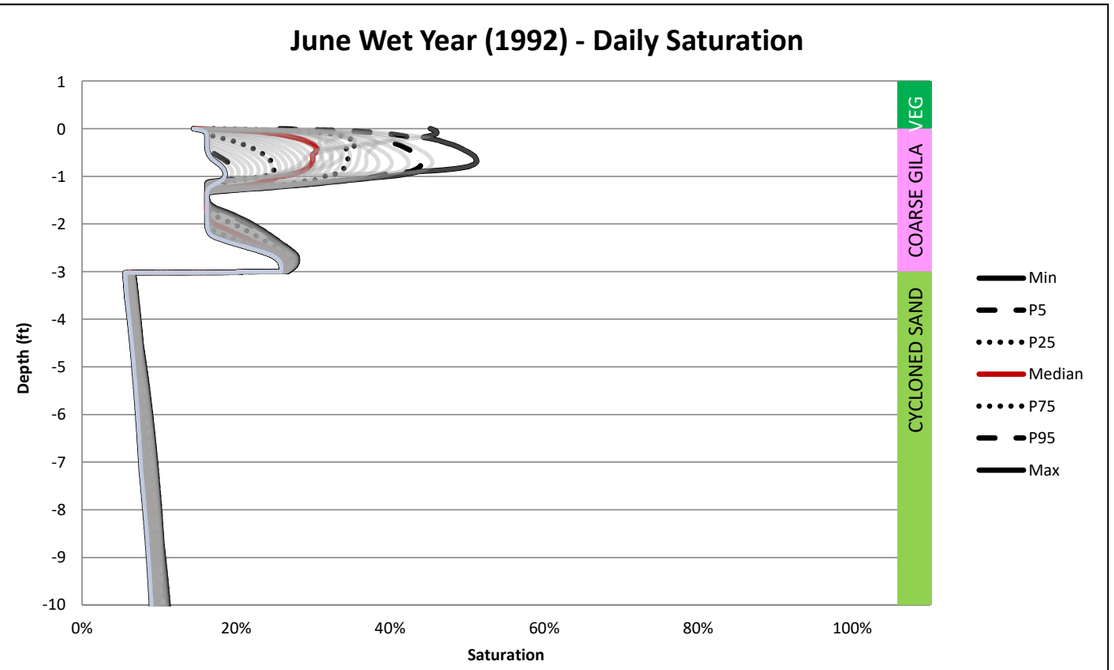
PROJECT: RESOLUTION PROJECT
SKUNK CAMP TSF RECLAMATION PLAN

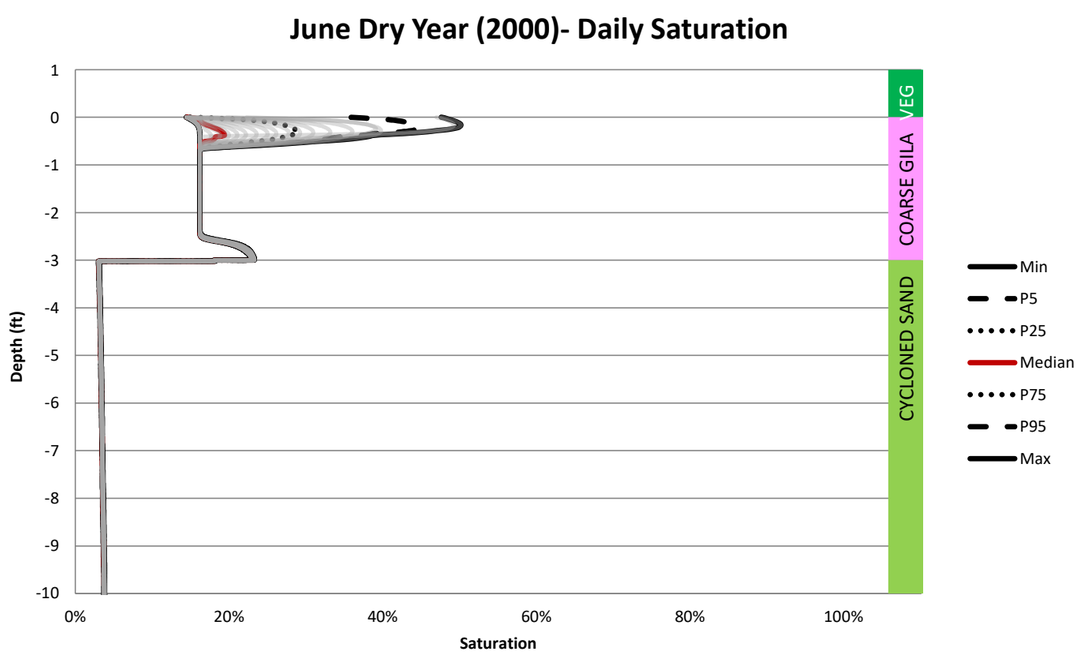
TITLE: SC8 - 9.8ft Cycloned Sand / 3ft Coarse Gila / Veg / Slope
Saturation - Winter (February)

PROJECT No.: M09441A23

FIG. No.: IV-B.174







NOT FOR CONSTRUCTION

TO BE READ WITH KLOHN CRIPPEN BERGER REPORT DATED MAY 2021

AS A MUTUAL PROTECTION TO OUR CLIENT, THE PUBLIC AND OURSELVES, ALL REPORTS AND DRAWINGS ARE SUBMITTED FOR THE CONFIDENTIAL INFORMATION OF OUR CLIENT FOR A SPECIFIC PROJECT AND AUTHORIZATION FOR USE AND/OR PUBLICATION OF DATA,STATEMENTS,CONCLUSIONS OR ABSTRACTS FROM OR REGARDING OUR REPORTS AND DRAWINGS IS RESERVED PENDING OUR WRITTEN APPROVAL.

CLIENT: RESOLUTION COPPER

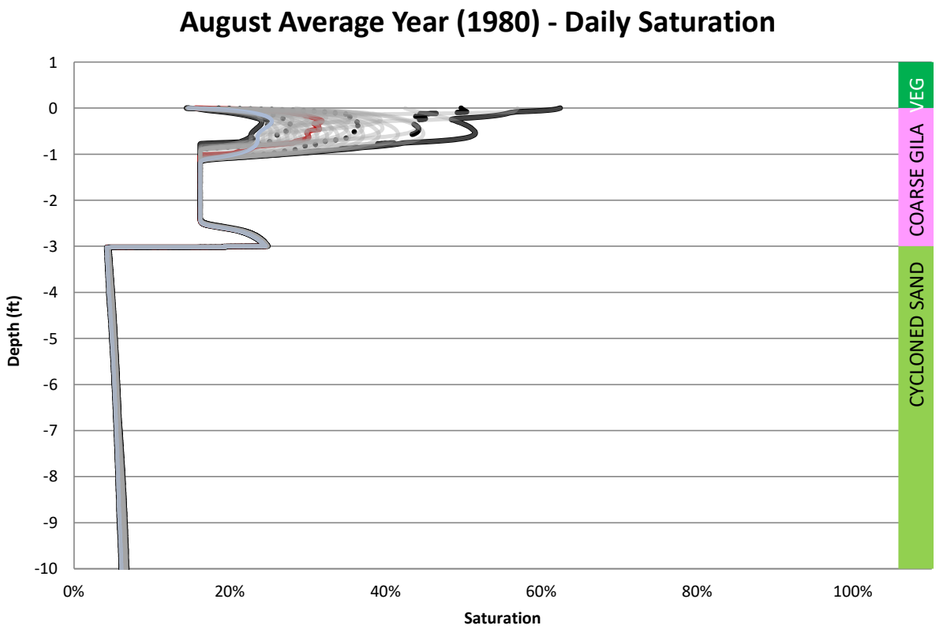
KCB Consultants Ltd.

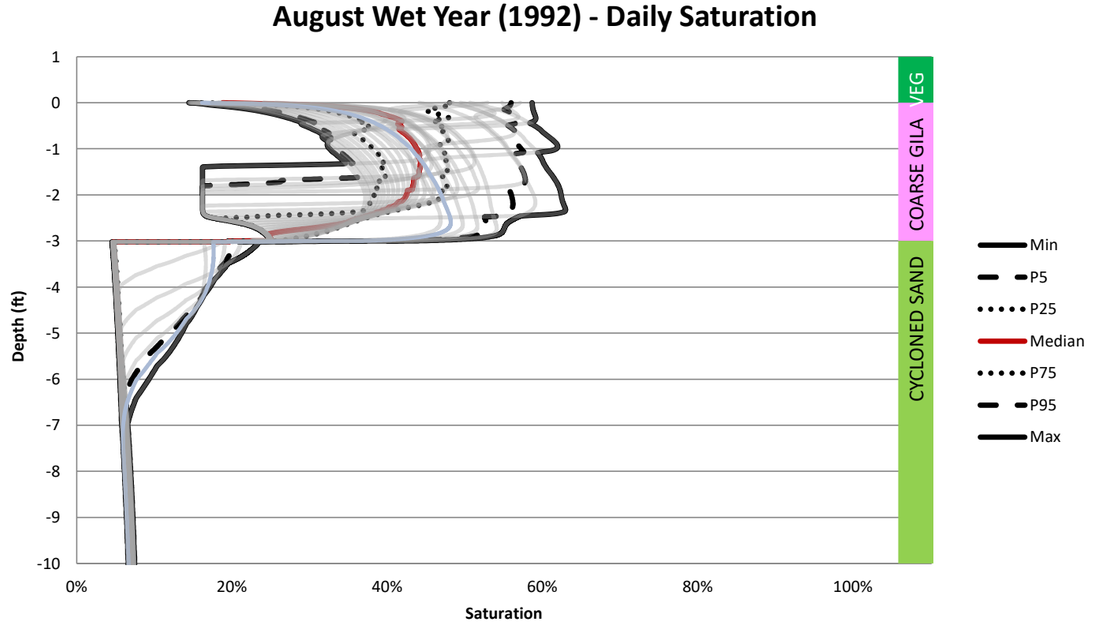
PROJECT: RESOLUTION PROJECT
SKUNK CAMP TSF RECLAMATION PLAN

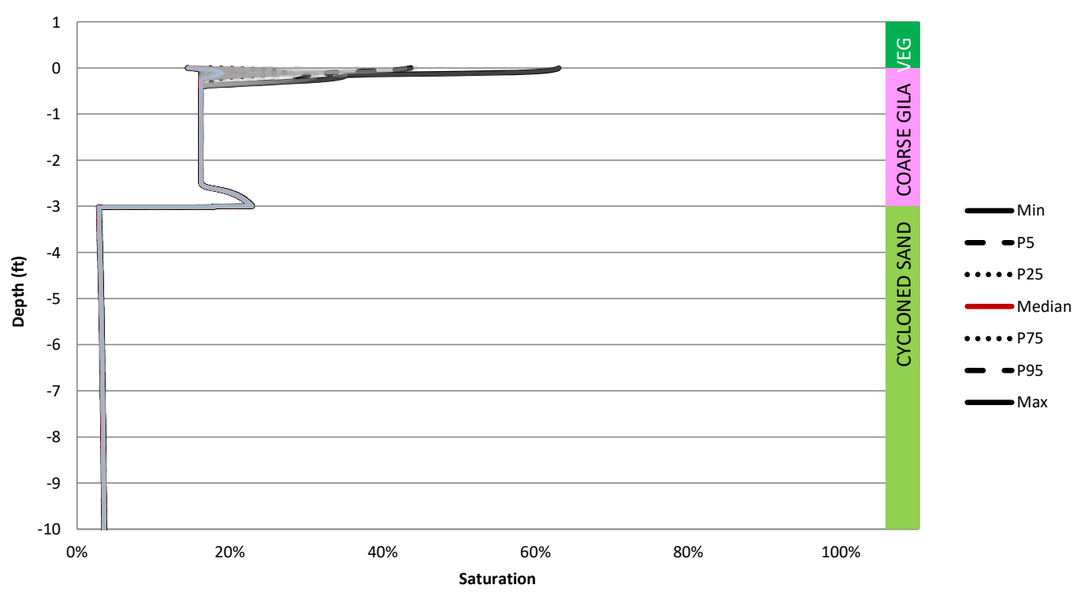
TITLE: SC8 - 9.8ft Cycloned Sand / 3ft Coarse Gila / Veg / Slope
Saturation - Dry Season (June)

PROJECT No. M09441A23

FIG. No. IV-B.175







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CLIENT: RESOLUTION COPPER

KCB Consultants Ltd.

PROJECT: RESOLUTION PROJECT
SKUNK CAMP TSF RECLAMATION PLAN

TITLE: SC8 - 9.8ft Cycloned Sand / 3ft Coarse Gila / Veg / Slope
Saturation - Summer Monsoon (August)

PROJECT No. M09441A23

FIG. No. IV-B.176

Table IV-B.65 SC9 Annual Water Balance

Water Year	Result Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
		(in)	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
1951	1951-10-01	14	32	-9.9	11	-5.6	0	14	4.1	60
1952	1952-10-01	0	35	-15	12	-3.3	0	20	5.7	72
1953	1953-10-01	15	40	-12	11	-1.7	0	15	3.3	72
1954	1954-10-01	21	34	-17	12	-0.35	0	21	4.5	72
1955	1955-10-01	13	42	-10	11	-1.2	0	13	3.3	72
1956	1956-10-01	13	45	-9.1	11	-0.61	0	13	3.5	74
1957	1957-10-01	15	40	-10	10	-0.20	0	15	4.6	71
1958	1958-10-01	19	35	-13	12	-0.17	0	19	5.9	70
1959	1959-10-01	16	42	-12	10	-0.17	0	16	4.0	75
1960	1960-10-01	19	37	-15	9.8	-7.6	0	19	4.0	73
1961	1961-10-01	9.7	46	-6.1	6.1	-0.26	0	9.7	3.8	73
1962	1962-10-01	14	40	-10	8.8	-0.66	0	14	3.8	71
1963	1963-10-01	24	33	-19	12	-0.97	0	24	4.7	73
1964	1964-10-01	11	44	-6.7	10	-2.8	0	11	4.7	72
1965	1965-10-01	18	37	-13	12	-1.2	0	18	4.7	71
1966	1966-10-01	23	32	-19	9.4	-7.6	0	23	4.0	72
1967	1967-10-01	14	42	-10	11	-0.29	0	14	3.9	72
1968	1968-10-01	22	33	-18	11	-6.9	0	22	4.0	71
1969	1969-10-01	19	37	-14	12	-2.4	0	19	4.6	72
1970	1970-10-01	16	40	-11	10.0	-0.29	0	16	4.5	72
1971	1971-10-01	12	44	-8.9	7.5	-0.079	0	12	3.2	73
1972	1972-10-01	11	48	-7.8	9.6	-1.1	0	11	3.3	76
1973	1973-10-01	31	22	-24	13	-8.7	0	31	7.0	69
1974	1974-10-01	15	40	-11	11	-0.47	0	15	4.3	72
1975	1975-10-01	19	34	-13	13	-1.0	0	19	5.5	69
1976	1976-10-01	16	40	-12	9.9	-0.33	0	16	4.3	72
1977	1977-10-01	16	40	-12	12	-0.071	0	16	4.6	73
1978	1978-10-01	24	31	-19	12	-7.6	0	24	5.1	71
1979	1979-10-01	30	25	-24	11	-12	0	30	6.0	71
1980	1980-10-01	20	35	-15	11	-3.8	0	20	5.0	71
1981	1981-10-01	15	43	-11	11	-0.37	0	15	3.7	75
1982	1982-10-01	23	31	-17	13	-0.15	0	23	6.4	69
1983	1983-10-01	27	27	-21	12	-5.7	0	27	6.4	69
1984	1984-10-01	18	37	-12	12	-3.8	0	18	6.0	71
1985	1985-10-01	22	29	-17	11	-4.4	0	22	5.9	67
1986	1986-10-01	21	33	-15	13	-1.5	0	21	5.8	70
1987	1987-10-01	20	34	-15	13	-3.9	0	20	5.1	70
1988	1988-10-01	23	32	-17	12	-2.0	0	23	5.8	71
1989	1989-10-01	12	45	-8.2	10	-2.1	0	12	3.4	74
1990	1990-10-01	23	32	-18	10	-0.31	0	23	5.2	71
1991	1991-10-01	23	32	-17	13	-9.0	0	23	5.7	71
1992	1992-10-01	36	18	-28	14	-10	0	36	8.2	70
1993	1993-10-01	33	21	-27	12	-20	0	33	5.4	70
1994	1994-10-01	15	41	-11	11	-0.69	0	15	4.0	73
1995	1995-10-01	25	30	-19	12	-3.8	0	25	5.7	71
1996	1996-10-01	13	43	-9.3	11	-0.42	0	13	4.1	74
1997	1997-10-01	10	48	-7.0	8.3	-0.094	0	10	3.2	75
1998	1998-10-01	20	33	-15	12	-1.4	0	20	5.6	69
1999	1999-10-01	15	42	-10	9.3	-0.33	0	15	4.4	73
2000	2000-10-01	5.4	54	-3.8	5.9	-0.055	0	5.4	1.7	77
2001	2001-10-01	23	31	-18	12	-1.7	0	23	5.7	71
2002	2002-10-01	5.4	53	-3.3	6.2	-0.55	0	5.4	2.1	75
2003	2003-10-01	13	46	-9.3	8.8	-0.11	0	13	3.8	76
2004	2004-10-01	12	47	-8.5	8.3	-0.071	0	12	3.7	77

Table IV-B.65 SC9 Annual Water Balance

Water Year	Result Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
		(in)	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
2005	2005-10-01	24	32	-19	11	-5.5	0	24	4.7	72
2006	2006-10-01	12	46	-8.8	9.8	-0.40	0	12	3.3	75

Table IV-B.66 SC9 Annual Water Balance

Month	Result Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
		[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
Nov-82	1982-11-30	0	4.1	-1.9	1.1	-0.051	0	2.6	0.66	8.8
Dec-82	1982-12-30	2.5	-0.24	-1.7	0.37	-0.043	0	2.5	0.78	2.7
Jan-83	1983-01-29	0.67	2.0	-0.55	0.52	-0.083	0	0.67	0.15	3.0
Feb-83	1983-02-28	3.6	-0.91	-3.0	0.74	-0.26	0	3.6	0.50	2.9
Mar-83	1983-03-30	5.4	-2.6	-4.4	1.1	-1.1	0	5.4	0.96	4.0
Apr-83	1983-04-29	0.83	3.5	-0.31	1.6	-1.7	0	0.83	0.50	5.3
May-83	1983-05-29	0	6.5	0	1.0	-1.2	0	0	0	7.9
Jun-83	1983-06-28	0.039	7.3	0	0.90	-0.61	0	0.039	0.10	9.4
Jul-83	1983-07-28	2.1	4.9	-1.7	1.4	-0.33	0	2.1	0.48	9.6
Aug-83	1983-08-27	3.8	1.7	-2.5	1.8	-0.20	0	3.8	1.3	7.2
Sep-83	1983-09-26	1.8	3.5	-1.1	1.7	-0.13	0	1.8	0.75	7.5
Oct-83	1983-10-26	4.9	-1.2	-4.2	0.88	-0.098	0	4.9	0.69	5.1
Nov-83	1983-11-25	1.6	1.6	-1.3	0.59	-0.23	0	1.6	0.26	4.2
Dec-83	1983-12-25	1.9	0.39	-1.4	0.39	-0.41	0	1.9	0.46	2.6
Jan-84	1984-01-24	1.5	0.75	-0.94	0.42	-0.71	0	1.5	0.58	2.7
Feb-84	1984-02-23	0	3.2	0	0.78	-0.77	0	0	0.012	3.7
Mar-84	1984-03-24	0	4.1	0	0.77	-0.59	0	0	0	5.0
Apr-84	1984-04-23	0.87	4.0	-0.59	1.3	-0.37	0	0.87	0.26	6.5
May-84	1984-05-23	0.67	5.3	-0.35	1.2	-0.25	0	0.67	0.32	7.5
Jun-84	1984-06-22	0.039	7.1	0	0.85	-0.16	0	0.039	0.043	9.3
Jul-84	1984-07-22	3.6	2.4	-2.6	1.4	-0.11	0	3.6	1.0	8.5
Aug-84	1984-08-21	3.9	1.5	-2.3	1.7	-0.079	0	3.9	1.6	6.9
Sep-84	1984-09-20	1.1	4.3	-0.51	1.7	-0.055	0	1.1	0.65	7.0
Oct-84	1984-10-20	2.5	1.4	-1.7	0.97	-0.043	0	2.5	0.87	5.6
Nov-84	1984-11-19	0	3.6	0	0.68	-0.035	0	0	0.020	4.2
Dec-84	1984-12-19	4.8	-2.6	-4.2	0.35	-0.024	0	4.8	0.63	3.1
Jan-85	1985-01-18	3.9	-1.9	-3.2	0.37	-0.024	0	3.9	0.69	2.3
Feb-85	1985-02-17	2.9	-0.87	-2.2	0.50	-0.46	0	2.9	0.63	2.3
Mar-85	1985-03-19	1.7	1.1	-0.98	1.0	-1.5	0	1.7	0.71	3.6
Apr-85	1985-04-18	0.43	4.0	-0.12	1.6	-1.0	0	0.43	0.33	5.4
May-85	1985-05-18	0.47	4.8	-0.28	1.1	-0.57	0	0.47	0.17	6.7
Jun-85	1985-06-17	0	6.7	0	0.84	-0.32	0	0	0	8.6
Jul-85	1985-07-17	0.24	6.3	-0.20	0.78	-0.21	0	0.24	0.039	8.4
Aug-85	1985-08-16	2.1	3.9	-1.4	1.5	-0.13	0	2.1	0.67	7.8
Sep-85	1985-09-15	2.2	3.1	-1.4	1.4	-0.098	0	2.2	0.80	7.9
Oct-85	1985-10-15	3.1	0.87	-2.2	1.1	-0.063	0	3.1	0.92	5.7
Nov-85	1985-11-14	1.4	1.8	-1.0	0.67	-0.051	0	1.4	0.42	3.9
Dec-85	1985-12-14	2.7	-0.28	-2.0	0.42	-0.035	0	2.7	0.69	3.1
Jan-86	1986-01-13	0	2.8	0.20	0.50	-0.031	0	0	0.21	3.3
Feb-86	1986-02-12	2.3	0.28	-1.9	0.51	-0.028	0	2.3	0.42	3.6
Mar-86	1986-03-14	1.9	1.5	-1.5	1.1	-0.028	0	1.9	0.44	3.7
Apr-86	1986-04-13	3.1	0.83	-2.5	1.6	-0.047	0	3.1	0.60	4.9
May-86	1986-05-13	0	5.8	0	1.1	-0.28	0	0	0	7.4
Jun-86	1986-06-12	0.039	7.2	0	0.94	-0.38	0	0.039	0.10	9.1
Jul-86	1986-07-12	2.2	4.8	-1.8	1.1	-0.27	0	2.2	0.42	9.2
Aug-86	1986-08-11	2.8	2.9	-1.9	1.7	-0.18	0	2.8	0.87	7.5
Sep-86	1986-09-10	3.0	2.2	-2.0	1.6	-0.12	0	3.0	0.91	7.3
Oct-86	1986-10-10	0.91	3.5	-0.51	1.3	-0.098	0	0.91	0.41	6.1
Nov-86	1986-11-09	2.8	0.47	-2.1	0.67	-0.075	0	2.8	0.62	4.6
Dec-86	1986-12-09	2.6	0.16	-2.2	0.51	-0.063	0	2.6	0.38	3.4
Jan-87	1987-01-08	1.5	0.87	-0.71	0.39	-0.063	0	1.5	0.76	2.7
Feb-87	1987-02-07	3.1	-0.67	-2.4	0.51	-0.15	0	3.1	0.74	2.9
Mar-87	1987-03-09	2.2	0.83	-1.9	1.0	-0.63	0	2.2	0.41	3.4
Apr-87	1987-04-08	0.98	2.9	-0.55	1.5	-0.99	0	0.98	0.39	5.0

Table IV-B.66 SC9 Annual Water Balance

Month	Result Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
		[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
May-87	1987-05-08	0	5.3	0	0.98	-0.78	0	0	0.012	6.8
Jun-87	1987-06-07	0.31	6.1	-0.12	0.94	-0.47	0	0.31	0.21	8.2
Jul-87	1987-07-07	0.20	6.9	-0.12	0.94	-0.28	0	0.20	0.10	9.2
Aug-87	1987-08-06	3.1	3.6	-2.6	1.6	-0.17	0	3.1	0.45	8.9
Sep-87	1987-09-05	2.4	3.2	-1.9	1.9	-0.12	0	2.4	0.52	7.5
Oct-87	1987-10-05	0.79	4.1	-0.28	1.4	-0.087	0	0.79	0.50	6.7
Nov-87	1987-11-04	1.4	2.6	-1.1	0.75	-0.059	0	1.4	0.32	5.8
Dec-87	1987-12-04	0.71	2.5	-0.31	0.59	-0.051	0	0.71	0.37	3.8
Jan-88	1988-01-03	4.0	-1.7	-3.2	0.35	-0.035	0	4.0	0.80	3.0
Feb-88	1988-02-02	3.6	-1.3	-3.0	0.43	-0.028	0	3.6	0.58	2.4
Mar-88	1988-03-03	0.75	2.6	-0.47	0.98	-0.11	0	0.75	0.26	3.6
Apr-88	1988-04-02	0.12	4.1	-0.079	1.0	-0.51	0	0.12	0.063	5.5
May-88	1988-05-02	2.4	2.1	-1.7	1.2	-0.44	0	2.4	0.76	6.1
Jun-88	1988-06-01	0	6.6	0.039	1.5	-0.29	0	0	0.020	8.0
Jul-88	1988-07-01	0.16	6.6	-0.039	0.83	-0.20	0	0.16	0.10	8.9
Aug-88	1988-07-31	2.4	4.0	-1.8	1.0	-0.13	0	2.4	0.67	8.5
Sep-88	1988-08-30	6.7	-1.3	-5.2	1.9	-0.091	0	6.7	1.5	7.3
Oct-88	1988-10-29	2.0	7.3	-1.3	2.2	-0.18	0	2.0	0.72	13
Nov-88	1988-11-28	1.7	1.3	-1.5	0.55	-0.14	0	1.7	0.26	4.1
Dec-88	1988-12-28	1.1	1.4	-0.63	0.43	-0.14	0	1.1	0.49	3.1
Jan-89	1989-01-27	2.0	0.31	-1.4	0.39	-0.14	0	2.0	0.57	2.4
Feb-89	1989-02-26	0.55	2.4	-0.20	0.83	-0.26	0	0.55	0.33	3.3
Mar-89	1989-03-28	1.7	2.4	-1.5	0.98	-0.37	0	1.7	0.20	5.3
Apr-89	1989-04-27	0	5.6	0.12	1.7	-0.31	0	0	0.11	6.9
May-89	1989-05-27	0.20	6.3	-0.039	0.87	-0.23	0	0.20	0.16	8.3
Jun-89	1989-06-26	0	7.1	0	0.87	-0.15	0	0	0	9.1
Jul-89	1989-07-26	0.079	6.7	-0.039	0.71	-0.11	0	0.079	0.035	9.0
Aug-89	1989-08-25	1.3	4.3	-0.75	0.87	-0.079	0	1.3	0.60	8.0
Sep-89	1989-09-24	1.5	3.9	-1.2	1.2	-0.055	0	1.5	0.24	7.3
Oct-89	1989-10-24	1.1	3.4	-0.67	0.67	-0.043	0	1.1	0.42	6.1
Nov-89	1989-11-23	0.28	3.1	-0.20	0.35	-0.039	0	0.28	0.098	4.5
Dec-89	1989-12-23	0	2.8	0.079	0.20	-0.028	0	0	0.067	3.5
Jan-90	1990-01-22	2.2	0.079	-1.5	0.28	-0.020	0	2.2	0.64	2.9
Feb-90	1990-02-21	2.5	-0.24	-1.8	0.59	-0.016	0	2.5	0.81	2.5
Mar-90	1990-03-23	0.79	2.6	-0.47	1.3	-0.016	0	0.79	0.31	4.2
Apr-90	1990-04-22	1.1	3.9	-0.59	1.7	-0.012	0	1.1	0.42	6.0
May-90	1990-05-22	1.1	4.8	-0.87	1.3	-0.0079	0	1.1	0.21	7.7
Jun-90	1990-06-21	0.39	6.7	-0.24	0.35	-0.012	0	0.39	0.17	9.0
Jul-90	1990-07-21	0.94	5.5	-0.59	0.43	-0.0079	0	0.94	0.37	8.6
Aug-90	1990-08-20	9.6	-4.3	-8.7	0.98	-0.0039	0	9.6	0.95	7.8
Sep-90	1990-09-19	2.4	3.0	-2.0	1.6	-0.020	0	2.4	0.42	7.1
Oct-90	1990-10-19	0.43	3.7	0.039	1.1	-0.40	0	0.43	0.43	5.9
Nov-90	1990-11-18	1.6	1.9	-1.1	0.67	-0.60	0	1.6	0.44	4.2
Dec-90	1990-12-18	2.8	-0.16	-2.1	0.47	-0.46	0	2.8	0.68	3.5
Jan-91	1991-01-17	4.7	-2.7	-3.8	0.35	-0.38	0	4.7	0.87	2.3
Feb-91	1991-02-16	0.12	2.7	-0.039	0.71	-1.9	0	0.12	0.12	3.3
Mar-91	1991-03-18	3.6	-0.28	-3.0	1.1	-1.3	0	3.6	0.63	4.3
Apr-91	1991-04-17	3.2	0.87	-2.6	1.6	-0.92	0	3.2	0.65	4.8
May-91	1991-05-17	0	5.8	0	1.0	-1.4	0	0	0	7.4
Jun-91	1991-06-16	0.71	6.3	-0.28	1.1	-0.80	0	0.71	0.41	8.7
Jul-91	1991-07-16	0.47	6.8	-0.31	1.2	-0.43	0	0.47	0.15	9.4
Aug-91	1991-08-15	3.3	2.8	-2.5	1.5	-0.25	0	3.3	0.86	8.4
Sep-91	1991-09-14	2.0	3.2	-1.3	1.7	-0.15	0	2.0	0.67	7.5
Oct-91	1991-10-01	0.24	2.4	-0.12	0.79	-0.067	0	0.24	0.13	3.5

Table IV-B.67 SC9 Monsoon Period Water Balance

Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
1951-07-01	0	7.2	0	0.84	-0.25	0	0	0	9.2
1951-08-01	1.1	6.3	-0.62	1.2	-0.16	0	1.1	0.43	9.5
1951-09-01	3.6	2.2	-3.0	1.3	-0.11	0	3.6	0.62	7.8
1951-10-01	0.65	4.4	-0.38	1.4	-0.074	0	0.65	0.26	6.6
1951-11-01	1.6	2.7	-1.3	0.70	-0.057	0	1.6	0.34	5.4
1951	7.0	23	-5.3	5.4	-0.65	0	7.0	1.7	39
1952-07-01	0.63	6.8	-0.28	1.2	-0.65	0	0.63	0.35	9.6
1952-08-01	0.56	6.3	-0.22	0.95	-0.42	0	0.56	0.34	8.8
1952-09-01	0.45	5.4	-0.22	1.1	-0.26	0	0.45	0.23	7.8
1952-10-01	0.70	4.7	-0.39	0.88	-0.15	0	0.70	0.31	7.0
1952-11-01	0	4.8	0.0028	0.55	-0.11	0	0	0.0028	5.9
1952	2.3	28	-1.1	4.7	-1.6	0	2.3	1.2	39
1953-07-01	0	7.0	0	0.84	-0.24	0	0	0	9.1
1953-08-01	2.7	3.9	-2.1	1.3	-0.16	0	2.7	0.60	8.8
1953-09-01	1.8	4.0	-1.2	1.9	-0.11	0	1.8	0.59	7.7
1953-10-01	0	5.2	0.025	1.3	-0.076	0	0	0.025	6.8
1953-11-01	0.012	4.4	-0.0016	0.29	-0.058	0	0.012	0.010	5.5
1953	4.6	25	-3.3	5.6	-0.64	0	4.6	1.2	38
1954-07-01	0.13	6.8	-0.059	0.91	-0.024	0	0.13	0.072	9.0
1954-08-01	4.5	1.5	-3.5	1.6	-0.028	0	4.5	0.95	7.8
1954-09-01	5.3	0.20	-4.4	1.9	-0.026	0	5.3	0.87	7.4
1954-10-01	1.3	3.8	-0.80	1.4	-0.030	0	1.3	0.49	6.6
1954-11-01	0	4.5	0.016	0.93	-0.11	0	0	0.013	5.6
1954	11	17	-8.8	6.7	-0.22	0	11	2.4	36
1955-07-01	2.1	5.0	-1.8	1.5	-0.093	0	2.1	0.31	9.1
1955-08-01	4.5	1.6	-3.6	1.3	-0.068	0	4.5	0.86	7.9
1955-09-01	2.7	2.6	-1.7	1.8	-0.054	0	2.7	0.95	7.2
1955-10-01	0.12	5.1	-0.063	1.3	-0.043	0	0.12	0.062	6.8
1955-11-01	0.020	4.7	-0.0079	0.47	-0.042	0	0.020	0.010	5.9
1955	9.4	19	-7.2	6.3	-0.30	0	9.4	2.2	37
1956-07-01	0.24	7.1	-0.15	0.86	-0.083	0	0.24	0.088	9.4
1956-08-01	2.8	4.2	-1.9	1.3	-0.066	0	2.8	0.87	9.0
1956-09-01	1.7	3.8	-1.2	1.8	-0.054	0	1.7	0.50	7.5
1956-10-01	0.079	5.2	-0.075	0.75	-0.041	0	0.079	0	6.8
1956-11-01	0.53	3.6	-0.31	0.23	-0.032	0	0.53	0.22	5.2
1956	5.4	24	-3.7	4.9	-0.28	0	5.4	1.7	38
1957-07-01	0.039	7.2	0	0.78	-0.013	0	0.039	0.050	9.3
1957-08-01	1.1	5.5	-0.64	0.51	-0.013	0	1.1	0.46	8.5
1957-09-01	3.4	2.4	-2.4	1.3	-0.011	0	3.4	1.0	8.1
1957-10-01	0.57	4.5	-0.35	1.4	-0.010	0	0.57	0.21	6.6
1957-11-01	3.3	0.31	-2.5	0.49	-0.0091	0	3.3	0.76	4.6
1957	8.4	20	-5.9	4.5	-0.056	0	8.4	2.5	37
1958-07-01	0.70	6.4	-0.48	1.1	-0.022	0	0.70	0.22	9.3
1958-08-01	0.78	6.2	-0.48	1.2	-0.032	0	0.78	0.30	9.1
1958-09-01	0.85	5.1	-0.42	1.3	-0.033	0	0.85	0.43	8.0
1958-10-01	3.0	1.8	-2.4	0.92	-0.028	0	3.0	0.67	6.4
1958-11-01	1.9	2.3	-1.5	0.95	-0.025	0	1.9	0.37	5.3
1958	7.3	22	-5.3	5.4	-0.14	0	7.3	2.0	38
1959-07-01	1.0	6.1	-0.64	0.58	-0.011	0	1.0	0.39	9.1
1959-08-01	3.8	3.7	-3.1	1.2	-0.0094	0	3.8	0.71	9.6
1959-09-01	5.3	0.15	-3.8	1.9	-0.0083	0	5.3	1.5	7.4
1959-10-01	0.047	5.1	-0.0079	1.1	-0.0079	0	0.047	0.041	6.9
1959-11-01	4.8	-0.59	-4.5	0.75	-0.0079	0	4.8	0.34	5.3
1959	15	14	-12	5.4	-0.044	0	15	3.0	38
1960-07-01	0	7.2	0	0.84	-0.23	0	0	0	9.2
1960-08-01	0.74	6.3	-0.49	0.97	-0.15	0	0.74	0.25	9.2
1960-09-01	1.5	4.4	-0.82	1.2	-0.11	0	1.5	0.72	8.1

Table IV-B.67 SC9 Monsoon Period Water Balance

Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
1960-10-01	0.27	5.0	-0.11	0.36	-0.069	0	0.27	0.16	7.0
1960-11-01	2.0	1.9	-1.5	0.48	-0.055	0	2.0	0.66	5.0
1960	4.6	25	-2.9	3.9	-0.61	0	4.6	1.8	38
1961-07-01	0	7.3	0	0.020	-0.011	0	0	0	9.3
1961-08-01	0.67	6.0	-0.34	0.22	-0.0098	0	0.67	0.33	8.9
1961-09-01	3.0	3.1	-2.2	0.92	-0.0083	0	3.0	0.74	8.1
1961-10-01	0.50	4.4	-0.0039	1.2	-0.0071	0	0.50	0.49	6.3
1961-11-01	0.45	3.6	-0.35	0.22	-0.0067	0	0.45	0.10	5.4
1961	4.6	24	-2.9	2.6	-0.043	0	4.6	1.7	38
1962-07-01	0	7.0	0	0.83	-0.15	0	0	0	9.1
1962-08-01	0.61	6.3	-0.30	1.0	-0.12	0	0.61	0.31	8.9
1962-09-01	0.50	5.6	-0.27	0.86	-0.090	0	0.50	0.22	8.4
1962-10-01	1.2	3.7	-0.67	0.44	-0.062	0	1.2	0.56	6.6
1962-11-01	0.87	3.2	-0.46	0.56	-0.051	0	0.87	0.41	5.1
1962	3.2	26	-1.7	3.7	-0.47	0	3.2	1.5	38
1963-07-01	0	7.0	0	0.83	-0.15	0	0	0	9.0
1963-08-01	0.075	7.2	-0.043	0.83	-0.12	0	0.075	0.031	9.4
1963-09-01	10	-5.1	-8.8	1.6	-0.085	0	10	1.6	7.5
1963-10-01	1.0	4.1	-0.48	1.6	-0.12	0	1.0	0.57	6.6
1963-11-01	0.67	3.9	-0.45	0.89	-0.62	0	0.67	0.22	5.8
1963	12	17	-9.8	5.7	-1.1	0	12	2.5	38
1964-07-01	0	7.2	0	0.69	-0.087	0	0	0	9.4
1964-08-01	1.5	5.3	-0.82	0.61	-0.063	0	1.5	0.67	8.8
1964-09-01	2.2	3.6	-1.2	1.3	-0.050	0	2.2	0.97	7.7
1964-10-01	1.6	3.0	-0.76	0.86	-0.038	0	1.6	0.81	6.1
1964-11-01	1.5	3.1	-1.3	0.77	-0.030	0	1.5	0.26	5.8
1964	6.8	22	-4.1	4.2	-0.27	0	6.8	2.7	38
1965-07-01	0.10	6.8	-0.031	0.86	-0.23	0	0.10	0.071	8.8
1965-08-01	1.4	5.2	-0.81	1.2	-0.16	0	1.4	0.63	8.9
1965-09-01	0.90	5.0	-0.53	1.6	-0.12	0	0.90	0.38	8.0
1965-10-01	1.0	3.9	-0.63	0.99	-0.079	0	1.0	0.41	6.6
1965-11-01	0.45	4.0	-0.30	0.31	-0.060	0	0.45	0.18	5.7
1965	3.9	25	-2.3	4.9	-0.64	0	3.9	1.7	38
1966-07-01	0.18	6.6	-0.071	0.83	-0.28	0	0.18	0.11	9.1
1966-08-01	0.84	5.8	-0.44	1.0	-0.18	0	0.84	0.39	8.3
1966-09-01	1.6	4.3	-1.2	1.0	-0.12	0	1.6	0.46	8.1
1966-10-01	2.7	2.2	-2.2	1.4	-0.080	0	2.7	0.45	6.5
1966-11-01	1.4	2.8	-0.98	0.94	-0.059	0	1.4	0.38	5.1
1966	6.7	22	-4.9	5.2	-0.71	0	6.7	1.8	37
1967-07-01	0.11	6.9	-0.028	0.14	-0.012	0	0.11	0.083	9.0
1967-08-01	4.0	2.4	-3.1	1.1	-0.011	0	4.0	0.82	8.3
1967-09-01	2.5	3.5	-2.0	2.0	-0.0098	0	2.5	0.52	8.0
1967-10-01	0.56	4.3	-0.31	1.0	-0.0087	0	0.56	0.24	6.5
1967-11-01	0.42	3.8	-0.25	0.71	-0.0079	0	0.42	0.17	5.6
1967	7.5	21	-5.7	5.1	-0.049	0	7.5	1.8	37
1968-07-01	0	7.3	0	0.87	-0.34	0	0	0	9.3
1968-08-01	1.8	5.0	-1.2	1.2	-0.22	0	1.8	0.59	8.9
1968-09-01	2.5	2.8	-1.6	1.8	-0.14	0	2.5	0.91	7.3
1968-10-01	0.051	5.2	-0.0039	1.0	-0.094	0	0.051	0.047	6.9
1968-11-01	0.39	3.7	-0.24	0.54	-0.071	0	0.39	0.15	5.1
1968	4.8	24	-3.1	5.5	-0.87	0	4.8	1.7	38
1969-07-01	0	7.2	0	0.86	-0.25	0	0	0	9.4
1969-08-01	0.35	6.3	-0.13	0.87	-0.16	0	0.35	0.22	8.7
1969-09-01	2.6	3.6	-1.7	1.7	-0.11	0	2.6	0.85	8.3
1969-10-01	1.2	3.8	-0.83	1.2	-0.079	0	1.2	0.41	6.8
1969-11-01	0.83	3.1	-0.59	0.57	-0.055	0	0.83	0.24	5.2
1969	5.0	24	-3.3	5.2	-0.66	0	5.0	1.7	38

Table IV-B.67 SC9 Monsoon Period Water Balance

Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
1970-07-01	0.079	7.1	-0.012	0.74	-0.016	0	0.079	0.067	9.1
1970-08-01	1.0	5.7	-0.58	0.85	-0.012	0	1.0	0.46	9.1
1970-09-01	1.7	4.4	-1.0	0.68	-0.016	0	1.7	0.69	8.0
1970-10-01	3.3	1.7	-2.9	1.3	-0.0079	0	3.3	0.48	7.0
1970-11-01	0	4.2	0	0.56	-0.012	0	0	0	5.3
1970	6.2	23	-4.5	4.2	-0.063	0	6.2	1.7	39
1971-07-01	0	7.0	0	0.055	-0.0039	0	0	0	9.0
1971-08-01	0.39	6.7	-0.20	0.18	-0.0039	0	0.39	0.20	9.2
1971-09-01	4.7	0.91	-3.4	1.4	-0.0039	0	4.7	1.2	7.8
1971-10-01	3.1	2.1	-2.7	1.3	-0.0039	0	3.1	0.37	7.1
1971-11-01	4.2	-0.31	-3.4	0.88	-0.0039	0	4.2	0.80	5.1
1971	12	16	-9.7	3.8	-0.020	0	12	2.6	38
1972-07-01	1.7	5.6	-1.3	1.1	-0.091	0	1.7	0.41	9.3
1972-08-01	0.27	7.1	-0.17	1.0	-0.063	0	0.27	0.11	9.5
1972-09-01	2.0	4.0	-1.4	1.1	-0.051	0	2.0	0.64	8.4
1972-10-01	0.67	4.4	-0.27	0.65	-0.039	0	0.67	0.40	6.8
1972-11-01	8.7	-5.0	-7.6	0.67	-0.028	0	8.7	1.1	4.9
1972	13	16	-11	4.6	-0.27	0	13	2.6	39
1973-07-01	0.87	6.2	-0.55	1.4	-0.66	0	0.87	0.32	9.0
1973-08-01	2.7	3.8	-2.2	1.3	-0.36	0	2.7	0.55	8.9
1973-09-01	1.4	4.6	-0.78	2.1	-0.22	0	1.4	0.65	8.1
1973-10-01	0	5.1	0	0.98	-0.14	0	0	0	6.7
1973-11-01	0	4.1	0	0.38	-0.10	0	0	0	5.6
1973	5.0	24	-3.5	6.2	-1.5	0	5.0	1.5	38
1974-07-01	0	7.4	0	0.80	-0.028	0	0	0	9.4
1974-08-01	2.4	4.1	-1.7	1.2	-0.024	0	2.4	0.72	8.6
1974-09-01	1.4	4.5	-0.80	1.6	-0.020	0	1.4	0.59	8.3
1974-10-01	3.4	1.4	-2.5	1.3	-0.020	0	3.4	0.93	6.5
1974-11-01	3.4	0.47	-2.8	0.87	-0.012	0	3.4	0.62	5.3
1974	11	18	-7.8	5.8	-0.10	0	11	2.9	38
1975-07-01	0	7.4	0	0.90	-0.28	0	0	0	9.6
1975-08-01	2.2	3.8	-1.1	1.3	-0.22	0	2.2	1.1	8.3
1975-09-01	2.0	4.2	-1.4	2.1	-0.14	0	2.0	0.62	8.0
1975-10-01	0.91	4.1	-0.41	1.3	-0.10	0	0.91	0.49	6.8
1975-11-01	0.28	3.9	-0.098	0.34	-0.075	0	0.28	0.17	5.4
1975	5.4	23	-3.0	6.0	-0.82	0	5.4	2.4	38
1976-07-01	0	7.6	0	0.16	-0.016	0	0	0	9.7
1976-08-01	2.8	3.5	-2.2	0.74	-0.0079	0	2.8	0.58	8.7
1976-09-01	0.83	5.2	-0.59	1.5	-0.012	0	0.83	0.26	7.9
1976-10-01	4.0	0.59	-3.2	1.3	-0.0079	0	4.0	0.77	6.4
1976-11-01	0.91	2.9	-0.56	0.87	-0.0079	0	0.91	0.33	5.1
1976	8.5	20	-6.6	4.5	-0.051	0	8.5	1.9	38
1977-07-01	0.039	7.4	-0.020	0.69	-0.0079	0	0.039	0.031	9.5
1977-08-01	2.5	4.5	-1.9	0.86	-0.0039	0	2.5	0.65	9.4
1977-09-01	2.4	3.5	-1.9	1.9	-0.0079	0	2.4	0.58	8.1
1977-10-01	3.5	1.1	-2.6	1.4	-0.0039	0	3.5	0.87	6.4
1977-11-01	1.3	2.9	-0.89	0.96	-0.0079	0	1.3	0.43	5.5
1977	9.8	19	-7.2	5.8	-0.031	0	9.8	2.6	39
1978-07-01	0.55	6.6	-0.41	0.94	-0.52	0	0.55	0.14	9.4
1978-08-01	0.98	5.9	-0.62	1.3	-0.30	0	0.98	0.35	9.4
1978-09-01	1.1	4.5	-0.63	1.7	-0.18	0	1.1	0.43	7.3
1978-10-01	0.39	4.4	-0.22	0.74	-0.12	0	0.39	0.17	6.6
1978-11-01	1.9	2.5	-1.6	0.42	-0.083	0	1.9	0.37	5.9
1978	4.9	24	-3.4	5.1	-1.2	0	4.9	1.5	39
1979-07-01	0.35	7.0	-0.087	1.1	-0.50	0	0.35	0.26	9.2
1979-08-01	0.20	6.8	-0.083	0.86	-0.30	0	0.20	0.083	9.3
1979-09-01	1.5	4.1	-0.81	1.5	-0.19	0	1.5	0.72	7.8

Table IV-B.67 SC9 Monsoon Period Water Balance

Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
1979-10-01	0.12	5.1	-0.024	0.64	-0.12	0	0.12	0.079	7.2
1979-11-01	0.67	3.9	-0.47	0.34	-0.087	0	0.67	0.21	5.9
1979	2.8	27	-1.5	4.4	-1.2	0	2.8	1.4	39
1980-07-01	0.16	6.9	-0.12	0.85	-0.42	0	0.16	0.039	9.0
1980-08-01	2.0	4.8	-1.2	1.4	-0.26	0	2.0	0.72	9.1
1980-09-01	1.3	4.6	-0.83	2.0	-0.16	0	1.3	0.51	7.9
1980-10-01	0.59	4.6	-0.35	0.99	-0.11	0	0.59	0.22	7.0
1980-11-01	0.039	4.3	0	0.16	-0.075	0	0.039	0.024	5.9
1980	4.1	25	-2.5	5.4	-1.0	0	4.1	1.5	39
1981-07-01	0.079	7.1	-0.039	1.0	-0.024	0	0.079	0.10	9.3
1981-08-01	2.2	4.7	-1.7	0.85	-0.020	0	2.2	0.46	9.3
1981-09-01	2.6	3.5	-1.9	2.1	-0.016	0	2.6	0.75	7.9
1981-10-01	0.51	4.8	-0.35	0.98	-0.020	0	0.51	0.15	7.5
1981-11-01	0.94	2.9	-0.55	0.72	-0.012	0	0.94	0.41	5.2
1981	6.3	23	-4.5	5.6	-0.091	0	6.3	1.9	39
1982-07-01	0.079	7.1	-0.079	0.89	-0.020	0	0.079	0	9.1
1982-08-01	2.6	3.7	-1.8	1.4	-0.020	0	2.6	0.84	8.8
1982-09-01	3.8	1.5	-2.9	1.8	-0.024	0	3.8	0.89	6.9
1982-10-01	3.0	2.2	-2.4	1.4	-0.020	0	3.0	0.69	6.7
1982-11-01	0.039	4.1	0.039	0.73	-0.024	0	0.039	0.039	5.4
1982	9.6	19	-7.1	6.2	-0.11	0	9.6	2.5	37
1983-07-01	0	7.4	0	0.90	-0.57	0	0	0	9.4
1983-08-01	2.8	4.1	-2.2	1.5	-0.32	0	2.8	0.67	9.5
1983-09-01	3.6	2.1	-2.5	1.9	-0.20	0	3.6	1.1	7.5
1983-10-01	5.1	-0.079	-4.1	1.5	-0.12	0	5.1	0.94	7.3
1983-11-01	1.1	2.5	-0.63	0.83	-0.11	0	1.1	0.49	4.9
1983	13	16	-9.4	6.7	-1.3	0	13	3.2	39
1984-07-01	1.3	5.7	-1.1	0.84	-0.14	0	1.3	0.28	9.3
1984-08-01	3.3	2.8	-2.1	1.7	-0.10	0	3.3	1.2	7.8
1984-09-01	3.3	1.9	-1.9	1.8	-0.067	0	3.3	1.4	7.4
1984-10-01	1.9	3.1	-1.3	1.4	-0.051	0	1.9	0.62	6.9
1984-11-01	1.3	2.3	-0.79	0.84	-0.043	0	1.3	0.58	4.9
1984	11	16	-7.0	6.6	-0.40	0	11	4.1	36
1985-07-01	0	6.3	0	0.75	-0.26	0	0	0	8.6
1985-08-01	1.3	5.6	-0.91	1.0	-0.17	0	1.3	0.34	8.7
1985-09-01	2.1	3.8	-1.5	1.9	-0.11	0	2.1	0.66	8.1
1985-10-01	3.5	1.1	-2.4	1.2	-0.079	0	3.5	1.1	6.6
1985-11-01	1.3	2.3	-0.59	0.80	-0.059	0	1.3	0.64	4.6
1985	8.1	19	-5.4	5.6	-0.69	0	8.1	2.7	37
1986-07-01	0.039	7.1	0	0.86	-0.31	0	0.039	0.10	9.3
1986-08-01	4.8	1.4	-3.5	1.6	-0.21	0	4.8	1.2	8.5
1986-09-01	2.0	3.6	-1.3	1.8	-0.14	0	2.0	0.73	8.0
1986-10-01	2.1	2.6	-1.4	1.4	-0.10	0	2.1	0.64	6.5
1986-11-01	1.7	2.1	-1.4	0.87	-0.087	0	1.7	0.34	4.8
1986	11	17	-7.7	6.6	-0.85	0	11	3.0	37
1987-07-01	0.20	6.9	-0.12	0.94	-0.30	0	0.20	0.10	9.0
1987-08-01	2.1	5.0	-1.8	1.4	-0.20	0	2.1	0.30	9.0
1987-09-01	2.9	2.9	-2.2	2.0	-0.13	0	2.9	0.65	8.1
1987-10-01	1.3	3.7	-0.79	1.5	-0.091	0	1.3	0.51	7.1
1987-11-01	0.31	4.2	-0.16	0.87	-0.063	0	0.31	0.16	6.0
1987	6.7	23	-5.0	6.7	-0.78	0	6.7	1.7	39
1988-07-01	0.16	6.6	-0.039	0.83	-0.20	0	0.16	0.10	8.9
1988-08-01	3.4	3.1	-2.7	1.1	-0.13	0	3.4	0.72	8.8
1988-09-01	5.9	-0.28	-4.4	1.9	-0.094	0	5.9	1.5	7.5
1988-10-01	0.31	4.7	-0.079	1.5	-0.071	0	0.31	0.22	6.9
1988-11-01	1.5	2.7	-1.1	0.75	-0.12	0	1.5	0.41	5.8
1988	11	17	-8.3	6.0	-0.61	0	11	3.0	38

Table IV-B.67 SC9 Monsoon Period Water Balance

Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
1989-07-01	0	7.2	0	0.83	-0.15	0	0	0	9.2
1989-08-01	0.47	6.3	-0.28	0.75	-0.11	0	0.47	0.22	9.3
1989-09-01	0.94	4.9	-0.51	0.91	-0.079	0	0.94	0.42	7.8
1989-10-01	1.5	3.6	-1.2	1.2	-0.051	0	1.5	0.24	7.3
1989-11-01	1.1	3.1	-0.63	0.59	-0.043	0	1.1	0.46	5.9
1989	4.0	25	-2.6	4.3	-0.43	0	4.0	1.3	39
1990-07-01	0.31	6.9	-0.20	0.28	-0.012	0	0.31	0.094	9.3
1990-08-01	1.5	4.8	-0.94	0.75	-0.0039	0	1.5	0.53	8.6
1990-09-01	9.0	-3.3	-8.1	1.5	-0.0079	0	9.0	0.81	7.4
1990-10-01	2.8	2.0	-2.1	1.3	-0.12	0	2.8	0.76	6.8
1990-11-01	0.24	3.7	-0.12	0.87	-0.56	0	0.24	0.16	5.3
1990	14	14	-11	4.7	-0.70	0	14	2.4	37
1991-07-01	0.63	6.7	-0.28	1.2	-0.59	0	0.63	0.34	9.2
1991-08-01	1.7	5.2	-1.3	1.2	-0.33	0	1.7	0.44	9.3
1991-09-01	2.8	3.1	-1.9	2.0	-0.20	0	2.8	0.84	8.3
1991-10-01	1.6	3.3	-1.1	1.5	-0.12	0	1.6	0.51	6.5
1991-11-01	1.2	3.5	-0.98	0.67	-0.094	0	1.2	0.23	6.6
1991	7.9	22	-5.5	6.5	-1.3	0	7.9	2.4	40
1992-07-01	1.3	5.8	-0.71	1.9	-0.72	0	1.3	0.61	8.9
1992-08-01	3.3	3.5	-2.6	1.4	-0.39	0	3.3	0.74	9.3
1992-09-01	5.3	0.28	-4.1	1.9	-0.24	0	5.3	1.1	7.8
1992-10-01	0.87	4.3	-0.67	1.5	-0.22	0	0.87	0.24	6.7
1992-11-01	1.2	3.1	-0.91	0.87	-0.41	0	1.2	0.30	6.2
1992	12	17	-9.0	7.5	-2.0	0	12	3.0	39
1993-07-01	0	7.1	0	1.1	-0.44	0	0	0	9.3
1993-08-01	0.24	6.6	-0.16	0.94	-0.27	0	0.24	0.098	8.9
1993-09-01	3.5	2.2	-2.2	1.4	-0.16	0	3.5	1.2	8.5
1993-10-01	0.12	4.8	0.039	1.4	-0.11	0	0.12	0.18	6.4
1993-11-01	0.83	3.5	-0.43	0.63	-0.075	0	0.83	0.39	6.0
1993	4.6	24	-2.8	5.4	-1.0	0	4.6	1.9	39
1994-07-01	0.39	6.6	-0.28	1.2	-0.067	0	0.39	0.13	8.9
1994-08-01	1.5	5.5	-1.2	0.59	-0.059	0	1.5	0.25	9.1
1994-09-01	0.71	5.4	-0.28	1.4	-0.043	0	0.71	0.44	8.6
1994-10-01	1.9	3.0	-1.3	1.1	-0.035	0	1.9	0.64	6.6
1994-11-01	1.9	2.0	-1.6	0.67	-0.028	0	1.9	0.31	5.3
1994	6.3	22	-4.6	4.9	-0.23	0	6.3	1.8	39
1995-07-01	0	7.2	0	0.87	-0.37	0	0	0	9.0
1995-08-01	0.039	7.1	0	0.83	-0.24	0	0.039	0.035	9.3
1995-09-01	3.9	2.2	-3.0	1.5	-0.14	0	3.9	0.86	8.8
1995-10-01	2.8	2.3	-2.2	1.5	-0.094	0	2.8	0.50	7.2
1995-11-01	0	4.3	0.039	0.98	-0.075	0	0	0.079	5.8
1995	6.7	23	-5.2	5.7	-0.91	0	6.7	1.5	40
1996-07-01	0.39	6.6	-0.24	0.67	-0.031	0	0.39	0.15	9.1
1996-08-01	2.4	4.4	-1.5	1.3	-0.028	0	2.4	0.83	8.9
1996-09-01	1.3	4.6	-0.79	1.2	-0.020	0	1.3	0.48	8.1
1996-10-01	3.0	1.5	-2.1	1.1	-0.020	0	3.0	0.95	6.7
1996-11-01	0.43	4.1	-0.20	0.83	-0.016	0	0.43	0.22	6.0
1996	7.5	21	-4.8	5.1	-0.11	0	7.5	2.6	39
1997-07-01	0.039	7.0	0	0.16	-0.0079	0	0.039	0.047	9.0
1997-08-01	0.12	7.3	-0.039	0.12	-0.0039	0	0.12	0.051	9.9
1997-09-01	2.6	3.3	-1.9	1.2	-0.0039	0	2.6	0.76	8.5
1997-10-01	0	5.4	0	0.59	-0.0039	0	0	0.0039	7.3
1997-11-01	0.75	3.2	-0.47	0.20	-0.0039	0	0.75	0.29	6.0
1997	3.5	26	-2.4	2.3	-0.024	0	3.5	1.2	41
1998-07-01	0	7.2	0	0.87	-0.36	0	0	0	9.2
1998-08-01	1.7	5.1	-1.2	1.6	-0.25	0	1.7	0.53	9.1
1998-09-01	2.4	3.4	-1.5	2.0	-0.15	0	2.4	0.90	8.3

Table IV-B.67 SC9 Monsoon Period Water Balance

Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
1998-10-01	1.3	3.7	-0.94	1.5	-0.11	0	1.3	0.41	7.0
1998-11-01	0	4.4	0	0.43	-0.079	0	0	0	6.3
1998	5.5	24	-3.6	6.4	-0.95	0	5.5	1.8	40
1999-07-01	0	7.1	0	0.20	-0.012	0	0	0	9.1
1999-08-01	5.8	0.39	-4.4	1.3	-0.0079	0	5.8	1.4	8.7
1999-09-01	2.8	2.8	-1.9	2.0	-0.0079	0	2.8	0.89	7.8
1999-10-01	1.1	3.9	-0.43	1.5	-0.0079	0	1.1	0.68	6.8
1999-11-01	0	4.5	0	0.83	-0.0079	0	0	0	6.2
1999	9.8	19	-6.8	5.7	-0.043	0	9.8	2.9	39
2000-07-01	0.79	6.3	-0.47	0.43	-0.0039	0	0.79	0.36	9.5
2000-08-01	0.079	7.4	-0.039	0.16	-0.0039	0	0.079	0.035	9.5
2000-09-01	0.67	5.0	-0.31	0.31	0	0	0.67	0.34	8.7
2000-10-01	0	5.3	0	0.039	-0.0039	0	0	0	6.8
2000-11-01	5.3	-1.7	-4.5	0.35	0	0	5.3	0.80	5.9
2000	6.9	22	-5.4	1.3	-0.012	0	6.9	1.5	40
2001-07-01	0	7.2	0	0.87	-0.26	0	0	0.016	9.2
2001-08-01	2.7	4.2	-2.4	1.0	-0.18	0	2.7	0.34	9.7
2001-09-01	3.4	2.4	-2.4	1.9	-0.12	0	3.4	0.92	7.6
2001-10-01	0.12	4.8	-0.039	0.83	-0.094	0	0.12	0.087	7.3
2001-11-01	0.35	3.6	-0.24	0.63	-0.098	0	0.35	0.18	5.5
2001	6.6	22	-5.1	5.3	-0.76	0	6.6	1.5	39
2002-07-01	0	7.4	0	0.12	-0.024	0	0	0	9.2
2002-08-01	0.31	6.8	-0.16	0.20	-0.024	0	0.31	0.19	9.7
2002-09-01	0.47	5.4	-0.24	0.16	-0.016	0	0.47	0.20	8.1
2002-10-01	1.2	3.9	-0.71	0.75	-0.016	0	1.2	0.48	7.1
2002-11-01	0.12	4.0	-0.039	0.12	-0.012	0	0.12	0.075	6.1
2002	2.1	28	-1.1	1.3	-0.091	0	2.1	0.95	40
2003-07-01	0	7.9	0	0.91	-0.0079	0	0	0	10.0
2003-08-01	0.47	6.7	-0.16	0.55	-0.016	0	0.47	0.38	10
2003-09-01	1.3	4.8	-0.87	0.71	-0.012	0	1.3	0.42	8.5
2003-10-01	1.9	3.3	-1.1	1.1	-0.0079	0	1.9	0.82	7.4
2003-11-01	0.079	4.4	-0.039	0.43	-0.016	0	0.079	0.059	6.0
2003	3.8	27	-2.2	3.7	-0.059	0	3.8	1.7	42
2004-07-01	0	7.8	0	0.20	-0.0039	0	0	0	10
2004-08-01	0.59	6.7	-0.28	0.28	-0.0039	0	0.59	0.29	9.8
2004-09-01	2.1	4.0	-1.3	0.98	-0.0039	0	2.1	0.76	8.6
2004-10-01	1.5	3.9	-1.1	0.87	-0.0039	0	1.5	0.40	7.9
2004-11-01	1.2	2.9	-0.83	0.63	0	0	1.2	0.36	6.1
2004	5.4	25	-3.6	3.0	-0.016	0	5.4	1.8	42
2005-07-01	0.079	7.6	-0.039	0.94	-0.37	0	0.079	0.035	9.7
2005-08-01	1.4	5.9	-1.1	0.94	-0.23	0	1.4	0.30	11
2005-09-01	4.7	0.94	-3.6	1.9	-0.13	0	4.7	1.1	7.3
2005-10-01	0.079	5.0	0	1.1	-0.10	0	0.079	0.067	7.4
2005-11-01	0.43	3.8	-0.28	0.55	-0.079	0	0.43	0.15	6.1
2005	6.7	23	-5.0	5.5	-0.92	0	6.7	1.7	41
2006-07-01	0.47	7.0	-0.24	0.43	-0.020	0	0.47	0.26	10
2006-08-01	3.2	3.1	-2.5	0.59	-0.012	0	3.2	0.65	9.2
2006-09-01	2.9	3.1	-1.9	2.0	-0.012	0	2.9	1.1	7.4
2006-10-01	1.1	3.8	-0.71	1.4	-0.012	0	1.1	0.39	6.9
2006-11-01	1.0	3.0	-0.51	0.79	-0.0079	0	1.0	0.54	5.9
2006	8.7	20	-5.8	5.2	-0.063	0	8.7	2.9	40

Table IV-B.68 SC9 Winter Storm Period Water Balance

Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
1951-11-01	0	2.7	-1.3	0.70	-0.057	0	1.6	0.34	5.4
1951-12-01	1.7	1.5	-1.0	0.57	-0.044	0	1.7	0.67	3.7
1952-01-01	3.0	-0.66	-2.4	0.40	-0.035	0	3.0	0.61	2.8
1952-02-01	2.8	-0.36	-2.0	0.46	-0.028	0	2.8	0.75	2.9
1952-03-01	0.50	2.4	-0.21	0.85	-0.041	0	0.50	0.29	3.8
1952	8.0	5.6	-7.0	3.0	-0.20	0	9.7	2.7	19
1952-11-01	0	4.8	0.0028	0.55	-0.11	0	0	0.0028	5.9
1952-12-01	4.3	-1.5	-3.7	0.30	-0.075	0	4.3	0.56	3.3
1953-01-01	2.0	0.26	-1.3	0.37	-0.057	0	2.0	0.65	2.7
1953-02-01	0.74	2.1	-0.38	0.55	-0.051	0	0.74	0.36	3.3
1953-03-01	0.60	2.4	-0.40	0.78	-0.065	0	0.60	0.20	3.8
1953	7.6	8.0	-5.9	2.5	-0.36	0	7.6	1.8	19
1953-11-01	0.012	4.4	-0.0016	0.29	-0.058	0	0.012	0.010	5.5
1953-12-01	0.56	2.8	-0.36	0.22	-0.044	0	0.56	0.20	3.9
1954-01-01	0.19	2.3	-0.056	0.27	-0.035	0	0.19	0.14	2.9
1954-02-01	2.4	0.35	-1.9	0.38	-0.028	0	2.4	0.54	3.2
1954-03-01	0.72	2.5	-0.46	0.95	-0.021	0	0.72	0.26	4.2
1954	3.9	12	-2.7	2.1	-0.19	0	3.9	1.2	20
1954-11-01	0	4.5	0.016	0.93	-0.11	0	0	0.013	5.6
1954-12-01	0.091	3.5	-0.067	0.32	-0.15	0	0.091	0.024	4.3
1955-01-01	0.29	2.7	-0.13	0.35	-0.14	0	0.29	0.16	3.5
1955-02-01	3.4	-1.4	-2.7	0.37	-0.12	0	3.4	0.73	2.4
1955-03-01	0.28	2.5	-0.091	0.79	-0.087	0	0.28	0.19	3.5
1955	4.1	12	-3.0	2.8	-0.60	0	4.1	1.1	19
1955-11-01	0.020	4.7	-0.0079	0.47	-0.042	0	0.020	0.010	5.9
1955-12-01	0.96	2.1	-0.68	0.39	-0.040	0	0.96	0.29	3.7
1956-01-01	1.4	1.4	-1.1	0.46	-0.037	0	1.4	0.30	3.1
1956-02-01	2.6	0.30	-2.2	0.55	-0.031	0	2.6	0.42	3.5
1956-03-01	2.0	0.49	-1.3	0.72	-0.026	0	2.0	0.68	3.1
1956	7.0	9.0	-5.3	2.6	-0.17	0	7.0	1.7	19
1956-11-01	0.53	3.6	-0.31	0.23	-0.032	0	0.53	0.22	5.2
1956-12-01	0	3.2	0.051	0.28	-0.026	0	0	0.052	3.8
1957-01-01	0.47	2.2	-0.29	0.21	-0.022	0	0.47	0.18	3.1
1957-02-01	4.8	-2.7	-4.2	0.35	-0.018	0	4.8	0.62	2.7
1957-03-01	0.73	2.1	-0.19	0.83	-0.014	0	0.73	0.55	3.4
1957	6.5	8.4	-4.9	1.9	-0.11	0	6.5	1.6	18
1957-11-01	3.3	0.31	-2.5	0.49	-0.0091	0	3.3	0.76	4.6
1957-12-01	0.61	2.0	-0.16	0.48	-0.0083	0	0.61	0.45	3.0
1958-01-01	1.1	1.6	-0.62	0.45	-0.0075	0	1.1	0.45	3.2
1958-02-01	0.012	2.9	0.012	0.54	-0.0067	0	0.012	0.024	3.3
1958-03-01	2.5	-0.039	-2.0	0.71	-0.0047	0	2.5	0.54	3.2
1958	7.5	6.8	-5.2	2.7	-0.036	0	7.5	2.2	17
1958-11-01	1.9	2.3	-1.5	0.95	-0.025	0	1.9	0.37	5.3
1958-12-01	1.5	1.6	-1.2	0.54	-0.021	0	1.5	0.31	3.6
1959-01-01	0	3.0	0.020	0.50	-0.019	0	0	0.022	3.6
1959-02-01	0.21	2.8	-0.098	0.52	-0.017	0	0.21	0.11	3.5
1959-03-01	1.4	1.1	-0.98	0.64	-0.013	0	1.4	0.44	3.3
1959	5.1	11	-3.8	3.1	-0.095	0	5.1	1.3	19
1959-11-01	4.8	-0.59	-4.5	0.75	-0.0079	0	4.8	0.34	5.3
1959-12-01	0.38	2.8	0.059	0.57	-0.011	0	0.38	0.44	3.7
1960-01-01	5.2	-3.0	-4.6	0.37	-0.094	0	5.2	0.61	2.7
1960-02-01	4.2	-2.0	-3.5	0.40	-1.4	0	4.2	0.69	2.5

Table IV-B.68 SC9 Winter Storm Period Water Balance

Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
1960-03-01	0.87	1.8	-0.45	0.76	-3.0	0	0.87	0.42	3.4
1960	15	-1.1	-13	2.9	-4.5	0	15	2.5	18
1960-11-01	2.0	1.9	-1.5	0.48	-0.055	0	2.0	0.66	5.0
1960-12-01	0.48	2.6	-0.22	0.52	-0.042	0	0.48	0.26	3.7
1961-01-01	0.47	2.2	-0.24	0.41	-0.033	0	0.47	0.23	3.3
1961-02-01	0.70	1.9	-0.42	0.38	-0.026	0	0.70	0.28	3.2
1961-03-01	0.23	2.9	-0.067	0.59	-0.020	0	0.23	0.16	3.7
1961	3.9	12	-2.4	2.4	-0.18	0	3.9	1.6	19
1961-11-01	0.45	3.6	-0.35	0.22	-0.0067	0	0.45	0.10	5.4
1961-12-01	0.32	2.4	-0.031	0.19	-0.0051	0	0.32	0.29	3.1
1962-01-01	3.9	-1.6	-3.3	0.30	-0.0047	0	3.9	0.59	2.6
1962-02-01	3.2	-0.98	-2.7	0.43	-0.0043	0	3.2	0.47	2.7
1962-03-01	1.7	0.75	-1.1	0.69	-0.0035	0	1.7	0.52	3.2
1962	9.5	4.1	-7.5	1.8	-0.024	0	9.5	2.0	17
1962-11-01	0.87	3.2	-0.46	0.56	-0.051	0	0.87	0.41	5.1
1962-12-01	0.83	2.5	-0.59	0.41	-0.039	0	0.83	0.25	3.9
1963-01-01	1.8	0.83	-1.2	0.36	-0.030	0	1.8	0.60	3.3
1963-02-01	2.1	0.51	-1.6	0.49	-0.024	0	2.1	0.51	3.0
1963-03-01	4.2	-1.2	-3.9	0.88	-0.019	0	4.2	0.28	3.8
1963	9.8	5.9	-7.8	2.7	-0.16	0	9.8	2.0	19
1963-11-01	0.67	3.9	-0.45	0.89	-0.62	0	0.67	0.22	5.8
1963-12-01	2.3	0.71	-1.5	0.54	-0.53	0	2.3	0.80	3.6
1964-01-01	0.34	2.5	-0.10	0.47	-0.36	0	0.34	0.23	3.3
1964-02-01	0.57	1.9	-0.37	0.48	-0.32	0	0.57	0.21	3.0
1964-03-01	0	2.8	0.016	0.77	-0.26	0	0	0.016	3.6
1964	3.9	12	-2.5	3.1	-2.1	0	3.9	1.5	19
1964-11-01	1.5	3.1	-1.3	0.77	-0.030	0	1.5	0.26	5.8
1964-12-01	1.4	1.6	-1.0	0.51	-0.024	0	1.4	0.37	3.6
1965-01-01	1.7	0.87	-1.3	0.43	-0.020	0	1.7	0.38	3.3
1965-02-01	2.9	-0.47	-2.2	0.46	-0.017	0	2.9	0.65	2.6
1965-03-01	2.8	-0.039	-2.5	0.82	-0.013	0	2.8	0.35	3.4
1965	10	5.1	-8.3	3.0	-0.10	0	10	2.0	19
1965-11-01	0.45	4.0	-0.30	0.31	-0.060	0	0.45	0.18	5.7
1965-12-01	2.4	0.87	-2.0	0.25	-0.044	0	2.4	0.33	3.9
1966-01-01	10	-8.3	-9.6	0.35	-0.033	0	10	0.80	2.7
1966-02-01	1.8	0.51	-1.3	0.44	-1.6	0	1.8	0.51	2.8
1966-03-01	2.0	0.51	-1.5	0.74	-2.0	0	2.0	0.50	3.1
1966	17	-2.4	-15	2.1	-3.8	0	17	2.3	18
1966-11-01	1.4	2.8	-0.98	0.94	-0.059	0	1.4	0.38	5.1
1966-12-01	0.88	2.4	-0.63	0.56	-0.046	0	0.88	0.25	4.1
1967-01-01	1.3	1.3	-0.81	0.44	-0.037	0	1.3	0.44	3.1
1967-02-01	0.79	1.9	-0.52	0.51	-0.028	0	0.79	0.28	2.9
1967-03-01	0	3.1	0.031	0.85	-0.022	0	0	0.031	3.9
1967	4.3	11	-2.9	3.3	-0.19	0	4.3	1.4	19
1967-11-01	0.42	3.8	-0.25	0.71	-0.0079	0	0.42	0.17	5.6
1967-12-01	2.1	1.0	-1.7	0.27	-0.0063	0	2.1	0.38	3.9
1968-01-01	10	-8.0	-9.4	0.34	-0.0051	0	10	0.60	2.3
1968-02-01	0.63	2.0	-0.33	0.50	-2.2	0	0.63	0.30	3.1
1968-03-01	1.9	0.98	-1.5	0.85	-1.4	0	1.9	0.48	3.4
1968	15	-0.16	-13	2.7	-3.7	0	15	1.9	18
1968-11-01	0.39	3.7	-0.24	0.54	-0.071	0	0.39	0.15	5.1
1968-12-01	2.5	0.43	-2.0	0.43	-0.051	0	2.5	0.55	3.8

Table IV-B.68 SC9 Winter Storm Period Water Balance

Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
1969-01-01	3.3	-0.87	-2.8	0.40	-0.039	0	3.3	0.49	2.9
1969-02-01	4.2	-1.9	-3.5	0.43	-0.031	0	4.2	0.64	2.6
1969-03-01	1.4	1.1	-0.69	0.72	-0.087	0	1.4	0.67	3.0
1969	12	2.5	-9.2	2.5	-0.28	0	12	2.5	17
1969-11-01	0.83	3.1	-0.59	0.57	-0.055	0	0.83	0.24	5.2
1969-12-01	2.1	0.71	-1.5	0.44	-0.047	0	2.1	0.60	3.6
1970-01-01	1.3	1.5	-0.79	0.46	-0.035	0	1.3	0.54	3.4
1970-02-01	0.50	2.2	-0.14	0.51	-0.028	0	0.50	0.36	2.9
1970-03-01	0.41	2.5	-0.14	0.83	-0.020	0	0.41	0.26	3.6
1970	5.2	10	-3.2	2.8	-0.19	0	5.2	2.0	19
1970-11-01	0	4.2	0	0.56	-0.012	0	0	0	5.3
1970-12-01	0.65	2.5	-0.54	0.25	-0.012	0	0.65	0.11	3.9
1971-01-01	1.2	1.2	-0.63	0.36	-0.0079	0	1.2	0.57	3.0
1971-02-01	0.85	2.1	-0.59	0.57	-0.0079	0	0.85	0.26	3.1
1971-03-01	0.82	2.1	-0.55	0.76	-0.0039	0	0.82	0.26	4.0
1971	3.5	12	-2.3	2.5	-0.043	0	3.5	1.2	19
1971-11-01	4.2	-0.31	-3.4	0.88	-0.0039	0	4.2	0.80	5.1
1971-12-01	0.039	3.1	0.051	0.56	-0.0039	0	0.039	0.091	3.7
1972-01-01	2.1	0.35	-1.4	0.40	-0.047	0	2.1	0.69	3.0
1972-02-01	0	2.8	0.10	0.54	-0.14	0	0	0.10	3.2
1972-03-01	0	3.5	0	0.73	-0.19	0	0	0	4.1
1972	6.4	9.4	-4.7	3.1	-0.39	0	6.4	1.7	19
1972-11-01	8.7	-5.0	-7.6	0.67	-0.028	0	8.7	1.1	4.9
1972-12-01	2.8	-0.20	-2.1	0.47	-0.063	0	2.8	0.73	3.2
1973-01-01	3.0	-0.67	-2.4	0.38	-0.85	0	3.0	0.55	2.9
1973-02-01	0.74	1.6	-0.079	0.44	-1.3	0	0.74	0.66	2.6
1973-03-01	3.2	-0.67	-2.4	0.72	-1.0	0	3.2	0.80	2.8
1973	18	-4.9	-15	2.7	-3.3	0	18	3.8	16
1973-11-01	0	4.1	0	0.38	-0.10	0	0	0	5.6
1973-12-01	1.8	1.3	-1.2	0.35	-0.067	0	1.8	0.54	3.9
1974-01-01	0.094	2.8	0.039	0.48	-0.055	0	0.094	0.13	3.3
1974-02-01	3.4	-0.98	-2.7	0.46	-0.043	0	3.4	0.71	2.9
1974-03-01	0.16	2.8	-0.051	0.83	-0.028	0	0.16	0.098	3.3
1974	5.4	10.0	-3.9	2.5	-0.30	0	5.4	1.5	19
1974-11-01	3.4	0.47	-2.8	0.87	-0.012	0	3.4	0.62	5.3
1974-12-01	0.12	3.1	0.20	0.57	-0.016	0	0.12	0.31	3.6
1975-01-01	0.75	1.6	-0.43	0.39	-0.012	0	0.75	0.32	3.1
1975-02-01	0.43	1.9	-0.20	0.44	-0.0079	0	0.43	0.20	2.6
1975-03-01	3.9	-1.1	-3.4	0.80	-0.0079	0	3.9	0.52	3.0
1975	8.6	5.9	-6.6	3.1	-0.055	0	8.6	2.0	18
1975-11-01	0.28	3.9	-0.098	0.34	-0.075	0	0.28	0.17	5.4
1975-12-01	2.1	1.3	-2.0	0.18	-0.051	0	2.1	0.15	4.2
1976-01-01	1.3	1.3	-0.62	0.43	-0.043	0	1.3	0.63	3.1
1976-02-01	0.24	2.3	-0.039	0.48	-0.035	0	0.24	0.19	2.9
1976-03-01	1.6	1.4	-1.1	0.87	-0.024	0	1.6	0.52	3.4
1976	5.5	10	-3.8	2.3	-0.23	0	5.5	1.7	19
1976-11-01	0.91	2.9	-0.56	0.87	-0.0079	0	0.91	0.33	5.1
1976-12-01	0.51	2.6	-0.29	0.57	-0.0079	0	0.51	0.26	4.0
1977-01-01	1.9	0.79	-1.6	0.43	-0.0039	0	1.9	0.24	3.1
1977-02-01	1.9	0.43	-1.1	0.44	-0.0039	0	1.9	0.82	2.5
1977-03-01	0.079	3.3	-0.016	0.93	-0.0079	0	0.079	0.059	4.1
1977	5.2	10.0	-3.5	3.2	-0.031	0	5.2	1.7	19

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Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
1977-11-01	1.3	2.9	-0.89	0.96	-0.0079	0	1.3	0.43	5.5
1977-12-01	0.35	2.9	-0.071	0.59	-0.0039	0	0.35	0.28	3.9
1978-01-01	0.67	2.1	-0.48	0.43	-0.0079	0	0.67	0.18	3.5
1978-02-01	6.4	-4.2	-5.7	0.42	0	0	6.4	0.69	2.5
1978-03-01	5.5	-3.0	-4.7	0.73	-0.0039	0	5.5	0.83	2.9
1978	14	0.71	-12	3.1	-0.024	0	14	2.4	18
1978-11-01	1.9	2.5	-1.6	0.42	-0.083	0	1.9	0.37	5.9
1978-12-01	5.6	-2.9	-5.0	0.49	-0.059	0	5.6	0.65	3.7
1979-01-01	6.5	-4.3	-5.9	0.38	-0.055	0	6.5	0.66	2.5
1979-02-01	6.1	-4.2	-4.9	0.34	-2.7	0	6.1	1.1	2.3
1979-03-01	1.2	1.9	-0.84	0.90	-4.0	0	1.2	0.39	3.3
1979	21	-7.0	-18	2.5	-6.9	0	21	3.2	18
1979-11-01	0.67	3.9	-0.47	0.34	-0.087	0	0.67	0.21	5.9
1979-12-01	0.71	2.5	-0.32	0.40	-0.059	0	0.71	0.35	4.0
1980-01-01	0.67	2.2	-0.45	0.34	-0.047	0	0.67	0.25	3.7
1980-02-01	4.1	-2.1	-3.3	0.33	-0.035	0	4.1	0.81	2.4
1980-03-01	6.1	-3.6	-5.6	0.71	-0.020	0	6.1	0.48	2.4
1980	12	2.9	-10	2.1	-0.25	0	12	2.1	18
1980-11-01	0.039	4.3	0	0.16	-0.075	0	0.039	0.024	5.9
1980-12-01	0	3.5	0	0.071	-0.055	0	0	0	4.3
1981-01-01	0.55	2.6	-0.31	0.23	-0.043	0	0.55	0.27	3.5
1981-02-01	1.3	1.5	-0.98	0.38	-0.035	0	1.3	0.33	3.5
1981-03-01	2.6	0.39	-2.3	0.86	-0.020	0	2.6	0.38	3.6
1981	4.6	12	-3.6	1.7	-0.23	0	4.6	1.0	21
1981-11-01	0.94	2.9	-0.55	0.72	-0.012	0	0.94	0.41	5.2
1981-12-01	2.3	0.98	-2.2	0.31	-0.012	0	2.3	0.11	4.4
1982-01-01	0	3.0	0.16	0.50	-0.012	0	0	0.17	3.3
1982-02-01	2.8	-0.43	-1.9	0.43	-0.0079	0	2.8	0.89	2.8
1982-03-01	1.8	0.91	-1.1	0.79	-0.0039	0	1.8	0.68	3.1
1982	7.8	7.3	-5.6	2.8	-0.047	0	7.8	2.3	19
1982-11-01	0.039	4.1	0.039	0.73	-0.024	0	0.039	0.039	5.4
1982-12-01	3.3	-0.75	-2.7	0.36	-0.028	0	3.3	0.63	3.6
1983-01-01	1.7	0.63	-0.94	0.39	-0.043	0	1.7	0.78	2.7
1983-02-01	1.9	0.83	-1.6	0.52	-0.098	0	1.9	0.26	3.2
1983-03-01	2.4	0.28	-2.0	0.74	-0.26	0	2.4	0.38	2.8
1983	9.3	5.1	-7.2	2.7	-0.46	0	9.3	2.1	18
1983-11-01	1.1	2.5	-0.63	0.83	-0.11	0	1.1	0.49	4.9
1983-12-01	2.0	1.0	-1.6	0.54	-0.28	0	2.0	0.43	3.8
1984-01-01	2.5	-0.28	-2.0	0.37	-0.47	0	2.5	0.48	2.7
1984-02-01	0.47	2.2	-0.12	0.52	-0.79	0	0.47	0.38	2.8
1984-03-01	0	3.1	0	0.75	-0.71	0	0	0	3.9
1984	6.1	8.6	-4.4	3.0	-2.4	0	6.1	1.8	18
1984-11-01	1.3	2.3	-0.79	0.84	-0.043	0	1.3	0.58	4.9
1984-12-01	2.1	1.1	-1.9	0.53	-0.031	0	2.1	0.23	4.2
1985-01-01	5.8	-3.6	-5.0	0.35	-0.024	0	5.8	0.79	2.5
1985-02-01	2.7	-0.67	-2.0	0.37	-0.091	0	2.7	0.69	2.5
1985-03-01	1.7	0.55	-1.1	0.64	-0.94	0	1.7	0.55	2.5
1985	14	-0.35	-11	2.7	-1.1	0	14	2.8	17
1985-11-01	1.3	2.3	-0.59	0.80	-0.059	0	1.3	0.64	4.6
1985-12-01	2.8	-0.039	-2.3	0.48	-0.043	0	2.8	0.45	3.9
1986-01-01	0.87	2.0	-0.31	0.48	-0.031	0	0.87	0.54	3.1
1986-02-01	0.079	3.1	-0.079	0.58	-0.031	0	0.079	0.012	3.6

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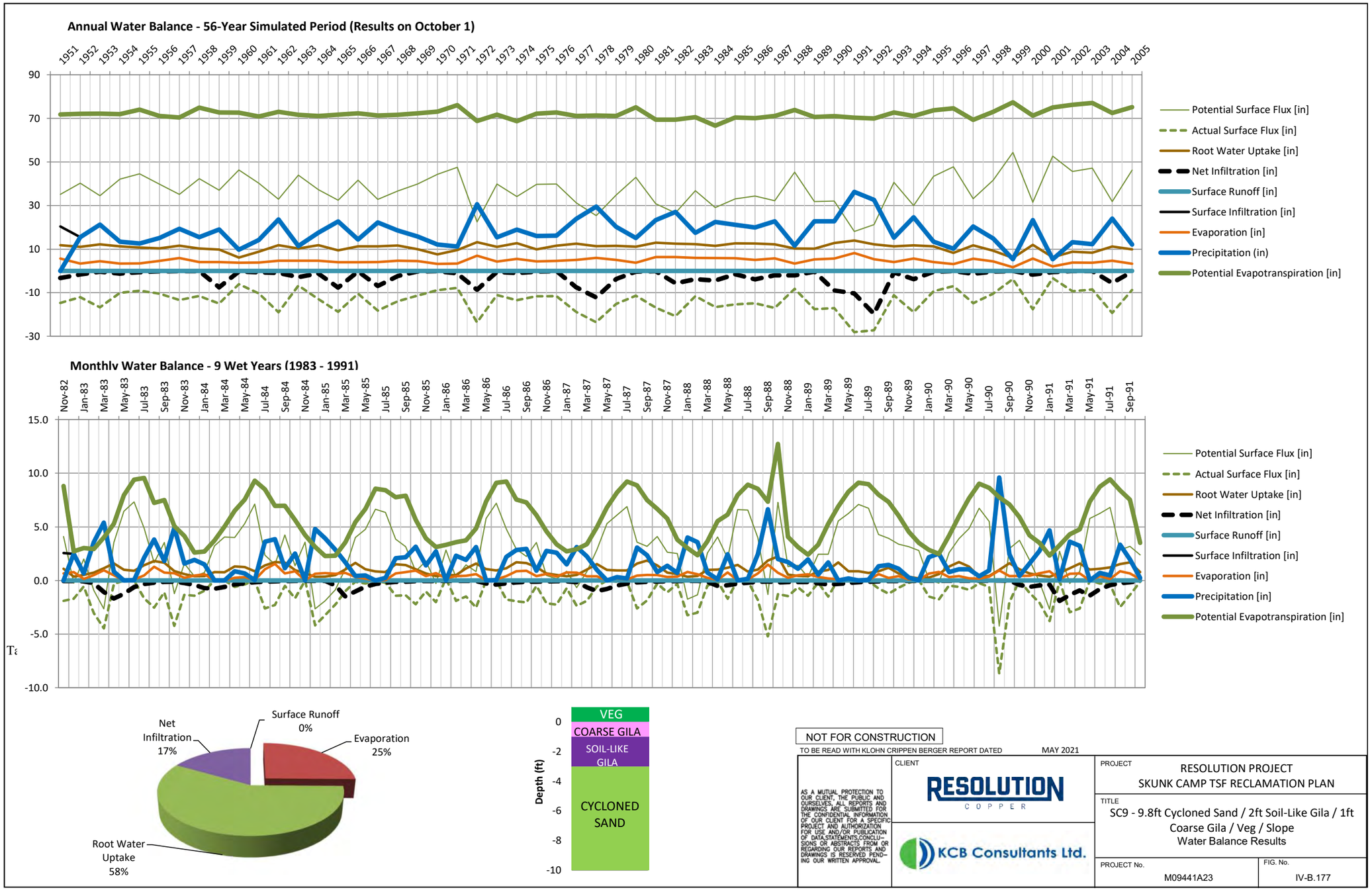
	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
1986-03-01	3.1	-0.59	-2.4	0.71	-0.024	0	3.1	0.73	2.9
1986	8.1	6.7	-5.7	3.1	-0.19	0	8.1	2.4	18
1986-11-01	1.7	2.1	-1.4	0.87	-0.087	0	1.7	0.34	4.8
1986-12-01	1.4	1.4	-0.79	0.51	-0.063	0	1.4	0.63	3.7
1987-01-01	3.0	-0.59	-2.4	0.39	-0.063	0	3.0	0.65	2.9
1987-02-01	3.3	-0.87	-2.6	0.47	-0.12	0	3.3	0.73	2.8
1987-03-01	2.7	-0.20	-2.2	0.75	-0.45	0	2.7	0.49	3.5
1987	12	1.9	-9.4	3.0	-0.78	0	12	2.8	18
1987-11-01	0.31	4.2	-0.16	0.87	-0.063	0	0.31	0.16	6.0
1987-12-01	1.8	1.3	-1.2	0.55	-0.051	0	1.8	0.54	3.8
1988-01-01	4.0	-1.5	-3.3	0.43	-0.035	0	4.0	0.78	3.2
1988-02-01	3.6	-1.3	-3.0	0.39	-0.028	0	3.6	0.60	2.5
1988-03-01	0.75	2.4	-0.47	0.91	-0.098	0	0.75	0.26	3.4
1988	10	5.1	-8.1	3.1	-0.28	0	10	2.3	19
1988-11-01	1.5	2.7	-1.1	0.75	-0.12	0	1.5	0.41	5.8
1988-12-01	1.7	1.3	-1.4	0.51	-0.14	0	1.7	0.33	4.0
1989-01-01	1.1	1.4	-0.59	0.43	-0.15	0	1.1	0.55	3.1
1989-02-01	2.2	0.12	-1.6	0.43	-0.15	0	2.2	0.57	2.7
1989-03-01	0.31	2.8	-0.12	0.87	-0.26	0	0.31	0.20	3.1
1989	6.9	8.3	-4.8	3.0	-0.81	0	6.9	2.1	19
1989-11-01	1.1	3.1	-0.63	0.59	-0.043	0	1.1	0.46	5.9
1989-12-01	0.28	3.0	-0.20	0.28	-0.035	0	0.28	0.12	4.2
1990-01-01	0.87	2.0	-0.71	0.20	-0.024	0	0.87	0.14	3.4
1990-02-01	1.3	0.98	-0.71	0.39	-0.020	0	1.3	0.58	2.7
1990-03-01	2.5	-0.039	-1.7	0.71	-0.016	0	2.5	0.82	2.6
1990	6.1	9.1	-4.0	2.2	-0.14	0	6.1	2.1	19
1990-11-01	0.24	3.7	-0.12	0.87	-0.56	0	0.24	0.16	5.3
1990-12-01	2.2	0.91	-1.4	0.55	-0.56	0	2.2	0.80	4.2
1991-01-01	4.8	-2.6	-4.1	0.35	-0.40	0	4.8	0.71	3.0
1991-02-01	1.8	0.71	-1.3	0.47	-1.1	0	1.8	0.44	2.6
1991-03-01	0.94	2.3	-0.59	0.94	-1.7	0	0.94	0.35	3.3
1991	10.0	5.0	-7.5	3.2	-4.3	0	10.0	2.5	18
1991-11-01	1.2	3.5	-0.98	0.67	-0.094	0	1.2	0.23	6.6
1991-12-01	3.3	-0.39	-2.8	0.51	-0.059	0	3.3	0.50	3.6
1992-01-01	4.0	-1.7	-3.1	0.35	-0.047	0	4.0	0.82	2.9
1992-02-01	3.0	-0.71	-2.1	0.43	-0.24	0	3.0	0.88	2.2
1992-03-01	2.8	-0.12	-2.1	0.75	-1.3	0	2.8	0.63	3.0
1992	14	0.55	-11	2.7	-1.7	0	14	3.1	18
1992-11-01	1.2	3.1	-0.91	0.87	-0.41	0	1.2	0.30	6.2
1992-12-01	0.51	2.3	-0.20	0.47	-0.33	0	0.51	0.33	3.6
1993-01-01	6.3	-4.3	-5.5	0.35	-0.27	0	6.3	0.87	2.5
1993-02-01	11	-9.4	-10	0.31	-5.6	0	11	0.84	1.9
1993-03-01	6.0	-4.1	-5.2	0.55	-5.4	0	6.0	0.85	2.7
1993	25	-12	-22	2.6	-12	0	25	3.2	17
1993-11-01	0.83	3.5	-0.43	0.63	-0.075	0	0.83	0.39	6.0
1993-12-01	4.2	-1.4	-3.9	0.43	-0.051	0	4.2	0.31	3.6
1994-01-01	0.28	2.3	-0.12	0.43	-0.047	0	0.28	0.18	3.4
1994-02-01	0.28	2.6	-0.16	0.55	-0.047	0	0.28	0.13	3.3
1994-03-01	2.6	-0.12	-2.1	0.71	-0.043	0	2.6	0.52	3.0
1994	8.2	6.9	-6.7	2.8	-0.26	0	8.2	1.5	19
1994-11-01	1.9	2.0	-1.6	0.67	-0.028	0	1.9	0.31	5.3
1994-12-01	3.3	-0.87	-2.6	0.43	-0.020	0	3.3	0.79	3.5

Table IV-B.68 SC9 Winter Storm Period Water Balance

Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
1995-01-01	2.7	-0.31	-2.1	0.39	-0.016	0	2.7	0.59	3.0
1995-02-01	3.6	-1.2	-2.8	0.43	-0.016	0	3.6	0.83	2.6
1995-03-01	2.7	0	-2.2	0.79	-0.23	0	2.7	0.46	3.1
1995	14	-0.43	-11	2.7	-0.31	0	14	3.0	18
1995-11-01	0	4.3	0.039	0.98	-0.075	0	0	0.079	5.8
1995-12-01	1.3	1.8	-0.91	0.55	-0.051	0	1.3	0.40	3.9
1996-01-01	0.91	1.9	-0.63	0.43	-0.043	0	0.91	0.24	3.5
1996-02-01	0.039	2.9	0	0.55	-0.039	0	0.039	0.031	3.3
1996-03-01	3.1	-0.24	-2.7	0.83	-0.024	0	3.1	0.47	3.6
1996	5.4	11	-4.2	3.3	-0.23	0	5.4	1.2	20
1996-11-01	0.43	4.1	-0.20	0.83	-0.016	0	0.43	0.22	6.0
1996-12-01	1.2	1.9	-0.98	0.35	-0.012	0	1.2	0.27	3.8
1997-01-01	0	2.6	0.20	0.39	-0.012	0	0	0.21	3.2
1997-02-01	2.8	-0.51	-2.2	0.39	-0.0079	0	2.8	0.67	2.7
1997-03-01	1.7	1.3	-1.5	0.87	-0.0079	0	1.7	0.23	3.4
1997	6.2	9.3	-4.6	2.8	-0.055	0	6.2	1.6	19
1997-11-01	0.75	3.2	-0.47	0.20	-0.0039	0	0.75	0.29	6.0
1997-12-01	0.79	2.1	-0.47	0.28	-0.0039	0	0.79	0.34	3.7
1998-01-01	2.7	-0.39	-1.9	0.31	0	0	2.7	0.76	3.1
1998-02-01	0.39	2.2	-0.039	0.51	0	0	0.39	0.32	2.4
1998-03-01	6.4	-4.4	-5.5	0.55	0	0	6.4	0.93	2.9
1998	11	2.8	-8.4	1.9	-0.0079	0	11	2.6	18
1998-11-01	0	4.4	0	0.43	-0.079	0	0	0	6.3
1998-12-01	1.1	2.1	-0.91	0.20	-0.055	0	1.1	0.15	3.9
1999-01-01	0.71	2.0	-0.20	0.43	-0.043	0	0.71	0.53	3.3
1999-02-01	0.079	2.9	-0.039	0.51	-0.035	0	0.079	0.031	3.6
1999-03-01	0.20	3.2	-0.12	0.43	-0.024	0	0.20	0.087	3.6
1999	2.0	15	-1.3	2.0	-0.24	0	2.0	0.80	21
1999-11-01	0	4.5	0	0.83	-0.0079	0	0	0	6.2
1999-12-01	0	3.7	0	0.28	-0.0079	0	0	0	4.7
2000-01-01	0.039	2.8	-0.039	0.20	-0.0039	0	0.039	0.0039	3.7
2000-02-01	0.28	2.9	-0.16	0.39	-0.0079	0	0.28	0.13	3.4
2000-03-01	0.67	2.5	-0.35	0.39	-0.0039	0	0.67	0.33	3.9
2000	0.98	16	-0.55	2.1	-0.031	0	0.98	0.46	22
2000-11-01	5.3	-1.5	-4.5	0.35	0	0	5.3	0.80	6.1
2000-12-01	2.1	0.59	-1.5	0.47	0	0	2.1	0.62	2.9
2001-01-01	0.079	2.9	-0.039	0.51	-0.0039	0	0.079	0.067	3.7
2001-02-01	3.4	-1.1	-2.6	0.39	-0.020	0	3.4	0.80	3.0
2001-03-01	1.7	0.87	-1.1	0.75	-0.059	0	1.7	0.64	2.8
2001	13	1.8	-9.7	2.5	-0.083	0	13	2.9	19
2001-11-01	0.35	3.7	-0.24	0.63	-0.10	0	0.35	0.18	5.7
2001-12-01	0.31	3.0	-0.12	0.35	-0.087	0	0.31	0.14	4.6
2002-01-01	1.8	0.51	-1.3	0.35	-0.067	0	1.8	0.52	2.9
2002-02-01	0.24	2.6	-0.12	0.55	-0.059	0	0.24	0.083	3.2
2002-03-01	0	3.3	0.039	0.67	-0.047	0	0	0.039	3.4
2002	2.7	13	-1.8	2.6	-0.36	0	2.7	0.97	20
2002-11-01	0.12	4.2	-0.039	0.16	-0.012	0	0.12	0.075	6.3
2002-12-01	0.87	2.5	-0.71	0.12	-0.012	0	0.87	0.15	4.4
2003-01-01	0.98	1.6	-0.43	0.24	-0.0039	0	0.98	0.56	3.4
2003-02-01	0.35	3.0	-0.079	0.51	-0.0079	0	0.35	0.28	3.1
2003-03-01	5.0	-2.4	-4.5	0.63	-0.0079	0	5.0	0.42	3.6
2003	7.3	8.8	-5.8	1.7	-0.043	0	7.3	1.5	21

Table IV-B.68 SC9 Winter Storm Period Water Balance

Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
2003-11-01	0.079	4.6	-0.039	0.47	-0.016	0	0.079	0.063	6.3
2003-12-01	0.87	2.0	-0.59	0.20	-0.0079	0	0.87	0.25	3.9
2004-01-01	0.98	1.9	-0.63	0.31	-0.0079	0	0.98	0.37	3.9
2004-02-01	1.5	0.94	-0.91	0.35	-0.0039	0	1.5	0.53	3.1
2004-03-01	0.67	2.0	-0.31	0.75	-0.0079	0	0.67	0.37	3.0
2004	4.1	11	-2.5	2.1	-0.043	0	4.1	1.6	20
2004-11-01	1.2	3.0	-0.83	0.67	0	0	1.2	0.37	6.4
2004-12-01	0.67	2.0	-0.31	0.31	-0.0039	0	0.67	0.33	3.5
2005-01-01	2.8	-0.079	-2.3	0.43	0	0	2.8	0.48	3.0
2005-02-01	4.2	-1.9	-3.6	0.43	0	0	4.2	0.58	2.7
2005-03-01	7.4	-5.3	-6.5	0.59	-0.0079	0	7.4	0.89	2.7
2005	16	-2.3	-14	2.4	-0.012	0	16	2.7	18
2005-11-01	0.43	3.9	-0.28	0.55	-0.083	0	0.43	0.15	6.4
2005-12-01	0	3.5	0	0.39	-0.063	0	0	0	4.4
2006-01-01	0	2.8	0	0.20	-0.055	0	0	0	3.5
2006-02-01	0	3.4	0	0.28	-0.047	0	0	0	3.8
2006-03-01	0.12	3.3	-0.079	0.47	-0.031	0	0.12	0.055	4.1
2006	0.55	17	-0.35	1.9	-0.28	0	0.55	0.21	22


Annual Water Balance - 56-Year Simulated Period (Results on October 1)
Potential Surface Flux [in]
Actual Surface Flux [in]
Root Water Uptake [in]
Net Infiltration [in]
Surface Runoff [in]
Surface Infiltration [in]
Evaporation [in]
Precipitation (in)
Potential Evapotranspiration [in]
Monthly Water Balance - 9 Wet Years (1983 - 1991)
Net Infiltration 17%
Surface Runoff 0%
Evaporation 25%
Root Water Uptake 58%
VEG
COARSE GILA
SOIL-LIKE GILA
CYCLONED SAND
Depth (ft)
NOT FOR CONSTRUCTION
TO BE READ WITH KLOHN CRIPPEN BERGER REPORT DATED MAY 2021
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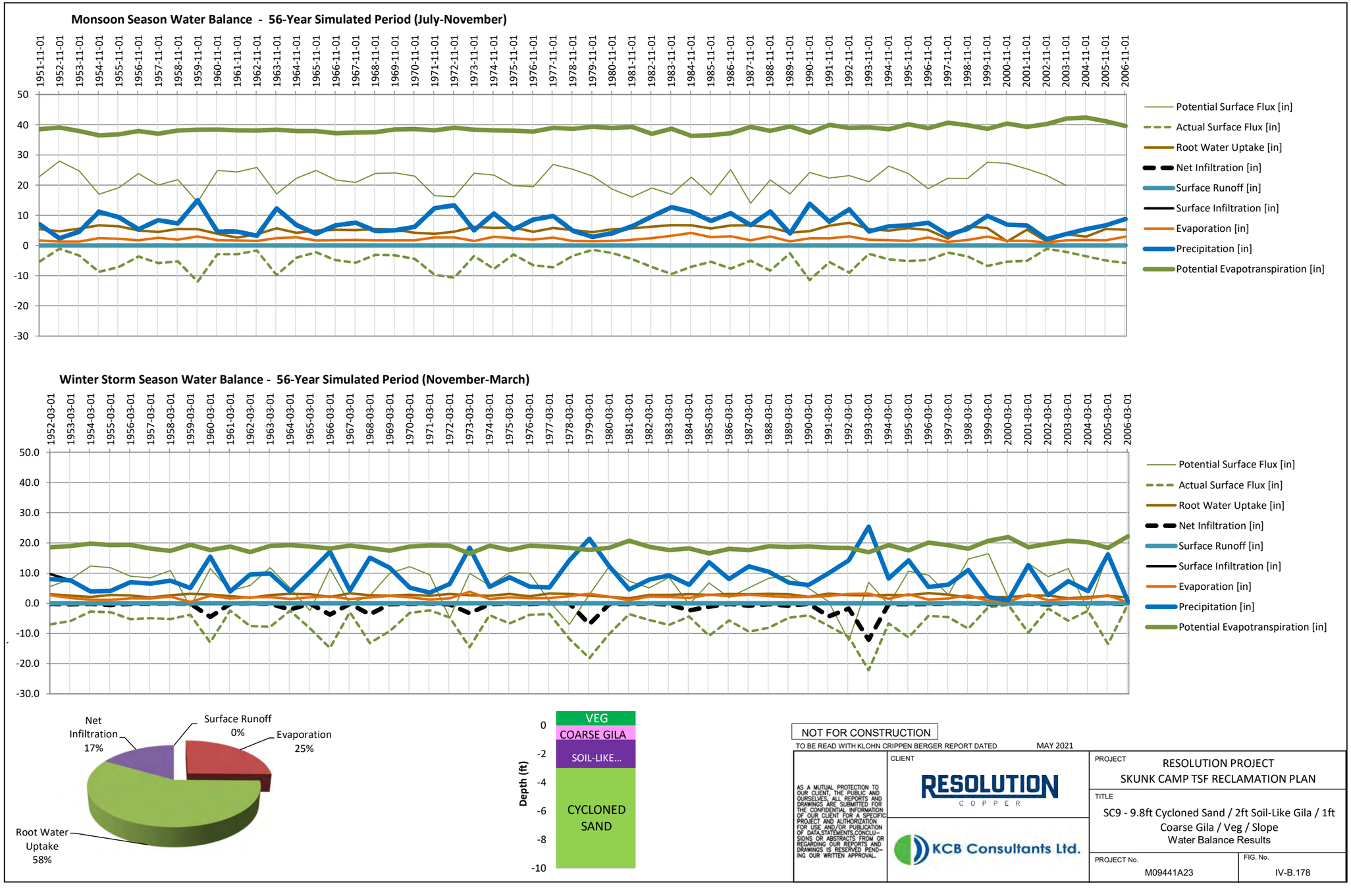
SKUNK CAMP TSF RECLAMATION PLAN
TITLE
SC9 - 9.8ft Cycloned Sand / 2ft Soil-Like Gila / 1ft Coarse Gila / Veg / Slope
Water Balance Results
PROJECT No.
M09441A23
FIG. No.
IV-B.177


Monsoon Season Water Balance - 56-Year Simulated Period (July-November)
Potential Surface Flux [in]
Actual Surface Flux [in]
Root Water Uptake [in]
Net Infiltration [in]
Surface Runoff [in]
Surface Infiltration [in]
Evaporation [in]
Precipitation [in]
Potential Evapotranspiration [in]
Winter Storm Season Water Balance - 56-Year Simulated Period (November-March)
Net Infiltration 17%
Surface Runoff 0%
Evaporation 25%
Root Water Uptake 58%
VEG
COARSE GILA
SOIL-LIKE...
CYCLONED SAND
Depth (ft)
NOT FOR CONSTRUCTION
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TITLE
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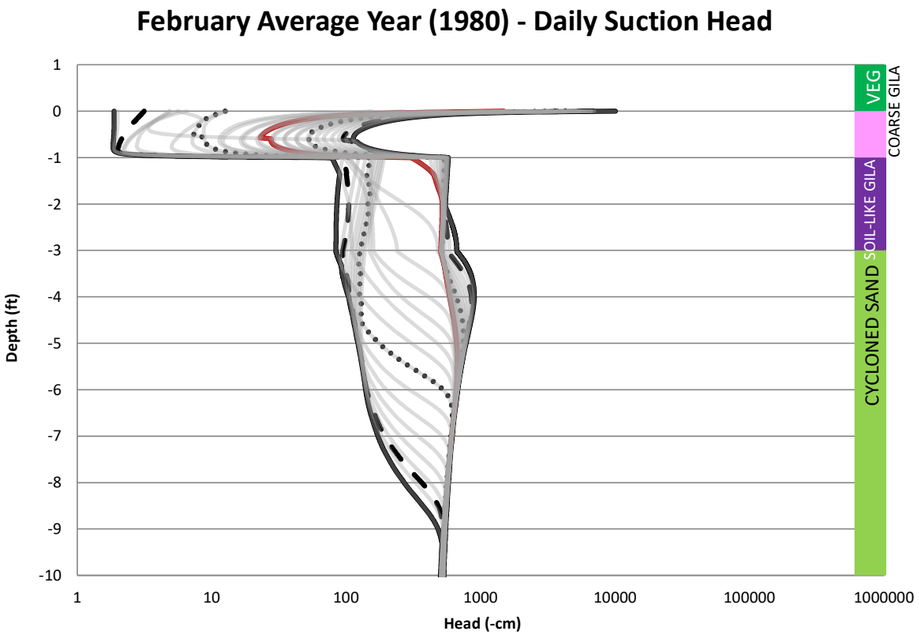
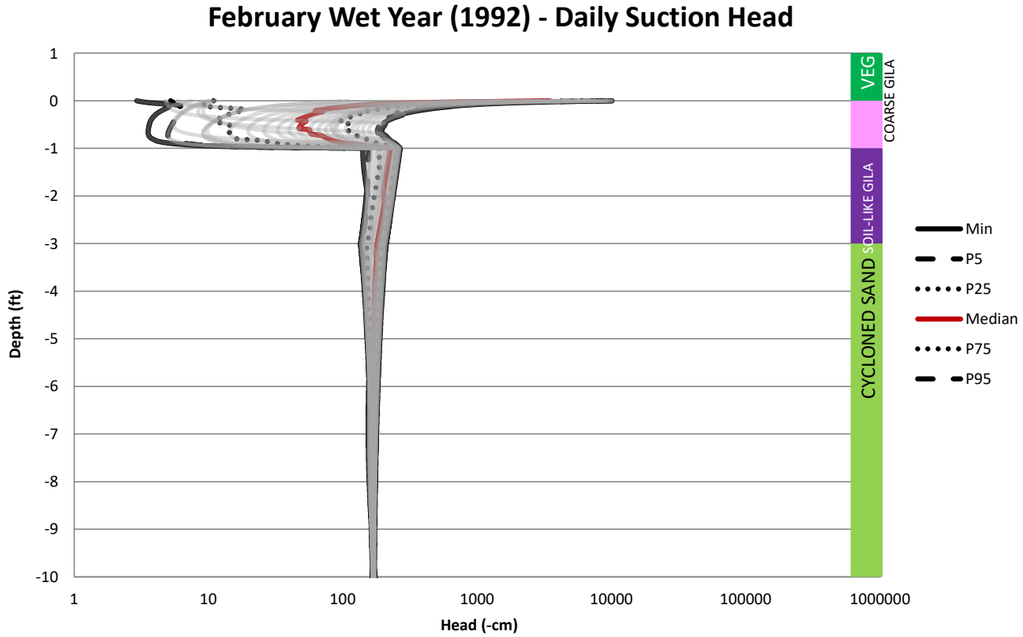
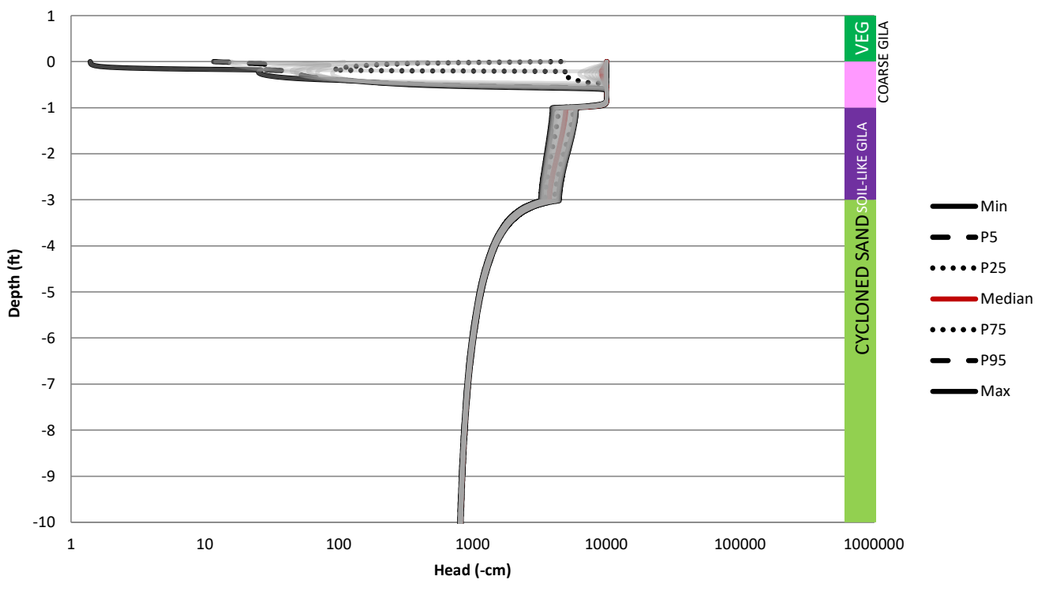
Water Balance Results
PROJECT No.
M09441A23
FIG. No.
IV-B.178







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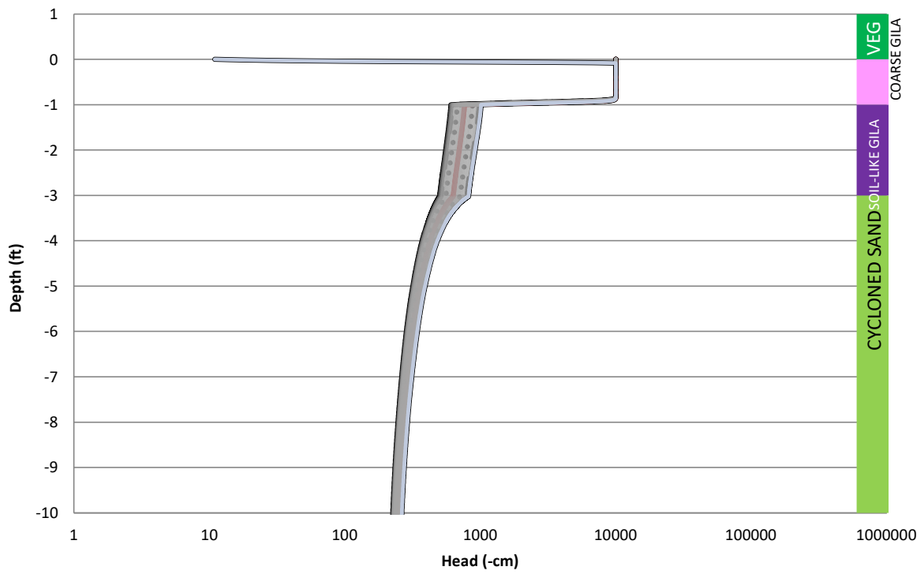
SKUNK CAMP TSF RECLAMATION PLAN

TITLE: SC9 - 9.8ft Cycloned Sand / 2ft Soil-Like Gila / 1ft Coarse Gila / Veg / Slope
Suction Profiles - Winter (February)

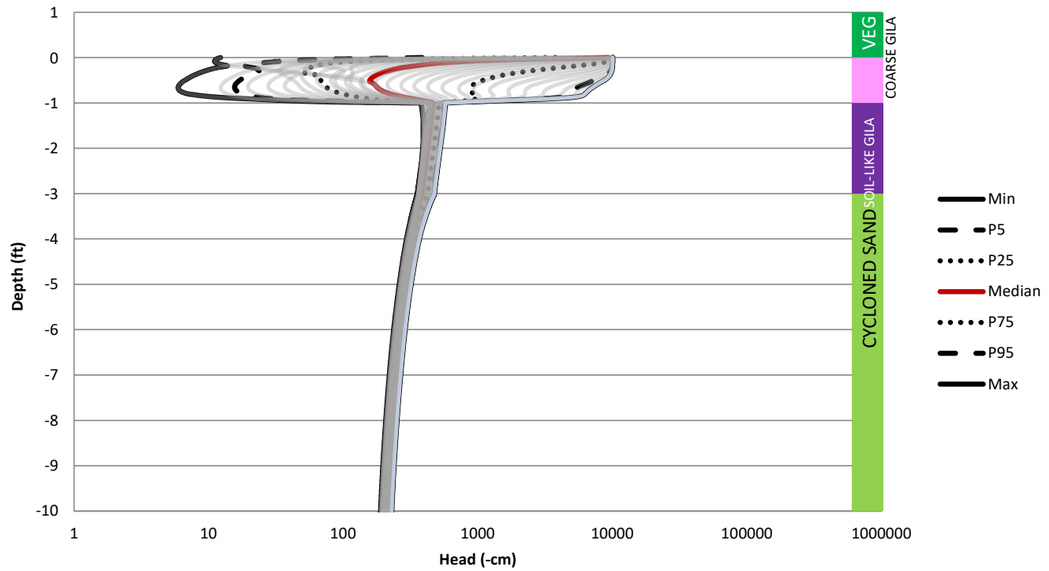
PROJECT No. M09441A23

FIG. No. IV-R-179

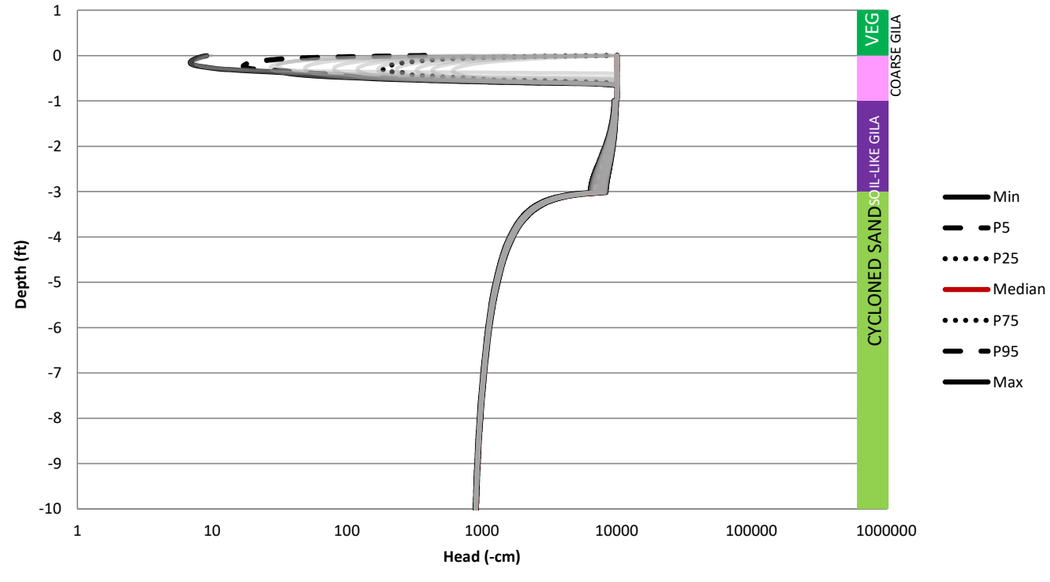
June Average Year (1980) - Daily Suction Head



June Wet Year (1992) - Daily Suction Head



June Dry Year (2000) - Daily Suction Head



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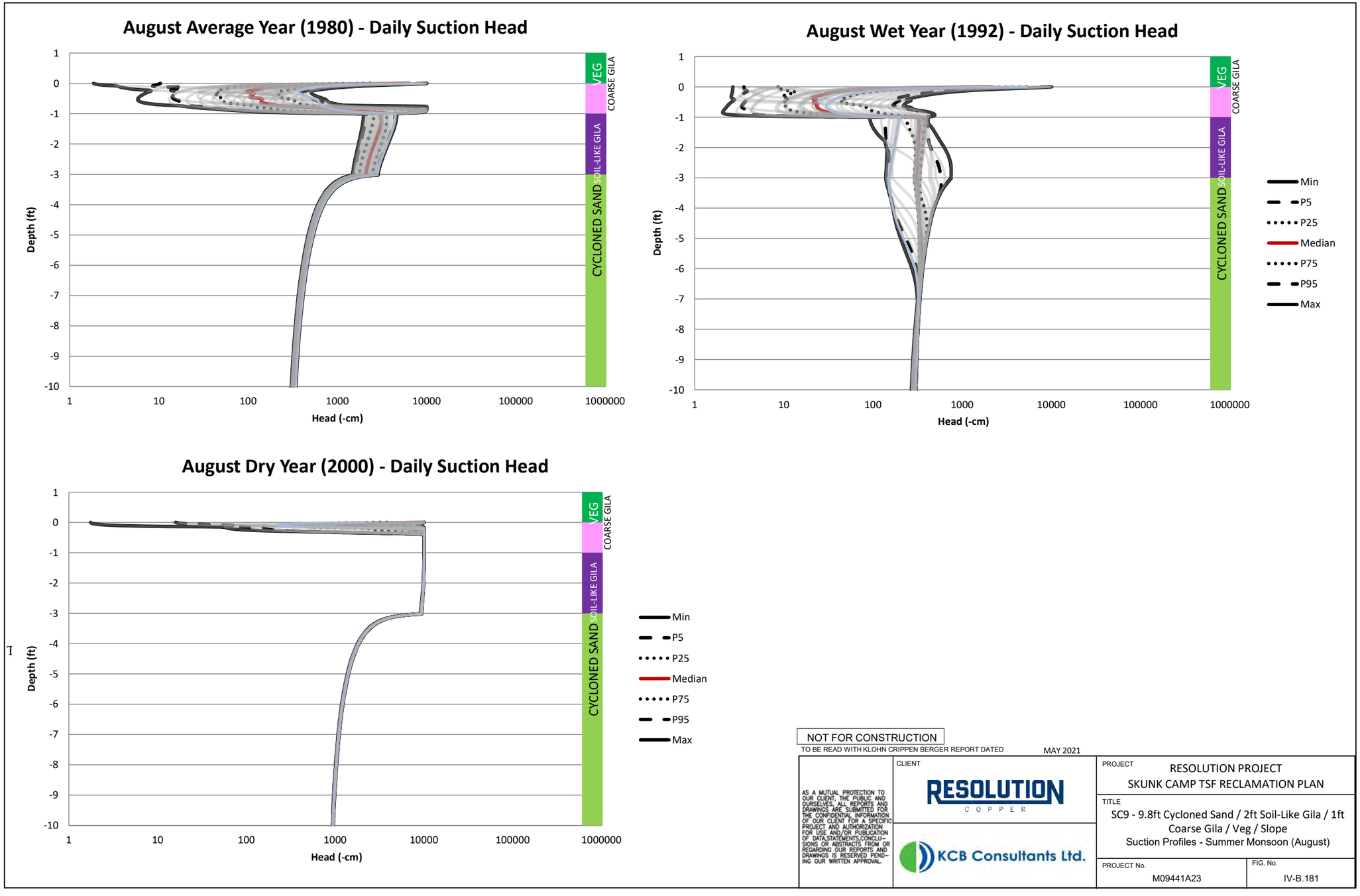
SKUNK CAMP TSF RECLAMATION PLAN

TITLE: SC9 - 9.8ft Cycloned Sand / 2ft Soil-Like Gila / 1ft Coarse Gila / Veg / Slope
Suction Profiles - Dry Season (June)

PROJECT No. M09441A23

FIG. No. IV-B.180


August Average Year (1980) - Daily Suction Head
Depth (ft)
Head (-cm)
VEG
COARSE GILA
SOIL-LIKE GILA
CYCLONED SAND
August Wet Year (1992) - Daily Suction Head
August Dry Year (2000) - Daily Suction Head
Min
P5
P25
Median
P75
P95
Max
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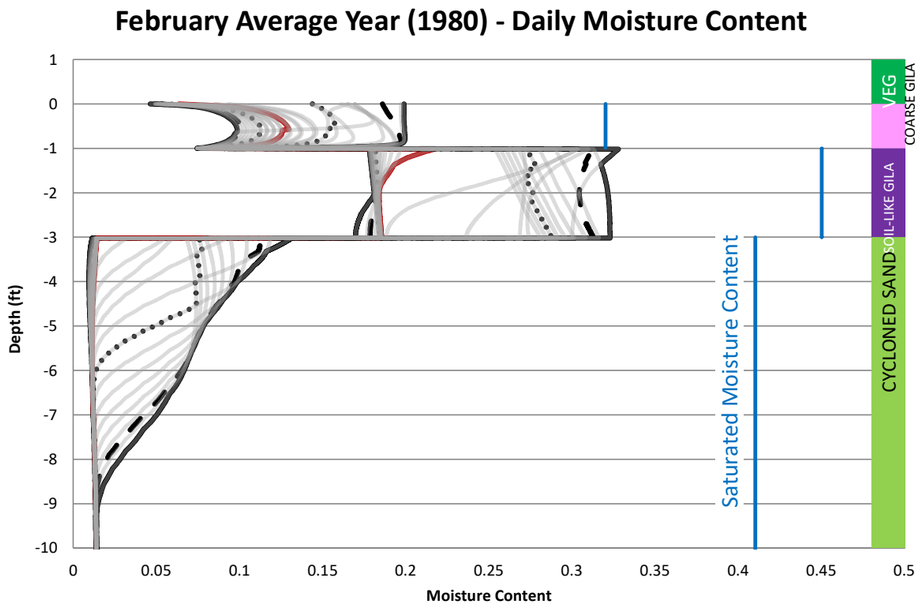
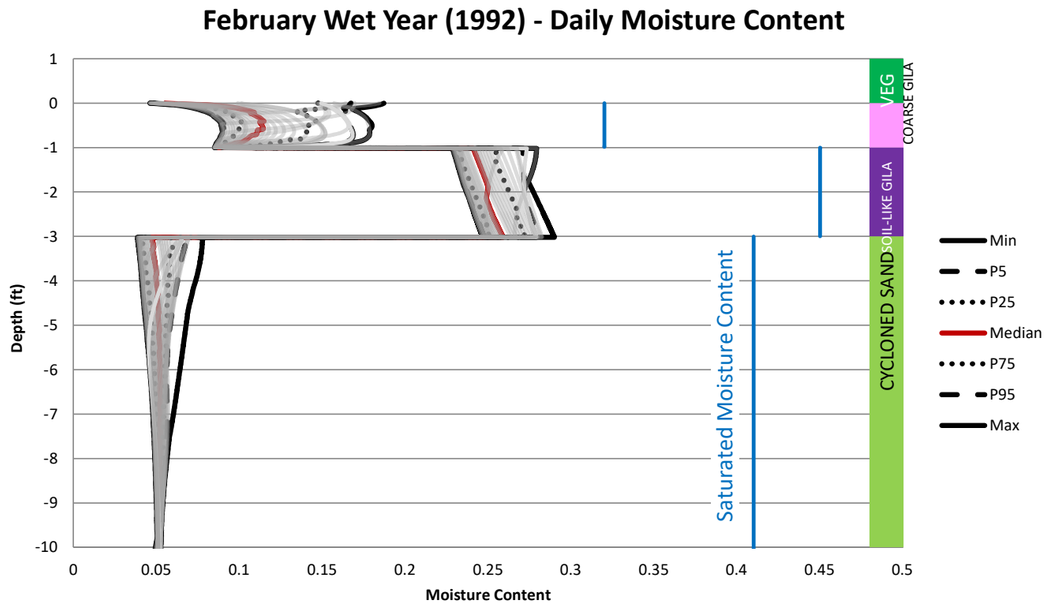
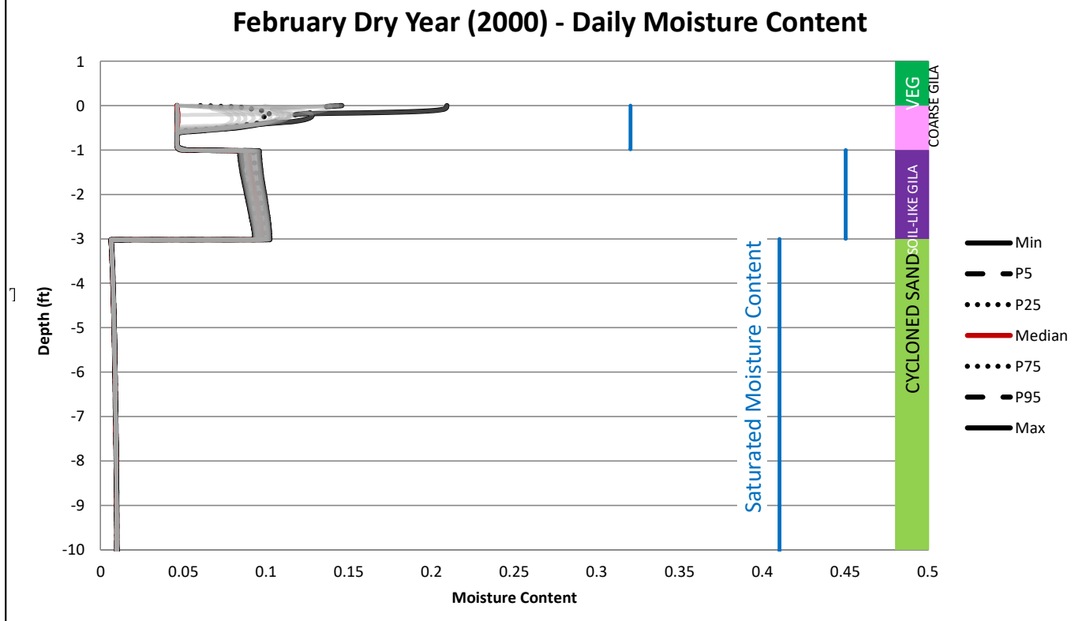
SKUNK CAMP TSF RECLAMATION PLAN
TITLE
SC9 - 9.8ft Cycloned Sand / 2ft Soil-Like Gila / 1ft Coarse Gila / Veg / Slope
Suction Profiles - Summer Monsoon (August)
PROJECT No.
M09441A23
FIG. No.
IV-B.181







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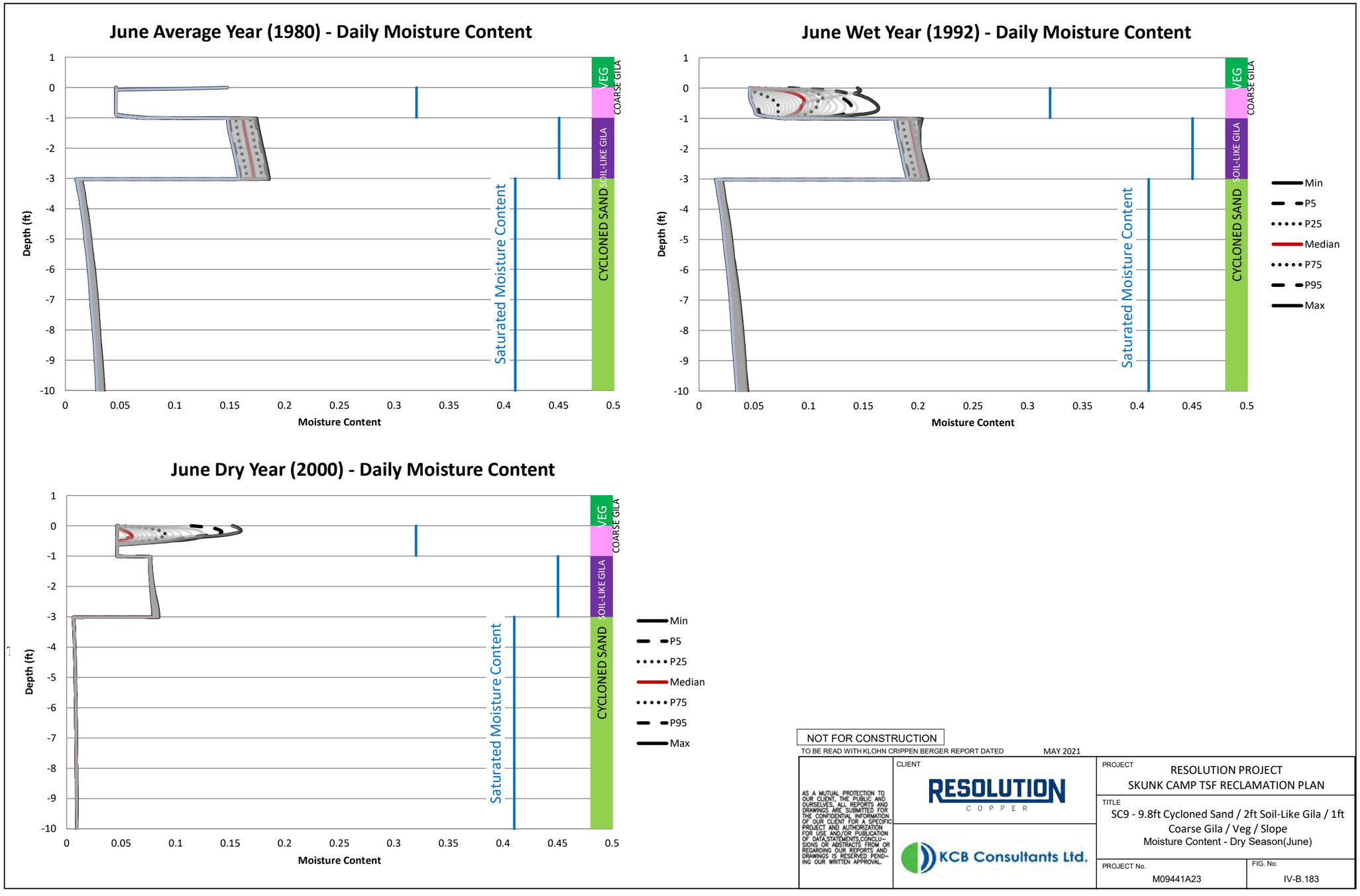
KCB Consultants Ltd.

PROJECT: RESOLUTION PROJECT
SKUNK CAMP TSF RECLAMATION PLAN

TITLE: SC9 - 9.8ft Cycloned Sand / 2ft Soil-Like Gila / 1ft Coarse Gila / Slope
Moisture Content - Winter (February)

PROJECT No. M09441A23

FIG. No. IV-B.182



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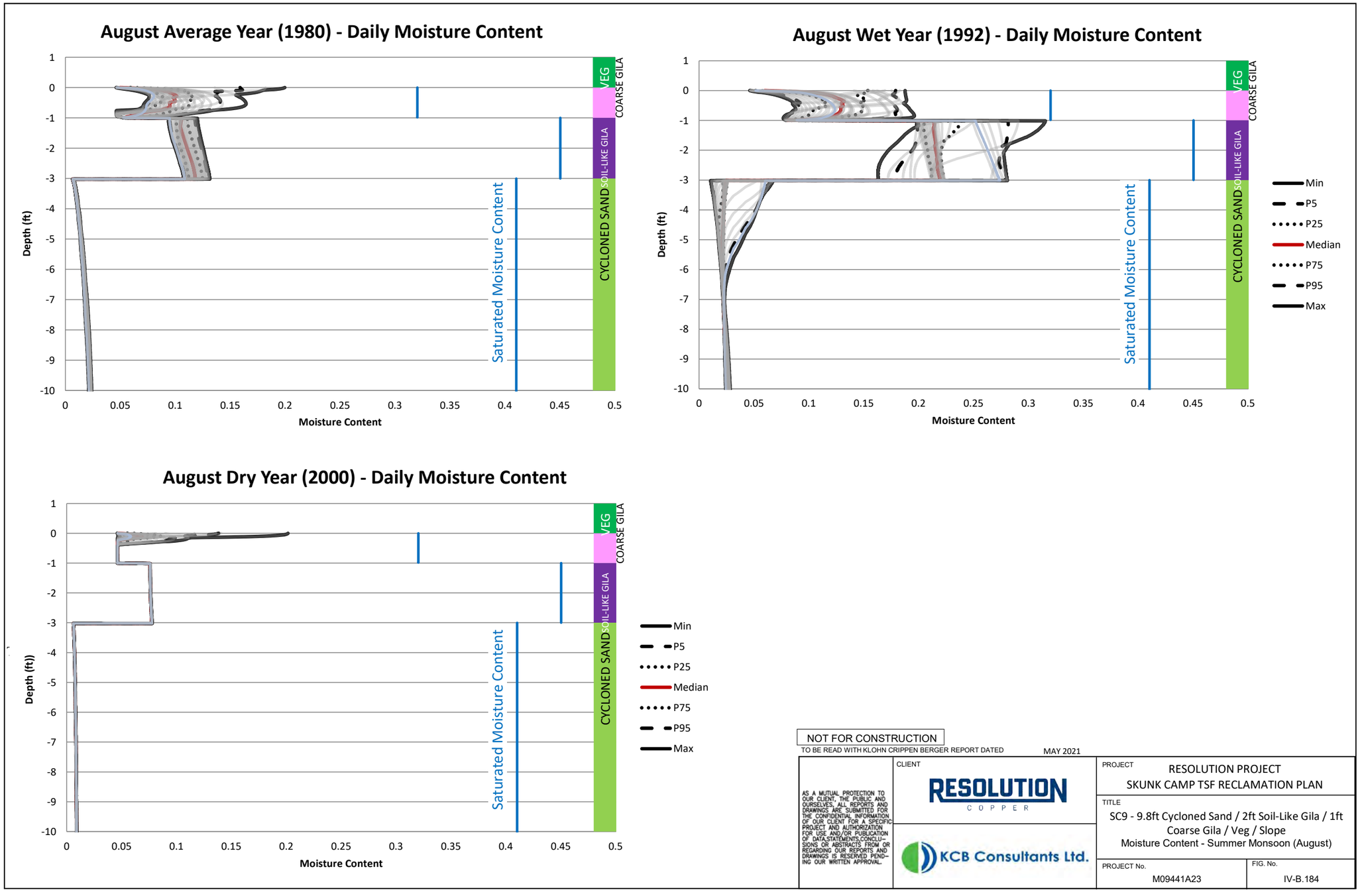
PROJECT: RESOLUTION PROJECT
SKUNK CAMP TSF RECLAMATION PLAN

TITLE: SC9 - 9.8ft Cycloned Sand / 2ft Soil-Like Gila / 1ft Coarse Gila / Veg / Slope
Moisture Content - Dry Season(June)

PROJECT No. M09441A23

FIG. No. IV-B.183


August Average Year (1980) - Daily Moisture Content
August Wet Year (1992) - Daily Moisture Content
August Dry Year (2000) - Daily Moisture Content
Depth (ft)
Moisture Content
Saturated Moisture Content
VEG
COARSE GILA
SOIL-LIKE GILA
CYCLONED SAND
Min
P5
P25
Median
P75
P95
Max
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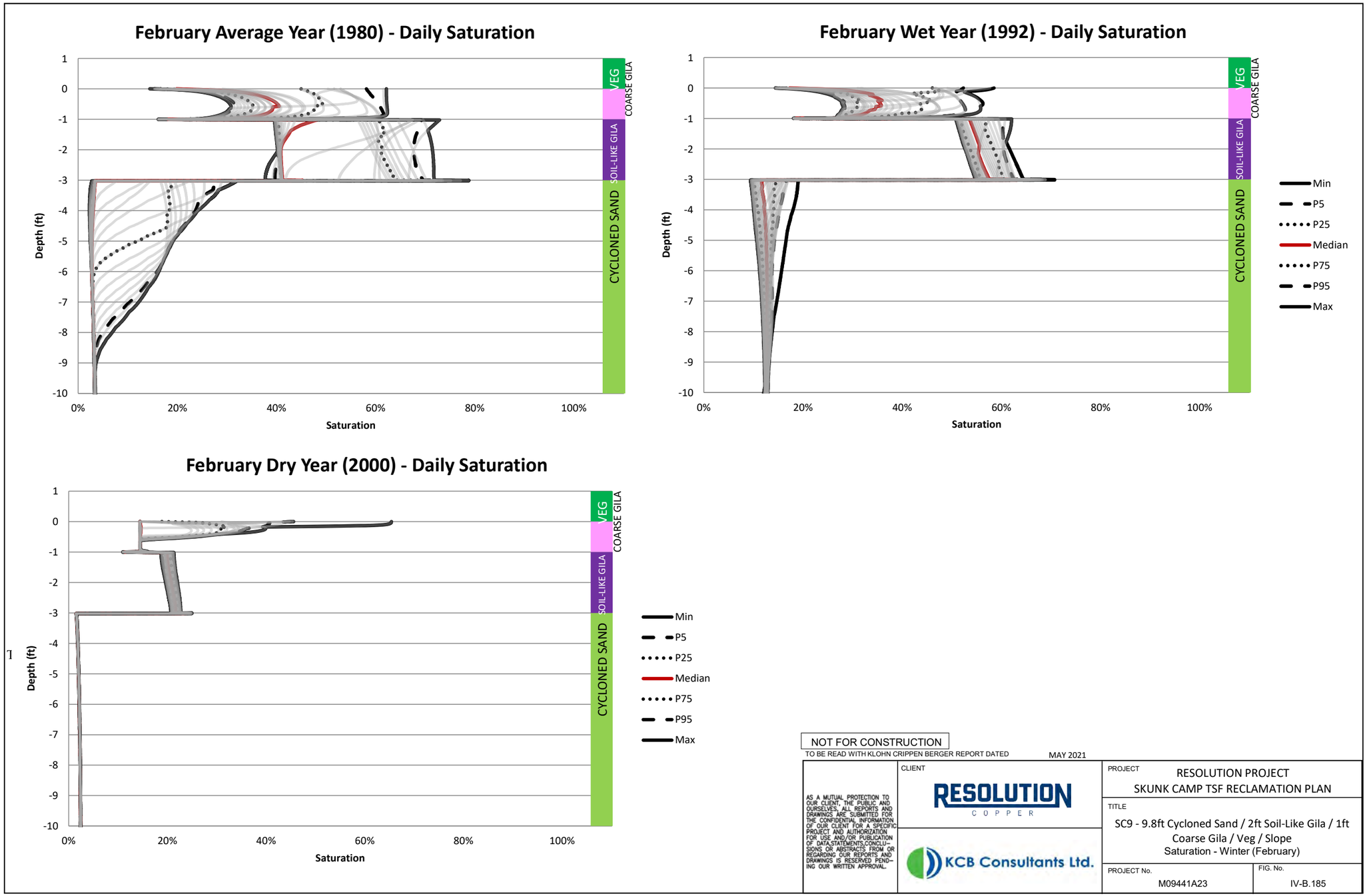
CLIENT
RESOLUTION COPPER
KCB Consultants Ltd.
PROJECT
RESOLUTION PROJECT
SKUNK CAMP TSF RECLAMATION PLAN
TITLE
SC9 - 9.8ft Cycloned Sand / 2ft Soil-Like Gila / 1ft Coarse Gila / Veg / Slope
Moisture Content - Summer Monsoon (August)
PROJECT No.
M09441A23
FIG. No.
IV-B.184


February Average Year (1980) - Daily Saturation
February Wet Year (1992) - Daily Saturation
February Dry Year (2000) - Daily Saturation
Depth (ft)
Saturation
0%
20%
40%
60%
80%
100%
1
0
-1
-2
-3
-4
-5
-6
-7
-8
-9
-10
VEG
COARSE GILA
SOIL-LIKE GILA
CYCLONED SAND
Min
P5
P25
Median
P75
P95
Max
NOT FOR CONSTRUCTION
TO BE READ WITH KLOHN CRIPPEN BERGER REPORT DATED
MAY 2021
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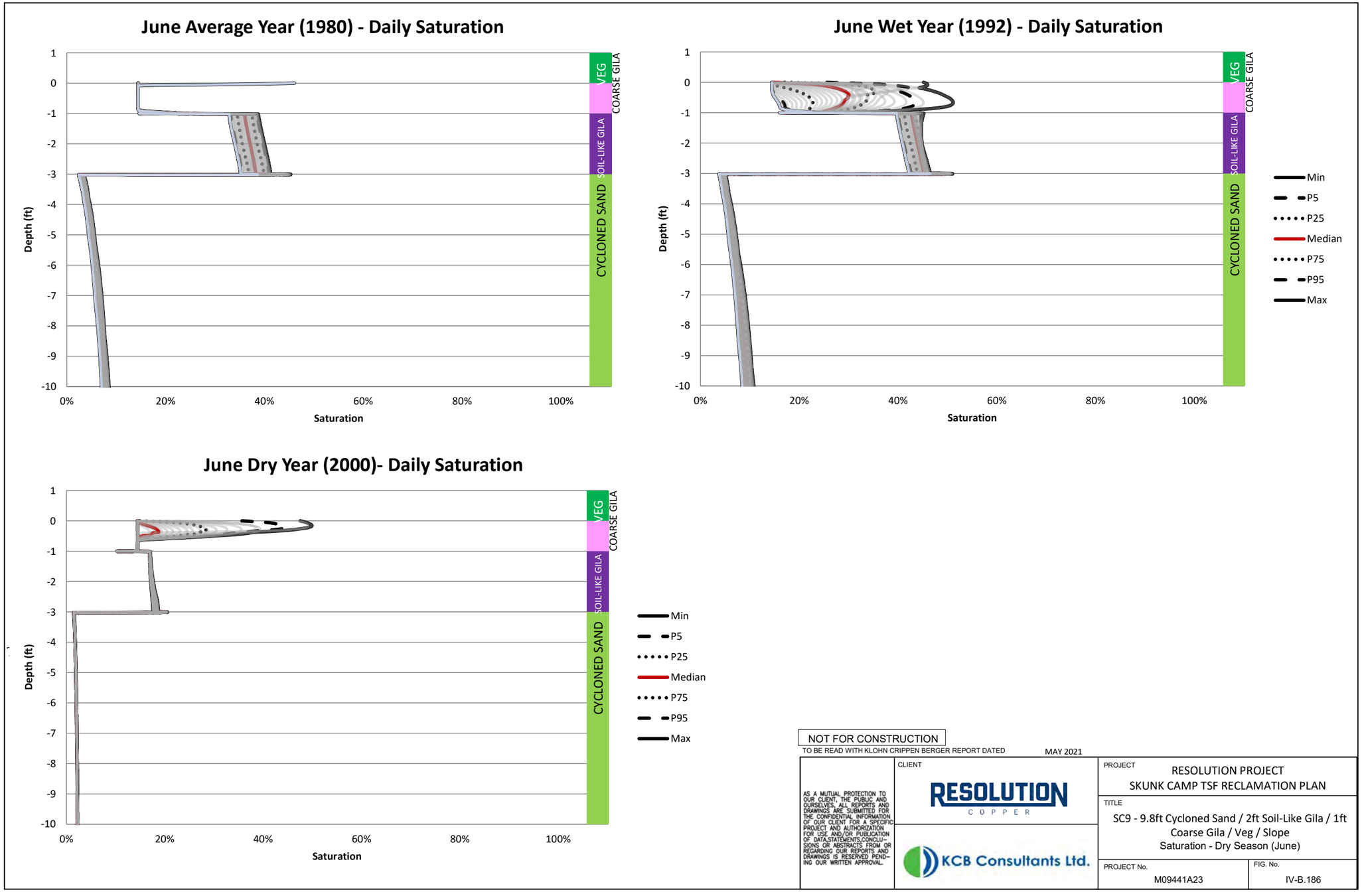
CLIENT
RESOLUTION COPPER
KCB Consultants Ltd.
PROJECT
RESOLUTION PROJECT
SKUNK CAMP TSF RECLAMATION PLAN
TITLE
SC9 - 9.8ft Cycloned Sand / 2ft Soil-Like Gila / 1ft Coarse Gila / Veg / Slope
Saturation - Winter (February)
PROJECT No.
M09441A23
FIG. No.
IV-B.185



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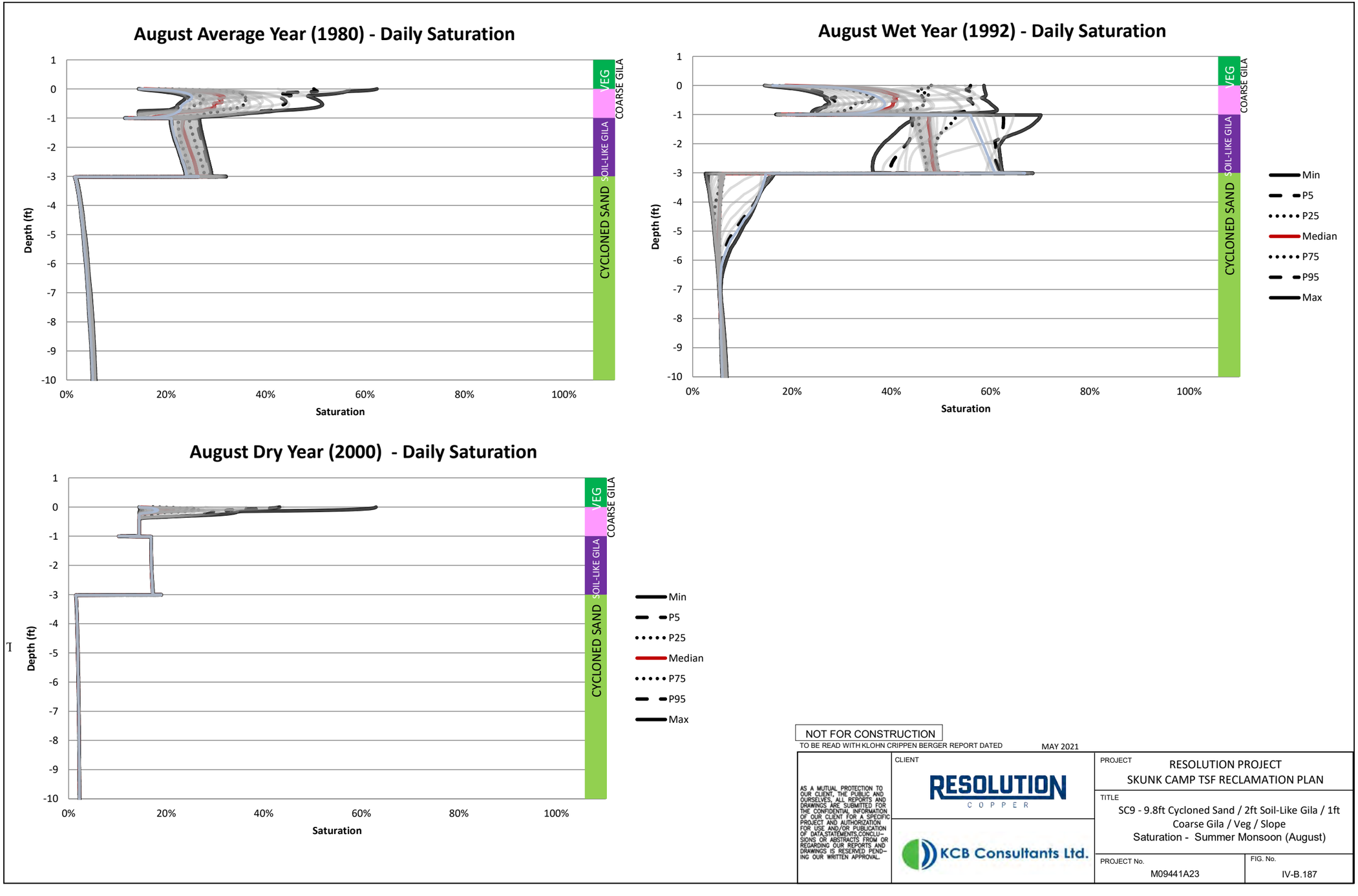
PROJECT: RESOLUTION PROJECT
SKUNK CAMP TSF RECLAMATION PLAN

TITLE: SC9 - 9.8ft Cycloned Sand / 2ft Soil-Like Gila / 1ft Coarse Gila / Veg / Slope
Saturation - Dry Season (June)

PROJECT No. M09441A23

FIG. No. IV-B.186



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PROJECT: RESOLUTION PROJECT
SKUNK CAMP TSF RECLAMATION PLAN

TITLE: SC9 - 9.8ft Cycloned Sand / 2ft Soil-Like Gila / 1ft Coarse Gila / Veg / Slope
Saturation - Summer Monsoon (August)

PROJECT No. M09441A23

FIG. No. IV-B.187

Table IV-B.69 SC10 Annual Water Balance

Water Year	Result Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
		(in)	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
1951	1951-10-01	14	46	2.8	0	-3.4	0	14	17	60
1952	1952-10-01	0	51	1.3	0	-0.20	0	20	22	72
1953	1953-10-01	15	57	-0.29	0	-0.071	0	15	15	72
1954	1954-10-01	21	51	-1.1	0	-0.035	0	21	20	72
1955	1955-10-01	13	58	0.79	0	-0.032	0	13	14	72
1956	1956-10-01	13	61	0.50	0	-0.020	0	13	13	74
1957	1957-10-01	15	56	-0.14	0	-0.012	0	15	15	71
1958	1958-10-01	19	51	-0.76	0	-0.0089	0	19	18	70
1959	1959-10-01	16	59	0.30	0	-0.0079	0	16	16	75
1960	1960-10-01	19	54	-0.36	0	-0.69	0	19	19	73
1961	1961-10-01	9.8	63	0.044	0	-0.16	0	9.8	9.8	73
1962	1962-10-01	14	57	0.049	0	-0.044	0	14	14	71
1963	1963-10-01	24	49	-2.3	0	-0.030	0	24	21	73
1964	1964-10-01	11	60	1.9	0	-0.092	0	11	13	72
1965	1965-10-01	18	53	0.23	0	-0.041	0	18	18	71
1966	1966-10-01	23	49	-4.5	0	-2.9	0	23	18	72
1967	1967-10-01	14	58	0.82	0	-0.22	0	14	15	72
1968	1968-10-01	22	49	-2.7	0	-2.6	0	22	20	71
1969	1969-10-01	19	53	-0.15	0	-0.25	0	19	18	72
1970	1970-10-01	16	56	-0.58	0	-0.083	0	16	15	72
1971	1971-10-01	12	61	-1.8	0	-0.030	0	12	10	73
1972	1972-10-01	11	65	2.9	0	-0.024	0	11	14	76
1973	1973-10-01	31	38	-1.0	0	-0.35	0	31	30	69
1974	1974-10-01	15	56	-0.55	0	-0.13	0	15	15	72
1975	1975-10-01	19	50	0.72	0	-0.041	0	19	20	69
1976	1976-10-01	16	56	-1.6	0	-0.025	0	16	14	72
1977	1977-10-01	16	56	0.46	0	-0.013	0	16	17	73
1978	1978-10-01	24	47	-1.3	0	-1.8	0	24	23	71
1979	1979-10-01	30	42	-5.2	0	-5.5	0	30	24	71
1980	1980-10-01	20	51	-0.82	0	-0.73	0	20	19	71
1981	1981-10-01	15	60	-0.18	0	-0.20	0	15	15	75
1982	1982-10-01	23	46	-1.0	0	-0.049	0	23	22	69
1983	1983-10-01	27	42	-2.8	0	-0.038	0	27	24	69
1984	1984-10-01	18	53	3.2	0	-0.069	0	18	21	70
1985	1985-10-01	22	44	-1.1	0	-0.32	0	22	21	67
1986	1986-10-01	21	49	0.48	0	-0.14	0	21	22	70
1987	1987-10-01	20	50	0.41	0	-0.053	0	20	20	70
1988	1988-10-01	23	49	-0.48	0	-0.047	0	23	22	71
1989	1989-10-01	12	62	1.0	0	-0.043	0	12	13	74
1990	1990-10-01	23	48	-3.4	0	-0.020	0	23	19	71
1991	1991-10-01	23	48	1.9	0	-0.52	0	23	25	71
1992	1992-10-01	36	34	-2.0	0	-0.97	0	36	34	70
1993	1993-10-01	33	37	-9.4	0	-10	0	33	23	70
1994	1994-10-01	15	57	0.30	0	-0.29	0	15	16	73
1995	1995-10-01	25	46	-1.6	0	-0.087	0	25	23	71
1996	1996-10-01	13	60	1.2	0	-0.054	0	13	15	74
1997	1997-10-01	10	65	0.82	0	-0.021	0	10	11	75
1998	1998-10-01	20	49	-0.63	0	-0.020	0	20	20	69
1999	1999-10-01	15	58	-0.38	0	-0.036	0	15	14	73
2000	2000-10-01	5.4	72	1.3	0	-0.017	0	5.4	6.7	77
2001	2001-10-01	23	48	-1.0	0	-0.016	0	23	22	71
2002	2002-10-01	5.4	70	0.89	0	-0.021	0	5.4	6.3	75
2003	2003-10-01	13	63	-0.46	0	-0.0079	0	13	13	76
2004	2004-10-01	12	65	-0.24	0	-0.0055	0	12	12	77

Table IV-B.69 SC10 Annual Water Balance

Water Year	Result Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
		(in)	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
2005	2005-10-01	24	49	-2.0	0	-1.1	0	24	22	72
2006	2006-10-01	12	63	0.15	0	-0.23	0	12	12	75

Table IV-B.70 SC10 Monthly Water Balance 9 Wet Years (1983 to 1991)

Month	Result Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
		[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
Nov-82	1982-11-30	0.0	5.5	0.20	0	-0.0047	0	2.5	2.7	8.7
Dec-82	1982-12-30	2.5	0.20	-0.26	0	-0.0024	0	2.5	2.2	2.8
Jan-83	1983-01-29	0.71	2.6	0.38	0	-0.0024	0	0.71	1.1	3.1
Feb-83	1983-02-28	3.5	-0.16	-0.81	0	-0.0020	0	3.5	2.7	2.9
Mar-83	1983-03-30	5.4	-1.5	-2.0	0	-0.0020	0	5.4	3.5	4.0
Apr-83	1983-04-29	0.83	5.2	2.4	0	-0.0020	0	0.83	3.2	5.3
May-83	1983-05-29	0	8.5	0.84	0	-0.0028	0	0	0.83	7.9
Jun-83	1983-06-28	0	9.4	0.42	0	-0.0039	0	0	0.47	9.3
Jul-83	1983-07-28	2.1	6.7	-0.58	0	-0.0051	0	2.1	1.5	9.4
Aug-83	1983-08-27	3.8	3.3	-0.22	0	-0.0051	0	3.8	3.6	7.1
Sep-83	1983-09-26	1.9	5.1	0.28	0	-0.0051	0	1.9	2.1	7.3
Oct-83	1983-10-26	4.9	-0.43	-1.4	0	-0.0051	0	4.9	3.5	5.0
Nov-83	1983-11-25	1.6	2.2	-0.12	0	-0.0055	0	1.6	1.5	4.1
Dec-83	1983-12-25	1.9	0.83	0.51	0	-0.0051	0	1.9	2.4	2.7
Jan-84	1984-01-24	1.5	1.2	0.50	0	-0.0055	0	1.5	2.0	2.7
Feb-84	1984-02-23	0	4.1	0.70	0	-0.0063	0	0	0.67	3.8
Mar-84	1984-03-24	0	5.6	0.38	0	-0.0067	0	0	0.39	5.0
Apr-84	1984-04-23	0.83	5.9	0.025	0	-0.0067	0	0.83	0.91	6.5
May-84	1984-05-23	0.67	7.3	0.17	0	-0.0063	0	0.67	0.83	7.5
Jun-84	1984-06-22	0.039	9.3	0.20	0	-0.0059	0	0.039	0.24	9.3
Jul-84	1984-07-22	3.6	4.1	-1.2	0	-0.0051	0	3.6	2.5	8.5
Aug-84	1984-08-21	3.9	3.2	-0.19	0	-0.0051	0	3.9	3.7	6.9
Sep-84	1984-09-20	1.1	5.9	0.55	0	-0.0043	0	1.1	1.7	7.0
Oct-84	1984-10-20	2.5	2.4	-0.25	0	-0.0039	0	2.5	2.3	5.6
Nov-84	1984-11-19	0	4.3	0.56	0	-0.0039	0	0	0.55	4.2
Dec-84	1984-12-19	4.8	-2.3	-2.9	0	-0.0035	0	4.8	1.9	3.1
Jan-85	1985-01-18	3.9	-1.5	-1.5	0	-0.0035	0	3.9	2.4	2.3
Feb-85	1985-02-17	2.9	-0.35	-0.37	0	-0.0031	0	2.9	2.5	2.3
Mar-85	1985-03-19	1.7	2.2	1.8	0	-0.0098	0	1.7	3.4	3.6
Apr-85	1985-04-18	0.43	5.7	1.5	0	-0.044	0	0.43	1.9	5.4
May-85	1985-05-18	0.47	6.6	0.56	0	-0.061	0	0.47	1.0	6.7
Jun-85	1985-06-17	0	8.7	0.39	0	-0.056	0	0	0.39	8.6
Jul-85	1985-07-17	0.20	8.2	0.063	0	-0.047	0	0.20	0.31	8.4
Aug-85	1985-08-16	2.1	5.7	-0.21	0	-0.038	0	2.1	1.9	7.8
Sep-85	1985-09-15	2.2	4.9	-0.29	0	-0.029	0	2.2	1.9	7.9
Oct-85	1985-10-15	3.1	1.9	-0.44	0	-0.024	0	3.1	2.7	5.7
Nov-85	1985-11-14	1.4	2.5	-0.17	0	-0.021	0	1.4	1.3	3.9
Dec-85	1985-12-14	2.8	0.16	-0.77	0	-0.017	0	2.8	2.0	3.1
Jan-86	1986-01-13	0	3.3	1.4	0	-0.015	0	0	1.4	3.3
Feb-86	1986-02-12	2.3	0.79	-1.4	0	-0.012	0	2.3	0.98	3.6
Mar-86	1986-03-14	1.9	2.6	0.25	0	-0.011	0	1.9	2.2	3.7
Apr-86	1986-04-13	3.1	2.4	0.27	0	-0.0098	0	3.1	3.4	4.9
May-86	1986-05-13	0	7.8	0.94	0	-0.0091	0	0	0.94	7.4
Jun-86	1986-06-12	0	9.4	0.45	0	-0.0087	0	0	0.43	9.1
Jul-86	1986-07-12	2.2	6.8	-0.60	0	-0.0079	0	2.2	1.6	9.2
Aug-86	1986-08-11	2.8	4.6	-0.11	0	-0.0075	0	2.8	2.7	7.5
Sep-86	1986-09-10	3.0	4.0	-0.66	0	-0.0067	0	3.0	2.3	7.3
Oct-86	1986-10-10	0.91	4.8	0.92	0	-0.0063	0	0.91	1.8	6.1
Nov-86	1986-11-09	2.8	1.2	-0.66	0	-0.0055	0	2.8	2.1	4.6
Dec-86	1986-12-09	2.6	0.67	-1.4	0	-0.0051	0	2.6	1.3	3.4
Jan-87	1987-01-08	1.5	1.2	0.81	0	-0.0047	0	1.5	2.3	2.7
Feb-87	1987-02-07	3.1	-0.12	-0.45	0	-0.0043	0	3.1	2.7	2.9
Mar-87	1987-03-09	2.3	1.9	0.23	0	-0.0039	0	2.3	2.5	3.4
Apr-87	1987-04-08	0.94	4.4	1.0	0	-0.0043	0	0.94	2.0	5.0

Table IV-B.70 SC10 Monthly Water Balance 9 Wet Years (1983 to 1991)

Month	Result Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
		[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
May-87	1987-05-08	0.039	7.2	0.64	0	-0.0039	0	0.039	0.67	6.8
Jun-87	1987-06-07	0.31	8.1	0.34	0	-0.0043	0	0.31	0.63	8.2
Jul-87	1987-07-07	0.20	8.9	0.21	0	-0.0043	0	0.20	0.43	9.2
Aug-87	1987-08-06	3.1	5.5	-1.3	0	-0.0039	0	3.1	1.8	8.9
Sep-87	1987-09-05	2.4	5.1	-0.022	0	-0.0035	0	2.4	2.4	7.5
Oct-87	1987-10-05	0.79	5.5	0.68	0	-0.0035	0	0.79	1.5	6.7
Nov-87	1987-11-04	1.4	3.5	-0.55	0	-0.0035	0	1.4	0.87	5.8
Dec-87	1987-12-04	0.71	3.1	0.69	0	-0.0035	0	0.71	1.4	3.8
Jan-88	1988-01-03	4.0	-1.3	-2.2	0	-0.0028	0	4.0	1.8	3.0
Feb-88	1988-02-02	3.6	-0.98	-1.0	0	-0.0024	0	3.6	2.6	2.4
Mar-88	1988-03-03	0.75	3.5	1.9	0	-0.0028	0	0.75	2.6	3.6
Apr-88	1988-04-02	0.12	5.9	0.89	0	-0.0024	0	0.12	1.0	5.5
May-88	1988-05-02	2.4	3.7	-0.38	0	-0.0035	0	2.4	2.0	6.1
Jun-88	1988-06-01	0	8.7	0.70	0	-0.0051	0	0	0.71	8.0
Jul-88	1988-07-01	0.12	8.5	0.33	0	-0.0051	0	0.12	0.47	8.9
Aug-88	1988-07-31	2.5	5.7	-1.0	0	-0.0051	0	2.5	1.4	8.5
Sep-88	1988-08-30	6.7	0.63	-1.6	0	-0.0051	0	6.7	5.0	7.3
Oct-88	1988-10-29	2.0	9.8	1.8	0	-0.0098	0	2.0	3.8	13
Nov-88	1988-11-28	1.7	1.9	-0.84	0	-0.0043	0	1.7	0.91	4.1
Dec-88	1988-12-28	1.1	1.8	0.62	0	-0.0043	0	1.1	1.7	3.1
Jan-89	1989-01-27	2.0	0.75	-0.063	0	-0.0039	0	2.0	1.9	2.4
Feb-89	1989-02-26	0.55	3.3	0.65	0	-0.0039	0	0.55	1.2	3.3
Mar-89	1989-03-28	1.7	4.1	-1.00	0	-0.0035	0	1.7	0.71	5.3
Apr-89	1989-04-27	0	7.6	1.2	0	-0.0035	0	0	1.3	6.9
May-89	1989-05-27	0.16	8.4	0.32	0	-0.0035	0	0.16	0.47	8.3
Jun-89	1989-06-26	0	9.1	0.22	0	-0.0031	0	0	0.24	9.1
Jul-89	1989-07-26	0.079	8.7	0.15	0	-0.0028	0	0.079	0.24	9.0
Aug-89	1989-08-25	1.3	6.1	-0.14	0	-0.0028	0	1.3	1.2	8.0
Sep-89	1989-09-24	1.5	5.7	-0.27	0	-0.0024	0	1.5	1.2	7.3
Oct-89	1989-10-24	1.1	4.5	-0.035	0	-0.0024	0	1.1	1.0	6.1
Nov-89	1989-11-23	0.28	3.8	0.11	0	-0.0020	0	0.28	0.39	4.5
Dec-89	1989-12-23	0	3.3	0.33	0	-0.0020	0	0	0.35	3.5
Jan-90	1990-01-22	2.2	0.47	-0.79	0	-0.0016	0	2.2	1.3	2.9
Feb-90	1990-02-21	2.5	0.39	-0.71	0	-0.0016	0	2.5	1.9	2.5
Mar-90	1990-03-23	0.83	3.9	0.50	0	-0.0016	0	0.83	1.3	4.2
Apr-90	1990-04-22	1.0	5.8	0.32	0	-0.0016	0	1.0	1.3	6.0
May-90	1990-05-22	1.1	6.9	0.12	0	-0.0016	0	1.1	1.2	7.7
Jun-90	1990-06-21	0.39	8.9	0.24	0	-0.0016	0	0.39	0.63	9.0
Jul-90	1990-07-21	0.94	7.4	0.012	0	-0.0012	0	0.94	0.94	8.6
Aug-90	1990-08-20	9.6	-2.6	-7.2	0	-0.00079	0	9.6	2.4	7.8
Sep-90	1990-09-19	2.5	4.7	2.4	0	-0.0012	0	2.5	4.9	7.1
Oct-90	1990-10-19	0.43	4.8	2.5	0	-0.014	0	0.43	2.9	5.9
Nov-90	1990-11-18	1.5	2.6	0.18	0	-0.047	0	1.5	1.7	4.2
Dec-90	1990-12-18	2.8	0.31	-1.1	0	-0.053	0	2.8	1.7	3.5
Jan-91	1991-01-17	4.7	-2.3	-2.3	0	-0.047	0	4.7	2.4	2.3
Feb-91	1991-02-16	0.16	3.4	2.6	0	-0.041	0	0.16	2.8	3.3
Mar-91	1991-03-18	3.6	0.87	-0.84	0	-0.052	0	3.6	2.8	4.3
Apr-91	1991-04-17	3.2	2.4	0.71	0	-0.056	0	3.2	3.9	4.8
May-91	1991-05-17	0	7.8	1.2	0	-0.052	0	0	1.1	7.4
Jun-91	1991-06-16	0.71	8.4	0.38	0	-0.047	0	0.71	1.1	8.7
Jul-91	1991-07-16	0.47	8.9	0.32	0	-0.040	0	0.47	0.75	9.4
Aug-91	1991-08-15	3.3	4.8	-0.91	0	-0.032	0	3.3	2.4	8.4
Sep-91	1991-09-14	2.0	4.9	0.19	0	-0.026	0	2.0	2.2	7.5
Oct-91	1991-10-01	0.24	3.2	0.41	0	-0.013	0	0.24	0.63	3.5

Table IV-B.71 SC10 Monsoon Period Water Balance

Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
1951-07-01	0	9.2	0.38	0	-0.10	0	0	0.38	9.2
1951-08-01	1.1	8.4	-0.0061	0	-0.073	0	1.1	1.0	9.5
1951-09-01	3.6	4.2	-2.0	0	-0.056	0	3.6	1.6	7.8
1951-10-01	0.65	6.0	1.1	0	-0.042	0	0.65	1.8	6.6
1951-11-01	1.6	3.7	-0.48	0	-0.033	0	1.6	1.2	5.4
1951	7.0	32	-0.94	0	-0.31	0	7.0	6.0	39
1952-07-01	0.63	8.9	0.53	0	-0.012	0	0.63	1.2	9.6
1952-08-01	0.56	8.3	0.23	0	-0.012	0	0.56	0.79	8.8
1952-09-01	0.45	7.4	0.24	0	-0.011	0	0.45	0.69	7.8
1952-10-01	0.70	6.3	0.031	0	-0.0098	0	0.70	0.73	7.0
1952-11-01	0	5.9	0.24	0	-0.0093	0	0	0.24	5.9
1952	2.3	37	1.3	0	-0.053	0	2.3	3.6	39
1953-07-01	0	9.1	0.25	0	-0.0049	0	0	0.25	9.1
1953-08-01	2.7	5.8	-1.3	0	-0.0048	0	2.7	1.4	8.8
1953-09-01	1.8	6.0	0.16	0	-0.0046	0	1.8	2.0	7.7
1953-10-01	0	6.8	0.75	0	-0.0043	0	0	0.75	6.8
1953-11-01	0.012	5.4	0.30	0	-0.0041	0	0.012	0.31	5.5
1953	4.5	33	0.18	0	-0.023	0	4.5	4.7	38
1954-07-01	0.13	8.9	0.41	0	-0.0023	0	0.13	0.54	9.0
1954-08-01	4.5	3.2	-1.2	0	-0.0025	0	4.5	3.2	7.8
1954-09-01	5.3	2.1	-1.0	0	-0.0027	0	5.3	4.3	7.4
1954-10-01	1.3	5.4	1.1	0	-0.0027	0	1.3	2.3	6.6
1954-11-01	0	5.6	0.83	0	-0.0028	0	0	0.83	5.6
1954	11	25	0.063	0	-0.013	0	11	11	36
1955-07-01	2.1	7.0	-0.57	0	-0.0024	0	2.1	1.5	9.1
1955-08-01	4.5	3.4	-1.9	0	-0.0023	0	4.5	2.6	7.9
1955-09-01	2.7	4.4	0.76	0	-0.0022	0	2.7	3.5	7.2
1955-10-01	0.12	6.7	0.84	0	-0.0020	0	0.12	0.96	6.8
1955-11-01	0.020	5.8	0.43	0	-0.0021	0	0.020	0.45	5.9
1955	9.4	27	-0.41	0	-0.011	0	9.4	8.9	37
1956-07-01	0.24	9.2	0.083	0	-0.0015	0	0.24	0.32	9.4
1956-08-01	2.8	6.2	-0.63	0	-0.0014	0	2.8	2.1	9.0
1956-09-01	1.7	5.7	0.13	0	-0.0014	0	1.7	1.9	7.5
1956-10-01	0.075	6.8	0.31	0	-0.0013	0	0.075	0.38	6.8
1956-11-01	0.53	4.5	0.0087	0	-0.0014	0	0.53	0.54	5.2
1956	5.4	32	-0.11	0	-0.0070	0	5.4	5.3	38
1957-07-01	0.031	9.3	0.34	0	-0.00091	0	0.031	0.37	9.3
1957-08-01	1.1	7.4	-0.10	0	-0.00091	0	1.1	0.98	8.5
1957-09-01	3.4	4.4	-0.59	0	-0.00087	0	3.4	2.8	8.1
1957-10-01	0.57	6.1	0.45	0	-0.00091	0	0.57	1.0	6.6
1957-11-01	3.2	1.1	-1.7	0	-0.00087	0	3.2	1.5	4.6
1957	8.3	28	-1.6	0	-0.0044	0	8.3	6.7	37
1958-07-01	0.70	8.5	0.17	0	-0.00063	0	0.70	0.87	9.3
1958-08-01	0.78	8.2	0.063	0	-0.00067	0	0.78	0.85	9.1
1958-09-01	0.85	7.2	0.21	0	-0.00071	0	0.85	1.1	8.0
1958-10-01	3.0	3.2	-1.1	0	-0.00063	0	3.0	1.9	6.4
1958-11-01	1.9	3.2	0.15	0	-0.00075	0	1.9	2.1	5.3
1958	7.3	30	-0.47	0	-0.0034	0	7.3	6.8	38
1959-07-01	1.0	8.2	-0.14	0	-0.00063	0	1.0	0.89	9.1
1959-08-01	3.8	5.8	-1.6	0	-0.00063	0	3.8	2.2	9.6
1959-09-01	5.3	2.0	-0.37	0	-0.00055	0	5.3	4.9	7.4
1959-10-01	0.051	6.7	1.0	0	-0.00059	0	0.051	1.1	6.9
1959-11-01	4.8	0.35	-3.7	0	-0.00059	0	4.8	1.1	5.3
1959	15	23	-4.8	0	-0.0030	0	15	10	38
1960-07-01	0	9.3	0.30	0	-0.087	0	0	0.30	9.2
1960-08-01	0.74	8.4	0.019	0	-0.063	0	0.74	0.76	9.2
1960-09-01	1.5	6.4	0.0091	0	-0.050	0	1.5	1.5	8.1

Table IV-B.71 SC10 Monsoon Period Water Balance

Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
1960-10-01	0.27	6.6	0.24	0	-0.038	0	0.27	0.51	7.0
1960-11-01	2.1	2.8	-0.56	0	-0.029	0	2.1	1.5	5.0
1960	4.6	33	0.0097	0	-0.27	0	4.6	4.6	38
1961-07-01	0	9.4	0.12	0	-0.0083	0	0	0.13	9.3
1961-08-01	0.67	8.0	-0.041	0	-0.0075	0	0.67	0.63	8.9
1961-09-01	3.0	5.1	-1.4	0	-0.0063	0	3.0	1.6	8.1
1961-10-01	0.50	5.9	0.99	0	-0.0051	0	0.50	1.5	6.3
1961-11-01	0.45	4.5	-0.068	0	-0.0051	0	0.45	0.39	5.4
1961	4.6	33	-0.38	0	-0.032	0	4.6	4.2	38
1962-07-01	0	9.1	0.27	0	-0.0035	0	0	0.27	9.1
1962-08-01	0.61	8.2	0.091	0	-0.0035	0	0.61	0.70	8.9
1962-09-01	0.50	7.7	0.11	0	-0.0031	0	0.50	0.60	8.4
1962-10-01	1.2	5.2	-0.23	0	-0.0031	0	1.2	1.0	6.6
1962-11-01	0.87	4.1	0.045	0	-0.0031	0	0.87	0.92	5.1
1962	3.2	34	0.29	0	-0.017	0	3.2	3.5	38
1963-07-01	0	9.1	0.31	0	-0.0024	0	0	0.31	9.0
1963-08-01	0.079	9.3	0.21	0	-0.0028	0	0.079	0.29	9.4
1963-09-01	10	-3.3	-5.9	0	-0.0028	0	10	4.6	7.5
1963-10-01	1.0	5.7	3.5	0	-0.0031	0	1.0	4.6	6.6
1963-11-01	0.67	4.9	0.92	0	-0.0031	0	0.67	1.6	5.8
1963	12	26	-0.96	0	-0.014	0	12	11	38
1964-07-01	0	9.4	0.17	0	-0.0071	0	0	0.17	9.4
1964-08-01	1.5	7.2	-0.31	0	-0.0067	0	1.5	1.2	8.8
1964-09-01	2.2	5.6	-0.16	0	-0.0055	0	2.2	2.0	7.7
1964-10-01	1.6	4.4	-0.0064	0	-0.0047	0	1.6	1.6	6.1
1964-11-01	1.5	4.2	-0.30	0	-0.0051	0	1.5	1.2	5.8
1964	6.8	31	-0.61	0	-0.029	0	6.8	6.2	38
1965-07-01	0.10	8.8	0.32	0	-0.0028	0	0.10	0.43	8.8
1965-08-01	1.4	7.1	-0.11	0	-0.0031	0	1.4	1.3	8.9
1965-09-01	0.90	7.0	0.16	0	-0.0031	0	0.90	1.1	8.0
1965-10-01	1.0	5.4	0.043	0	-0.0031	0	1.0	1.1	6.6
1965-11-01	0.46	5.0	0.093	0	-0.0031	0	0.46	0.56	5.7
1965	3.9	33	0.51	0	-0.015	0	3.9	4.5	38
1966-07-01	0.18	8.6	0.28	0	-0.15	0	0.18	0.46	9.1
1966-08-01	0.84	7.6	0.054	0	-0.11	0	0.84	0.89	8.3
1966-09-01	1.6	6.3	-0.33	0	-0.072	0	1.6	1.3	8.1
1966-10-01	2.7	3.7	-0.51	0	-0.053	0	2.7	2.2	6.5
1966-11-01	1.4	3.8	0.37	0	-0.043	0	1.4	1.7	5.1
1966	6.7	30	-0.13	0	-0.42	0	6.7	6.5	37
1967-07-01	0.079	8.9	0.20	0	-0.010	0	0.079	0.28	9.0
1967-08-01	4.0	4.2	-1.0	0	-0.0091	0	4.0	2.9	8.3
1967-09-01	2.5	5.6	-0.049	0	-0.0079	0	2.5	2.5	8.0
1967-10-01	0.56	5.7	0.47	0	-0.0067	0	0.56	1.0	6.5
1967-11-01	0.42	4.8	0.32	0	-0.0063	0	0.42	0.74	5.6
1967	7.5	29	-0.11	0	-0.040	0	7.5	7.4	37
1968-07-01	0	9.4	0.33	0	-0.11	0	0	0.33	9.3
1968-08-01	1.8	6.9	-0.48	0	-0.078	0	1.8	1.4	8.9
1968-09-01	2.5	4.7	0.054	0	-0.058	0	2.5	2.6	7.3
1968-10-01	0.047	6.7	0.45	0	-0.044	0	0.047	0.50	6.9
1968-11-01	0.39	4.6	0.20	0	-0.035	0	0.39	0.59	5.1
1968	4.8	32	0.56	0	-0.32	0	4.8	5.4	38
1969-07-01	0	9.3	0.39	0	-0.022	0	0	0.39	9.4
1969-08-01	0.33	8.1	0.21	0	-0.020	0	0.33	0.54	8.7
1969-09-01	2.6	5.7	-0.38	0	-0.017	0	2.6	2.2	8.3
1969-10-01	1.2	5.4	0.025	0	-0.014	0	1.2	1.3	6.8
1969-11-01	0.83	4.1	0.015	0	-0.012	0	0.83	0.84	5.2
1969	5.0	33	0.25	0	-0.084	0	5.0	5.2	38

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Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
1970-07-01	0.079	9.2	0.26	0	-0.0047	0	0.079	0.34	9.1
1970-08-01	1.0	7.6	0.032	0	-0.0043	0	1.0	1.1	9.1
1970-09-01	1.7	6.5	-0.24	0	-0.0047	0	1.7	1.5	8.0
1970-10-01	3.4	3.2	-0.87	0	-0.0039	0	3.4	2.5	7.0
1970-11-01	0	5.1	0.63	0	-0.0035	0	0	0.63	5.3
1970	6.2	31	-0.19	0	-0.021	0	6.2	6.0	39
1971-07-01	0	9.1	0.12	0	-0.0020	0	0	0.12	9.0
1971-08-01	0.39	8.7	0.027	0	-0.0020	0	0.39	0.42	9.2
1971-09-01	4.7	2.9	-1.4	0	-0.0016	0	4.7	3.2	7.8
1971-10-01	3.1	3.7	-1.9	0	-0.0016	0	3.1	1.2	7.1
1971-11-01	4.2	0.55	0.035	0	-0.0016	0	4.2	4.2	5.1
1971	12	25	-3.1	0	-0.0087	0	12	9.2	38
1972-07-01	1.7	7.7	-0.48	0	-0.0024	0	1.7	1.2	9.3
1972-08-01	0.27	9.2	0.30	0	-0.0024	0	0.27	0.57	9.5
1972-09-01	2.0	6.0	-0.36	0	-0.0020	0	2.0	1.6	8.4
1972-10-01	0.67	6.0	0.27	0	-0.0020	0	0.67	0.93	6.8
1972-11-01	8.7	-4.2	-5.1	0	-0.0016	0	8.7	3.6	4.9
1972	13	25	-5.4	0	-0.010	0	13	7.9	39
1973-07-01	0.87	8.2	0.43	0	-0.043	0	0.87	1.3	9.0
1973-08-01	2.7	5.7	-0.93	0	-0.038	0	2.7	1.8	8.9
1973-09-01	1.4	6.7	0.78	0	-0.030	0	1.4	2.2	8.1
1973-10-01	0	6.6	0.46	0	-0.025	0	0	0.46	6.7
1973-11-01	0	5.1	0.28	0	-0.022	0	0	0.28	5.6
1973	5.0	32	1.0	0	-0.16	0	5.0	6.0	38
1974-07-01	0	9.5	0.24	0	-0.0071	0	0	0.24	9.4
1974-08-01	2.5	6.0	-0.49	0	-0.0063	0	2.5	2.0	8.6
1974-09-01	1.4	6.5	0.18	0	-0.0055	0	1.4	1.6	8.3
1974-10-01	3.4	2.9	-0.70	0	-0.0047	0	3.4	2.7	6.5
1974-11-01	3.4	1.4	-1.8	0	-0.0047	0	3.4	1.6	5.3
1974	11	26	-2.6	0	-0.028	0	11	8.0	38
1975-07-01	0	9.5	0.40	0	-0.0028	0	0	0.39	9.6
1975-08-01	2.2	5.5	-0.24	0	-0.0028	0	2.2	2.0	8.3
1975-09-01	2.0	6.3	-0.019	0	-0.0031	0	2.0	2.0	8.0
1975-10-01	0.91	5.6	0.26	0	-0.0031	0	0.91	1.2	6.8
1975-11-01	0.24	4.8	0.23	0	-0.0031	0	0.24	0.47	5.4
1975	5.4	32	0.63	0	-0.015	0	5.4	6.0	38
1976-07-01	0	9.8	0.26	0	-0.0016	0	0	0.28	9.7
1976-08-01	2.8	5.2	-0.90	0	-0.0020	0	2.8	1.9	8.7
1976-09-01	0.83	7.4	0.31	0	-0.0016	0	0.83	1.1	7.9
1976-10-01	4.0	1.9	-1.4	0	-0.0012	0	4.0	2.6	6.4
1976-11-01	0.91	3.8	0.80	0	-0.0016	0	0.91	1.7	5.1
1976	8.5	28	-0.89	0	-0.0079	0	8.5	7.6	38
1977-07-01	0.039	9.5	0.22	0	-0.0012	0	0.039	0.28	9.5
1977-08-01	2.6	6.5	-0.73	0	-0.00079	0	2.6	1.8	9.4
1977-09-01	2.4	5.6	-0.17	0	-0.00079	0	2.4	2.2	8.1
1977-10-01	3.5	2.5	-0.64	0	-0.00079	0	3.5	2.8	6.4
1977-11-01	1.3	3.9	0.44	0	-0.00079	0	1.3	1.8	5.5
1977	9.8	28	-0.89	0	-0.0043	0	9.8	8.9	39
1978-07-01	0.55	8.7	0.31	0	-0.26	0	0.55	0.83	9.4
1978-08-01	0.94	7.9	0.074	0	-0.16	0	0.94	1.1	9.4
1978-09-01	1.1	6.4	0.40	0	-0.11	0	1.1	1.5	7.3
1978-10-01	0.39	5.9	0.22	0	-0.074	0	0.39	0.59	6.6
1978-11-01	1.9	3.5	-0.80	0	-0.057	0	1.9	1.1	5.9
1978	4.9	32	0.20	0	-0.67	0	4.9	5.1	39
1979-07-01	0.35	9.1	0.54	0	-0.18	0	0.35	0.87	9.2
1979-08-01	0.16	8.8	0.31	0	-0.13	0	0.16	0.47	9.3
1979-09-01	1.5	6.1	-0.0075	0	-0.087	0	1.5	1.5	7.8

Table IV-B.71 SC10 Monsoon Period Water Balance

Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
1979-10-01	0.12	6.7	0.28	0	-0.059	0	0.12	0.39	7.2
1979-11-01	0.67	4.8	-0.039	0	-0.049	0	0.67	0.63	5.9
1979	2.8	35	1.1	0	-0.51	0	2.8	3.9	39
1980-07-01	0.16	8.9	0.33	0	-0.11	0	0.16	0.51	8.9
1980-08-01	2.0	6.6	-0.26	0	-0.085	0	2.0	1.7	8.9
1980-09-01	1.3	6.5	0.39	0	-0.062	0	1.3	1.7	7.8
1980-10-01	0.59	6.1	0.25	0	-0.047	0	0.59	0.83	6.9
1980-11-01	0.039	5.2	0.25	0	-0.038	0	0.039	0.28	5.8
1980	4.1	33	0.96	0	-0.35	0	4.1	5.0	38
1981-07-01	0.12	9.1	0.42	0	-0.0098	0	0.12	0.55	9.2
1981-08-01	2.2	6.5	-0.95	0	-0.0091	0	2.2	1.2	9.2
1981-09-01	2.6	5.5	0.35	0	-0.0083	0	2.6	3.0	7.7
1981-10-01	0.51	6.3	0.29	0	-0.0075	0	0.51	0.83	7.4
1981-11-01	0.94	3.7	0.26	0	-0.0067	0	0.94	1.2	5.1
1981	6.4	31	0.37	0	-0.041	0	6.4	6.8	39
1982-07-01	0.039	9.1	0.42	0	-0.0035	0	0.039	0.47	9.0
1982-08-01	2.7	5.4	-0.63	0	-0.0028	0	2.7	2.0	8.7
1982-09-01	3.8	3.2	-0.51	0	-0.0028	0	3.8	3.3	6.8
1982-10-01	3.0	3.0	-0.12	0	-0.0028	0	3.0	2.9	6.6
1982-11-01	0	5.0	0.92	0	-0.0024	0	0	0.91	5.3
1982	9.5	26	0.068	0	-0.014	0	9.5	9.6	36
1983-07-01	0	9.4	0.40	0	-0.0039	0	0	0.39	9.3
1983-08-01	2.8	6.0	-0.80	0	-0.0055	0	2.8	2.0	9.4
1983-09-01	3.6	3.9	-0.37	0	-0.0051	0	3.6	3.3	7.4
1983-10-01	5.1	1.3	-2.8	0	-0.0051	0	5.1	2.3	7.1
1983-11-01	1.1	3.3	2.4	0	-0.0055	0	1.1	3.5	4.8
1983	13	24	-1.2	0	-0.025	0	13	11	38
1984-07-01	1.3	7.7	-0.61	0	-0.0055	0	1.3	0.75	9.3
1984-08-01	3.3	4.5	-0.22	0	-0.0055	0	3.3	3.1	7.8
1984-09-01	3.3	3.7	-0.057	0	-0.0047	0	3.3	3.2	7.4
1984-10-01	1.9	4.6	-0.15	0	-0.0043	0	1.9	1.7	6.9
1984-11-01	1.3	3.2	0.40	0	-0.0043	0	1.3	1.7	4.9
1984	11	24	-0.64	0	-0.024	0	11	11	36
1985-07-01	0	8.2	0.32	0	-0.052	0	0	0.35	8.6
1985-08-01	1.2	7.6	-0.39	0	-0.044	0	1.2	0.83	8.7
1985-09-01	2.1	5.8	-0.16	0	-0.034	0	2.1	2.0	8.1
1985-10-01	3.5	2.4	-0.71	0	-0.026	0	3.5	2.8	6.6
1985-11-01	1.2	3.1	0.63	0	-0.023	0	1.2	1.9	4.6
1985	8.1	27	-0.30	0	-0.18	0	8.1	7.9	37
1986-07-01	0	9.2	0.33	0	-0.0083	0	0	0.31	9.3
1986-08-01	4.8	3.1	-1.1	0	-0.0079	0	4.8	3.7	8.5
1986-09-01	2.0	5.6	0.039	0	-0.0071	0	2.0	2.0	8.0
1986-10-01	2.1	4.1	0.091	0	-0.0067	0	2.1	2.2	6.5
1986-11-01	1.7	3.0	0.053	0	-0.0059	0	1.7	1.8	4.8
1986	11	25	-0.57	0	-0.036	0	11	10	37
1987-07-01	0.20	9.1	0.22	0	-0.0039	0	0.20	0.43	9.0
1987-08-01	2.0	6.9	-0.62	0	-0.0043	0	2.0	1.4	9.0
1987-09-01	2.9	4.9	-0.29	0	-0.0039	0	2.9	2.6	8.1
1987-10-01	1.3	5.2	0.24	0	-0.0035	0	1.3	1.5	7.1
1987-11-01	0.31	5.2	0.39	0	-0.0039	0	0.31	0.75	6.0
1987	6.7	31	-0.055	0	-0.020	0	6.7	6.7	39
1988-07-01	0.12	8.5	0.33	0	-0.0051	0	0.12	0.47	8.9
1988-08-01	3.4	4.9	-1.9	0	-0.0055	0	3.4	1.5	8.8
1988-09-01	5.9	1.7	-0.61	0	-0.0051	0	5.9	5.3	7.5
1988-10-01	0.31	6.2	1.6	0	-0.0051	0	0.31	1.9	6.9
1988-11-01	1.5	3.7	0.14	0	-0.0047	0	1.5	1.7	5.8
1988	11	25	-0.44	0	-0.026	0	11	11	38

Table IV-B.71 SC10 Monsoon Period Water Balance

Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
1989-07-01	0	9.3	0.21	0	-0.0031	0	0	0.24	9.2
1989-08-01	0.51	8.2	0.0047	0	-0.0031	0	0.51	0.51	9.3
1989-09-01	0.91	6.9	0.055	0	-0.0024	0	0.91	0.94	7.8
1989-10-01	1.5	5.2	-0.27	0	-0.0028	0	1.5	1.2	7.3
1989-11-01	1.1	4.1	0.028	0	-0.0020	0	1.1	1.1	5.9
1989	4.0	34	0.030	0	-0.013	0	4.0	4.0	39
1990-07-01	0.28	8.9	0.21	0	-0.0016	0	0.28	0.51	9.3
1990-08-01	1.5	6.5	-0.11	0	-0.0012	0	1.5	1.4	8.6
1990-09-01	9.0	-1.5	-4.3	0	-0.00079	0	9.0	4.7	7.4
1990-10-01	2.8	3.5	1.0	0	-0.0024	0	2.8	3.9	6.8
1990-11-01	0.28	4.6	1.5	0	-0.031	0	0.28	1.7	5.3
1990	14	22	-1.7	0	-0.037	0	14	12	37
1991-07-01	0.63	8.8	0.34	0	-0.044	0	0.63	0.94	9.2
1991-08-01	1.7	7.1	-0.47	0	-0.038	0	1.7	1.3	9.3
1991-09-01	2.8	5.1	0.040	0	-0.029	0	2.8	2.8	8.3
1991-10-01	1.6	4.7	0.18	0	-0.024	0	1.6	1.7	6.5
1991-11-01	1.2	4.6	-0.49	0	-0.022	0	1.2	0.75	6.6
1991	7.9	30	-0.41	0	-0.16	0	7.9	7.5	40
1992-07-01	1.3	7.9	0.72	0	-0.20	0	1.3	2.0	8.9
1992-08-01	3.3	5.5	-1.2	0	-0.14	0	3.3	2.1	9.3
1992-09-01	5.3	2.2	-0.69	0	-0.098	0	5.3	4.6	7.8
1992-10-01	0.87	5.9	1.5	0	-0.065	0	0.87	2.4	6.7
1992-11-01	1.2	4.1	0.057	0	-0.054	0	1.2	1.3	6.2
1992	12	26	0.37	0	-0.55	0	12	12	39
1993-07-01	0	9.2	0.63	0	-0.26	0	0	0.63	9.3
1993-08-01	0.24	8.5	0.36	0	-0.16	0	0.24	0.63	8.9
1993-09-01	3.4	4.1	-0.96	0	-0.11	0	3.4	2.4	8.5
1993-10-01	0.16	6.3	0.89	0	-0.073	0	0.16	1.1	6.4
1993-11-01	0.83	4.4	0.21	0	-0.056	0	0.83	1.0	6.0
1993	4.6	33	1.1	0	-0.66	0	4.6	5.8	39
1994-07-01	0.35	8.6	0.26	0	-0.013	0	0.35	0.67	8.9
1994-08-01	1.5	7.4	-0.79	0	-0.012	0	1.5	0.67	9.1
1994-09-01	0.67	7.5	0.78	0	-0.011	0	0.67	1.5	8.6
1994-10-01	2.0	4.4	-0.22	0	-0.0091	0	2.0	1.7	6.6
1994-11-01	1.9	2.8	-0.50	0	-0.0083	0	1.9	1.3	5.3
1994	6.3	31	-0.47	0	-0.053	0	6.3	5.9	39
1995-07-01	0	9.3	0.35	0	-0.0094	0	0	0.35	9.0
1995-08-01	0.039	9.1	0.23	0	-0.0098	0	0.039	0.28	9.3
1995-09-01	3.9	4.3	-1.1	0	-0.0087	0	3.9	2.8	8.8
1995-10-01	2.8	3.8	-0.82	0	-0.0079	0	2.8	1.9	7.2
1995-11-01	0	5.3	1.2	0	-0.0079	0	0	1.2	5.8
1995	6.7	32	-0.085	0	-0.044	0	6.7	6.5	40
1996-07-01	0.39	8.6	0.037	0	-0.0035	0	0.39	0.47	9.1
1996-08-01	2.4	6.3	-0.39	0	-0.0031	0	2.4	1.9	8.9
1996-09-01	1.2	6.6	0.027	0	-0.0031	0	1.2	1.3	8.1
1996-10-01	3.0	2.8	-0.38	0	-0.0024	0	3.0	2.6	6.7
1996-11-01	0.43	5.1	0.35	0	-0.0024	0	0.43	0.79	6.0
1996	7.4	29	-0.35	0	-0.015	0	7.4	7.1	39
1997-07-01	0.039	9.1	0.21	0	-0.0020	0	0.039	0.24	9.0
1997-08-01	0.12	9.4	0.13	0	-0.0016	0	0.12	0.24	9.9
1997-09-01	2.6	5.4	-0.52	0	-0.0012	0	2.6	2.1	8.5
1997-10-01	0	7.0	0.32	0	-0.0012	0	0	0.31	7.3
1997-11-01	0.75	4.1	-0.061	0	-0.0012	0	0.75	0.67	6.0
1997	3.5	35	0.076	0	-0.0071	0	3.5	3.5	41
1998-07-01	0	9.3	0.42	0	-0.0024	0	0	0.43	9.2
1998-08-01	1.7	7.0	-0.10	0	-0.0031	0	1.7	1.6	9.1
1998-09-01	2.4	5.4	-0.087	0	-0.0039	0	2.4	2.3	8.3

Table IV-B.71 SC10 Monsoon Period Water Balance

Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
1998-10-01	1.3	5.3	0.11	0	-0.0047	0	1.3	1.5	7.0
1998-11-01	0	5.4	0.33	0	-0.0047	0	0	0.31	6.3
1998	5.4	32	0.67	0	-0.019	0	5.4	6.1	40
1999-07-01	0	9.1	0.24	0	-0.0024	0	0	0.28	9.1
1999-08-01	5.8	2.1	-2.1	0	-0.0012	0	5.8	3.7	8.7
1999-09-01	2.8	4.8	0.11	0	-0.0020	0	2.8	3.0	7.8
1999-10-01	1.1	5.4	1.1	0	-0.0016	0	1.1	2.2	6.8
1999-11-01	0	5.6	0.51	0	-0.0020	0	0	0.55	6.2
1999	9.7	27	-0.14	0	-0.0091	0	9.7	9.6	39
2000-07-01	0.79	8.3	-0.011	0	-0.00079	0	0.79	0.79	9.5
2000-08-01	0.079	9.5	0.21	0	-0.0012	0	0.079	0.28	9.5
2000-09-01	0.67	6.9	0.033	0	-0.00079	0	0.67	0.71	8.7
2000-10-01	0	6.9	0.16	0	-0.0012	0	0	0.16	6.8
2000-11-01	5.3	-0.83	-3.8	0	-0.00039	0	5.3	1.6	5.9
2000	6.9	31	-3.4	0	-0.0043	0	6.9	3.5	40
2001-07-01	0.039	9.3	0.36	0	-0.0024	0	0.039	0.39	9.2
2001-08-01	2.7	6.2	-1.6	0	-0.0024	0	2.7	1.1	9.7
2001-09-01	3.4	4.3	0.59	0	-0.0020	0	3.4	3.9	7.6
2001-10-01	0.12	6.3	0.69	0	-0.0024	0	0.12	0.83	7.3
2001-11-01	0.35	4.5	0.31	0	-0.0020	0	0.35	0.71	5.5
2001	6.6	31	0.31	0	-0.011	0	6.6	6.9	39
2002-07-01	0	9.6	0.092	0	-0.0016	0	0	0.079	9.2
2002-08-01	0.31	8.8	0.026	0	-0.0020	0	0.31	0.35	9.7
2002-09-01	0.47	7.4	-0.057	0	-0.0016	0	0.47	0.39	8.1
2002-10-01	1.2	5.4	-0.14	0	-0.0012	0	1.2	1.1	7.1
2002-11-01	0.12	5.0	0.13	0	-0.0012	0	0.12	0.24	6.1
2002	2.1	36	0.049	0	-0.0075	0	2.1	2.1	40
2003-07-01	0	10	0.29	0	-0.00079	0	0	0.31	10.0
2003-08-01	0.47	8.8	0.15	0	-0.00039	0	0.47	0.63	10
2003-09-01	1.3	6.9	-0.16	0	-0.00079	0	1.3	1.1	8.5
2003-10-01	1.9	4.9	-0.085	0	-0.00079	0	1.9	1.9	7.4
2003-11-01	0.079	5.5	0.28	0	-0.00079	0	0.079	0.35	6.0
2003	3.8	36	0.47	0	-0.0035	0	3.8	4.3	42
2004-07-01	0	10	0.26	0	-0.00079	0	0	0.28	10
2004-08-01	0.55	8.8	0.096	0	-0.00079	0	0.55	0.63	9.8
2004-09-01	2.1	6.1	-0.29	0	0	0	2.1	1.8	8.6
2004-10-01	1.5	5.6	-0.25	0	-0.00039	0	1.5	1.3	7.9
2004-11-01	1.2	3.8	-0.19	0	-0.00039	0	1.2	0.98	6.1
2004	5.4	34	-0.38	0	-0.0024	0	5.4	5.0	42
2005-07-01	0.079	9.8	0.40	0	-0.17	0	0.079	0.47	9.7
2005-08-01	1.4	7.9	-0.32	0	-0.12	0	1.4	1.1	11
2005-09-01	4.7	3.0	-0.57	0	-0.083	0	4.7	4.1	7.3
2005-10-01	0.12	6.6	0.76	0	-0.058	0	0.12	0.83	7.4
2005-11-01	0.39	4.8	0.31	0	-0.048	0	0.39	0.75	6.1
2005	6.7	32	0.57	0	-0.48	0	6.7	7.2	41
2006-07-01	0.51	9.2	0.056	0	-0.010	0	0.51	0.55	10
2006-08-01	3.2	4.8	-2.0	0	-0.0091	0	3.2	1.2	9.2
2006-09-01	2.9	5.1	0.94	0	-0.0079	0	2.9	3.9	7.4
2006-10-01	1.1	5.3	0.46	0	-0.0075	0	1.1	1.6	6.9
2006-11-01	1.0	3.9	0.26	0	-0.0059	0	1.0	1.3	5.9
2006	8.7	28	-0.25	0	-0.041	0	8.7	8.5	40

Table IV-B.72 SC10 Winter Storm Period Water Balance

Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
1951-11-01	0	3.7	-0.48	0	-0.033	0	1.6	1.2	5.4
1951-12-01	1.7	2.0	0.46	0	-0.026	0	1.7	2.2	3.7
1952-01-01	3.0	-0.26	-1.3	0	-0.023	0	3.0	1.7	2.8
1952-02-01	2.8	0.10	0.020	0	-0.019	0	2.8	2.8	2.9
1952-03-01	0.50	3.3	1.4	0	-0.015	0	0.50	1.9	3.8
1952	8.0	8.9	0.050	0	-0.12	0	9.7	9.7	19
1952-11-01	0	5.9	0.24	0	-0.0093	0	0	0.24	5.9
1952-12-01	4.3	-1.0	-2.8	0	-0.0080	0	4.3	1.5	3.3
1953-01-01	2.0	0.64	0.41	0	-0.0074	0	2.0	2.4	2.7
1953-02-01	0.74	2.7	1.1	0	-0.0064	0	0.74	1.9	3.3
1953-03-01	0.60	3.2	0.31	0	-0.0051	0	0.60	0.91	3.8
1953	7.6	11	-0.76	0	-0.036	0	7.6	6.9	19
1953-11-01	0.012	5.4	0.30	0	-0.0041	0	0.012	0.31	5.5
1953-12-01	0.56	3.4	0.011	0	-0.0037	0	0.56	0.57	3.9
1954-01-01	0.19	2.7	0.20	0	-0.0035	0	0.19	0.40	2.9
1954-02-01	2.4	0.88	-0.98	0	-0.0032	0	2.4	1.4	3.2
1954-03-01	0.72	3.5	0.33	0	-0.0027	0	0.72	1.1	4.2
1954	3.9	16	-0.13	0	-0.017	0	3.9	3.8	20
1954-11-01	0	5.6	0.83	0	-0.0028	0	0	0.83	5.6
1954-12-01	0.091	4.1	0.33	0	-0.0028	0	0.091	0.42	4.3
1955-01-01	0.29	3.2	0.25	0	-0.0030	0	0.29	0.55	3.5
1955-02-01	3.4	-1.0	-1.6	0	-0.0031	0	3.4	1.8	2.4
1955-03-01	0.28	3.3	0.83	0	-0.0028	0	0.28	1.1	3.5
1955	4.1	15	0.65	0	-0.015	0	4.1	4.7	19
1955-11-01	0.020	5.8	0.43	0	-0.0021	0	0.020	0.45	5.9
1955-12-01	0.96	2.7	-0.084	0	-0.0019	0	0.96	0.88	3.7
1956-01-01	1.4	1.8	-0.16	0	-0.0018	0	1.4	1.2	3.1
1956-02-01	2.6	0.85	-1.6	0	-0.0018	0	2.6	1.0	3.5
1956-03-01	2.0	1.2	0.46	0	-0.0017	0	2.0	2.5	3.1
1956	7.0	12	-0.97	0	-0.0092	0	7.0	6.0	19
1956-11-01	0.53	4.5	0.0087	0	-0.0014	0	0.53	0.54	5.2
1956-12-01	0	3.8	0.36	0	-0.0013	0	0	0.36	3.8
1957-01-01	0.47	2.6	0.028	0	-0.0012	0	0.47	0.50	3.1
1957-02-01	4.8	-2.3	-3.0	0	-0.0010	0	4.8	1.8	2.7
1957-03-01	0.73	2.9	1.4	0	-0.00094	0	0.73	2.2	3.4
1957	6.5	12	-1.2	0	-0.0058	0	6.5	5.4	18
1957-11-01	3.2	1.1	-1.7	0	-0.00087	0	3.2	1.5	4.6
1957-12-01	0.61	2.5	1.1	0	-0.00091	0	0.61	1.8	3.0
1958-01-01	1.1	2.1	0.27	0	-0.00087	0	1.1	1.3	3.2
1958-02-01	0.012	3.4	0.43	0	-0.00087	0	0.012	0.44	3.3
1958-03-01	2.5	0.68	-0.87	0	-0.00067	0	2.5	1.6	3.2
1958	7.4	9.8	-0.74	0	-0.0042	0	7.4	6.7	17
1958-11-01	1.9	3.2	0.15	0	-0.00075	0	1.9	2.1	5.3
1958-12-01	1.5	2.2	-0.14	0	-0.00067	0	1.5	1.4	3.6
1959-01-01	0	3.5	0.65	0	-0.00071	0	0	0.65	3.6
1959-02-01	0.21	3.3	0.31	0	-0.00071	0	0.21	0.53	3.5
1959-03-01	1.4	1.9	-0.29	0	-0.00059	0	1.4	1.1	3.3
1959	5.1	14	0.69	0	-0.0034	0	5.1	5.8	19
1959-11-01	4.8	0.35	-3.7	0	-0.00059	0	4.8	1.1	5.3
1959-12-01	0.38	3.3	2.7	0	-0.00055	0	0.38	3.0	3.7
1960-01-01	5.2	-2.6	-3.2	0	-0.00047	0	5.2	2.1	2.7
1960-02-01	4.2	-1.6	-1.6	0	-0.00055	0	4.2	2.5	2.5

Table IV-B.72 SC10 Winter Storm Period Water Balance

Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
1960-03-01	0.87	2.5	2.4	0	-0.015	0	0.87	3.3	3.4
1960	15	2.0	-3.4	0	-0.017	0	15	12	18
1960-11-01	2.1	2.8	-0.56	0	-0.029	0	2.1	1.5	5.0
1960-12-01	0.48	3.1	0.31	0	-0.024	0	0.48	0.80	3.7
1961-01-01	0.47	2.7	0.14	0	-0.021	0	0.47	0.61	3.3
1961-02-01	0.70	2.4	-0.13	0	-0.018	0	0.70	0.57	3.2
1961-03-01	0.23	3.8	0.35	0	-0.013	0	0.23	0.57	3.7
1961	3.9	15	0.10	0	-0.10	0	3.9	4.0	19
1961-11-01	0.45	4.5	-0.068	0	-0.0051	0	0.45	0.39	5.4
1961-12-01	0.32	2.9	0.30	0	-0.0047	0	0.32	0.62	3.1
1962-01-01	3.9	-1.3	-2.0	0	-0.0043	0	3.9	1.9	2.6
1962-02-01	3.2	-0.51	-1.4	0	-0.0035	0	3.2	1.8	2.7
1962-03-01	1.7	1.4	0.65	0	-0.0035	0	1.7	2.3	3.2
1962	9.5	7.1	-2.5	0	-0.021	0	9.5	7.0	17
1962-11-01	0.87	4.1	0.045	0	-0.0031	0	0.87	0.92	5.1
1962-12-01	0.83	3.1	-0.063	0	-0.0028	0	0.83	0.77	3.9
1963-01-01	1.8	1.3	-0.64	0	-0.0024	0	1.8	1.2	3.3
1963-02-01	2.1	0.98	-0.21	0	-0.0024	0	2.1	1.9	3.0
1963-03-01	4.2	-0.31	-1.8	0	-0.0020	0	4.2	2.4	3.8
1963	9.8	9.2	-2.7	0	-0.013	0	9.8	7.2	19
1963-11-01	0.67	4.9	0.92	0	-0.0031	0	0.67	1.6	5.8
1963-12-01	2.3	1.2	-0.29	0	-0.0063	0	2.3	2.1	3.6
1964-01-01	0.34	3.0	0.77	0	-0.0098	0	0.34	1.1	3.3
1964-02-01	0.58	2.4	0.20	0	-0.011	0	0.58	0.78	3.0
1964-03-01	0	3.6	0.37	0	-0.0098	0	0	0.37	3.6
1964	3.9	15	2.0	0	-0.040	0	3.9	5.9	19
1964-11-01	1.5	4.2	-0.30	0	-0.0051	0	1.5	1.2	5.8
1964-12-01	1.4	2.1	-0.20	0	-0.0039	0	1.4	1.2	3.6
1965-01-01	1.7	1.3	-0.47	0	-0.0039	0	1.7	1.2	3.3
1965-02-01	2.9	-0.039	-0.48	0	-0.0035	0	2.9	2.4	2.6
1965-03-01	2.8	0.83	-0.37	0	-0.0031	0	2.8	2.5	3.4
1965	10	8.4	-1.8	0	-0.020	0	10	8.5	19
1965-11-01	0.46	5.0	0.093	0	-0.0031	0	0.46	0.56	5.7
1965-12-01	2.4	1.4	-1.5	0	-0.0024	0	2.4	0.84	3.9
1966-01-01	10	-7.9	-8.6	0	-0.0024	0	10	1.9	2.7
1966-02-01	1.8	0.94	0.95	0	-0.20	0	1.8	2.8	2.8
1966-03-01	2.0	1.3	1.3	0	-0.87	0	2.0	3.3	3.1
1966	17	0.75	-7.8	0	-1.1	0	17	9.3	18
1966-11-01	1.4	3.8	0.37	0	-0.043	0	1.4	1.7	5.1
1966-12-01	0.88	2.9	0.23	0	-0.031	0	0.88	1.1	4.1
1967-01-01	1.3	1.8	-0.082	0	-0.026	0	1.3	1.2	3.1
1967-02-01	0.79	2.4	0.13	0	-0.023	0	0.79	0.92	2.9
1967-03-01	0	3.9	0.44	0	-0.017	0	0	0.44	3.9
1967	4.3	15	1.1	0	-0.14	0	4.3	5.4	19
1967-11-01	0.42	4.8	0.32	0	-0.0063	0	0.42	0.74	5.6
1967-12-01	2.1	1.6	-1.3	0	-0.0051	0	2.1	0.79	3.9
1968-01-01	10	-7.6	-8.0	0	-0.0047	0	10	2.0	2.3
1968-02-01	0.63	2.5	2.5	0	-0.59	0	0.63	3.1	3.1
1968-03-01	1.9	1.9	1.3	0	-0.80	0	1.9	3.2	3.4
1968	15	3.1	-5.3	0	-1.4	0	15	9.8	18
1968-11-01	0.39	4.6	0.20	0	-0.035	0	0.39	0.59	5.1
1968-12-01	2.5	0.94	-0.84	0	-0.027	0	2.5	1.7	3.8

Table IV-B.72 SC10 Winter Storm Period Water Balance

Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
1969-01-01	3.3	-0.43	-1.9	0	-0.023	0	3.3	1.4	2.9
1969-02-01	4.2	-1.5	-1.8	0	-0.020	0	4.2	2.4	2.6
1969-03-01	1.4	1.9	1.8	0	-0.015	0	1.4	3.1	3.0
1969	12	5.5	-2.5	0	-0.12	0	12	9.2	17
1969-11-01	0.83	4.1	0.015	0	-0.012	0	0.83	0.84	5.2
1969-12-01	2.1	1.2	-0.46	0	-0.010	0	2.1	1.7	3.6
1970-01-01	1.3	1.9	-0.054	0	-0.0098	0	1.3	1.3	3.4
1970-02-01	0.50	2.7	0.51	0	-0.0087	0	0.50	1.0	2.9
1970-03-01	0.41	3.3	0.27	0	-0.0067	0	0.41	0.67	3.6
1970	5.2	13	0.27	0	-0.048	0	5.2	5.5	19
1970-11-01	0	5.1	0.63	0	-0.0035	0	0	0.63	5.3
1970-12-01	0.65	3.1	-0.14	0	-0.0035	0	0.65	0.51	3.9
1971-01-01	1.2	1.6	0.0094	0	-0.0031	0	1.2	1.2	3.0
1971-02-01	0.85	2.7	0.22	0	-0.0031	0	0.85	1.1	3.1
1971-03-01	0.81	2.9	-0.023	0	-0.0024	0	0.81	0.80	4.0
1971	3.5	15	0.70	0	-0.016	0	3.5	4.2	19
1971-11-01	4.2	0.55	0.035	0	-0.0016	0	4.2	4.2	5.1
1971-12-01	0.039	3.7	1.7	0	-0.0016	0	0.039	1.7	3.7
1972-01-01	2.1	0.75	-0.25	0	-0.0016	0	2.1	1.9	3.0
1972-02-01	0	3.3	0.85	0	-0.0016	0	0	0.85	3.2
1972-03-01	0	4.6	0.36	0	-0.0020	0	0	0.36	4.1
1972	6.4	13	2.7	0	-0.0083	0	6.4	9.0	19
1972-11-01	8.7	-4.2	-5.1	0	-0.0016	0	8.7	3.6	4.9
1972-12-01	2.8	0.31	0.31	0	-0.0020	0	2.8	3.1	3.2
1973-01-01	3.0	-0.31	-0.31	0	-0.0031	0	3.0	2.7	2.9
1973-02-01	0.74	2.0	2.0	0	-0.020	0	0.74	2.7	2.6
1973-03-01	3.2	0.079	-0.41	0	-0.039	0	3.2	2.8	2.8
1973	18	-2.0	-3.5	0	-0.066	0	18	15	16
1973-11-01	0	5.1	0.28	0	-0.022	0	0	0.28	5.6
1973-12-01	1.8	1.8	-0.69	0	-0.018	0	1.8	1.1	3.9
1974-01-01	0.098	3.3	0.54	0	-0.016	0	0.098	0.64	3.3
1974-02-01	3.4	-0.55	-1.2	0	-0.013	0	3.4	2.2	2.9
1974-03-01	0.12	3.6	0.73	0	-0.010	0	0.12	0.88	3.3
1974	5.4	13	-0.32	0	-0.079	0	5.4	5.1	19
1974-11-01	3.4	1.4	-1.8	0	-0.0047	0	3.4	1.6	5.3
1974-12-01	0.12	3.6	1.8	0	-0.0043	0	0.12	1.9	3.6
1975-01-01	0.79	2.0	0.39	0	-0.0039	0	0.79	1.1	3.1
1975-02-01	0.39	2.3	0.24	0	-0.0035	0	0.39	0.67	2.6
1975-03-01	3.9	-0.35	-1.8	0	-0.0031	0	3.9	2.1	3.0
1975	8.6	9.0	-1.2	0	-0.020	0	8.6	7.4	18
1975-11-01	0.24	4.8	0.23	0	-0.0031	0	0.24	0.47	5.4
1975-12-01	2.2	1.9	-1.7	0	-0.0024	0	2.2	0.43	4.2
1976-01-01	1.2	1.8	0.75	0	-0.0028	0	1.2	2.0	3.1
1976-02-01	0.24	2.8	0.58	0	-0.0024	0	0.24	0.79	2.9
1976-03-01	1.6	2.3	-0.15	0	-0.0020	0	1.6	1.5	3.4
1976	5.5	13	-0.32	0	-0.013	0	5.5	5.2	19
1976-11-01	0.91	3.8	0.80	0	-0.0016	0	0.91	1.7	5.1
1976-12-01	0.55	3.2	0.41	0	-0.0012	0	0.55	0.94	4.0
1977-01-01	1.8	1.2	-1.1	0	-0.0016	0	1.8	0.75	3.1
1977-02-01	1.9	0.91	0.33	0	-0.0012	0	1.9	2.2	2.5
1977-03-01	0.079	4.3	0.76	0	-0.00079	0	0.079	0.83	4.1
1977	5.3	13	1.2	0	-0.0063	0	5.3	6.5	19

Table IV-B.72 SC10 Winter Storm Period Water Balance

Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
1977-11-01	1.3	3.9	0.44	0	-0.00079	0	1.3	1.8	5.5
1977-12-01	0.35	3.5	0.61	0	-0.00079	0	0.35	0.94	3.9
1978-01-01	0.67	2.5	-0.066	0	-0.0012	0	0.67	0.59	3.5
1978-02-01	6.4	-3.7	-4.4	0	-0.00039	0	6.4	2.0	2.5
1978-03-01	5.5	-2.2	-2.2	0	-0.00079	0	5.5	3.2	2.9
1978	14	3.9	-5.6	0	-0.0039	0	14	8.6	18
1978-11-01	1.9	3.5	-0.80	0	-0.057	0	1.9	1.1	5.9
1978-12-01	5.6	-2.4	-3.4	0	-0.043	0	5.6	2.2	3.7
1979-01-01	6.6	-3.9	-3.9	0	-0.035	0	6.6	2.6	2.5
1979-02-01	6.0	-3.8	-3.8	0	-0.23	0	6.0	2.2	2.3
1979-03-01	1.2	2.8	2.7	0	-2.2	0	1.2	4.0	3.3
1979	21	-3.9	-9.3	0	-2.5	0	21	12	18
1979-11-01	0.67	4.8	-0.039	0	-0.049	0	0.67	0.63	5.9
1979-12-01	0.67	3.1	0.12	0	-0.037	0	0.67	0.79	4.0
1980-01-01	0.71	2.8	-0.12	0	-0.029	0	0.71	0.59	3.7
1980-02-01	4.1	-1.7	-2.4	0	-0.024	0	4.1	1.7	2.5
1980-03-01	6.1	-2.9	-3.4	0	-0.019	0	6.1	2.6	2.5
1980	12	6.2	-5.8	0	-0.16	0	12	6.4	19
1980-11-01	0.039	5.2	0.25	0	-0.038	0	0.039	0.28	5.8
1980-12-01	0	4.1	0.18	0	-0.028	0	0	0.20	4.3
1981-01-01	0.55	3.2	0.033	0	-0.024	0	0.55	0.59	3.6
1981-02-01	1.3	2.1	-0.38	0	-0.020	0	1.3	0.94	3.6
1981-03-01	2.7	1.3	-1.1	0	-0.016	0	2.7	1.6	3.6
1981	4.6	16	-0.99	0	-0.13	0	4.6	3.6	21
1981-11-01	0.94	3.7	0.26	0	-0.0067	0	0.94	1.2	5.1
1981-12-01	2.3	1.6	-1.9	0	-0.0051	0	2.3	0.39	4.4
1982-01-01	0	3.6	1.5	0	-0.0055	0	0	1.5	3.4
1982-02-01	2.7	0	-0.57	0	-0.0047	0	2.7	2.1	2.8
1982-03-01	1.8	1.7	0.078	0	-0.0039	0	1.8	1.9	3.1
1982	7.8	11	-0.63	0	-0.026	0	7.8	7.2	19
1982-11-01	0	5.0	0.92	0	-0.0024	0	0	0.91	5.3
1982-12-01	3.3	-0.28	-1.5	0	-0.0024	0	3.3	1.8	3.6
1983-01-01	1.7	1.1	0.64	0	-0.0024	0	1.7	2.3	2.7
1983-02-01	1.9	1.4	-0.79	0	-0.0024	0	1.9	1.1	3.3
1983-03-01	2.4	0.98	0.30	0	-0.0020	0	2.4	2.6	2.8
1983	9.3	8.2	-0.43	0	-0.011	0	9.3	8.8	18
1983-11-01	1.1	3.3	2.4	0	-0.0055	0	1.1	3.5	4.8
1983-12-01	2.0	1.6	-0.38	0	-0.0051	0	2.0	1.7	3.8
1984-01-01	2.5	0.20	-0.14	0	-0.0055	0	2.5	2.4	2.8
1984-02-01	0.51	2.8	1.3	0	-0.0059	0	0.51	1.8	2.8
1984-03-01	0	4.0	0.55	0	-0.0063	0	0	0.55	3.9
1984	6.1	12	3.7	0	-0.028	0	6.1	9.8	18
1984-11-01	1.3	3.2	0.40	0	-0.0043	0	1.3	1.7	4.9
1984-12-01	2.1	1.7	-1.2	0	-0.0035	0	2.1	0.91	4.2
1985-01-01	5.8	-3.3	-3.5	0	-0.0035	0	5.8	2.2	2.5
1985-02-01	2.7	-0.31	-0.32	0	-0.0031	0	2.7	2.4	2.5
1985-03-01	1.7	1.2	1.2	0	-0.0035	0	1.7	2.8	2.5
1985	14	2.4	-3.5	0	-0.018	0	14	10	17
1985-11-01	1.2	3.1	0.63	0	-0.023	0	1.2	1.9	4.6
1985-12-01	2.8	0.43	-1.5	0	-0.019	0	2.8	1.2	3.9
1986-01-01	0.91	2.5	1.2	0	-0.016	0	0.91	2.1	3.1
1986-02-01	0.079	3.7	0.57	0	-0.013	0	0.079	0.67	3.6

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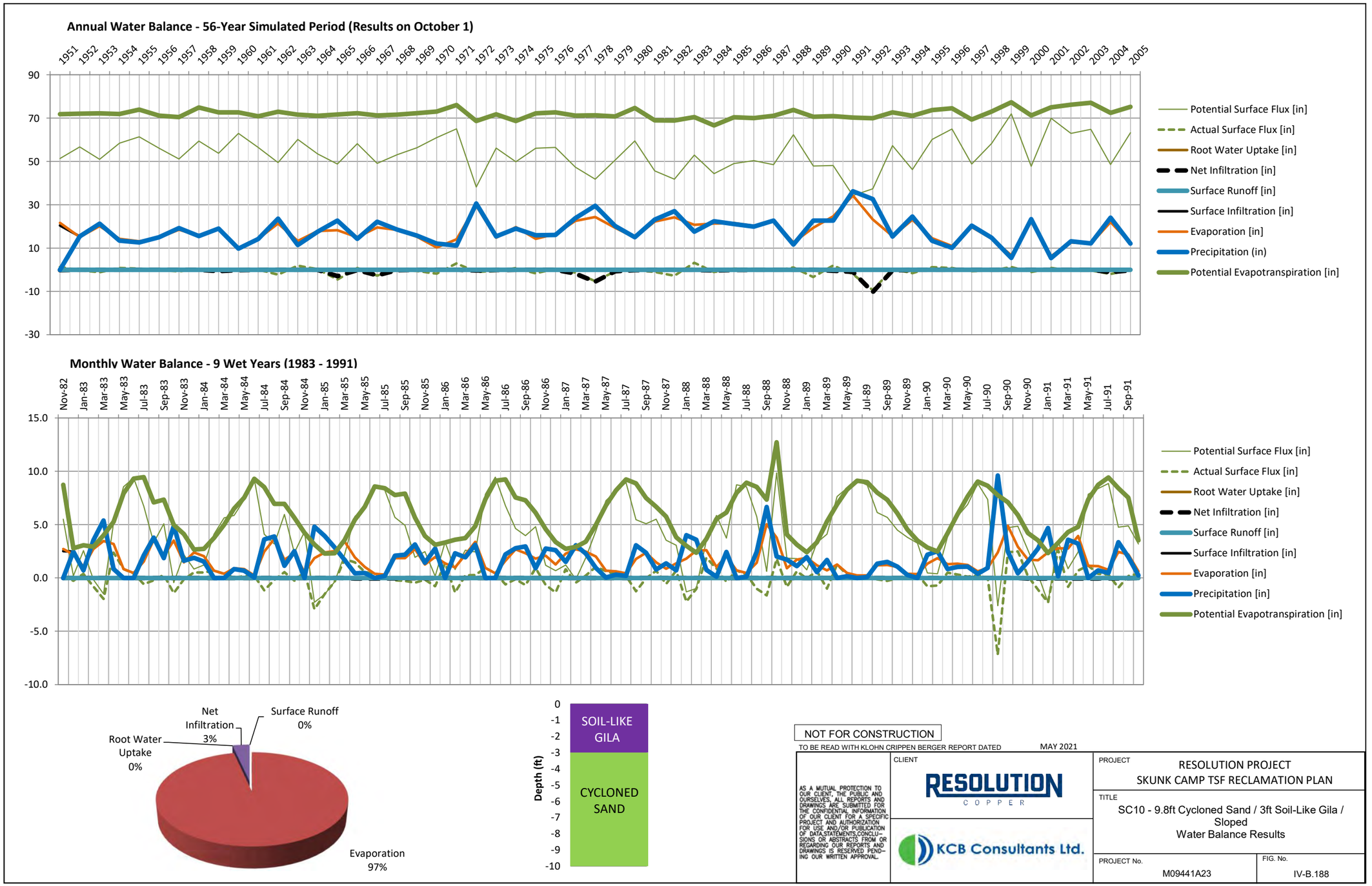
Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
1986-03-01	3.1	0.12	-0.85	0	-0.011	0	3.1	2.2	2.9
1986	8.0	9.8	0.11	0	-0.082	0	8.0	8.1	18
1986-11-01	1.7	3.0	0.053	0	-0.0059	0	1.7	1.8	4.8
1986-12-01	1.4	1.9	0.25	0	-0.0051	0	1.4	1.7	3.7
1987-01-01	3.0	-0.16	-0.91	0	-0.0051	0	3.0	2.1	2.9
1987-02-01	3.3	-0.35	-0.92	0	-0.0043	0	3.3	2.4	2.8
1987-03-01	2.7	0.51	-0.66	0	-0.0039	0	2.7	2.0	3.5
1987	12	4.9	-2.2	0	-0.024	0	12	10	18
1987-11-01	0.31	5.2	0.39	0	-0.0039	0	0.31	0.75	6.0
1987-12-01	1.8	1.9	-0.20	0	-0.0031	0	1.8	1.5	3.8
1988-01-01	4.0	-1.1	-2.4	0	-0.0028	0	4.0	1.7	3.2
1988-02-01	3.6	-0.91	-0.95	0	-0.0028	0	3.6	2.6	2.5
1988-03-01	0.75	3.3	1.9	0	-0.0024	0	0.75	2.6	3.4
1988	10	8.4	-1.2	0	-0.015	0	10	9.3	19
1988-11-01	1.5	3.7	0.14	0	-0.0047	0	1.5	1.7	5.8
1988-12-01	1.7	1.9	-0.57	0	-0.0047	0	1.7	1.1	4.0
1989-01-01	1.1	1.8	0.53	0	-0.0039	0	1.1	1.7	3.1
1989-02-01	2.2	0.55	-0.30	0	-0.0043	0	2.2	1.9	2.7
1989-03-01	0.31	3.6	0.66	0	-0.0035	0	0.31	0.98	3.1
1989	6.9	12	0.47	0	-0.021	0	6.9	7.3	19
1989-11-01	1.1	4.1	0.028	0	-0.0020	0	1.1	1.1	5.9
1989-12-01	0.28	3.6	0.13	0	-0.0020	0	0.28	0.43	4.2
1990-01-01	0.87	2.5	-0.51	0	-0.0020	0	0.87	0.35	3.4
1990-02-01	1.3	1.5	0.13	0	-0.0020	0	1.3	1.4	2.7
1990-03-01	2.5	0.67	-0.56	0	-0.0012	0	2.5	2.0	2.6
1990	6.0	12	-0.78	0	-0.0091	0	6.0	5.3	19
1990-11-01	0.28	4.6	1.5	0	-0.031	0	0.28	1.7	5.3
1990-12-01	2.2	1.5	-0.031	0	-0.053	0	2.2	2.2	4.2
1991-01-01	4.8	-2.3	-3.3	0	-0.052	0	4.8	1.5	3.0
1991-02-01	1.8	1.3	1.2	0	-0.045	0	1.8	3.0	2.6
1991-03-01	0.94	3.3	1.3	0	-0.041	0	0.94	2.3	3.3
1991	10	8.3	0.70	0	-0.22	0	10	11	18
1991-11-01	1.2	4.6	-0.49	0	-0.022	0	1.2	0.75	6.6
1991-12-01	3.3	0.12	-1.3	0	-0.017	0	3.3	1.9	3.6
1992-01-01	4.0	-1.3	-1.5	0	-0.015	0	4.0	2.5	2.9
1992-02-01	3.0	-0.28	-0.26	0	-0.013	0	3.0	2.8	2.2
1992-03-01	2.8	0.63	0.49	0	-0.013	0	2.8	3.2	3.0
1992	14	3.7	-3.1	0	-0.080	0	14	11	18
1992-11-01	1.2	4.1	0.057	0	-0.054	0	1.2	1.3	6.2
1992-12-01	0.51	2.8	0.78	0	-0.043	0	0.51	1.3	3.6
1993-01-01	6.3	-4.0	-4.2	0	-0.035	0	6.3	2.1	2.5
1993-02-01	11	-9.1	-9.1	0	-0.64	0	11	2.2	1.9
1993-03-01	6.0	-3.5	-3.5	0	-4.1	0	6.0	2.5	2.7
1993	25	-9.6	-16	0	-4.9	0	25	9.4	17
1993-11-01	0.83	4.4	0.21	0	-0.056	0	0.83	1.0	6.0
1993-12-01	4.2	-0.87	-2.3	0	-0.043	0	4.2	1.9	3.6
1994-01-01	0.28	2.8	1.5	0	-0.034	0	0.28	1.7	3.4
1994-02-01	0.28	3.2	0.56	0	-0.028	0	0.28	0.83	3.3
1994-03-01	2.6	0.59	-0.72	0	-0.023	0	2.6	1.9	3.0
1994	8.1	10	-0.79	0	-0.18	0	8.1	7.4	19
1994-11-01	1.9	2.8	-0.50	0	-0.0083	0	1.9	1.3	5.3
1994-12-01	3.3	-0.35	-0.98	0	-0.0071	0	3.3	2.4	3.5

Table IV-B.72 SC10 Winter Storm Period Water Balance

Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
1995-01-01	2.7	0.039	-0.51	0	-0.0059	0	2.7	2.2	3.0
1995-02-01	3.7	-0.79	-0.78	0	-0.0051	0	3.7	2.9	2.6
1995-03-01	2.7	0.79	0.062	0	-0.0043	0	2.7	2.8	3.1
1995	14	2.5	-2.7	0	-0.031	0	14	12	18
1995-11-01	0	5.3	1.2	0	-0.0079	0	0	1.2	5.8
1995-12-01	1.3	2.4	0.054	0	-0.0067	0	1.3	1.4	3.9
1996-01-01	0.87	2.3	0.047	0	-0.0055	0	0.87	0.94	3.5
1996-02-01	0.039	3.5	0.40	0	-0.0059	0	0.039	0.43	3.3
1996-03-01	3.1	0.59	-1.2	0	-0.0039	0	3.1	1.9	3.6
1996	5.4	14	0.49	0	-0.030	0	5.4	5.9	20
1996-11-01	0.43	5.1	0.35	0	-0.0024	0	0.43	0.79	6.0
1996-12-01	1.2	2.4	-0.42	0	-0.0020	0	1.2	0.79	3.8
1997-01-01	0.039	3.1	0.69	0	-0.0020	0	0.039	0.71	3.2
1997-02-01	2.8	-0.039	-1.2	0	-0.0016	0	2.8	1.7	2.7
1997-03-01	1.7	2.1	-0.70	0	-0.0020	0	1.7	0.98	3.4
1997	6.2	13	-1.2	0	-0.0098	0	6.2	5.0	19
1997-11-01	0.75	4.1	-0.061	0	-0.0012	0	0.75	0.67	6.0
1997-12-01	0.83	2.7	-0.041	0	-0.00079	0	0.83	0.75	3.7
1998-01-01	2.7	-0.039	-1.0	0	-0.00079	0	2.7	1.7	3.1
1998-02-01	0.39	2.7	0.63	0	-0.00079	0	0.39	1.0	2.4
1998-03-01	6.4	-3.8	-4.1	0	-0.00039	0	6.4	2.2	2.9
1998	11	5.6	-4.7	0	-0.0039	0	11	6.3	18
1998-11-01	0	5.4	0.33	0	-0.0047	0	0	0.31	6.3
1998-12-01	1.1	2.7	-0.65	0	-0.0039	0	1.1	0.43	3.9
1999-01-01	0.75	2.5	0.54	0	-0.0039	0	0.75	1.3	3.3
1999-02-01	0.039	3.5	0.25	0	-0.0039	0	0.039	0.31	3.6
1999-03-01	0.20	4.2	0.14	0	-0.0031	0	0.20	0.35	3.6
1999	2.0	18	0.60	0	-0.020	0	2.0	2.7	21
1999-11-01	0	5.6	0.51	0	-0.0020	0	0	0.55	6.2
1999-12-01	0	4.3	0.29	0	-0.0020	0	0	0.28	4.7
2000-01-01	0.039	3.3	0.17	0	-0.0020	0	0.039	0.20	3.7
2000-02-01	0.31	3.5	0.12	0	-0.0016	0	0.31	0.39	3.4
2000-03-01	0.67	3.4	-0.087	0	-0.0016	0	0.67	0.63	3.9
2000	1.0	20	1.0	0	-0.0091	0	1.0	2.0	22
2000-11-01	5.3	-0.63	-3.8	0	-0.00039	0	5.3	1.6	6.1
2000-12-01	2.1	1.1	0.91	0	-0.00079	0	2.1	3.0	2.9
2001-01-01	0.079	3.3	1.3	0	0	0	0.079	1.4	3.7
2001-02-01	3.4	-0.63	-1.5	0	-0.00039	0	3.4	1.9	3.0
2001-03-01	1.8	1.7	0.64	0	0	0	1.8	2.4	2.8
2001	13	4.8	-2.4	0	-0.0016	0	13	10	19
2001-11-01	0.35	4.7	0.33	0	-0.0024	0	0.35	0.71	5.7
2001-12-01	0.28	3.6	0.21	0	-0.0020	0	0.28	0.47	4.6
2002-01-01	1.9	0.94	-0.49	0	-0.0016	0	1.9	1.4	2.9
2002-02-01	0.24	3.1	0.24	0	-0.0020	0	0.24	0.43	3.2
2002-03-01	0	4.3	0.34	0	-0.0020	0	0	0.35	3.4
2002	2.7	17	0.63	0	-0.0098	0	2.7	3.3	20
2002-11-01	0.12	5.2	0.13	0	-0.0012	0	0.12	0.24	6.3
2002-12-01	0.83	3.1	-0.54	0	-0.00079	0	0.83	0.31	4.4
2003-01-01	1.0	2.0	0.12	0	-0.00079	0	1.0	1.1	3.4
2003-02-01	0.35	3.6	0.21	0	-0.0012	0	0.35	0.59	3.1
2003-03-01	5.0	-1.7	-3.6	0	-0.00039	0	5.0	1.3	3.6
2003	7.3	12	-3.7	0	-0.0043	0	7.3	3.5	21

Table IV-B.72 SC10 Winter Storm Period Water Balance

Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
2003-11-01	0.079	5.7	0.30	0	-0.0012	0	0.079	0.35	6.3
2003-12-01	0.87	2.6	-0.13	0	-0.0012	0	0.87	0.75	3.9
2004-01-01	0.98	2.4	-0.12	0	-0.00039	0	0.98	0.83	3.9
2004-02-01	1.4	1.4	-0.43	0	0	0	1.4	1.0	3.1
2004-03-01	0.71	2.8	0.23	0	-0.00039	0	0.71	0.91	3.0
2004	4.1	15	-0.15	0	-0.0031	0	4.1	3.9	20
2004-11-01	1.2	4.0	-0.17	0	-0.00039	0	1.2	1.0	6.4
2004-12-01	0.63	2.4	0.25	0	0	0	0.63	0.91	3.5
2005-01-01	2.8	0.43	-1.5	0	-0.00039	0	2.8	1.2	3.0
2005-02-01	4.2	-1.5	-1.6	0	0	0	4.2	2.7	2.7
2005-03-01	7.3	-4.7	-4.7	0	0	0	7.3	2.6	2.7
2005	16	0.67	-7.7	0	-0.00079	0	16	8.5	18
2005-11-01	0.39	5.0	0.32	0	-0.049	0	0.39	0.75	6.4
2005-12-01	0	4.1	0.30	0	-0.036	0	0	0.31	4.4
2006-01-01	0	3.3	0.21	0	-0.029	0	0	0.20	3.5
2006-02-01	0	4.1	0.16	0	-0.024	0	0	0.16	3.8
2006-03-01	0.12	4.2	0.097	0	-0.019	0	0.12	0.20	4.1
2006	0.51	21	1.1	0	-0.16	0	0.51	1.6	22


Annual Water Balance - 56-Year Simulated Period (Results on October 1)
Potential Surface Flux [in]
Actual Surface Flux [in]
Root Water Uptake [in]
Net Infiltration [in]
Surface Runoff [in]
Surface Infiltration [in]
Evaporation [in]
Precipitation (in)
Potential Evapotranspiration [in]
Monthly Water Balance - 9 Wet Years (1983 - 1991)
Potential Surface Flux [in]
Actual Surface Flux [in]
Root Water Uptake [in]
Net Infiltration [in]
Surface Runoff [in]
Surface Infiltration [in]
Evaporation [in]
Precipitation [in]
Potential Evapotranspiration [in]
Net Infiltration 3%
Surface Runoff 0%
Root Water Uptake 0%
Evaporation 97%
Depth (ft)
SOIL-LIKE GILA
CYCLONED SAND
NOT FOR CONSTRUCTION
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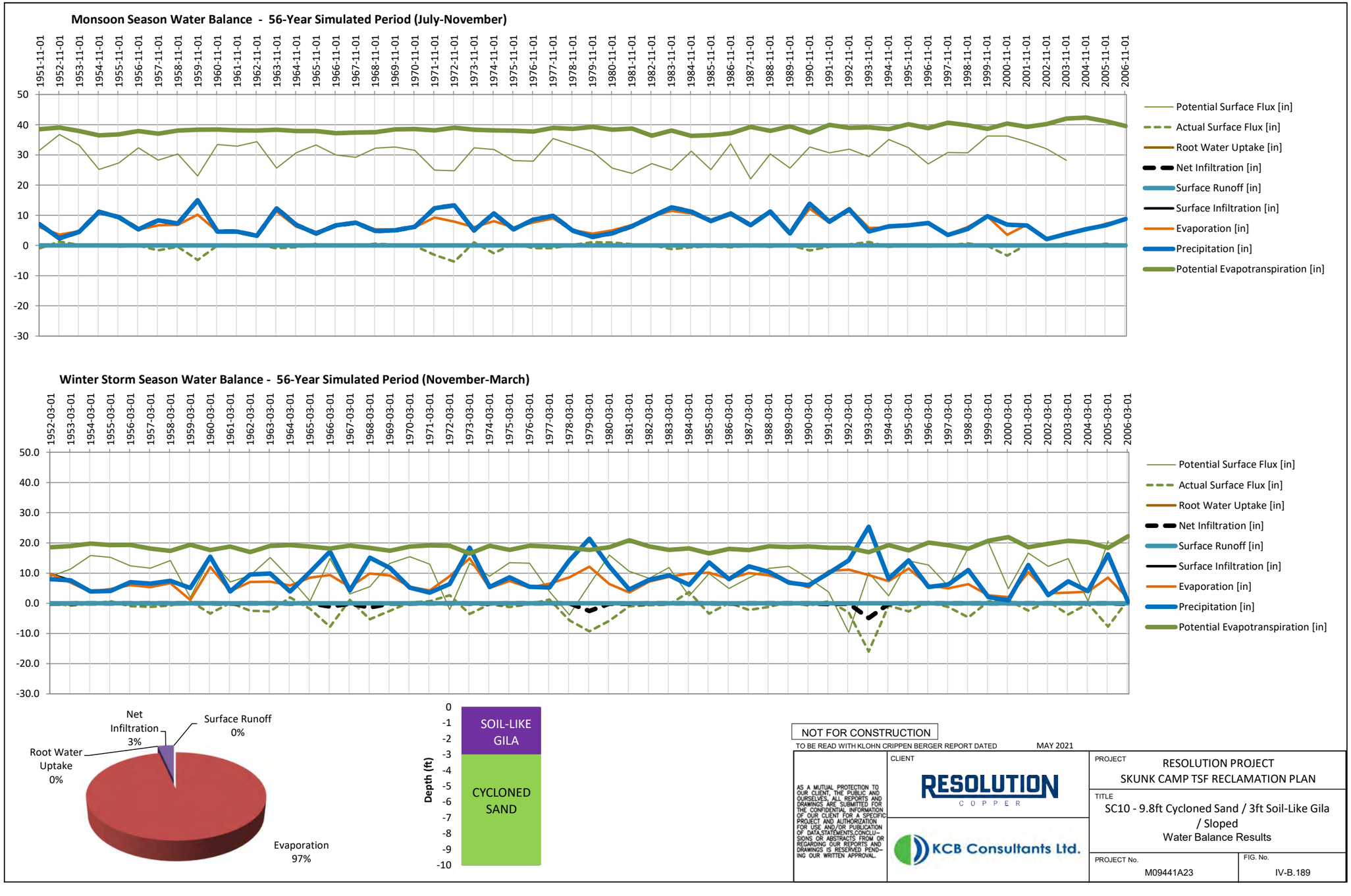
SKUNK CAMP TSF RECLAMATION PLAN
TITLE
SC10 - 9.8ft Cycloned Sand / 3ft Soil-Like Gila / Sloped
Water Balance Results
PROJECT No.
M09441A23
FIG. No.
IV-B.188


Monsoon Season Water Balance - 56-Year Simulated Period (July-November)
Potential Surface Flux [in]
Actual Surface Flux [in]
Root Water Uptake [in]
Net Infiltration [in]
Surface Runoff [in]
Surface Infiltration [in]
Evaporation [in]
Precipitation [in]
Potential Evapotranspiration [in]
Winter Storm Season Water Balance - 56-Year Simulated Period (November-March)
Net Infiltration 3%
Surface Runoff 0%
Root Water Uptake 0%
Evaporation 97%
SOIL-LIKE GILA
CYCLONED SAND
Depth (ft)
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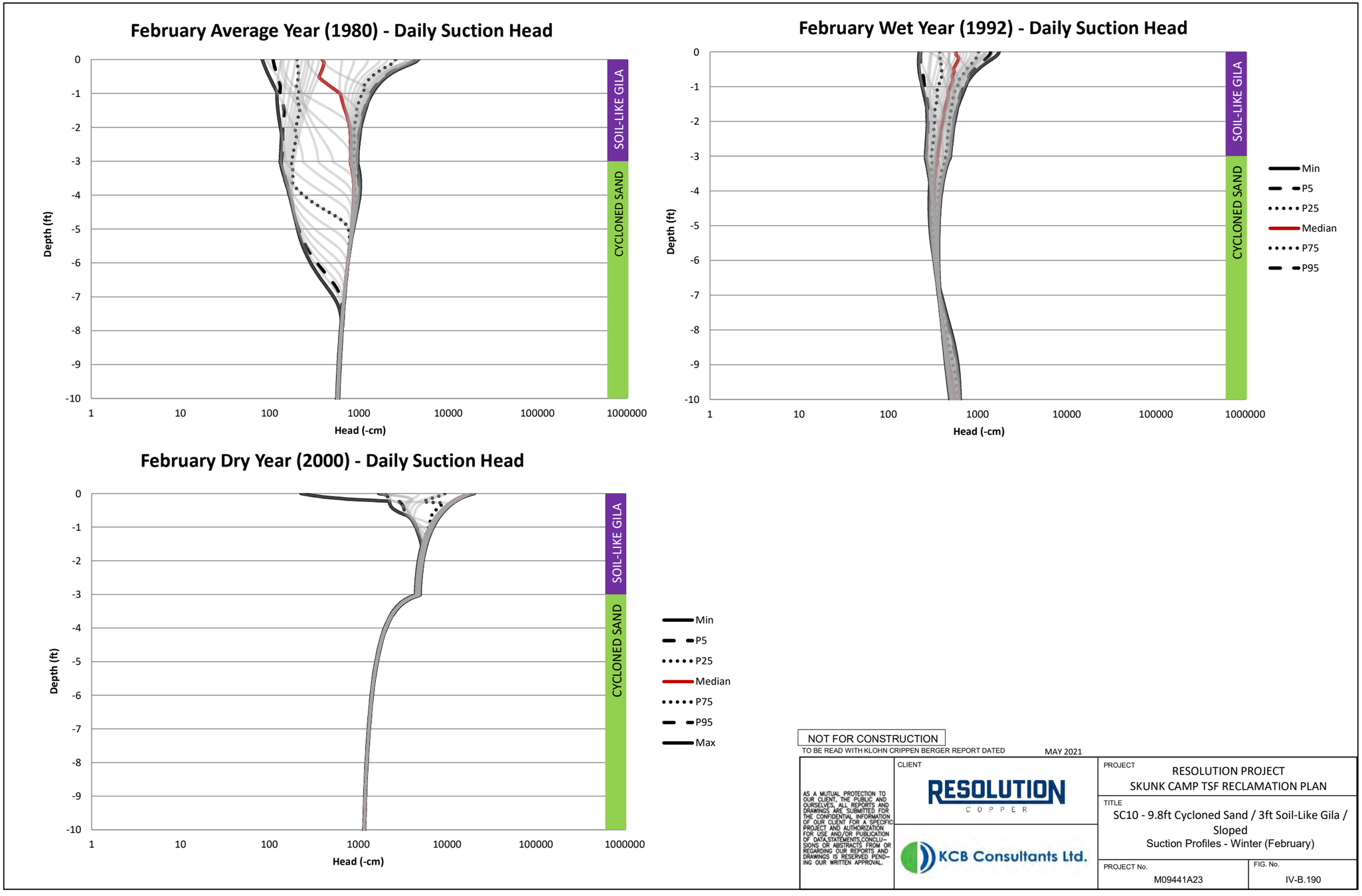
SC10 - 9.8ft Cycloned Sand / 3ft Soil-Like Gila / Sloped
Water Balance Results
PROJECT No.
M09441A23
FIG. No.
IV-B.189



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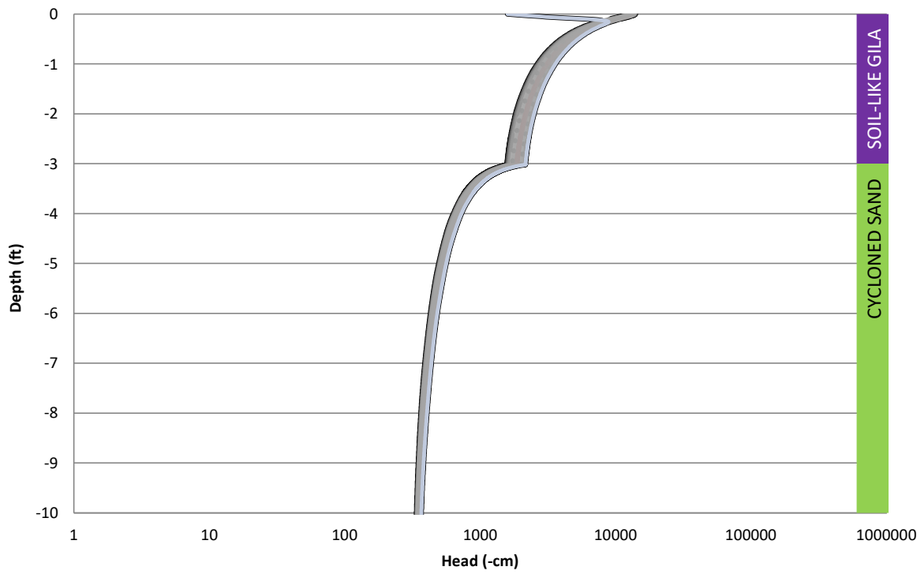
SKUNK CAMP TSF RECLAMATION PLAN

TITLE: SC10 - 9.8ft Cycloned Sand / 3ft Soil-Like Gila / Sloped
Suction Profiles - Winter (February)

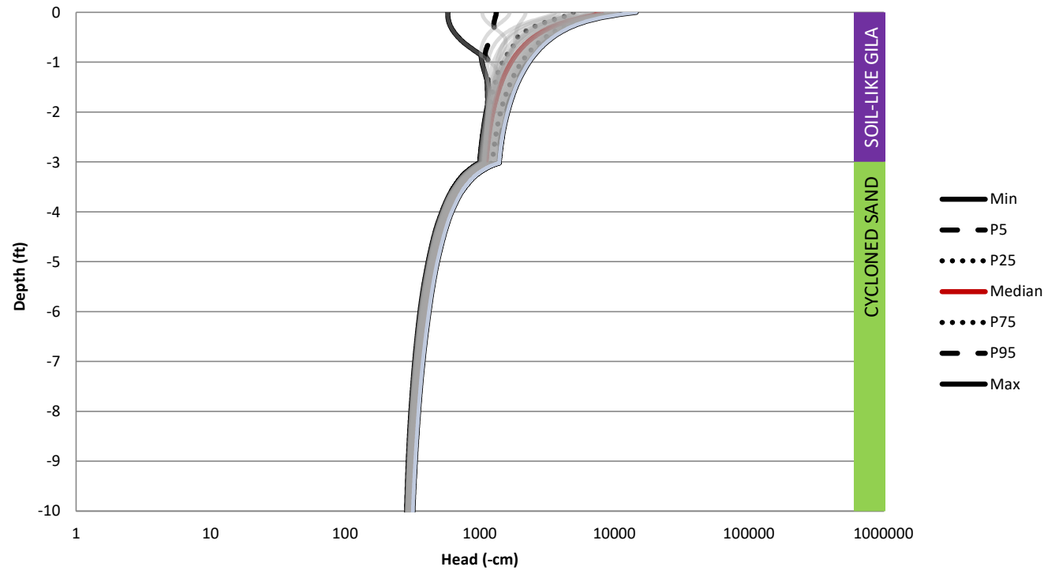
PROJECT No. M09441A23

FIG. No. IV-B.190

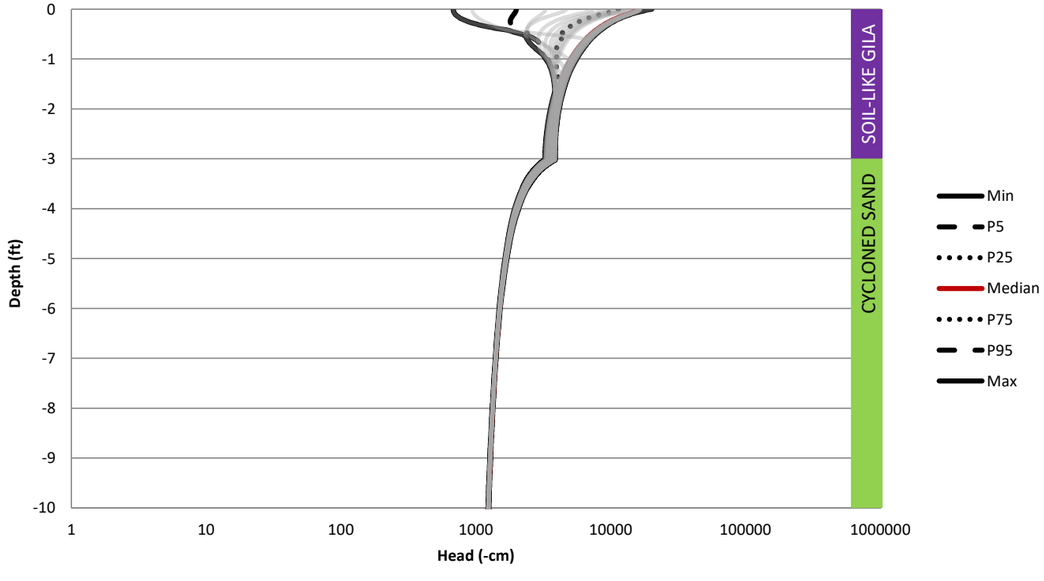
June Average Year (1980) - Daily Suction Head



June Wet Year (1992) - Daily Suction Head



June Dry Year (2000) - Daily Suction Head



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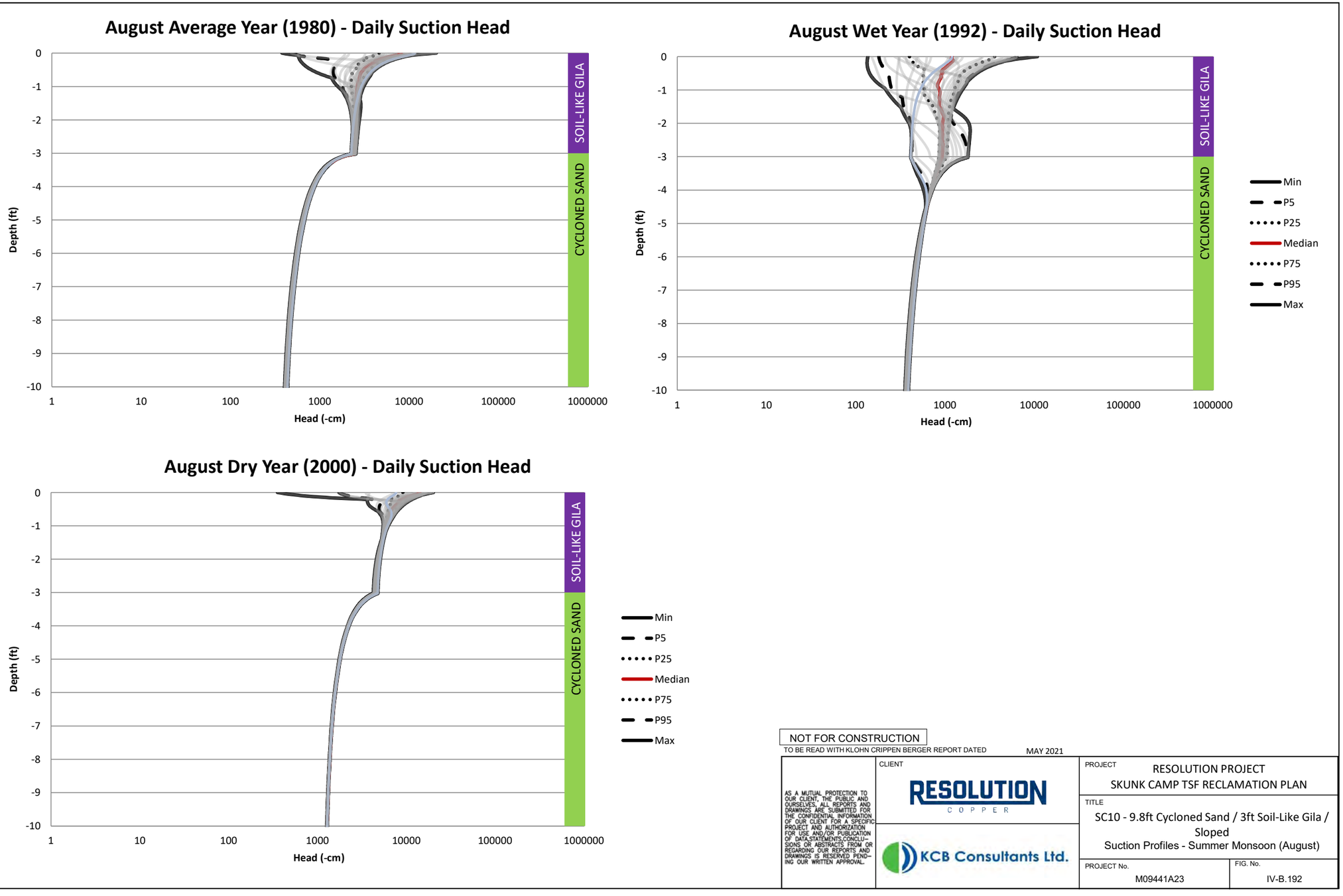
SKUNK CAMP TSF RECLAMATION PLAN

TITLE: SC10 - 9.8ft Cycloned Sand / 3ft Soil-Like Gila / Sloped
Suction Profiles - Dry Season (June)

PROJECT No. M09441A23

FIG. No. IV-B.191


August Average Year (1980) - Daily Suction Head
August Wet Year (1992) - Daily Suction Head
August Dry Year (2000) - Daily Suction Head
Depth (ft)
Head (-cm)
0
-1
-2
-3
-4
-5
-6
-7
-8
-9
-10
1
10
100
1000
10000
100000
1000000
SOIL-LIKE GILA
CYCLONED SAND
Min
P5
P25
Median
P75
P95
Max
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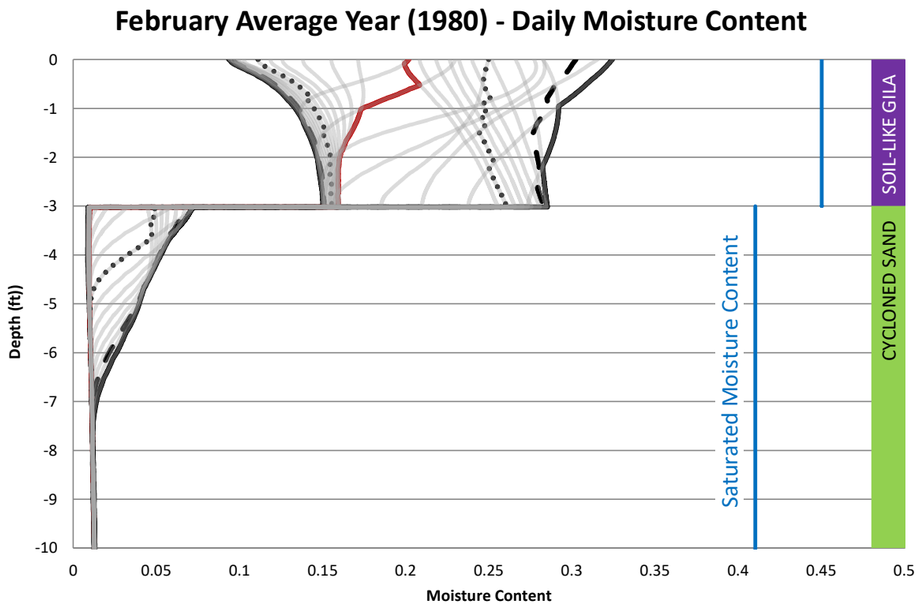
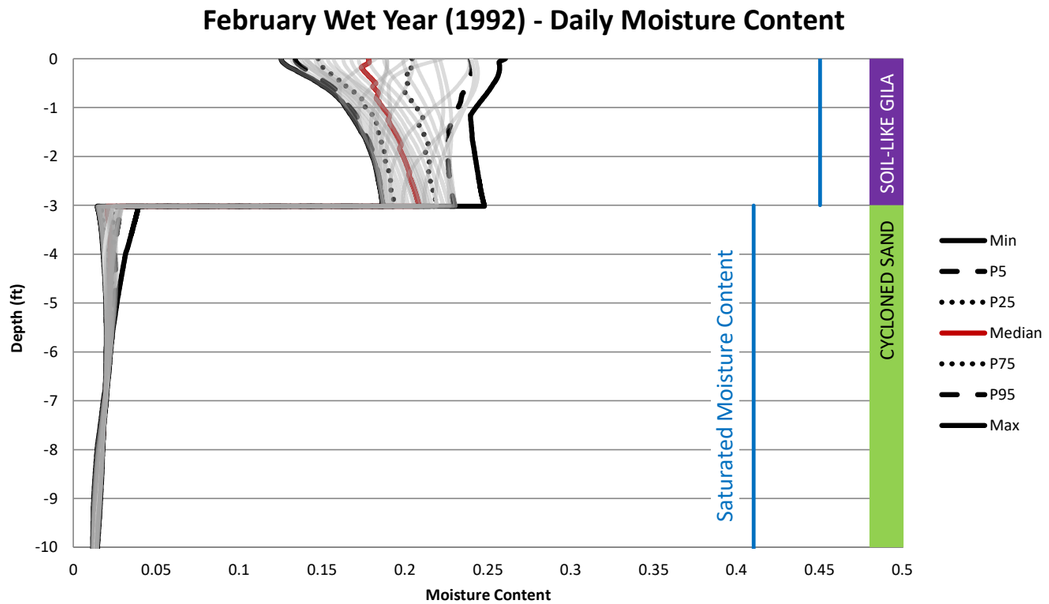
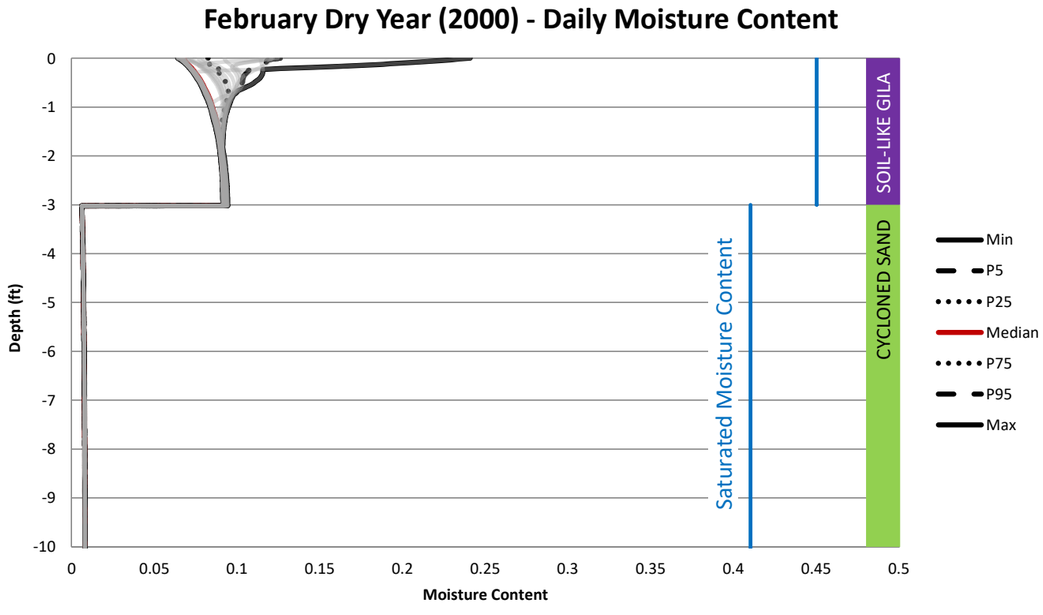
SKUNK CAMP TSF RECLAMATION PLAN
TITLE
SC10 - 9.8ft Cycloned Sand / 3ft Soil-Like Gila / Sloped
Suction Profiles - Summer Monsoon (August)
PROJECT No.
M09441A23
FIG. No.
IV-B.192







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CLIENT: RESOLUTION COPPER

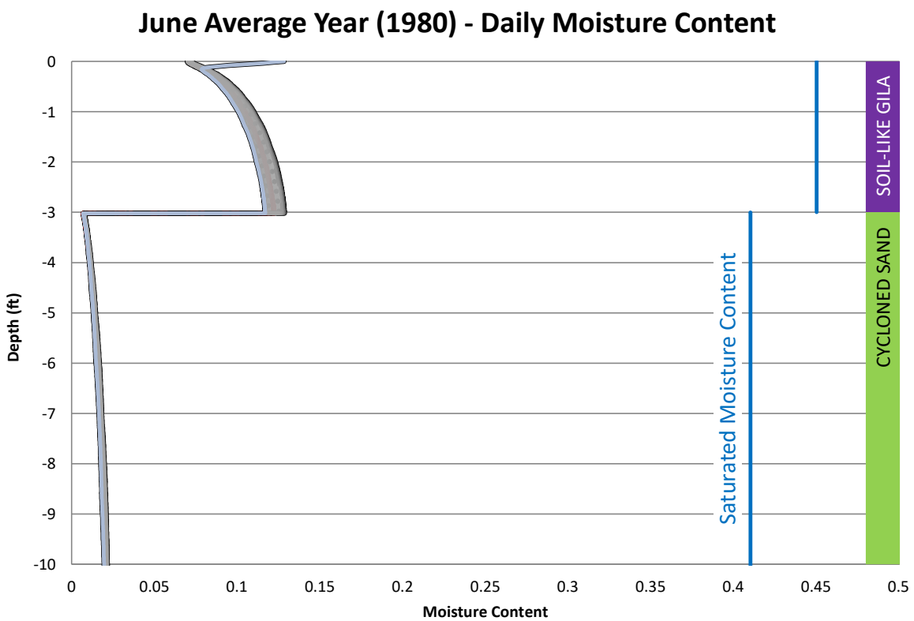
KCB Consultants Ltd.

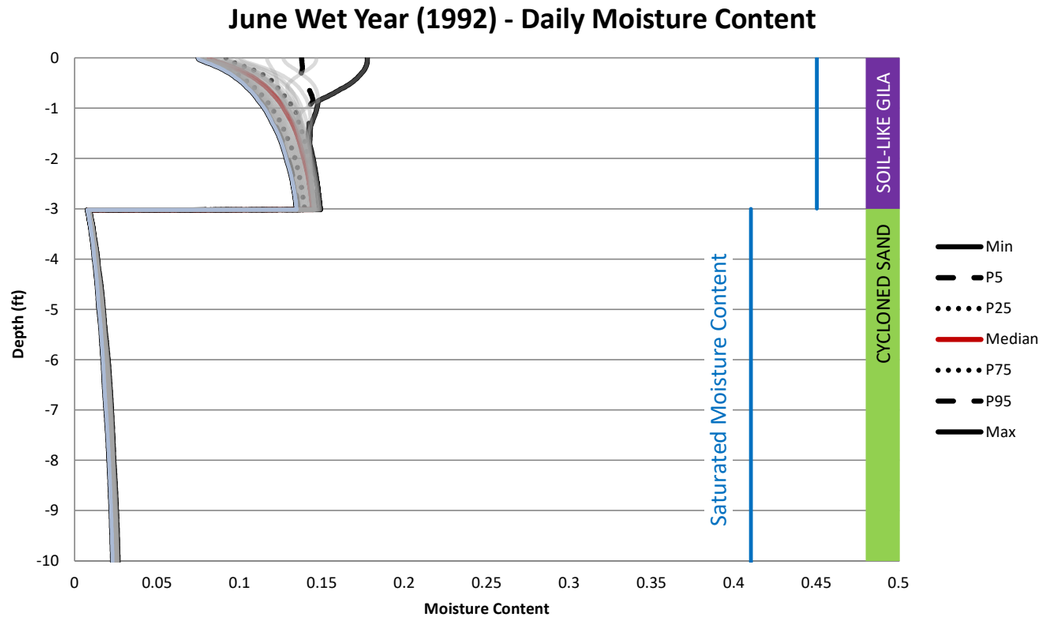
PROJECT: RESOLUTION PROJECT
SKUNK CAMP TSF RECLAMATION PLAN

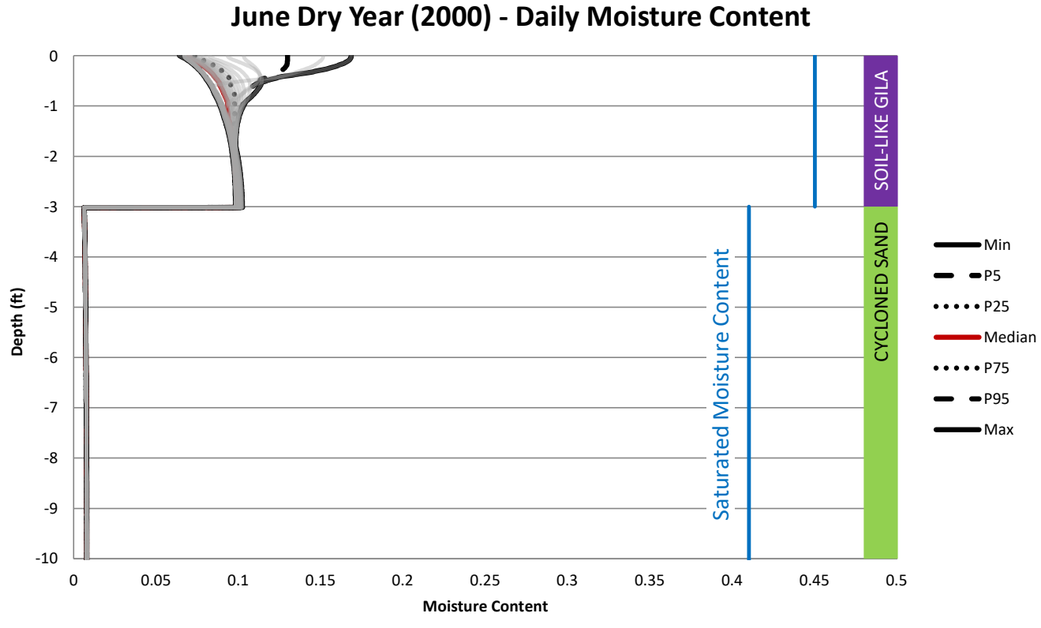
TITLE: SC10 - 9.8ft Cycloned Sand / 3ft Soil-Like Gila / Sloped
Moisture Content - Winter (February)

PROJECT No. M09441A23

FIG. No. IV-B.193







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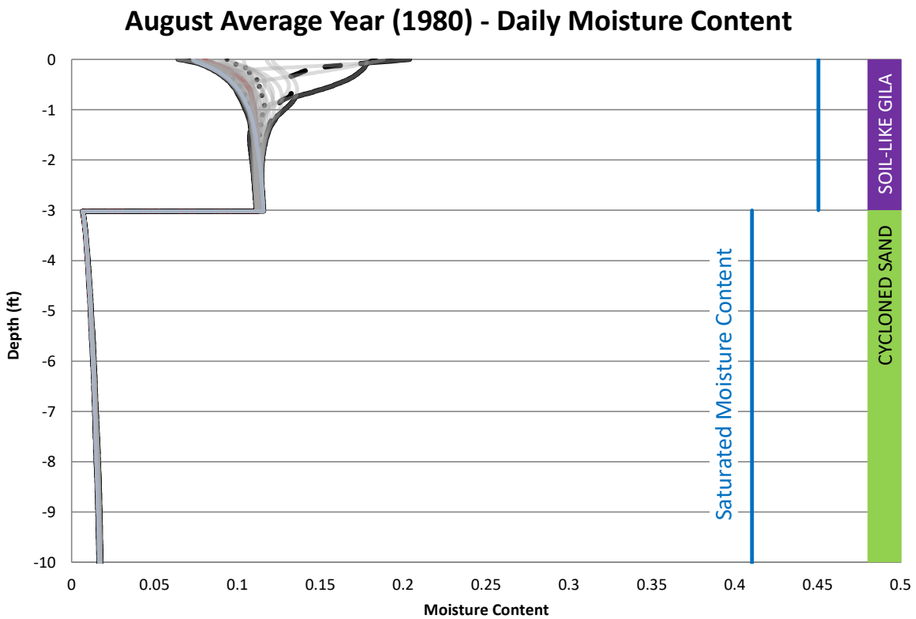
KCB Consultants Ltd.

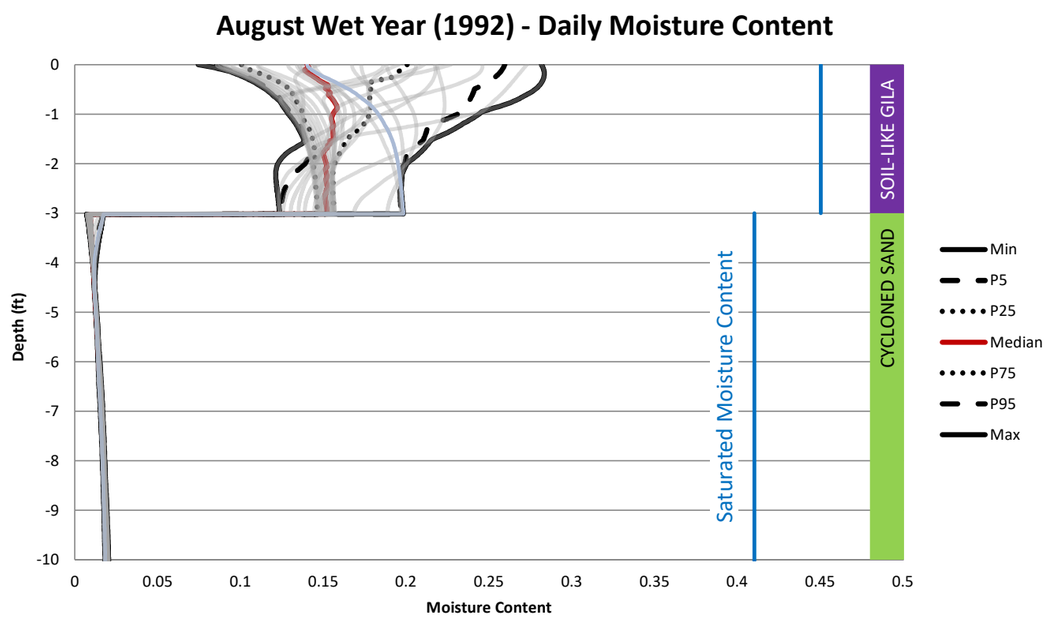
PROJECT: RESOLUTION PROJECT
SKUNK CAMP TSF RECLAMATION PLAN

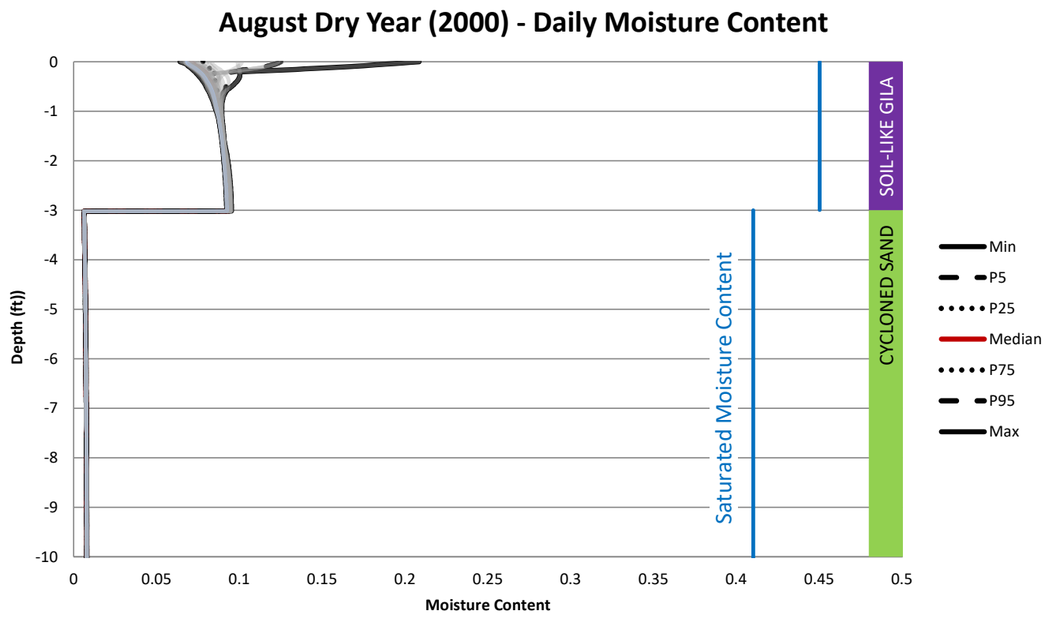
TITLE: SC10 - 9.8ft Cycloned Sand / 3ft Soil-Like Gila / Sloped
Moisture Content - Dry Season(June)

PROJECT No. M09441A23

FIG. No. IV-B.194







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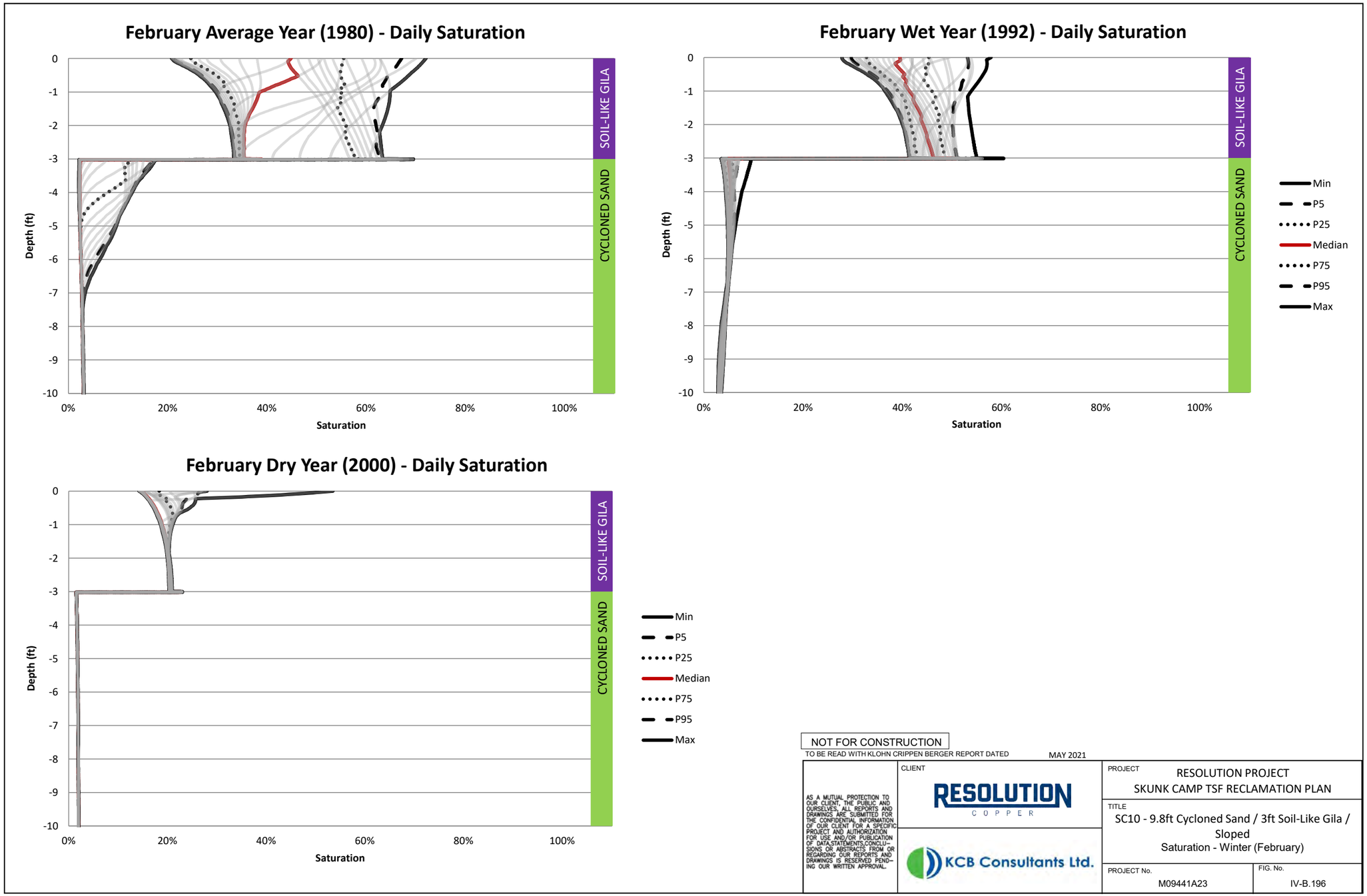
PROJECT: RESOLUTION PROJECT
SKUNK CAMP TSF RECLAMATION PLAN

TITLE: SC10 - 9.8ft Cycloned Sand / 3ft Soil-Like Gila / Sloped
Moisture Content - Summer Monsoon (August)

PROJECT No. M09441A23

FIG. No. IV-B.195


February Average Year (1980) - Daily Saturation
February Wet Year (1992) - Daily Saturation
February Dry Year (2000) - Daily Saturation
Depth (ft)
Saturation
0
-1
-2
-3
-4
-5
-6
-7
-8
-9
-10
0%
20%
40%
60%
80%
100%
SOIL-LIKE GILA
CYCLONED SAND
Min
P5
P25
Median
P75
P95
Max
NOT FOR CONSTRUCTION
TO BE READ WITH KLOHN CRIPPEN BERGER REPORT DATED
MAY 2021
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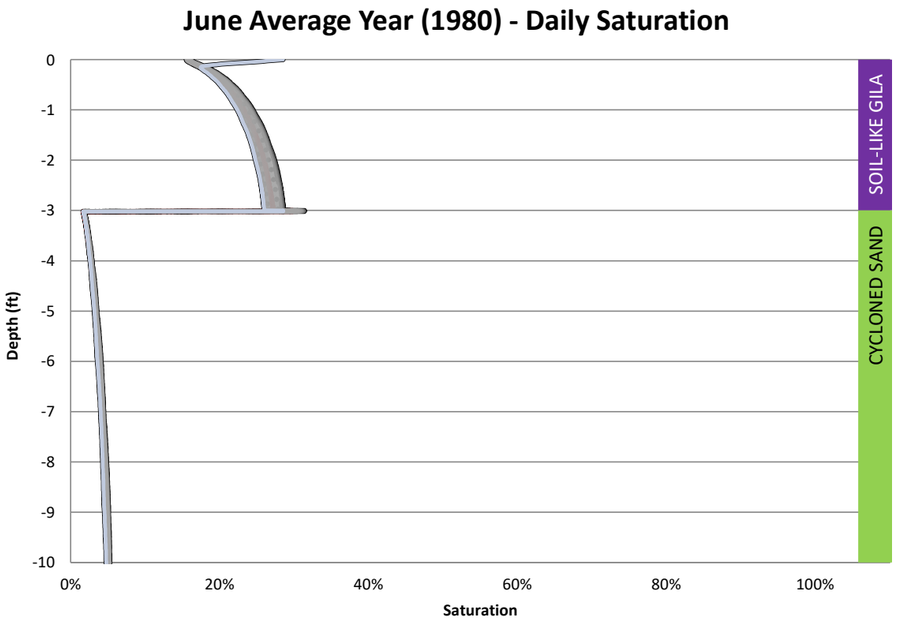
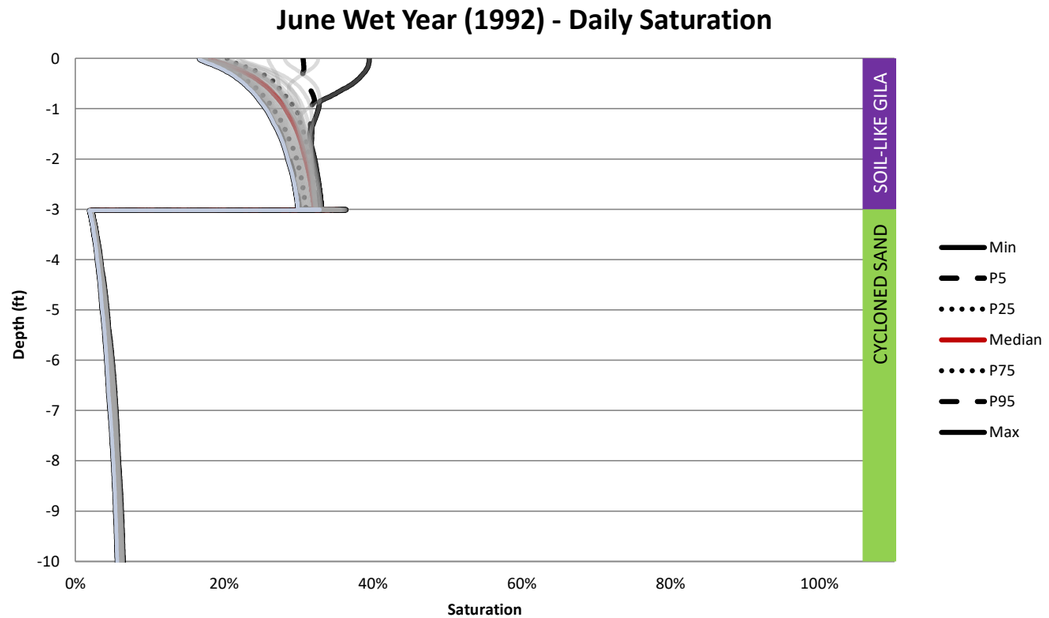
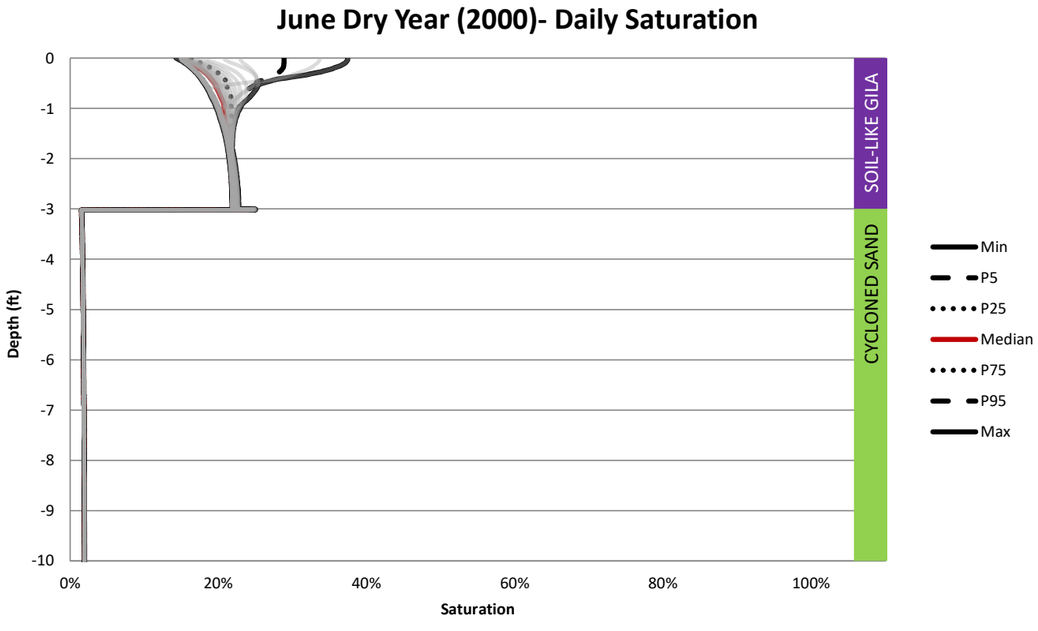
PROJECT
RESOLUTION PROJECT
SKUNK CAMP TSF RECLAMATION PLAN
TITLE
SC10 - 9.8ft Cycloned Sand / 3ft Soil-Like Gila / Sloped
Saturation - Winter (February)
PROJECT No.
M09441A23
FIG. No.
IV-B.196







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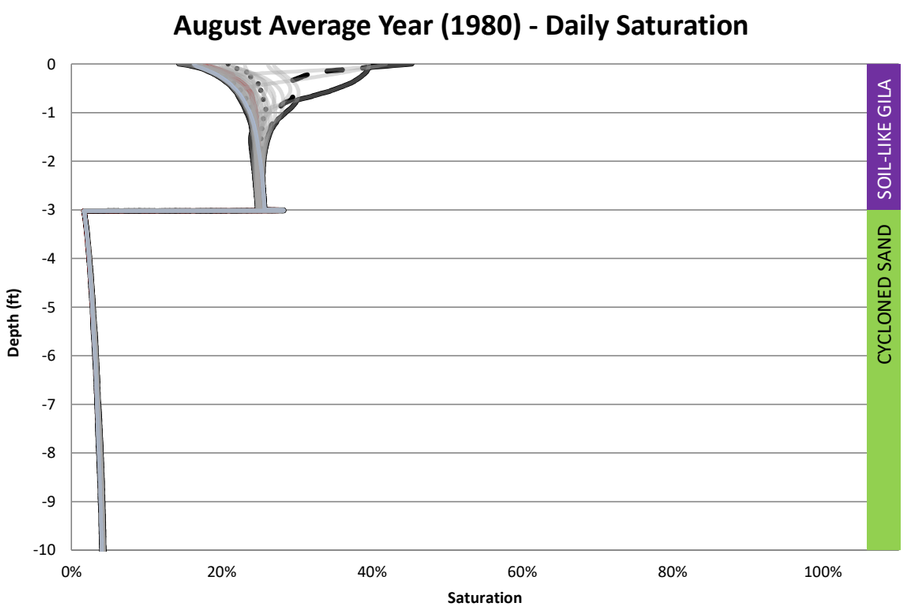
KCB Consultants Ltd.

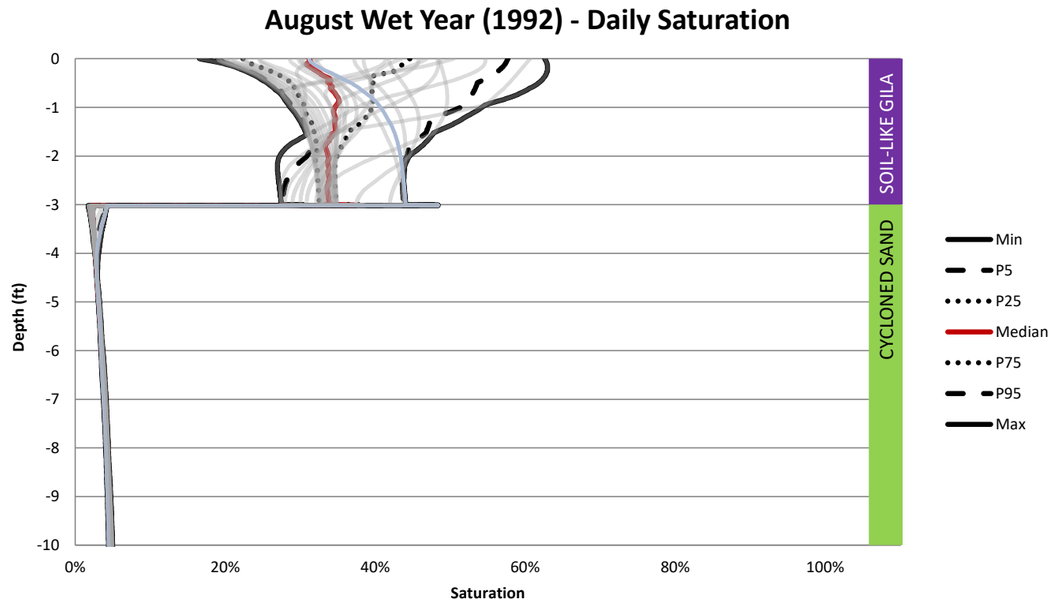
PROJECT: RESOLUTION PROJECT
SKUNK CAMP TSF RECLAMATION PLAN

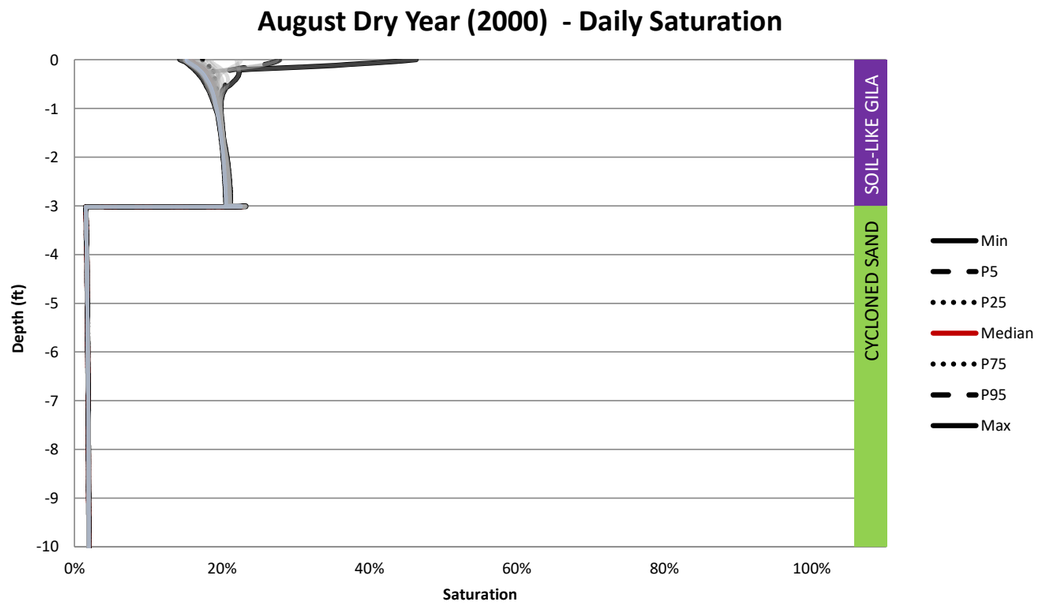
TITLE: SC10 - 9.8ft Cycloned Sand / 3ft Soil-Like Gila / Sloped
Saturation - Dry Season (June)

PROJECT No. M09441A23

FIG. No. IV-B.197







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KCB Consultants Ltd.

PROJECT: RESOLUTION PROJECT
SKUNK CAMP TSF RECLAMATION PLAN

TITLE: SC10 - 9.8ft Cycloned Sand / 3ft Soil-Like Gila / Sloped
Saturation - Summer Monsoon (August)

PROJECT No. M09441A23

FIG. No. IV-B.198

Table IV-B.73 SC11 Annual Water Balance

Water Year	Result Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
		(in)	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
1951	1951-10-01	14	46	-8.4	0	-29	0	14	5.5	60
1952	1952-10-01	14	51	-13	0	-16	0	20	7.3	72
1953	1953-10-01	15	57	-11	0	-9.1	0	15	4.6	72
1954	1954-10-01	21	51	-15	0	-13	0	21	6.1	72
1955	1955-10-01	13	58	-8.9	0	-10	0	13	4.5	72
1956	1956-10-01	13	61	-7.7	0	-8.7	0	13	4.9	74
1957	1957-10-01	15	56	-8.7	0	-8.1	0	15	6.3	71
1958	1958-10-01	19	51	-12	0	-12	0	19	7.4	70
1959	1959-10-01	16	59	-10	0	-9.8	0	16	5.2	75
1960	1960-10-01	19	54	-13	0	-16	0	19	5.5	73
1961	1961-10-01	9.8	63	-4.3	0	-3.3	0	9.8	5.5	73
1962	1962-10-01	14	57	-8.8	0	-9.9	0	14	5.4	71
1963	1963-10-01	24	50	-18	0	-13	0	24	5.8	73
1964	1964-10-01	11	60	-5.1	0	-8.6	0	11	6.3	72
1965	1965-10-01	18	53	-11	0	-12	0	18	6.1	71
1966	1966-10-01	23	49	-18	0	-16	0	23	5.2	72
1967	1967-10-01	14	58	-8.9	0	-8.7	0	14	5.4	72
1968	1968-10-01	22	49	-17	0	-18	0	22	5.4	71
1969	1969-10-01	19	53	-13	0	-12	0	19	6.0	72
1970	1970-10-01	16	56	-9.7	0	-8.4	0	16	6.1	72
1971	1971-10-01	12	61	-7.5	0	-6.0	0	12	4.5	73
1972	1972-10-01	11	65	-6.5	0	-10	0	11	4.7	76
1973	1973-10-01	31	38	-22	0	-21	0	31	8.2	69
1974	1974-10-01	15	56	-9.8	0	-8.1	0	15	5.5	72
1975	1975-10-01	19	50	-12	0	-14	0	19	7.0	69
1976	1976-10-01	16	56	-10	0	-7.1	0	16	5.9	72
1977	1977-10-01	16	57	-10	0	-10	0	16	5.8	73
1978	1978-10-01	24	47	-17	0	-21	0	24	6.8	71
1979	1979-10-01	30	42	-22	0	-23	0	30	7.4	71
1980	1980-10-01	20	51	-13	0	-12	0	20	7.0	71
1981	1981-10-01	15	59	-9.5	0	-8.3	0	15	5.6	75
1982	1982-10-01	23	45	-15	0	-13	0	23	7.9	69
1983	1983-10-01	27	42	-19	0	-17	0	27	7.5	69
1984	1984-10-01	18	53	-10	0	-13	0	18	7.3	70
1985	1985-10-01	22	44	-15	0	-15	0	22	7.2	67
1986	1986-10-01	21	49	-14	0	-14	0	21	7.0	70
1987	1987-10-01	20	51	-13	0	-14	0	20	6.5	70
1988	1988-10-01	23	48	-16	0	-15	0	23	7.1	71
1989	1989-10-01	12	62	-6.7	0	-9.7	0	12	4.9	74
1990	1990-10-01	23	48	-16	0	-11	0	23	7.0	71
1991	1991-10-01	23	48	-15	0	-17	0	23	7.3	71
1992	1992-10-01	36	34	-27	0	-25	0	36	9.6	70
1993	1993-10-01	33	37	-26	0	-28	0	33	6.7	70
1994	1994-10-01	15	57	-9.2	0	-8.7	0	15	6.1	73
1995	1995-10-01	25	46	-18	0	-15	0	25	7.0	71
1996	1996-10-01	13	60	-7.8	0	-8.9	0	13	5.5	74
1997	1997-10-01	10	65	-5.4	0	-7.7	0	10	4.7	75
1998	1998-10-01	20	49	-13	0	-12	0	20	7.0	69
1999	1999-10-01	15	58	-9.3	0	-7.5	0	15	5.6	73
2000	2000-10-01	5.4	72	-2.2	0	-6.5	0	5.4	3.2	77
2001	2001-10-01	23	48	-16	0	-13	0	23	7.0	71
2002	2002-10-01	5.3	70	-2.0	0	-4.8	0	5.3	3.4	75
2003	2003-10-01	13	63	-7.6	0	-6.0	0	13	5.5	76
2004	2004-10-01	12	65	-6.9	0	-6.1	0	12	5.3	77

Table IV-B.73 SC11 Annual Water Balance

Water Year	Result Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
		(in)	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
2005	2005-10-01	24	49	-18	0	-17	0	24	6.0	72
2006	2006-10-01	12	63	-7.3	0	-6.8	0	12	4.8	75

Table IV-B.74 SC11 Monthly Water Balance 9 Wet Years (1983 to 1991)

Month	Result Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
		[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
Nov-82	1982-11-30	8.0	5.5	-1.8	0	-3.6	0	2.5	0.76	8.7
Dec-82	1982-12-30	2.5	0.16	-1.7	0	-0.91	0	2.5	0.77	2.8
Jan-83	1983-01-29	0.67	2.6	-0.42	0	-1.3	0	0.67	0.26	3.1
Feb-83	1983-02-28	3.5	-0.20	-2.9	0	-1.4	0	3.5	0.62	2.9
Mar-83	1983-03-30	5.4	-1.5	-4.3	0	-2.3	0	5.4	1.1	4.0
Apr-83	1983-04-29	0.83	5.2	-0.016	0	-2.9	0	0.83	0.81	5.3
May-83	1983-05-29	0	8.5	0.13	0	-1.7	0	0	0.13	7.9
Jun-83	1983-06-28	0	9.4	0.071	0	-0.91	0	0	0.083	9.3
Jul-83	1983-07-28	2.1	6.7	-1.6	0	-0.59	0	2.1	0.56	9.4
Aug-83	1983-08-27	3.8	3.4	-2.5	0	-0.39	0	3.8	1.4	7.1
Sep-83	1983-09-26	1.9	5.1	-0.93	0	-1.1	0	1.9	0.90	7.3
Oct-83	1983-10-26	4.9	-0.31	-4.1	0	-2.4	0	4.9	0.74	5.0
Nov-83	1983-11-25	1.6	2.2	-1.2	0	-2.8	0	1.6	0.39	4.1
Dec-83	1983-12-25	1.9	0.79	-1.4	0	-1.4	0	1.9	0.50	2.7
Jan-84	1984-01-24	1.5	1.3	-0.87	0	-1.6	0	1.5	0.65	2.7
Feb-84	1984-02-23	0	4.1	0.12	0	-1.3	0	0	0.12	3.8
Mar-84	1984-03-24	0	5.7	0.079	0	-0.79	0	0	0.071	5.0
Apr-84	1984-04-23	0.87	5.9	-0.47	0	-0.59	0	0.87	0.39	6.5
May-84	1984-05-23	0.67	7.3	-0.079	0	-0.39	0	0.67	0.59	7.5
Jun-84	1984-06-22	0.039	9.3	0.12	0	-0.31	0	0.039	0.15	9.3
Jul-84	1984-07-22	3.6	4.1	-2.5	0	-0.24	0	3.6	1.1	8.5
Aug-84	1984-08-21	3.9	3.3	-2.3	0	-0.24	0	3.9	1.6	6.9
Sep-84	1984-09-20	1.2	5.9	-0.24	0	-1.1	0	1.2	0.90	7.0
Oct-84	1984-10-20	2.5	2.4	-1.6	0	-1.3	0	2.5	0.94	5.6
Nov-84	1984-11-19	0	4.3	0.16	0	-1.3	0	0	0.15	4.2
Dec-84	1984-12-19	4.8	-2.3	-4.1	0	-0.98	0	4.8	0.63	3.1
Jan-85	1985-01-18	3.9	-1.5	-3.2	0	-2.3	0	3.9	0.69	2.3
Feb-85	1985-02-17	2.9	-0.35	-2.2	0	-3.1	0	2.9	0.72	2.3
Mar-85	1985-03-19	1.7	2.2	-0.87	0	-2.4	0	1.7	0.82	3.6
Apr-85	1985-04-18	0.47	5.7	0.079	0	-1.4	0	0.47	0.55	5.4
May-85	1985-05-18	0.43	6.6	-0.039	0	-0.83	0	0.43	0.39	6.7
Jun-85	1985-06-17	0	8.7	0.079	0	-0.63	0	0	0.098	8.6
Jul-85	1985-07-17	0.24	8.3	-0.12	0	-0.51	0	0.24	0.087	8.4
Aug-85	1985-08-16	2.1	5.7	-1.2	0	-0.31	0	2.1	0.86	7.8
Sep-85	1985-09-15	2.2	4.9	-1.1	0	-0.28	0	2.2	1.0	7.9
Oct-85	1985-10-15	3.1	1.9	-2.2	0	-0.35	0	3.1	0.92	5.7
Nov-85	1985-11-14	1.4	2.5	-0.91	0	-1.2	0	1.4	0.53	3.9
Dec-85	1985-12-14	2.7	0.12	-2.0	0	-1.1	0	2.7	0.71	3.1
Jan-86	1986-01-13	0	3.3	0.31	0	-1.3	0	0	0.30	3.3
Feb-86	1986-02-12	2.4	0.83	-1.9	0	-1.2	0	2.4	0.47	3.6
Mar-86	1986-03-14	1.9	2.6	-1.3	0	-0.87	0	1.9	0.56	3.7
Apr-86	1986-04-13	3.1	2.4	-2.2	0	-1.6	0	3.1	0.87	4.9
May-86	1986-05-13	0	7.8	0.16	0	-2.1	0	0	0.13	7.4
Jun-86	1986-06-12	0	9.4	0.039	0	-1.1	0	0	0.087	9.1
Jul-86	1986-07-12	2.2	6.8	-1.7	0	-0.67	0	2.2	0.43	9.2
Aug-86	1986-08-11	2.8	4.6	-1.8	0	-0.47	0	2.8	1.00	7.5
Sep-86	1986-09-10	3.0	3.9	-1.9	0	-1.1	0	3.0	1.1	7.3
Oct-86	1986-10-10	0.87	4.8	-0.35	0	-1.1	0	0.87	0.56	6.1
Nov-86	1986-11-09	2.8	1.2	-2.0	0	-1.3	0	2.8	0.68	4.6
Dec-86	1986-12-09	2.6	0.67	-2.2	0	-1.5	0	2.6	0.47	3.4
Jan-87	1987-01-08	1.5	1.3	-0.71	0	-1.3	0	1.5	0.76	2.7
Feb-87	1987-02-07	3.1	-0.12	-2.4	0	-1.5	0	3.1	0.75	2.9
Mar-87	1987-03-09	2.3	1.9	-1.7	0	-2.0	0	2.3	0.55	3.4
Apr-87	1987-04-08	0.94	4.4	-0.35	0	-1.8	0	0.94	0.60	5.0

Table IV-B.74 SC11 Monthly Water Balance 9 Wet Years (1983 to 1991)

Month	Result Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
		[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
May-87	1987-05-08	0.039	7.2	0.12	0	-1.4	0	0.039	0.13	6.8
Jun-87	1987-06-07	0.31	8.1	0.039	0	-0.83	0	0.31	0.36	8.2
Jul-87	1987-07-07	0.20	8.9	0	0	-0.59	0	0.20	0.21	9.2
Aug-87	1987-08-06	3.1	5.7	-2.4	0	-0.39	0	3.1	0.59	8.9
Sep-87	1987-09-05	2.3	5.1	-1.7	0	-0.35	0	2.3	0.72	7.5
Oct-87	1987-10-05	0.79	5.6	-0.12	0	-0.87	0	0.79	0.66	6.7
Nov-87	1987-11-04	1.4	3.5	-0.94	0	-0.98	0	1.4	0.48	5.8
Dec-87	1987-12-04	0.71	3.1	-0.24	0	-0.75	0	0.71	0.46	3.8
Jan-88	1988-01-03	4.0	-1.3	-3.2	0	-0.67	0	4.0	0.83	3.0
Feb-88	1988-02-02	3.6	-0.94	-3.0	0	-1.6	0	3.6	0.61	2.4
Mar-88	1988-03-03	0.75	3.5	-0.31	0	-3.0	0	0.75	0.39	3.6
Apr-88	1988-04-02	0.12	5.9	0.039	0	-1.6	0	0.12	0.21	5.5
May-88	1988-05-02	2.4	3.7	-1.5	0	-0.87	0	2.4	0.91	6.1
Jun-88	1988-06-01	0	8.7	0.20	0	-0.63	0	0	0.19	8.0
Jul-88	1988-07-01	0.16	8.5	0.079	0	-0.63	0	0.16	0.20	8.9
Aug-88	1988-07-31	2.4	5.7	-1.7	0	-0.51	0	2.4	0.75	8.5
Sep-88	1988-08-30	6.7	0.51	-5.2	0	-0.43	0	6.7	1.4	7.3
Oct-88	1988-10-29	2.0	9.9	-0.94	0	-4.6	0	2.0	1.0	13
Nov-88	1988-11-28	1.7	1.9	-1.3	0	-1.1	0	1.7	0.38	4.1
Dec-88	1988-12-28	1.1	1.9	-0.55	0	-0.83	0	1.1	0.56	3.1
Jan-89	1989-01-27	2.0	0.71	-1.4	0	-0.91	0	2.0	0.62	2.4
Feb-89	1989-02-26	0.51	3.3	-0.039	0	-1.3	0	0.51	0.48	3.3
Mar-89	1989-03-28	1.7	4.1	-1.3	0	-0.98	0	1.7	0.35	5.3
Apr-89	1989-04-27	0	7.7	0.24	0	-0.67	0	0	0.27	6.9
May-89	1989-05-27	0.16	8.4	0.079	0	-0.59	0	0.16	0.23	8.3
Jun-89	1989-06-26	0	9.1	0.079	0	-0.55	0	0	0.067	9.1
Jul-89	1989-07-26	0.079	8.7	0.039	0	-0.43	0	0.079	0.11	9.0
Aug-89	1989-08-25	1.4	6.1	-0.51	0	-0.28	0	1.4	0.84	8.0
Sep-89	1989-09-24	1.5	5.7	-1.1	0	-0.24	0	1.5	0.44	7.3
Oct-89	1989-10-24	1.1	4.4	-0.55	0	-0.24	0	1.1	0.56	6.1
Nov-89	1989-11-23	0.31	3.8	-0.039	0	-0.28	0	0.31	0.25	4.5
Dec-89	1989-12-23	0	3.3	0.24	0	-0.35	0	0	0.22	3.5
Jan-90	1990-01-22	2.2	0.51	-1.5	0	-0.28	0	2.2	0.66	2.9
Feb-90	1990-02-21	2.5	0.35	-1.7	0	-0.31	0	2.5	0.86	2.5
Mar-90	1990-03-23	0.83	3.9	-0.28	0	-0.55	0	0.83	0.49	4.2
Apr-90	1990-04-22	1.0	5.8	-0.43	0	-0.79	0	1.0	0.61	6.0
May-90	1990-05-22	1.1	6.9	-0.67	0	-0.75	0	1.1	0.40	7.7
Jun-90	1990-06-21	0.39	8.9	-0.039	0	-0.79	0	0.39	0.36	9.0
Jul-90	1990-07-21	0.94	7.4	-0.39	0	-0.63	0	0.94	0.54	8.6
Aug-90	1990-08-20	9.6	-2.5	-8.5	0	-0.47	0	9.6	1.1	7.8
Sep-90	1990-09-19	2.5	4.8	-1.9	0	-4.6	0	2.5	0.59	7.1
Oct-90	1990-10-19	0.39	4.8	0.12	0	-2.6	0	0.39	0.56	5.9
Nov-90	1990-11-18	1.6	2.6	-1.0	0	-1.7	0	1.6	0.54	4.2
Dec-90	1990-12-18	2.8	0.28	-2.0	0	-0.98	0	2.8	0.73	3.5
Jan-91	1991-01-17	4.7	-2.2	-3.8	0	-1.1	0	4.7	0.88	2.3
Feb-91	1991-02-16	0.16	3.4	0.12	0	-3.3	0	0.16	0.24	3.3
Mar-91	1991-03-18	3.6	0.83	-2.8	0	-1.6	0	3.6	0.79	4.3
Apr-91	1991-04-17	3.2	2.5	-2.4	0	-1.7	0	3.2	0.82	4.8
May-91	1991-05-17	0	7.8	0.12	0	-2.6	0	0	0.11	7.4
Jun-91	1991-06-16	0.71	8.4	-0.16	0	-1.3	0	0.71	0.54	8.7
Jul-91	1991-07-16	0.47	8.9	-0.079	0	-0.71	0	0.47	0.37	9.4
Aug-91	1991-08-15	3.3	4.8	-2.4	0	-0.47	0	3.3	0.96	8.4
Sep-91	1991-09-14	2.0	4.9	-1.1	0	-0.39	0	2.0	0.84	7.5
Oct-91	1991-10-01	0.24	3.2	0.039	0	-0.39	0	0.24	0.27	3.5

Table IV-B.75 SC11 Monsoon Period Water Balance

Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
1951-07-01	20	9.2	0.087	0	-0.72	0	0	0.086	9.2
1951-08-01	1.1	8.4	-0.49	0	-0.62	0	1.1	0.56	9.5
1951-09-01	3.6	4.2	-2.8	0	-0.45	0	3.6	0.83	7.8
1951-10-01	0.65	6.0	-0.20	0	-0.49	0	0.65	0.45	6.6
1951-11-01	1.6	3.7	-1.1	0	-1.1	0	1.6	0.51	5.4
1951	7.0	32	-4.5	0	-3.4	0	7.0	2.4	39
1952-07-01	0.63	8.9	-0.055	0	-1.7	0	0.63	0.57	9.6
1952-08-01	0.56	8.3	-0.083	0	-0.94	0	0.56	0.48	8.8
1952-09-01	0.45	7.4	0.029	0	-0.60	0	0.45	0.48	7.8
1952-10-01	0.70	6.3	-0.23	0	-0.39	0	0.70	0.48	7.0
1952-11-01	0	5.9	0.15	0	-0.31	0	0	0.15	5.9
1952	2.3	37	-0.19	0	-3.9	0	2.3	2.2	39
1953-07-01	0	9.1	0.047	0	-0.61	0	0	0.047	9.1
1953-08-01	2.7	5.8	-2.1	0	-0.42	0	2.7	0.65	8.8
1953-09-01	1.8	6.1	-0.97	0	-0.32	0	1.8	0.83	7.7
1953-10-01	0	6.8	0.20	0	-0.42	0	0	0.20	6.8
1953-11-01	0.012	5.4	0.078	0	-0.70	0	0.012	0.090	5.5
1953	4.5	33	-2.7	0	-2.5	0	4.5	1.8	38
1954-07-01	0.13	8.9	0.096	0	-0.89	0	0.13	0.23	9.0
1954-08-01	4.5	3.2	-3.4	0	-0.58	0	4.5	1.0	7.8
1954-09-01	5.3	2.1	-4.3	0	-1.2	0	5.3	0.96	7.4
1954-10-01	1.3	5.4	-0.60	0	-3.4	0	1.3	0.69	6.6
1954-11-01	0	5.6	0.17	0	-1.7	0	0	0.17	5.6
1954	11	25	-8.1	0	-7.8	0	11	3.1	36
1955-07-01	2.1	7.0	-1.7	0	-0.32	0	2.1	0.38	9.1
1955-08-01	4.5	3.4	-3.6	0	-0.30	0	4.5	0.88	7.9
1955-09-01	2.7	4.4	-1.6	0	-1.1	0	2.7	1.1	7.2
1955-10-01	0.12	6.7	0.14	0	-2.1	0	0.12	0.26	6.8
1955-11-01	0.020	5.8	0.087	0	-1.3	0	0.020	0.11	5.9
1955	9.4	27	-6.6	0	-5.1	0	9.4	2.7	37
1956-07-01	0.24	9.2	-0.098	0	-0.50	0	0.24	0.14	9.4
1956-08-01	2.8	6.2	-1.7	0	-0.35	0	2.8	1.0	9.0
1956-09-01	1.7	5.7	-1.0	0	-0.30	0	1.7	0.71	7.5
1956-10-01	0.079	6.8	0.047	0	-0.52	0	0.079	0.13	6.8
1956-11-01	0.53	4.5	-0.21	0	-0.77	0	0.53	0.32	5.2
1956	5.4	32	-3.0	0	-2.4	0	5.4	2.3	38
1957-07-01	0.031	9.3	0.11	0	-0.65	0	0.031	0.14	9.3
1957-08-01	1.1	7.4	-0.46	0	-0.60	0	1.1	0.63	8.5
1957-09-01	3.4	4.4	-2.2	0	-0.46	0	3.4	1.2	8.1
1957-10-01	0.57	6.1	-0.19	0	-0.52	0	0.57	0.37	6.6
1957-11-01	3.2	1.1	-2.5	0	-0.99	0	3.2	0.74	4.6
1957	8.3	28	-5.3	0	-3.2	0	8.3	3.1	37
1958-07-01	0.70	8.5	-0.35	0	-1.2	0	0.70	0.35	9.3
1958-08-01	0.78	8.2	-0.25	0	-0.71	0	0.78	0.53	9.1
1958-09-01	0.85	7.2	-0.11	0	-0.49	0	0.85	0.74	8.0
1958-10-01	3.0	3.3	-2.2	0	-0.33	0	3.0	0.76	6.4
1958-11-01	1.9	3.3	-1.4	0	-0.54	0	1.9	0.48	5.3
1958	7.3	30	-4.4	0	-3.2	0	7.3	2.9	38
1959-07-01	1.0	8.2	-0.53	0	-0.28	0	1.0	0.50	9.1
1959-08-01	3.8	5.8	-3.0	0	-0.24	0	3.8	0.81	9.6
1959-09-01	5.3	2.0	-3.8	0	-0.41	0	5.3	1.5	7.4
1959-10-01	0.047	6.7	0.14	0	-3.1	0	0.047	0.19	6.9
1959-11-01	4.8	0.35	-4.3	0	-1.6	0	4.8	0.49	5.3
1959	15	23	-12	0	-5.6	0	15	3.4	38
1960-07-01	0	9.3	0.083	0	-0.42	0	0	0.087	9.2
1960-08-01	0.74	8.4	-0.35	0	-0.32	0	0.74	0.39	9.2
1960-09-01	1.5	6.4	-0.60	0	-0.26	0	1.5	0.94	8.1

Table IV-B.75 SC11 Monsoon Period Water Balance

Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
1960-10-01	0.27	6.6	0.083	0	-0.21	0	0.27	0.35	7.0
1960-11-01	2.1	2.8	-1.4	0	-0.19	0	2.1	0.68	5.0
1960	4.6	33	-2.2	0	-1.4	0	4.6	2.4	38
1961-07-01	0	9.4	0.059	0	-0.25	0	0	0.059	9.3
1961-08-01	0.67	8.0	-0.17	0	-0.24	0	0.67	0.50	8.9
1961-09-01	3.0	5.1	-2.0	0	-0.21	0	3.0	0.95	8.1
1961-10-01	0.50	5.9	0.18	0	-0.18	0	0.50	0.68	6.3
1961-11-01	0.45	4.5	-0.20	0	-0.28	0	0.45	0.25	5.4
1961	4.6	33	-2.1	0	-1.2	0	4.6	2.4	38
1962-07-01	0	9.1	0.055	0	-0.73	0	0	0.055	9.1
1962-08-01	0.61	8.2	-0.14	0	-0.52	0	0.61	0.47	8.9
1962-09-01	0.50	7.7	-0.063	0	-0.35	0	0.50	0.43	8.4
1962-10-01	1.2	5.2	-0.48	0	-0.27	0	1.2	0.76	6.6
1962-11-01	0.87	4.1	-0.30	0	-0.22	0	0.87	0.57	5.1
1962	3.2	34	-0.92	0	-2.1	0	3.2	2.3	38
1963-07-01	0	9.0	0.079	0	-0.69	0	0	0.079	9.0
1963-08-01	0.079	9.3	0.047	0	-0.56	0	0.079	0.13	9.4
1963-09-01	10	-3.1	-8.9	0	-0.37	0	10	1.6	7.5
1963-10-01	1.0	5.7	-0.33	0	-4.1	0	1.0	0.71	6.6
1963-11-01	0.67	4.9	-0.31	0	-2.5	0	0.67	0.35	5.8
1963	12	26	-9.4	0	-8.2	0	12	2.8	38
1964-07-01	0	9.3	0.059	0	-0.38	0	0	0.059	9.4
1964-08-01	1.5	7.2	-0.67	0	-0.33	0	1.5	0.81	8.8
1964-09-01	2.2	5.6	-1.0	0	-0.28	0	2.2	1.1	7.7
1964-10-01	1.6	4.4	-0.57	0	-0.24	0	1.6	1.0	6.1
1964-11-01	1.5	4.1	-1.1	0	-0.30	0	1.5	0.40	5.8
1964	6.8	31	-3.4	0	-1.5	0	6.8	3.4	38
1965-07-01	0.098	8.8	0.055	0	-0.91	0	0.098	0.16	8.8
1965-08-01	1.5	7.1	-0.67	0	-0.63	0	1.5	0.77	8.9
1965-09-01	0.91	7.0	-0.25	0	-0.43	0	0.91	0.65	8.0
1965-10-01	1.0	5.4	-0.47	0	-0.30	0	1.0	0.57	6.6
1965-11-01	0.46	5.0	-0.15	0	-0.30	0	0.46	0.31	5.7
1965	4.0	33	-1.5	0	-2.6	0	4.0	2.5	38
1966-07-01	0.18	8.6	-0.012	0	-0.48	0	0.18	0.17	9.1
1966-08-01	0.85	7.6	-0.30	0	-0.34	0	0.85	0.54	8.3
1966-09-01	1.6	6.3	-0.97	0	-0.27	0	1.6	0.64	8.1
1966-10-01	2.7	3.7	-2.1	0	-0.20	0	2.7	0.61	6.5
1966-11-01	1.4	3.8	-0.87	0	-0.52	0	1.4	0.49	5.1
1966	6.7	30	-4.2	0	-1.8	0	6.7	2.5	37
1967-07-01	0.079	8.9	0.063	0	-0.60	0	0.079	0.14	9.0
1967-08-01	4.0	4.2	-3.1	0	-0.50	0	4.0	0.86	8.3
1967-09-01	2.5	5.6	-1.8	0	-0.78	0	2.5	0.69	8.0
1967-10-01	0.55	5.7	-0.055	0	-1.7	0	0.55	0.50	6.5
1967-11-01	0.43	4.8	-0.055	0	-1.2	0	0.43	0.36	5.6
1967	7.5	29	-5.0	0	-4.8	0	7.5	2.6	37
1968-07-01	0	9.4	0.055	0	-0.65	0	0	0.055	9.3
1968-08-01	1.8	6.9	-1.2	0	-0.44	0	1.8	0.62	8.9
1968-09-01	2.5	4.7	-1.5	0	-0.32	0	2.5	1.1	7.3
1968-10-01	0.051	6.7	0.13	0	-0.46	0	0.051	0.18	6.9
1968-11-01	0.39	4.6	-0.071	0	-0.70	0	0.39	0.31	5.1
1968	4.8	32	-2.6	0	-2.6	0	4.8	2.2	38
1969-07-01	0	9.3	0.091	0	-0.70	0	0	0.091	9.4
1969-08-01	0.33	8.1	-0.012	0	-0.63	0	0.33	0.32	8.7
1969-09-01	2.6	5.7	-1.5	0	-0.45	0	2.6	1.1	8.3
1969-10-01	1.2	5.3	-0.69	0	-0.35	0	1.2	0.55	6.8
1969-11-01	0.83	4.1	-0.47	0	-0.50	0	0.83	0.35	5.2
1969	5.0	33	-2.6	0	-2.6	0	5.0	2.4	38

Table IV-B.75 SC11 Monsoon Period Water Balance

Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
1970-07-01	0.079	9.2	0.059	0	-0.65	0	0.079	0.14	9.1
1970-08-01	1.0	7.6	-0.33	0	-0.45	0	1.0	0.72	9.1
1970-09-01	1.7	6.4	-0.78	0	-0.31	0	1.7	0.95	8.0
1970-10-01	3.3	3.1	-2.8	0	-0.28	0	3.3	0.57	7.0
1970-11-01	0	5.1	0.10	0	-1.1	0	0	0.10	5.3
1970	6.2	31	-3.7	0	-2.8	0	6.2	2.5	39
1971-07-01	0	9.1	0.055	0	-0.29	0	0	0.055	9.0
1971-08-01	0.39	8.7	-0.071	0	-0.25	0	0.39	0.31	9.2
1971-09-01	4.7	2.8	-3.4	0	-0.19	0	4.7	1.3	7.8
1971-10-01	3.0	3.7	-2.4	0	-0.41	0	3.0	0.60	7.1
1971-11-01	4.2	0.51	-3.4	0	-2.1	0	4.2	0.83	5.1
1971	12	25	-9.2	0	-3.2	0	12	3.1	38
1972-07-01	1.7	7.7	-1.1	0	-0.26	0	1.7	0.54	9.3
1972-08-01	0.27	9.2	0.075	0	-0.21	0	0.27	0.35	9.5
1972-09-01	2.0	6.0	-1.2	0	-0.17	0	2.0	0.84	8.4
1972-10-01	0.67	6.0	-0.035	0	-0.20	0	0.67	0.63	6.8
1972-11-01	8.7	-4.2	-7.6	0	-0.47	0	8.7	1.1	4.9
1972	13	25	-9.9	0	-1.3	0	13	3.4	39
1973-07-01	0.87	8.3	-0.29	0	-1.2	0	0.87	0.59	9.0
1973-08-01	2.7	5.7	-2.1	0	-0.78	0	2.7	0.64	8.9
1973-09-01	1.4	6.7	-0.61	0	-0.66	0	1.4	0.82	8.1
1973-10-01	0	6.6	0.14	0	-0.94	0	0	0.14	6.7
1973-11-01	0	5.1	0.075	0	-0.92	0	0	0.075	5.6
1973	5.0	32	-2.8	0	-4.5	0	5.0	2.3	38
1974-07-01	0	9.5	0.055	0	-0.66	0	0	0.055	9.4
1974-08-01	2.4	6.0	-1.6	0	-0.46	0	2.4	0.85	8.6
1974-09-01	1.4	6.5	-0.62	0	-0.35	0	1.4	0.77	8.3
1974-10-01	3.3	2.8	-2.4	0	-0.53	0	3.3	1.00	6.5
1974-11-01	3.4	1.4	-2.6	0	-1.2	0	3.4	0.74	5.3
1974	11	26	-7.2	0	-3.2	0	11	3.4	38
1975-07-01	0	9.5	0.063	0	-1.1	0	0	0.067	9.6
1975-08-01	2.2	5.5	-1.1	0	-0.69	0	2.2	1.2	8.3
1975-09-01	2.0	6.3	-1.1	0	-0.46	0	2.0	0.85	8.0
1975-10-01	0.91	5.6	-0.20	0	-0.45	0	0.91	0.70	6.8
1975-11-01	0.28	4.8	0.035	0	-0.64	0	0.28	0.30	5.4
1975	5.4	32	-2.3	0	-3.4	0	5.4	3.1	38
1976-07-01	0	9.8	0.12	0	-0.52	0	0	0.11	9.7
1976-08-01	2.8	5.3	-2.1	0	-0.48	0	2.8	0.71	8.7
1976-09-01	0.87	7.4	-0.42	0	-0.53	0	0.87	0.43	7.9
1976-10-01	4.0	1.9	-3.1	0	-0.72	0	4.0	0.91	6.4
1976-11-01	0.91	3.8	-0.43	0	-1.5	0	0.91	0.48	5.1
1976	8.5	28	-5.9	0	-3.7	0	8.5	2.6	38
1977-07-01	0.039	9.6	0.055	0	-0.63	0	0.039	0.11	9.5
1977-08-01	2.5	6.5	-1.9	0	-0.48	0	2.5	0.66	9.4
1977-09-01	2.4	5.6	-1.7	0	-0.35	0	2.4	0.74	8.1
1977-10-01	3.4	2.5	-2.5	0	-1.0	0	3.4	0.94	6.4
1977-11-01	1.3	3.9	-0.80	0	-1.8	0	1.3	0.52	5.5
1977	9.8	28	-6.8	0	-4.3	0	9.8	3.0	39
1978-07-01	0.51	8.7	-0.31	0	-0.96	0	0.51	0.23	9.4
1978-08-01	0.98	7.9	-0.40	0	-0.65	0	0.98	0.59	9.4
1978-09-01	1.1	6.4	-0.45	0	-0.45	0	1.1	0.60	7.3
1978-10-01	0.39	5.9	-0.051	0	-0.37	0	0.39	0.34	6.6
1978-11-01	1.9	3.5	-1.5	0	-0.42	0	1.9	0.42	5.9
1978	4.9	32	-2.7	0	-2.9	0	4.9	2.2	39
1979-07-01	0.35	9.1	0.13	0	-0.99	0	0.35	0.48	9.2
1979-08-01	0.16	8.8	0.031	0	-0.65	0	0.16	0.20	9.3
1979-09-01	1.5	6.1	-0.63	0	-0.44	0	1.5	0.91	7.8

Table IV-B.75 SC11 Monsoon Period Water Balance

Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
1979-10-01	0.12	6.7	0.12	0	-0.32	0	0.12	0.22	7.2
1979-11-01	0.67	4.8	-0.37	0	-0.28	0	0.67	0.31	5.9
1979	2.8	35	-0.72	0	-2.7	0	2.8	2.1	39
1980-07-01	0.16	8.9	-0.035	0	-0.74	0	0.16	0.13	8.9
1980-08-01	1.9	6.6	-0.97	0	-0.52	0	1.9	0.96	8.9
1980-09-01	1.3	6.5	-0.54	0	-0.36	0	1.3	0.77	7.8
1980-10-01	0.59	6.1	-0.17	0	-0.33	0	0.59	0.42	6.9
1980-11-01	0.039	5.2	0.094	0	-0.45	0	0.039	0.13	5.8
1980	4.1	33	-1.6	0	-2.4	0	4.1	2.4	38
1981-07-01	0.12	9.1	0.15	0	-0.74	0	0.12	0.27	9.2
1981-08-01	2.2	6.4	-1.6	0	-0.62	0	2.2	0.59	9.2
1981-09-01	2.6	5.4	-1.7	0	-0.50	0	2.6	0.93	7.7
1981-10-01	0.51	6.2	-0.14	0	-1.1	0	0.51	0.38	7.4
1981-11-01	0.94	3.7	-0.42	0	-1.0	0	0.94	0.54	5.1
1981	6.3	31	-3.7	0	-4.0	0	6.3	2.7	39
1982-07-01	0.079	9.1	0.055	0	-1.1	0	0.079	0.11	9.0
1982-08-01	2.6	5.4	-1.6	0	-0.79	0	2.6	1.0	8.7
1982-09-01	3.8	3.0	-2.7	0	-0.59	0	3.8	1.1	6.8
1982-10-01	3.1	3.1	-2.1	0	-1.7	0	3.1	0.86	6.6
1982-11-01	0	5.0	0.14	0	-2.4	0	0	0.14	5.2
1982	9.6	26	-6.3	0	-6.7	0	9.6	3.2	36
1983-07-01	0	9.4	0.067	0	-0.87	0	0	0.067	9.3
1983-08-01	2.8	5.9	-2.1	0	-0.59	0	2.8	0.75	9.4
1983-09-01	3.6	4.0	-2.4	0	-0.39	0	3.6	1.2	7.4
1983-10-01	5.1	1.4	-4.0	0	-1.2	0	5.1	1.1	7.1
1983-11-01	1.1	3.3	-0.55	0	-3.0	0	1.1	0.59	4.8
1983	13	24	-9.0	0	-6.0	0	13	3.7	38
1984-07-01	1.3	7.7	-0.98	0	-0.31	0	1.3	0.32	9.3
1984-08-01	3.3	4.6	-2.0	0	-0.20	0	3.3	1.3	7.8
1984-09-01	3.3	3.7	-1.7	0	-0.43	0	3.3	1.6	7.4
1984-10-01	1.9	4.6	-1.1	0	-1.4	0	1.9	0.81	6.9
1984-11-01	1.3	3.2	-0.71	0	-1.3	0	1.3	0.65	4.9
1984	11	24	-6.5	0	-3.6	0	11	4.7	36
1985-07-01	0	8.2	0.079	0	-0.59	0	0	0.075	8.6
1985-08-01	1.3	7.6	-0.75	0	-0.39	0	1.3	0.48	8.7
1985-09-01	2.1	5.8	-1.2	0	-0.31	0	2.1	0.87	8.1
1985-10-01	3.5	2.4	-2.4	0	-0.28	0	3.5	1.2	6.6
1985-11-01	1.2	3.1	-0.51	0	-0.79	0	1.2	0.72	4.6
1985	8.1	27	-4.8	0	-2.4	0	8.1	3.3	37
1986-07-01	0	9.2	0.039	0	-0.79	0	0	0.067	9.3
1986-08-01	4.7	3.1	-3.5	0	-0.55	0	4.7	1.3	8.5
1986-09-01	2.0	5.5	-1.1	0	-0.87	0	2.0	0.90	8.0
1986-10-01	2.0	4.0	-1.3	0	-1.2	0	2.0	0.78	6.5
1986-11-01	1.8	3.0	-1.3	0	-1.3	0	1.8	0.48	4.8
1986	11	25	-7.1	0	-4.7	0	11	3.5	37
1987-07-01	0.20	9.0	0	0	-0.63	0	0.20	0.21	9.0
1987-08-01	2.0	6.9	-1.7	0	-0.47	0	2.0	0.42	9.0
1987-09-01	2.9	5.0	-2.0	0	-0.35	0	2.9	0.85	8.1
1987-10-01	1.3	5.2	-0.63	0	-0.75	0	1.3	0.67	7.1
1987-11-01	0.35	5.2	0.079	0	-1.1	0	0.35	0.38	6.0
1987	6.7	31	-4.2	0	-3.3	0	6.7	2.5	39
1988-07-01	0.16	8.5	0.079	0	-0.63	0	0.16	0.20	8.9
1988-08-01	3.4	4.8	-2.6	0	-0.51	0	3.4	0.80	8.8
1988-09-01	5.9	1.7	-4.4	0	-0.51	0	5.9	1.5	7.5
1988-10-01	0.31	6.2	0.12	0	-2.8	0	0.31	0.45	6.9
1988-11-01	1.5	3.7	-0.94	0	-1.9	0	1.5	0.52	5.8
1988	11	25	-7.8	0	-6.3	0	11	3.4	38

Table IV-B.75 SC11 Monsoon Period Water Balance

Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
1989-07-01	0	9.3	0.039	0	-0.51	0	0	0.059	9.2
1989-08-01	0.51	8.2	-0.20	0	-0.39	0	0.51	0.31	9.3
1989-09-01	0.94	6.9	-0.20	0	-0.31	0	0.94	0.70	7.8
1989-10-01	1.5	5.2	-1.1	0	-0.24	0	1.5	0.41	7.3
1989-11-01	1.1	4.0	-0.47	0	-0.24	0	1.1	0.62	5.9
1989	4.0	34	-1.9	0	-1.7	0	4.0	2.1	39
1990-07-01	0.31	8.9	0	0	-0.75	0	0.31	0.29	9.3
1990-08-01	1.5	6.6	-0.71	0	-0.59	0	1.5	0.72	8.6
1990-09-01	9.0	-1.4	-8.0	0	-1.5	0	9.0	1.0	7.4
1990-10-01	2.8	3.5	-2.0	0	-4.6	0	2.8	0.85	6.8
1990-11-01	0.28	4.6	0.079	0	-2.2	0	0.28	0.35	5.3
1990	14	22	-11	0	-9.6	0	14	3.2	37
1991-07-01	0.59	8.7	-0.079	0	-0.94	0	0.59	0.53	9.2
1991-08-01	1.7	7.1	-1.1	0	-0.59	0	1.7	0.61	9.3
1991-09-01	2.8	5.2	-1.7	0	-0.39	0	2.8	1.0	8.3
1991-10-01	1.6	4.7	-0.87	0	-0.59	0	1.6	0.70	6.5
1991-11-01	1.2	4.6	-0.91	0	-1.1	0	1.2	0.33	6.6
1991	7.9	30	-4.7	0	-3.7	0	7.9	3.2	40
1992-07-01	1.3	7.9	-0.51	0	-1.1	0	1.3	0.82	8.9
1992-08-01	3.3	5.4	-2.4	0	-1.1	0	3.3	0.82	9.3
1992-09-01	5.3	2.2	-4.1	0	-1.1	0	5.3	1.2	7.8
1992-10-01	0.87	5.9	-0.47	0	-3.3	0	0.87	0.41	6.7
1992-11-01	1.2	4.1	-0.83	0	-1.9	0	1.2	0.42	6.2
1992	12	26	-8.3	0	-8.4	0	12	3.6	39
1993-07-01	0	9.2	0.12	0	-0.83	0	0	0.12	9.3
1993-08-01	0.24	8.5	0	0	-0.71	0	0.24	0.24	8.9
1993-09-01	3.4	4.1	-2.1	0	-0.51	0	3.4	1.3	8.5
1993-10-01	0.16	6.3	0.24	0	-0.39	0	0.16	0.37	6.4
1993-11-01	0.83	4.4	-0.20	0	-0.63	0	0.83	0.58	6.0
1993	4.6	33	-2.0	0	-3.1	0	4.6	2.6	39
1994-07-01	0.35	8.5	-0.039	0	-0.51	0	0.35	0.37	8.9
1994-08-01	1.5	7.4	-1.0	0	-0.39	0	1.5	0.40	9.1
1994-09-01	0.71	7.5	-0.039	0	-0.31	0	0.71	0.69	8.6
1994-10-01	1.9	4.5	-1.1	0	-0.31	0	1.9	0.80	6.6
1994-11-01	1.8	2.8	-1.4	0	-0.55	0	1.8	0.43	5.3
1994	6.3	31	-3.7	0	-2.1	0	6.3	2.7	39
1995-07-01	0	9.3	0.12	0	-0.67	0	0	0.11	9.0
1995-08-01	0.039	9.1	0.039	0	-0.51	0	0.039	0.11	9.3
1995-09-01	3.8	4.3	-2.9	0	-0.31	0	3.8	0.92	8.8
1995-10-01	2.8	3.9	-2.1	0	-0.47	0	2.8	0.60	7.2
1995-11-01	0	5.3	0.20	0	-1.3	0	0	0.23	5.8
1995	6.6	32	-4.7	0	-3.2	0	6.6	2.0	40
1996-07-01	0.39	8.6	-0.20	0	-0.51	0	0.39	0.22	9.1
1996-08-01	2.4	6.3	-1.4	0	-0.39	0	2.4	0.94	8.9
1996-09-01	1.3	6.7	-0.55	0	-0.28	0	1.3	0.68	8.1
1996-10-01	3.1	2.8	-2.0	0	-0.35	0	3.1	1.1	6.7
1996-11-01	0.39	5.1	-0.039	0	-1.1	0	0.39	0.39	6.0
1996	7.5	29	-4.2	0	-2.6	0	7.5	3.3	39
1997-07-01	0	9.1	0.079	0	-0.51	0	0	0.091	9.0
1997-08-01	0.12	9.4	0	0	-0.39	0	0.12	0.13	9.9
1997-09-01	2.6	5.4	-1.7	0	-0.31	0	2.6	0.94	8.5
1997-10-01	0	7.0	0.16	0	-0.24	0	0	0.15	7.3
1997-11-01	0.71	4.1	-0.35	0	-0.31	0	0.71	0.39	6.0
1997	3.4	35	-1.8	0	-1.8	0	3.4	1.7	41
1998-07-01	0	9.3	0.039	0	-0.98	0	0	0.059	9.2
1998-08-01	1.7	6.9	-1.0	0	-0.59	0	1.7	0.68	9.1
1998-09-01	2.4	5.4	-1.3	0	-0.43	0	2.4	1.1	8.3

Table IV-B.75 SC11 Monsoon Period Water Balance

Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
1998-10-01	1.3	5.2	-0.75	0	-0.51	0	1.3	0.61	7.0
1998-11-01	0	5.4	0.12	0	-0.79	0	0	0.098	6.3
1998	5.4	32	-3.0	0	-3.3	0	5.4	2.5	40
1999-07-01	0	9.1	0.079	0	-0.55	0	0	0.059	9.1
1999-08-01	5.8	2.0	-4.5	0	-0.43	0	5.8	1.3	8.7
1999-09-01	2.8	4.7	-1.8	0	-0.98	0	2.8	1.0	7.8
1999-10-01	1.1	5.4	-0.28	0	-1.7	0	1.1	0.84	6.8
1999-11-01	0	5.6	0.16	0	-1.6	0	0	0.14	6.2
1999	9.7	27	-6.3	0	-5.2	0	9.7	3.4	39
2000-07-01	0.79	8.4	-0.35	0	-0.47	0	0.79	0.43	9.5
2000-08-01	0.079	9.5	0.12	0	-0.35	0	0.079	0.19	9.5
2000-09-01	0.67	6.9	-0.079	0	-0.28	0	0.67	0.58	8.7
2000-10-01	0	6.9	0.12	0	-0.20	0	0	0.12	6.8
2000-11-01	5.4	-0.83	-4.5	0	-0.16	0	5.4	0.84	5.9
2000	6.9	31	-4.7	0	-1.5	0	6.9	2.1	40
2001-07-01	0.039	9.3	0.079	0	-1.0	0	0.039	0.12	9.2
2001-08-01	2.7	6.2	-2.3	0	-0.67	0	2.7	0.37	9.7
2001-09-01	3.4	4.4	-2.4	0	-0.71	0	3.4	0.98	7.6
2001-10-01	0.12	6.4	0.12	0	-1.9	0	0.12	0.24	7.3
2001-11-01	0.39	4.5	-0.079	0	-1.3	0	0.39	0.31	5.5
2001	6.7	31	-4.6	0	-5.6	0	6.7	2.0	39
2002-07-01	0	9.6	0.039	0	-0.24	0	0	0.043	9.2
2002-08-01	0.35	8.8	-0.039	0	-0.20	0	0.35	0.29	9.7
2002-09-01	0.43	7.4	-0.12	0	-0.12	0	0.43	0.33	8.1
2002-10-01	1.2	5.4	-0.55	0	-0.12	0	1.2	0.65	7.1
2002-11-01	0.12	5.0	0.079	0	-0.12	0	0.12	0.19	6.1
2002	2.1	36	-0.59	0	-0.79	0	2.1	1.5	40
2003-07-01	0	10	0.079	0	-0.75	0	0	0.063	10.0
2003-08-01	0.47	8.8	-0.039	0	-0.51	0	0.47	0.46	10
2003-09-01	1.3	6.9	-0.59	0	-0.35	0	1.3	0.69	8.5
2003-10-01	1.9	5.0	-0.94	0	-0.24	0	1.9	1.00	7.4
2003-11-01	0.079	5.5	0.16	0	-0.28	0	0.079	0.23	6.0
2003	3.8	36	-1.3	0	-2.1	0	3.8	2.4	42
2004-07-01	0	10	0.039	0	-0.71	0	0	0.059	10
2004-08-01	0.55	8.8	-0.079	0	-0.51	0	0.55	0.46	9.8
2004-09-01	2.1	6.1	-1.1	0	-0.35	0	2.1	0.98	8.6
2004-10-01	1.6	5.5	-0.94	0	-0.28	0	1.6	0.58	7.9
2004-11-01	1.2	3.8	-0.71	0	-0.31	0	1.2	0.47	6.1
2004	5.4	34	-2.8	0	-2.2	0	5.4	2.5	42
2005-07-01	0.079	9.8	0.039	0	-0.63	0	0.079	0.12	9.7
2005-08-01	1.4	7.9	-1.0	0	-0.43	0	1.4	0.39	11
2005-09-01	4.7	2.9	-3.4	0	-0.35	0	4.7	1.3	7.3
2005-10-01	0.079	6.6	0.16	0	-1.3	0	0.079	0.24	7.4
2005-11-01	0.43	4.8	-0.16	0	-1.2	0	0.43	0.29	6.1
2005	6.7	32	-4.4	0	-4.0	0	6.7	2.3	41
2006-07-01	0.51	9.2	-0.16	0	-0.55	0	0.51	0.33	10
2006-08-01	3.1	4.9	-2.4	0	-0.39	0	3.1	0.85	9.2
2006-09-01	2.9	5.0	-1.6	0	-0.35	0	2.9	1.3	7.4
2006-10-01	1.1	5.2	-0.59	0	-1.3	0	1.1	0.54	6.9
2006-11-01	1.0	3.8	-0.31	0	-1.3	0	1.0	0.70	5.9
2006	8.7	28	-5.0	0	-3.9	0	8.7	3.7	40

Table IV-B.76 SC11 Winter Storm Period Water Balance

Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
1951-11-01	20	3.7	-1.1	0	-1.1	0	1.6	0.51	5.4
1951-12-01	1.7	2.0	-1.0	0	-0.77	0	1.7	0.69	3.7
1952-01-01	3.0	-0.26	-2.4	0	-0.87	0	3.0	0.64	2.8
1952-02-01	2.8	0.10	-2.0	0	-1.3	0	2.8	0.77	2.9
1952-03-01	0.50	3.3	-0.072	0	-2.4	0	0.50	0.43	3.8
1952	9.7	8.9	-6.6	0	-6.4	0	9.7	3.0	19
1952-11-01	0	5.9	0.15	0	-0.31	0	0	0.15	5.9
1952-12-01	4.3	-1.0	-3.7	0	-0.24	0	4.3	0.60	3.3
1953-01-01	2.0	0.63	-1.3	0	-0.53	0	2.0	0.66	2.7
1953-02-01	0.74	2.7	-0.29	0	-1.5	0	0.74	0.45	3.3
1953-03-01	0.60	3.2	-0.28	0	-1.1	0	0.60	0.32	3.8
1953	7.6	11	-5.5	0	-3.6	0	7.6	2.2	19
1953-11-01	0.012	5.4	0.078	0	-0.70	0	0.012	0.090	5.5
1953-12-01	0.56	3.4	-0.27	0	-0.61	0	0.56	0.30	3.9
1954-01-01	0.19	2.7	0.074	0	-0.46	0	0.19	0.27	2.9
1954-02-01	2.4	0.88	-1.8	0	-0.33	0	2.4	0.60	3.2
1954-03-01	0.72	3.5	-0.32	0	-0.27	0	0.72	0.41	4.2
1954	3.9	16	-2.2	0	-2.4	0	3.9	1.7	20
1954-11-01	0	5.6	0.17	0	-1.7	0	0	0.17	5.6
1954-12-01	0.091	4.1	0.012	0	-0.95	0	0.091	0.11	4.3
1955-01-01	0.29	3.2	0.0039	0	-0.68	0	0.29	0.29	3.5
1955-02-01	3.4	-1.0	-2.7	0	-0.46	0	3.4	0.76	2.4
1955-03-01	0.28	3.3	0.063	0	-0.51	0	0.28	0.34	3.5
1955	4.1	15	-2.4	0	-4.3	0	4.1	1.7	19
1955-11-01	0.020	5.8	0.087	0	-1.3	0	0.020	0.11	5.9
1955-12-01	0.96	2.7	-0.61	0	-0.75	0	0.96	0.36	3.7
1956-01-01	1.4	1.8	-0.98	0	-0.54	0	1.4	0.39	3.1
1956-02-01	2.6	0.86	-2.1	0	-0.56	0	2.6	0.50	3.5
1956-03-01	2.0	1.2	-1.3	0	-0.60	0	2.0	0.74	3.1
1956	7.0	12	-4.9	0	-3.8	0	7.0	2.1	19
1956-11-01	0.53	4.5	-0.21	0	-0.77	0	0.53	0.32	5.2
1956-12-01	0	3.8	0.21	0	-0.60	0	0	0.21	3.8
1957-01-01	0.47	2.6	-0.16	0	-0.43	0	0.47	0.31	3.1
1957-02-01	4.8	-2.3	-4.1	0	-0.33	0	4.8	0.71	2.7
1957-03-01	0.73	2.9	-0.075	0	-0.76	0	0.73	0.65	3.4
1957	6.5	12	-4.3	0	-2.9	0	6.5	2.2	18
1957-11-01	3.2	1.1	-2.5	0	-0.99	0	3.2	0.74	4.6
1957-12-01	0.61	2.5	-0.098	0	-0.94	0	0.61	0.52	3.0
1958-01-01	1.1	2.1	-0.55	0	-1.4	0	1.1	0.52	3.2
1958-02-01	0.012	3.4	0.12	0	-0.90	0	0.012	0.13	3.3
1958-03-01	2.5	0.68	-1.9	0	-0.61	0	2.5	0.61	3.2
1958	7.4	9.8	-4.9	0	-4.8	0	7.4	2.5	17
1958-11-01	1.9	3.3	-1.4	0	-0.54	0	1.9	0.48	5.3
1958-12-01	1.5	2.1	-1.1	0	-1.5	0	1.5	0.40	3.6
1959-01-01	0	3.5	0.13	0	-1.2	0	0	0.13	3.6
1959-02-01	0.21	3.4	0.020	0	-0.87	0	0.21	0.24	3.5
1959-03-01	1.4	1.9	-0.89	0	-0.58	0	1.4	0.54	3.3
1959	5.1	14	-3.3	0	-4.6	0	5.1	1.8	19
1959-11-01	4.8	0.35	-4.3	0	-1.6	0	4.8	0.49	5.3
1959-12-01	0.38	3.3	0.13	0	-1.7	0	0.38	0.51	3.7
1960-01-01	5.2	-2.6	-4.6	0	-2.0	0	5.2	0.62	2.7
1960-02-01	4.2	-1.6	-3.4	0	-3.2	0	4.2	0.73	2.5

Table IV-B.76 SC11 Winter Storm Period Water Balance

Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
1960-03-01	0.87	2.5	-0.33	0	-3.7	0	0.87	0.54	3.4
1960	15	2.0	-13	0	-12	0	15	2.9	18
1960-11-01	2.1	2.8	-1.4	0	-0.19	0	2.1	0.68	5.0
1960-12-01	0.48	3.1	-0.11	0	-0.23	0	0.48	0.37	3.7
1961-01-01	0.46	2.7	-0.11	0	-0.39	0	0.46	0.36	3.3
1961-02-01	0.70	2.4	-0.30	0	-0.43	0	0.70	0.40	3.2
1961-03-01	0.23	3.8	0.11	0	-0.32	0	0.23	0.35	3.7
1961	3.9	15	-1.8	0	-1.6	0	3.9	2.2	19
1961-11-01	0.45	4.5	-0.20	0	-0.28	0	0.45	0.25	5.4
1961-12-01	0.32	2.9	0.14	0	-0.39	0	0.32	0.46	3.1
1962-01-01	3.9	-1.3	-3.2	0	-0.37	0	3.9	0.65	2.6
1962-02-01	3.2	-0.51	-2.7	0	-1.00	0	3.2	0.52	2.7
1962-03-01	1.7	1.4	-1.0	0	-1.6	0	1.7	0.64	3.2
1962	9.5	7.1	-7.0	0	-3.7	0	9.5	2.5	17
1962-11-01	0.87	4.1	-0.30	0	-0.22	0	0.87	0.57	5.1
1962-12-01	0.83	3.1	-0.48	0	-0.17	0	0.83	0.35	3.9
1963-01-01	1.8	1.3	-1.2	0	-0.15	0	1.8	0.63	3.3
1963-02-01	2.1	0.98	-1.5	0	-0.19	0	2.1	0.56	3.0
1963-03-01	4.2	-0.31	-3.8	0	-0.86	0	4.2	0.39	3.8
1963	9.8	9.2	-7.3	0	-1.6	0	9.8	2.5	19
1963-11-01	0.67	4.9	-0.31	0	-2.5	0	0.67	0.35	5.8
1963-12-01	2.3	1.3	-1.5	0	-1.2	0	2.3	0.81	3.6
1964-01-01	0.34	3.0	0.0039	0	-0.89	0	0.34	0.34	3.3
1964-02-01	0.58	2.4	-0.28	0	-0.93	0	0.58	0.31	3.0
1964-03-01	0	3.7	0.14	0	-0.65	0	0	0.14	3.6
1964	3.9	15	-2.0	0	-6.1	0	3.9	2.0	19
1964-11-01	1.5	4.1	-1.1	0	-0.30	0	1.5	0.40	5.8
1964-12-01	1.4	2.1	-0.93	0	-0.55	0	1.4	0.44	3.6
1965-01-01	1.7	1.3	-1.2	0	-0.80	0	1.7	0.45	3.3
1965-02-01	2.9	-0.039	-2.2	0	-0.94	0	2.9	0.67	2.6
1965-03-01	2.8	0.83	-2.4	0	-1.7	0	2.8	0.44	3.4
1965	10	8.3	-7.9	0	-4.3	0	10	2.4	19
1965-11-01	0.46	5.0	-0.15	0	-0.30	0	0.46	0.31	5.7
1965-12-01	2.4	1.5	-2.0	0	-0.32	0	2.4	0.39	3.9
1966-01-01	10	-8.0	-9.6	0	-1.0	0	10	0.81	2.7
1966-02-01	1.8	0.91	-1.3	0	-6.4	0	1.8	0.55	2.8
1966-03-01	2.0	1.3	-1.4	0	-2.5	0	2.0	0.59	3.1
1966	17	0.67	-14	0	-11	0	17	2.7	18
1966-11-01	1.4	3.8	-0.87	0	-0.52	0	1.4	0.49	5.1
1966-12-01	0.87	2.9	-0.53	0	-1.1	0	0.87	0.35	4.1
1967-01-01	1.2	1.8	-0.74	0	-0.84	0	1.2	0.51	3.1
1967-02-01	0.79	2.4	-0.43	0	-0.68	0	0.79	0.36	2.9
1967-03-01	0	3.9	0.16	0	-0.52	0	0	0.16	3.9
1967	4.3	15	-2.4	0	-3.6	0	4.3	1.9	19
1967-11-01	0.43	4.8	-0.055	0	-1.2	0	0.43	0.36	5.6
1967-12-01	2.1	1.6	-1.7	0	-0.70	0	2.1	0.43	3.9
1968-01-01	10	-7.6	-9.4	0	-1.9	0	10	0.63	2.3
1968-02-01	0.63	2.5	-0.25	0	-6.3	0	0.63	0.39	3.1
1968-03-01	1.9	1.9	-1.3	0	-1.7	0	1.9	0.60	3.4
1968	15	3.1	-13	0	-12	0	15	2.4	18
1968-11-01	0.39	4.6	-0.071	0	-0.70	0	0.39	0.31	5.1
1968-12-01	2.5	0.91	-1.9	0	-0.56	0	2.5	0.62	3.8

Table IV-B.76 SC11 Winter Storm Period Water Balance

Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
1969-01-01	3.3	-0.43	-2.7	0	-0.59	0	3.3	0.54	2.9
1969-02-01	4.2	-1.4	-3.5	0	-1.3	0	4.2	0.67	2.6
1969-03-01	1.4	1.8	-0.63	0	-2.9	0	1.4	0.73	3.0
1969	12	5.5	-8.8	0	-6.0	0	12	2.9	17
1969-11-01	0.83	4.1	-0.47	0	-0.50	0	0.83	0.35	5.2
1969-12-01	2.1	1.2	-1.5	0	-0.58	0	2.1	0.64	3.6
1970-01-01	1.3	1.9	-0.76	0	-0.75	0	1.3	0.56	3.4
1970-02-01	0.50	2.7	-0.016	0	-0.89	0	0.50	0.48	2.9
1970-03-01	0.40	3.3	0.039	0	-0.65	0	0.40	0.44	3.6
1970	5.2	13	-2.7	0	-3.4	0	5.2	2.5	19
1970-11-01	0	5.1	0.10	0	-1.1	0	0	0.10	5.3
1970-12-01	0.65	3.1	-0.47	0	-0.93	0	0.65	0.18	3.9
1971-01-01	1.2	1.6	-0.55	0	-0.64	0	1.2	0.65	3.0
1971-02-01	0.85	2.7	-0.51	0	-0.43	0	0.85	0.34	3.1
1971-03-01	0.82	3.0	-0.44	0	-0.42	0	0.82	0.38	4.0
1971	3.5	15	-1.9	0	-3.6	0	3.5	1.7	19
1971-11-01	4.2	0.51	-3.4	0	-2.1	0	4.2	0.83	5.1
1971-12-01	0.039	3.7	0.18	0	-2.8	0	0.039	0.22	3.7
1972-01-01	2.1	0.75	-1.4	0	-1.5	0	2.1	0.72	3.0
1972-02-01	0	3.3	0.22	0	-0.91	0	0	0.22	3.2
1972-03-01	0	4.6	0.079	0	-0.72	0	0	0.079	4.1
1972	6.4	13	-4.3	0	-8.0	0	6.4	2.1	19
1972-11-01	8.7	-4.2	-7.6	0	-0.47	0	8.7	1.1	4.9
1972-12-01	2.8	0.31	-2.1	0	-4.4	0	2.8	0.75	3.2
1973-01-01	3.0	-0.31	-2.4	0	-2.8	0	3.0	0.58	2.9
1973-02-01	0.74	2.0	-0.024	0	-1.9	0	0.74	0.71	2.6
1973-03-01	3.2	0.079	-2.3	0	-1.4	0	3.2	0.83	2.8
1973	18	-2.0	-14	0	-11	0	18	3.9	16
1973-11-01	0	5.1	0.075	0	-0.92	0	0	0.075	5.6
1973-12-01	1.8	1.8	-1.2	0	-0.63	0	1.8	0.56	3.9
1974-01-01	0.094	3.3	0.15	0	-0.46	0	0.094	0.25	3.3
1974-02-01	3.4	-0.51	-2.7	0	-0.39	0	3.4	0.74	2.9
1974-03-01	0.16	3.6	0.10	0	-1.0	0	0.16	0.25	3.3
1974	5.4	13	-3.5	0	-3.4	0	5.4	1.9	19
1974-11-01	3.4	1.4	-2.6	0	-1.2	0	3.4	0.74	5.3
1974-12-01	0.12	3.6	0.27	0	-1.4	0	0.12	0.39	3.6
1975-01-01	0.75	2.0	-0.34	0	-1.6	0	0.75	0.41	3.1
1975-02-01	0.43	2.4	-0.094	0	-0.95	0	0.43	0.31	2.6
1975-03-01	3.9	-0.35	-3.3	0	-0.57	0	3.9	0.66	3.0
1975	8.6	9.0	-6.1	0	-5.7	0	8.6	2.5	18
1975-11-01	0.28	4.8	0.035	0	-0.64	0	0.28	0.30	5.4
1975-12-01	2.1	1.9	-1.9	0	-0.56	0	2.1	0.21	4.2
1976-01-01	1.3	1.8	-0.58	0	-0.48	0	1.3	0.68	3.1
1976-02-01	0.24	2.8	0.083	0	-0.69	0	0.24	0.31	2.9
1976-03-01	1.6	2.2	-1.00	0	-0.71	0	1.6	0.61	3.4
1976	5.5	14	-3.4	0	-3.1	0	5.5	2.1	19
1976-11-01	0.91	3.8	-0.43	0	-1.5	0	0.91	0.48	5.1
1976-12-01	0.55	3.2	-0.16	0	-1.5	0	0.55	0.39	4.0
1977-01-01	1.8	1.2	-1.4	0	-0.92	0	1.8	0.38	3.1
1977-02-01	1.9	0.91	-1.1	0	-0.69	0	1.9	0.83	2.5
1977-03-01	0.079	4.3	0.11	0	-0.91	0	0.079	0.19	4.1
1977	5.2	13	-3.0	0	-5.5	0	5.2	2.3	19

Table IV-B.76 SC11 Winter Storm Period Water Balance

Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
1977-11-01	1.3	3.9	-0.80	0	-1.8	0	1.3	0.52	5.5
1977-12-01	0.31	3.5	0.043	0	-1.4	0	0.31	0.40	3.9
1978-01-01	0.67	2.5	-0.39	0	-0.93	0	0.67	0.26	3.5
1978-02-01	6.4	-3.7	-5.7	0	-0.65	0	6.4	0.73	2.5
1978-03-01	5.5	-2.2	-4.6	0	-2.7	0	5.5	0.91	2.9
1978	14	4.0	-11	0	-7.5	0	14	2.8	18
1978-11-01	1.9	3.5	-1.5	0	-0.42	0	1.9	0.42	5.9
1978-12-01	5.6	-2.4	-5.0	0	-0.40	0	5.6	0.67	3.7
1979-01-01	6.6	-3.9	-5.9	0	-3.1	0	6.6	0.67	2.5
1979-02-01	6.0	-3.8	-5.0	0	-5.3	0	6.0	1.1	2.3
1979-03-01	1.3	2.8	-0.70	0	-4.6	0	1.3	0.53	3.3
1979	21	-3.8	-18	0	-14	0	21	3.4	18
1979-11-01	0.67	4.8	-0.37	0	-0.28	0	0.67	0.31	5.9
1979-12-01	0.71	3.1	-0.21	0	-0.24	0	0.71	0.46	4.0
1980-01-01	0.67	2.8	-0.35	0	-0.22	0	0.67	0.35	3.7
1980-02-01	4.1	-1.7	-3.2	0	-0.20	0	4.1	0.89	2.5
1980-03-01	6.0	-2.9	-5.4	0	-0.51	0	6.0	0.61	2.5
1980	12	6.2	-9.6	0	-1.5	0	12	2.6	19
1980-11-01	0.039	5.2	0.094	0	-0.45	0	0.039	0.13	5.8
1980-12-01	0	4.2	0.063	0	-0.44	0	0	0.063	4.3
1981-01-01	0.55	3.2	-0.17	0	-0.36	0	0.55	0.39	3.6
1981-02-01	1.3	2.1	-0.89	0	-0.30	0	1.3	0.43	3.6
1981-03-01	2.7	1.3	-2.1	0	-0.22	0	2.7	0.52	3.6
1981	4.6	16	-3.1	0	-1.8	0	4.6	1.5	21
1981-11-01	0.94	3.7	-0.42	0	-1.0	0	0.94	0.54	5.1
1981-12-01	2.3	1.6	-2.1	0	-0.69	0	2.3	0.19	4.4
1982-01-01	0	3.6	0.27	0	-0.67	0	0	0.27	3.4
1982-02-01	2.7	0	-1.8	0	-0.93	0	2.7	0.89	2.8
1982-03-01	1.8	1.7	-1.1	0	-0.82	0	1.8	0.74	3.1
1982	7.8	11	-5.2	0	-4.1	0	7.8	2.6	19
1982-11-01	0	5.0	0.14	0	-2.4	0	0	0.14	5.2
1982-12-01	3.3	-0.31	-2.7	0	-1.2	0	3.3	0.64	3.6
1983-01-01	1.7	1.1	-0.92	0	-0.94	0	1.7	0.78	2.7
1983-02-01	1.9	1.4	-1.5	0	-1.4	0	1.9	0.36	3.3
1983-03-01	2.3	0.94	-1.8	0	-1.3	0	2.3	0.50	2.8
1983	9.2	8.1	-6.8	0	-7.3	0	9.2	2.4	18
1983-11-01	1.1	3.3	-0.55	0	-3.0	0	1.1	0.59	4.8
1983-12-01	2.0	1.5	-1.5	0	-2.3	0	2.0	0.51	3.8
1984-01-01	2.5	0.20	-2.0	0	-1.4	0	2.5	0.52	2.8
1984-02-01	0.51	2.8	0	0	-1.6	0	0.51	0.48	2.8
1984-03-01	0	4.0	0.079	0	-1.1	0	0	0.094	3.9
1984	6.1	12	-4.0	0	-9.4	0	6.1	2.2	18
1984-11-01	1.3	3.2	-0.71	0	-1.3	0	1.3	0.65	4.9
1984-12-01	2.1	1.7	-1.8	0	-1.3	0	2.1	0.31	4.2
1985-01-01	5.7	-3.3	-5.0	0	-1.0	0	5.7	0.77	2.5
1985-02-01	2.7	-0.31	-1.9	0	-3.5	0	2.7	0.75	2.5
1985-03-01	1.7	1.2	-1.1	0	-2.5	0	1.7	0.61	2.5
1985	14	2.4	-10	0	-9.5	0	14	3.1	17
1985-11-01	1.2	3.1	-0.51	0	-0.79	0	1.2	0.72	4.6
1985-12-01	2.8	0.39	-2.2	0	-1.3	0	2.8	0.50	3.9
1986-01-01	0.87	2.5	-0.31	0	-1.3	0	0.87	0.60	3.1
1986-02-01	0.12	3.7	0.039	0	-1.4	0	0.12	0.11	3.6

Table IV-B.76 SC11 Winter Storm Period Water Balance

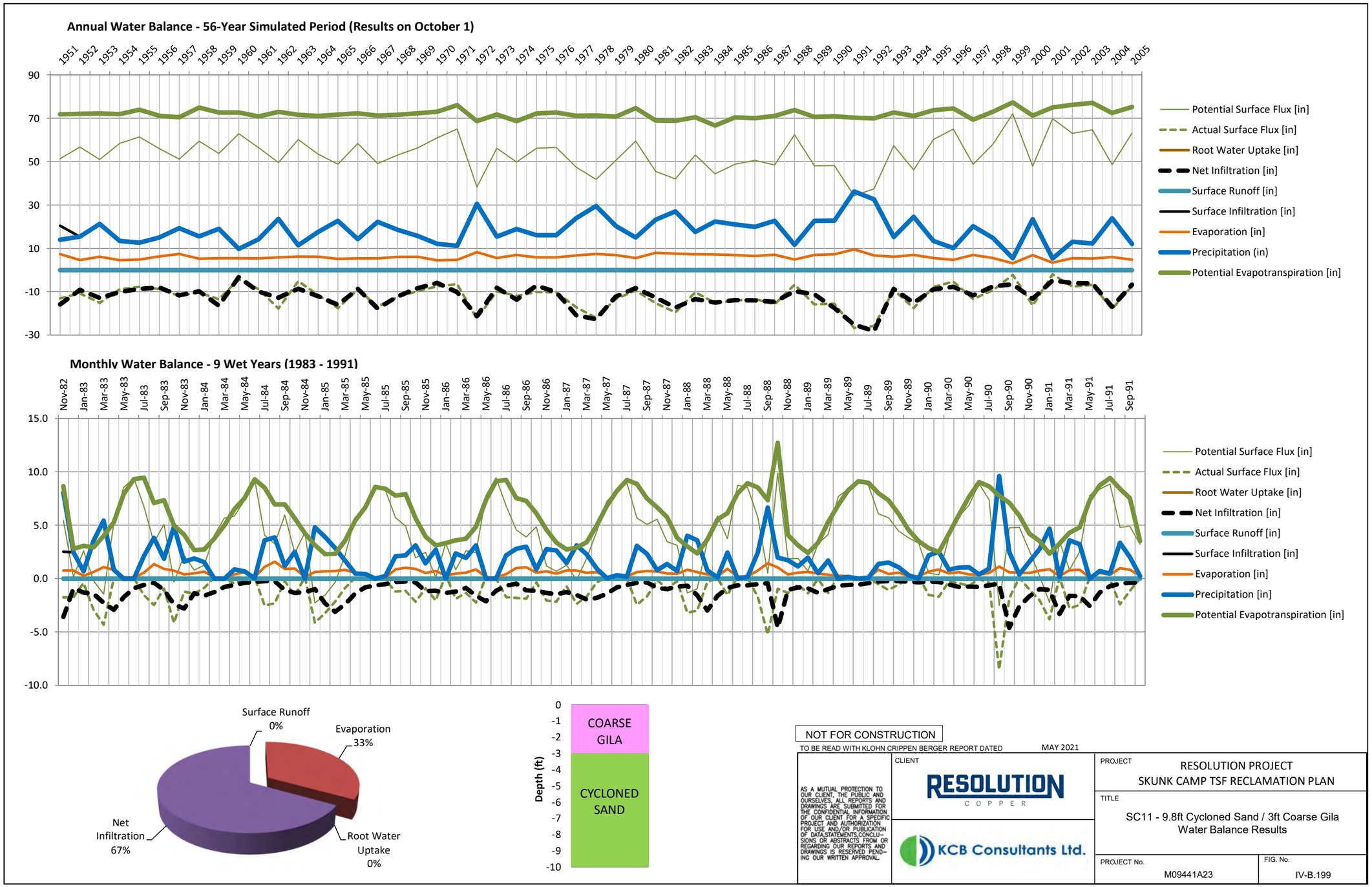
Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
1986-03-01	3.1	0.12	-2.3	0	-0.87	0	3.1	0.77	2.9
1986	8.0	9.8	-5.4	0	-5.6	0	8.0	2.7	18
1986-11-01	1.8	3.0	-1.3	0	-1.3	0	1.8	0.48	4.8
1986-12-01	1.4	1.9	-0.75	0	-1.5	0	1.4	0.67	3.7
1987-01-01	3.0	-0.16	-2.3	0	-1.2	0	3.0	0.68	2.9
1987-02-01	3.3	-0.35	-2.6	0	-1.6	0	3.3	0.75	2.8
1987-03-01	2.7	0.51	-2.1	0	-1.8	0	2.7	0.57	3.5
1987	12	5.0	-9.1	0	-7.4	0	12	3.2	18
1987-11-01	0.35	5.2	0.079	0	-1.1	0	0.35	0.38	6.0
1987-12-01	1.7	1.9	-1.2	0	-0.75	0	1.7	0.59	3.8
1988-01-01	4.0	-1.1	-3.2	0	-0.71	0	4.0	0.82	3.2
1988-02-01	3.6	-0.87	-3.0	0	-1.5	0	3.6	0.63	2.5
1988-03-01	0.75	3.3	-0.35	0	-3.0	0	0.75	0.39	3.4
1988	10	8.4	-7.6	0	-7.0	0	10	2.8	19
1988-11-01	1.5	3.7	-0.94	0	-1.9	0	1.5	0.52	5.8
1988-12-01	1.7	1.9	-1.3	0	-0.98	0	1.7	0.44	4.0
1989-01-01	1.1	1.9	-0.51	0	-0.87	0	1.1	0.60	3.1
1989-02-01	2.2	0.55	-1.6	0	-1.0	0	2.2	0.63	2.7
1989-03-01	0.28	3.6	0.039	0	-1.3	0	0.28	0.35	3.1
1989	6.8	12	-4.3	0	-6.1	0	6.8	2.5	19
1989-11-01	1.1	4.0	-0.47	0	-0.24	0	1.1	0.62	5.9
1989-12-01	0.31	3.6	-0.039	0	-0.31	0	0.31	0.27	4.2
1990-01-01	0.87	2.5	-0.63	0	-0.31	0	0.87	0.24	3.4
1990-02-01	1.3	1.5	-0.67	0	-0.31	0	1.3	0.63	2.7
1990-03-01	2.5	0.63	-1.7	0	-0.31	0	2.5	0.86	2.6
1990	6.1	12	-3.5	0	-1.5	0	6.1	2.6	19
1990-11-01	0.28	4.6	0.079	0	-2.2	0	0.28	0.35	5.3
1990-12-01	2.2	1.5	-1.4	0	-1.3	0	2.2	0.80	4.2
1991-01-01	4.8	-2.3	-4.1	0	-0.83	0	4.8	0.75	3.0
1991-02-01	1.8	1.2	-1.2	0	-2.5	0	1.8	0.54	2.6
1991-03-01	0.94	3.2	-0.47	0	-2.4	0	0.94	0.49	3.3
1991	10	8.2	-7.1	0	-9.2	0	10	2.9	18
1991-11-01	1.2	4.6	-0.91	0	-1.1	0	1.2	0.33	6.6
1991-12-01	3.3	0.12	-2.7	0	-0.79	0	3.3	0.56	3.6
1992-01-01	4.0	-1.3	-3.1	0	-1.5	0	4.0	0.82	2.9
1992-02-01	3.0	-0.28	-2.1	0	-3.1	0	3.0	0.90	2.2
1992-03-01	2.8	0.63	-2.0	0	-2.5	0	2.8	0.76	3.0
1992	14	3.7	-11	0	-9.0	0	14	3.4	18
1992-11-01	1.2	4.1	-0.83	0	-1.9	0	1.2	0.42	6.2
1992-12-01	0.51	2.8	-0.079	0	-1.0	0	0.51	0.42	3.6
1993-01-01	6.3	-3.9	-5.5	0	-0.91	0	6.3	0.84	2.5
1993-02-01	11	-9.0	-10	0	-7.8	0	11	0.85	1.9
1993-03-01	6.0	-3.5	-5.1	0	-5.9	0	6.0	0.88	2.7
1993	25	-9.6	-22	0	-17	0	25	3.4	17
1993-11-01	0.83	4.4	-0.20	0	-0.63	0	0.83	0.58	6.0
1993-12-01	4.2	-0.83	-3.8	0	-0.55	0	4.2	0.41	3.6
1994-01-01	0.31	2.8	0	0	-1.8	0	0.31	0.30	3.4
1994-02-01	0.24	3.2	0	0	-1.3	0	0.24	0.24	3.3
1994-03-01	2.6	0.59	-2.0	0	-0.67	0	2.6	0.64	3.0
1994	8.2	10	-6.0	0	-5.0	0	8.2	2.2	19
1994-11-01	1.8	2.8	-1.4	0	-0.55	0	1.8	0.43	5.3
1994-12-01	3.4	-0.35	-2.6	0	-0.87	0	3.4	0.79	3.5

Table IV-B.76 SC11 Winter Storm Period Water Balance

Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
1995-01-01	2.7	0.079	-2.0	0	-1.9	0	2.7	0.63	3.0
1995-02-01	3.7	-0.83	-2.8	0	-2.3	0	3.7	0.85	2.6
1995-03-01	2.7	0.75	-2.1	0	-2.2	0	2.7	0.59	3.1
1995	14	2.4	-11	0	-7.8	0	14	3.3	18
1995-11-01	0	5.3	0.20	0	-1.3	0	0	0.23	5.8
1995-12-01	1.3	2.4	-0.83	0	-1.3	0	1.3	0.47	3.9
1996-01-01	0.91	2.4	-0.59	0	-0.91	0	0.91	0.31	3.5
1996-02-01	0	3.5	0.12	0	-0.75	0	0	0.14	3.3
1996-03-01	3.2	0.59	-2.6	0	-0.59	0	3.2	0.56	3.6
1996	5.4	14	-3.7	0	-4.8	0	5.4	1.7	20
1996-11-01	0.39	5.1	-0.039	0	-1.1	0	0.39	0.39	6.0
1996-12-01	1.3	2.4	-0.83	0	-0.94	0	1.3	0.39	3.8
1997-01-01	0	3.1	0.28	0	-0.67	0	0	0.30	3.2
1997-02-01	2.9	-0.039	-2.1	0	-0.47	0	2.9	0.73	2.7
1997-03-01	1.7	2.2	-1.3	0	-0.51	0	1.7	0.40	3.4
1997	6.2	13	-4.0	0	-3.7	0	6.2	2.2	19
1997-11-01	0.71	4.1	-0.35	0	-0.31	0	0.71	0.39	6.0
1997-12-01	0.83	2.6	-0.31	0	-0.31	0	0.83	0.46	3.7
1998-01-01	2.7	0.039	-2.0	0	-0.31	0	2.7	0.77	3.1
1998-02-01	0.35	2.7	0.079	0	-0.43	0	0.35	0.43	2.4
1998-03-01	6.4	-3.8	-5.5	0	-0.63	0	6.4	0.93	2.9
1998	11	5.6	-8.0	0	-2.0	0	11	3.0	18
1998-11-01	0	5.4	0.12	0	-0.79	0	0	0.098	6.3
1998-12-01	1.1	2.7	-0.87	0	-0.67	0	1.1	0.23	3.9
1999-01-01	0.75	2.4	-0.16	0	-0.55	0	0.75	0.57	3.3
1999-02-01	0.039	3.5	0.079	0	-0.39	0	0.039	0.14	3.6
1999-03-01	0.20	4.2	0.039	0	-0.35	0	0.20	0.21	3.6
1999	2.0	18	-0.79	0	-2.8	0	2.0	1.3	21
1999-11-01	0	5.6	0.16	0	-1.6	0	0	0.14	6.2
1999-12-01	0	4.3	0.079	0	-0.98	0	0	0.071	4.7
2000-01-01	0	3.3	0	0	-0.67	0	0	0.055	3.7
2000-02-01	0.31	3.5	-0.039	0	-0.47	0	0.31	0.25	3.4
2000-03-01	0.67	3.4	-0.28	0	-0.31	0	0.67	0.41	3.9
2000	0.98	20	-0.079	0	-4.0	0	0.98	0.93	22
2000-11-01	5.4	-0.63	-4.5	0	-0.16	0	5.4	0.84	6.1
2000-12-01	2.1	1.1	-1.5	0	-0.63	0	2.1	0.63	2.9
2001-01-01	0.12	3.4	0.079	0	-2.2	0	0.12	0.19	3.7
2001-02-01	3.4	-0.71	-2.6	0	-1.2	0	3.4	0.81	3.0
2001-03-01	1.7	1.7	-0.98	0	-0.79	0	1.7	0.73	2.8
2001	13	4.8	-9.5	0	-5.0	0	13	3.2	19
2001-11-01	0.39	4.7	-0.079	0	-1.3	0	0.39	0.31	5.7
2001-12-01	0.28	3.6	0	0	-0.67	0	0.28	0.29	4.6
2002-01-01	1.9	0.94	-1.3	0	-0.47	0	1.9	0.56	2.9
2002-02-01	0.20	3.1	0	0	-0.39	0	0.20	0.19	3.2
2002-03-01	0	4.3	0.16	0	-0.39	0	0	0.17	3.4
2002	2.7	17	-1.2	0	-3.3	0	2.7	1.5	20
2002-11-01	0.12	5.2	0.079	0	-0.12	0	0.12	0.19	6.3
2002-12-01	0.83	3.1	-0.59	0	-0.12	0	0.83	0.28	4.4
2003-01-01	0.98	2.0	-0.35	0	-0.079	0	0.98	0.63	3.4
2003-02-01	0.35	3.5	0.079	0	-0.12	0	0.35	0.42	3.1
2003-03-01	5.0	-1.7	-4.4	0	-0.039	0	5.0	0.54	3.6
2003	7.2	12	-5.2	0	-0.47	0	7.2	2.1	21

Table IV-B.76 SC11 Winter Storm Period Water Balance

Date	Precipitation	Potential Surface Flux	Actual Surface Flux	Root Water Uptake	Net Infiltration	Surface Runoff	Surface Infiltration	Evaporation	Potential Evapotranspiration
	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]	[in]
2003-11-01	0.079	5.7	0.16	0	-0.28	0	0.079	0.24	6.3
2003-12-01	0.87	2.6	-0.55	0	-0.28	0	0.87	0.33	3.9
2004-01-01	0.98	2.3	-0.51	0	-0.31	0	0.98	0.46	3.9
2004-02-01	1.4	1.4	-0.83	0	-0.28	0	1.4	0.59	3.1
2004-03-01	0.67	2.8	-0.20	0	-0.28	0	0.67	0.49	3.0
2004	4.0	15	-1.9	0	-1.4	0	4.0	2.1	20
2004-11-01	1.2	4.0	-0.71	0	-0.31	0	1.2	0.48	6.4
2004-12-01	0.63	2.4	-0.24	0	-0.47	0	0.63	0.43	3.5
2005-01-01	2.8	0.43	-2.2	0	-0.51	0	2.8	0.54	3.0
2005-02-01	4.3	-1.5	-3.6	0	-1.6	0	4.3	0.61	2.7
2005-03-01	7.3	-4.6	-6.5	0	-3.1	0	7.3	0.91	2.7
2005	16	0.71	-13	0	-6.0	0	16	3.0	18
2005-11-01	0.43	5.0	-0.16	0	-1.3	0	0.43	0.30	6.4
2005-12-01	0	4.1	0.12	0	-0.71	0	0	0.11	4.4
2006-01-01	0	3.3	0.079	0	-0.51	0	0	0.063	3.5
2006-02-01	0	4.1	0.039	0	-0.35	0	0	0.051	3.8
2006-03-01	0.12	4.3	0	0	-0.24	0	0.12	0.13	4.1
2006	0.55	21	0.079	0	-3.1	0	0.55	0.64	22



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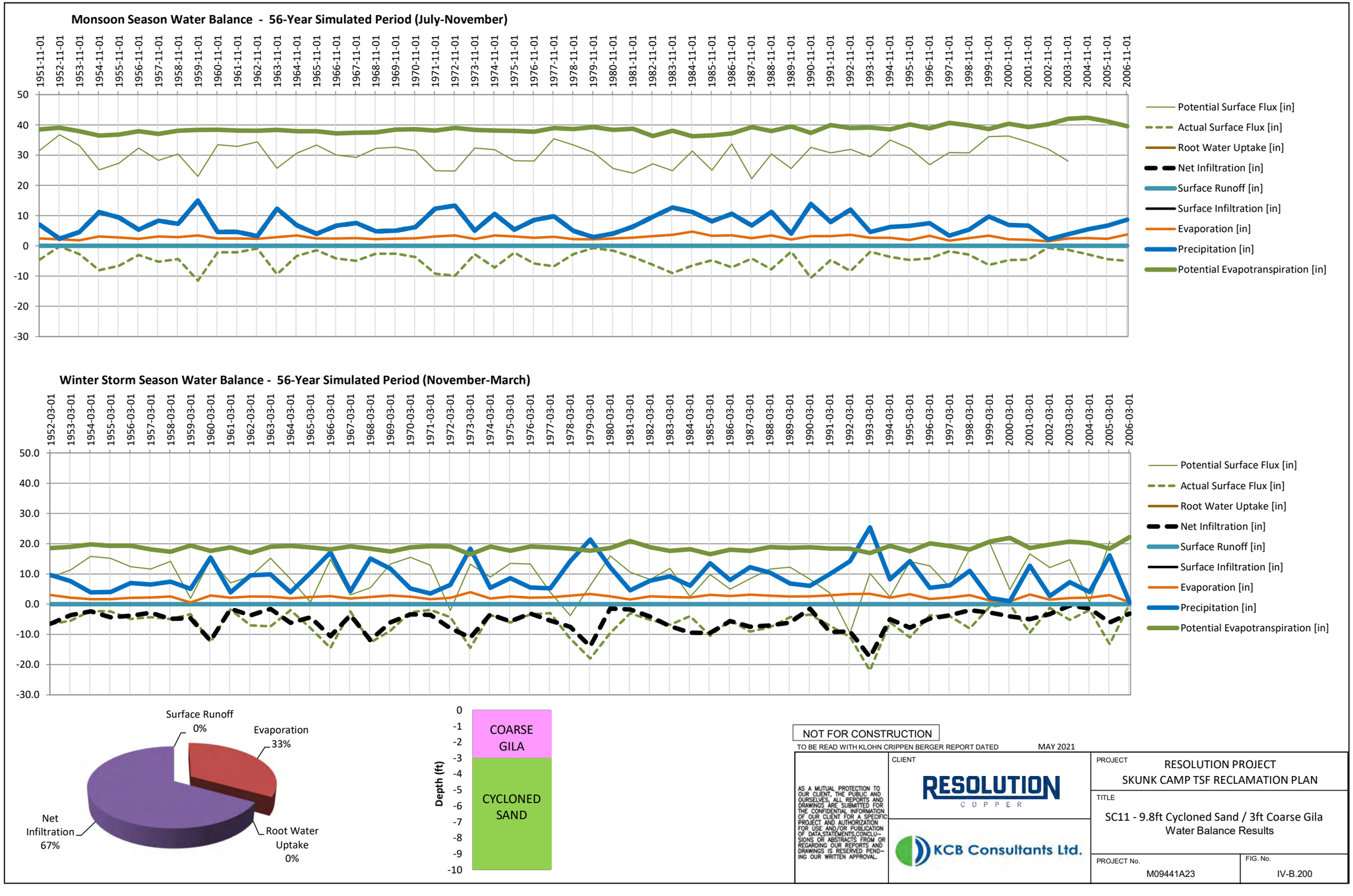
SKUNK CAMP TSF RECLAMATION PLAN

TITLE: SC11 - 9.8ft Cycloned Sand / 3ft Coarse Gila Water Balance Results

PROJECT No. M09441A23

FIG. No. IV-B.199


Monsoon Season Water Balance - 56-Year Simulated Period (July-November)
Potential Surface Flux [in]
Actual Surface Flux [in]
Root Water Uptake [in]
Net Infiltration [in]
Surface Runoff [in]
Surface Infiltration [in]
Evaporation [in]
Precipitation [in]
Potential Evapotranspiration [in]
Winter Storm Season Water Balance - 56-Year Simulated Period (November-March)
Surface Runoff 0%
Evaporation 33%
Net Infiltration 67%
Root Water Uptake 0%
Depth (ft)
COARSE GILA
CYCLONED SAND
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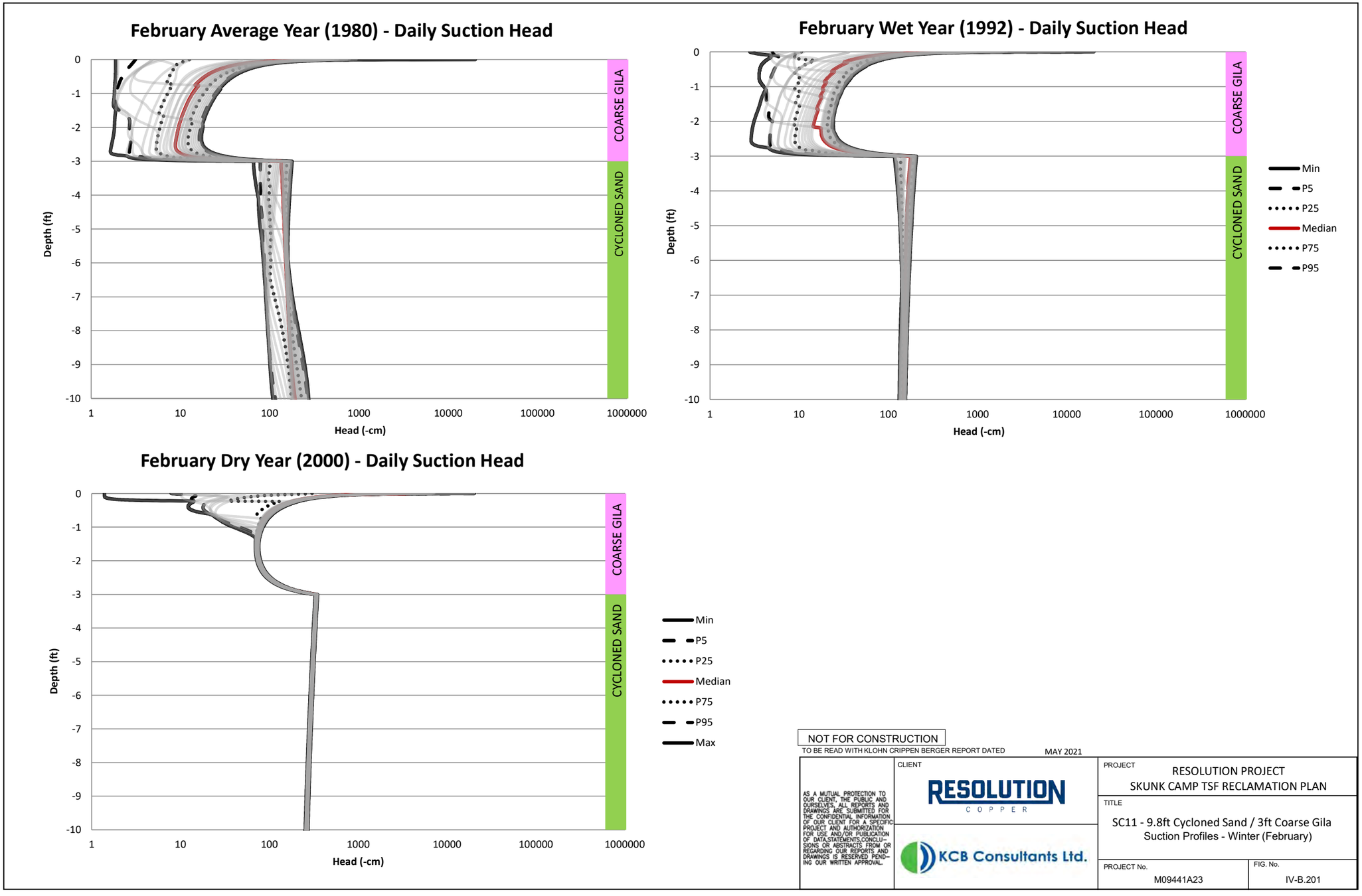
PROJECT No.
M09441A23
FIG. No.
IV-B.200



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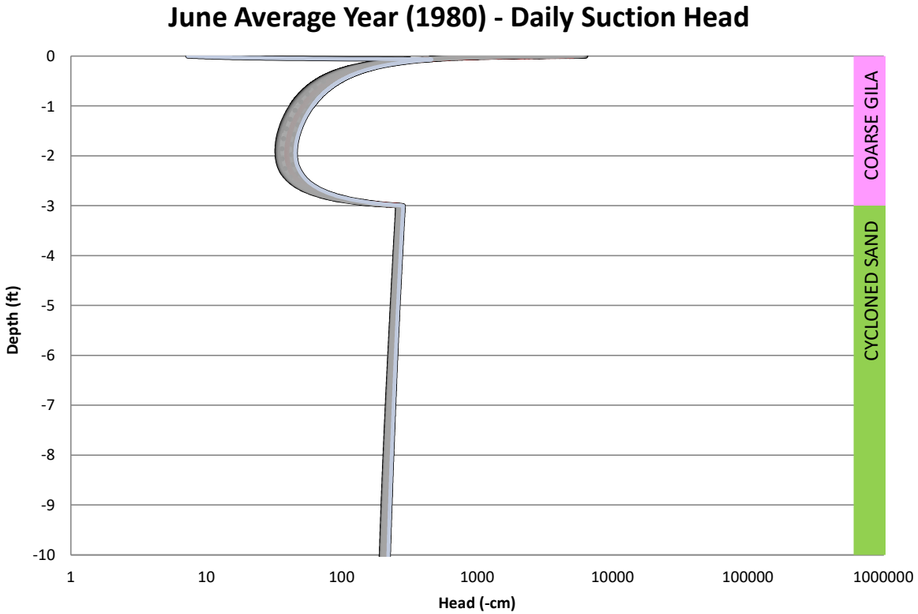
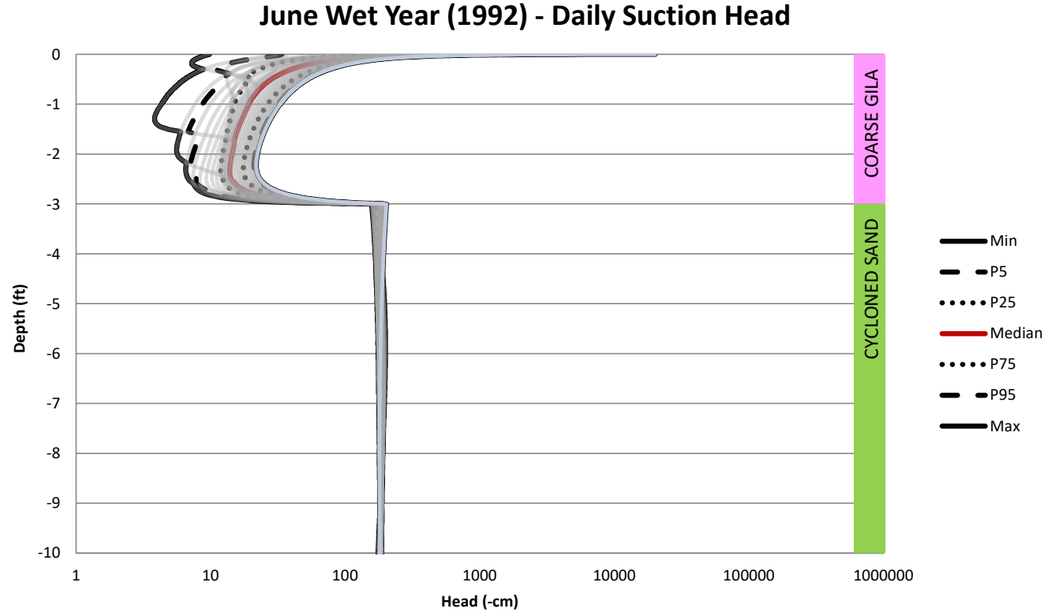
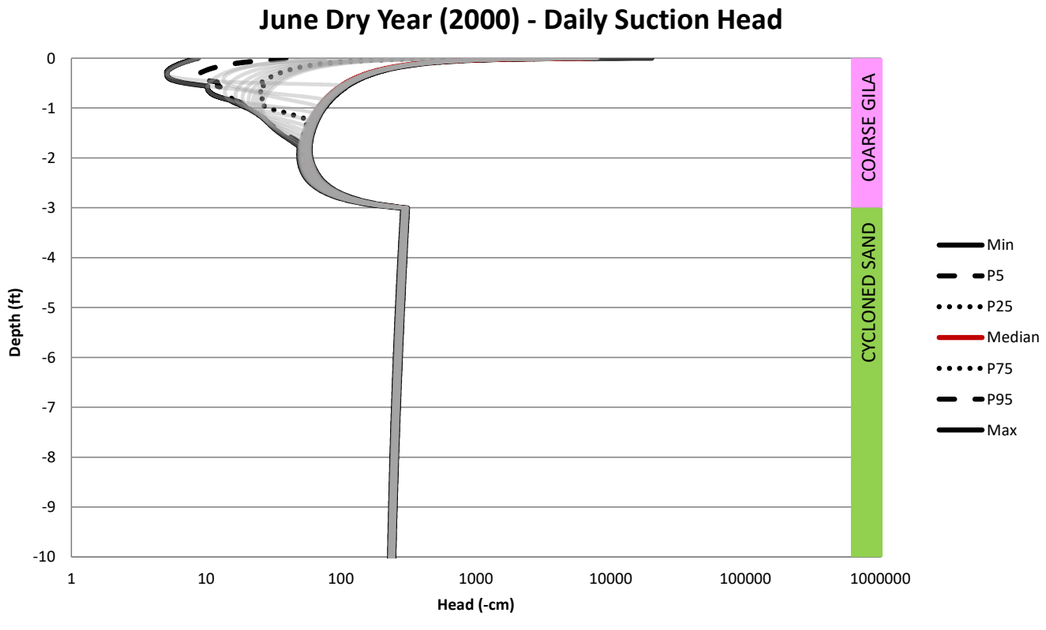
PROJECT No. M09441A23

FIG. No. IV-B.201







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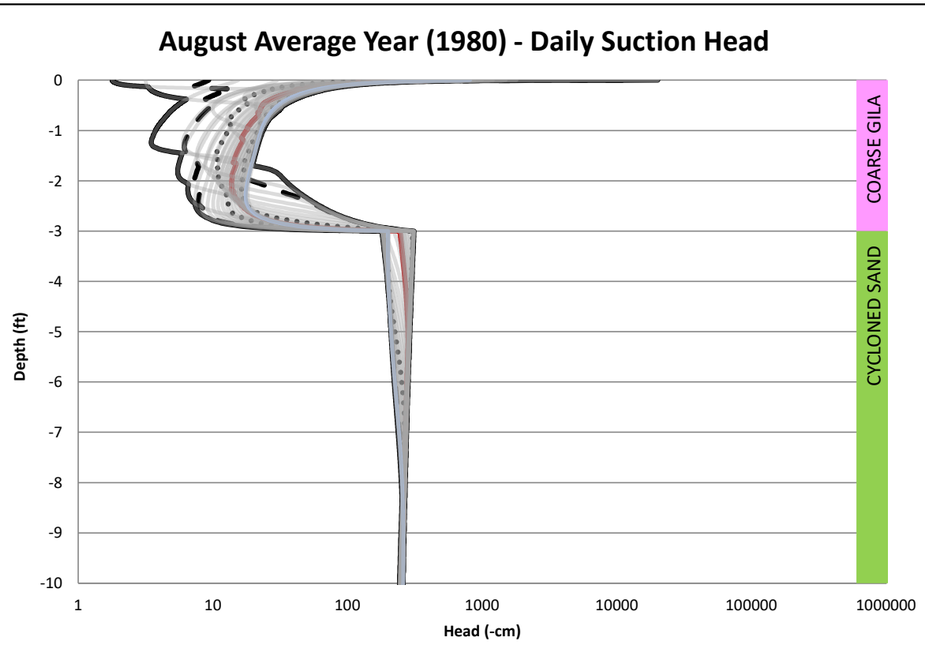
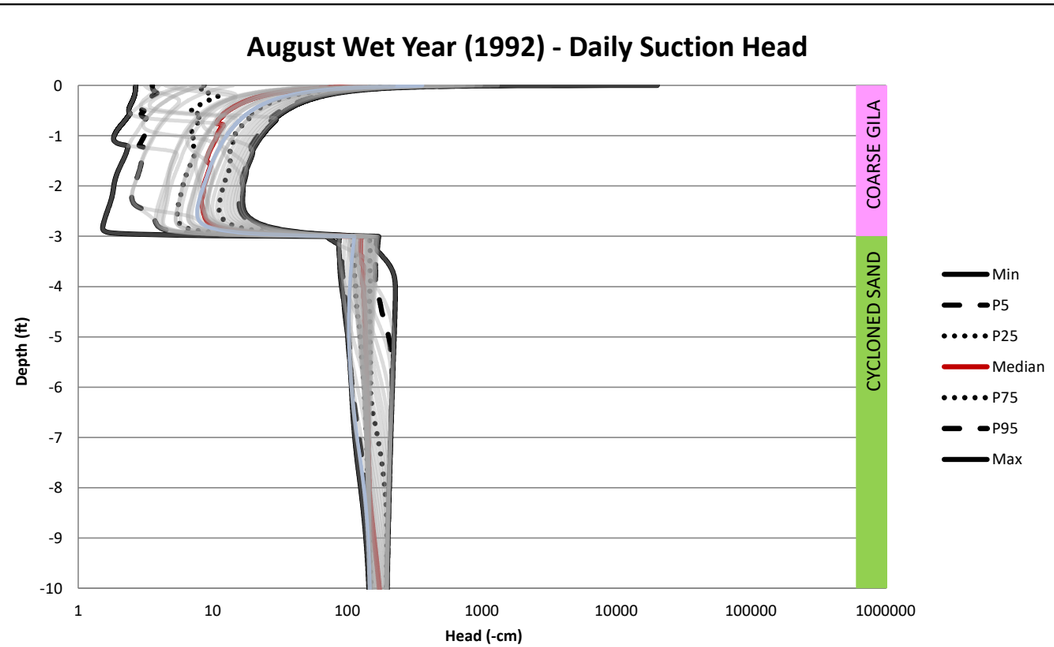
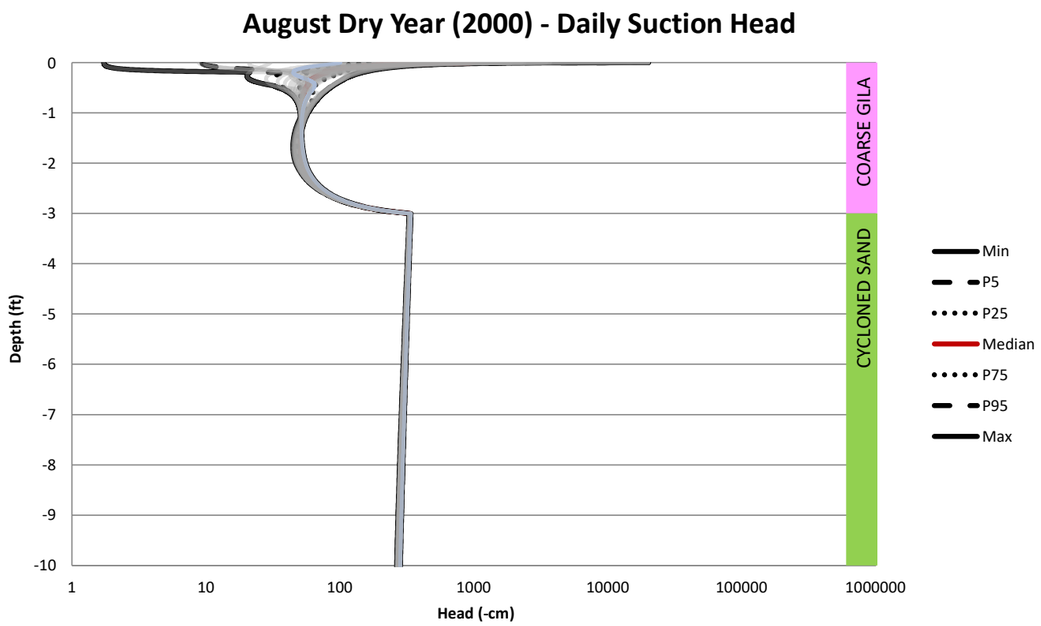
PROJECT No. M09441A23

FIG. No. IV-B.202







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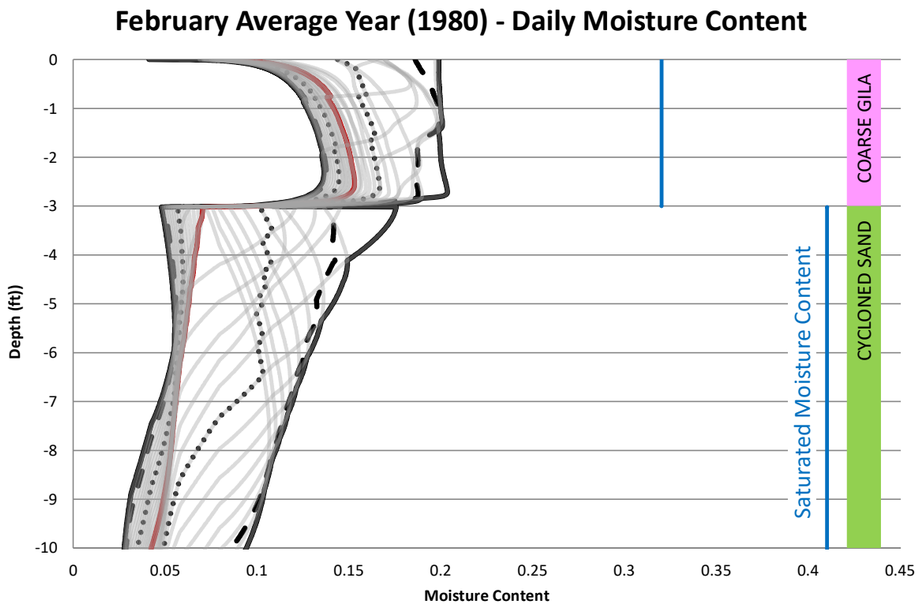
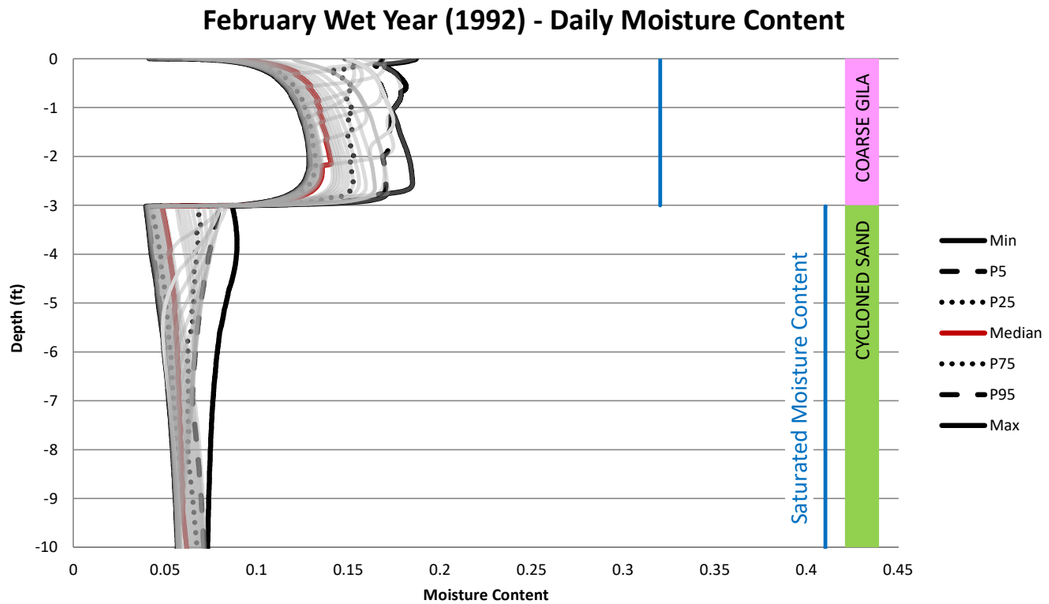
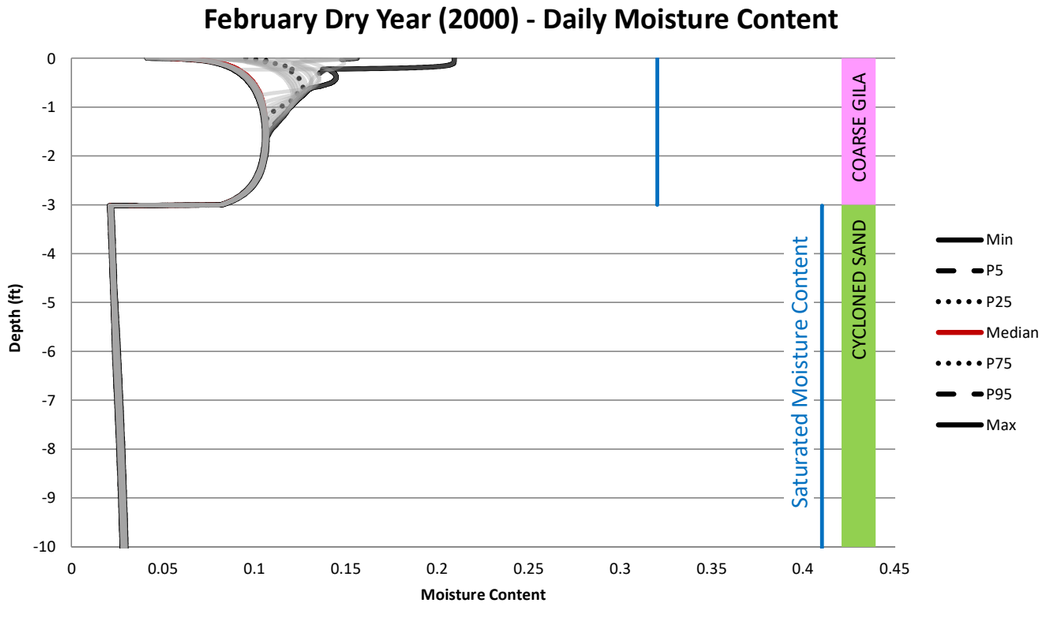
TITLE: SC11 - 9.8ft Cycloned Sand / 3ft Coarse Gila Suction Profiles - Summer Monsoon (August)

PROJECT No. M09441A23

FIG. No. IV-B.203







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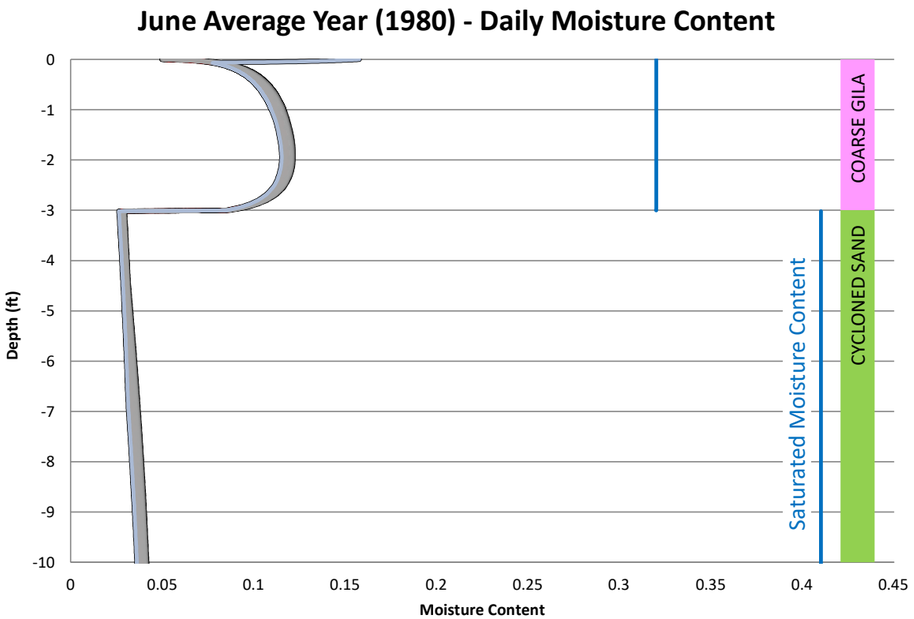
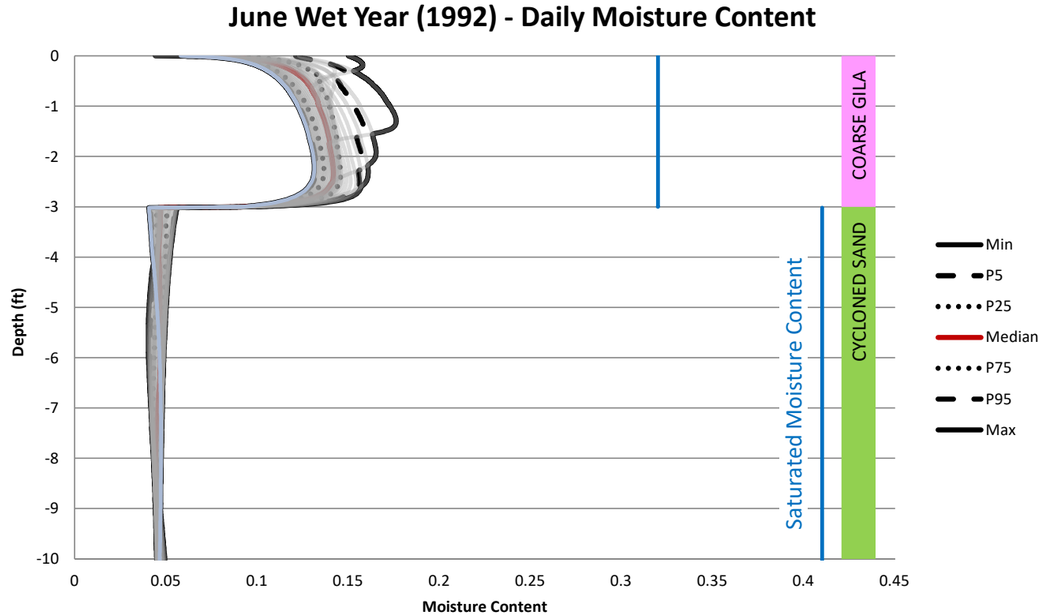
SKUNK CAMP TSF RECLAMATION PLAN

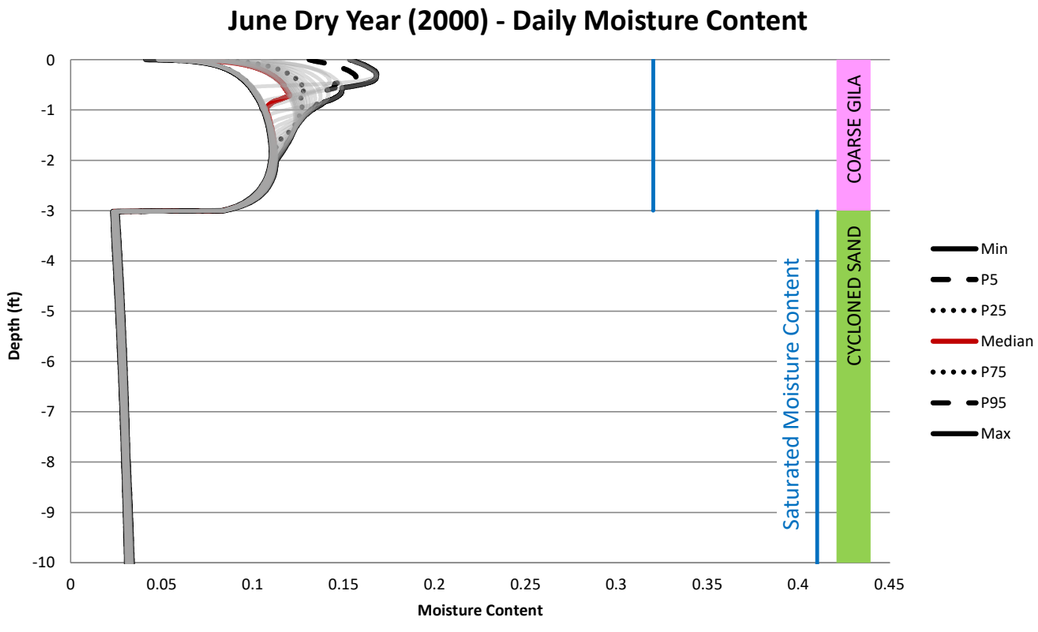
TITLE: SC11 - 9.8ft Cycloned Sand / 3ft Coarse Gila Moisture Content - Winter (February)

PROJECT No. M09441A23

FIG. No. IV-B.204







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TITLE: SC11 - 9.8ft Cycloned Sand / 3ft Coarse Gila Moisture Content - Dry Season(June)

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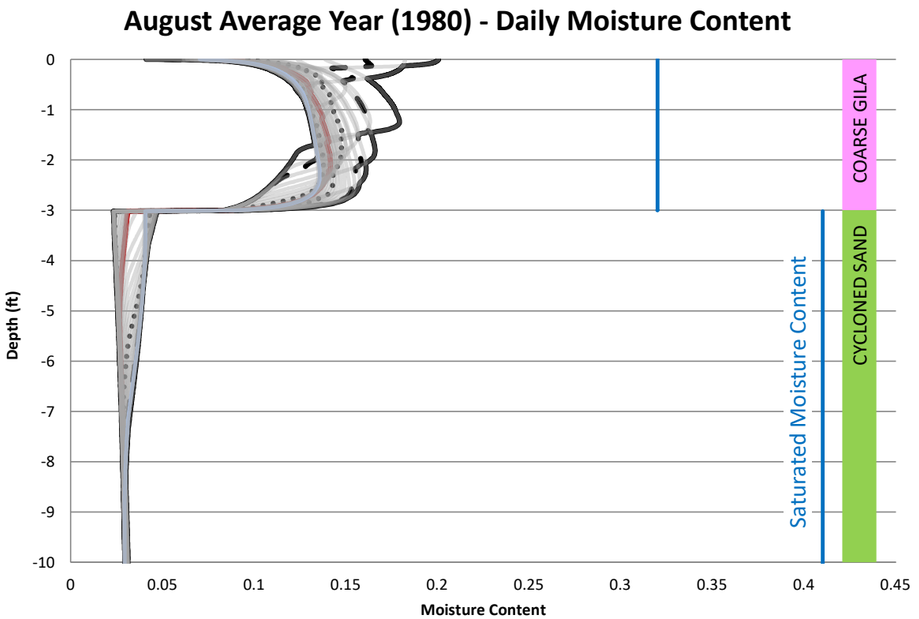
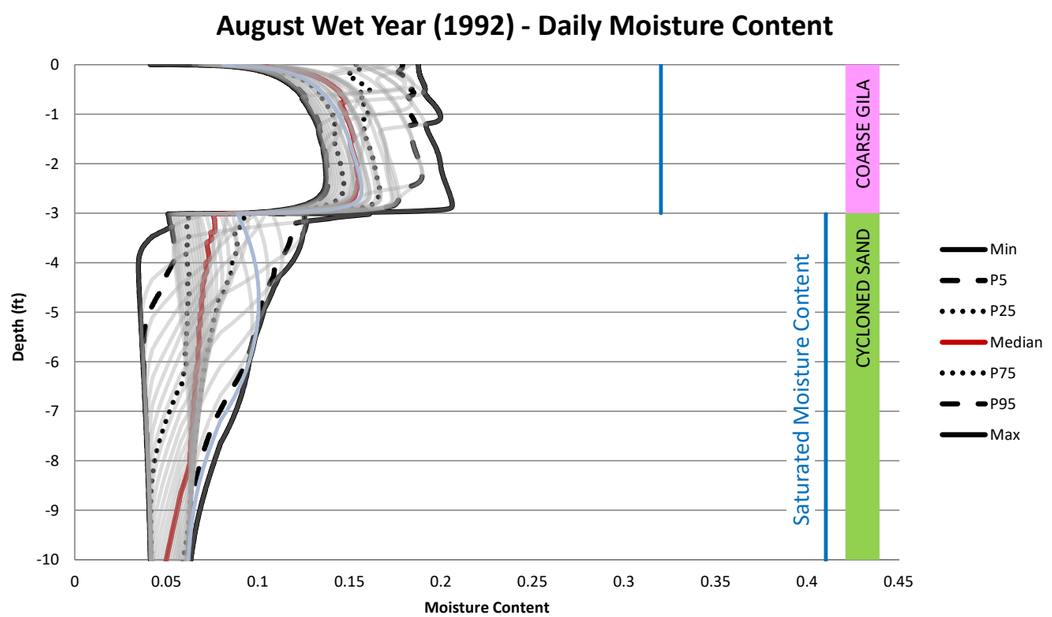
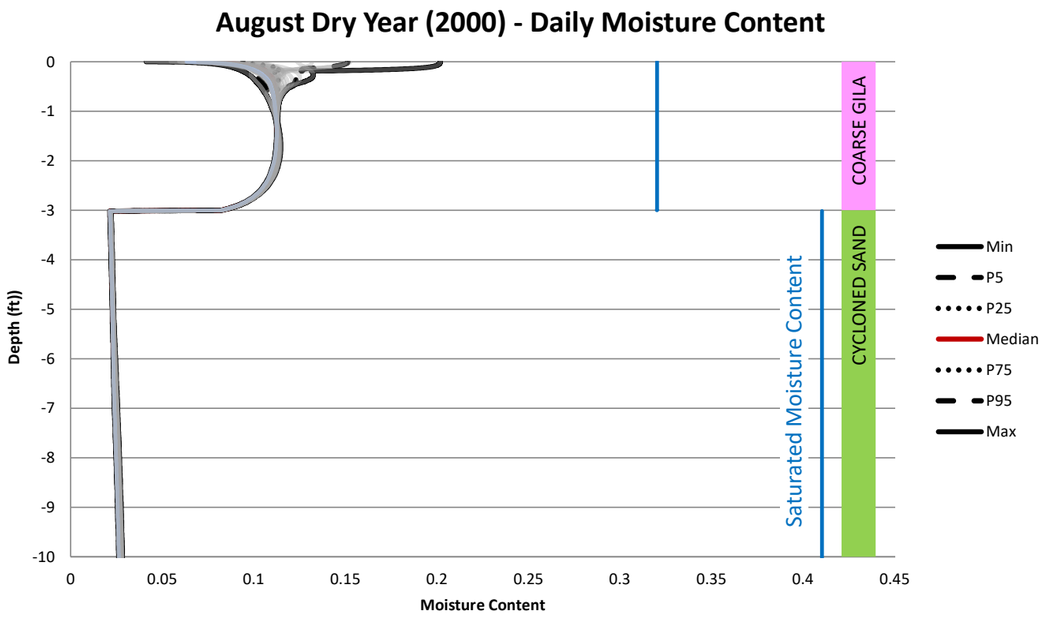
FIG. No. IV-B.205







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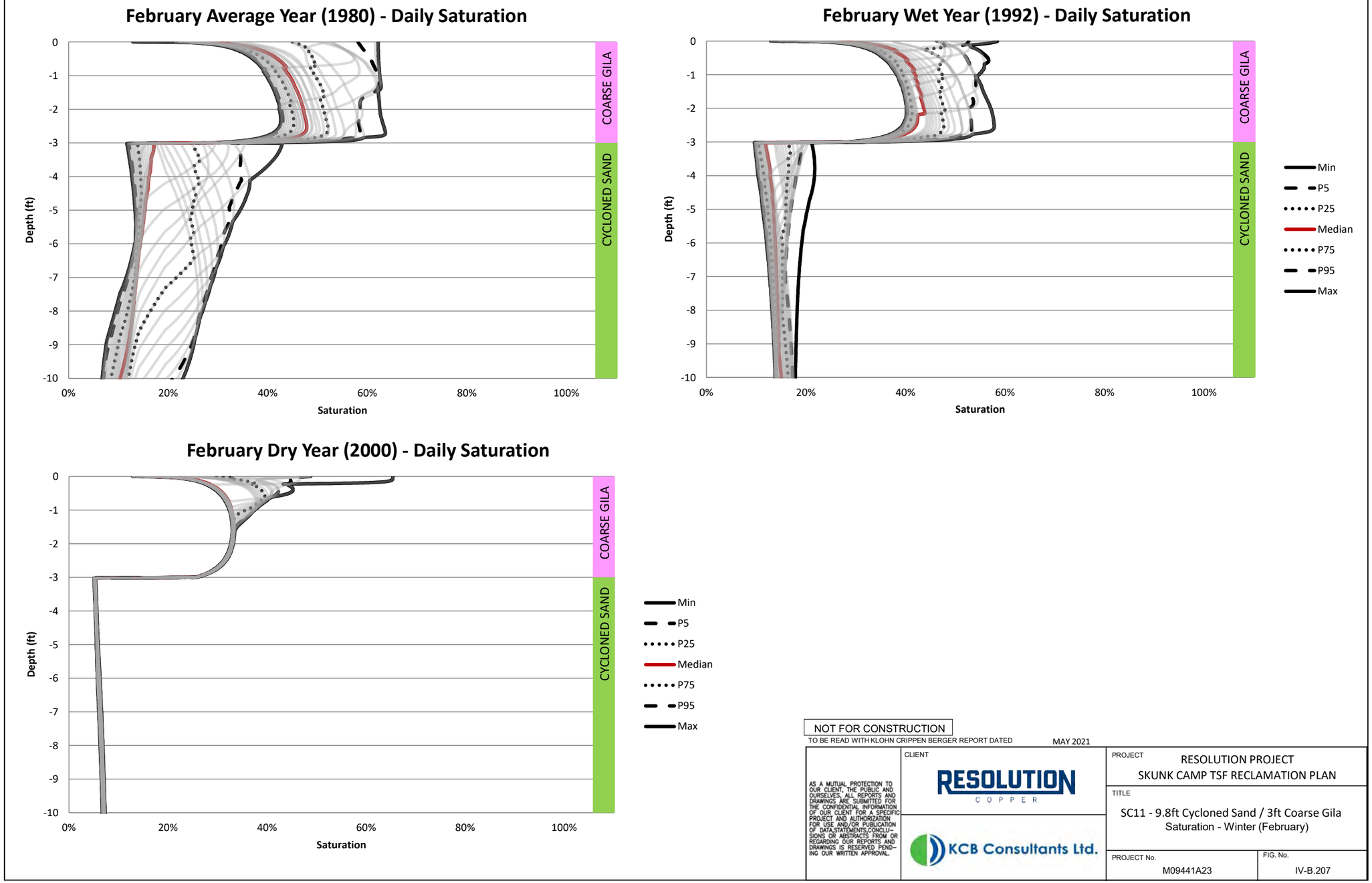
TITLE: SC11 - 9.8ft Cycloned Sand / 3ft Coarse Gila
Moisture Content - Summer Monsoon (August)

PROJECT No. M09441A23

FIG. No. IV-B.206



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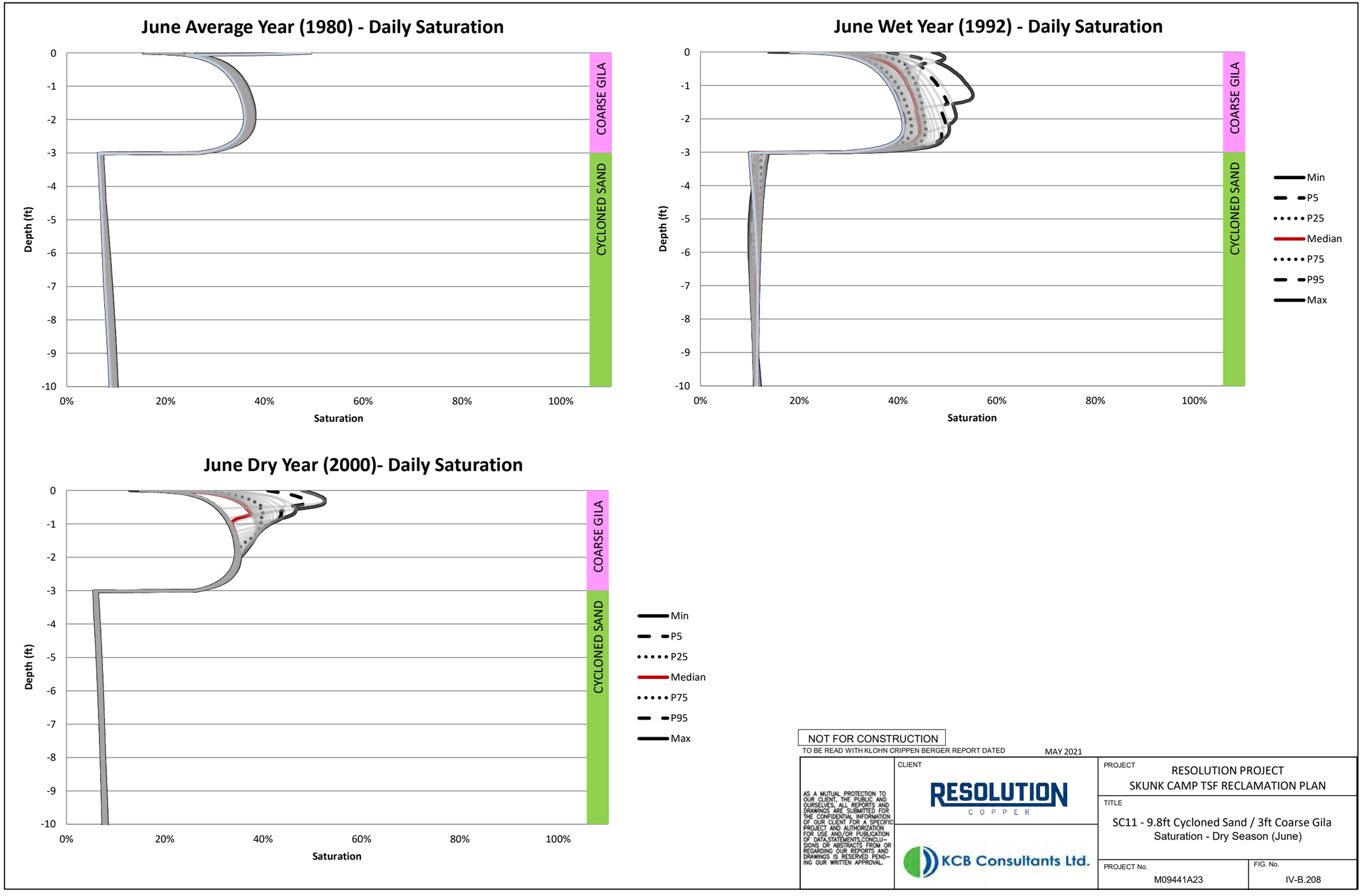
TITLE: SC11 - 9.8ft Cycloned Sand / 3ft Coarse Gila Saturation - Winter (February)

PROJECT No.: M09441A23

FIG. No.: IV-B.207



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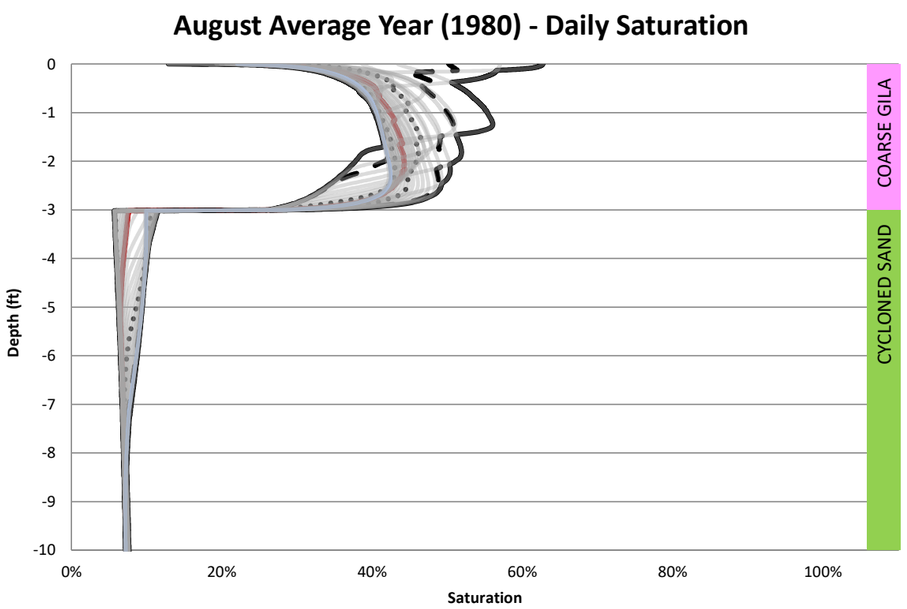
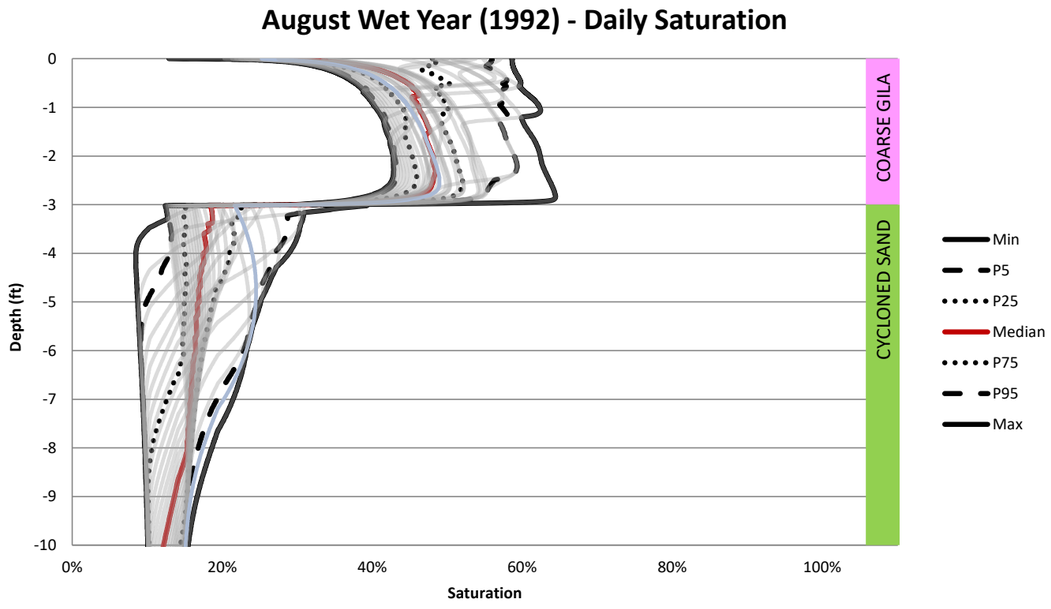
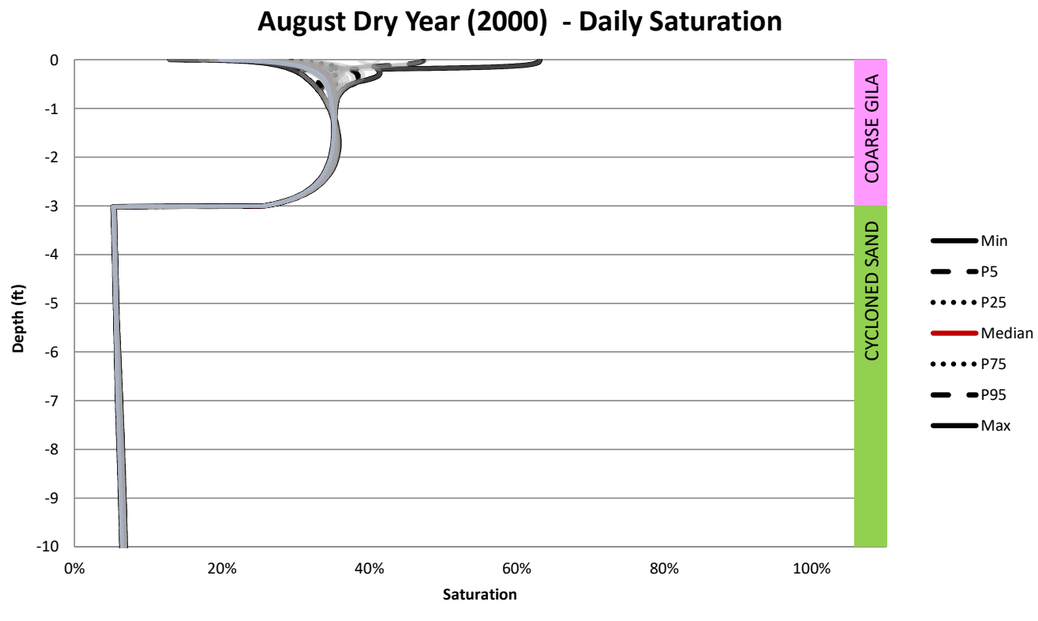
PROJECT No. M09441A23

FIG. No. IV-B.208







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TITLE: SC11 - 9.8ft Cycloned Sand / 3ft Coarse Gila Saturation - Summer Monsoon (August)

PROJECT No. M09441A23

FIG. No. IV-B.209

APPENDIX V

Consolidation Modeling

Appendix V
Consolidation Modeling

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V-1 INTRODUCTION

Post-closure settlement of tailings is an important consideration when developing a closure plan for a tailings facility to understand what the long-term post-closure landform configuration will be and how long it will take to get there.

This appendix summarizes preliminary estimates of post-closure tailings settlement of the Skunk Camp Tailings Storage Facility (TSF). One of the closure objectives for the Skunk Camp TSF is to minimize ponded water on the closed tailings surface. The assessment is important for the Skunk Camp TSF Reclamation Plan because it may indicate where low spots may form, potentially leading to pooling.

The objective of this assessment is to estimate settlement for the impounded scavenger and pyrite tailings in the TSF during the life of mine and post-closure period.

The approach used includes:

1. **Review of tailings deposition characteristics (Section V-2):** Post-closure settlement is impacted by tailings properties and the deposition environment. These characteristics were reviewed to provide context for the preliminary consolidation assessment.
2. **Preliminary consolidation assessment (Sections V-4 and V-5):** Available consolidation testing data was used to help inform a preliminary assessment of potential post-closure consolidation.
3. **Results (Sections V-5):** Summary of potential post-closure settlement.
4. **Conclusions (Section V-6):** Summarize the risks, opportunities and recommended path forward that were identified in this assessment.

There are many factors affecting tailings settlement, such as TSF construction/infilling characteristics, tailings/slurry properties, depositional environments and climate. However, the settlement estimates can be made from first principles with an understanding of life of mine operations and assumed material properties supported by laboratory testing. These estimates will be checked based on observations during and after operating mine life to refine the post-closure settlement predictions.

V-2 TAILINGS DEPOSITIONAL CHARACTERISTICS

Post-closure settlement is impacted by tailings properties at end of operations, such as particle size distribution (PSD), clay content and type, hydraulic conductivity, void ratio and drainage conditions (e.g. vertical and lateral). In general, the higher the tailings void ratio and fines/clay content at end of operations, the more post-closure settlement could occur and the longer it will take to fully realize it.

Tailings properties at end of operations depend on:

1. Slurry characteristics (i.e., solids content and PSD of the solid fraction).

2. Deposition characteristics (i.e., deposit height, rate of rise, climate conditions etc.). Deposition characteristics relate to tailings properties at the end of operations because, as tailings consolidate during deposition, slower rates of rise of the impoundment result in more consolidation during infilling of the TSF, and thus less post-closure settlement. High evaporation rates can lead to desiccation.
3. Tailings depositional environment (i.e., affected in turn by flow rate/velocity out of the pipe, placement distance from the discharge point, and whether deposition occurs subaerially or subaqueously). Depositional environment plays a significant role in segregation/fines capture, and therefore the PSD and consolidation characteristics of tailings at different locations in the TSF. Higher energy flows typically result in higher segregation of tailings, everything else being equal, with the coarser (and faster settling) fraction of the tailings settling out closer to the discharge point (i.e., closest to the Main Embankment) and the finer (and more prone to higher post-closure settlement) fraction settling out further upstream in the scavenger impoundment[1]. Spacing of sandy layers within fines and vice versa can significantly influence the time of settlement by controlling drainage path length.

Two distinct depositional environments were assumed for this assessment:

1. Subaerial deposition (scavenger tailings): tailings are placed above water. The flow energy is higher in this case and thus particle distribution tends to be coarser. However, long beaches are exposed to evaporation and exhibit ranges in fines content as the flow energy dissipates the farther it gets from the discharge point. A range of PSD along the beach are included in this assessment (scavenger total tailings and cyclone overflow).
2. Subaqueous deposition (pyrite tailings): tailings are subaqueously discharged below a pond. A significant amount of energy dissipates as the tailings enter the pond, resulting in lower tailings densities placed in this environment compared to those deposited subaerially.

V-3 MODELING APPROACH

V-3.1 Model Type

One-dimensional (1D) consolidation modeling of the scavenger and pyrite tailings was undertaken using the large-strain consolidation software FSConsol (GWP 2014). FSConsol is a 1D consolidation software program. FSConsol is based on the large strain consolidation theory developed by Gibson, England & Hussey (1967) and has been used extensively for tailings consolidation modeling in the mining industry. Large-strain modeling is required for the large settlements expected in tailings deposits. The software estimates tailings behavior after initial settling due to self-weight loading. The analysis models consolidation behavior of the tailings solids only and does not consider potential impacts from geochemical processes.

[1] The scavenger impoundment includes both scavenger total tailings and cyclone overflow (refer to Section V-3.3).

Analyses were conducted using the tailings deposition schedule and the ultimate volume-elevation relationships for the deposited tailings. Scavenger tailings were assumed to be thickened to 60% solids density by weight and pyrite tailings were assumed to be thickened to 50% solids density before they are deposited. For this analysis, initial settled densities from laboratory consolidation testing were assumed for initial conditions.

V-3.2 Large Strain Consolidation

Upon deposition of a layer of tailings, the vertical stress in the underlying deposit increases due to the weight of the freshly deposited layer. The increase in vertical stress (equal to the total unit weight of the freshly deposited layer multiplied by the height of the layer) is initially borne by the pore water fluid at the instant of loading. If drainage is allowed, the excess pore fluid pressure dissipates due to the flow of pore fluid out of the tailings. Drainage increases the effective stress in the tailings and causes the tailings to compress or "consolidate". Assuming the pore fluid and the tailings solids are themselves incompressible, the consolidation or drainage process is governed by the following equation:

$$\frac{\partial u}{\partial t} = C_v \frac{\partial^2 u}{\partial z^2}$$

where t = time (years);

z = depth from arbitrary datum;

u = initial pore pressure head;

C_v = coefficient of consolidation = $k/m_v\gamma_w$;

k = hydraulic conductivity in the vertical (z) direction;

γ_w = unit weight of water;

m_v = $-(de/d\sigma_v')/(1+e_o)$;

σ_v' = effective vertical stress;

e = void ratio; and

e_o = initial void ratio.

The computer program FSConsol uses the finite difference method to solve the governing partial differential equation. The relationship between effective stress and void ratio is approximated as:

$$e = A\sigma_v'^{B}$$

and relationship between hydraulic conductivity and void ratio is approximated as:

$$k = Ce^{D}$$

where A, B, C, and D are empirical constants estimated for the different tailings types (for the purposes of this assessment these were determined from properties measured in laboratory slurry consolidation, oedometer and Rowe cell tests).

To solve the consolidation equation, the tailings deposited in the impoundment are divided into layers and are added to the model according to the proposed deposition schedule. Immediately following the application of a new layer, FSConsol re-computes the state variables (nodal values of the excess pore water pressure and void ratio) assuming a time step, Δt (typically 1 day or less). The nodal coordinates are updated after each time step to accommodate the large vertical consolidation strains in the tailings.

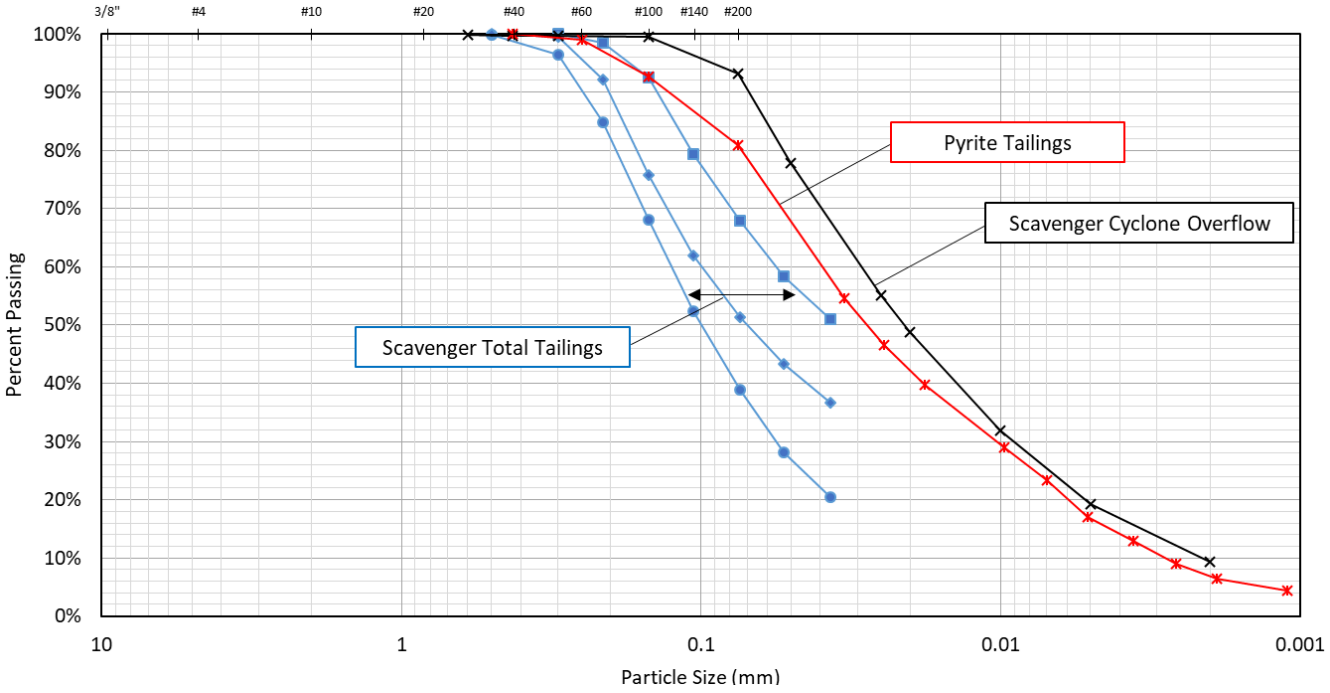
V-3.3 Analysis Locations

Four locations (Figure V-3-2) and column depths were chosen to represent the Skunk Camp TSF impoundment:

1. S1 (scavenger total tailings): representing the coarser fraction of the scavenger tailings that would settle out in the scavenger impoundment first close to the Main Embankment (maximum particle size of 0.4 mm and a fines content between 50% to 60%).
2. S2 (scavenger cyclone overflow): representing the finer fraction of the scavenger tailings within the center of the finer scavenger impoundment (maximum particle size of 0.15 mm, a fines content greater than 90% and clay content less than 5%).
3. P1: pyrite tailings within Pyrite Cell 1 (which are subsequently covered by the scavenger impoundment). Pyrite tailings have a maximum particle size of 0.25 mm, a fines content greater than 80% and clay content less than 5%
4. P2: pyrite tailings within Pyrite Cell 2 (which are subsequently covered by scavenger tailings and the store-and-release closure cover – see Appendix IV for details).

PSDs of the three material types are shown in Figure V-3-1.

Figure V-3-1 Scavenger Total and Cyclone Overflow Tailings Gradations



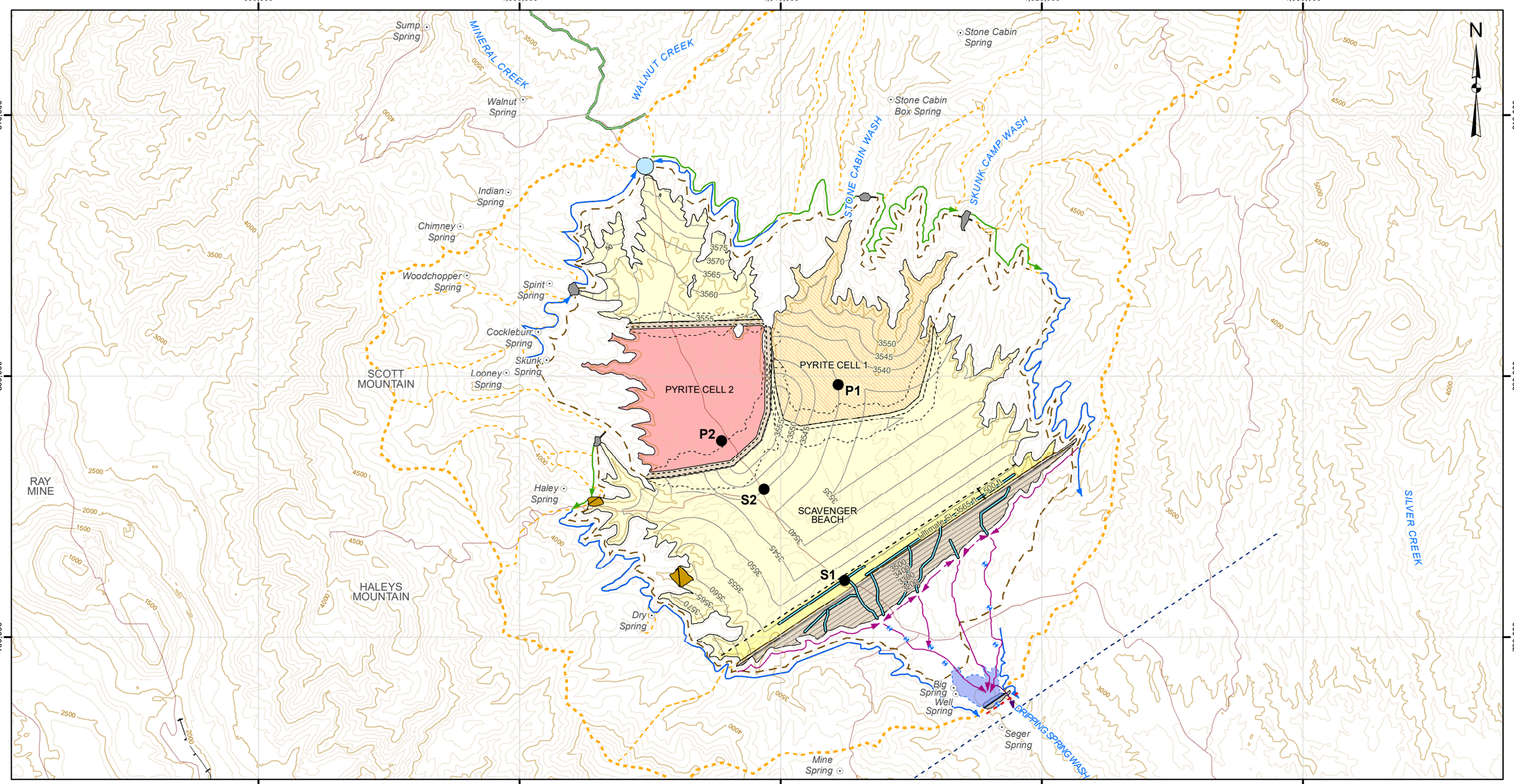
Analysis locations were selected based on where the analyzed material is thickest to estimate greatest settlement and longest time to complete settlement, as shown with depth isopachs in Figure V-3-3.

Table V-1 provides the height of the tailings column assuming no consolidation (based on the simplified TSF staging presented in Appendix II), and the year tailings deposition begins at each run location. The filling schedules are plotted in Figure V-3-4 and are based on the tailings staging model[2].

Table V-1 Tailings Height and Initial Year of Deposition

Run/Location	Height of Tailings Column – No Consolidation (ft)	Production Year Tailings Deposition Starts in Location
S1	419.4	1
S2	433.2	1
P1	209.8	1
P2	199.0	16

[2] The tailings staging model was based on the Mine Plan of Operations (MPO) and is presented in Appendix II of this report.



LEGEND

- 1D CONSOLIDATION MODELING LOCATION
- MAIN EMBANKMENT -CYCLONED SAND
- NEAR DAM SCAVENGER BEACH
- SCAVENGER BEACH
- PYRITE TAILINGS
- PYRITE TAILINGS UNDER SCAVENGER BEACH
- PYRITE CELL EMBANKMENT FOOTPRINT
- CONTAINMENT DAM
- SKUNK CAMP TSF - WEST PLANT PIPELINE CORRIDOR AND TUNNEL
- PROPOSED ROAD
- SPRING
- TSF CATCHMENT BOUNDARY
- SUB-CATCHMENT BOUNDARY
- SURFACE WATER DIVERSION DAM DRAWDOWN PIPELINE
- OPERATIONAL UPSTREAM DIVERSION CHANNEL
- CONTACT WATER COLLECTION DITCH
- SCP EMERGENCY SPILLWAY
- FINGER DRAIN
- SHALLOW ALLUVIAL PUMPBACK WELL
- GROUT CURTAIN
- POINT OF COMPLIANCE LOCATION
- SURFACE WATER DIVERSION DAM
- SEEPAGE COLLECTION DAM
- SEEPAGE COLLECTION POND
- STORM RETENTION POND
- EXISTING ROAD
- EXISTING RAILWAY
- RIVER OR MAJOR DRAINAGE
- INDEX CONTOUR (500ft)
- INDEX CONTOUR (100ft)

NOTES:
1. NAD83, ARIZONA STATE PLANE CENTRAL, GRID COORDINATES IN FEET
2. TOPOGRAPHY BASED ON INTERMAP NEXTMAP DSM AND DTM ACQUIRED IN 2004.
3. CONTAINMENT DAMS REQUIRED FOR AVOIDANCE OF SPRINGS

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0 1 Mile

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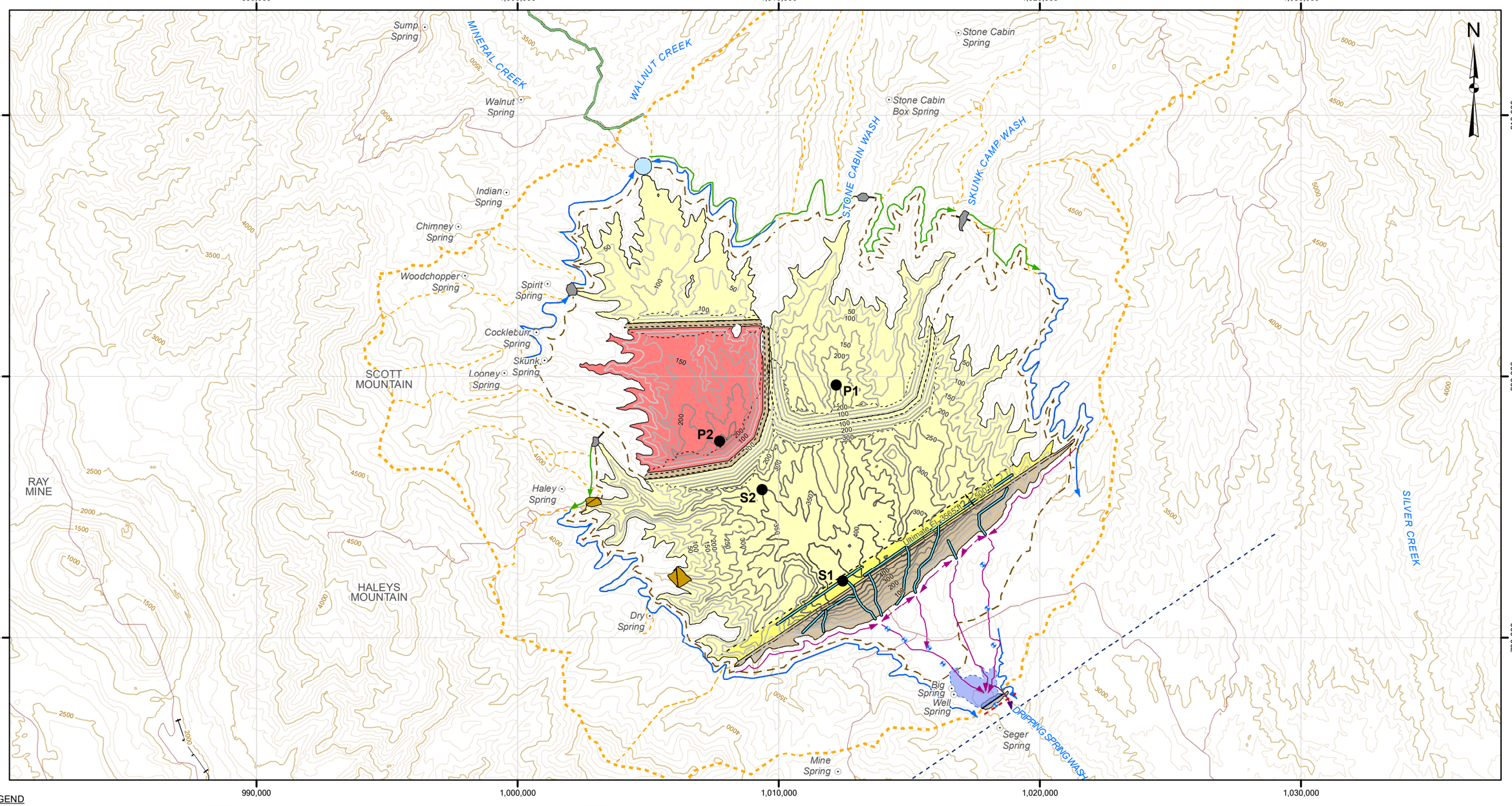
ULTIMATE LAYOUT
CONSOLIDATION MODELING LOCATIONS

PROJECT No. UM09441A23

FIG No. V-3-2

\\int.klohn.com\ProjData\M\PHX\UM09441A23-RES-Skunk Camp Closure Study\400 Drawings\GIS\02_Maps\Reports\SC_TSF_ReclamationPlan\SC_TSF_UltimateLayout_Consolidation_Modeling_Locations.mxd 2021-04-30 1:19:14 PM



LEGEND

- 1D CONSOLIDATION MODELING LOCATION
- MAIN EMBANKMENT -CYCLONED SAND
- NEAR DAM SCAVENGER BEACH
- SCAVENGER BEACH
- PYRITE TAILINGS
- PYRITE CELL EMBANKMENT FOOTPRINT
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- SEEPAGE COLLECTION POND
- STORM RETENTION POND
- SHALLOW ALLUVIAL PUMPBACK WELL
- FINGER DRAIN
- GROUT CURTAIN
- POINT OF COMPLIANCE LOCATION
- EXISTING ROAD
- EXISTING RAILWAY
- RIVER OR MAJOR DRAINAGE
- INDEX CONTOUR (500ft)
- INDEX CONTOUR (100ft)

TAILINGS DEPTH ISOPACH (ft)

- 50
- 100
- 150
- 200
- 250
- 300
- 350
- 400
- 450

NOTES:
1. NAD83, ARIZONA STATE PLANE CENTRAL, GRID COORDINATES IN FEET
2. TOPOGRAPHY BASED ON INTERMAP NEXTMAP DSM AND DTM ACQUIRED IN 2004.
3. CONTAINMENT DAMS REQUIRED FOR AVOIDANCE OF SPRINGS
4. SCAVENGER BEACH ISOPACHS AND PYRITE CELL ISOPACHS INCLUDE THE UNDERLYING CYCLONED SAND EMBANKMENT

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0 1 Mile

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SKUNK CAMP TSF RECLAMATION PLAN

TITLE: SKUNK CAMP TSF
TAILINGS DEPTH ISOPACHS
CONSOLIDATION MODELING LOCATIONS

PROJECT No. UM09441A23

FIG No. V-3-3

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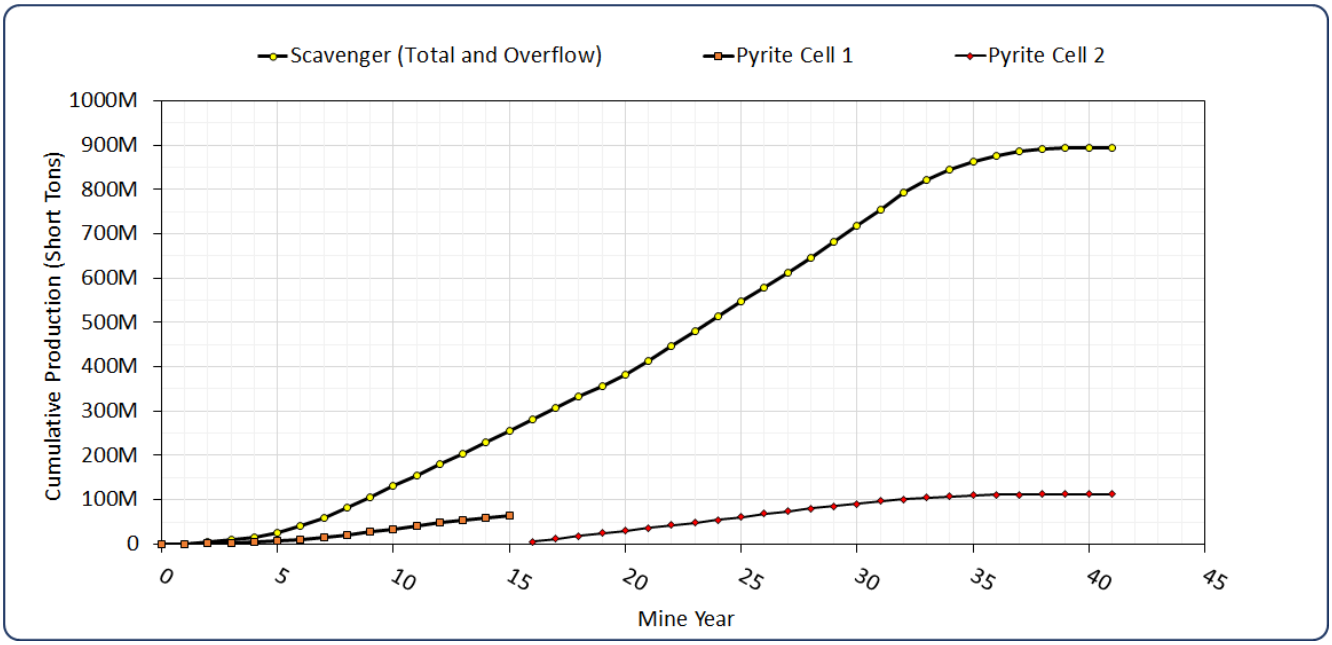
Figure V-3-4 Filling Schedules



V-4 FSCONSOL MODEL INPUT PARAMETERS AND ASSUMPTIONS

V-4.1 General

Input parameters for FSConsol are tailings properties; tailings discharge rate from the mill; the tailings impoundment stage-storage curve; and any surcharge loading following deposition. Scavenger and pyrite tailings were analyzed in FSConsol for 75 years[3] to determine post-closure settlement.

V-4.2 Tailings Physical Parameters

FSConsol models consolidation based on the power relationships discussed in Section V-3.2. These relationships can also be entered manually from consolidation test data.

Compressibility (e vs logσ_v') and hydraulic conductivity (k vs e) data were entered directly into FSConsol based on a series of laboratory test data used to develop best-fit curves for these relationships (KCBCL 2020) to describe the above relationships instead of using the power relationships and empirical constants[4] (A, B, C and D). These relationships are plotted in Figure V-4-1 and Figure V-4-2 with supporting physical parameters summarized in Table V-2. Solids content is defined as the weight of solids divided by the total weight of tailings and is estimated from

[3] A limitation of the FSConsol software is a maximum model duration of 75 years. A time step interval of 30 days was selected to achieve numerical stability. Negligible differences in results were observed with smaller time steps and curve fitting was used to extrapolate beyond the 75 years to estimate long-term settlement.
[4] This approach is considered appropriate and representative of the tailings properties known to date.

oedometer and Rowe cell tests (KCBCL 2020). Due to the relatively low clay content of the three tailings types (less than 5%), they consolidate rapidly under self-weight loading and additional loading at low stresses, as demonstrated in Figure V-4-1.

Figure V-4-1 Void Ratio vs Vertical Effective Stress

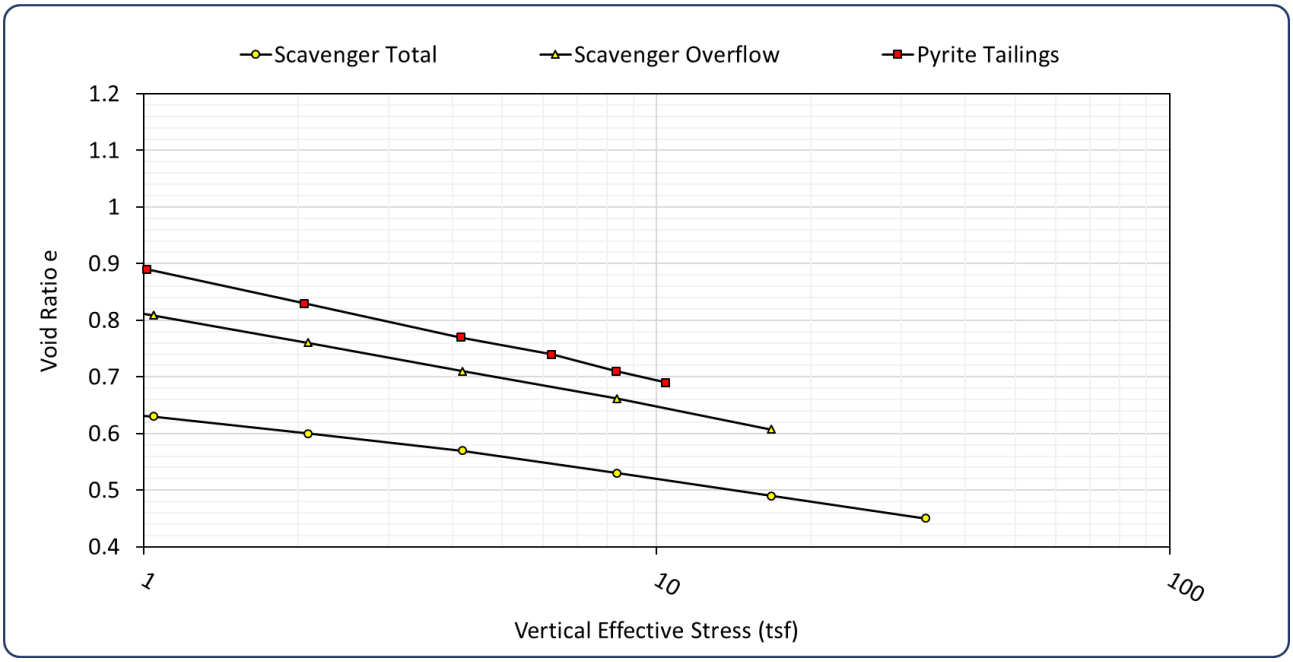


Figure V-4-2 Hydraulic Conductivity vs Void Ratio

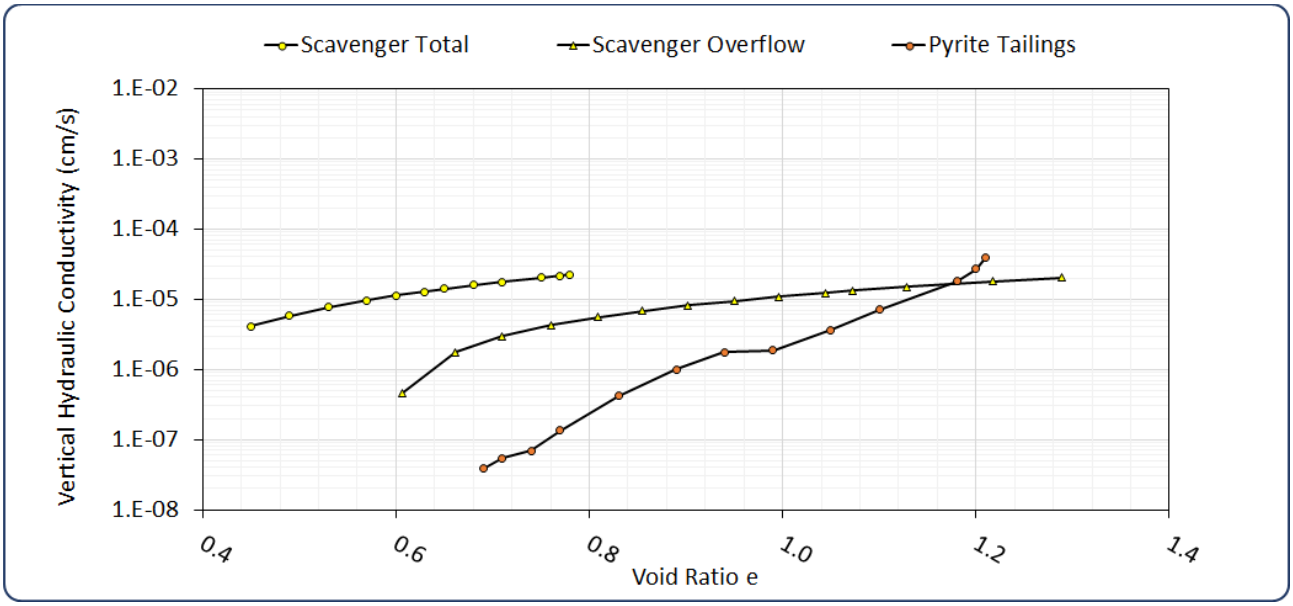


Table V-2 Summary of FSConsol Input Parameters

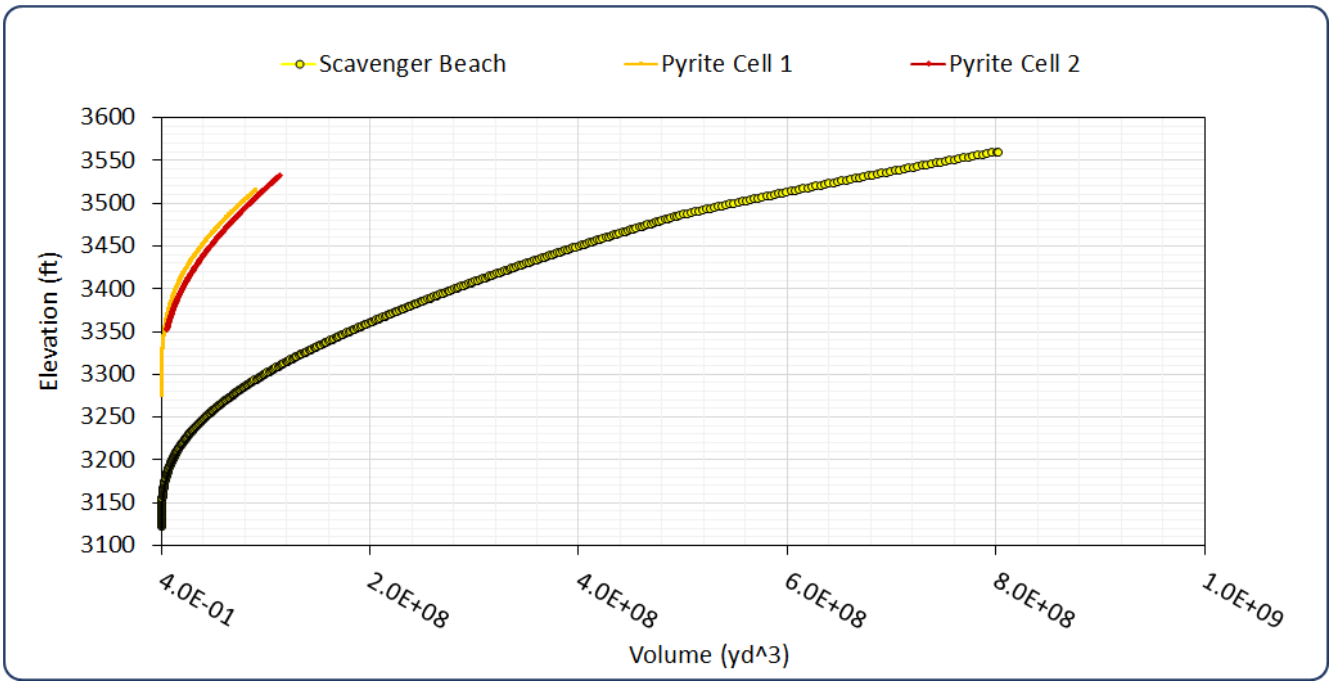
Tailings Type	Sample Name[1]	Years Deposited	Specific Gravity	Initial (Settled) Solids Content	Cv @ 1 tsf (m^2/yr)
Scavenger Total Tailings	Scavenger - 2018	1-41	2.80	78.3%	200
Scavenger Fine Tailings (Cyclone Overflow)	Overflow: Cyclone Overflow (OD) – 2018	1-41	2.80	72.3%	90
Pyrite Tailings (Cell 1)	Pyrite (RC) – 2018	1-15	3.58	71.0%	60
Pyrite Tailings (Cell 2)	Pyrite (RC) – 2018	16-41	3.58	71.0%	60

Notes:
1. Details of tailings parameters are documented in KCBCL (2020).

V-4.3 Tailings Volume and Stage Storage

To facilitate how FSConsol calculates volume (discussed in Section V-3.2), each 1D column was segregated into horizontal layers, each representing one year of deposition in a tailings area. Incremental (annual) tailings volumes were extracted from the tailings staging model[5]. Figure V-4-3 shows the stage-storage relationship for scavenger and pyrite tailings disposal up to elevation 3560 fasl.

Figure V-4-3 Stage Storage Relationships



[5] The tailings staging model was based on the MPO and is presented in Appendix II of this report.

V-4.4 Surcharge Loading for Closure Covers

Surcharge loading, in the form of closure covers and mounding as compensation for predicted settlement, is applied to the surface of the tailings deposit after infilling is completed. The analyses assume that the surcharge does not impede the upward drainage path for tailings consolidation water.

To assess post-closure consolidation of the Skunk Camp TSF, surcharge loading from scavenger tailings and from store and release closure cover were applied to the four models. Surcharge loads are summarized in Table V-3.

Table V-3 Surcharge Loads

Model	Surcharge Material	Years Applied (inclusive)	Thickness (ft)	Surcharge Load[1] (psf)
S1 – Scavenger Total Tailings	Store and Release Cover[1]	42 to 45	2	264
S2 – Scavenger Cyclone Overflow	Store and Release Cover[1]	42 to 45	2	264
P1 – Pyrite Cell 1	Scavenger Tailings Cover[2]	16 to 17	31	3391
	Scavenger Tailings[3]	29 to 42	39	4186
	Store and Release Cover[1]	42 to 45	2	264
P2 -Pyrite Cell 2	Scavenger Tailings Cover[2]	42 to 44	15	1620
	Store and Release Cover[1]	45	2	264

Notes:
1. Surcharge loads were distributed linearly over the period(s) they are applied (i.e., increasing from 0 psf).
2. Store and release cover is assumed to be Gila Conglomerate with a bulk unit weight of 132 pcf (KCB 2017).
3. Scavenger tailings cover for Pyrite Cell 1 is assumed to be placed within one year, based on the staging model (Appendix II). Scavenger tailings bulk unit weight = 108 pcf (based on the consolidation analysis results for scavenger tailings under self-weight (Figure V-5-2) and staging assumptions (Appendix II)).
4. The scavenger tailings overtop the Pyrite Cell 1 embankment at the end of Year 28, based on the staging model (Appendix II). Scavenger tailings bulk unit weight = 108 pcf (based on the consolidation analysis results for scavenger tailings under self-weight (Figure V-5-2) and staging assumptions (Appendix II)).

V-4.5 Boundary and Drainage Conditions

Drainage conditions influence the estimated rate of consolidation. There are distinct differences in the drainage conditions in the scavenger and pyrite tailings due to the two approaches to tailings management (drained vs undrained at the base). FSConsol defines a 1D drainage pathway by describing top and bottom boundary conditions. For all analyses, the top surface of the tailings is a flow boundary through which water can freely pass.

V-4.5.1 Scavenger Total and Cyclone Overflow Tailings

The fluctuation of the phreatic surface in the scavenger tailings impoundment during operations (i.e., non-hydrostatic conditions) combined with variable foundation conditions introduce uncertainties and limitations to this analysis. An increase in the effective stress due to drain down of the tailings pore water will influence the rate of consolidation. The scavenger tailings and cyclone overflow tailings consolidation models (S1 and S2) account for non-hydrostatic conditions by incorporating this increase of effective stress due to the anticipated drain down of the scavenger impoundment over

the life of mine and post-closure. As discussed in Section V-4.1, model results are extrapolated beyond 75 years assuming complete drain down of the scavenger total and cyclone overflow tailings post closure.

The bottom boundary of the scavenger tailings is assumed to be free draining for S1 and S2 based on the expected vertical hydraulic conductivity of the foundation materials. This results in "double" (upward and downward) drainage of the scavenger total tailings and cyclone overflow deposits.

V-4.5.2 Pyrite Tailings

A constant water cap of 5 ft is assumed above the top surface of the pyrite tailings (P1 and P2) to represent the minimum operating pond level required for subaqueous deposition. Pore pressure conditions in the pyrite tailings correspond to hydrostatic pressure from the water cap. Removal of this water cap for closure cover placement has a negligible effect on the overall consolidation estimates.

The bottom boundaries of the pyrite cells are assumed to be impermeable to represent the engineered low permeability layer at the base of the pyrite cells. This results in "single" upward drainage of the pyrite tailings deposits.

V-4.6 Additional Assumptions

Additional physical mechanisms that contribute to tailings consolidation (i.e., erosion, channelization, cementation, changes in geometry, desiccation, etc.) are complex and not accounted for in this analysis. Seismicity is not considered in the analysis, however some settlements (up to 0.5%)[6] may occur due to ground shaking that would require some maintenance if a seismic event were to occur.

In addition, the software makes the following simplifying assumptions:

- vertical drainage only;
- the elevation of the tailings surface is calculated assuming no settlement of the foundation;
- no tailings are in the impoundment at the beginning of the analysis (i.e. at t = 0); and,
- horizontal tailings surfaces (i.e. no tailings slope).

The incremental contributions of the above mechanisms/assumptions to estimates of post-closure settlement are also considered negligible because of the following:

- A "threshold filling rate", which represents the maximum filling rate at which evaporative effects will be significant, has been considered by some researchers in this area. For example, consolidation modelling on gold tailings in Australia has indicated a threshold deposition rate of about 15 ft/year for a very high evaporation rate of 10 ft/year. For comparison, the deposition rate for the Skunk Camp TSF is between 10 ft/year and 15 ft/year for the scavenger tailings and between 5 ft/year and 20 ft/year for the pyrite tailings. The evaporation rate is

[6] Refer to Kramer (1996).

lower (6 ft/year) than the threshold (10 ft/year). Some desiccation is anticipated through operations and closure, but would generally be surficial and not significantly change the estimated post-closure settlement. The pyrite tailings remain saturated during operations and covered post-closure, so desiccation from evaporation effects is not expected.

- At this early stage of the project, detailed calculations have not been carried out to assess the possible impact of lateral drainage, which could allow the tailings to consolidate faster to a higher density. It is judged that given the scale of the tailings deposits, the effect on consolidation duration could be an increase of less than 5% and is within the same order of magnitude for the purpose of this assessment.
- Foundation settlement was assumed to be near fully developed at the post-closure phase of project and are assumed not impact the analysis.

During operations, some segregation of the scavenger tailings will occur during deposition and the scavenger total tailings deposited will also incorporate a significant amount of fine cyclone overflow tailings. Also, the pyrite tailings will be intermixed to some extent with fine slimes segregated from the scavenger tailings. The consolidation settlement estimates presented herein represent the range of potential settlements based on the material properties known to date.

V-5 RESULTS

The results of the consolidation modeling are provided in Table V-4. Detailed summaries of FSConsol time step results for scavenger and pyrite tailings are presented in Figure V-5-1 and Figure V-5-3, respectively . Profiles of effective stress, excess pore pressure, void ratio, dry density and vertical hydraulic conductivity for scavenger and pyrite tailings are presented in Figure V-5-2 and Figure V-5-4, respectively.

V-5.1 Time Step Results

V-5.1.1 Scavenger Total and Cyclone Overflow Tailings

Both scavenger total tailings and cyclone overflow reach nearly full consolidation at the end of operations. The assumed free-draining foundation, slow rate of rise, high initial solids content, and vertical hydraulic conductivity are believed to be the main contributing factors to this magnitude of consolidation during operations.

The fluctuation of the phreatic surface in the scavenger impoundment during operations (i.e., non-hydrostatic conditions) combined with variable foundation conditions introduce uncertainties and limitations to this analysis. Thus, a range of estimated post-closure consolidation settlements are presented herein representing the upper and lower bounds of consolidation within the scavenger tailings during operations. Figure V-5-1 and Figure V-5-2 present the results for the upper bound of estimated post-closure consolidation settlements from this analysis.

Scavenger Total Tailings

The estimated post-closure consolidation settlement within the total scavenger tailings is between approximately 1 ft and 10 ft.

Figure V-5-1 shows that excess pore pressures in the scavenger tailings are low throughout filling/operations (at or above 90% dissipation). The pore water pressure and effective stress profiles shown in Figure V-5-2 indicate that the scavenger total tailings will likely be slightly under-consolidated at the end of operations to a depth of approximately 100 ft, with additional excess pore pressures generated in the entire column during post-closure due to drain down within the scavenger impoundment and closure cover placement. The results suggest that drain down and consolidation of the scavenger total tailings will cease approximately 50 years post-closure. However, the rate of consolidation is reduced from about 4 inches/year less than 1 inch/year after 35 years post-closure.

Scavenger Cyclone Overflow

The estimated post-closure consolidation settlement within the cyclone overflow is between approximately 1 ft and 20 ft, approximately twice that estimated for the scavenger total tailings. The difference is attributed to the distinct difference in initial void ratio and fines/clay content of these materials.

Figure V-5-1 shows that excess pore pressures in the cyclone overflow are low throughout filling/operations (at or above 90% dissipation). The pore water pressure and effective stress profiles shown in Figure V-5-2 indicate that the entire depth of the cyclone overflow will be under-consolidated at the end of operations. Excess pore pressures are generated in the entire column during post-closure due to drain down of the scavenger impoundment. The results suggest that drain down and consolidation of the cyclone overflow will cease approximately 70 years post-closure. However, the rate of consolidation is reduced from about 7 inches/year less than 1 inch/year after 55 years post-closure.

V-5.1.2 Pyrite Tailings

Pyrite Cell 1 and Pyrite Cell 2 tailings reach nearly full consolidation at the end of operations. The fully saturated conditions, slow rate of rise, high initial solids content, and relationship between void ratio, and vertical hydraulic conductivity are believed to be the contributing factors to this magnitude of consolidation during operations.

The estimated post-closure consolidation settlement is between up to 2 ft within Pyrite Cell 1 and up to 4 ft within Pyrite Cell 2. The difference between the cells is attributed to Pyrite Cell 1 tailings consolidating during operations as they are progressively covered by up to 40 ft of scavenger tailings between Year 29 and Year 41 (end of operations). The magnitude of pyrite tailings consolidation settlement is less than that estimated for the scavenger tailings because the pyrite tailings remain saturated through operations and post-closure due to the low-permeability layer restricting downward drainage at the base of the pyrite cells.

As shown in Figure V-5-3, excess pore pressures in the pyrite tailings reach about 50% in Pyrite Cell 1 and 30% in Pyrite Cell 2 during operations due to the impermeable base, higher fines content and lower vertical hydraulic conductivity (compared to scavenger tailings). The pore water pressure and effective stress profiles shown in Figure V-5-4 indicate the pyrite tailings will likely be under-consolidated at the end of operations. The results suggest that drain down and consolidation of pyrite tailings will cease after about 30 years post-closure in Pyrite Cell 1 and after about 55 years post-closure in Pyrite Cell 2. However, the rate of consolidation is reduced from about 6 inches/year to less than 1 inch/year after 10 years post-closure.

V-5.2 Depth Profile Results

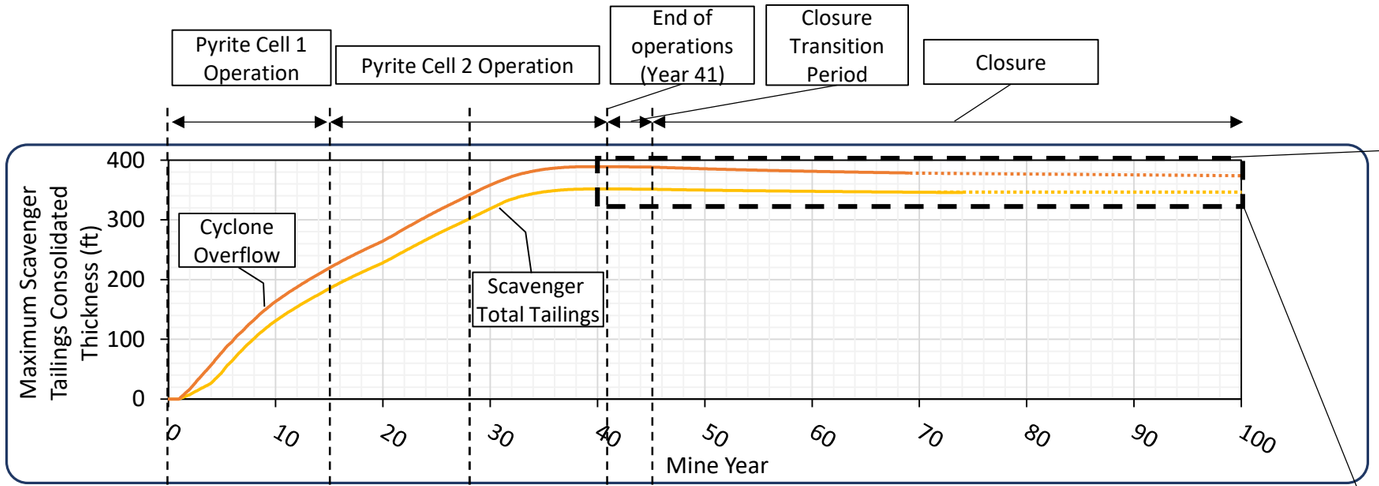
The vertical hydraulic conductivity, void ratio and dry density of the tailings deposits varies with depth due to consolidation and the change in void ratio over time. However, changes in these parameters are negligible for all tailings materials after about 5 years post-closure in the scavenger tailings and after about 20 years post-closure the pyrite tailings, after most of the excess pore pressure has dissipated (see Figure V-5-2 and Figure V-5-4).

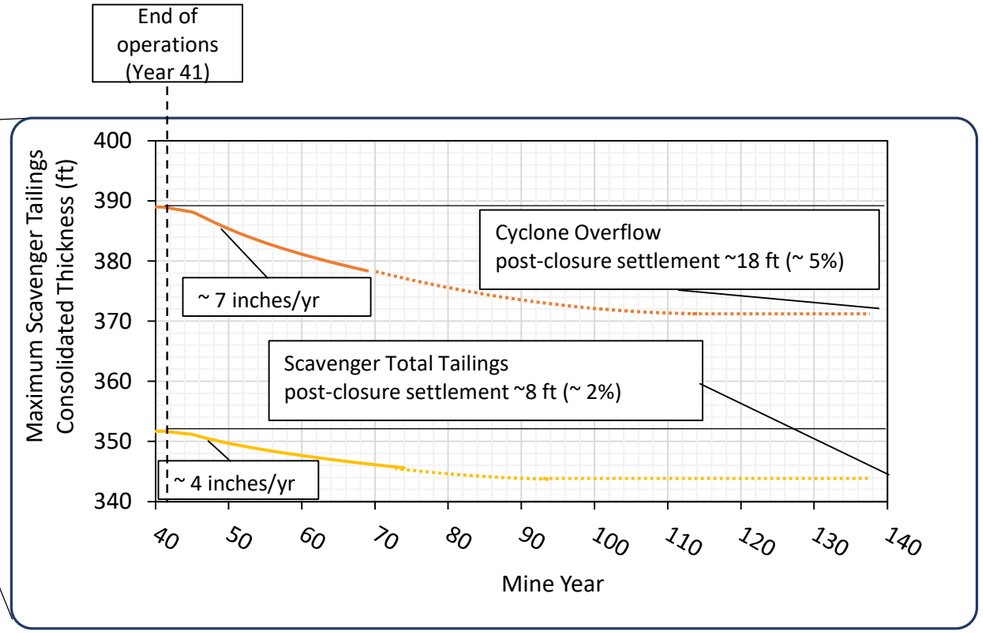
Table V-4 Summary of Model Results – Life of Mine (LOM) vs 20 years Post Closure

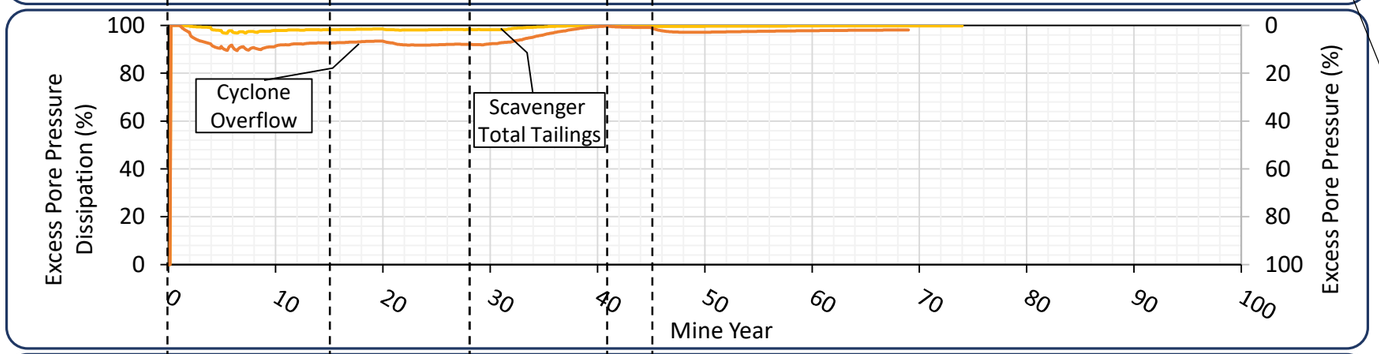
Model/Material	Maximum Tailings Thickness (ft)		Excess Pore Pressure Dissipation (%)		Maximum Dry Density[2] (pcf)		Minimum Vertical Hydraulic Conductivity[3] (cm/s)	
	LOM (Yr 41)	20 Yrs Post-Closure	LOM (Yr 41)	20 Yrs Post-Closure	LOM (Yr 41)	20 Yrs Post-Closure	LOM (Yr 41)	20 Yrs Post-Closure
S1 – Scavenger Total Tailings[4]	352	347	99%	99.9%	112	112	6E-6	6E-6
S2 – Scavenger Cyclone Overflow[4]	389	381	98%	99%	104	104	8E-7	9E-7
P1 – Pyrite Cell 1[4]	181	179	78%	88%	98	99	5E-8	4E-8
P2 – Pyrite Cell 2[4]	177	173	87%	94%	98	99	6E-8	5E-8

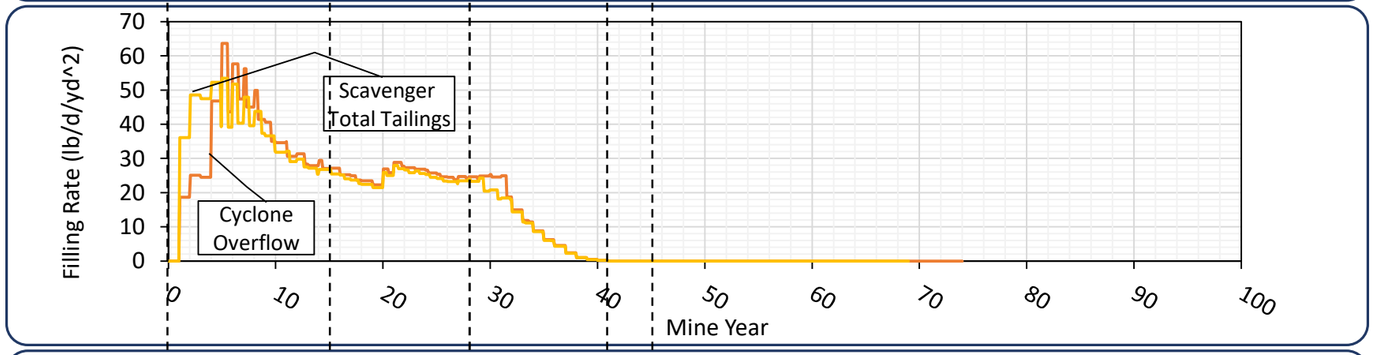
Notes:

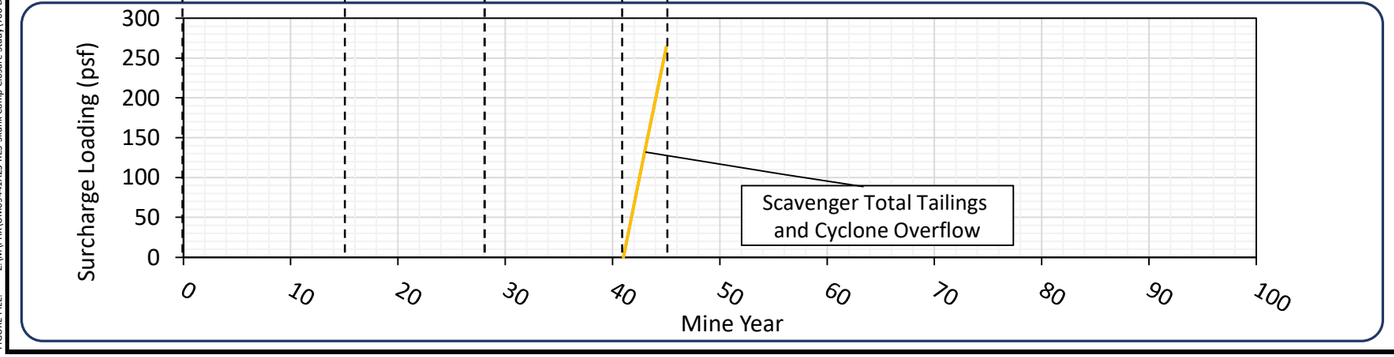
1. Results are based on the following simplifying assumptions:
   - physical mechanisms that contribute to tailings consolidation (i.e., erosion, channelization, changes in geometry, desiccation, etc.) are not considered;
   - vertical drainage only;
   - the elevation of the tailings surface is calculated assuming no settlement of the foundation;
   - no tailings are in the impoundment at the beginning of the analysis (i.e. at t = 0); and
   - horizontal tailings surfaces (i.e. no tailings slope).
2. Maximum dry density occurs at the base of the tailings deposits.
3. Minimum vertical hydraulic conductivity occurs at the base of the tailings deposits.
4. During operations, some segregation of the scavenger tailings will occur during deposition and the scavenger impoundment will also incorporate a significant amount of fine cyclone overflow tailings. Also, the pyrite tailings will be intermixed to some extent with fine slimes segregated from the scavenger tailings. The consolidation estimates presented here represent the expected range based on the material properties known to date.











Model	Thickness at Closure (ft)	Consolidated Thickness (ft)	Post-Closure Settlement (ft)	Years to Reach 100 % Dissipation
S1 (Total)	352	344	8	*50 yrs post-closure*
S2 (Overflow)	389	371	18	*70 yrs post-closure*

NOTES:

1. Results were calculated using the one-dimensional large-strain consolidation software FSConsol.
2. Only vertical drainage is considered, with a free-draining boundary condition assumed at the base.
3. Tailings elevations are calculated assuming no settlement of the foundation.
4. There are no tailings in the impoundment at time = 0 years.
5. Horizontal tailings surfaces are considered (i.e., no tailings slopes).
6. Closure cover for all Scavenger tailings includes 2 ft of store and release cover.
7. Rate of rise is based on the stage storage curve and production rate for the scavenger beach.
8. Dashed lines indicate curve fitting and extrapolation beyond the FSConsol model limit of 75 years.

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TITLE: SCAVENGER TAILINGS ONE-DIMENSIONAL CONSOLIDATION ANALYSIS TIME STEP RESULTS

PROJECT No. UM09441A23

No. V-5-1

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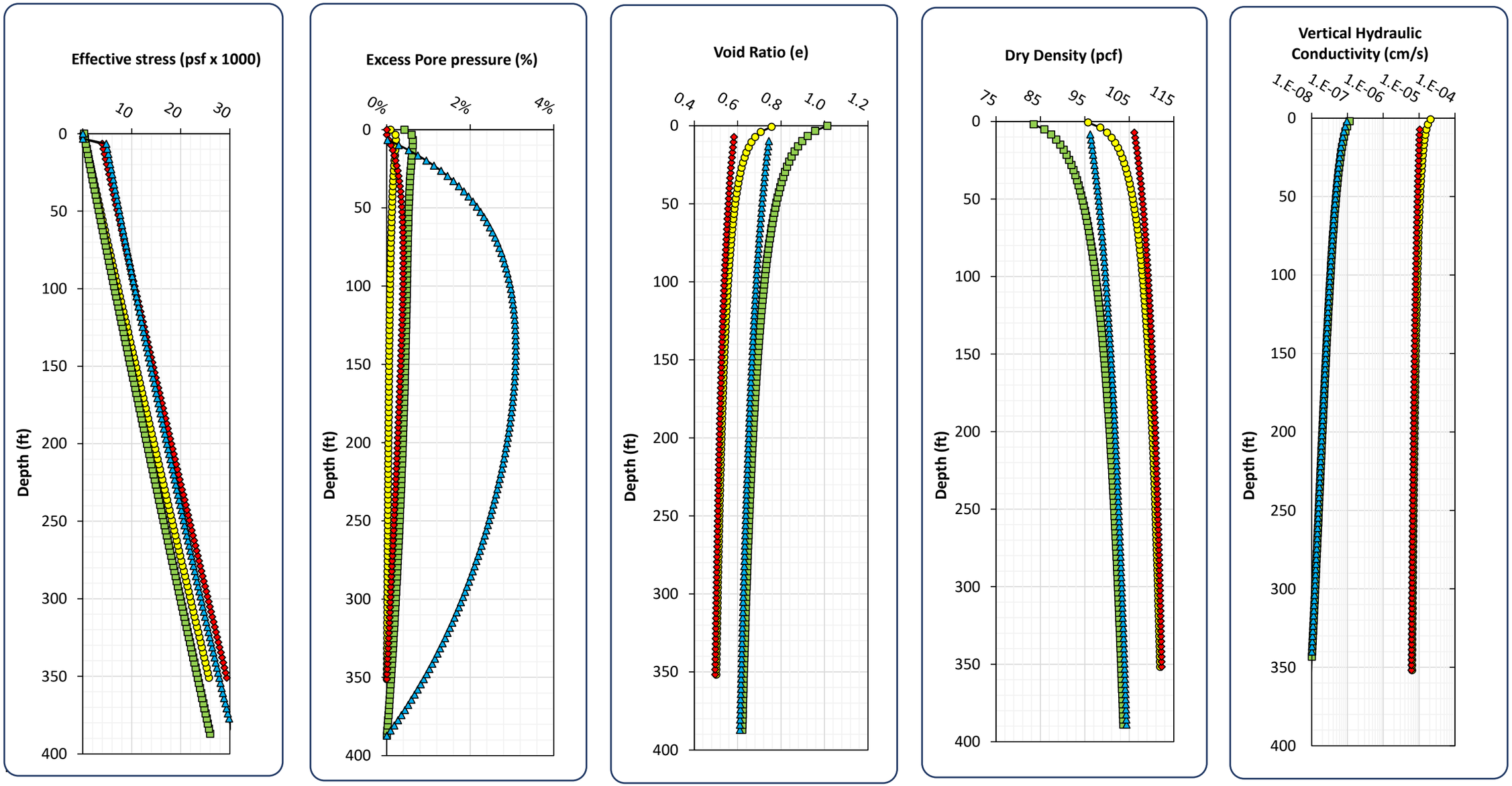

Legend:

- S1 - End of Mine Life (Yr 41)
- S2 - End of Mine Life (Yr 41)
- S1 - 20 Years Post-Closure (Yr 61)
- S2 - 20 Years Post-Closure (Yr 61)

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TITLE: SCAVENGER TAILINGS
ONE-DIMENSIONAL CONSOLIDATION ANALYSIS
DEPTH PROFILE RESULTS

PROJECT No. UM09441A23

No. V-5-2

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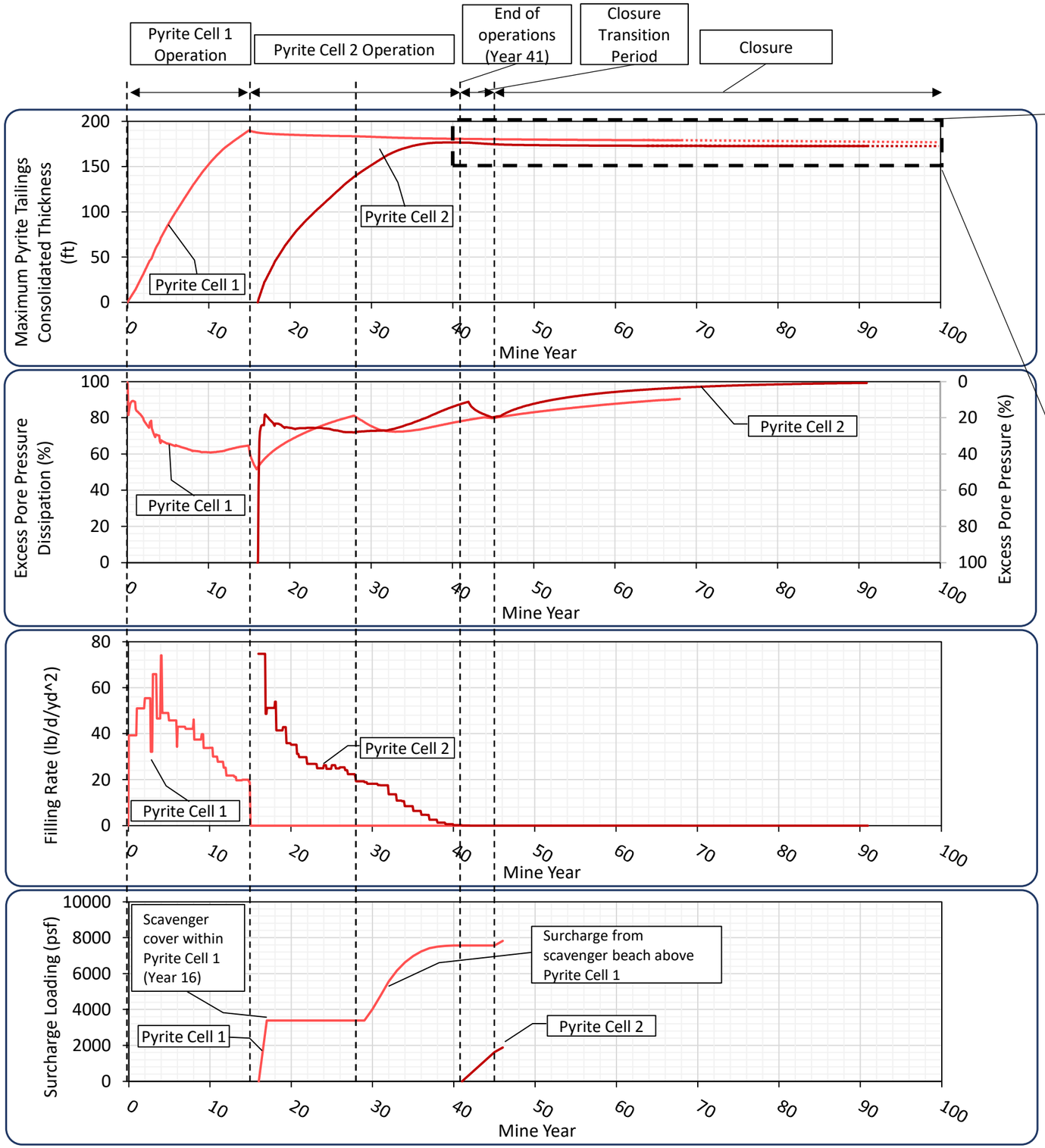

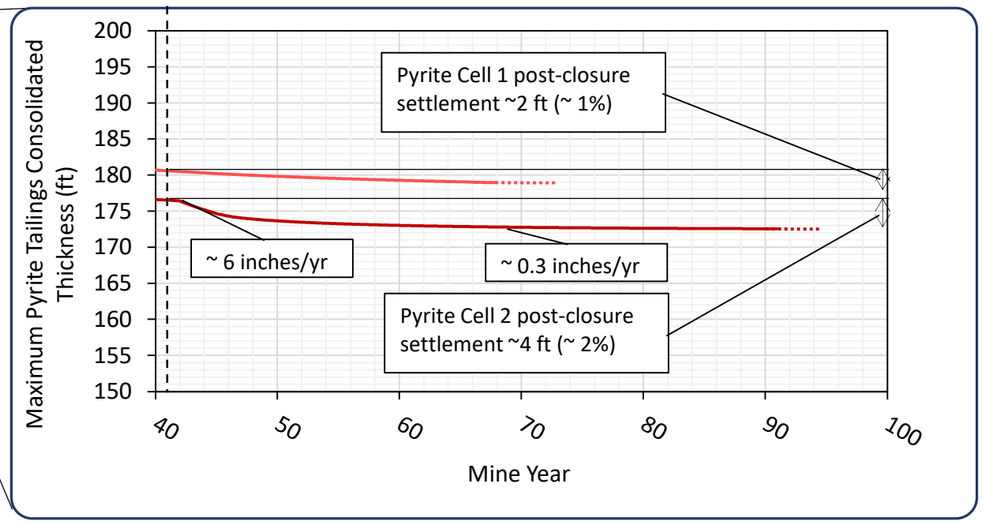

Post-Closure Summary				
Model	**Thickness at Closure (ft)**	**Consolidated Thickness (ft)**	**Post-Closure Subsidence (ft)**	**Years to Reach 100 % Dissipation**
P1 (Cell 1)	181	179	2	*30 yrs post-closure*
P2 (Cell 2)	175	173	2	*55 yrs post-closure*

NOTES:

1. Results were calculated using the one-dimensional large-strain consolidation software FSConsol.
2. Only vertical drainage is considered, with impermeable conditions assumed at the base.
3. Tailings elevations are calculated assuming no settlement of the foundation.
4. There are no tailings in the impoundment at time = 0 years.
5. Horizontal tailings surfaces are considered (i.e., no tailings slopes).
6. The scavenger beach overtops Pyrite Cell 1 at the end of Year 28.
7. Closure cover for Pyrite Cell 1 includes 15 ft of scavenger tailings and 2 ft of store and release cover.
8. Closure cover for Pyrite Cell 2 includes 2 ft of store and release cover.
9. Rate of rise is based on the stage storage curve and production rate for the pyrite cells.
10. Dashed lines indicate curve fitting and extrapolation beyond the FSConsol model limit of 75 years.

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SKUNK CAMP TSF RECLAMATION PLAN

TITLE: PYRITE TAILINGS
ONE-DIMENSIONAL CONSOLIDATION ANALYSIS
TIME STEP RESULTS

PROJECT No. UM09441A23

No. V-5-3

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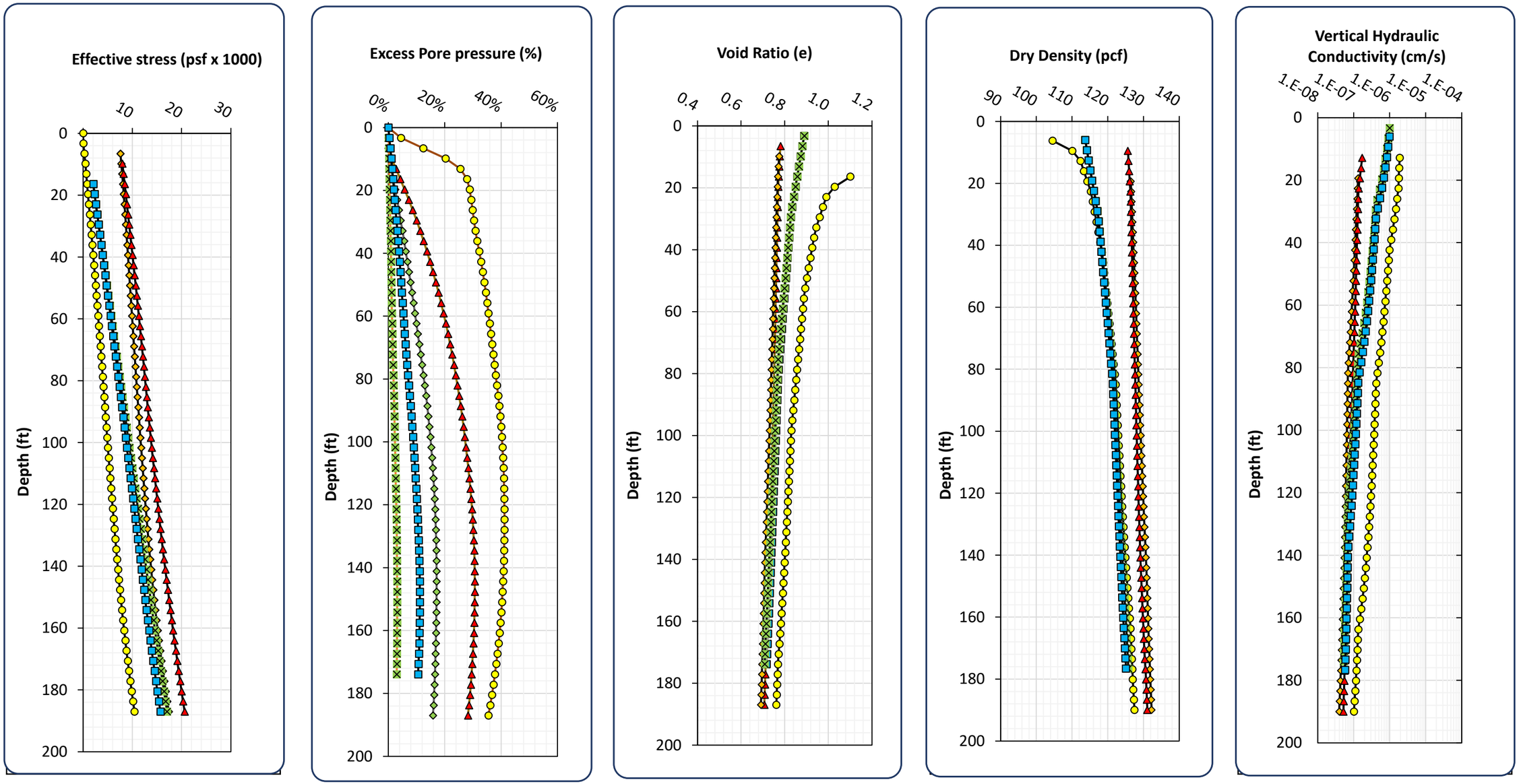

Legend:

- Pyrite Cell 1 - End of Pyrite Cell 1 Operations (Yr 15)
- Pyrite Cell 1 - End of Mine Life (Yr 41)
- Pyrite Cell 2 - End of Mine Life (Yr 41)
- Pyrite Cell 1 - 20 Years Post-Closure (Yr 61)
- Pyrite Cell 2 - 20 Years Post-Closure (Yr 61)

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TITLE: PYRITE TAILINGS
ONE-DIMENSIONAL CONSOLIDATION ANALYSIS
DEPTH PROFILE RESULTS

PROJECT No. UM09441A23 | No. V-5-4

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V-6 CONCLUSIONS

Overall, the results of the FSConsol consolidation analysis predicts tailings densities and consolidation behavior within the expected ranges for copper tailings observed at similar facilities with similar materials.

Consolidation settlement during operations will be known during operations as the dam is constructed and monitored for settlement, following the observational method. The largest estimated settlement during operations occurs within Pyrite Cell 1, where the pyrite tailings consolidate approximately 10 ft between Year 15 and Year 41 as they are covered with up to 40 ft of scavenger tailings.

Depending on the relative amount of consolidation during operations, post-closure consolidation settlement of the scavenger tailings is estimated to be on the order of 1 to 20 ft, with the largest settlement predicted to occur in the cyclone overflow tailings deposited furthest upstream of the Main Embankment. Post-closure consolidation settlement of pyrite tailings is estimated to be less than 5 ft, with the largest settlement occurring in the Pyrite Cell 2 area.

Differential settlement is anticipated across these areas due to variability in the material properties over the mine life. Observations during operations will improve the estimates of post closure differential settlement.

Based on these results, there are no fatal flaws to dam safety, functionality of water management infrastructure, surface drainage, or other post-closure infrastructure. Differential settlements can be monitored and easily mitigated by adaptative management through the closure maintenance and monitoring program. The most significant impact of post-closure consolidation would occur at the deepest part of the scavenger impoundment (cyclone overflow) and the deepest part of Pyrite Cell 2, where settlements have potential to cause water ponding in these areas. Table V-5 summarizes the approach to manage post-closure consolidation settlement and minimize the risk of ponding.

Table V-5 Approach to Post-Closure Consolidation Settlement

Technical Focus	Description	Potential Program to Address Risk or Opportunity
Depth of tailings	The deepest part of the cyclone overflow areas of the scavenger impoundment will undergo the greatest settlement. The deepest part of Pyrite Cell 2 will undergo the greatest settlement within the pyrite tailings.	Place the closure cover such that the deepest area of the scavenger impoundment has a mound of 20 ft, to mitigate potential future ponding. Similarly, place the closure cover such that the deepest area of the pyrite tailings has a mound of 5 ft
Material Variability	Fluctuations in material properties (e.g., gradation, specific gravity, initial solids content) throughout the life of mine may result in differential settlements.	Prepare adaptive management plans that apply to operations and closure maintenance and monitoring activities to identify areas at greatest risk of post-closure settlements.

Technical Focus	Description	Potential Program to Address Risk or Opportunity
Post-closure monitoring and maintenance	Settlement is likely to cause ongoing maintenance of the final cover during the closure-active care phase.	The majority of settlement is expected within 10 years post-closure. A monitoring and maintenance program of settlement of the cover surface should be completed during this time. Monitoring observations will be used to inform potential mitigations required beyond 10 years post-closure.
Seismicity	A small amount of settlement (~0.5%) may occur after a seismic event that would require maintenance.	Prepare and implement a monitoring plan and an emergency response plan that include actions following a seismic event, including inspections and maintenance as required.

REFERENCES

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APPENDIX VI

Seepage Collection Pond Post-Closure Water Balance

Appendix VI
Seepage Collection Pond Post-Closure Water Balance

VI-1 INTRODUCTION

This appendix summarizes the water balance approach used to estimate the volume of water that will require active or passive management at the Skunk Camp Tailings Storage Facility (TSF) Seepage Collection Pond (SCP) after the end of operations (Mine Year 41) under average annual conditions. The scope of the water balance includes inflows and outflows to the SCP based on climate conditions (e.g., precipitation, runoff, and evaporation) and seepage from the TSF, which will be collected through a series of finger drains in the embankment and impoundment, see Figure 2.2 in the main report. The main objective of this water balance is to gain an understanding of the inflows and outflows to the SCP during post-closure and identify if active seepage management is required and, if so, for how long.

This appendix has the following format:

- Section VI-2: Description of the conceptual water balance
- Section VI-3: Summary of model parameters and assumptions
- Section VI-4: Presentation of conceptual water balance results
- Section VI-5: Summary of key conclusions of the conceptual water balance

VI-2 CONCEPTUAL WATER BALANCE

Figure VI-1 presents the conceptual water balance schematic and Table VI-1 summarizes the inflows, outflows, and the calculations used to estimate the flows. The assumptions used to estimate the magnitude of the flows are provided in Section VI-3.

Figure VI-1 SCP Post-Closure Conceptual Water Balance Schematic

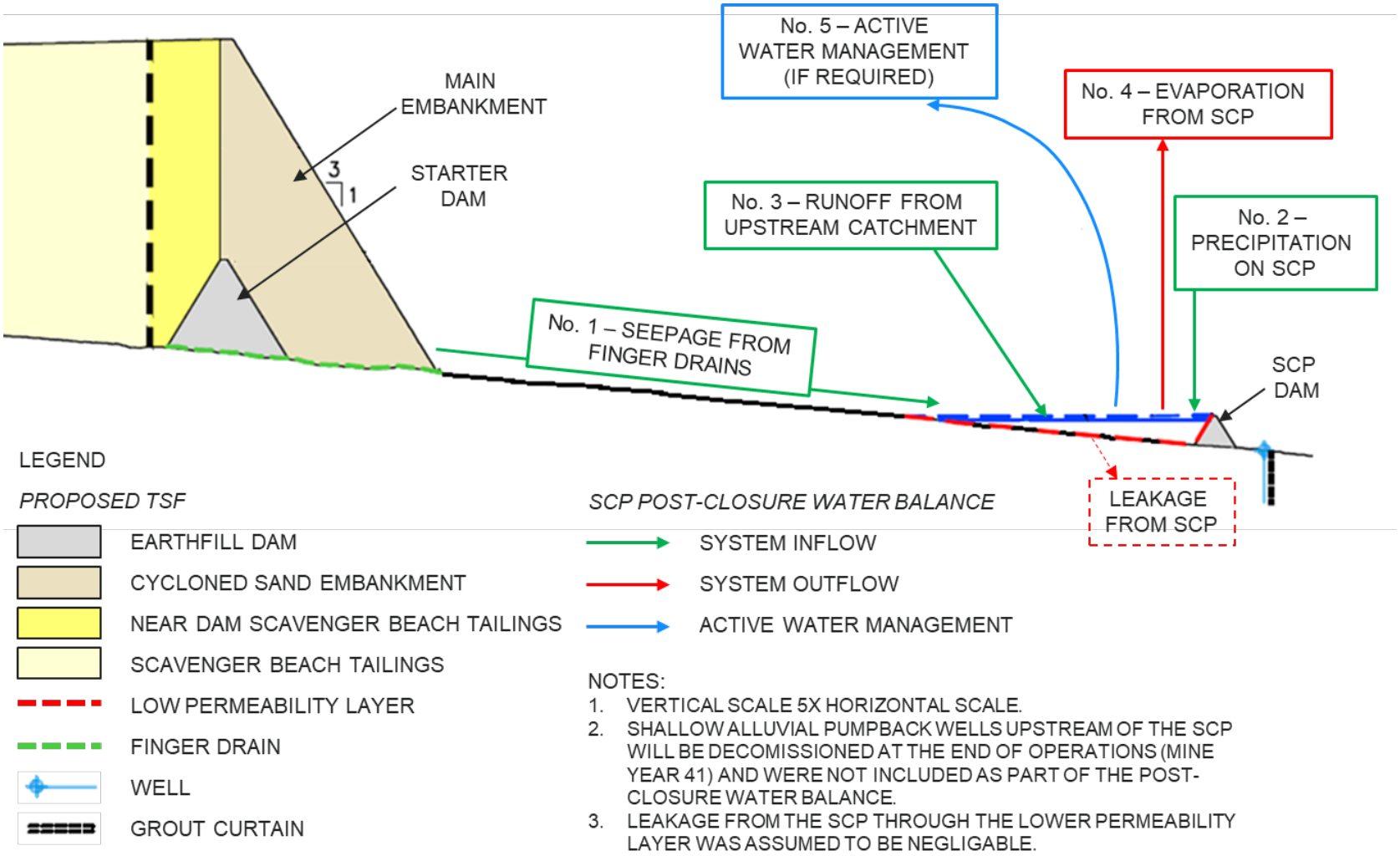


Table VI-1 SCP Post-Closure Conceptual Water Balance Summary

Flow No.	Description	Calculation
Inflows[1]		
1	Seepage from Finger Drains	Rates obtained from Montgomery & Associates' (M&A) Regional 3D Groundwater Model. Inputs to the Regional 3D Groundwater Model were developed by KCBCL (2020).
2	Precipitation on SCP	$Annual\ Precipiation * SCP\ Area$
3	Runoff from Upstream Catchment	$Annual\ Precipiation * Catchment\ Area * Runoff\ Coefficent$
Outflows		
4	Evaporation from SCP	$SCP\ Area * Annual\ Evaporation$
-	Leakage from SCP[2]	Assumed negligible due to low permeability layer.
Inflows – Outflows		
5	Active Water Management[3]	$\sum(Inflows) - \sum(Outflows)$

Notes:
1. Shallow alluvial pumpback wells upstream of the SCP will be decommissioned at the end of operations (Mine Year 41), see Figure 4.2 in the main text. As such, flows from the shallow alluvial pumpback wells were not included as part of the SCP post-closure water balance.
2. Leakage from the SCP is assumed to be negligible due to the low permeability layer, therefore, a flow number was not assigned.
3. Active water management is only required when inflows exceed outflows.

VI-3 MODEL PARAMETERS

VI-3.1 General

The conceptual water balance for the SCP is based on the Skunk Camp TSF Alternative 6 layout prepared for the Draft Environmental Impact Statement (DEIS) (KCB 2018). The SCP has been relocated since the DEIS to improve seepage capture, as shown on Figure 2.2 of the main report. Water balance flows are calculated on an annual timestep assuming average climate conditions, see Appendix IV-A for discussion on climate.

VI-3.2 Climate Conditions

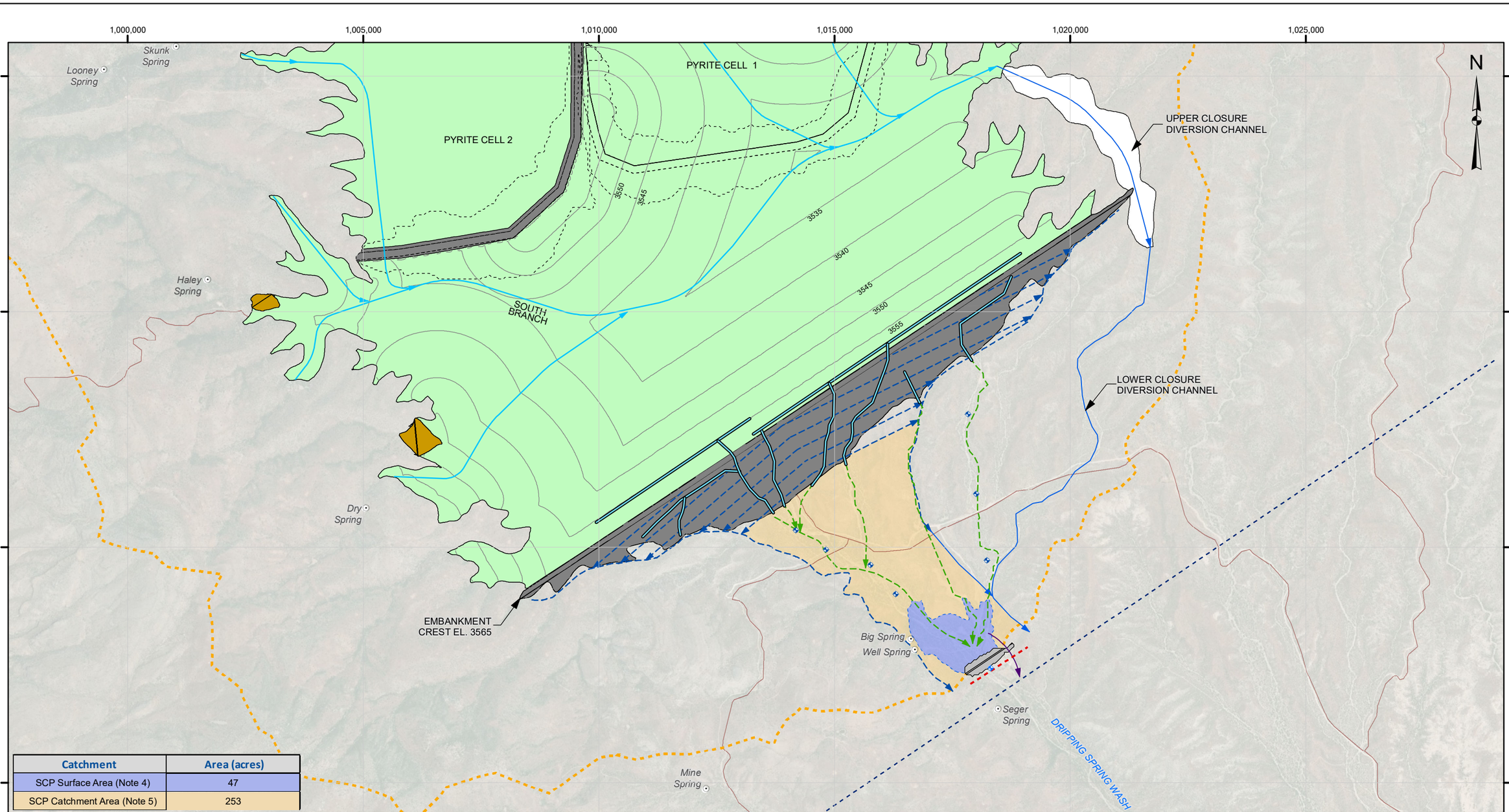
The precipitation, evaporation, and runoff flows were estimated under average climate conditions, summarized in Table VI-2. Average annual precipitation and potential evaporation values were developed based on a long-term climate data set scaled to the Skunk Camp site, refer to Appendix IV-A.

Table VI-2 Average Precipitation and Evaporation

Month	Precipitation[1] (inches)	Potential Evaporation[2] (inches)
January	2.1	3.0
February	1.9	3.6
March	2.2	5.4
April	0.7	7.0
May	0.4	9.0
June	0.3	9.3
July	1.8	8.7
August	2.7	7.8
September	1.4	6.5
October	1.2	5.1
November	1.4	3.6
December	2.1	3.0
Annual	**18.2**	**72.1**

VI-3.3 Catchment and Pond Area

The SCP Surface Area (ponded area) and SCP Catchment Area (natural ground) are shown on Figure VI-2. The SCP Surface Area will fluctuate based on system inflows and outflows, which in turn would impact the quantity of precipitation, runoff, seepage, and evaporation at the SCP. For the purposes of this analysis, the SCP Surface Area and SCP Catchment Area were assumed to be constant.



Catchment	Area (acres)
SCP Surface Area (Note 4)	47
SCP Catchment Area (Note 5)	253

LEGEND

- RECLAIMED EMBANKMENT
- RECLAIMED TAILINGS SURFACE
- PYRITE CELL EMBANKMENT FOOTPRINT
- CONTAINMENT DAM
- SKUNK CAMP TSF - WEST PLANT PIPELINE CORRIDOR AND TUNNEL
- SPRING
- TSF CATCHMENT BOUNDARY
- TAILINGS SURFACE CHANNELS
- CLOSURE EMBANKMENT BENCH AND TOE DITCHES
- FINGER DRAIN COLLECTION PIPE
- CLOSURE DIVERSION CHANNEL
- SCP EMERGENCY SPILLWAY
- SEEPAGE COLLECTION POND CATCHMENT
- CLOSURE SURFACE DIVERSION CHANNEL EXCAVATION
- FINGER DRAIN
- SHALLOW ALLUVIAL PUMPBACK WELL
- DECOMISSIONED PUMPBACK WELL
- GROUT CURTAIN
- POINT OF COMPLIANCE LOCATION
- SEEPAGE COLLECTION DAM
- SEEPAGE COLLECTION POND
- EXISTING ROAD
- EXISTING RAILWAY
- RIVER OR MAJOR DRAINAGE

NOTES:
1. NAD83, ARIZONA STATE PLANE CENTRAL
2. TERRAIN AND IMAGERY DATA SOURCE: ESRI
3. CONTAINMENT DAM REQUIRED FOR AVOIDANCE OF SPRINGS
4. FOR THE PURPOSE OF THE CLOSURE WATER BALANCE, THE SCP SURFACE AREA WAS ASSUMED TO BE CONSTANT
5. THE SCP CATCHMENT AREA IS NATURAL GROUND

NOT FOR CONSTRUCTION

TO BE READ WITH KLOHN CRIPPEN BERGER REPORT DATED: MAY 2021

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SKUNK CAMP TSF RECLAMATION PLAN

TITLE: SEEPAGE COLLECTION POND SURFACE AND CATCHMENT AREAS

PROJECT No. UM09441A23

FIG No. VI-2

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VI-3.4 Runoff Coefficients

As shown in Figure VI-2, the SCP Catchment Area consists of natural ground. Average annual runoff coefficients are summarized in Table VI-3.

Table VI-3 Runoff Coefficients

Ground Type	Applicable Area	Average Annual Runoff Coefficient
Natural Catchment	SCP Catchment Area	0.15[1]
Pond Surface	SCP Surface Area	1.0

Note:

1. Natural Catchments are defined as undisturbed areas where tailings deposition has not occurred. Based on the USGS Pinto Creek Below Haunted Canyon Near Miami station (09498501) data from years with precipitation values close to the site's average annual precipitation (KCB 2018).

VI-3.5 Seepage from Finger Drains

Montgomery and Associates (M&A) has developed a three-dimensional (3D) regional groundwater model to assess the impact of seepage from the TSF on the downstream environment and to develop a seepage management plan to achieve compliance (M&A 2020). Based on the results of the 3D regional groundwater model, the TSF design will incorporate several finger drains beneath the Main Embankment and into the impoundment close to the embankment (see Figure 2.2 of the main report). Seepage from the finger drains will be conveyed to the SCP through a series of Finger Drain Collection Pipelines, see Figure 4.2 in the main report. The finger drains will continue to convey seepage after the end of operations, gradually drying out until approximately Mine Year 286 when flows from the finger drains are expected to stop, see Table VI-4.

Table VI-4 Finger Drain Seepage Rates (M&A 2020)

Mine Year	No. of Drains with Flow	Average Seepage Per Drain (gpm)	Average Seepage of All Drains (gpm)	Average Seepage of All Drains (acre-ft/year)
41	19	15.4	292.9	472.3
46	20	18.8	375.4	605.5
51	20	18.7	373.1	601.8
56	20	17.1	342.1	551.7
66	20	14.4	287.2	463.2
86	18	10.2	183.6	296.1
136	10	5.6	56.4	91.0
286	4	0.0	0.1	0.1

Groenendyk, D., "[Skunk Camp] Seepage Control Updates", e-mail message to K. Patterson, May 22, 2020.

VI-4 RESULTS

The results of the SCP post-closure water balance are summarized in Table VI-5.

Table VI-5 SCP Post-Closure Simplified Water Balance Results

Mine Year	Inflows to SCP (acre-ft/year)				Outflows from SCP (acre-ft/year)		Inflows – Outflows (acre-ft/year) [2]	Inflows – Outflows (gpm) [2]
	No. 1 – Seepage from Finger Drains	No. 2 – Precipitation on SCP	No. 3 – Runoff from Upstream Catchment	Total Inflows to SCP	No. 4 – Evaporation from SCP	Total Outflows from SCP		
41[1]	472	72	58	601	284	284	318	197
46	606	72	58	735	284	284	451	280
51	602	72	58	731	284	284	447	277
56	552	72	58	681	284	284	397	246
66	463	72	58	592	284	284	309	191
86	296	72	58	425	284	284	142	88
136	91	72	58	220	284	284	-64	-39
286	0	72	58	129	284	284	-154	-96

Notes:

1. End of Operations
2. Red highlighted cells indicate that there is excess water going into the SCP, which needs to be actively managed. The magnitude of these flows can be managed through spray evaporators. The green highlighted cells indicate that the SCP is in deficit and the inflows can be managed through evaporation.

VI-5 CONCLUSIONS

Based on the results of the conceptual post-closure SCP water balance, the SCP will require active water management measures (e.g., spray evaporators) to manage the surplus of water after the end of operations. Based on linear interpolation of the net inflows – outflows to the SCP, the SCP will achieve a net zero water balance at approximately Mine Year 120, at which point active management measures can be decommissioned and the SCP can be passively managed with a net deficit. The regional groundwater modeling indicates that seepage from the finger drains will cease in Mine Year 286, at which point the SCP can be decommissioned.

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Montgomery & Associates. (M&A). 2020. Skunk Camp TSF Predictive Groundwater Modeling. *[to come]*.