
Decision Notice and Finding of No Significant Impact for the Resolution Copper Mining Baseline Hydrological and Geotechnical Data Gathering Activities Plan of Operations

USDA Forest Service
Globe and Mesa Ranger Districts
Tonto National Forest
Pinal County, Arizona

Introduction

In June 2013, Resolution Copper Mining LLC (Resolution) submitted the proposed *Plan of Operations for Baseline Hydrological and Geotechnical Data Gathering Activities* (Baseline Plan) to the United States Department of Agriculture (USDA) Forest Service for approval. Approval of the Baseline Plan will authorize the use of National Forest System (NFS) land for collection of hydrological, geochemical and geotechnical baseline data in an area where Resolution is proposing to construct a tailings storage facility (TSF). Subsequently, in November 2013, Resolution submitted the proposed *Resolution Copper Mining General Plan of Operations* (MPO), for approval, which includes the TSF and other surface disturbing activities associated with development of a large-scale underground copper mine. The Forest Service prepared an Environmental Assessment (EA) in compliance with the *National Environmental Policy Act* of 1969 (NEPA) to consider approval of the Baseline Plan. This Draft Decision Notice and Finding of No Significant Impact (Draft DN/FONSI) responds to the proposed Baseline Plan only. The Forest Service is developing a separate Environmental Impact Statement (EIS) to respond to the proposed MPO, which will rely, in part, on the data collected under the approved Baseline Plan.

The Proposed Action is to approve the proposed Baseline Plan as submitted by Resolution and modified over the course of the environmental analysis. Operations under the Baseline Plan will cause direct surface disturbance on 75.4 acres of NFS land located in the Globe and Mesa Ranger Districts of the Tonto National Forest (Forest) in Pinal County, Arizona. This surface disturbance will include construction of temporary access roads and drilling/trenching sites; improvement of existing NFS roads; use of existing user-created routes; and installation of groundwater monitoring wells, geotechnical boreholes and trenches. These proposed activities are described in detail in Chapter 2 of the EA.

The purpose and need for the Proposed Action is to allow collection of hydrological, geochemical and geotechnical data, which will be used to support analysis of the proposed TSF in a subsequent EIS for the proposed MPO. The Proposed Action would provide information needed to meet the requirements of 40 *Code of Federal Regulations* (CFR) Section (§) 1502.22, which requires the Forest Service to include information in an EIS that is “essential to a reasoned choice among alternatives”. The Baseline activities are needed to provide information necessary for evaluation of geotechnical stability and potential impacts to water quality in the EIS for approval of the MPO. Evaluation of geotechnical stability and water quality issues will be critical to support a reasoned choice among alternatives for

the proposed TSF in the EIS for the MPO. The Baseline activities will also provide data that will support Resolution's on-going design efforts for the proposed TSF.

Decision and Reasons for the Decision

Based upon my review of the two alternatives analyzed in detail in the EA, the No Action and Proposed Action, I have decided to select the Proposed Action as described in Chapter 2 of the EA, including applicant-proposed environmental protection measures (EPMs) and Forest-proposed mitigation measures. I have also decided that additional terms and conditions of approval and species-specific conservation measures will be required. The Proposed Action will meet the purpose and need, and comply with the *General Mining Law* of 1872 as amended, the *Organic Administration Act* of 1897, and Forest Service mining regulations set forth at *36 CFR 228 Subpart A*. This alternative is also consistent with the Forest Plan and Forest Service mineral policy, which is to "encourage, facilitate, and administer the orderly exploration, development, and production of mineral and energy resources on NFS lands to help meet the present and future needs of the Nation" (FSM 2802). The activities associated with the Baseline Plan would be integrated with the planning and management of other NFS lands.

My decision and the reasons for my decision are described below with a focus on: 1) Activities that will be approved; and 2) Requirements for environmental protection.

Activities that will be approved

My decision to select the Proposed Action does not constitute final approval of the Baseline Plan. Following issuance of this DN/FONSI, Resolution must revise the Baseline Plan as necessary to conform to the requirements of this DN. The Baseline Plan will be resubmitted to the Forest Service along with a reclamation bond or other acceptable form of financial assurance. The financial assurance will provide for reclamation in accordance with the revised Baseline Plan in the event that Resolution fails to complete the reclamation. Once I determine that the revised Baseline Plan conforms to this DN and that the financial assurance is acceptable, I will approve the Baseline Plan.

The Baseline activities included in the plan I will approve include the following:

- 1) Construct 16 drill sites to accommodate 16 hydrological testing and monitoring wells that will affect approximately 4.21 acres. Fourteen of these drill sites will be co-located with geotechnical drill holes.
- 2) Complete 38 geotechnical drill holes and piezometer installations that will affect approximately 0.27 acres.
- 3) Construct 32 geotechnical test trenches at 32 sites that will affect approximately 1.28 acres.
- 4) Complete roadway improvements to facilitate access to hydraulic testing and monitoring wells, geotechnical drill holes/piezometers, and trenches on approximately 12.09 miles of existing roads on NFS lands that will affect approximately 14.67 acres.
- 5) Develop two laydown yards for storage of materials during construction that will affect approximately 2.19 acres.
- 6) Improve and/or maintain temporary access roads on previously disturbed areas for access to drill sites with monitoring wells or piezometers, which will affect 3.94 acres.

- 7) Utilize short-term temporary access roads to bring a tracked drill rig and a service truck to off-road locations, which will affect approximately 7.07 acres.

Construction and installation of the Baseline Plan activities is expected to take approximately six months for the 16 hydrological drill sites, nine to ten months for the 38 geotechnical drill sites, and three to four months for the 32 test trenches. Construction and installation would occur concurrently (as appropriate) and would be completed within the first two years of the ten year period covered by the Baseline Plan. Road maintenance and access to the hydrological testing and monitoring wells would occur throughout the authorization period.

The activities under the plan I will approve were modified somewhat from Resolution's original proposal as described in Section 2.3 of the EA. These modifications were made during the environmental analysis in response to external and internal scoping comments. The activities in the plan that will be approved are designed to minimize adverse effects to NFS surface resources to the extent feasible, while providing for collection of adequate baseline data to support the planned EIS for the proposed MPO.

Requirements for Environmental Protection

I will approve the Baseline Plan in accordance with the Forest Service regulations for locatable minerals (*36 CFR 228 Subpart A*). The purpose of these regulations is "to set forth rules and procedures through which use of the surface of NFS lands in connection with operations approved by the United States mining laws ... shall be conducted so as to minimize adverse environmental impacts on National Forest System surface resources." The regulations require me to consider "the economics of the operation along with other factors in determining the reasonableness of the requirements for surface resource protection (*36 CFR §228.5*) and require that operations "be conducted so as, where feasible, to minimize adverse environmental impacts on National Forest surface resources" (*36 CFR §228.8*).

I also evaluated whether additional requirements for surface resource protection were necessary to assure consistency with Forest Plan standards and guidelines. My decision is consistent with the Forest Plan.

I carefully considered requirements for environmental protection for the project including:

- Applicant-proposed environmental protection measures (EPMs)
- Forest Service-proposed mitigation measures (MMs)
- Terms and conditions of approval
- Species-specific conservation measures

Applicant-Proposed Environmental Protection Measures

Resolution proposed a number of EPMs, which were modified somewhat during the environmental analysis as provided for by *36 CFR §220.7*. These EPMs address air quality; water quality; solid wastes; scenic values, recreation, and other uses; biological resources; cultural resources; public safety; fire protection; and hazardous substances/petroleum products/drilling materials as described below. My decision requires that these EPMs be included in the approved plan of operations.

Air Quality

AQ – 1: Fugitive dust-suppression techniques will be used as necessary, such as applying water during road construction and Baseline Plan activities.

AQ – 2: Water will be used in the drilling process to control fugitive dust production from the drill.

AQ – 3: Construction and service vehicles will drive slowly (15 mph or less) on dirt roads and adjust their speed as conditions dictate, to minimize creating a dust trail.

AQ – 4: To the extent practicable and consistent with the efficient and safe implementation of the Baseline Plan, Resolution will limit project-related traffic on NFS lands.

AQ – 5: Drill rigs, drilling equipment, pumps and other mobile and stationary sources of air emissions at drilling and test trench sites will be operated within manufacturer specifications and in accordance with applicable regulations to reduce air pollutant emissions. Total diesel fuel used for drilling activities will be tracked and monitored. Engines utilized in operations will be equipped with the pollution control equipment provided by the manufacturer (e.g., catalytic converters and mufflers). Additionally, pollution-control equipment will be inspected prior to arrival on NFS lands to ensure that it is in good working order, and will be maintained in accordance with manufacturer specifications.

Water Quality

WQ – 1: The Baseline Plan activities will require water for dust suppression on roads and drilling processes. Water for these activities will come from potable private water sources.

WQ – 2: Drill sites are located within the Phoenix Active Management Area and Resolution will comply with established Arizona Department of Water Resources (ADWR) reporting requirements.

WQ – 3: In accordance with ADWR requirements, the strategic installation of bentonite seals and professional drilling practices will minimize the potential effects of drilling activities to the existing groundwater aquifer system.

WQ – 4: Resolution will collect excess cuttings and mud generated during drilling activities, and will remove the materials from NFS lands. These materials will be disposed of in accordance with applicable state law.

WQ – 5: A construction Stormwater Pollution Prevention Plan will be prepared in accordance with the regulations of the *Arizona Pollution Discharge Elimination System Stormwater Construction General Permit*. Runoff and sediment discharged from areas disturbed to construct drill sites will be controlled with erosion control features such as wattles, silt fence, berms, straw bales, and other best management practices for stormwater management.

WQ – 6: Materials used to construct applicable sediment and erosion control features (e.g., straw bales) will be certified noxious weed free.

WQ-7: Sediment control features, such as berms and silt fencing, will be used on fill slopes to catch sediment and keep it from entering drainages.

WQ – 8: Sediment control features will be used on temporary stock piles excavated for test trenching activities to catch sediment and keep it from entering drainages.

WQ – 9: Road maintenance and construction will avoid drainage channel bottoms to the greatest extent possible. Water bars will be installed to minimize erosion on steep sections of roadway.

WQ – 10: Upon completion of drilling and monitoring, drill holes will be abandoned pursuant to Arizona Administrative Code R12-15-816(g), and Arizona Revised Statutes (ARS) 45, Chapter 2, Article 10, as administered by ADWR. The drill sites will be re-graded to pre-Baseline activities conditions. An approved Forest Service seed mix will be applied and raked into the soil of disturbed areas. Copies of Arizona Well Drill Reports, Well Log Forms, and Well Abandonment and Completion Reports will be provided to the Forest Service.

Solid Wastes

SW-1: Solids from drilling (e.g., drill cuttings, rock and water) shall be removed from National Forest System lands and disposed of in accordance with applicable sections of ARS §§27-514. Storage tanks shall be pumped of any remaining drilling solids, water and/or muds and be removed from drill sites within five calendar days of completed work at each drill site.

SW – 2: A portable toilet will be placed at each active drill site and serviced periodically by a contractor. All other wastes, such as paper and food waste will be stored in garbage sacks and removed from the sites daily.

Scenic Values, Recreation, and Other Uses

SVR – 1: Good housekeeping practices, timely reclamation of disturbed areas, and minimization of disturbance areas will protect scenic values.

SVR – 2: Recreation access will be maintained and no road closures will be necessary during the Baseline Plan activities.

SVR – 3: For any proposed use of previously disturbed areas to be used as temporary access roads on NFS lands, once activities specified in the Plan are complete, Resolution will reclaim roads consistent with the Forest Service's Travel Management Planning objectives.

SVR – 4: Lights used for night work at drill sites and the laydown areas will be oriented to the work area or shielded to minimize night light effects on recreational users.

SVR – 5: The drilling equipment will be surrounded by tanks, compressors, a portable driller's office, large containers, and topography which may act as barriers to reduce noise levels.

Biological Resources

BR – 1: At unoccupied drill sites that have open storage tanks for solids from drilling, substantial barriers such as cattle fencing will be used to prevent cattle and wildlife from entering.

BR – 2: Sonoran desert tortoises will be avoided and not handled unless necessary. If encountered within or near a work zone, and it is determined necessary to move them out of harm's way, the Arizona Game and Fish Department's *Guidelines for Handling Sonoran Desert Tortoises Encountered on Development Projects*, Revised October 23, 2007, will be followed.

BR – 3: In the event that a Sonoran desert tortoise is injured, the Tonto National Forest's Minerals Biologist, Mark Taylor, will be contacted at (480) 610-3304 or (602) 225-2246.

BR – 4: Project activities will comply with the *Biological Resources Monitoring Plan for Resolution Copper Mining, LLC Plan of Operations: Baseline Hydrological and Geotechnical Data Gathering Activities on Tonto National Forest*, dated December 2015.

Cultural Resources

CR – 1: Ground-disturbing activities will occur outside known National Register of Historic Places (NRHP) sites and NRHP-eligible sites, and thus such sites will be avoided.

CR – 2: A cultural resources monitor will be present during construction near (within 50 meters [164 feet]) NRHP- or NRHP-eligible sites.

CR – 3: Resolution will follow applicable laws and regulations regarding cultural resources while conducting Baseline activities (e.g., National Historic Preservation Act, Native American Graves Protection Act, and Archaeological Resources Protection Act).

CR – 4: If previously unidentified cultural resources are encountered during construction activities, work will cease at the location and the Forest Service will be contacted for instruction before work will continue at that location.

Public Safety

PS – 1: Public access to the Baseline activities areas will be managed during roadway improvements and maintenance. To the extent practicable, roadway activities in the Plan will be conducted in a manner that will allow continued use by the public.

PS – 2: Signing for roadway access management will comply with the guidelines in the Manual on Uniform Traffic Control Devices (FSM 7103.3) for signs and markers.

Fire Prevention

FP – 1: For fire prevention measures, the 2013 *Fire Restriction Response Plan* (Appendix D of the Plan) will be posted and implemented at each drill site. The 2013 Fire Restriction Response Plan will be used in conjunction with any Forest Service issued Emergency Fire Restriction Orders.

FP – 2: Resolution employees and its contractors will take care to thoroughly extinguish smoking materials. Litter will be cleared from ignition sources.

Hazardous Substances/Petroleum Products/Drilling Materials

HS – 1: No extremely hazardous substances, as defined by the Comprehensive Environmental Response, Compensation, and Liability Act, Superfund Amendments Reauthorization Act, and Emergency Planning and Community Right-to-Know Act, will be used in the activities described in the Plan.

HS – 2: Resolution will follow the Spill Prevention, Control, and Countermeasures (SPCC) Plan (Refer to Appendix F of the Plan). The SPCC Plan details engineering practices used to prevent releases when handling and storing petroleum products.

HS – 3: At the active drill sites, containment structures will be used to store oil, oily rags, containers of hydraulic oil, diesel fuel, and other miscellaneous small containers typically found on drill sites.

HS – 4: Fuel associated with drill rig and mud-mixing equipment will be held in double-walled fuel tanks or within secondary containment structures.

HS – 5: Fire extinguishers will be available at containment structures.

HS – 6: Each active drill rig will maintain sufficient spill clean-up supplies for unforeseen releases.

HS – 7: During drilling operations, drill rigs will be parked on top of plastic sheeting overlain by absorbent material. Plastic and absorbent materials will also be used under other gas or diesel motors, and other equipment that may leak oil, as needed.

HS – 8: Refuse containers designated for disposal of absorbent materials will be located at each drill rig. This material will be disposed of off-site in accordance with applicable laws and regulations.

Mitigation Measures Proposed by Forest Service

As part of the analysis conducted in Chapter 3 of the EA, MMs were proposed to minimize or avoid impacts to resources specific to Baseline activities. My decision requires implementation of these mitigation measures.

MM – 1: Wells located within a few hundred feet of drill pads, test trenches, construction laydown yards, roadway improvements, and short-term temporary access roads, will be flagged.

MM – 2: Settling pits will be lined if tanks are not used for short-term storage of the drill cuttings.

MM – 3: Saguaro, barrel, pincushion, hedgehog, ocotillo, and agave species will be avoided where practicable. If it is determined that any of these plants need to be moved to conduct Baseline activities, they will be transplanted away from project-related activities and will be used for reclamation efforts.

MM – 4: Seed mixes to be used in reclamation will be certified weed free of seeds listed on the Forest Service's noxious weed list, and contain only species native to the project area. Seed mixes will be developed from a native species seed list approved by the forest. Three re-seeding efforts will be conducted once annually and applied at a timeframe determined by the forest.

MM – 5: To the extent possible, Baseline activities will be scheduled to occur in areas that do not have established populations of invasive plant species prior to conducting activities in areas with existing, established populations of invasive plant species.

MM – 6: To minimize soil and noxious weed transport, equipment will be cleaned prior to use on NFS lands. Cleaning will remove dirt, plant parts, and material that could carry noxious weed seed. Only equipment cleaned and inspected will be allowed to operate in the project area.

MM – 7: Baseline activities will be restricted to approved activity areas to conserve intact Sonoran desert tortoise habitat.

MM – 8: Overhanging banks along drainages or side-slopes and/or rock out-crops will be avoided, as practicable to minimize disturbance to Sonoran desert tortoise habitat.

MM – 9: Pre-construction surveys will be conducted for Sonoran desert tortoise and gila monster before ground disturbing activities start. A biological monitor will monitor for Sonoran desert tortoise, gila monster, and migratory birds during construction and reclamation activities. The monitor will flag Sonoran desert tortoise and gila monster shelter sites/burrows for avoidance by project activities. These flagged avoidance areas will be maintained as appropriate during construction. In the event a burrow cannot be avoided, it will be inspected and any tortoises discovered in the burrow will be relocated outside of project activity areas.

MM – 10: A biological monitor will inspect open pits or trenches for Sonoran desert tortoise and gila monster prior to backfilling activities and will be responsible for relocating these species out of harm's way. If a tortoise is detected, it will be moved in accordance with the Arizona Game and Fish Department's *Guidelines for Handling Sonoran Desert Tortoises Encountered on Development Projects*, Revised October 23, 2007.

MM – 11: Project crews will be informed of the potential to encounter Sonoran desert tortoises and gila monster within the project area. Work crews will check below equipment prior to moving, and cover and/or backfill holes that could potentially entrap these species. If these species are encountered, work crews will stop work until the biological monitor has relocated these species out of harm's way.

MM – 12: In the event that Baseline activities are modified in a manner that will result in an effect to a listed species or designated critical habitat, or if a new species was listed or critical habitat was designated which may be affected by Baseline activities, all work shall cease and consultation under Section 7 of the Endangered Species Act with the United States Fish and Wildlife Service will be initiated.

MM – 13: To protect cultural resources, proposed geotechnical borings GT-9, GT-10, GT-11 and the associated temporary access routes will not be approved.

MM – 14: To protect cultural resources, proposed geotechnical boring GT-31 will be moved 675 feet north along existing road FR-518.

MM – 15: To protect cultural resources, proposed groundwater monitoring well DS-B will be moved 80 feet north.

MM – 16: Ensure construction and drilling equipment are properly maintained and feature, as appropriate, factory-installed or approved exhaust mufflers, air intake filters, hoods, enclosures, and other means to minimize noise from engine operation.

Terms and Conditions of Approval

Based on my review of the Baseline Plan, the EA, and the project record, I have determined that the following terms and conditions of approval (TCAs) will be required:

TCA – 1: Portable and mobile drill rigs shall meet the current non-road diesel engine rules for Tier 2, Tier 4 transitional or Tier 4 emission standards as these standards phase in over time.

TCA – 2: Drillers and other site workers shall limit, to the extent practicable, nighttime use of the laydown area. Drillers and other site workers shall pick up necessary supplies from the

laydown area at the beginning of the night shift to minimize the need to return during the night. In the event that the laydown area must be utilized during the night for unforeseen circumstances, Resolution shall notify the Forest Service within 24 hours after the use occurs, provide rationalization for the necessary use, and provide a plan to avoid such use in the future.

TCA – 3: All geotechnical drill holes and hydrological testing and monitoring wells shall be plugged with cement or bentonite grout placed from the bottom of the drill hole or well to a depth of 2 feet below the ground surface. Plugging of all geotechnical drill holes and hydrological testing and monitoring wells shall be consistent with Arizona Administrative Code R12-15-816, the Arizona Department of Water Resources *Well Abandonment Handbook*, and the ASTM International *Standard Guide for Decommissioning of Groundwater Wells, Vadose Zone Monitoring Devices, Boreholes, and Other Devices for Environmental Activities* (ASTM D5299-99).

TCA – 4: The operator shall engage a professional geologist or engineer registered in the state of Arizona and approved by the Forest Service to conduct independent third-party construction quality assurance (CQA) oversight during plugging of all geotechnical drill holes and hydrological testing and monitoring wells. A report documenting the plugging methods and CQA activities shall be prepared by the third-party geologist or engineer for each geotechnical drill hole and hydrological testing and monitoring well, and shall be submitted to the Forest Service within 60 days after completion of the plugging activities.

TCA – 5: The Forest Service shall be notified at least 24 hours prior to plugging of geotechnical drill holes and hydrological testing and monitoring wells to provide for field inspection and monitoring of the plugging activities by a Forest Service minerals administrator.

Species Specific Conservation Measures

I consulted with the US Fish and Wildlife Service regarding potential project effects to the western yellow billed cuckoo and determined that the following species-specific conservation measures (SSCM) will be required:

SSCM-1: A qualified biological monitor will be present during all surface disturbing activities and will monitor for the presence of western yellow-billed cuckoos.

SSCM-2: No noise generating or surface disturbing activities (i.e. road construction, trenching, drill site preparation or installation of geotechnical drill holes or hydrological testing and monitoring wells) will be conducted prior to the completion of the 2016 protocol surveys.

SSCM-3: In the event that western yellow-billed cuckoos are detected, no noise generating or surface disturbing activities will be conducted between June 1 and September 30.

SSCM-4: In the event that western yellow-billed cuckoos are detected, routine monitoring of existing wells or piezometers would be permitted during June 1 and September 30.

SSCM-5: If western yellow-billed cuckoos are found in 2016 during protocol surveys, then surveys would be conducted again in 2017 (or the following year if the proposed action is postponed).

Other Alternatives Considered

I considered selection of the No Action alternative. Under the No Action alternative, none of the Baseline activities would be authorized and the current multiple use management of NFS lands within the project area would continue. Under the No Action alternative, the proposed baseline hydrological, geotechnical and geochemical data would not be collected, and the planned EIS for the proposed MPO would proceed without this data. This would reduce the ability of the Forest Service to accurately and completely evaluate issues associated with the proposed TSF as described in Section 2.2 of the EA including potential risks to public safety and the environment.

The long-term stability of the proposed TSF is a critical issue that will be evaluated in the EIS for the MPO. The geotechnical data that will be collected in accordance with the Baseline Plan will provide data that is necessary to support assessment of the long-term stability of the proposed TSF. The hydrological and geochemical data that will be collected in accordance with the Baseline Plan are critical to evaluate potential for transport of contaminants, and to inform and validate groundwater and geochemical models that will be developed during the NEPA analysis for the MPO. Accordingly, my decision to select the Proposed Action will be more protective of public safety and the environment than selection of the No Action Alternative.

Selection of the No Action alternative would also prevent the Forest Service from complying with *40 CFR §1502.22* which requires federal agencies to include information in an EIS that is “essential to a reasoned choice among alternatives”, and it would prevent the Forest Service from fully evaluating issues associated with compliance with Federal and State water quality standards, including regulations issued pursuant to the *Federal Water Pollution Control Act*, as required by *36 CFR §228.8(b)*. In contrast, the baseline data collected in accordance with the Proposed Action will enable the Forest Service to develop reasonable alternatives for the TSF, as the data will allow detailed evaluation of the proposed TSF to determine if alternative TSF locations, designs or configurations should be considered.

Additional alternatives considered but eliminated from detailed analysis are described in Section 2.4 of the EA.

Public Involvement and Scoping

As described in the introduction, the need for this action arose in June 2013. The Baseline Plan was listed in the Schedule of Proposed Actions in May 2014. A scoping letter was sent to interested parties on May 19, 2014, which initiated the necessary NEPA compliance required prior to considering approval of Resolution’s plan to conduct Baseline activities.

The proposal was provided to the public and federal, state and local agencies for comment during a 30-day scoping period from May 24 through June 23, 2014. A general scoping letter was distributed to 338 people, including 18 federal, state and local government agencies, and a tribal scoping letter was distributed to twenty tribal representatives. In addition, the agency published a legal notice in the *Arizona Capitol Times* (the newspaper of record) on May 23, 2014 and the *Arizona Silver Belt* on May 21, 2014. The general scoping letter included a description of the Baseline Plan, a description of the project location and a map, the public scoping timeframe, details of the public open house, and instructions and methods for providing comments. A public scoping open house was held on June 10, 2014 at Superior Junior/Senior High School in Superior, Arizona.

A total of 222 scoping comment submissions were received. Using the comments from the public; federal, state, county and local agencies; Native American Indian tribes (Tribes); special interest

groups; non-government organizations (NGOs); and other interested parties, the interdisciplinary team identified several issues regarding the potential effects of the Proposed Action. The key issues of concern addressed in development of alternatives included: the use of alternative access routes and the level of data collected as part of the Baseline activities; environmental concerns, including the use and reclamation of forest roads and short-term temporary access roads; and transportation and access issues related to maintenance of roads, the public's use of NFS roads, the use of helicopters to conduct the Baseline activities, and using only existing NFS roads for the Baseline activities in order to protect wildlife and other resources (see EA Section 1.7.2). The issues were used to formulate alternatives to the Proposed Action, modify the Proposed Action, prescribe mitigation and monitoring measures, and guide the analyses of the potential environmental effects of the Proposed Action and alternatives.

A 30-day public comment period for the Preliminary EA occurred March 13 through April 13, 2015. The public comment period was initiated by publication of a legal notice announcing the public comment period in the *Arizona Capitol Times* on March 13, 2015. The same legal notice was published in the *Arizona Silver Belt* on March 18, 2015. Approximately 850 people, including representatives from approximately 93 organizations and government agencies were notified by letter of the Preliminary EA availability and comment period. Additionally, ten Native American Tribes with cultural affiliation in Arizona were notified of the comment period, and were mailed copies of the Preliminary EA, and the Scoping Comment and Response Report. There were two open houses held during the public comment period, the first was held on March 25, 2015 at the Superior Junior/Senior High School located in the Town of Superior, Arizona. The second was held on March 26, 2015 at the Queen Valley Recreation Center, located in the community of Queen Valley, Arizona. Over 5,000 comment letters were received, the majority of which were form letters. For additional detail on how comments on the Preliminary EA were addressed, refer to the Response to Comment Report in the project record and also available on the project website at: http://www.fs.fed.us/nepa/nepa_project_exp.php?project=44494

Tribal Consultations

I conducted government-to-government consultations with Native American Indian Tribes (Tribes) in accordance with the National Historic Preservation Act of 1966 (NHPA). I initiated tribal consultations by sending a scoping letter and cultural resources report to the Tribes, which invited the Tribes to engage in government-to-government consultation. Eleven Tribes received the tribal scoping letter including Fort McDowell Yavapai Nation, Gila River Indian Community, the Hopi Tribe, Salt River Pima-Maricopa Indian Community, Tonto Apache Tribe, San Carlos Apache Tribe, Yavapai Apache Nation, Yavapai-Prescott Indian Tribe, White Mountain Apache Tribe, and Zuni Pueblo. Eight Tribes responded to the letter initiating NHPA Section 106 consultations: the Tonto Apache Tribe, Yavapai Apache Nation, White Mountain Apache Tribe, San Carlos Apache Tribe, Hopi Tribe, Gila River Indian Community, Fort McDowell Yavapai Nation and Yavapai-Prescott Indian Tribe. Those eight tribes indicated they wanted to continue participating in Section 106 consultations.

The Forest Service met with Hopi Tribe Cultural Preservation Office Staff on July 23, 2013 and September 22, 2015 followed with correspondence dated August 21, 2015. The Forest Service met with the White Mountain Apache Tribe, the Tonto Apache Tribe, and the Yavapai Apache tribes in a series of consultation meetings on August 14, 2015, September 24, 2015, and October 21, 2015. During the latter two of these meetings, the Mescalero Apache Tribe attended the meetings and participated in consultation. The October 21, 2015 consultation meeting concluded with the acceptance of a mitigation package proposed by the Forest Service. The Forest Service met with the Gila River Indian Community and Salt River Indian Community on October 15, 2015 and November 6, 2015. The Fort McDowell Yavapai Nation sent two letters to the Forest (June 23, 2014, April 23,

2015) and the Forest Service met with the Fort McDowell Yavapai Nation on November 16, 2015. The San Carlos Apache Tribe sent the Forest Service letters on June 20, 2014, June 23, 2014 and April 13, 2015. The Forest responded on August 21, 2014 and April 13, 2015 and offered face-to-face meetings.

Finding of No Significant Impact

As the responsible official, I am responsible for evaluating the effects of the project relative to the definition of significance established by the CEQ Regulations (*40 CFR §1508.13*). I have reviewed and considered the EA and documentation included in the project record, and I have determined that the alternative selected will not have a significant effect on the quality of the human environment. As a result, no EIS will be prepared. My rationale for this finding is as follows, organized by sub-section of the CEQ definition of significance cited above.

Context

For the Proposed Action and No Action alternatives, the context of the environmental effects is based on the environmental analysis in EA. The context is limited to the locale of the project area. The proposed direct surface disturbance associated with the Proposed Action is approximately 75.4 acres, which is far less than one percent of the acreage in the Globe and Mesa Ranger Districts, and the new surface disturbance (33.63 acres) within the project area from the Baseline activities would be an even smaller percentage. The Proposed Action is relatively short-term in nature with most surface disturbance occurring in the first two years of a 10-year authorization period.

Intensity

Intensity is a measure of the severity, extent, or quantity of effects, and is based on information from the effects analysis (Chapter 3 of the EA), and the references in the project record. The effects of authorizing Resolution's Plan have been appropriately and thoroughly considered with an analysis that is responsive to concerns and issues raised by the public. The agency has taken a hard look at the environmental effects using relevant scientific information and knowledge of site-specific conditions gained from field visits. My finding of no significant impact is based on the context of the project and intensity of effects using the ten factors identified in *40 CFR §1508.27(b)*.

- 1. Impacts that may be both beneficial and adverse. A significant effect may exist even if the Federal agency believes that on balance the effect will be beneficial (40 CFR §1508.27(b)(1)).***

Both beneficial and adverse effects were analyzed in Chapter 3 of the EA. As described above under "Rationale for Decision," my decision will result in Resolution's Baseline activities being conducted in a manner that is consistent with the Forest Plan and applicable laws and regulations. Resolution's proposed EPMs and the Forest's proposed MMs will minimize, as feasible, adverse effects to NFS surface resources. Some beneficial effects may occur as a result of reclamation of previously disturbed areas and improvement of existing Forest System roads, but on balance, the environmental effects of this project are adverse. Improvements to existing Forest System roads are described in sections 2.3 and 3.10 of the EA, and the effects of reclamation activities on the natural environment are discussed in Chapter 3 of the EA.

- 2. The degree to which the proposed action affects public health or safety (40 CFR §1508.27(b)(2)).***

My decision includes EPMs and MMs to protect public health and safety. For example, to protect public health from the effects from potential fuel spills to surface and ground water resources, a

SPCC Plan has been developed for the project and will be maintained during the life of the Baseline Plan (See EPM HS-2 above). And, in accordance with ADWR requirements, the strategic installation of bentonite seals and professional drilling practices would minimize the potential effects of drilling activities to the existing groundwater aquifer system (EPM WQ-3 above). Several other EPMs and MMs have been developed and analyzed in the EA to protect public health or safety. All of the EPMs and MMs are listed in *Decisions and Reasons for the Decisions* section above and also discussed and analyzed in further detail in chapters 2 and 3 of the EA.

3. ***Unique characteristics of the geographic area such as the proximity to historical or cultural resources, parklands, prime farmlands, wetlands, wild and scenic rivers, or ecologically critical areas (40 CFR §1508.27(b)(3)).***

The Forest Archeologist has determined that this project will have no effect to historic properties if implemented with identified conditions for mitigation and monitoring (EA Section 2.3.6, Section 2.5 and Section 3.9). My decision will have no effect on wetlands. My decision will not affect parklands, farmlands, or ecologically critical areas or cause the destruction of significant scientific, cultural or historic resources.

4. ***The degree to which the effects on the quality of the human environment are likely to be highly controversial (40 CFR §1508.27(b)(4)).***

As indicated by the comments received in the preparation of the Preliminary EA (Forest Service, 2015), many respondents are opposed to mine development and its associated environmental impacts. However, this EA has been prepared to address the potential effects of gathering hydrological, geotechnical and geochemical baseline data in an area being considered for a TSF, and not developing the TSF or the mine in general. The potential effects of approving the MPO, which will address proposed development of the mine and TSF, will be evaluated in an EIS before mine development or development of the proposed TSF may occur. Although some may not support my decision, the public comments did not materially question the effects analysis on scientific grounds.

5. ***The degree to which the possible effects on the human environment are highly uncertain or involve unique or unknown risks (40 CFR §1508.27(b)(5)).***

There are no unique, highly uncertain or unknown environmental risks associated with approval of the Baseline Plan. The effects will be similar to the effects of previous data gathering projects that have been implemented such as the Resolution *Pre-Feasibility Activities Plan of Operations*, which was approved in 2010. As described in the EA (Section 2.3.6 and Section 2.5), numerous EPMs and MMs have been designed to minimize or avoid risks.

6. ***The degree to which the action may establish precedent for future actions with significant effects or represents a decision in principle about a future consideration (40 CFR §1508.27(b)(6)).***

This is a project-level decision. The nature of this decision is not precedent setting, nor does it represent a precedent for, or trigger any future decisions. Collection of baseline data to support environmental analysis and design efforts associated with proposed large-scale mining projects is common practice, and is often required by state and federal laws. Therefore this decision is not precedent setting. Further, approval of the Baseline Plan does not trigger any future decisions related to the proposed MPO. Approval of baseline data collection does not require me to approve the TSF. In contrast, collection of baseline data will facilitate a robust environmental analysis of the proposed TSF and support development of alternatives in the planned EIS for the MPO.

7. *Whether the action is related to other actions with individually insignificant but cumulatively significant impacts (40 CFR §1508.27(b)(7)). Significance exists if it is reasonable to anticipate a cumulatively significant impact on the environment. Significance cannot be avoided by terming an action temporary or by breaking it down into small component parts.*

As identified in the effects disclosures in Chapter 3 of the EA, this action is not related to other actions with individually insignificant but cumulatively significant impacts. This includes specific concerns brought up during public scoping and the Preliminary EA comment period as to the relationship of the cumulative effects of this action with Resolution's proposed MPO, which is considered as a reasonably foreseeable future action in the cumulative effects analyses presented in Chapter 3 of the EA.

8. *The degree to which the action may adversely affect districts, sites, highways, structures, or objects listed in or eligible for listing in the National Register of Historic Places or may cause loss or destruction of significant scientific, cultural, or historical resources (40 CFR §1508.27(b)(8)).*

The Forest Archeologist has determined that this project would have no effect to districts, sites, highways, structures, or objects listed in or eligible for listing in the National Register of Historic Places if implemented with identified conditions for mitigation and monitoring (EA Section 2.3.6, Section 2.5 and Section 3.9).

9. *The degree to which the action may adversely affect an endangered or threatened species or its habitat that has been determined to be critical under the Endangered Species Act of 1973 (40 CFR §1508.27(b)(9)).*

My decision may affect, but is not likely to adversely affect the western yellow billed cuckoo, and it will not affect other endangered or threatened species or designated or proposed critical habitat. The 2015 biological evaluation (WestLand Resources, Inc., 2015), 2016 biological assessment (US Forest Service, 2016) and informal consultation with the US Fish and Wildlife Service regarding the western yellow billed cuckoo supports this conclusion.

10. *Whether the action threatens a violation of Federal, State, or local law or requirements imposed for the protection of the environment (40 CFR §1508.27(b)(10)).*

This action would not threaten a violation of Federal, State or local law or requirements imposed for protection of the environment. Consistency with laws or requirements imposed for protection of the environment is discussed in Section 1.3 and Chapter 3 of the EA.

Conclusion

After considering the environmental effects described in the EA and specialist reports, I have determined that the Proposed Action will not have significant effects on the quality of the human environment considering the context and intensity of impacts (40 CFR §1508.27). Thus, an EIS will not be prepared.

Findings Required by Other Laws and Regulations

This decision to approve Resolution's Plan is consistent with the intent of the Forest Plan, Forest Service Policy, and other management considerations. The project was designed in conformance with the Forest Plan and other federal and state law, policy, and direction applicable to the resources present in the Tonto National Forest. The Forest Plan sets forth forest wide standards and guidelines, and management area direction.

Implementation of this decision will not violate any Federal, state, or local laws or requirements imposed for the protection of the environment including, but not limited to:

- *National Forest Management Act of 1976*
- *Clean Water Act of 1977, as amended*
- *Clean Air Act of 1963, as amended*
- *Endangered Species Act of 1973, as amended*
- *American Antiquities Act of 1906 and National Historic Preservation Act of 1966, as amended*
- *Migratory Bird Treaty Act of 1918 and Executive Order 13186*
- *The Bald and Golden Eagle Protection Act of 1940, as amended*
- *Archaeological Resources Protection Act of 1979*
- Executive Memorandum of April 1994, Government-to-Government Relations with Native American Tribal Governments
- Executive Order 12898 of 1994 (Environmental Justice)
- Executive Order 11988 of 1977 (Floodplain Management)
- Executive Order 13112 of 1999 (Invasive Species)
- Executive Order 13007 of 1996, Indian Sacred Sites, and Executive Order 13175 of 2000, Consultation and Coordination with Indian Tribal Governments
- *General Mining Law of 1872 as amended*
- *The Organic Administration Act of 1897*
- *Noise Control Act of 1972*

Administrative Review and Objection Rights

This decision was subject to pre-decisional objection pursuant to 36 CFR 218, Subparts A and B. The final EA was completed and released, along with a Draft DN/FONSI on January 15, 2016, which initiated the 45-day objection period. The objection period ended February 29, 2016. Nine objectors raised over 100 individual issues in their objections. The Reviewing Officer for the objection (i.e. the Regional Forester for the USDA Forest Service Southwestern Region) considered each of these issues. Objection resolution meetings took place on May 9, 2016, and final direction from the Reviewing Official was issued in May 2016. The Reviewing Official directed me to modify the Draft DN/FONSI, prepare an errata report for the EA and informally consult with the U.S. Fish and Wildlife Service (USFWS) on impacts to the western yellow-billed cuckoo. I have complied with the direction received from the Reviewing Official during the objection process.

Implementation Date

Following issuance of this DN/FONSI, Resolution must revise the Baseline Plan as necessary to conform to the requirements of this DN. The Baseline Plan will be resubmitted to the Forest Service along with a reclamation bond or other acceptable form of financial assurance. Once I determine that the revised Baseline Plan conforms to this DN and that the financial assurance is acceptable, I will approve the Baseline Plan. At that time, the Baseline Plan will be implemented by Resolution Copper. I anticipate that the Baseline Plan will be implemented within approximately 15 days after this DN/FONSI is issued.

Approved by:



Neil Bosworth
Forest Supervisor
Tonto National Forest

8/22/16
Date

In accordance with Federal civil rights law and U.S. Department of Agriculture (USDA) civil rights regulations and policies, the USDA, its Agencies, offices, and employees, and institutions participating in or administering USDA programs are prohibited from discriminating based on race, color, national origin, religion, sex, gender identity (including gender expression), sexual orientation, disability, age, marital status, family/parental status, income derived from a public assistance program, political beliefs, or reprisal or retaliation for prior civil rights activity, in any program or activity conducted or funded by USDA (not all bases apply to all programs). Remedies and complaint filing deadlines vary by program or incident.

Persons with disabilities who require alternative means of communication for program information (e.g., Braille, large print, audiotape, American Sign Language, etc.) should contact the responsible Agency or USDA's TARGET Center at (202) 720-2600 (voice and TTY) or contact USDA through the Federal Relay Service at (800) 877-8339. Additionally, program information may be made available in languages other than English.

To file a program discrimination complaint, complete the USDA Program Discrimination Complaint Form, AD-3027, found online at http://www.ascr.usda.gov/complaint_filing_cust.html and at any USDA office or write a letter addressed to USDA and provide in the letter all of the information requested in the form. To request a copy of the complaint form, call (866) 632-9992. Submit your completed form or letter to USDA by: (1) mail: U.S. Department of Agriculture, Office of the Assistant Secretary for Civil Rights, 1400 Independence Avenue, SW, Washington, D.C. 20250-9410; (2) fax: (202) 690-7442; or (3) email: program.intake@usda.gov.

USDA is an equal opportunity provider, employer and lender.