

# PLAN OF OPERATIONS FOR MINING ACTIVITIES ON NATIONAL FOREST SYSTEM LANDS

**USE OF THIS FORM IS OPTIONAL!** 1<sup>st</sup> TIME USERS SHOULD DIRECT QUESTIONS REGARDING THIS FORM OR REGULATIONS (36 CFR 228A) TO THE FOREST SERVICE DISTRICT OFFICE NEAREST YOUR AREA OF INTEREST.

Submitted by:

Signature Title Date  
(mm/dd/yy)

Plan Received by:

Signature Title Date  
(mm/dd/yy)

## I. GENERAL INFORMATION

A. Name of Mine/Project: *Roca Honda Project*

B. Type of Operation: *Mine Development, Production*  
(lode, placer, mill, exploration, development, production, other)

C. Is this a (X new/continuing) operation? (check one). If continuing a previous operation, this plan (replaces/modifies/supplements) a previous plan of operations. (check one)

D. Proposed start-up date (mm/dd/yy) of operation: *Upon permit approval*

E. Expected total duration of this operation: *17 years*

F. If seasonal, expected date (mm/dd/yy) of annual reclamation/stabilization close out: *N/A*

G. Expected date (mm/dd/yy) for completion of all required reclamation: *19 years after permit approval*

*H. Roca Honda Resources, LLC (RHR) is submitting this Form to be in compliance with Title 36, Code of Federal Regulations, Part 228.4, Plan of Operations. Each section of the Form is addressed, however, the details for a complete response are referenced to the attached Permit Application package submitted to the New Mexico Mining and Minerals Division. The Permit Application includes the following five volumes; Permit Application introductory sections, Sampling and Analysis Plan, Baseline Data Report, Mine Operations Plan, and Reclamation Plan.*

## II. PRINCIPALS

A. Name, address and phone number of operator: *Roca Honda Resources, LLC  
4001 Office Court, Suite 102  
Santa Fe, NM 87507  
(505) 474-6646*

B. Name, address, and phone number of authorized field representative (if other than the operator).

*(If more space is needed to fill out a block of information, use additional sheets and attach form)*

Attach authorization to act on behalf of operator.

*The authorized agent for Roca Honda Resources, LLC is John DeJoia, Manager, Roca Honda Resources, LLC located at the above address and phone number.*

C. Name, address and phone number of owners of the claims (if different than the operator):

*The owners of the claims are presented in the attached Permit Application volume in Section D.*

D. Name, address and phone number of any other lessees, assigns, agents, etc., and briefly describe their involvement with the operation, if applicable:

*Other involved parties are listed in the attached Permit Application volume in Section D4.*

### III. PROPERTY OR AREA

Name of claim, if applicable, and the legal land description where the operation will be located.

MC#	Name	Section	Township	Range
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*The legal description of the claims is included in the attached Permit Application volume in Attachment 2.*

### IV. DESCRIPTION OF THE OPERATION

A. **Access.** Show on a map (USGS quadrangle map or a National Forest map, for example) the claim boundaries, if applicable, and all access needs such as roads and trails, on and off the claim. Specify which Forest Service roads will be used, where maintenance or reconstruction is proposed, and where new construction is necessary. For new construction, include construction specifications such as widths, grades, etc., location and size of culverts, describe maintenance plans, and the type and size of vehicles and equipment that will use the access routes.

*The RHRMine Permit Application volume contains the maps of the claim boundaries and the Forest Service roads accessing the claims, where maintenance and reconstruction is proposed, and new road construction.*

*Road construction and improvement activities include clearing/grubbing vegetation, cut and fill for new roads as needed, widening existing roads, surfacing with gravel, constructing drainage slopes and ditches, and installing arroyo crossings. Haul roads are proposed to be 60 feet wide to include swales on both sides. Access roads will be a minimum of 12 feet wide largely to serve the vent shafts. Drainage from the access roads will be determined in the field because of there steep areas.*

*Haul roads will be constructed with a center crown to direct storm water to roadside swales. Roadside swales, designed to safely convey a 10-year, 24-hour precipitation event, will collect and convey surface runoff to the nearest natural drainage arroyo. Energy dissipaters will be used in the swales to reduce erosion and slow the velocity. Roads and swales will be checked and maintained following runoff events. Maintenance will include grading, hole repair, and debris clean-out. Culverts will be installed where haul roads cross existing drainage channels. These crossings will be inspected and maintained following all runoff events.*

*The surface disturbance area associated with road construction (new roads and improvements to existing roads) is estimated for the following sections:*

*(If more space is needed to fill out a block of information, use additional sheets and attach form)*

*Section 9 – 5 acres  
Section 10 – 13 acres  
Section 11 – 8 acres  
Section 16 – 18 acres*

*Prior to final closure, the USFS, State of New Mexico, and the neighboring rancher will determine which roads will remain intact and which will be reclaimed.*

*See attached RHR Permit Application Mine Operations Plan for more detail on site access roads.*

**B. Map, Sketch or Drawing.** Show location and layout of the area of operation. Identify any streams, creeks or springs if known. Show the size and kind of all surface disturbances such as trenches, pits, settling ponds, stream channels and run-off diversions, waste dumps, drill pads, timber disposal or clearance, etc. Include sizes, capacities, acreage, amounts, locations, materials involved, etc.

*See attached RHR Permit Application Mine Operations Plan for location and layout of the area of operation and details of the surface disturbances.*

**C. Project Description.** Describe all aspects of the operation including mining, milling, and exploration methods, materials, equipment, workforce, construction and operation schedule, power requirements, how clearing will be accomplished, topsoil stockpile, waste rock placement, tailings disposal, proposed number of drillholes and depth, depth of proposed suction dredging, and how gravels will be replaced, etc. Calculate production rates of ore. Include justification and calculations for settling pond capacities, and the size of runoff diversion channels.

*The project description is provided in detail in the attached RHR Permit Application, prepared in accordance with the New Mexico Administrative Code (NMAC) 19.10.6.602 D.15 regulations for new non-coal mining operations. The Mine Operations Plan is organized in conformance with the regulatory requirements outlined in NMAC Section 19.10.6.602.D.15 (a) through (k) and 19.10.6.603 A through H. This plan is also prepared to meet the United States Forest Service (USFS) requirements for submittal of a Plan of Operations (POO) for operation of a mine on Forest Service lands.*

*Selecting the optimum facilities location requires the evolution of various practical geographic, technical, and regulatory considerations. While the general location of the mine is dictated by the location of the ore body, the location of the surface facilities can be managed to some extent to maximize efficiencies and balance the geographic, technical, and regulatory constraints that the site presents.*

*Potential facility locations were evaluated in relation to the desired mine shaft location using topographic maps as base maps to develop the location of surface facilities. These locations, which include the major surface and associated mine facilities, are generally located on level ground to the extent possible and otherwise situated to maximize the natural topographic advantages available. Flood plains and steeply sloping ground were avoided. Each mine site was evaluated for geologic suitability, including proximity to future mining areas, and soil and ground stability. A variety of other factors were also considered in choosing the proposed locations for the facilities including archaeological and cultural resources, erosion potential, proximity to the neighboring rancher, visibility and sightlines from the highway, as well as wildlife considerations and aesthetics.*

*(If more space is needed to fill out a block of information, use additional sheets and attach form)*

*The attached Mine Operations Plan provides the detailed information required by NMAC 19.10.6.602.D.15 (a) through (e) requiring a description of the type and methods of mining and engineering techniques proposed, the maps and approximate schedule of the proposed mining operations, a description and identification of acreages anticipated to be disturbed, plans for the proposed facilities, contingency plans to mitigate impacts to wildlife, and measures which will be undertaken to reduce sediments and monitor non-point source discharges.*

*See the attached RHR Permit Application Mine Operations Plan for more project description.*

**D. Equipment and Vehicles.** Describe that which is proposed for use in your operation (Examples: drill, dozer, wash plant, mill, etc.). Include: sizes, capacity, frequency of use, etc.

*The equipment and vehicles anticipated for the site preparation and mining operations activities are listed below along with a brief description. The final number and sizes will be refined as the detail design is finalized.*

### ***Surface Equipment***

*Generator Set – Provide emergency, standby, prime, and continuous power to the mine operations. Anticipated to be used on an as needed basis.*

*Air Compressors – Used to power equipment.*

*Switchgear – Provides single standby/load management or multi-unit utility paralleling when integrated with the generator set at the facility. Daily use is anticipated.*

*Bulldozers (various sizes) – Primarily used for road construction and cut-and-fill leveling for large areas. Daily use is anticipated during site preparation and construction.*

*Graders (various sizes) – Primarily used for leveling large areas. Daily use anticipated during site preparation and construction.*

*Excavators (wheel and track) – Primarily used for digging, material handling, lifting heavy objects, general grading and landscaping. Daily use anticipated during site preparation.*

*Scrapers – Primarily used for earth-moving and cut-and-fill operations. Anticipated to be used on an as needed basis.*

*Drill Rigs – Used for constructing wells, development drilling, and vent shafts.*

*Hydraulic Hammer – Primarily used for breaking rock or concrete. Anticipated to be used on an as needed basis.*

*Backhoe – Primarily used for digging and backfilling. Anticipated to be used on an as needed basis.*

*Vibratory Roller – Primarily used for compacting materials such as road base. Anticipated to be used on an as needed basis.*

*(If more space is needed to fill out a block of information, use additional sheets and attach form)*

*Crane – Primarily used for constructing or lifting heavy objects such as a head frame. Anticipated to be used on an as needed basis.*

*Loaders (various sizes) - Primarily used to load material (demolition debris, dirt, gravel, raw minerals, rock, etc.) into or onto another type of machinery (e.g. dump truck, conveyor belt, etc.). Daily use is anticipated.*

*Forklifts – Industrial truck with metal forks used to lift and transport materials. Daily use is anticipated.*

*Winch Truck (2 ton) – Truck with a winch attached to pull in, let out or otherwise adjust the tension of a cable. Anticipated to be used on an as needed basis.*

*Dump Trucks – Primarily used to move and stockpile excavated material. Daily use is anticipated.*

*Haul Trucks – Used to transport ore from the mine site to the mill. Type of truck will be determined when mill location is selected.*

*Tractors – Used for reclamation.*

*Concrete Batch Plant – Primarily used for mixing concrete to be used at various locations. Anticipated to be used on an as needed basis.*

*Water truck (4,000 gallon) – Primarily used to haul water for dust suppression on roads and disturbed areas. Daily use anticipated.*

*Pickup Trucks – Pickup trucks will be used for various support activities. Daily use anticipated.*

*Mine Rescue Ambulance – Primarily used in mine rescue emergencies to administer medical assistance and to transport injured personnel to hospital/medical facilities. Anticipated to be used on an as needed basis.*

### ***Underground Equipment***

*ST-1 ½ LHDs – Standard 1 ½ cubic yard Load/Haul/Dump used to move mined material. Daily use anticipated during mining operations.*

*ST-3 ½ LHDs – Standard 3 ½ cubic yard Load/Haul/Dump used to move mined material. Daily use anticipated during mining operations.*

*Skid-Steer Loader – Compact loading equipment used to access confined areas, capable of handling a variety of small loading operations. Daily use anticipated during operations.*

*Single Boom Jumbos – Drill used for efficient drilling of headings and capable of handling face, bench, and roof bolt drilling requirements in underground mining operations. Daily use anticipated during mining operations.*

*Longhole Drills – Used to drill ore pass blast holes from the cross cut or from a cubby from the bottom*

*(If more space is needed to fill out a block of information, use additional sheets and attach form)*

*up. Also used for the drilling of drain and cable holes and traveling ways. Daily use anticipated during mining operations.*

*Fletcher Bolters – Machine used for the installation of roof bolts. Daily use anticipated during mining operations.*

*Shotcrete Machines – Machine used to spray concrete (e.g. to strengthen tunnels). Anticipated to be used on an as needed basis.*

*UG Communications – Leaker feeder cables (a radio frequency cable with weak shielding which allows radio signals to enter or leave the cable at any point), VHF system, UHF system (minimizes the impairment of radio wave transmission in curves, branches, and other spatial limitations inside of a mine), Intrinsically safe system (allows for system use in mines or other hazardous areas where explosions are possible as a result of the surrounding environment), tagging and tracking (locates personnel in an emergency situation). Daily use anticipated.*

*Compressors, Slushers & Jacklegs/Drills - Equipment used to drill holes for blasting and then collect the blasted material for loading at the shaft hoist. Daily use anticipated during mining operations.*

**E. Structures.** Include information about fixed or portable structures or facilities planned for the operation. Show locations on the map. Include such things as living quarters, storage sheds, mill buildings, thickener tanks, fuel storage, powder magazines, pipelines, water diversions, trailers, sanitation facilities including sewage disposal, etc. Include engineering design and geotechnical information for project facilities, justification and calculations for sizing of tanks, pipelines and water diversions, etc.

*Surface facilities and structures will be constructed within the Roca Honda permit area to support the underground mining efforts. The majority of these facilities and structures will be located on Sections 10 and 16, with minimal structures located on Section 9 (see Figures 4-1, 4-2 and 4-3, in Section 4.0 of the Permit Application Mine Operations Plan). The size and description of these facilities and structures are summarized for Sections 16, 10, and 9 in Tables A-1, A-2, and A-3, respectively, of Attachment A to this Plan of Operations. Final locations, sizes, engineering designs, geotechnical information, and supporting calculations will be provided as the mine design progresses.*

## **V. ENVIRONMENTAL PROTECTION MEASURES (SEE 36 CFR 228.8)**

**A. Air Quality.** Describe measures proposed to minimize impacts on air quality such as obtaining a burning permit for slash disposal or dust abatement on roads.

*Water will be used as dust suppression during site preparation and mining activities to reduce/minimize wind-blown dust from heavy equipment operations on roads and construction sites.*

**B. Water Quality.** State how applicable state and federal water quality standards will be met. Describe measures or management practices to be used to minimize water quality impacts and meet applicable standards.

*(If more space is needed to fill out a block of information, use additional sheets and attach form)*

1. State whether water is to be used in the operation, and describe the quantity, source, methods and design of diversions, storage, use, disposal, and treatment facilities. Include assumptions for sizing water conveyance or storage facilities.

*See attached Mine Operations Plan, Section 3.0 Mine Methods and Techniques.*

2. Describe methods to control erosion and surface water runoff from all disturbed areas, including waste and tailings dumps.

*See attached Mine Operations Plan, Section 4.2 Sediment Reduction, Surface Runoff Control/Non-Point Source Monitoring.*

3. Describe proposed surface water and groundwater quality monitoring, if required, to demonstrate compliance with federal or state water quality standards.

*See attached Sampling and Analysis Plan and Baseline Data Report, Section 8.0 Surface Water, and Section 9.0 Ground Water.*

4. Describe the measures to be used to minimize potential water quality impacts during seasonal closures, or for a temporary cessation of operations.

*No seasonal closures or temporary cessation of operations are anticipated.*

5. If land application is proposed for waste water disposal, the location and operation of the land application system must be described. Also describe how vegetation, soil, and surface and groundwater quality will be protected if land application is used.

*No land application of waste water is proposed or anticipated.*

C. **Solid Wastes.** Describe the quantity and the physical and chemical characteristics of solid waste produced by the operation. Describe how the wastes will be disposed of including location and design of facilities, or treated so as to minimize adverse impacts.

***Hazardous RCRA-Regulated Waste***

*Hazardous RCRA-regulated waste, in the form of leaks and/or spills of cleaning solvents used during equipment repair and maintenance, barium chloride, acid and sodium hydroxide used in the water treatment process and the materials contaminated during cleanup activities (contact waste such as soil, sorbant pads, paper towels, etc.), may be generated from onsite activities. An estimated hazardous waste generation of approximately 2 cubic yards per year (cy/yr) during an estimated 17 year mine life equals a roughly anticipated 40 cy of hazardous waste. Upon characterization sampling, PPE, sampling waste and any hazardous waste will be containerized and disposed of at an appropriate disposal facility such as Onyx Environmental Services in Henderson, CO.*

***New Mexico Special Waste***

*New Mexico Special Waste in the form of leaks and/or spills of antifreeze, diesel fuel, oil, hydraulic fluid and any other petroleum-based product may be generated during construction and operation activities as well as during equipment repair and maintenance activities. An estimated New Mexico Special Waste*

*(If more space is needed to fill out a block of information, use additional sheets and attach form)*

generation of approximately 20 cy/yr during an estimated 17 year mine life equals a roughly anticipated 400 cy of New Mexico Special Waste. Upon characterization sampling, NMSW will be containerized and disposed of at an appropriate disposal facility such as Waste Management of Rio Rancho in Rio Rancho, NM.

### ***Municipal Solid Waste***

*Municipal solid waste will be generated on site from sources such as the packaging for equipment and supplies, office paper, plastic and paper cups, paper towels, sanitary wipes, and Kleenex-type tissue. An estimated municipal solid waste generation of 100 cy/yr during an estimated 17 year mine life equals a roughly anticipated 1,600 cy of municipal solid waste. Any non-contact solid waste will be considered MSW and will be disposed of at an appropriate municipal waste disposal facility such as Waste Management of Rio Rancho in Rio Rancho, NM.*

**D. Scenic Values.** Describe protection of scenic values such as screening, slash disposal, or timely reclamation.

*Visual Resource Management is a tool used to assess aesthetic value as a resource. The scenic value component of the RHR mining proposal merits evaluation among the various environmental impacts that may occur as a result of constructing and operating the Roca Honda mine. As a general matter, the location of the project within sight of Mt. Taylor requires that scenic values be considered. The area has recently been designated as a Traditional Cultural Property (TCP) and significant interest exists in projecting resources, such as scenic values. As such, the protection of scenic values at the permit area will be addressed to protect these values to the extent possible.*

*Scenic values in and around the permit area will be protected by minimizing visual exposure by the general public to the various surface facilities of the mine complex. The natural topographic location of the permit area in Section 16 is at a higher elevation than the general public would normally see from State Route 605. RHR has taken advantage of these topographic features to protect scenic values. Some structures such as the top of the head frame and the top of some buildings may be visible. Additional protection will be utilized such as screening and berming soil with vegetation as a visual barrier and painting structures to blend with surrounding landscape colors. All exterior colors will be selected from a list of colors approved by BLM or USFS.*

*At Section 10, scenic values will be protected by utilizing the existing vegetation as a visual break between the facility and the public road. The Section 10 facility, located in the southeastern corner of the section, will be situated in a relatively low-lying area protected by pinon-juniper tree stands. While the surface facilities will be more visible than those on Section 16, RHR has endeavored to develop Section 16 as the main facility, placing most of the facilities where they would be the most protective of scenic values. The combination of use of existing vegetation, berming of soil wherever possible, vegetation of exposed stockpiles and selection of appropriate use of color schemes for the facilities will all aid in mitigating impact to scenic values.*

*In addition, slash and/or cleared vegetation that may have to be stripped during the site grading process will be mulched and added to topsoil stockpiles to increase the organic matter content. Timely reclamation in the permit area will include contemporaneous reclamation techniques to establish revegetation as soon as possible. Avoiding site disturbance where possible and minimizing the area when it must be disturbed, using existing roads and old drill pads where possible, removing,*

*(If more space is needed to fill out a block of information, use additional sheets and attach form)*

*segregating, and stockpiling topsoil and subsoil, and returning non-ore stockpiles below ground will also be used as mitigation techniques for scenic value protection. Early reclamation reduces erosion, isolates and protects material for later use, provides mitigation of potential impacts, and reduces the final reclamation work and costs.*

**E. Fish and Wildlife.** Describe measures to maintain and protect fisheries and wildlife, and their habitat (includes threatened, endangered, and sensitive species) affected by the operations.

*Measures to maintain and protect wildlife and their habitat are discussed in Section 5.3.2 of the attached Mine Operations Plan.*

**F. Cultural Resources.** Describe measures for protecting known historic and archeological values, or new sites in the project area.

*Measures for protecting known cultural resources are discussed in Section 5.3.3 of the attached Mine Operations Plan and Section 11.0 of the Baseline Data Report.*

**G. Hazardous Substances.**

1. Identify the type and volume of all hazardous materials and toxic substances which will be used or generated in the operations including cyanide, solvents, petroleum products, mill, process and laboratory reagents.

*Hazardous materials and toxic substances may be present onsite during site preparation and mining operations in the form of vehicle/equipment fluids, cleaning solvents and water treatment system process chemicals. The estimated volumes are based on a short-term usage and storage and the materials will be replaced as the usage demands.*

*The following substances are expected to be used onsite during site construction and operations:*

- *Antifreeze (>500 gallons) – or ethylene glycol, is a colorless, oily liquid used as an antifreeze coolant for equipment.*
- *Cleaning solvents (>50 gallons) - generally colorless, blue, or yellow-green liquids used for cleaning equipment. Constituents include perchloroethylene, methylene, chloride, trichloroethylene, and petroleum distillate.*
- *Diesel fuel (>25,000 gallons) - a clear, blue-green, or yellow liquid used as a fuel for generators, trucks, and heavy equipment. Constituents include petroleum distillates, oil and grease, naphthalene, and xylene.*
- *Gasoline (>6,000 gallons) - a colorless, pale brown or pink liquid used as fuel for cars and trucks. Constituents include petroleum hydrocarbon, benzene, ethyl benzene, toluene, xylene, and methyl tertiary-butyl ether.*
- *Petroleum based grease (>50 gallons) - a reddish colored, semi-solid gel used as a lubricant.*

*(If more space is needed to fill out a block of information, use additional sheets and attach form)*

- *Hydraulic fluid (>1,000 gallons) – a brown, oily petroleum hydrocarbon used in hydraulic devices. Constituents include mineral oil.*
- *Oil (>1,000 gallons) - a brown or dark brown oily liquid used as a lubricant. Constituents include petroleum hydrocarbon.*
- *Barium chloride (three 55 gallon drums) – reagent used in the water treatment process to precipitate radium out of the liquid.*
- *Sulfuric or Hydrochloric acid (five 55 gallon drums) – reagent used in the water treatment process to adjust pH.*
- *Sodium hydroxide (two 55 gallon drums) – reagent used in the water treatment process to adjust pH.*

*Handling and storage of hazardous substances will follow guidance and preventative measures from the onsite Material Safety Data Sheets and the RHR Site Safety Manual. In case of a release or spill of a hazardous substance the onsite Spill Prevention, Control and Countermeasures Plan will be followed and appropriate actions performed.*

2. For each material or substance, describe the methods, volume, and frequency of transport (include type of containers and vehicles), procedures for use of materials or substances, methods, volume, and containers for disposal of materials and substances, security (fencing), identification (signing/labeling), or other special operations requirements necessary to conduct the proposed operations.

*Vehicle and equipment fluids such as diesel fuel and gasoline will be stored in bulk (>25,000 gallon diesel and >6,000 gallon gasoline) metal tanks on concrete pads inside earth-bermed storage areas. Equipment will be fueled either by driving up to a bulk fuel dispenser and fueling the vehicle or a designated fuel vehicle will fill up at the bulk fuel dispenser and take fuel to each individual piece of heavy equipment. The fuel tanks should be filled approximately every three months.*

*Vehicle and equipment fluids such as antifreeze, petroleum based grease, hydraulic fluid, motor oil and cleaning solvents will be stored in metal 55-gallon drums, or equivalent, as received from the manufacturer or vendor and stored in a maintenance building onsite where vehicle and equipment maintenance and repairs will be performed. A limited storage of these materials will be maintained and may require replacement approximately twice per year. Spent or used fluids will be collected and stored in labeled drums during routine fluid change and maintenance intervals. The spent fluids will be collected by a contract recycler.*

*Mine water treatment reagents such as barium chloride, acid and sodium hydroxide will be stored at the mine water treatment facility and used as needed in the mine water treatment processing stream. Reagents will be contained in manufacturer-supplied containers and stored in a secured area of the mine water treatment building. The chemical usage will be monitored and the results used to order quantities of chemicals from local suppliers.*

*(If more space is needed to fill out a block of information, use additional sheets and attach form)*

*Explosives will be used in the mining operations and stored in magazines located at the surface in a controlled area. All activities related to explosives will meet Bureau of Alcohol Tobacco and Firearms (BATF) standards and Mine Safety and Health Administration (MSHA) and State requirements. An estimate of 300 pounds per day will be used and a replacement shipment of approximately five tons per month will be ordered. Section 5.3.11 Explosives of the attached Roca Honda Mine Operations Plan discusses more details of handling, usage and storage of explosives.*

*A security fence will be installed surrounding storage tanks, maintenance buildings, the water treatment facility and the explosive magazines where hazardous materials and toxic substances will be used and stored. All hazardous materials and toxic substances will be identified and properly labeled to comply with state and federal requirements.*

3. Describe the measures to be taken for release of a reportable quantity of a hazardous material or the release of a toxic substance. This includes plans for spill prevention, containment, notification, and cleanup.

### ***Prevention***

*The Project Manager and Safety Officer will determine the reportable quantity for each hazardous material in accordance with the regulatory requirements and train the personnel to recognize the quantities. Prior to commencing site work, all project personnel, including contractor personnel, will receive training on the proper procedures to respond to a spill or discharge. The training ensures that all personnel understand the procedures and best management practices previously described, as well as the spill reporting requirements under applicable pollution control laws, rules, and regulations.*

*Spill prevention briefings may also be conducted as necessary to review and discuss recent onsite spill events or failures, identify malfunctioning equipment and discuss recently developed precautionary measures related to the project. Personnel will also have an opportunity during the briefings to share recommendations concerning health, safety, and environmental issues encountered during execution of site activities. The Project Manager will be the designated point of contact for spill prevention and response. The Safety Officer will report to the Project Manager and will be responsible for conducting these briefings and designating others to lead briefings.*

*The site preparation and mining operation activities will be conducted to minimize the likelihood of a discharge leaving the facility and reaching an arroyo or waterway. Vehicle and equipment fueling and maintenance and generator operations are the primary activities requiring spill prevention. Vehicle and equipment fueling procedures and practices will be designed to minimize or eliminate the discharge of fuel spills and leaks to site waterways. Vehicles and equipment will be refueled onsite, either at designated onsite refueling areas or at the equipment locations, as necessary. The following procedures and practices apply to the site preparation and mining operations activities:*

- An onsite fueling area will be designated and designed with an area protected from run-on with berms or curbs and a curbed interior pad area to contain spills.*
- The fueling area will be located away from downstream waterways.*
- Drip pans or absorbent pads will be used as necessary during vehicle and equipment fueling.*

*(If more space is needed to fill out a block of information, use additional sheets and attach form)*

- *Absorbent spill clean-up materials and spill kits will be available in the fueling area and on fueling trucks used to refuel equipment outside the designated fueling area, and will be disposed of properly after use.*
- *Fueling will be performed within the protected areas.*
- *Nozzles used in vehicle and equipment fueling will be equipped with an automatic shutoff to control drips. Fueling operations will not be left unattended.*
- *Fuel tanks will not be "topped off."*

*Vehicle and equipment maintenance procedures and practices will be designed to minimize or eliminate the discharge of spills and leaks to site waterways. These procedures and practices apply to the site preparation and mining operations activities:*

- *All site vehicles will be monitored daily for leaks, and will receive regular preventive maintenance to reduce the potential of leaks. Vehicles with leaks will be repaired immediately or will be moved from the immediate work location to the maintenance building if further maintenance is required.*
- *Drip pans or absorbent pads will be used during vehicle and equipment maintenance work.*
- *Absorbent spill clean-up materials will be available onsite and will be disposed of properly after use.*
- *Used oils, fluids, lubricants, and spill clean-up materials will be disposed of immediately and properly.*

*Equipment inspections will consist of informal daily examinations and periodic condition inspections of the equipment. Additional inspections will be performed if a malfunction or leak occurs. Designated field personnel will conduct informal daily inspections of the support vehicles and associated equipment. Personnel will check equipment for leaks and proper operation; examine generators and pumps to verify proper function and check for damage and leakage; look for accumulation of water, oil, or other material at the work sites; and look for stained or discolored soil in and around the vehicles and equipment. Inspections of certain equipment will be performed in accordance with manufacturer's specifications, where applicable. All inspections will be documented on inspection logs; these logs will be signed by the onsite Project Manager, or designee, and maintained in the field files.*

*Brittle fracture evaluation is conducted by an experienced person for field-constructed aboveground tanks that undergo repair, alteration, reconstruction, or change in service. Brittle fractures may cause sudden and catastrophic tank failure, resulting in loss of product and potentially serious damage to the environment. Aboveground tanks will be evaluated for brittle fracture using current industry standards. The brittle fracture evaluation will be conducted as a best management practice as deemed necessary by the Project Manager.*

### **Containment**

*The following summarizes the actions that must be taken in the event of a discharge, including the distribution of responsibilities among individuals.*

*(If more space is needed to fill out a block of information, use additional sheets and attach form)*

*Field personnel must shut off all ignition sources, including motors, electrical circuits, and open flames.*

*Field personnel should determine the source of the discharge, and if safe to do so, immediately shut off the source of the discharge.*

*Field personnel should use any and all resources available at the project site to stop the spilled material from spreading, if safe to do so. Depending on the location and size of the discharge, sorbent material may be placed in the path of the discharge, or earthen berms or trenches constructed.*

*In the event of a discharge, field personnel must immediately contact the onsite Safety Officer, who will direct the response and cleanup activities.*

*The onsite Project Manager will ensure that the Discharge Notification Form is completely and accurately filled out.*

*Potentially harmful discharge notifications, as discussed below, must be completed immediately upon discovering the discharge. The onsite Project Manager must be contacted immediately so that timely notifications can be made. If the Project Manager is not available, the Safety Officer will begin notification. The Project Manager must also ensure that written notifications, if needed, are submitted to the appropriate agencies.*

*The following summarizes potential discharge scenarios during operations and scenario-specific containment procedures:*

- *Fueling/maintenance of earth moving equipment – piping, hoses, valves, and fittings can leak, rupture, or overflow within the local fueling area. Drip pans or absorbent pads will be used for containment as well as curbs or berms around the designated fueling area (if applicable).*
- *Fueling/maintenance of equipment/support vehicles – piping, hoses, valves, and fittings can leak, rupture, or overflow within the local fueling area. Drip pans or absorbent pads will be used for containment as well as curbs or berms around the designated fueling area (if applicable).*
- *Generator maintenance – generators can leak or develop valve failure within the local generator area. Drip pans or absorbent pads will be used for containment.*

### **Notification**

*Several parties must be contacted in the event of a reportable quantity discharge. All discharges should initially be reported to the Project Manager, who is then responsible for ensuring that all subsequent required discharge notifications have been made.*

*The U.S. Environmental Protection Agency (EPA) requires that discharges of oil in quantities that may be harmful to public health or welfare, or to the environment, be reported to the federal government. Quantities that may be harmful include those that:*

- *Violate applicable water quality standards;*

*(If more space is needed to fill out a block of information, use additional sheets and attach form)*

- Cause a film or "sheen" upon, or discoloration of the surface of the water or adjoining shorelines; or
- Cause a sludge or emulsion to be deposited beneath the surface of the water or upon adjoining shorelines.

*For any potentially harmful discharge that reaches navigable waters, or threatens to reach navigable waters, immediate notification must be made to the National Response Center (800-424-8802) and to the EPA Region 6 office (800-887-6063). The following information should be reported, if known:*

- Name, location, organization, and telephone number of the person making the report
- Name and address of the party responsible for the incident
- Date and time of the incident
- Location of the incident
- Source and cause of the release or spill
- Types of material(s) released or spilled
- Quantity of materials released or spilled
- Danger or threat posed by the release or spill
- Number and types of injuries (if any)
- Weather conditions at the incident location
- Any other information that may help emergency personnel respond to the incident

*In the event of a discharge that may result in an emergency situation, the Project Manager or designee must verbally notify the New Mexico Environment Department (NMED) Petroleum Storage Tank Bureau at 505-827-9329, 24-hours a day, as soon as possible after discovery of the discharge. Any amount of any material as may, with reasonable probability, injure or be detrimental to human health, animal or plant life, or property, or may unreasonably interfere with the public welfare or the use of property must be reported. This includes chemical, biohazardous, petroleum products, and sewage spills and incidents. In addition to recent spills, the discovery of evidence of previous unauthorized discharges, such as contaminated soil or ground water, also must be reported.*

*In the event of a discharge that does not present an emergency situation, verbal notification must be made to the NMED Petroleum Storage Tank Bureau at 505-476-6000 during normal business hours or at 866-428-6535 to leave a voice mail 24-hours a day.*

*A written notification must be made to the EPA for any single discharge of oil of more than 1,000 gallons, or for two discharges of one barrel (42 gallons) of oil to navigable waters or an adjoining shoreline waterway in any 12-month period. This written notification must be made within 60 days of the qualifying discharge; a copy will be sent to NMED. This reporting requirement is separate and in addition to the verbal reporting procedures discussed in the paragraphs above. Written notification to the EPA will be sent to:*

*SPCC/FRP Coordinator  
U.S. EPA - Region VI (6SF-RP)  
1445 Ross Ave.  
Dallas, TX 75202-2733  
(214) 665-6489*

*(If more space is needed to fill out a block of information, use additional sheets and attach form)*

## **Cleanup**

*Spill response materials will be available to and accessible by RHR and subcontractor personnel. These materials may be stored in the project vehicles or an onsite trailer, if one is used. The response materials may include:*

- *Absorbent socks*
- *“Oil-dry” loose absorbent material*
- *Absorbent pads*
- *Nitrile gloves*
- *Neoprene gloves*
- *Non-sparking shovels*

*RHR field operations personnel will regularly check the materials to ensure that used material is replenished.*

*The cleanup contractor will handle the disposal of any recovered product, contaminated soil, contaminated materials and equipment, decontamination solutions, sorbents, and spent chemicals collected during a response to a discharge incident. Any recovered product that can be recycled on site will be stored separately. Any recovered product not deemed suitable for onsite recycling will be disposed of with the rest of the waste collected during the response efforts.*

*If RHR or subcontractor personnel respond to a discharge without involvement of a cleanup contractor, RHR will contract a licensed transportation/disposal company to dispose of waste according to regulatory requirements. The Project Manager will ensure that the waste is characterized and that arrangements are made for the use of certified waste containers.*

- H. **Reclamation.** Describe the annual and final reclamation standards based on the anticipated schedule for construction, operations, and project closure. Include such items as the removal of structures and facilities including bridges and culverts, a revegetation plan, permanent containment of mine tailings, waste, or sludges which pose a threat of a release into the environment, closing ponds and eliminating standing water, a final surface shaping plan, and post operations monitoring and maintenance plans.

*See attached Permit Application Reclamation Plan.*

*Performance Standards from Forest Service Manual 2800 chapter 2842:*

*1. Revegetation – A fenced, controlled plot of ground, planted with the revegetation seed mix for a similar location in the permit area, will be used as a reference area for soil and grass reclamation, protected from animals and erosion while the seed is growing. This plot of soil and grass will be the standard for revegetation of the disturbed areas in the permit area. Revegetated areas will be monitored and compared to the standard plot during reclamation, making improvements if necessary.*

*2. Soil and water conservation measures – Inspections of storm water erosion controls, evaporation ponds, and the water detention basins will be performed before, during and after a precipitation event and the required maintenance.*

*(If more space is needed to fill out a block of information, use additional sheets and attach form)*

3. *Mass stability of overburden or other waste embankments – The operational stockpiles will be removed during reclamation and the disturbed area will be recontoured to blend with the natural topography.*

4. *Concurrent reclamation – Concurrent reclamation will be initiated with topsoil stripping and continue through mine operations. This ongoing and/or early reclamation reduces erosion, isolates and protects material for later use, provides mitigation of potential impacts, and reduces the final reclamation work and costs. Adjunct to concurrent reclamation is avoidance of disturbance and the use of existing roads and access corridors whenever possible. RHR will improve some of these existing roads for its needs and locate ventilation holes and escape shafts on old drill pads whenever possible.*

*Candidate areas for concurrent reclamation include the mud pits and the excavated material stockpiles, consisting of: 1) topsoil, 2) subsoil, 3) sub-base rock, 4) shaft material, 5) non-ore material, and 6) ore-bearing material.*

5. *Post-mining land configuration - The post-mining re-contouring is provided in Figures 2-1 through 2-6 of the RHR Reclamation Plan.*

## **VI. FOREST SERVICE EVALUATION OF PLAN OF OPERATIONS**

A. Required changes/modifications/special mitigation for plan of operations:

B. **Bond.** Reclamation of all disturbances connected with this plan of operations is covered by Reclamation Performance Bond No. \_\_\_\_\_, dated (mm/dd/yy) \_\_\_\_\_, signed by \_\_\_\_\_ (Principal) and \_\_\_\_\_ (Surety), for the penal sum of \_\_\_\_\_. This Reclamation Performance Bond is a guarantee of faithful performance with the terms and conditions listed below, and with the reclamation requirements agreed upon in the plan of operations. This Reclamation Performance Bond also extends to and includes any unauthorized activities conducted in connection with this operation.

The bond amount for this Reclamation Performance Bond was based on a bond calculation worksheet. The bond amount may be adjusted during the term of this proposed plan of operations in response to changes in the operations or to changes in the economy. Both the Reclamation Performance Bond and the bond calculation worksheet are attached to and made part of this plan of operations.

Acceptable bond securities (subject to change) include:

1. Negotiable Treasury bills and notes which are unconditionally guaranteed as to both principle and interest in an amount equal at their par value to the penal sum of the bond; or
2. Certified or cashier's check, bank draft, Post Office money order, cash, assigned certificate of deposit, assigned savings account, blanket bond, or an irrevocable letter of credit equal to the penal sum of the bond.

## **VII. TERMS AND CONDITIONS**

A. If a bond is required, it must be furnished before approval of the plan of operations.

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- B. Information provided with this plan marked confidential will be treated in accordance with the agency's laws, rules, and regulations.
- C. Approval of this plan does not constitute certification of ownership to any person named herein and/or recognition of the validity of any mining claim named herein.
- D. Approval of this plan does not relieve me of my responsibility to comply with other applicable state or federal laws, rules, or regulations.
- E. If previously undiscovered cultural resources (historic or prehistoric objects, artifacts, or sites) are exposed as a result of operations, those operations will not proceed until notification is received from the Authorized Officer that provisions for mitigating unforeseen impacts as required by 36 CFR 228.4(e) and 36 CFR 800 have been complied with.
- F. This plan of operations has been approved for a period of \_\_\_\_\_ or until (mm/dd/yy) \_\_\_\_\_. A new or revised plan must be submitted in accordance with 36 CFR part 228, subpart A, if operations are to be continued after that time period.

**VIII. OPERATING PLAN ACCEPTANCE**

I/We have reviewed and agreed to comply with all conditions in this plan of operations including the required changes, modifications, special mitigation, and reclamation requirements.

I/We understand that the bond will not be released until the Authorized Officer in charge gives written approval.

Operator (or Authorized Representative) \_\_\_\_\_ (Date)

(mm/dd/yy)

**IX. OPERATING PLAN APPROVAL**

(Name) \_\_\_\_\_ (Title)

(Authorized Officer) \_\_\_\_\_ (Date)

(mm/dd/yy)

**“According to the Paperwork Reduction Act of 1995, an agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a valid OMB number. The valid OMB number for this information collection is 0596-0022. The time required to complete this information collection is estimated to average 8 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.”**

*(If more space is needed to fill out a block of information, use additional sheets and attach form)*

## **Attachment A**

### **Roca Honda Mine Permit Area Surface Facilities and Structures**

*(If more space is needed to fill out a block of information, use additional sheets and attach form)*

**Table A-1. Section 16 Typical Surface Facilities and Structures (See Figure 4-1 in Mine Plan).**

Type	Approximate Size	Description
Evaporation pond (below parking)	11,250 sqft	Lined pond with down-gradient monitoring wells
Evaporation pond (below ore bays)	4,300 sqft	Lined pond with down-gradient monitoring wells
Evaporation pond (below non-ore)	3,375 sqft	Lined pond with down-gradient monitoring wells
Fuel depot	100' diameter	Contains a 20 ft and 30 ft diameter fuel tank
Generator pad	100' x 100'	Generator and fuel tanks
Headframe and shaft	30' x 75'	Steel headframe at main shaft opening
Hoist house	75' x 75'	Houses hoist and mechanical equipment in support of the main shaft
Heli-pad	50' x 50'	Pad for landing and take-off of helicopters
Explosives storage	165' x 165'	Storage buildings for explosives (fenced area)
Scale/assay house	40' x 20'	First floor - scale house second floor - assay building
Emergency services building	75' x 35'	Houses emergency services vehicles and equipment (e.g., fire truck and ambulance)
Mine rescue and safety	75' x 50'	Houses mine safety and rescue equipment and personnel
Truck wash area	120' x 50'	Wash pad and compressor building
Water tank	50' diameter	Fire and facility use water
Office	130' x 100'	Main office
Ore bays (4)	125' x 125' each	Stockpile of ore to be sent to mill
Ore pad	15' x 20'	Pad for initial placement of ore from shaft
Parking lot	66,300 sqft	Approximately 160 spaces for employees and visitors
Storage yard and laydown area	105,300 sqft	Maintenance yard and equipment parking
Maintenance shop	24,300 sqft	Upkeep and maintenance of surface equipment
Power substation	100' x 180'	132 kv electrical substation (fenced area)
Detention basin	44,100 sqft	Collects and controls flow in arroyo
Sewage facility	40' x 20'	Processing of sewage waste
Non-ore stockpile	52,650 sqft	Non-ore materials from mine
Shaft material stockpile	179,450 sqft	Excavated material from shaft construction
Subbase rock stockpile	322,750 sqft	Excavated rock from site leveling
Subsoil stockpile	106,250 sqft	Excavated soil from site leveling
Subsoil stockpile	112,100 sqft	Excavated soil from site leveling
Topsoil stockpile	141,100 sqft	Excavated topsoil from site clearing
Topsoil stockpile	203,475 sqft	Excavated topsoil from site clearing
Pipeline to water treatment plant (Section 16 only)	5,150 ft	Steel 24 inch pipe from shaft to treatment plant
Mine water treatment building	300' x 120'	Houses treatment unit processes
Settling ponds (2)	475' x 225' each	Lined ponds for initial water treatment process

*(If more space is needed to fill out a block of information, use additional sheets and attach form)*

Treated water reservoir	475' x 225'	Temporary storage of treated water
Development drill pads (11)	150' x 150' each	Disturbed area to drill borehole

**Table A-2. Section 10 Typical Surface Facilities and Structures (See Figure 4-2 in Mine Plan).**

Type	Approximate Size	Description
Equipment parking	200' x 200'	Parking and storage of surface operational equipment
Fuel depot	100' diameter	Contains a 20 ft and 30 ft diameter fuel tank
Generator pad	100' x 100'	Generator and fuel tanks
Heli-pad	50' x 50'	Pad for landing and take-off of helicopters
Explosives storage	165' x 165'	Storage buildings for explosives (fenced area)
Emergency services building	75' x 35'	Houses emergency services vehicles and equipment (e.g., fire truck and ambulance)
Headframe and shaft	30' x 75'	Steel headframe at main shaft opening
Hoist house	75' x 75'	Houses hoist and mechanical equipment in support of the main shaft
Mine rescue and safety	75' x 50'	Houses mine safety and rescue equipment and personnel
Water tank	50' diameter	Fire and facility use water
Office	130' x 100'	Main office
Ore bays (5)	125' x 125' each	Stockpile of ore to be sent to mill
Ore pad	15' x 20'	Pad for initial placement of ore from shaft
Parking lot	220' x 140'	Approximately 80 spaces for employees and visitors
Power substation	160' x 80'	132 kv electrical substation
Detention pond	41,450 sqft	Collects and controls flow in arroyo
Scale/assay house	40' x 20'	First floor - scale house second floor - assay building
Sewage facility	40' x 20'	Processing of sewage waste
Shaft material stockpile	22,400 sqft	Excavated material from shaft construction
Non-ore stockpile	64,450 sqft	Non-ore materials from mine
Subsoil stockpile	23,100 sqft	Excavated soil from site leveling
Topsoil stockpile	183,850 sqft	Excavated topsoil from site clearing
Subbase rock stockpile	31,600 sqft	Excavated rock from site leveling
Truck wash area	120' x 50'	Decontamination pad and sump to wash down mine equipment
Ventilation/escape shaft	12' diameter	Ventilation and escape shaft and air sampling station
Ventilation shaft	12' diameter	Ventilation and air sampling station
Evaporation pond (below parking)	6,850 sqft	Lined pond with down-gradient monitoring wells
Evaporation pond (below vent)	1800 sqft	Lined pond with down-gradient monitoring wells
Evaporation pond (below ops area)	13,750 sqft	Lined pond with down-gradient monitoring wells

*(If more space is needed to fill out a block of information, use additional sheets and attach form)*

Evaporation pond (below non-ore)	42,000 sqft	Lined pond with down-gradient monitoring wells
Development drill pad (1)	150' x 150'	Disturbed area to drill borehole
Monitor well pad (1)	150' x 150'	Disturbed area to drill and install well
Pipeline to water treatment plant (Section 10 only)	2,355 ft	Steel 24 inch pipe from shaft to treatment plant

**Table A-3. Section 9 Typical Surface Facilities and Structures (See Figure 4-3 in Mine Plan).**

Type	Approximate Size	Description
Ventilation/escape shaft	12' diameter	Ventilation and escape shaft and air sampling station
Ventilation shaft	12' diameter	Ventilation shaft and air sampling station
Ventilation shaft	12' diameter	Ventilation shaft and air sampling station
Monitor well pad (2)	150' x 150' each	Disturbed area to drill and install well

*(If more space is needed to fill out a block of information, use additional sheets and attach form)*