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**U.S. Department of the Interior**  
**Bureau of Land Management**  
Ely District Office, Nevada

September 9, 1994

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# **Record of Decision**

# **Robinson Project**

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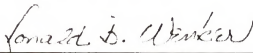
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## RECORD OF DECISION

### Robinson Project

**N46-92-004P**

U.S. Department of the Interior  
Bureau of Land Management  
Ely District Office  
HC 33 Box 33500  
Ely, Nevada 89301



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Ronald B. Wenker  
Acting State Director, Nevada

September 9, 1994

#### COOPERATING AGENCIES

U.S Environmental Protection Agency  
Nevada Division of Environmental Protection  
Nevada Department of Transportation  
White Pine County  
City of Ely

## **RECORD OF DECISION**

### **ROBINSON PROJECT N46-92-004P**

#### **SUMMARY**

The decision of the State Director, Nevada, Bureau of Land Management is to authorize the reintroduction of copper mining and continuation of gold mining in the Robinson Mining District by the Robinson Mining Limited Partnership (RMLP).

The BLM decision will consist of the action proposed in the Plan of Operation (POO) submitted by RMLP with two major modifications: tailings disposal and reclamation options. The mitigation measures and monitoring requirements are outlined below. Implementation of this decision with the mitigation measures will not cause unnecessary or undue degradation of the subject public lands.

The analysis of alternatives in the EIS included the Proposed Action, the No Action Alternative, the Disposal of Mill Tailings or Waste Rock in Liberty Pit, and a Reclamation Alternative consisting of seven independent reclamation options. In addition six separate alternatives were considered and eliminated from further detailed analysis.

All practicable means to avoid or minimize environmental harm from the selected alternative have been adopted. There were no measures identified to reduce or avoid environmental harm which were not selected to be part of this decision. Monitoring will be established which will allow further refinement of mitigation measures. All mitigation will be implemented and enforced.

#### **DECISION**

The decision of the State Director, Nevada, Bureau of Land Management (BLM) is to authorize the reintroduction of copper mining and the continuation of gold mining in the Robinson Mining District by the RMLP. This decision shall not be implemented until 30 days after the date that the Environmental Protection Agency (EPA) publishes the Notice of Availability of the Final Environmental Impact Statement (FEIS) and Record of Decision (ROD) in the Federal Register.

The BLM decision, which is the same as that identified in the Draft and Final EISs as the Agency Preferred Alternative, is a combination of actions that have been analyzed. It consists of the action proposed in the POO submitted by RMLP with two major modifications: tailings disposal and three of the reclamation options. The mitigation and monitoring requirements are outlined below. BLM's decision for tailings disposal consists of disposal into Giroux Wash in an impoundment formed by a "straight across" dam (Alternative Scenario 4 as described in the FEIS) during extraction of the economic ore from Liberty Pit. After economic ore recovery from Liberty Pit has been completed in about seven years, and upon the condition that RMLP has received an approved Water Pollution Control Permit from NDEP, the remaining tailings will be disposed of in Liberty Pit (Alternative Scenario 4). If the Nevada Division of Environmental Protection (NDEP) does

not grant the required permit, the decision is to allow RMLP to dispose of all of the tailings into Giroux Wash.

BLM's decision for reclamation incorporates the following options: 1) vegetation cover standards based on Range/Woodland Site descriptions; 2) weeds cannot comprise any percentage of the cover; and 3) specific vegetation diversity requirements (see reclamation alternatives description in the FEIS).

Facilities will be built to the standards outlined in the plan of operation and the water pollution control application approved and permitted per the State of Nevada regulation, Nevada Administrative Code 445, and the BLM Cyanide Management Plan. RMLP will follow the POO in regard to all other activities associated with the project.

The POO has outlined detailed plans for the operation and construction of the Robinson Project. In summary, the POO consists of the expansion and continued mining of the Liberty, Veteran-Tripp, Ruth, Kimbley and Wedge Pits; expansion of existing waste rock disposal areas; construction of runoff diversion channels; construction and operation of a new tailings slurry pipeline; construction and operation of a new ore crushing facility; copper concentrator; mill tailings disposal facility; heap leach pads and ponds; construction and operation of a solvent extraction and electrowinning (SX/EW) plant; new power distribution line; and installation of water production wells and associated pipelines.

The operation has an estimated mine life of 16.5 years and will employ a total of 550 people. The operation will produce an average of 650 tons of copper concentrate, 50 tons of cathode copper, and two tons of molybdenum concentrate daily. The operation will utilize up to 3,216 acres of private lands, and 2,140 acres of public lands. There is a total of 3,370 acres of pre-existing disturbance within the Robinson Mining District. RMLP has submitted, and BLM and the NDEP have accepted, a bond of \$2,552,464 for the Phase One construction and operations of the project. Before Phase Two construction can occur an additional bond of approximately \$9,470,920 will be submitted to ensure successful reclamation. The bond for Phase Two will be reviewed and adjusted to meet then existing costs before being finalized.

All required State of Nevada, local Government or other Federal permits must be in place before mining operations can occur. Each of the respective water pollution control permits must be in place before disposal of tailings into Liberty Pit or construction on the SX/EW Plant, concentrator, mill tailing impoundment and heap leach pads. All Air Quality Permits to Construct will be in place before construction occurs.

A "Monitoring Plan," which will consolidate monitoring for project implementation and will include all committed monitoring identified below, will be developed within 60 days after project approval.

#### **ALTERNATIVES INCLUDING THE PROPOSED ACTION**

The analysis of alternatives in the EIS included Proposed Action, No Action, Six variations of Mill Tailings or Waste Rock disposal in Liberty Pit, and a Reclamation Alternative consisting of seven independent reclamation options. These are described below.

### Disposal of Mill Tailings

There are six scenarios within this alternative. These scenarios analyzed options of how to use Liberty Pit and Giroux Wash for tailings and waste rock disposal.

Scenario 1- Construct and utilize East Giroux Wash tailings disposal area, place remainder of tailings in Liberty Pit and reclaim Liberty Pit.

Scenario 2- Construct and utilize East Giroux Wash tailings disposal area, construct and utilize a smaller West Giroux Wash disposal area, and place tailings into Liberty Pit to just below final pit lake level (subaqueous disposal).

Scenario 3- Construct and utilize a smaller (7-year life) West Giroux Wash tailings disposal area, place remainder of tailings in Liberty Pit and reclaim Liberty Pit.

Scenario 4- Construct and utilize a straight across tailings impoundment sized for seven years, place remainder of tailings in Liberty Pit and reclaim Liberty Pit.

Scenario 5- Construct and utilize a larger straight across tailings impoundment, and place tailings into Liberty Pit to just below final pit lake level (subaqueous disposal).

Scenario 6- Construct and utilize the Giroux Wash tailings disposal area, and place 80 million tons of waste rock from the Veteran-Tripp pit into the Liberty pit.

### Reclamation Alternative

Reclamation options were developed to analyze several methods of performing reclamation. These options were independent as they could be implemented separately. All other aspects of the reclamation plan would remain the same.

Option 1- Waste rock dumps and facility sideslopes would be constructed or modified during reclamation to unbenched slopes of 3:1.

Option 2- All surface facilities and structures would be removed and surface disturbance reclaimed.

Option 3- Reclamation cover standards would be based on Range/Woodland Site Descriptions. There would be five different vegetative areas with five different cover standards.

Option 4- Seed mixtures would be composed of only native species.

Option 5- Weeds could not comprise any percentage of the required cover. Beyond the required cover, there is no limit on weeds. No noxious weeds will be allowed on any of the reclaimed areas.

Option 6- Seed sources would be from environments with similar elevation and climate characteristics of the mine site.

Option 7- There would be specific diversity requirements to meet the vegetation composition standards for five different vegetative areas.

Some of the alternatives considered for this NEPA analysis were eliminated from detailed analysis. A full description of each of these alternatives with rationale for their elimination from detailed analysis can be found in the Robinson Project Final EIS. These are:

1. Alternative locations for the tailings disposal facility
2. Tailings disposal area liner
3. Alternative routes for the new transmission line to the mine
4. Alternative design standards above those required by regulatory agencies
5. Methods for closing acidic copper leaching heaps
6. Monitoring systems, wells and tailings impoundment seepage collection

The National Environmental Policy Act, as interpreted through the regulations promulgated by the Council on Environmental Quality, require that the ROD for any federal action also identify the "environmentally preferable" alternative(s). Because mining is, by its nature, disruptive to the resources in the immediate area being mined, all of the "action" alternatives result in new disturbance. However, in the case of the Robinson Project, the No Action Alternative would result in 818 acres of previous disturbance remaining unreclaimed, sulfuric acid leached waste rock dumps would not be segregated and capped, poor water quality in the Ruth Pit would remain, and all new disturbance would be stabilized and reclaimed. Therefore, the BLM decision is the environmentally preferable alternative and would result in the least long-term disturbance to the environment.

#### MANAGEMENT CONSIDERATIONS

The rationale for the above decision is that it would allow RMLP to make a legitimate use of the public lands in an environmentally sound manner without causing undue or unnecessary degradation. In addition the decision would result in reclamation of 818 acres of previous mining disturbance that would otherwise remain unreclaimed, reclamation and stabilization of all new disturbance, and improvement of water quality in the Ruth Pit.

The rationale for selecting the Liberty Pit Tailings Disposal Alternative (Scenario 4) is because it would not degrade the waters of the State of Nevada; would disturb fewer acres of native vegetation on public land in Giroux Wash than the Proposed Action; would leave open the option of mining additional copper ore from Liberty Pit if economics prove this feasible during the time that Liberty Pit is being mined and would cost less than the Proposed Action.

NDEP has primacy for water quality issues. During their review of the water pollution control permit for disposal of tailings in Liberty Pit, they may be unable to issue the permit. If this occurs, RMLP would deposit the remaining tailings into the Giroux Wash tailings

disposal area which has been previously permitted by the State of Nevada. The rationale for this part of the decision is that would not degrade the waters of the State of Nevada and it would cost less than the proposed action.

RMLP's Plan of Operation proposes mining within the Robinson District, an area within the Ely District where mining has been identified as an appropriate land use that is in conformance with the Egan Resource Management Plan. Past operations in the Robinson District have established mining as the principal land use in the area. To date, surface disturbance from historic mining activities have left a total contiguous area of approximately 3,370 acres with little or no natural vegetation, and mining remains the sole land use within this area.

All but one of the respondents to the Draft EIS indicated support for selection of a "mining alternative". The majority (70%) of the letters received on the Draft EIS and approximately 80% of the comments at the public meeting were supportive specifically of the Proposed Action, RMLP's efforts to minimize environmental impacts, and the initiation and/or continuation of mining in the Robinson District.

The mine area is not included in any areas of designated National, regional, or local significance. Mining, by law, is a valid use of the public lands, which is inherently site-specific and which does not lend itself to relocation.

Long term reclamation would result in conditions to support post-mining land uses on public lands, in particular wildlife habitat, and would reduce visual contrasts.

The purpose of reclamation is to stabilize the soils and establish a seed bed for future revegetation. Our past experience has shown that native species alone have not met these requirements. Therefore, to meet all reclamation requirements the test plot program will also evaluate non-native species. Based on the test plot program the vegetation species that meet the goals of the reclamation will be used for the mine. This program may show that both types of seeds are needed or that native species alone will be able to meet the reclamation requirements.

The POO and the mitigation measures will minimize the adverse environmental impacts identified in the EIS. The monitoring requirements of the Plan of Operation and Mitigation Plan will assist RMLP, BLM, and others in identifying and mitigating or avoiding any unforeseen environmental impacts that may occur. The monitoring committed to shall provide periodic opportunities for BLM to refine and modify the mitigating measures.

#### **MITIGATION AND MONITORING**

All practicable means to avoid or minimize environmental harm from the selected alternative have been adopted. There were no measures identified to reduce or avoid environmental harm which were not selected to be part of this decision. All mitigation will be implemented and enforced.

The operation will be monitored under the Inspection and Enforcement procedures according to 43 Code of Federal Regulations (CFR) 3809. This will require monthly



compliance exams by BLM during construction and quarterly mine plan compliance exams by BLM during operation of the project.

The operator will have a quality assurance/quality control program established for the construction of the mill and heap leach facilities as outlined in the water pollution control permits.

The water quality of the project will be monitored per the POO and the water monitoring program established in the technical document "Groundwater Monitoring Program; Robinson Mine, Ely, Nevada" and "Groundwater Monitoring Plan: Giroux Wash Tailing Impoundment". These documents are incorporated by reference.

This ROD expressly incorporates each of the following mitigation measures and monitoring requirements. It is important to note that BLM, Magma, and the Cooperating Agencies have worked together to limit and/or mitigate resource and social impacts that may result from the project. The following mitigation and monitoring measures were identified in the FEIS, have been selected as part of the decision and shall be part of the POO.

#### Vegetation

- A total of 24 inches of uncompacted material will be placed on the copper heap leach pad during reclamation. This increased depth of uncompacted material from what was originally proposed in the POO for the copper heap leach pad will improve shrub establishment on the heap by increasing available rooting depth, reduce the potential for penetration of the heap by the roots of aggressive shrub species, and reduce the potential for non-point source pollution from penetrated heaps.

#### Wildlife Resources

- Removal of native vegetation on previously undisturbed lands in the project area will be prohibited between May 1 and July 31 to protect nesting migratory birds, such as the loggerhead shrike. Constraint periods for native vegetation removal will prevent loss of migratory birds and other protected bird species.
- An employee awareness program for wildlife resource protection and applicable laws will be developed and implemented by RMLP. This program information will be distributed to all new employees. This measure will reduce the potential for harassment and illegal shooting of wildlife species, particularly of high-profile species (e.g., mule deer, golden eagle).
- BLM will conduct nest surveys for ferruginous hawks along the transmission line route, if the disturbance activities were to occur during the breeding season (March 1 through June 30). If a nest is located, applicable protection procedures will be identified by the BLM biologist to protect these breeding birds. Procedures may include construction constraints within 0.5 mile of the nest during the highly sensitive or early periods of the breeding season (e.g., courtship and incubation). Surveys will determine the potential for impacting breeding ferruginous hawks



during nesting, and construction restrictions would prevent disturbances of breeding birds.

- No construction along the transmission line route in sagebrush habitat will occur between March 1 and May 15 between two hours before sunrise and 10:00 a.m. Construction restrictions will prevent disturbance of breeding sage grouse.
- BLM will conduct a sage grouse lek survey in the spring of 1995. Anti-perching devices, approved by the BLM and Nevada Division of Wildlife (NDOW), will be installed on transmission line structures within 0.5 mile of any active lek sites. Anti-perching devices will prevent raptors from using the transmission line structures as perch sites within 0.5 mile of a lek, reducing the potential for grouse predation during their breeding activities.
- Right-of-way clearing for transmission line construction within the pinyon/juniper habitat will use selective cutting to remove only the vegetation necessary for access, construction, and line reliability. Selective cutting will minimize the amount of pinyon/juniper habitat lost.
- The cyanide solution ponds and heap leach pads will be surveyed daily for wildlife species. The tailings facility also will be examined daily to record any wildlife mortalities and injuries that might be caused by animals becoming mired in the tailings. Information will be reported to the BLM and NDOW. If the solution ponds, heap leach pads, or tailings facility cause wildlife mortalities, both the BLM and NDOW will be consulted, and an appropriate mitigation measure (e.g., netting, supplemental fencing) will be developed to reduce or eliminate the problem. Daily monitoring of the cyanide solution ponds, heap leach pads, and tailings facility will identify areas lethal or dangerous to wildlife. Consultation with the BLM and NDOW will facilitate the development of appropriate supplemental mitigation.

#### Cultural Resources

- The procedures for evaluation and mitigation of impacts to cultural resources documented in the proposed project area have been determined through consultation among the BLM, the RMLP, the State Historic Preservation Officer, and the Advisory Council on Historic Preservation and are outlined in the Programmatic Agreement, on file at the Ely District office of the BLM. The Programmatic Agreement allows the BLM to determine effect based upon the mutually agreed upon guarantee of identification, evaluation, and mitigation of cultural resources in the proposed project area pursuant to Section 106 of the National Historic Preservation Act and implementing regulations (36 CFR 800).
- Mitigation of indirect impacts will be accomplished by limiting access to archaeological sites on private land, education of RMLP employees to the fragile nature of cultural resources, and an RMLP strict management policy against casual collecting of artifacts from project lands.

### Paleontology

- If potentially significant fossils, such as vertebrates, are discovered during mine development, operations, or reclamation, steps will be taken to identify and preserve them. RMLP will contact the BLM compliance officer at the Ely District Office to determine necessary. This measure will allow for the evaluation of the importance of any vertebrate fossils that may be discovered and provide adequate time for their preservation or data recovery.

The following mitigation and monitoring are also part of the BLM decision.

### Operation

The operator shall submit an annual report to the BLM by February 28th of each year which contains the following;

- a. An evaluation of the hydrologic monitoring data which includes a summary of statistical analyses along with tabular results of the generated statistical data, a summary of trends analysis along with graphical depictions of any apparent trends, comparison of analytical data to the state of Nevada water quality standards, and an evaluation of groundwater directions.
- b. An evaluation of waste rock, overburden and spent ore analysis with respect to stabilization and closure.
- c. Anticipated quality of water which will be impounded in the pits upon closure of the facility.
- d. Potential of the impoundment to degrade waters of the State of Nevada or to adversely affect human, terrestrial or avian life.
- e. Necessary stabilization procedures and plans for permanent closure of the pits.
- f. Current status of the project as outlined in the POO, including what activity occurred the past year and what will occur this next year.
- g. An evaluation of the monitoring data (air, wildlife and the test plot program) which includes a summary of statistical analyses along with tabular results of the generated statistical data, a summary of vegetative trends analysis along with graphical depictions of any apparent trends, and comparison of analytical data.

### Water

1. Any violation of the water pollution control permits or the BLM cyanide management plan or an emergency release will be reported to the BLM and NDEP. The minimum requirements for reporting known violations and releases are as follows.

- a. An oral report no later than 5 p.m. of the next regular work day from the time the operator has knowledge of the circumstances. The report shall include the following:
1. Name, address, and telephone number of the owner or operator,
  2. Name, address, and telephone number of the facility,
  3. Date, time and type of incident, condition or circumstances,
  4. Name and quality of materials involved,
  5. Human and animal mortality or injury,
  6. An assessment of actual or potential hazard to human health and the environment outside the facility, and
  7. The estimated quantity and the proposed disposition of the recovered and waste material that resulted from the incident.
- b. A written summary shall be provided within 10 calendar days of the time the operator makes the oral report. The written summary shall contain a description of the release or discharge and its cause, the periods of the release or discharge (including exact dates and times), whether the cause and its consequences have been corrected, and if not, the anticipated time each is expected to continue, and the steps taken or planned to reduce, eliminate, and prevent recurrence of the event.
- c. The operator shall take reasonable actions, including more frequent and enhanced monitoring to:
1. Determine the effects and extent of each release or discharge,
  2. Minimize any adverse impact to the waters of the state arising from each release or discharge,
  3. Minimize the effect of each release or discharge upon domestic animals, wild horses and wildlife, and
  4. Minimize the endangerment of the public health and safety which arises from each release or discharge.
  5. Remediation may include but is not limited to the following proven techniques: An interceptor well system, pump and treatment system, in-situ chemical stabilization, or in-situ bio-remediation.
2. The operator shall inspect all control devices, systems and facilities weekly, as outlined below, or as specified in the final water pollution control permits. Drainages and

containment systems shall also be inspected after storms and when possible during storms. These inspections are performed to detect evidence of:

- a. Deterioration, malfunction, or improper operation of control systems,
- b. Sudden changes in the level of the contents of any monitoring device,
- c. The presence of liquids in leak detection systems, and
- d. Severe erosion or other signs of deterioration in dikes or other containment devices.

3. The sites have been identified in Table 1 for the fluid management system and the water quality monitoring program. They will be inspected during the listed time periods by the operator as shown in Table 1.

4. All solid, toxic or hazardous wastes shall be disposed of pursuant to applicable laws and regulations.

#### Air

1. The operator will properly maintain construction equipment and will water the construction areas for dust suppression.

2. Dust generation from disturbed areas will be reduced through interim and final reclamation, which includes revegetation of the disturbed areas.

3. A 25 mph speed limit on nonpaved light vehicle roads and a 35 mph speed limit on paved light vehicle roads will be enforced to minimize dust.

4. Copper and molybdenum concentrates will be stabilized and covered during transport by rail and/or truck.

5. A monitoring and compliance schedule will be implemented by RMLP. The schedule will be specified in the Air Quality Permits issued by NDEP. All required air quality reports provided to NDEP will be submitted to the BLM.

#### Vegetation

1. Every five years after implementation of the reclamation test plot program, data from the yearly reports will be compiled and the vegetation standards will be reviewed and modified, if needed.

2. Three transects will be run per stratigraphic feature, or one per 160 acres, whichever is smaller. In general, areas that change vegetation success due to slope, rainfall, aspect and soil type, as well as different mine features (i.e., haul roads, waste rock dumps, leach pad, tailings impoundment) will be considered to be separate stratigraphic features.

## PUBLIC INVOLVEMENT

The scoping period for the EIS was initiated by publication of a Notice of Intent (NOI) on July 2, 1993 (Fed. Reg. page 35974) and comments were accepted until August 6, 1993. The NOI summarized the Proposed Action and the BLM's determination that an EIS was necessary for analysis of the proposal. The public and all appropriate news media were notified in writing of the periods available for comment. On July 9, 1993, 300 copies of the news release, "Ely BLM Invites Comments on Robinson Copper Mining Facility," were issued statewide to all newspapers, radio and television stations, and major interest groups. The BLM also mailed individual notifications to 148 interested persons, agencies, or groups. As a result of the EIS scoping process, 17 comment letters were received by the BLM. Major issues and concerns raised during scoping were potential impacts to water quality and quantity, especially Murry Springs, and social and economic issues.

Based on the public comments and the issues and concerns identified by BLM, a Draft EIS was prepared. The Draft EIS was filed with the EPA on April 20, 1994, and the Notice of Availability was published. The 45-day comment period extended through June 17, 1994. The public, including interested parties and all appropriate news media, was notified in writing of the periods available for comment. Approximately 350 copies of the Draft EIS were distributed to various individuals, organizations, and government agencies. Public meetings were held in Ely and Reno, Nevada, on May 24 and 25, 1994, respectively, and were attended by approximately 130 individuals, 15 of whom spoke. Thirty-five comment letters were received. Major issues and concerns raised during the comment period were tailings disposal options, economic benefit to White Pine County, water quality, reclamation and wildlife issues.

## APPEALS

This decision may be appealed to the Interior Board of Land Appeals, Office of the Secretary, in accordance with the regulations contained in 43 CFR, Part 4. If an appeal is taken, a notice of appeal must be filed at the BLM, Nevada State Office, 850 Harvard Way, P.O. Box 12000, Reno, Nevada 89520-0006 within 30 days after the date that EPA publishes the Notice of Availability of the FEIS and ROD in the Federal Register. The appellant has the burden of showing that the decision appealed from is in error.

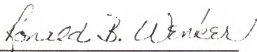
If you wish to file a petition (request) (pursuant to regulation 43 CFR 4.21) for a stay (suspension) of the effectiveness of this decision during the time that your appeal is being reviewed by the Board, the petition for a stay must accompany your notice of appeal. A petition for a stay is required to show sufficient justification based on the standards listed below. Copies of the notice of appeal and petition for a stay must also be submitted to each party named in this decision and to the Interior Board of Land Appeals and to the appropriate Office of the Solicitor (see 43 CFR 4.413) at the same time the original documents are filed with this office. If you request a stay, you have the burden of proof to demonstrate that a stay should be granted.

Standards for Obtaining a Stay

Except as otherwise provided by law or other pertinent regulations a petition for a stay of a decision pending appeal shall show sufficient justification based on the following standards.

1. The relative harm to the parties if the stay is granted or denied,
2. The likelihood of the appellant's success on the merits,
3. The likelihood of immediate and irreparable harm if the stay is not granted, and
4. Whether the public interest favors granting the stay.

**Record of Decision Approval**



**Ronald B. Wenker**  
**Acting State Director**

**September 9, 1994**

**Table 1**

Identification	Parameter	Minimum Frequency
1) Monitoring wells WCC1M,WCC2M,WCC3M WCC4M,WCC5M,WCC6M SKKR13M,R-A,R-B,R-C R-E,R-F,R-H	Water Level Elevation	Monthly for the first year, quarterly thereafter
Boreholes: AB-1,AB-3,AB-4		
Production well: Deep Ruth Shaft		
2) Sites identified above  except WCC1M,WCC2M WCC3M AND WCC4M	Profile 1 *	Semi- Annually
3) WCCM1M,WCC2M,WCC3M and WCC4M	Profile 1	Quarterly
4) Concentrator make-up water supply (CMWS)	Profile 1	Annually
5) Tailings Water	Profile 1 Profile 2 **	Monthly Semi- Annually
6) Tailings seepage collection ponds	Profile 1	Monthly
7) Mill water storage pond leak detection sumps	Average daily accumulation in gpd***	Weekly
8) Leach facility make-up water supply	Profile 1	Annually
9) Heap leach pad I,II,III cells 1,2&3 leak detection observation manholes	Average daily accumulations in gpd	Weekly



10)	Heap leach solution collection channel leak detection observation manholes	same as (9)	Weekly
11)	PLS, raffinate and intermediate solution pond leak detection sumps	Same as (9)	Weekly
12)	PLS, raffinate and intermediate solutions	Profile 2	Quarterly
13)	Leach pad monitoring wells GWOP-1, 2 & 3	Profile 1	Quarterly
14)	Waste rock and overburden generated during quarter	Meteoric water mobility analysis; acid generation/ neutralization potential	Quarterly
15)	Murry Spring	flow Profile 1	Continuous Quarterly
16)	Tailings Solids	Acid generation/ neutralization potential	Semi- Annually
17)	Liberty/ Ruth Pits	Surface Samples Profile 1	Semi- Annually

\* Chemical analysis that identifies elements for the Drinking Water Standards review.

\*\* Chemical analysis for a range of multiple elements to determine chemical trends.

\*\*\* Gallons per day

Any additional necessary fluid management and testing procedures will be developed with NDEP and BLM within 90 days of the start of construction of the facility.