

STATE OF CALIFORNIA
 ENVIRONMENTAL PROTECTION AGENCY
 DEPARTMENT OF TOXIC SUBSTANCES CONTROL &
 CENTRAL VALLEY REGIONAL WATER QUALITY CONTROL BOARD

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| In the Matter of: |) | DTSC Docket No. HSA-CO 11/12-008 |
| |) | |
| Empire Mine State Historic Park |) | RWQCB Order No. R5-2011-0705 |
| 10556 East Empire Street |) | |
| Grass Valley, CA |) | CLEANUP AND ABATEMENT |
| Nevada County |) | ORDER, IMMINENT AND/OR |
| |) | |
| Project Respondents: |) | SUBSTANTIAL ENDANGERMENT |
| |) | |
| California Department of |) | DETERMINATION AND |
| Parks & Recreation |) | CONSENT ORDER |
| 1416 Ninth Street |) | Health and Safety Code |
| Sacramento, California 95814 |) | Sections 25355.5(a)(1)(C) |
| |) | and 25358.3, 58009 and 58010 |
| |) | |
| Newmont USA Limited |) | Water Code |
| A Delaware Corporation |) | Sections 13267 &13304 |
| 6363 South Fiddlers Green Circle |) | |
| Greenwood Village, CO 80111 |) | |

I. INTRODUCTION

1.1 Parties. The California Environmental Protection Agency, Department of Toxic Substances Control (DTSC) and Central Valley Regional Water Quality Control Board (Regional Water Board) enter into this Cleanup and Abatement Order, Imminent and/or Substantial Endangerment Determination and Consent Order (Order) with California Department of Parks and Recreation (Parks) and Newmont USA Limited, a Delaware Corporation (Newmont) (together, Respondents).

1.2 Site. This Order applies to the property that is known as the Empire Mine State Historic Park (Park), located at 10791 East Empire Street, Grass Valley California 95945 in Nevada County, and the areal extent of contamination that resulted from activities on the property (collectively, the "Site"). The Park consists of approximately 856 acres and is identified by Nevada County Assessor's Parcel numbers 09-610-14, 09-610-17, 09-610-34, 29-260-01, 29-260-02, 29-350-13, 09-620-04, 09-620-09, 09-620-13, 09-620-18, 22-200-02, 22-200-25, 22-200-43, 22-200-53, 09-610-18, 09-560-21, 09-560-24, 09-320-37, 09-630-09, 09-610-01, 22-200-03, 09-320-34, 09-610-16, 09-610-24, 09-610-07, 09-610-10, 09-320-36, 09-610-25, 09-610-26, 09-620-06, 09-620-19, 09-610-35, 09-610-15, 09-610-30, 09-610-38, 09-560-40, 09-560-41, 09-560-42, 09-

560-43. A location map and diagram of the Site are attached as Exhibit A and Exhibit B, respectively.

1.3 Jurisdiction. This Order is entered into by DTSC, the Regional Water Board and Respondents pursuant to Health and Safety Code Sections 25355.5(a)(1)(C), 25358.3, 58009, and 58010; and Water Code Sections 13267 and 13304. These sections authorize DTSC and the Regional Water Board to enter into an enforceable agreement or order with Respondents requiring the characterization, associated cost reimbursement for oversight and remediation of the Site and any off-site discharges; to order appropriate work and to take various actions.

1.4 Purpose. The purpose of this Order is to protect public health and safety, the waters of the state, and the environment, and to govern, with the oversight of DTSC and the Regional Water Board, Respondents' implementation of certain response activities at the Site, including site characterization, environmental monitoring, work plan development and implementation, evaluation and analysis of response action alternatives, implementation of response actions, long term operations and maintenance and reporting. Building on the work begun in 2006, the parties currently anticipate that the comprehensive program of Site investigation and cleanup, outlined in Exhibit C-8 (Plan/Activities list), will be implemented over a multi-year timeframe. The intent of this order is to incorporate the work from the previous limited scope orders and govern continuing remediation of the Site through certification. The anticipated work and its elements constitute response actions, as that term is defined in the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA, 42 U.S.C. §9601, et seq.), consistent with Chapter 6.8 of Division 20 of the Health and Safety Code, Sections 25300 et seq., as amended ("Chapter 6.8"), and cleanup and abatement actions, as set forth in Water Code Section 13304. All work is intended and will be designed and implemented consistent with State law and CERCLA, so that, during implementation and upon completion, the data, analysis, and response actions taken are not inconsistent with CERCLA's National Contingency Plan (NCP) and its requirements for a Remedial Investigation/Feasibility Study and response action selection in accordance with NCP and State criteria for remedy selection.

1.5 Contribution. The Parties agree that this Order constitutes an administrative settlement for purposes of Section 113(f)(3)(B) of CERCLA, 42 U.S.C. § 9613(f)(3)(B), pursuant to which Respondents have, as of the Effective Date, resolved their liability to DTSC and the Regional Water Board only for actual work performed and implemented in compliance with this Order and for costs actually paid in accordance with this Order.

II. BACKGROUND

2.1 Ownership. Parks owns the surface and sub-surface property rights, with the exception of certain mineral rights deeper than 100-250 feet below the surface. Parks purchased the Site in 1975 from Newmont Exploration Limited. Newmont USA

Limited is successor in interest to Newmont Exploration Limited. New Verde Mines LLC, a subsidiary of Newmont USA Limited, still retains certain subsurface mineral rights at the Site deeper than 100-250 feet below the surface.

2.2 Physical Description. The Site includes the Empire Mine State Historic Park and the corridor of the unnamed creek, historically referred to as Woodpecker Ravine, which is also referred to as the “Magenta Drain.” After the Magenta Drain leaves State Park property, it flows through a residential area and Memorial Park before entering a concrete channel. The Empire Mine State Historic Park is approximately 856 acres in size and located on the western slope of the north-central Sierra Nevada Mountains, approximately 50 miles northeast of Sacramento in Nevada County. Two irregularly shaped areas comprising the Site straddle East Empire Street and Highway 174, east of Highway 49 and Wolf Creek near Grass Valley, California. The larger area that includes the primary historic section is south of Highway 174 and East Empire Street while the smaller area lies to the north of Highway 174. Historical buildings and foundations of former buildings remain on the Site and are open for public touring. An extensive trail system runs throughout the Site. Little Wolf Creek traverses the southern portion of the Site before joining with Wolf Creek. The South Fork of Wolf Creek is located along the northern boundary of the Site and converges with the aforementioned unnamed creek before joining Wolf Creek. Piles of waste rock and mill tailings from past mining activities exist at numerous locations within the Site. Storm water from the Site drains to Wolf Creek. Wolf Creek flows into the Bear River, which feeds Camp Far West Reservoir, and then connects to the Feather River, which connects to the Sacramento River. The Magenta Drain discharges mine influenced water containing pollutants via Woodpecker Ravine into the south fork of Wolf Creek that flows through downtown Grass Valley and eventually to Wolf Creek.

2.3 Site History. Mining operations began within the present boundaries of the Park in 1851. In 1929, the Empire Mine and North Star Mine were acquired under the common ownership of the Empire Star Mines Company, one of the mine operators before 1957. In 1957, the mines ceased operations and the assets of the Empire Star Mines Company were transferred to New Verde Mines Company. During the life of the Empire Mine, it produced 5.6 million troy ounces (187 tons) of gold, using mercury amalgamation and cyanide extraction processes, during its operation. During the operating life of the mine, waste rock and tailings from the milling process were deposited in several areas of the Park. During the period 1925-1955, some cyanided sulfide tailings were stockpiled south of the former cyanide plant, an area presently referred to as the Red Dirt Pile. Parks’ contractor, Argo Minerals West, Inc., removed an estimated 46,000 tons of these cyanided sulfide tailings from the Site in 1986. Residual materials in the Red Dirt Pile area contained elevated concentrations of arsenic, lead, and mercury. This area was addressed by the Red Dirt Pile Priority Action Implementation Plan, completed in 2007. Various state regulatory and park personnel from 1977 to present have conducted site investigations.

2.3.1 DTSC Enforcement History:

2.3.1.1 DTSC issued an Order to Post to Parks for portions of the Site on July 27, 1989, based on chemical analyses of certain soils near the old cyanide plant. DTSC's predecessor, Department of Health Services, had sampled soils there and found elevated concentrations of lead, arsenic, and mercury at hazardous waste levels as set forth in Title 22 of the California Code of Regulations. The Order to Post required notices for trails and/or paths leading into and around contaminated areas below the former cyanide plant to direct visitors away from and prevent their exposure to hazardous substances. DTSC advised Parks to conduct a Preliminary Endangerment Assessment (PEA) and comply with the Order to Post on May 18, 1990. DTSC verified Parks' compliance with the Order to Post by letter dated March 7, 1991.

2.3.1.2 DTSC entered an Interagency Agreement with Parks on October 19, 1990, to oversee Parks' preparation of the PEA. The PEA addressed the area roughly bounded by the sand dam to the west, Little Wolf Creek to the south, the former cyanide plant to the north and the stamp mill to the east. DTSC provided additional comments on the PEA, and conditionally approved the PEA on January 6, 1993, with certain requirements, including additional sampling of Little Wolf Creek, potable and groundwater supplies, soil remediation, community and visitor awareness activities and protection measures, and development of a risk assessment during the remedial investigation and feasibility study process.

2.3.1.3 In July 2004, DTSC received additional inquiries from Site users regarding the mill tailing contamination and imposed additional requirements on the Site by letter dated July 29, 2005. DTSC noted that the mill tailings in this area appeared disturbed and also appeared to have migrated onto a trail. DTSC repeated that Parks needed to characterize fully the nature and extent of contamination with appropriate agency oversight.

2.3.2 Regional Water Board Enforcement History: The Regional Water Board enforces compliance with the two (2) NPDES permits mentioned below. The permits, including their enforcement, are outside the scope of this Order.

2.3.2.1 The Regional Water Board, on December 17, 2004, issued an Order pursuant to Water Code Section 13267 (13267 Order) requiring Parks to submit a technical report, including a report of waste discharge to apply for a National Pollutant Discharge Elimination System (NPDES) permit for the discharge of pollutants from the Magenta Drain. On September 23, 2005, Parks submitted a report of waste discharge to comply with the 13267 Order. On June 23, 2006, the Regional Water Board issued Parks an NPDES permit regulating the discharge from the Magenta Drain.

2.3.2.2 On June 28, 2005, Parks submitted a Notice of Intent to Comply (NOI) to the Regional Water Board to obtain coverage under the State Water Resources Control Board (State Water Board) General NPDES Permit for Discharges of Storm Water Associated with Industrial Activities. Parks also obtained coverage under the State Water Board General NPDES Permit for Discharges of Storm Water Associated

with Construction Activity, for its Public Mine Tour Tunnel Project. Parks completed this project in 2006 and the Construction Stormwater Permit was terminated in January of 2007.

2.3.3 Joint DTSC and Regional Water Board Enforcement History. The DTSC and the Regional Water Board entered into a Cleanup and Abatement Order, Imminent and/or Substantial Endangerment Determination and Partial Consent Order on November 28, 2006 with Respondents to implement five work plans previously approved by the regulatory agencies. That order is referred to as the 2006 Order. On September 7, 2007 the 2006 Order was amended (Amendment #1) to eliminate the termination date and expand the scope of work to include activities identified in Exhibit C-6 for implementation in 2007. The parties executed a subsequent amendment (Amendment #2) on March 11, 2009, covering additional response measures identified in Exhibit C-6-1 that were conducted in 2008. On September 1, 2009 the parties entered another Cleanup and Abatement Order, Imminent and/or Substantial Endangerment Determination and Partial Consent Order (2009 Order), that superseded the 2006 Order and Amendments #1 and #2 to the 2006 Order, to continue the work set forth in those orders and provide for additional work as described in Exhibit C-7 of the 2009 Order. The work described therein, and in Exhibit C-8 attached hereto (e.g., Priority Analysis Work Plans, Priority Action Evaluation and Alternative Analyses, Implementation Plans, etc.) are substantially equivalent to the RI/FS Workplans, RI Reports, FS Reports, RAWs, RAPs, and etc. defined in Section 4.0 below.

2.4 Substances Found at the Site. The 1993 PEA by Harding Lawson Associates determined that soils in the area below the former cyanide plant contain elevated levels of metals that are hazardous substances listed in Title 40, Code of Federal Regulations (40 CFR Section 302.4, Table 302.4). The arsenic, lead, mercury, and cadmium levels found in soils exceeded both residential California Human Health Screening Levels (CHHSLs) and U.S. EPA Region 9 residential Soil Regional Screening Levels (RSLs) as of January 2008. Arsenic was detected at a maximum concentration of 2290 milligrams/kilogram (mg/kg) just south of the former cyanide plant. Lead was detected at a maximum concentration of 13,200 mg/kg inside the foundation of the former cyanide plant. Mercury was detected at a maximum concentration of 37 mg/kg near the Hard Rock Trail. Cadmium was detected at a maximum concentration of 99 mg/kg inside the foundation of the former cyanide plant. Since 2006, a number of investigations at the Site have identified arsenic as the metal most commonly found at elevated concentrations. Lead and cadmium were also identified at elevated concentrations during these investigations. Weak acid dissociable cyanide has been detected at a maximum concentration of 8.43 mg/kg inside the foundation of the former cyanide plant. The constituents described in this Paragraph are “wastes” as defined in Water Code section 13050. The Site also contains at least one point source of pollutants, as defined in the federal Clean Water Act to waters of the State and navigable waters of the United States, known as the Magenta Drain.

2.5 Health/Environmental Threats at Site.

2.5.1 Arsenic. Acute ingestion may lead to a burning sensation in the mouth, nausea and vomiting. Chronic exposure to arsenic is associated with a persistent metallic taste in the mouth, hyperkeratosis, anemia, and peripheral nerve disease, and may increase the risk of developing skin cancer, aplastic anemia and leukemia.

2.5.2 Lead. Lead is a heavy metal that was used in paints, gasoline, and industrial purposes. Intake of lead is toxic to the nervous system, blood, heart, liver, and reproductive system. Children and pregnant women are particularly vulnerable. Lead exposure during pregnancy can cause premature births, smaller babies, decreased mental ability in the infant, learning difficulties, and reduced growth in children. These effects are more common if the mother or baby is exposed to high levels of lead. Adults can suffer from reproductive problems (in both men and women), high blood pressure, digestive problems, nerve disorders, memory and concentration problems, muscle and joint pain. If not detected early, children with high levels of lead in their bodies can suffer from damage to the brain and nervous system, behavior and learning problems (such as hyperactivity), slowed growth, hearing problems, and headaches.

2.5.3 Mercury. Skin contact with mercurous compounds of mercury can cause a hypersensitive skin rash called acrodynia or "pink disease." In children, this is accompanied by a fever, hyperkeratosis and swelling of the spleen, lymph nodes and fingers.

2.5.4 Cadmium. Chronic oral exposure to cadmium is associated with heart and kidney disease, decreased fertility, and impaired decreased immune function. Chronic inhalation of cadmium fumes/dust is associated with the development of emphysema, bronchitis and an increased risk of lung cancer.

2.5.5 Water Quality. The substances described in Section 2.4 may discharge to waters of the state and cause or threaten to cause pollution or nuisance, including causing impacts to beneficial uses of waters of the state.

2.6 Routes of Exposure. Potential routes of exposure at the Site for waste and/or hazardous substances which may affect public health, the environment or water quality include direct contact with contaminated soil, air routes for dust, consumption of food grown in contaminated soil, migration of waste and/or hazardous substances to groundwater, and offsite migration of waste and/or hazardous substances in soil and surface water runoff from rain into surface water bodies. If the drinking water source is impacted, direct exposure could be through bathing or drinking the water or breathing vapors while using the water. Ecological habitat receptors may be more sensitive to waste and/or hazardous substances than are human receptors.

2.7 Public Health and/or Environmental Risk. There is potential exposure to the public, Site workers, Park residents and ecological receptors to waste and/or hazardous substances via soil, air, water and food grown on the Site. Soil sampling has confirmed

certain trail segments, waste rock piles, areas with mill tailings and some residential yards contain elevated levels of metals. Trail use during dry times generates dust, which may be inhaled. Runoff from the Site, which may contain waste and/or hazardous substances, flows into both Little Wolf Creek and Wolf Creek, which flow into the Sacramento River.

III. AGENCY FINDINGS AND DETERMINATIONS

3.1 DTSC: As described in Section II of this Order, and further described in its records:

3.1.1 DTSC hereby makes the findings enumerated in Section II above, and that each Respondent is a responsible party or liable person as defined in Health and Safety Code section 25323.5.

3.1.2 DTSC hereby concludes that:

3.1.2.1 Respondents are responsible parties or liable persons as defined in Health and Safety Code section 25323.5.

3.1.2.2 Each of the substances listed in Section 2.4 is a "hazardous substance" as defined in Health and Safety Code section 25316.

3.1.2.3 There has been a "release" and/or there is a "threatened release" of hazardous substances listed in Section 2.4 at the Site, as defined in Health and Safety Code section 25320.

3.1.2.4 The actual and threatened release of hazardous substances at the Site may present an imminent and substantial endangerment to the public health or welfare or to the environment.

3.1.2.5 Response action is necessary to abate a public nuisance and/or to protect and preserve the public health.

3.1.3 Based on the foregoing findings of fact and conclusions of law, DTSC hereby determines that response action is necessary at the Site because there has been a release and/or there is a threatened release of a hazardous substance.

3.1.4 Based on the foregoing findings of facts and conclusions of law, DTSC hereby determines that there may be an imminent and/or substantial endangerment to the public health or welfare or to the environment because of the release and or the threatened release of the hazardous substances at the Site.

3.2 Regional Water Board: As described in Section II of this Order, and further described in its records:

3.2.1 The Regional Water Board hereby finds that:

3.2.1.1 The Site contains waste, as defined in Water Code section 13050. The waste at the Site was discharged and continues to discharge to waters of the state and it has caused and threatens to continue to cause pollution or nuisance. Parks is subject to Water Code Section 13304 because it currently owns the land where the Empire Mine is located and where waste has been discharged and continues to discharge, and therefore, is causing or permitting the discharge or threatened discharge of waste.

3.2.1.2 As the current landowner of the surface at the mine site, Parks has an obligation to prevent an ongoing discharge caused by the movement of wastes even if the current landowner did not cause the wastes to be present on the property.

3.2.1.3 Newmont is subject to Water Code Section 13304 because it, or its predecessor, formerly owned and operated the mine and discharged mine waste at the site. Mine waste continues to discharge and threaten to discharge to waters of the state.

3.2.1.4 Parks and Newmont are subject to Water Code section 13267 because they each have discharged waste, are discharging waste, and/or are suspected of having discharged or discharging waste within the Central Valley Region, and, therefore, the Regional Water Board may order Parks and Newmont to submit technical and/or monitoring program reports consistent with Water Code section 13267.

IV. CONSENT ORDER

4.0 IT IS HEREBY AGREED AND ORDERED THAT THE RESPONDENTS shall conduct all activities under this Order consistent with Chapter 6.8 of Division 20 of the Health and Safety Code, Sections 25300 et seq., as amended; Water Code, Division 7, as amended; the National Contingency Plan (40 Code of Federal Regulations (CFR) Part 300), as amended; U.S. EPA and DTSC Superfund guidance documents regarding site investigation and remediation; the Water Quality Control Plan for the Sacramento and San Joaquin River Basins, as amended; State Water Resources Control Board Resolution No. 92-49; and other applicable law. The Respondents shall conduct activities in the manner specified in the site-specific Health & Safety Plan, at Exhibit D. Having implemented the Communication Strategy (Exhibit E), the Respondents shall implement the Public Participation Plan, at Exhibit E-1. Exhibits D and E-1 shall be amended from time to time, if necessary, to meet, respectively, health and safety or communications objectives as set forth in each document.

4.1 Scope of Work. The scope of work (Work) includes those actions expected to be necessary to remediate the Site to ensure it does not pose a threat, or potential threat, to human health, the environment or waters of the State.

4.1.1 The Work includes all of the work required in the 2009 Order, described in Exhibit C-7, in addition to the work required in the 2006 Order and Amendments #1 and #2 to the 2006 Order. Exhibit C-8 presents an outline of the actions currently identified as necessary to remediate the Site.

4.1.2 The Work may be amended as new information becomes available. Any party may identify the need for additional work. If DTSC or the Regional Water Board determines that additional response actions are necessary to achieve the objectives above, Respondents shall conduct additional response actions with DTSC/Regional Water Board oversight under this Order.

4.2 Remedial Investigation/Feasibility Study (RI/FS). As needed, focused RI/FSs shall be conducted for specific media or operable units based on Site priorities. The RI/FSs shall be prepared consistent with the U.S. Environmental Protection Agency's "Guidance for Conducting Remedial Investigations and Feasibility Studies under CERCLA," October 1988. The purpose of the RI/FS is to assess Site conditions and to evaluate alternatives to the extent necessary to select remedies appropriate for the Site. RI and FS activities shall be conducted concurrently and iteratively so that the investigations can be completed expeditiously. Because of the unknown nature of portions of the Site and the iterative nature of the RI/FS, additional data requirements and analyses may be identified throughout the process. Respondent(s) shall fulfill additional data and analysis needs identified by DTSC and the Regional Water Board; these additional data and analysis requests will be consistent with the general scope and objectives of this Order.

4.2.1 RI/FS Objectives. The objectives of the RI/FS are to:

- (a) Determine the nature and full extent of hazardous substance contamination of air, soil, surface water and groundwater at the Site;
- (b) Identify all actual and potential exposure pathways and routes through environmental media;
- (c) Determine the magnitude and probability of actual or potential harm to public health, safety or welfare, the environment or to waters of the state posed by the threatened or actual release of hazardous substances at or from the Site;
- (d) Identify and evaluate appropriate response actions to prevent or minimize future releases and mitigate any releases which have already occurred; and
- (e) Collect and evaluate the information necessary to prepare a report of waste discharge (ROWD) consistent with California Code of Regulations, title 27, division 2, chapter 7, subchapter 1, article 1 (section 22470 et seq.), and a RAP/RAW.

4.2.2 RI/FS Workplans. The RI/FS Workplans shall include a detailed description of the tasks to be performed, information or data needed for each task, a Field Sampling Plan, a Health and Safety Plan, a Quality Assurance Project Plan, the

deliverables which will be submitted to DTSC and the Regional Water Board, and a schedule.

4.2.3 RI/FS Workplan Revisions. If Respondent(s) proposes to modify any methods or initiates new activities for which no Field Sampling Plan, Health and Safety Plan, Quality Assurance Project Plan or other necessary procedures/plans have been established, Respondent(s) shall prepare an addendum to the approved plan(s) for DTSC and the Regional Water Board's review and approval prior to modifying the method or initiating new activities.

4.2.4 Remedial Investigation (RI) Reports. The RI Reports shall be prepared and submitted by Respondent(s) to DTSC and the Regional Water Board for review and approval in accordance with the approved RI/FS workplan schedule. The purpose of the RI is to collect data necessary to adequately characterize the Site for the purposes of defining risks to public health, the environment and waters of the State and developing and evaluating effective remedial alternatives. Site characterization may be conducted in one or more phases to focus sampling efforts and increase the efficiency of the investigation. Respondent(s) shall identify the sources of contamination and define the nature, extent, and volume of the contamination. Using this information, the contaminant fate and transport shall be evaluated. The RI Reports shall contain:

- (a) Site Physical Characteristics. Data collected on the physical characteristics of the Site and surrounding area shall be detailed to the extent necessary to define potential transport pathways and receptor populations and to provide sufficient engineering data for development and screening of remedial action alternatives.
- (b) Sources of Contamination. Contamination sources (including heavily contaminated media) shall be defined. The data shall include the source locations, type of contaminant, waste characteristics, and Site features related to contaminant migration and human exposure.
- (c) Nature and Extent of Contamination. Contaminants shall be identified and the horizontal and vertical extent of contamination shall be defined in soil, groundwater, surface water, sediment, air, and biota. Spatial and temporal trends and the fate and transport of contamination shall be evaluated.
- (d) Health and Ecological Risk Assessments. Health and ecological risk assessments that meet the requirements of Health and Safety Code §25356.1.5(b) shall be conducted.

4.2.5 Feasibility Study (FS) Reports. The FS Report shall be prepared and submitted by Respondent(s) to DTSC and the Regional Water Board for review and approval, no later than 60 days from approval of the RI Report. The FS Report shall summarize the results of the FS including the following:

- (a) Documentation of all treatability studies conducted if applicable.

(b) Development of the medium specific or operable unit specific remedial action objectives, including legal requirements and other promulgated standards that are relevant.

(c) Identification and screening of general response actions, remedial technologies, and process options on a medium and/or operable unit specific basis.

(d) Evaluation of alternatives based on the criteria contained in the NCP including:

Threshold Criteria:

- (1) Overall protection of human health and the environment.
- (2) Compliance with legal requirements and other promulgated standards that are relevant.

Primary Balancing Criteria:

- (3) Long-term effectiveness and permanence.
- (4) Reduction of toxicity, mobility, or volume through treatment.
- (5) Short-term effectiveness.
- (6) Implementability based on technical and administrative feasibility.
- (7) Cost.

Modifying Criteria:

- (8) State and local agency acceptance.
- (9) Community acceptance.

4.3 Interim Screening and Evaluation of Remedial Technologies. At the request of DTSC or the Regional Water Board, Respondent(s) shall submit an interim document which identifies and evaluates potentially suitable remedial technologies and recommendations for treatability studies.

4.4 Removal Action Workplan (RAW). If DTSC or the Regional Water Board determines a removal action is appropriate, Respondent(s) will prepare a RAW in accordance with Health and Safety Code sections 25323.1 and 25356.1. The Removal Action Workplan will include:

- (a) a description of the onsite contamination and the risks to public health and safety, the environment and waters of the State;
- (b) the goals to be achieved by the removal action;

- (c) an analysis of the alternative options considered and rejected and the basis for that rejection. This should include a discussion for each alternative which covers its effectiveness, implementability and cost;
- (d) administrative record list;
- (e) a description of the techniques and methods to be used in the removal action, including any excavating, storing, handling, transporting, treating, and disposing of material on or off the site;
- (f) Sampling and Analysis Plan with corresponding Quality Assurance Plan to confirm the effectiveness of the RAW, if applicable;
- (g) a brief overall description of methods that will be employed during the removal action to ensure the health and safety of workers and the public during the removal action. A detailed community air monitoring plan shall be included if requested by DTSC or the Regional Water Board.

In conjunction with DTSC, Respondent(s) shall implement the public review process following the approved Public Participation Plan (Exhibit E-1). DTSC and the Regional Water Board will prepare a response to the public comments received. If required, the Respondent(s) shall submit within two (2) weeks of the request the information necessary for DTSC and the Regional Water Board to prepare this document.

Following the Regional Water Board and DTSC's finalization of the Responsiveness Summary, DTSC and the Regional Water Board will specify any changes to be made in the RAW. Respondent(s) shall modify the document in accordance with the Regional Water Board and DTSC's specifications and submit a final RAW within fifteen (15) days of receipt of their comments or by the date specified by the Regional Water Board and DTSC.

If the proposed removal action does not meet the requirements of Health and Safety Code section 25356.1(h), the Respondent(s) will prepare a Remedial Action Plan (RAP) in accordance with Health and Safety Code section 25356.1(c) for DTSC's and the Regional Water Board's review and approval.

4.5 Remedial Action Plan (RAP). If it is determined necessary by DTSC or the Regional Water Board, Respondent(s) shall prepare and submit to DTSC and the Regional Water Board a draft RAP. The draft RAP shall be consistent with the NCP and Health and Safety Code section 25356.1. The draft RAP public review process may be combined with that of any other documents required by the California Environmental Quality Act (CEQA). The draft RAP shall be based on and summarize the approved RI/FS Reports, and shall clearly set forth:

- (a) Health and safety risks posed by the conditions at the Site.
- (b) The effect of contamination or pollution levels upon present, future, and probable beneficial uses of contaminated, polluted, or threatened resources.

- (c) The effect of alternative remedial action measures on the reasonable availability of groundwater resources for present, future, and probable beneficial uses.
- (d) Site specific characteristics, including the potential for offsite migration of hazardous substances, the surface or subsurface soil, and the hydro geologic conditions, as well as preexisting background contamination levels.
- (e) Cost-effectiveness of alternative remedial action measures. Land disposal shall not be deemed the most cost-effective measure merely on the basis of lower short-term cost.
- (f) The potential environmental impacts of alternative remedial action measures, including, but not limited to, land disposal of the untreated hazardous substances as opposed to treatment of the hazardous substances to remove or reduce their volume, toxicity, or mobility prior to disposal.
- (g) A statement of reasons setting forth the basis for the removal and remedial actions selected. The statement shall include an evaluation of each proposed alternative submitted and evaluate the consistency of the removal and remedial actions proposed by the plan with the NCP.
- (h) A schedule for implementation of all proposed removal and remedial actions.

In conjunction with DTSC, Respondent(s) shall implement the public review process specified in DTSC's Public Participation Policy and Guidance Manual and the approved Public Participation Plan. DTSC and the Regional Water Board will prepare a response to the public comments received. If required, the Respondent(s) shall submit within two (2) weeks of the request the information necessary for DTSC and the Regional Water Board to prepare this document.

Following the Regional Water Board and DTSC's finalization of the Responsiveness Summary, DTSC and the Regional Water Board will specify any changes to be made in the RAP. Respondent(s) shall modify the document in accordance with DTSC's and the Regional Water Board's specifications and submit a final RAP within fifteen (15) days of receipt of their comments or by the date specified by the Regional Water Board and DTSC.

4.6 Quality Assurance/Quality Control (QA/QC). All sampling and analysis conducted by Respondent(s) under this Order shall be performed in accordance with QA/QC procedures submitted by Respondents and approved by DTSC and the Regional Water Board pursuant to this Order.

4.7 Report of Waste Discharge (ROWD). If it is determined necessary by DTSC or the Regional Water Board, Respondent(s) shall submit a ROWD in compliance with California Water Code section 13260 and/or California Code of Regulations, title 27, division 2, chapter 7, subchapter 1, article 1.

4.8 Remedial Design (RD). Within sixty (60) days after DTSC and Regional Water Board approval of the final RAP, Respondent(s) shall submit to DTSC and the Regional Water Board for review and approval a RD describing in detail the technical and operational plans for implementation of the final RAP which includes the following elements, as applicable:

- (a) Design criteria, process unit and pipe sizing calculations, process diagrams, and final plans and specifications for facilities to be constructed.
- (b) Description of equipment used to excavate, handle, and transport contaminated material.
- (c) A field sampling and laboratory analysis plan addressing sampling during implementation and to confirm achievement of the performance objectives of the RAP.
- (d) A transportation plan identifying routes of travel and final destination of wastes generated and disposed.
- (e) For groundwater extraction systems: aquifer test results, capture zone calculations, specifications for extraction and performance monitoring wells, and a plan to demonstrate that capture is achieved.
- (f) An updated health and safety plan addressing the implementation activities.
- (g) Identification of any necessary permits and agreements.
- (h) An operation and maintenance plan including any required monitoring.
- (i) A detailed schedule for implementation of the remedial action consistent with the schedule contained in the approved RAP including procurement, mobilization, construction phasing, sampling, facility startup, and testing.
- (j) A community air monitoring plan if applicable.

4.9 Implementation of Final RAPs or Final RAWs. Upon DTSC and Regional Water Board approval of the RD or RAW, Respondent(s) shall implement the final RAP or final RAW in accordance with the approved schedule in the RD or final RAW. Within sixty (60) days of completion of field activities, Respondent(s) shall submit a Completion Report documenting the implementation of the final RAP and RD or final RAW.

4.10 Changes During Implementation of the Final RAP or Final RAW. During the implementation of the final RAP and RD or final RAW, DTSC or the Regional Water Board may specify such additions, modifications, and revisions to the RD or final RAW as they deem necessary to protect public health and safety, waters of the State or the environment or to implement the final RAP or final RAW.

4.11 Operation and Maintenance (O&M). Respondent(s) shall comply with all O&M requirements in accordance with the final RAP and approved RD or final RAW. Within thirty (30) days of the date of the Regional Water Board's or DTSC's request, Respondents shall prepare and submit to the Regional Water Board and DTSC for approval an O&M workplan that includes an implementation schedule. Once approved,

Respondents shall implement the workplan in accordance with the schedule. Respondents shall enter into an O&M Agreement, including financial assurance, pursuant to California Health and Safety Code section 25355.2, with DTSC within (30) days of the date of DTSC's request.

4.12 Land Use Covenant. If the approved remedy in the final RAP or final RAW includes environmental restrictions or land use covenant(s) pursuant to California Code of Regulations, title 22, section 67391.1, the current owner(s) of the Site shall sign and record the environmental restrictions or land use covenant(s) approved by DTSC and the Regional Water Board within ninety (90) days of approval of the final RAP or final RAW.

4.13 Financial Assurance. Respondent(s) shall demonstrate to DTSC and the Regional Water Board and maintain financial assurance for operation and maintenance and monitoring. Respondent(s) shall demonstrate financial assurance prior to the time that operation and maintenance activities are initiated and shall maintain it throughout the period of time necessary to complete all required operation and maintenance activities. The financial assurance mechanisms shall meet the requirements of Health and Safety Code section 25355.2 and California Code of Regulations, title 27, section 22510(f). All financial assurance mechanisms are subject to the review and approval of DTSC and the Regional Water Board.

4.14 Five-Year Review. Respondent(s) shall review and reevaluate the remedial action after a period of five (5) years from the completion of construction and startup, and every five (5) years thereafter. The review and reevaluation shall be conducted to determine if human health, the environment and waters of the State are being protected by the remedial action. Within thirty (30) calendar days before the end of the time period approved by DTSC and the Regional Water Board to review and reevaluate the remedial action, Respondent(s) shall submit a remedial action review workplan to DTSC and the Regional Water Board for review and approval. Within sixty (60) days of the Regional Water Board and DTSC's approval of the workplan, Respondent(s) shall implement the workplan and shall submit a comprehensive report of the results of the remedial action review. The report shall describe the results of all sample analyses, tests and other data generated or received by Respondents and evaluate the adequacy of the implemented remedy in protecting public health, safety, the environment and waters of the State. As a result of any review performed under this Section, Respondents may be required to perform additional Work or to modify Work previously performed.

4.15 Discontinuation of Remedial Technology. Any remedial technology employed in implementation of the final RAP or final RAW shall be left in place and operated by Respondent(s) until and except to the extent that DTSC and the Regional Water Board authorize Respondents in writing to discontinue, move or modify some or all of the remedial technology because Respondents have met the criteria specified in the final RAP or final RAW for its discontinuance, or because the modifications would better achieve the goals of the final RAP or final RAW.

4.16 Review, Approval and Schedules. The Parties will use the following procedures to provide technical review, comment, approval, and response to comments on the Respondents' submittals under this Order.

4.16.1 Review and Comment on Draft Documents Prior to Submission to DTSC and the Regional Water Board. To facilitate regulatory review, any work plan or report prepared by a Respondent for submission to the Regional Water Board or DTSC under this Order shall be provided to all Respondents for technical review and comment at least twenty-one (21) days prior to submission to DTSC and the Regional Water Board.

a. The Respondents reviewing the document will have fourteen (14) calendar days to provide written comments to the authoring Respondent from the date of receipt of a new work plan or report.

b. The authoring Respondent shall revise the document as it deems necessary and submit it to DTSC and the Regional Water Board in accordance with the approved schedule. The authoring Respondent shall address all comments timely received from other Respondent(s), and inform DTSC and the Regional Water Board how it has done so. Concurrent with submission to DTSC and the Regional Water Board, the authoring Respondent shall provide copies to the other Respondents.

c. If no written comments are received within the allotted time period the authoring Respondent may submit the document to DTSC and the Regional Water Board, with notification to the other Respondents, without further review or modification. The authoring Respondent shall inform DTSC and the Regional Water Board that no comments were received.

d. If a reviewing Respondent(s) fails to timely submit comments or determines its comments were not adequately addressed, they may submit written comments on the document to DTSC and the Regional Water Board for consideration during the review process described in section 4.16.3. These comments shall be submitted to DTSC and the Regional Water Board within seven (7) calendar days of the date DTSC or the Regional Water Board receives the document.

e. The reviewing Respondent shall bear the costs of any changes to the authorized work or schedule that results from the consideration of comments received after the applicable comment periods.

4.16.2 All notices and documents required from the Respondents under this Order shall be submitted to both DTSC and the Regional Water Board.

a. Deliverables shall be submitted in accordance with schedules approved by DTSC or the Regional Water Board.

b. The Respondent(s) shall revise any submittals to address DTSC's and the Regional Water Board's written comments. Revised submittals are subject to DTSC's

and the Regional Water Board's approval, modification or other action as noted elsewhere in this Order.

4.16.3 Final Document Approval

a. DTSC and the Regional Water Board have approval authority over all final documents. DTSC and the Regional Water Board shall approve, disapprove, or conditionally approve a final document within 30 days after it receives the final document. DTSC or the Regional Water Board may modify the document as they deem necessary to comply with this Order or to protect public health or safety, the environment or waters of the state, and may approve the document as modified.

b. Upon receipt of DTSC's and the Regional Water Board's written approval, the Respondents shall commence work and implement any approved submittal as approved and in accordance with the schedule and provisions contained therein.

c. Every DTSC or Regional Water Board approved submittal (including approved modifications) or schedule required under this Order and DTSC's and the Regional Water Board's work plan approval letters shall be deemed incorporated into this Order. Any noncompliance with the documents incorporated in this Order shall be deemed a failure or refusal to comply with this Order.

d. The Respondent(s) may seek to modify a final document by submitting a written request to DTSC and the Regional Water Board's project managers. DTSC and the Regional Water Board may approve, with or without requiring other modifications, or disapprove the request.

4.17 Communications. All DTSC and Regional Water Board approvals and decisions made regarding submittals and notifications will be communicated to the Respondents in writing by DTSC's and the Regional Water Board's Project Managers or their respective designees. No informal advice, guidance, or suggestions or comments by DTSC or the Regional Water Board regarding reports, plans, specifications, schedules or any other writings by the Respondents shall be construed to relieve the Respondents of the obligation to obtain such written approvals.

4.18 Project Managers. Perry Myers, P.E., is the designated DTSC Project Manager for this Order. Victor Izzo, P.G., is the designated Regional Water Board Project Manager for this Order. Dan Millsap and Bill Lyle are the designated Respondents' Project Managers for this Order for Parks and Newmont, respectively. At least one of the Respondents' Project Managers shall have expertise in hazardous substance site cleanup. When designating a new Project Manager, the Respondents shall submit: (a) the name and address of the new Project Manager(s), and (b) the resume of the new Project Manager(s) demonstrating expertise in hazardous substance site cleanup. All engineering and geological work shall be conducted in conformance with applicable state law, including but not limited to, Business and Professions Code Sections 6735 and 7835. The Respondents shall each provide at least ten (10) days

advance written notice to the other parties of any change in its designated manager. See section 4.19 regarding other specialized expertise for reports under this Order.

4.19 Reports. As required by the California Business and Professions Code sections 6735, 7835, and 7835.1, Respondents shall have appropriate reports prepared by, or under the supervision of, a California registered professional engineer or geologist (Respondent's Workplan Engineer/Geologist) and signed by and showing the seal or stamp of the registered professional. All technical reports submitted by the Respondents shall include a statement signed by the authorized representative certifying under penalty of law that the representative has examined and is familiar with the report and that to the best of their knowledge, the report is true, complete, and accurate. When designating a new Professional Engineer/Geologist the Respondents shall submit: (a) the name and address of the new Respondent's Workplan Engineer/Geologist; and (b) the resume of the new Respondent's Workplan Engineer/Geologist, who must demonstrate appropriate expertise in hazardous substance site cleanup to DTSC's satisfaction. The Respondents shall each provide at least ten (10) days advance written notice to the other parties of any change in its designated Respondent's Workplan Engineer/Geologist.

4.20 Notices and Submittals. All notices, documents and communications required to be given under this Order, unless otherwise specified herein, shall be sent to the respective parties at the following addresses in a manner that produces a record of the sending of the notice, document or communication such as certified mail, overnight delivery service, facsimile transmission or courier hand delivery service:

4.20.1 To DTSC:

Perry Myers, P.E. (2 copies)
Project Manager
Brownfields and Environmental Restoration Program
Department of Toxic Substances Control
8800 Cal Center Drive
Sacramento, California 95826

With copies of transmittal letter or if none, cover page only, to:

Vivian Murai, Senior Staff Counsel
Office of Legal Counsel, MS-23A
Department of Toxic Substances Control
1001 I Street, 23d Floor
P.O. Box 806
Sacramento, California 95812-0806

4.20.2 To the Regional Water Board:

Victor Izzo, P.G., Senior Engineering Geologist (1 copy)
Title 27 Permitting and Mining

Central Valley Regional Water Quality Control Board
11020 Sun Center Drive, #200
Rancho Cordova, CA 95670

With copies of transmittal letter or if none, cover page only, to:

David P. Coupe, Senior Staff Counsel
c/o San Francisco Bay Regional Water Quality Control Board
1515 Clay Street, Suite 1400
Oakland, CA 94612
dcoupe@waterboards.ca.gov.

4.20.3 To the Respondents:

Dan Millsap, Project Manager
Northern Service Center
California Department of Parks and Recreation
One Capitol Mall, Suite 410
Sacramento, CA 95814

William Lyle, Director of Closure & Reclamation
c/o Newmont USA, Limited
6363 South Fiddlers Green Circle
Greenwood Village, Colorado 80111

With Copies To:

Kathryn Tobias, Senior Staff Counsel
California Department of Parks and Recreation
1416 Ninth Street
Sacramento, CA 95814

Matt Green, Acting District Superintendent, or designee
Gold Sector
California Department of Parks and Recreation
10556 East Empire Street
Grass Valley, CA 95945

Nancy Lipson, Esq.
Newmont USA, Limited
6363 South Fiddlers Green Circle
Greenwood Village, Colorado 80111

4.21 Quarterly Summary Reports. On a quarterly basis, each Respondent shall submit to DTSC and the Regional Water Board a Quarterly Summary Report documenting its activities completed under the provisions of this Order. The report shall

be received by DTSC and the Regional Water Board by the seventh (7th) day following the end of each quarter of the calendar year, and shall describe:

4.21.1. Specific actions taken by or on behalf of Respondent(s) during the previous quarter and the status of ongoing activities;

4.21.2. Summary of actions expected to be undertaken during the upcoming quarter; and

4.21.3. Any problems or anticipated problems in complying with this Order.

4.22 Extension Requests. If Respondent(s) are unable to perform any activity or submit any document within the time required under this Order, Respondent(s) may, prior to expiration of the time, request an extension of time that includes a proposed revised schedule in writing. The extension request shall include a justification for the delay. All such requests shall be in advance of the date on which the activity or document is due. If DTSC or the Regional Water Board determines that good cause exists for an extension, it will grant the request and specify a new schedule in writing. Respondents shall comply with the new schedule that is hereby incorporated into this Order. The request shall include the name of the activity and due date to be changed, the desired DTSC and Regional Water Board response date, and a new schedule of activities for tasks whose completion dates change as a result of the extension.

4.23 Submittal of Data and Documents. Unless otherwise specified in the documents required under this Order, including Work Plans, or under the NPDES permits (as defined in Section 2.3.2), the Respondents shall submit to DTSC and the Regional Water Board on an ongoing basis all data and appropriately redacted or non-privileged information concerning hazardous substances contamination and/or discharges of waste at the Site, in an electronic format agreed to by DTSC and the Regional Water Board, including technical records and reports, relevant contractual documents, sampling and monitoring information and photographs and maps. This obligation applies whether or not such data or information was developed pursuant to this Order. These submittals shall be in both electronic and hard copy format, if reasonably feasible.

4.24 Preservation of Documentation. The Respondents shall maintain a central repository of the data, reports, and other documents prepared pursuant to this Order. All such data, reports and other documents shall be preserved by the Respondents for a minimum of ten (10) years after the conclusion of all activities carried out under this Order. If DTSC or the Regional Water Board requests that some or all of these documents be preserved for a longer period of time, the Respondents shall either comply with that request, deliver the documents to DTSC and/or the Regional Water Board, or permit DTSC and/or the Regional Water Board to copy the documents prior to destruction. The Respondents shall notify DTSC and the Regional Water Board in writing at least six (6) months prior to the expiration of the ten-year minimum retention period before destroying any documents prepared pursuant to this Order. If any litigation, claim, negotiation, audit or other action involving the records has started

before the expiration of the ten-year period, the related records shall be retained until the completion and resolution of all issues arising therefrom or until the end of the ten-year period, whichever is later.

4.25 Time Periods. Unless otherwise specified, time periods begin from the date this Order is fully executed, and “days” means calendar days. “Business days” means all calendar days that are not weekends or official State holidays.

4.26 Dispute Resolution. The Respondents agree that the procedures contained in this Section are the required informal administrative procedures for resolving disputes arising under this Order. If a Respondent fails to follow the procedures contained in this Section, it shall have waived its right to further contest the disputed issue. Respondents shall follow Sections 4.26.1 through and including 4.26.3 to resolve disputes with DTSC and the Regional Water Board other than billing and cost recovery issues. Section 4.26.4 addresses billing and cost recovery disputes.

4.26.1 The parties agree in the first instance to attempt to resolve informally, among the Project Managers, any disagreement as to the Respondents’ compliance with the requirements of this Order. The DTSC or Regional Water Board Project Manager shall memorialize the decision and rationale resulting from these discussions (4.26.1 decision), and provide it to the parties.

4.26.2 If any or both Respondents wish to contest the 4.26.1 decision, the Respondents shall provide an initial written notice to the parties of their intent to dispute that decision within fourteen (14) days of the date of issuance of the Section 4.26.1 decision. This initial dispute notice shall include sufficient information to identify the disputed 4.26.1 decision. Within twenty-one (21) days, the Respondents shall present to the DTSC Cleanup Program Branch Manager - Sacramento Office, or designee, and/or the Regional Water Board’s Site and Groundwater Cleanup Program Manager, or designee, a written explanation of the issues in dispute, the nature of the dispute, the legal or other basis for Respondent’s position(s), and the remedy sought. The DTSC branch manager or Regional Water Board program manager shall issue a written decision with an explanation for the decision within thirty (30) days after receipt of the letter from the Respondents (Initial Informal Administrative Decision). The Parties may meet and confer prior to the written decision and may mutually agree to extend the days for resolution of the dispute. Where the dispute involves both agencies, DTSC and the Regional Water Board agree to make reasonable efforts to issue a joint written decision.

4.26.3 If a Respondent disagrees with the Initial Informal Administrative Decision, the Respondent(s) may seek a second level of review with the agencies. The second level reviewers shall be a DTSC Cleanup Program Assistant Deputy Director and a Regional Water Board Assistant Executive Officer, or their designee(s). Within thirty (30) days of the Initial Informal Administrative Decision, the Respondent(s) shall provide to these second level reviewers a written notice stating the reasons why the Initial Informal Administrative Decision is not acceptable and the remedy sought. The notice shall include (a) Respondent(s)’ original statement of dispute, (b) supporting documents, including the section 4.26.1 decision, and (c) copies of any responses

prepared by the Project Managers, DTSC branch manager and Regional Water Board program manager. These reviewers shall consider the issues raised in Respondent(s)' notice, and render a written decision to Respondent(s) within thirty (30) days of receipt of Respondent(s)' notice. The Parties may meet and confer prior to the written decision and may mutually agree to extend the days for resolution of the dispute. The decision shall constitute DTSC's and/or the Regional Water Board's Final Informal Administrative Decision on the issues in dispute. Where the dispute involves both agencies, DTSC and the Regional Water Board agree to make reasonable efforts to issue a joint written decision. Respondents reserve their legal rights to contest or defend against any final informal administrative decision rendered by DTSC or by the Regional Water Board under this section, including but not limited to those rights under Water Code Section 13320, and 23 CCR Sections 2050-2068. DTSC and the Regional Water Board reserve their rights as set forth throughout this Order.

4.26.4 If any Respondent disputes a DTSC or Regional Water Board billing, or any part thereof, the Respondent shall notify the assigned Project Manager and attempt to informally resolve the dispute with the agency whose bill is disputed. If the Respondent desires to formally request dispute resolution with regard to the billing, the Respondent shall file a request for dispute resolution in writing within 30 days of receipt of the billing in dispute. The written request shall describe all issues in dispute and shall set forth the reasons for the dispute, both factual and legal. If the dispute pertains only to a portion of the costs included in the invoice, the Respondent shall pay all costs that are undisputed in accordance with Section 4.27. The filing of a notice of dispute pursuant to this Section shall not stay the accrual of interest on any unpaid costs pending resolution of the dispute. The written request for dispute resolution shall be sent to:

For DTSC:
Special Assistant for Cost Recovery and Reimbursement Policy
Department of Toxic Substances Control
P.O. Box 806
Sacramento, CA 95812-0806.

For the Regional Water Board:
Assistant Executive Officer
Regional Water Quality Control Board, Central Valley Board
11020 Sun Center Drive, #200
Rancho Cordova, CA 95670

A copy of the written request for dispute resolution shall also be sent to the person designated by DTSC or the Regional Water Board to receive submittals under this Order. A decision on the billing dispute will be rendered by the DTSC Special Assistant for Cost Recovery and Reimbursement Policy, Assistant Executive Officer, or other DTSC or Regional Water Board designee, respectively.

4.27 Payment. The Respondents agree to pay DTSC and the Regional Water Board for their costs as provided in this section. Respondents are liable for all of

DTSC's and the Regional Water Board's costs that have been incurred in taking response actions at the Site (including costs of overseeing response actions performed by Respondent(s)) and costs incurred in the future.

4.27.1 DTSC and the Regional Water Board will bill the Respondents quarterly. To the extent Respondents desire additional billing detail beyond the standard invoice information, DTSC and the Regional Water Board shall provide upon request readily available detail on the oversight activities conducted during that quarter.

4.27.2 Any DTSC billing not paid by the Respondents within sixty (60) days of mailing to Respondents is subject to interest calculated from the date of the invoice pursuant to Health and Safety Code section 25360.1, and may render the Respondents to be in material default of this Order. Any Regional Water Board billing not paid by the Respondents within ninety (90) days of the invoice date will be considered a violation of this Order.

4.27.3 All payments made by the Respondents to DTSC shall be by a cashier's check, certified check or State Controller's check made payable to the "DTSC" or "Department of Toxic Substances Control," and shall bear on its face the project code for the Site (Site No. 100235) and the docket number of this Order. Payments for DTSC billings shall be sent to:

Department of Toxic Substances Control
Accounting/Cashier
1001 I Street, 21st Floor, MS-21A
P.O. Box 806
Sacramento, California 95812-0806

A photocopy of the check shall be sent concurrently to DTSC's Project Manager and to Parks. Payments may be made by wire transfer in accordance with DTSC and Regional Water Board procedures, if any.

4.27.4 All payments made by the Respondents to the Regional Water Board shall be by a cashier's check, certified check or State Controller's check made payable to the "State Water Resources Control Board," and shall bear on its face the Site name "Empire Mine SHP." Payments shall be sent to:

State Water Resources Control Board
SLIC Program
P.O. Box 944212
Sacramento, CA 94244-2120

A photocopy of the check shall be sent concurrently to the Regional Water Board's Project Manager and to Parks. Payments may be made by wire transfer in accordance with Regional Water Board procedures.

4.28 Cost Record Retention. DTSC and the Regional Water Board shall retain all cost records associated with the work performed under this Order for such time periods as may be required by applicable state law. The Respondents may request to inspect all documents which support DTSC's and the Regional Water Board's cost determinations in accordance with the Public Records Act, Government Code Sections 6250 et seq.

4.29 Site Access. Access to the Site and laboratories used for analyses of samples under this Order shall be provided at all reasonable times to employees, contractors, and consultants of DTSC or the Regional Water Board. Nothing in this Section is intended or shall be construed to limit in any way the right of entry or inspection that DTSC, the Regional Water Board or any other agency may otherwise have by operation of any law. DTSC or the Regional Water Board and its authorized representatives shall have the authority to enter and move freely about all property at the Site at all reasonable times for purposes including, but not limited to: inspecting records, operating logs, sampling and analytic data, and contracts relating to this Site; reviewing the progress of Respondents in carrying out the terms of this Order; conducting such tests as DTSC or the Regional Water Board may deem necessary; and verifying the data submitted by Respondents.

To the extent the Site or any other property to which access is required for the implementation of this Order is owned or controlled by persons other than Respondents, Respondents shall use best efforts to secure from such persons access for Respondents, as well as DTSC and the Regional Water Board, its representatives, and contractors, as necessary to effectuate this Order. To the extent that any portion of the Site is controlled by tenants of Respondents, Respondents shall use best efforts to secure from such tenants, access for Respondents, as well as for DTSC and the Regional Water Board, its representatives, and contractors, as necessary to effectuate this Order. For purposes of this Section, "best efforts" includes, but is not limited to, the payment of reasonable sums of money in consideration of access. If any access required to complete the Work is not obtained within forty-five (45) days of the effective date of this Order, or within forty-five (45) days of the date DTSC or the Regional Water Board notifies Respondents in writing that additional access beyond that previously secured is necessary, Respondents shall promptly notify DTSC and the Regional Water Board, and shall include in that notification a summary of the steps Respondents have taken to attempt to obtain access. DTSC or the Regional Water Board may, as they deem appropriate, assist Respondents in obtaining access. Respondents shall reimburse DTSC and the Regional Water Board in obtaining access, including, but not limited to, attorneys fees and the amount of just compensation.

4.30 Site Access for Respondents. Parks shall grant access to other Respondents who are in compliance with this Order for the purpose of conducting activities pursuant to this Order or for activities deemed necessary by DTSC or the Regional Water Board to meet the objectives of this Order.

4.31 Notification of Field Activities. The Respondents shall inform the Project Managers at least seven (7) days in advance of any field activities pursuant to this

Order and shall allow DTSC, the Regional Water Board and their authorized representatives to take duplicates of any samples collected by the Respondents pursuant to this Order.

4.32 Notification of Environmental Condition. The Respondents shall notify the Project Managers immediately upon learning of any condition posing an immediate threat to public health or safety or the environment. Within seven (7) days of the onset of such a condition, the Respondents shall furnish a report to DTSC and the Regional Water Board, signed by the Respondents' Project Manager(s), setting forth the events that occurred and the measures taken in the response thereto. Nothing in this section shall be deemed to limit any other notification requirement to which Respondents may be subject.

4.33 Stop Work Order. In the event that DTSC or the Regional Water Board determines that any activity (whether or not pursued in compliance with this Order) may pose an imminent or substantial endangerment to the health or safety of people on the Site or in the surrounding area or to the environment, DTSC or the Regional Water Board may order Respondent(s) to stop further implementation of this Order for such period of time needed to abate the endangerment. In the event that DTSC or the Regional Water Board determines that any site activities (whether or not pursued in compliance with this Order) are proceeding without DTSC or Regional Water Board authorization, DTSC or the Regional Water Board may order Respondent(s) to stop further implementation of this Order or activity for such period of time needed to obtain DTSC or Regional Water Board authorization, if such authorization is appropriate. Any deadline in this Order directly affected by a Stop Work Order, under this Section, shall be extended for the term of the Stop Work Order.

4.34 Emergency Response Action/Notification. In the event of any action or occurrence (such as a fire, earthquake, explosion, or human exposure to hazardous substances caused by the release or threatened release of a hazardous substance) during the course of this Order, Respondents shall immediately take all appropriate action to prevent, abate, or minimize such emergency, release, or immediate threat of release and shall immediately notify the Project Managers. Respondents shall take such action in consultation with the Project Managers and in accordance with all applicable provisions of this Order. Within seven days of the onset of such an event, Respondents shall furnish a report to DTSC and the Regional Water Board, signed by Respondents' Project Manager, setting forth the events which occurred and the measures taken in the response thereto. In the event that Respondents fail to take appropriate response and DTSC or the Regional Water Board takes the action instead, Respondents shall be liable to DTSC and the Regional Water Board for all costs of the response action. Nothing in this section shall be deemed to limit any other notification requirement to which Respondents may be subject.

4.35 Respondents' Liabilities. In consideration of the actions that will be performed and the payments that will be made by Respondents under the terms of this Order, and except as otherwise specifically provided in this Order, DTSC and the Regional Water Board covenant not to sue or to take administrative action against

Respondents for performance of the Scope of Work described in Paragraph 4.1, actually performed, and for recovery of their past costs and future oversight costs. This covenant not to sue is conditioned upon the complete and satisfactory performance by Respondents of their obligations under the Orders governing this Site. This covenant not to sue extends only to Respondents and does not extend to any other person. Nothing in this Order is intended or shall be construed to limit the rights of any of the parties with respect to claims arising out of or relating to the deposit or disposal at any other location of substances removed from the Site.

4.36 Government Liabilities. DTSC and the Regional Water Board shall not be liable for any injuries or damages to persons or property resulting from acts or omissions by the Respondents or by related parties in carrying out activities pursuant to this Order, nor shall DTSC or the Regional Water Board be held as a party to any contract entered into by the Respondents or its agents in carrying out the activities pursuant to this Order.

4.37 Third-Party Actions. In the event that the Respondents are a party to any suit or claim for damages or contribution relating to the Site to which DTSC or the Regional Water Board is not a party, the Respondents shall notify DTSC and the Regional Water Board in writing within ten (10) days after service of the complaint in the third-party action. Respondents shall pay all costs incurred by DTSC and the Regional Water Board relating to such third-party actions, including but not limited to responding to subpoenas.

4.38 Reservation of Rights. DTSC, the Regional Water Board and the Respondents reserve the following rights:

4.38.1 Except as provided in this Order, DTSC reserves its rights to pursue cost recovery and further response action(s) under CERCLA, as amended, Chapter 6.8 of Division 20 of the California Health and Safety Code, and any other applicable law.

4.38.2 Except as provided in this Order, the Regional Water Board reserves its rights to pursue cost recovery under Water Code, Division 7, CERCLA, as amended, and any other applicable law. The Regional Water Board reserves its right to issue orders for cleanup and abatement or take other remedial action pursuant to Water Code Section 13304 and any other applicable law.

4.38.3 Nothing in this Order shall constitute or be construed as a satisfaction or release from liability for any conditions or claims arising as a result of past, current or future operations of Respondents. Nothing in this Order is intended or shall be construed to limit or preclude DTSC or the Regional Water Board from taking any action authorized by law or equity to protect public health and safety or the environment and recovering the costs thereof.

4.38.4 Nothing in this Order (including any covenant not to sue or release) shall constitute or be construed as a waiver of the Respondents' rights, with respect to any claim, cause of action, or demand in law or equity that the Respondents may have

against any “person,” as defined in Section 101(21) of CERCLA, or Health and Safety Code Section 25319, including but not limited to claims based on negligence, or brought under CERCLA.

4.38.5 Except for purposes of enforcing this Order, in signing this Order the Respondents deny any and all legal and equitable liability and reserve all applicable defenses under any federal, state, or local statute, regulation, or common law for any claim, endangerment, nuisance, response, removal, remedial or other costs or damages incurred or to be incurred by the United States, the State, or other entities or persons or any natural resource damages as a result of the release or threat of release of hazardous substances to, at, from, or near the Site. Entry of this Order is not an acknowledgement by Respondents that any release or threatened release of a hazardous substance constituting an imminent and substantial endangerment to human health or the environment has occurred or exists to, at, from, or near the Site. Respondents do not admit and retain the right to controvert any of the factual or legal statements or determinations made herein in any judicial or administrative proceeding except in an action to enforce this Order. This Order shall not be admissible in any judicial or administrative proceeding against any Respondent, over its objection, as proof of liability or an admission of any fact dealt with herein, but it shall be admissible in an action to the extent necessary to enforce this Order.

4.39 The Respondents hereby waive the defenses of res judicata, collateral estoppel and claim splitting by DTSC and the Regional Water Board, only with respect to the agencies’ rights to pursue subsequent litigation regarding the Respondents’ responsibility for phases of Site work and costs not covered by this Order.

4.40 Compliance with Applicable Laws. Nothing in this Order shall relieve Respondent(s) from complying with all other applicable laws and regulations, including but not limited to compliance with all applicable waste discharge requirements issued by the State Water Resources Control Board or a California Regional Water Quality Control Board. Respondent(s) shall conform all actions required by this Order with all applicable federal, state and local laws and regulations.

4.41 California Law. This Order shall be governed, performed and interpreted under the laws of the State of California.

4.42 Compliance with CEQA. The issuance of this Order is an enforcement action taken by a regulatory agency and is exempt from the provisions of the California Environmental Quality Act, pursuant to Section 15321(a)(2), Title 14, California Code of Regulations. DTSC, the Regional Water Board, and/or Parks will comply with CEQA to the extent that any activities required by this Order are subject to CEQA. Parks is the lead agency for CEQA activities at the Site. Upon request, Respondent(s) shall provide DTSC, the Regional Water Board or Parks with any non-privileged information that the agencies deem necessary to facilitate compliance with CEQA. The costs incurred by DTSC and the Regional Water Board in complying with CEQA are response costs, and Respondents shall reimburse DTSC and the Regional Water Board for such costs pursuant to Section 4.27.

4.43 Respondents shall implement the Communication Strategy (Exhibit E), conduct appropriate public participation activities given the nature of the community surrounding the Site and the level of community interest. Respondents shall work cooperatively with DTSC and the Regional Water Board to ensure that the affected and interested public and community are involved in DTSC's and the Regional Water Board's decision-making process. Any such public participation activities shall be conducted in accordance with Health and Safety Code sections 25358.7, the DTSC Public Participation Policy and Procedures Manual and the approved Public Participation Plan (Exhibit E-1).

4.44 Severability. If any portion of this Order is ultimately determined not to be enforceable, that portion will be severed from the Order and the severability shall not affect the enforceability of the remaining terms of the Order.

4.45 Parties Bound. This Order applies to and is binding upon Respondent(s), and its officers, directors, agents, employees, contractors, consultants, receivers, trustees, successors and assignees, including but not limited to, individuals, partners, and subsidiary and parent corporations. Respondent(s) shall provide a copy of this Order to all contractors, subcontractors, laboratories, and consultants which are retained to conduct any work performed under this Order, within fifteen (15) days after the effective date of this Order or the date of retaining their services, whichever is later. Respondent(s) shall condition any such contracts upon satisfactory compliance with this Order. Notwithstanding the terms of any contract, Respondent(s) is responsible for compliance with this Order and for ensuring that its subsidiaries, employees, contractors, consultants, subcontractors, agents and attorneys comply with this Order.

4.46 Change in Ownership. No change in ownership or corporate or partnership status relating to the Site shall in any way alter Respondent's responsibility under this Order. No conveyance of title, easement, or other interest in the Site, or a portion of the Site, shall affect Respondent's obligations under this Order. Unless DTSC and the Regional Water Board agree that such obligations may be transferred to a third party, Respondents shall be responsible for and liable for any failure to carry out all activities required of Respondents by the terms and conditions of this Order, regardless of Respondent's use of employees, agents, contractors, or consultants to perform any such tasks. Respondents shall provide a copy of this Order to any subsequent owners or successors before ownership rights or stock or assets in a corporate acquisition are transferred.

4.47 Enforceability. Respondents' compliance with the requirements of this Order is enforceable by either DTSC or the Regional Water Board. DTSC and the Regional Water Board agree to coordinate any enforcement effort to avoid unnecessarily duplicative legal proceedings in ensuring compliance.

4.48 Satisfaction and Amendments. This Order supercedes both the 2006 Order, as amended, and the 2009 Order on the effective date of this Order except for purposes of enforcement. The intent of the parties in entering this Order was to include all pending work, including 2009 Work and ongoing work required by the 2006 Order,

including all Amendments. However, even if any such required or necessary activity was inadvertently omitted from Exhibit C-8, Respondents' obligations under the 2006 Order, as amended, and the 2009 Order shall continue in force, notwithstanding the foregoing language in this section, for obligations under Sections 4.24 Preservation of Documentation and 4.27 Payment, and any other provisions containing express time period requirements. Respondents' obligations under this Order shall be deemed satisfied upon Respondents' receipt of written notice from DTSC and the Regional Water Board that Respondents have complied with all the terms of this Order. Amendments or modifications may be proposed by any party. Each Respondent shall notify all parties within three business days that it has executed the amendment or modification. The effective date of that amendment or modification shall be the third business day following notification of full execution from the last party. The parties may agree to a different effective date.

4.49 Exhibits. All exhibits listed herein and attached to this Order are incorporated herein by this reference.

| | |
|-------------|---|
| Exhibit A | Site Location Map |
| Exhibit B | Site Diagram |
| Exhibit C-8 | Plan/Activities List |
| Exhibit D | Health & Safety Plan |
| Exhibit E | Communication Strategy |
| E-1 | Public Participation Plan, January 31, 2007 |

4.50 Effective Date. The effective date of this Order is the date when this Order is fully executed.

V. PENALTIES FOR NONCOMPLIANCE

5.0 Each Respondent may be liable for penalties of up to \$25,000 for each day out of compliance with any term or condition set forth in this Order and for punitive damages up to three times the amount of any costs incurred by DTSC as a result of Respondents' failure to comply, pursuant to Health and Safety Code sections 25359, 25359.2, 25359.4, and 25367(c). Health and Safety Code section 25359.4.5. provides that a responsible party who complies with this Order, or with another order or agreement concerning the same response actions required by this Order, may seek treble damages from a respondent who fails or refuses to comply with this Order without sufficient cause. Respondents may also be liable for administrative or judicial civil liabilities of up to \$25,000 per day and \$20 per gallon of waste discharged for each violation of this Order, in accordance with Water Code sections 13268 and 13350. The Assistant Executive Officer or the Executive Officer of the Regional Water Board may refer this matter to the Attorney General for judicial enforcement.

VI. SIGNATORIES

6.0 Binding Authority. Each undersigned representative of the parties to this Order certifies that he or she is fully authorized to enter into the terms and conditions of this Order and to execute and legally bind the Parties to this Order.

6.1 Counterparts. This Order may be executed and delivered in any number of counterparts, each of which when executed and delivered shall be deemed to be an original, but such counterparts shall together constitute one and the same document.

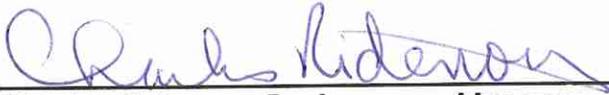
AGREED:

_____ Date: _____
Matt Green,
Acting Sierra District Superintendent,
or his designee/delegee, title:
California Department of Parks and Recreation

AGREED:

_____ Date: _____
Jeffrey K. Reeser
Vice President and Secretary
Newmont USA Limited

AGREED AND ORDERED:

 _____ Date: 7/18/11
Charles Ridenour, Performance Manager
Sacramento Office
Brownfields and Environmental Restoration Program
Department of Toxic Substances Control

AGREED AND ORDERED:

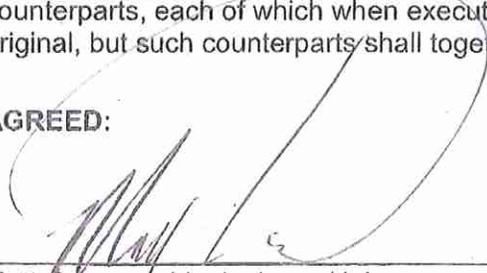
 _____ Date: 6-23-2011
Pamela C. Creedon, Executive Officer
Central Valley Regional Water Quality Control Board

VI. SIGNATORIES

6.0 Binding Authority. Each undersigned representative of the parties to this Order certifies that he or she is fully authorized to enter into the terms and conditions of this Order and to execute and legally bind the Parties to this Order.

6.1 Counterparts. This Order may be executed and delivered in any number of counterparts, each of which when executed and delivered shall be deemed to be an original, but such counterparts shall together constitute one and the same document.

AGREED:



Date: 7-7-11
Matt Green, or his designee/delegee:
Acting Sierra District Superintendent
or Designee/Delegee title:
California Department of Parks and Recreation

AGREED:



Date: 6/30/11
Stephen Gottesfeld
Vice President
Newmont USA Limited

AGREED AND ORDERED:

Date: _____
Charles Ridenour, Performance Manager
Sacramento Office
Brownfields and Environmental Restoration Program
Department of Toxic Substances Control

AGREED AND ORDERED:

Date: _____
Pamela C. Creedon, Executive Officer
Central Valley Regional Water Quality Control Board

EXHIBIT A
Site Location Map
Empire Mine State Historic Park

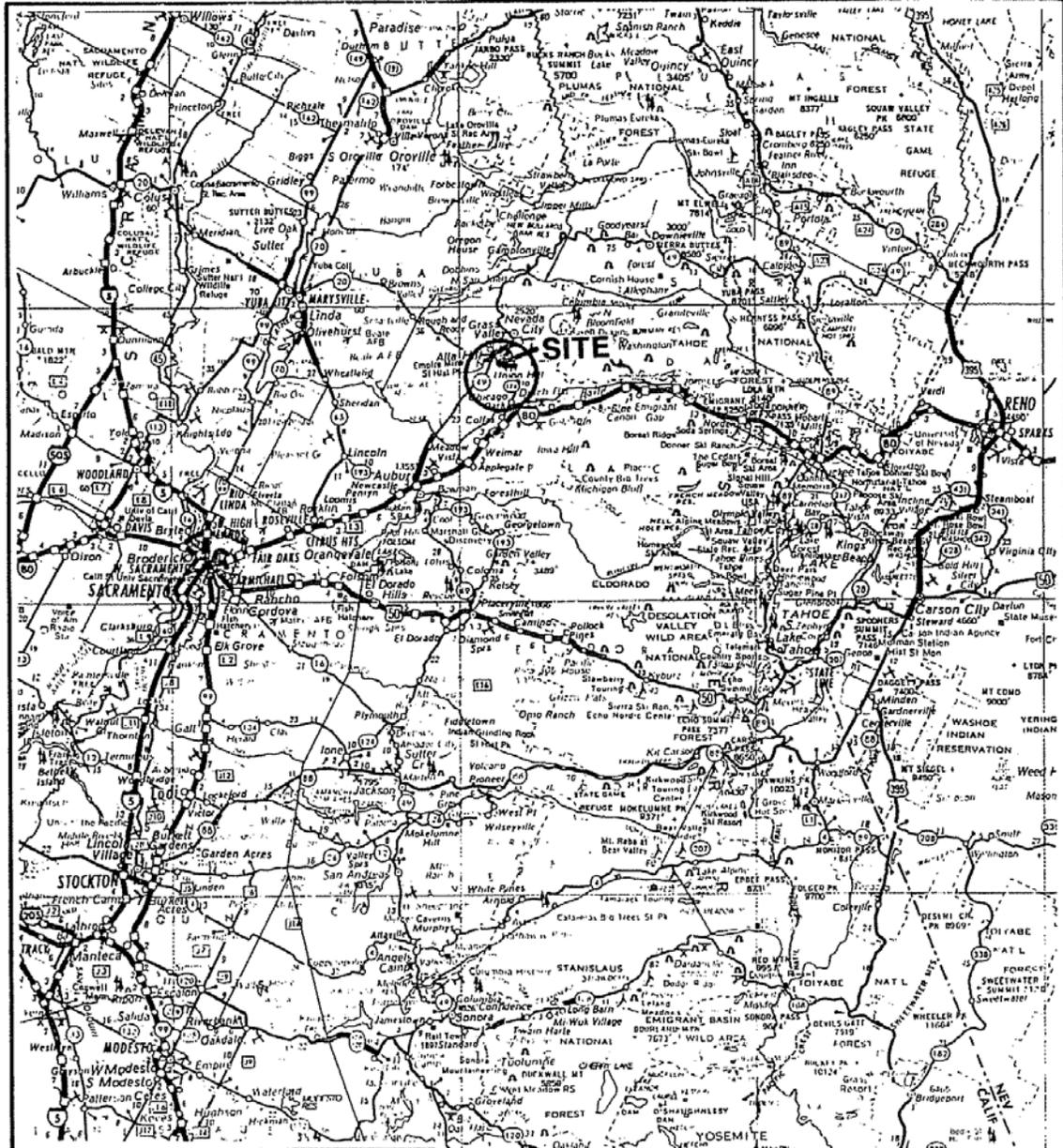


EXHIBIT C-8

Empire Mine State Historic Park -- Plans/Activities List

- **Red Dirt Pile**
 - RDP Implementation Plan (completed)
 - Completion Report (completed)
 - Long-term Operation and Maintenance Plan
 - Land Use Covenants
- **CN Plant and Adit Project Area**
 - Work Plan Development and Submittal (completed)
 - Soils and Foundation Characterization (completed)
 - Remedial Action Alternatives Report
 - Implementation Plan
 - Completion Report
 - Long-term Operation and Maintenance Plan (if necessary)
 - Land Use Covenants (if necessary)
- **Trails**
 - Work Plan Development Submittal (completed)
 - Additional Characterization (completed)
 - Priority Action Evaluation and Alternatives Analysis (completed)
 - Implementation Plan (completed)
 - Completion Report
 - Long-term Operation and Maintenance Plan (if necessary)
 - Land Use Covenants (if necessary)
- **Residences**
 - Soil Screening Level Determination/Background (completed)
 - Additional Characterization and/or Assessment
 - Exterior Soils Implementation Plan
 - Interior Implementation Plan (completed)
 - Interior Completion Report (completed)
 - Exterior Soils Completion Report
 - Long-term Operation and Maintenance Plan (if necessary)
 - Land Use Covenants (if necessary)
- **Magenta Drain Discharge**
 - Characterization Work Plan Development and Submittal (completed)
 - Hydrogeologic Characterization (completed)
 - Pilot-scale Water Treatment Testing (completed)
 - Empire Mine Pump Test (completed)
 - Magenta Drain Hydrology Evaluation (completed)

- Magenta Drain Passive Treatment System Design Basis (completed)
- Magenta Drain Report of Geotechnical Investigation (completed)
- Magenta Drain Design Basis Report (completed)
- **Un-named Channel (Woodpecker Ravine)**
 - Work Plan Development and Submittal
 - Remedial Action Alternatives Report
 - Implementation Plan
 - Completion Report
- **Empire Shaft Irrigation Water/Groundwater**
 - Sample Plan Development and Submittal (completed)
 - Water Quality Monitoring (ongoing)
- **Little Wolf Creek/Conveyance Corridor Surface Water Monitoring**
 - Sample Plan Development and Submittal (completed)
 - Flow and Water Quality Monitoring (ongoing)
- **Sand Dam**
 - Work Plan Development and Submittal
 - Marshland Delineation (vegetation and hydrological)
 - Conveyance Corridor Stormwater BMP Design and Implementation
 - Tailing physical and geochemical characterization (completed)
 - Remedial Action Alternatives Report
 - Implementation Plan
 - Completion Report
 - Long-term Operation and Maintenance Plan (if necessary)
 - Land Use Covenants (if necessary)
- **Historic Mine and Mill Facilities**
 - Survey Features and Locations (completed)
 - Historic Data Review
 - Field Reconnaissance
 - Mine/Mill material characterization (completed)
 - Remedial Action Alternatives Report
 - Implementation Plan
 - Completion Report
 - Long-term Operation and Maintenance Plan (if necessary)
 - Land Use Covenants (if necessary)
- **Historic Grounds/Mine Yard Characterization**
 - Work Plan Submittal and Development (completed)
 - Mine Yard Soils Characterization (completed)
 - Historic Ground Soil Characterization (completed)
 - Arsenic Settable Dust Cleanup Goals

- Remedial Action Alternatives Report
- Implementation Plan
- Completion Report
- Long-term Operation and Maintenance Plan (if necessary)
- Land Use Covenants (if necessary)
- **Historic Buildings-Interior**
 - Work Plan Submittal and Development (completed)
 - Historic Buildings Interior Dust Characterization
 - Arsenic is Settable Dust Cleanup Goals
 - Remedial Action Alternatives Report
 - Implementation Plan
 - Completion Report
 - Long-term Operation and Maintenance Plan (if necessary)
 - Land Use Covenants (if necessary)
- **Conveyance Corridor**
 - Work Plan Development and Submittal (completed)
 - Soils, Sediment and Drainage Channel Characterization (completed)
 - Remedial Action Alternatives Report
 - Implementation Plan
 - Completion Report
 - Long-term Operation and Maintenance Plan (if necessary)
 - Land Use Covenants (if necessary)
- **Stacy Lane Pond**
 - Work Plan Development and Submittal (completed)
 - Physical and geochemical characterization (completed)
 - Remedial Action Alternatives Report
 - Implementation Plan
 - Completion Report
 - Long-term Operation and Maintenance Plan (if necessary)
 - Land Use Covenants (if necessary)
- **Site-wide Human Health and Ecological Risk Assessment**
 - Work Plan Development and Submittal (completed)
 - Completion Report
- **Conceptual Site Model Update**
- **Identify closed areas for re-opening and re-open**
- **Final Closure Report(s)**
- **Final Site-wide Remedy (for areas outside established operable units)**

EXHIBIT D

HEALTH AND SAFETY PLAN

**HEALTH AND SAFETY PLAN
FOR
EMPIRE MINE STATE HISTORIC PARK
GRASS VALLEY, CALIFORNIA**

JULY 2006

Prepared by:

MFG, INC.
consulting scientists and engineers

3801 Automation Way, Suite 100
Fort Collins, Colorado 80525
(970) 223-9600
Fax: (970) 223-7171

MFG Project No. 180156/102

**HEALTH AND SAFETY PLAN
FOR
EMPIRE MINE STATE HISTORIC PARK
GRASS VALLEY, CALIFORNIA**

| PREPARED BY: | | | |
|--|-------------------|---------------------|-------------|
| Title | Name | Signature | Date |
| MFG | Jill Richards | | |
| REVIEWED BY: | | | |
| Title | Name | Signature | Date |
| MFG Project Manager | Sherm Worthington | | |
| MFG Office Health and Safety Coordinator | Tory Fravel | | |
| MFG Corporate Health and Safety Director | Stacy Meacham | | |
| REVISIONS | | | |
| Title | Name | Approved by: | Date |
| | | | |
| | | | |

List of Attachments

- A Safety Compliance Agreement Form
- B Safety Meeting Attendance Form
- C Site Vicinity Map Showing Route to Medical Facility

1.0 PROJECT BACKGROUND AND SITE CHARACTERIZATION

| | |
|---|--|
| Site Name: Empire Mine State Historic Park Owner/Operator: California Department of Parks and Recreation (CDPR) Site Location/Address: 10556 East Empire Street Grass Valley, California 95945 | |
| CDPR Contact(s): | |
| Ron Munson, Sector Superintendent | Phone: (530) 273-3884 email: rmunson@parks.ca.gov |
| Contractor Contact: | |
| To be determined | Phone: Fax: |

1.1 General Project Objective

The project consists of conducting sample collection, inspection activities, surveys, and light construction activities, such as fence construction, associated with the 2006 Priority Actions within the Empire Mine State Historic Park (SHP). This Health and Safety Plan (HASP) provides guidance for personnel who will be working at the site, and may be potentially exposed to any hazardous waste or substances. The general responsibilities of these personnel are to conduct sampling, visual inspections, surveys, and light construction activities, such as fence construction in the designated exclusion areas within the SHP.

This HASP was developed per California Code of Regulations, Title 8, Section 5192, to provide general health and safety guidance for work activities conducted at the site. According to Cal/OSHA requirements, each contractor working at this site must prepare a site specific HASP that addresses the safety and health hazards for all work activities and includes requirements and procedures for employee protection. The HASP must be kept on-site, and prior to any work done at the site, the project manager and field staff must be familiar with the HASP.

1.2 Health and Safety Plan Scope/Applicability

This HASP applies to all personnel, consultants, contractors conducting work associated with the 2006 Priority Actions within the boundaries of the Empire Mine SHP. The specific work tasks are defined in Section 3.0. This HASP will be amended as necessary for implementation of construction activities associated with the 2006 Priority Actions once those activities are specified.

1.3 Site Description

The SHP property comprises approximately 856 acres, located in the City of Grass Valley, in Nevada County, California. The property is located at the site of the historic Empire Mine operations which California Department of Parks and Recreation (CDPR) acquired in 1975. Since acquisition, CDPR has established a state park at this location providing the visiting public an interpretation of the historic mining operations. The site includes mine and mill-related features and historic depositions of mine waste rock and mill tailing piles.

Based on a Preliminary Endangerment Assessment for the Empire Mine State Historic Park, Grass Valley, California (September 29, 1992) conducted by Harding Lawson Associates, an approximate seven-acre area within the boundaries of the Empire Mine SHP was determined to pose a public health risk due to elevated concentrations of lead, arsenic, cadmium, and mercury associated with historic tailings. This seven-acre area, defined herein as the Designated Area, includes the Old Cyanide Plant and extends to the Sand Dam above Wolf Creek. Mine waste rock and mill-related tailing piles and soils within the Designated Area and possibly at other locations within the SHP may contain metal

concentrations (primarily arsenic, lead, and mercury) that may potentially present health risks to certain people based on the type, amount, and length of exposure.

In addition, physical hazards associated with conducting site inspections or visitations include uneven terrain, steep grades, slippery surfaces, unstable surfaces, holes or ditches, open mineshafts or adits, work at high altitude (sun exposure), dusty conditions, and weather conditions consisting of high temperatures. Building materials (wood timbers, scrap metal, wire, pipe, nails, etc.) may also be present within the Designated Area and other areas within the SHP that may pose physical safety hazards. Overhead electrical lines and underground utility lines could also present a potential safety hazard if contacted or disturbed.

It is incumbent upon every person conducting the Priority Action activities to minimize their exposure to the physical and chemical hazards located within the Designated Area and possibly at other areas of the SHP.

2.0 PROJECT ORGANIZATION

| Personnel | Name | Affiliation | Phone (Work) | Phone (Other) |
|-----------------------------------|-------------------|-------------|----------------|----------------|
| Project Manager | Sherm Worthington | MFG | (970) 206-4284 | (970) 227-9445 |
| Site Safety Officer | Mahesh Vidyasagar | MFG | (970) 223-9600 | |
| Corporate H&S Director | Stacy Meacham | MFG | (402) 933-1345 | (402) 651-6675 |
| Field Supervisor | Not Applicable | | | |
| Field Project Staff: | Jason Andrews | MFG | (970) 223-9600 | |
| | Rebecca Bilodeau | MFG | (970) 223-9600 | |
| | Jason Cumbers | MFG | (970) 223-9600 | |
| | Ed Muller | MFG | (970) 223-9600 | |

2.1 Key Personnel Responsibilities

Project Manager

The Project Manager is responsible for ensuring that all work performed for this project is done in accordance with the requirements of the Work Plan and the HASP. The Project Manager has the authority to suspend activities if the health and/or safety of workers or observers may be compromised. Safety-related authority is outlined below:

- Ensuring that the project work is conducted in a manner consistent with the HASP.
- Correcting work practices or conditions that may result in injury or exposure to hazardous substances.
- Preparing accident and job exposure forms, if necessary.

Site Safety Officer (SSO)

The SSO for this project has responsibility for implementation of this HASP and conformance with all applicable worker safety regulations (WDOH, MSHA and OSHA, as appropriate). The SSO is the primary contact for matters relating to health and safety. The SSO must approve any changes to the HASP or changes to the Work Plans that could impact health and safety. The SSO is responsible for resolving any health and safety issues that arise out of the work.

- Verifying that appropriate communications systems are in place
- Managing health and safety equipment
- Establishing a work/rest regimen if required to prevent heat-related illness or injury
- Overseeing any emergency response activities
- Monitoring health and safety conditions during field work
- Completing accident or incident reports as necessary

- Overseeing set-up, inspection, and execution of decontamination
- Making adjustments to this HASP, in consultation with the Project Manager, as necessary based on field measurements
- Maintaining records of personnel and equipment surveys, worker training, and daily site safety meetings

The SSO has the authority to stop activities if conditions are deemed unsafe. Resumption of site activities following such a shutdown will be at the discretion of the SSO and Project Manager. The SSO has the authority to temporarily or permanently remove from the work area any individual who is not complying with the provisions of the HASP or who is endangering the health and/or safety of any individual present in the work areas.

The SSO or the Project Manager must be present on site during all field activities or may designate an individual to act in place of the SSO or Project Manager such as the Field Supervisor during such times as it is determined that the SSO or Project Manager does not need to be physically present.

3.0 PROJECT WORK PLAN/TASK HAZARD ANALYSIS

3.1 Project Objectives

The project consists of conducting various site activities, which include sample collection, inspection activities, surveying, and light construction activities, such as fence construction, associated with the 2006 Priority Actions within the SHP.

Involved regulatory agencies include the CDPR, California Department of Toxic Substances Control (DTSC), and the California Central Valley Regional Water Quality Control Board (CVRWQCB).

3.2 Work Tasks

| | Task Description |
|---------------|--|
| Task 1 | Soil sample collection from the Red Dirt Pile (RDP), as described in the RDP Work Plan. |
| Task 2 | Physical survey of designated trails, as described in the Trails Work Plan. |
| Task 3 | Physical survey of the exclusion areas and construction of a fence surrounding the designated exclusion areas, as described in the Exclusions Work Plan. |

3.3 Site-Specific Chemical Hazards (Chemicals known or suspected to be on-site)

| General Properties | | | | |
|--------------------|--------------|----------------|--------------------------------|--|
| Constituent | Hazard Class | Physical State | Potential Exposure Routes | Tasks Involving Potential Exposure |
| Lead | Toxic | Solid | Inhalation – Dust Ingestion | Walking, sampling and construction activities on tailing or other mine or mill-related materials or windy conditions that generate dust |
| Aluminum | Irritant | Solid | Inhalation – Dust Ingestion | Walking, sampling and construction activities on tailing or other mine or mill-related materials or windy conditions that generate dust |
| Arsenic | Toxic | Solid | Inhalation – Dust Ingestion | Walking, sampling and construction activities, on tailing or other mine or mill-related materials or windy conditions that generate dust |
| Cadmium | Toxic | Solid | Inhalation – Dust Ingestion | Walking, sampling and construction activities, on tailing or other mine or mill-related materials or windy conditions that generate dust |
| Mercury | Toxic | Solid/vapor | Inhalation – Dust Ingestion | Walking, sampling and construction activities on tailing or other mine or mill-related materials or windy conditions that generate dust |

| Exposure Limits | | |
|--------------------------------|----------------------|-----------------------|
| Constituent | PEL | IDLH |
| Lead | 50 µg/m ³ | 100 mg/m ³ |
| Aluminum | 5 mg/m ³ | |
| Arsenic | 10 µg/m ³ | 5 mg/m ³ |
| Cadmium | 5 µg/m ³ | 9 mg/m ³ |
| Mercury compounds (skin) | 25 µg/m ³ | 10 mg/m ³ |
| Mercury alkyl compounds (skin) | 10 µg/m ³ | 2 mg/m ³ |

Notes:

PEL = Permissible Exposure Limit (OSHA); IDLH = Immediately Dangerous to Life and Health;
µg/m³ = micrograms per cubic meter; mg/m³ = milligrams per cubic meter.

| Warning Properties/Exposure Symptoms | | |
|--------------------------------------|--------------------|---|
| Constituent | Warning Properties | Exposure Symptoms |
| Lead | Dust | Nasal ulcers, fever, bronchitis, melanosis, peripheral neuropathy |
| Aluminum | Dust | Shortness of breath, weakness and cough with chronic exposure. |
| Arsenic | Dust | Nasal ulcers, fever, bronchitis, melanosis, peripheral neuropathy |
| Cadmium | Dust | Pulmonary edema, dyspnea (breathing difficulty), cough, chest tightness, substernal pain; headache; chills, muscle aches; nausea, vomiting, diarrhea; anosmia (loss of the sense of smell), emphysema, proteinuria, mild anemia |
| Mercury | None | Severe abdominal pain, tremors, weakness, irritation, fatigue |

| Site Concentrations of Detected Constituents | | | |
|--|--------------------------------------|---|--|
| Constituent | Mine/Mill Tailing (average mg/kg) | Surface Water ($\mu\text{g/l}$ dissolved) | Air ($\mu\text{g}/\text{m}^3$) |
| Lead | 3,486 | NA | PM ₁₀ concentrations range from 5.35×10^{-3} to 2.55×10^{-3} |
| Aluminum | NA | NA | NA |
| Arsenic | 1,800 | 26.7 at Magenta Drain Portal | PM ₁₀ concentrations range from $<9.95 \times 10^{-4}$ to 1.87×10^{-3} |
| Cadmium | 99.3 | NA | NA |
| Mercury | 30 | .NA | PM ₁₀ concentrations range from $<7.46 \times 10^{-4}$ to 1.31×10^{-3} |

NA-not available

3.4 Chemicals Used to Perform On-Site Tasks

| Task | Chemical | Hazard Class | Physical State | PEL |
|------|----------|--------------|----------------|-----|
| | None | | | |

3.5 Non-Chemical Hazards

| Task/Hazard | Non-Chemical Hazards |
|---|--|
| Walking | Tripping due to uneven terrain. Caution should be exercised when walking off established trails, possible underground mine shaft and underground mine collapse features exist within the Park. Workers must maintain an alertness for such features. |
| Sampling | Tripping in field sampling areas. |
| Working during hot, dry conditions | Possible heat exposure, heat stress, dehydration, or sunstroke. Symptoms include heat rash, heat cramps, heat exhaustion, dizziness, nausea, faintness, and elevated body temperature. Personnel exhibiting symptoms of heat stress must stop work immediately and go and sit in the shade for at least 15 minutes and drink cool fluids or water. |
| Sunburn | Over-exposure to the sun can be prevented. Personnel will bring sunscreen with an SPF of least 30 with them to the field and apply it several times a day. |
| Inclement Weather | Personnel will arrive at the Site prepared for adverse or changing weather conditions. |
| Poisonous Plants | Reactions to poisonous plant exposure vary depending on the individual and the severity of the exposure, and can range from minor skin irritation to severe allergic reactions (oozing rashes and swelling) that require medical attention. Skin protection such as Ivy Block is available in the field kit. It is recommended that exposed areas be washed with Technu. Equipment exposed to poison oak oils is to be washed daily. |
| Biting/Stinging Insects | Wasps, bees, spiders, centipedes and other insects may be found on site. West Nile Virus can be transmitted by a simple mosquito bite. <u>Wear insect repellent while onsite. Apply 1x in the morning and reapply after lunch!</u> Bites and stings from insects may be painful but generally are not dangerous, unless the individual bitten/stung is severely allergic. Some spiders such as the Black Widow and Brown Recluse can inflict a serious bite that should be evaluated by a medical professional. |
| Ticks | Ticks are small (2mm to 7mm), blood-eating parasites related to spiders that may reside in brushy or grassy areas. Tick bites can result in transmission of Lyme Disease, Rocky Mountain Spotted Tick Fever and other diseases, and may become infected. Lyme Disease can be a debilitating, long-term illness. All tick bites must be evaluated by a medical professional. Ticks removed from workers shall be moist in a container and taken to the Placer County Public Health Laboratory, 11475 C Avenue, Auburn (530) 889-7205 for species determination. If the tick is a deer tick, seek medical attention. |
| Stream Work | Hazards include slips, trips and falls resulting from underestimating the power of currents, stepping on slippery or potentially unstable rocks or logs, or slipping on steep banks and drop offs. Drowning could result from unconsciousness after a fall, being swept away by currents, becoming trapped under obstacles in deep, rapidly moving water, being pulled under if waders fill with water, or an inability to swim. |
| Small Animals | Never approach animals, including squirrels, bats, dogs and cats. Many serious diseases can be transmitted from animals such as rabies, Hantavirus and Cat Scratch Fever. All animal bites must be evaluated by a medical professional. |
| Snakes | Snake bites can occur when snakes are inadvertently disturbed when stepping on or near them, or when turning over rocks or placing hands in crevices. Never handle a snake. Assume all snakes are poisonous. All snake bites must be immediately evaluated by a medical professional. Rattlesnake encounters are fairly common within the Park. |
| Working Hours | Normal visiting hours in the field are from 6am to 5pm. Personnel may not visit alone in the field after dark. |

List of Site-Specific Non-Chemical Hazards:

- Overhead Lines - electrical
- Underground Utilities – electrical, natural gas, television cable
- Earth Moving Equipment including backhoes, excavators, and haul trucks
- Vehicle Traffic
- Trenches and Excavations
- Dust
- Slip/Trip/Fall
- Sharp Objects/Stick/Puncture/Pinch
- Lifting
- Hot Surfaces/Burns
- Noise
- Low Light
- Inclement Weather
- Heat Stress
- Cold Exposure
- Insects (ticks, spiders)
- Dangerous Animals

3.6 Workplace Safety Surveys

Site personnel will survey the Site for potential work hazards at the beginning of the inspection or visitation. Additional site safety surveys or safety audits will be performed:

- in the event of an accident, injury, or illness related to the site;
- whenever a new substance, process or equipment is introduced that was not contemplated in this HASP;
- whenever a safety deficiency is noted;
- when a new hazard is recognized and needs to be evaluated; and
- periodically as needed.

4.0 PERSONNEL TRAINING

All personnel engaged in work involving potential exposure to hazardous chemicals at the Site have completed training in accordance with California Code of Regulations Title 8, Section 5192(e). Training requirements corresponding to the work done for this project applies to workers that are on-site for specific limited tasks, and Section 5192(e)(3)(B) states that a minimum of 24 hours of off-site instruction is required, with a minimum of one day supervised field experience. According to Section 5192(e)(9), equivalent training (i.e. 40 Hour OSHA HAZWOPER training certification) is acceptable, but personnel new to the site must receive site specific training on Park related workplace hazards before site entry. Copies of OSHA records for personnel training are available from the Office Health and Safety Coordinator. The Field Supervisor shall have completed an additional 8 Hour OSHA Supervisor training course. The SSO shall hold a current certificate for first aid/CPR training.

4.1 Site Safety Meetings

Site safety meetings will be conducted to discuss Site activities and task-specific hazards. Safety meeting attendance forms documenting the meetings are included in Attachment B. Safety meetings will be conducted according to the following schedule:

- Every day before work begins which involves more than one person.
- Every time a new individual enters the Site that did not attend the morning safety meeting.
- Documentation of the safety meetings must be placed in the project file.

4.2 Health and Safety Plan

Site visiting personnel are required to review this HASP and acknowledge by signature that they have read it and agree to abide by its requirements. Safety Compliance Agreement Forms are included in Attachment A.

4.3 Additional Training Requirements

All personnel will be familiar with the written Standard Operation Procedures (SOPs) relating to the work.

5.0 ENGINEERING CONTROLS, WORK PRACTICES AND PERSONAL PROTECTIVE EQUIPMENT

5.1 Engineering Controls

No specific engineering controls to be used to control exposure and/or migration of contamination are necessary

Requirements for Equipment Operation Near Power Lines

| Activity | Line Rating | Minimum Clearance |
|--|----------------------------|---|
| Equipment Operation | ≤ 50 kV | 10 feet |
| | > 50 kV | 10 feet + 0.4 inches per each kV over 50 kV, or 2 times the length of the line insulator (minimum of 10 feet) |
| In transit with no load and beam lowered | ≤ 50 kV | 4 feet |
| | > 50 kV to ≤ 345 kV | 10 feet |
| | 345 kV to ≤ 750 kV | 16 feet |

Note: kV = kilovolt

5.2 Safe Work Practices

General Safe Work Practices

The following work practices will be instituted in order to limit worker exposure to contaminants and other hazards.

1. Personnel must be physically fit and properly trained prior to performing any field activities.
2. Personnel must inspect the job site for safety hazards prior to beginning any field activities. The appropriate personnel will inform visiting personnel of potential work hazards during the indoctrination briefing. Personnel shall follow all Site designated safety procedures.
3. All field personnel shall:
 - Read the HASP as part of the site indoctrination briefing;
 - Dress appropriately for weather conditions;
 - Wear safety glasses at all times while in demarcated work areas;
 - Wear protective clothing as required by the HASP; and
 - Immediately report any accident or injury to the appropriate personnel.
4. Do not eat, drink, smoke, or chew gum or use tobacco products in restricted areas. Workers shall periodically leave the restricted area to take in water or electrolyte drinks to prevent heat related illness.
5. Changes in visitation practices or work rules that involve deviations from the HASP, or that introduce new hazards, will be implemented only after approval by the appropriate personnel.

6. Follow all emergency procedures explicitly.
7. Be aware of site conditions, and especially any changes in conditions. If an unsafe condition is encountered, rectify and/or report it immediately.
8. Unauthorized persons will not be allowed in restricted areas. Non-essential personnel will maintain an appropriate distance from restricted areas.
9. If other people are present or working nearby, always check in with the appropriate personnel to coordinate your activities and request their cooperation.
10. Personnel working in restricted areas shall wash their hands and face prior to eating, smoking or leaving the Site. Water for hand washing is available at the Park Maintenance Shop.
11. No personnel will enter mine openings such as shafts, portals, or adits, without proper underground mine training and prior Park's authorization.

Working in Isolated or Remote Sites

1. Personnel working at isolated sites must use the "buddy system" and may not visit isolated or remote sites without accompaniment of another employee. Attempt to maintain line of sight with other personnel, or at a minimum, stay in frequent communication/contact. Visitation will only be conducted during daylight hours.
2. Personnel will familiarize themselves with the Empire Mine SHP area by reviewing the site map and other available information prior to beginning site visits. Maps will be carried by personnel visiting the field.
3. Off-road vehicle travel is not permitted.

Stinging/Biting Insects, Poisonous Plants and Animals

1. Determine if any visiting personnel are known to be allergic to bee stings or other insect bites/stings. If such persons are identified, an appropriate adrenaline injection kit should be carried into the field and other personnel should be made aware of its location and how to use it. Avoid wearing perfume or after shave lotion.
2. Learn to recognize common poisonous plants ("leaves of three, leave them be") and avoid areas where they grow.
3. If possible, avoid traversing areas of brush or tall grass where ticks might occur. The use of commercially available tick repellent containing DEET is recommended when working in such areas. When working in areas where ticks may occur, inspect yourself for ticks several times each day. Particular attention should be paid to the scalp, neck, ankles, back of legs and waist. Wear light-colored clothing so ticks may be easier to detect.
4. Avoid putting your hands where you can not see them. If your work involves turning over rocks or logs, or reaching into dark areas, wear leather work gloves to avoid being stung or bitten by small insects/animals. Wear shin guards whenever snakes are suspected to be present. Use a flashlight to inspect the interior of monitoring well or interior pipe surfaces for snakes and spiders.

Water Sampling

1. Wear the appropriate protective gear for the operation. Non-slip boots should be worn in locations where wet terrain is expected.
2. Walk slowly and anticipate footing in sampling area.

3. Exercise caution when opening or handling sampling containers containing acid (hydrochloric, nitric, sulfuric) preservatives. Do not allow sampling containers containing acid to sit in the sun. Warmed acids may fume when the containers are opened causing irritation to the eyes, nose and throat.

Soil Sampling

1. Wear the appropriate protective gear for the operation.
2. Walk slowly and anticipate footing in sampling area.
3. During soil sampling, stand upwind of the active area of soil movement to avoid inhalation, and minimize contact with soil with your clothing and body.

Construction Equipment

1. High temperature and equipment engines may create a fire hazard. Platforms, footwalks, steps, and ladders used for equipment access can present slipping and/or falling hazards. Anyone entering or climbing on equipment should always maintain three points of contact.
2. Equipment backing up and swing loads pose serious hazard to ground personnel. All equipment shall have functional back-up alarms.
3. Eye contact must be made with the operator before approaching moving equipment. The operator must stop the equipment before the worker approaches to reduce the potential hazard. Site personnel not directly involved with the work activity and observers must remain outside the swing radius of the operating equipment.
4. Hard hats, safety glasses, and steel-toed boots are required in areas where heavy equipment is working.
5. All the safety provisions of normal site operations will be followed.
6. Observe safe distances from overhead utilities of at least 10 feet. In accordance with OSHA requirements, greater distances are required for overhead lines carrying greater than 50,000 volts. Greater distance should also be maintained if there is a risk that stray or broken (snapped) cables could come into contact with electrical lines.
7. Any vehicle should be parked a safe distance of at least 15 feet from construction equipment.
8. NEVER put your hands near moving equipment (e.g. cables, pulleys, hammers, or augers).
9. Construction equipment is not to be parked or left idling in areas of dry vegetation.

Use of Protective Equipment

1. Inspect, clean and maintain any protective equipment issued to you.
2. Anticipate local weather conditions. Wear appropriate clothing and bring extra clothing/rain gear.
3. Use only the equipment for which you are trained and qualified.

5.3 Personal Protective Equipment

| PPE Level Selection | | | | | |
|--|---------|---------|------------------|---|---------|
| Work will be performed using what level PPE: | | | | | |
| Level A | Level B | Level C | Modified Level D | X | Level D |

| PPE Utilization Chart | |
|--|--|
| PPE | Utilization Requirements |
| Hard Hat (ANSI Z 89.1) | Not needed, except at all times in areas where heavy equipment is operating. |
| Steel-Toe Boots (ANSI Z 41.1) | Not needed, except at all times in areas where heavy equipment is operating. |
| Safety Glasses/Sunglasses (ANSI Z 87.1) | Not needed, except at all times in areas where heavy equipment is operating. |
| Hearing Protection | Not needed, except at all times near operating machinery (use arms length rule) when noise level exceeds 85 dB |
| Respiratory Protection | Not needed |
| Chemical Resistant Gloves | To be used during sampling activities. |
| Cotton or Leather Work Gloves | To be used when using hand tools, such as during fence construction activities. |
| Rain gear; cold weather gear | As necessary |
| Bright-colored Safety Vest | Not needed |
| Protective Clothing | Not needed |

6.0 MEDICAL SURVEILLANCE

No site-specific, medical monitoring is required.

7.0 EXPOSURE MONITORING

No exposure monitoring is necessary.

8.0 SITE CONTROLS

| |
|---|
| Is the Site securely fenced? Partially |
| What types of people routinely have access to the site: Park employees, volunteers, and visitors |
| The general work areas will be delineated with: Signage, flagging, or barricade fencing |
| Briefly describe the location of the work areas: Park trails, Red Dirt Pile, and exclusion areas |
| Briefly describe the location of the contamination reduction zone: NA |
| Briefly describe the location of the support zone: NA |

9.0 DECONTAMINATION

| EQUIPMENT | DECONTAMINATION PROCEDURE |
|---------------------------------------|---|
| Sampling Equipment | Follow decontamination procedures via associated Workplan SOPs. |
| Clothing (boots, gloves, etc.) | Removal of loose soil |

10.0 EMERGENCY RESPONSE PLAN

The following protocols will be used for injuries or incidents:

In case of injury, administer first aid immediately. All injuries, accidents, or near-miss events shall be reported to the Project Manager, SSO and Office Health and Safety Coordinator soon as possible depending on the nature of the injury.

Serious, Life Threatening Injury (Emergency Medical Condition):

IN THE EVENT OF A SERIOUS, LIFE THREATENING INJURY, CALL 911 FOR AMBULANCE.

An emergency medical condition is one in which the symptoms lead a prudent layperson acting reasonably to believe that if not treated immediately, might cause loss of life or limb, or lead to severe or permanent disability. Examples include an accident or illness resulting in uncontrolled bleeding, loss of consciousness, seizure, poisoning, severe chest pain, shortness of breath, acute abdominal pain, serious burns or cuts, or broken bones.

Non-life Threatening Injury (Urgent Medical Condition):

An urgent medical condition is not an immediate threat of life or limb, but one in which delaying medical treatment could lead to serious medical problems. Examples include infections, sprains, and soreness.

Other injuries:

All injuries, accidents, or near-miss events will be reported to the Project Manager, SSO and Office Health and Safety Coordinator.

Fire:

Summer conditions within the Grass Valley area present potential fire danger conditions. In the event of fire, field personnel will follow Park fire protocols. Field supervisory personnel shall contact 911 to report fire conditions, all field personnel will evacuate the Park premises to the Pennsylvania mine entrance on Empire Street designated as the evacuation meeting area, field supervisory personnel shall account for the presence of all workers, and field supervisory personnel shall report the incident to the Park ranger staff.

| CONTACT | PHONE NUMBER |
|--|---------------------|
| Fire/Rescue: | 911 |
| Ambulance: | 911 |
| Police: | 911 |
| Nearest Hospital: | 503-274-6000 |
| National Poison Control Center: | 800-222-1222 |
| Hazardous Materials Spill Response Units: | |
| EPA Hotline (24 Hours): | 800-621-3191 |
| CHEMTREC (24 Hours) | 800-424-9300 |
| National Response Center (24 Hours) | 800-424-8802 |

| | |
|---------------------------------|--|
| Name of Medical Facility | Sierra Nevada Memorial Hospital |
| Address | 155 Glasson Way Grass Valley, CA |
| Telephone Number | Emergency: 911 General: 503-274-6000 |
| Directions from Site | Go east on East Empire Street to Empire Mine Cross Road. Turn left onto Empire Mine Cross Road. Proceed north to Highway 174. Turn left onto Highway 174 and proceed to East Bennett Street. Turn left onto East Bennett Street. Proceed to East Main Street. Turn right onto East Main Street. Proceed to Presley Way. Turn right onto Presley Way. Proceed to Catherine Lane. Turn left onto Catherine Lane. Proceed to Glasson way. Turn right onto Glasson Way and proceed to Sierra Nevada Memorial Hospital. |
| Map | See Attachment C |

Emergency equipment is located as follows:

| | |
|---------------------------------|-----------------------------------|
| First Aid Kit | In field vehicle |
| Fire Extinguisher | In field vehicle |
| Cellular Phone | In field vehicle |
| Spill Kit | Park Maintenance Shop |
| Eye Wash | In first aid kit in field vehicle |
| Wipes for face and hands | In first aid kit in field vehicle |

11.0 CONFINED SPACE ENTRY

Confined space entry is not permitted under this Site Safety Plan under any circumstances. If entry into confined spaces is necessary, a confined space entry plan and permit system must first be prepared and approved by the Project Manager and Site Health and Safety Director.

Examples of potential confined spaces include the following:

- Manholes and utility access points
- Containment pits and sumps
- Trenches greater than 4 feet in depth
- Aboveground storage tanks

Visiting personnel will not enter trenches deeper than 4 feet unless the trench sidewalls are laid back at slope of 1(H):1(V) or milder, or the trench is reinforced with a trench box.

ATTACHMENT A
SAFETY COMPLIANCE AGREEMENT FORM

SAFETY COMPLIANCE AGREEMENT FORM

PROJECT TITLE: Empire Mine State Historic Park

PROJECT TASK: Site Sampling, Inspection and Construction Protocols

I have received a copy of the Health and Safety Plan for the above referenced project. I have read the Health and Safety Plan and agree to comply with all the health and safety requirements contained therein. I understand that I may be prohibited from working on the project for violating any of the Health and Safety Plan requirements.

SIGNATURE: _____ **DATE:** _____

NOTE: This form must be submitted to the Site Safety Officer and Project Manager.

ATTACHMENT B
SAFETY MEETING AGREEMENT FORM

**EMPIRE MINE STATE HISTORIC PARK
SAFETY MEETING LOG**

Date _____

Topics Discussed:

| |
|--|
| |
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| |
| |
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| |

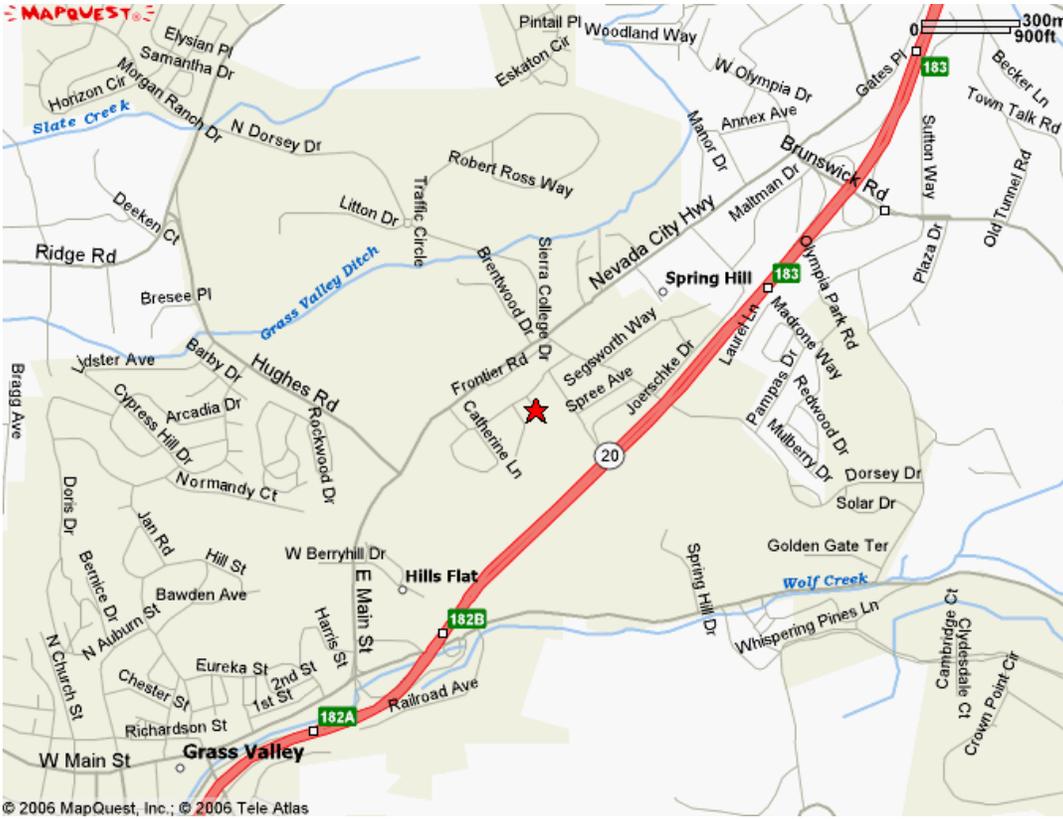
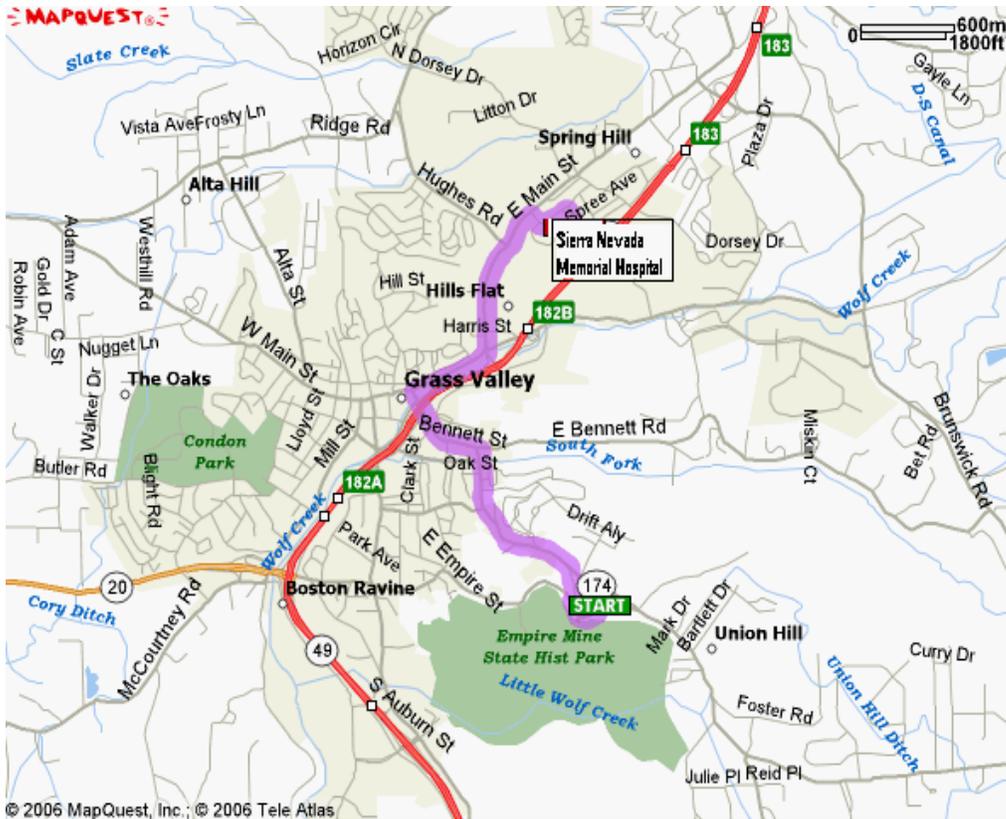
Attendance:

| Signature of Attendee |
|-----------------------|
| 1. |
| 2. |
| 3. |
| 4. |
| 5. |
| 6. |
| 7. |
| 8. |
| 9. |
| 10. |
| 11. |
| 12. |
| 13. |

Site Safety Officer _____

Reviewed by Site Safety Officer _____ Date _____

ATTACHMENT C
SITE VICINITY MAP SHOWING ROUTE TO MEDICAL FACILITY



Respondents shall conduct appropriate Community Involvement activities, related to 2006 Work Plan activities at the Site and preparing for anticipated 2007 Site activities, given the nature of the community surrounding the Site and the level of community interest. Respondents shall work cooperatively with DTSC and the Regional Board to ensure that the affected and interested community is involved in the decision-making process. Any such Community Involvement activities shall be conducted in accordance with Health and Safety Code Sections 25356.1 and 25358.7. DTSC's Public Participation Manual dated 2001, as applicable, and shall be subject to DTSC's review and approval.

Community Involvement Activities Through August 2006

For the 2006 Priority Action Work Plans, DTSC-Approved Community Involvement Activities included:

- Coordination, consultation, meetings, and conference calls with parties for a fact sheet and public notice, docent meetings, and other necessary planning and implementation.
- Development and Issuance of the fact sheet describing the Site, proposed work, and the location and availability of the public comment period for the 2006 Priority Action Work Plans for public comment.
- Development and Issuance of the Public Notice announcing location and availability of the five draft Priority Action Work Plans for public comment.
- Planning, publicity for and holding meetings for the draft Priority Action Work Plans with the employees and docents.
- Mailings to the DTSC-approved Site specific mailing list.
- Creating an information repository at DTSC-approved locations.

Public Participation Plan to Prepare for 2007 Site Work, Other Community Involvement

Due to the scope of the anticipated response measures (2007 Site Work) at the Site in 2007, DTSC will require a DTSC-Approved Public Participation Plan before inception of any 2007 Site Work. To enable 2007 work to begin as soon as technically feasible, Respondent(s) shall submit this Proposed Draft Public Participation Plan (clearly labeled as a Proposed draft) to DTSC for review within 90 days of the effective date of this Order, or by January 31, 2007, or other (written) DTSC-approved date. The Respondents' Proposed Draft Public Participation Plan shall comply with Chapter 6 of the October 2001 DTSC Public Participation Manual which can be found on the DTSC website at

http://www.dtsc.ca.gov/LawsRegsPolicies/Policies/PPP/upload/OEA_Pol_PublicParticipationManual_Chapter6.pdf. The parties will not release the Proposed Draft Public Participation Plan to the public before DTSC has approved it.

The Respondents shall conduct the following public participation activities to facilitate development of a satisfactory Public Participation Plan:

- Respondents will hold project coordination, consultation, meetings, and conference calls to scale, scope and develop any additional Community Involvement activities needed for 2006 Work Plan implementation (e.g., an additional fact sheet may be appropriate depending on new information from 2006 Work Plan implementation) with DTSC for DTSC review and approval.
- Respondents will hold project coordination, consultation, meetings, and conference calls needed to scale, scope and develop the Proposed Draft Public Participation Plan with DTSC for DTSC review and approval.
- The Respondents will develop a Community Profile for DTSC approval.
- DTSC staff and the Proponent(s) will collaborate on conducting community interviews.
- Respondents will update the mailing list as appropriate, and submit the updates to DTSC for review and approval.
- Respondents will update the information repositories as appropriate.

Respondents will implement any of the public participation support activities identified in this Order at the request of DTSC. DTSC retains the right to implement any of these activities independently if Respondents' actions do not satisfy DTSC. DTSC will notify Respondents in writing prior to independently implementing any public participation activities.

Post 2006 public participation activities will follow the final Public Participation Plan outside the scope of this Order, unless the Parties mutually agree otherwise in writing. Any 2007 Site Work is also outside the scope of this Order, unless the Parties mutually agree otherwise in writing.

EXHIBIT E-1

PUBLIC PARTICIPATION PLAN

Public Participation Plan
Empire Mine State Historic Park
Environmental Characterization and Remediation

Prepared by:

Sigler Communications, Inc.

Submitted:

January 31, 2007

Signature: *Heidi Nelson*

Name: Heidi Nelson

Date: January 31, 2007

Plan approval provided by Heidi Nelson, Public Participation Specialist, Department of Toxic Substances Control.

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1.0 INTRODUCTION

The Public Participation Plan (PPP) for the Empire Mine State Historical Park (EMSHP) has been prepared to guide public participation and communications regarding environmental activities at the EMSHP.

2.0 DESCRIPTION OF THE SITE

2.1 Site History

Located in Grass Valley, California, the Empire Mine was the oldest and most productive gold mine in the state of California. The 856-acre State Park is located just east of Route 49 at 10791 E. Empire St.

In summary, George Roberts, who originally discovered gold at the Empire Mine, sold his interest in 1869 to William Bourn, Sr. The Bourn family owned and operated the mine until 1929, when it was sold to the Empire Star Mine Company, a predecessor to Newmont USA Ltd. (Newmont). Empire Star Mine Company ceased operations in 1956 due to escalating operational costs. In 1974, California State Parks purchased the property to create Empire Mine State Historic Park (EMSHP).

2.2 Empire Mine State Historic Park

EMSHP provides a historical interpretation of one of the most famous mines of the Gold Rush era. Visitors pay a nominal fee to view the Park's historic buildings, mine yard, the Bourn Cottage and restored gardens. EMSHP draws up to 100,000 visitors annually. Others, including many locals who live in Grass Valley and Nevada County, are attracted to the recreational amenities of the forested backcountry and 14 miles of trails contained within the 856-acre Park (see Appendix A for a Park locator map). Trails are posted to accommodate hikers, dog walkers, mountain bikers and equestrians. Visitors can access the multi-use trails free-of-charge daily from sunrise to sunset through various entrances. EMSHP is listed on the State of California's Web site at http://www.parks.ca.gov/?page_id=22308.

Park Staff

There are approximately 20 full- and part-time employees at the Park. Eight on-site residences are provided for employee housing. Employees provide services to the Park including management, maintenance, education and security.

Volunteers

Approximately 200 volunteers provide face-to-face contact with the public, administrative support, facilities maintenance and grounds keeping. Volunteers work under the established Department of Parks and Recreation's Volunteer in Parks program. Volunteer docents interpret the Park's cultural, natural and recreational resources.

The Empire Mine Park Association (EMPA), also based in Grass Valley, furthers the interpretive and educational goals of EMSHP. EMPA is a Cooperating Association Program, one of more than 80 such non-profit groups that support state parks across the state. Through public donations, visitor center sales, membership dues and special events such as the annual Miners' Picnic, the association provides significant financial support to the Park. The group hosts an Empire Mine Web site at www.empiremine.org.



Events

Many public and private events are held at EMSHP. Most notably, a Springtime Open House is held over Mother's Day weekend featuring programs, refreshments and entertainment. The annual Miners' Picnic is scheduled for late summer and on Thanksgiving weekend the Park sponsors a Holiday Open House. Additionally, the amenities are open to the public for weddings and other private functions.

2.3 Newmont

Newmont Mining Corporation is an international gold producer based in Denver, Colorado. The company operates mines in Australia, New Zealand, Indonesia, North America, South America and Africa. Through its work at a number of historical mine sites and its current operations, the company has pioneered innovative mine reclamation, closure and remediation techniques to promote post-reclamation mine use,

while preserving the historical integrity, biodiversity and sustainability of an area. The company hosts a Web site at www.newmont.com.

2.4 Department of Toxic Substances Control

The Department of Toxic Substances Control (referred to as DTSC) is the state regulatory agency that oversees environmental investigations and cleanups to ensure they are conducted in a manner protective of human health and the environment.

On November 28, 2006, DTSC, Central Valley Regional Water Quality Control Board, Parks and Recreation and Newmont entered into a Partial Consent Order to characterize certain environmental conditions at the Park and conduct certain priority actions.

3.0 COMMUNITY DESCRIPTION

3.1 Grass Valley

EMSHP is located adjacent to the City of Grass Valley in Nevada County, California. Grass Valley has a population of approximately 12,000 people, and Nevada County has a population of 93,050. The next closest community is Nevada City, which is home to 3,050 people according to the 2000 U.S. Census.



Grass Valley was an active gold-mining town for more than 100 years. According to the town's Web site, www.cityofgrassvalley.com, the median household income is \$28,182 (2000) and the medium home value is \$151,300 (2000). Residential homes are located in certain areas around the periphery of the Park.

3.2 Elected Officials/Community Leadership

The six-member Grass Valley City Council meets at 7 p.m. on the second and fourth Tuesdays of the month, with special meetings called as necessary. The meetings are open to the public and held in the City Hall Council Chambers.

Agendas are available the Friday preceding each council meeting. All members are elected at large; therefore, no single member represents the EMSHP area. A City Administrator manages the town's day-to-day business. The town does not have an environmental health or public health department. The Nevada County Royce Branch Library at 207 Mill St. serves Grass Valley residents.

The Nevada County Board of Supervisors is the legislative and executive body of county government. The board exercises authority over the provision of government services including environmental and public health. The five board members are elected on a non-partisan basis to serve four-year terms. Each is elected from one of the five supervisory districts of the county. County Supervisor John Spencer, who represents Grass Valley in District 3, is a licensed professional land surveyor.

The county's Web site, <http://new.mynevadacounty.com/Home>, provides an organizational chart that includes an environmental health and community health contact/department.

4.0 ENVIRONMENTAL ISSUES

Gold mining at Empire Mine involved extracting gold-bearing ore from underground mines. Mining extracted both ore and waste rock and further processing (milling) of the ore generated tailing (finely crushed ore that remained after the minerals were extracted). The waste rock, rock not economical to be mined or milled, was either left underground or brought to surface and piled at or near the mine entrance. The tailing sands were deposited at locations near the milling facilities.

As with many of the mines in the gold country of California, mining and milling operations at the EMSHP left behind a mixture of naturally occurring minerals that

contained varying concentrations of metals (e.g., arsenic, lead, cadmium) and potentially contained process reagents (cyanide and mercury) used in the gold-extraction processes.

Historic waste rock and tailing are found in several areas of the Park and are part of its historic character. These materials may pose a hazard to people, wildlife and area waterways, depending on their proximity to the materials and the land use.

Reducing the environmental exposure to metals found in these historic mine areas is important for a number of reasons. High metal concentrations can have potential effects on human health and the environment. Some fine-grained particles of waste rock and tailing could become airborne and inhaled under dry conditions as a result of the wind, construction, equestrian use or foot traffic. When some minerals are exposed to air or water, they can oxidize, producing acidity and water-soluble metals. Over time, water passing over these rocks can leach these metals into the water.

In 1992, the Department of Toxic Substances Control (DTSC) required Parks to conduct a Preliminary Endangerment Assessment (PEA) at the site to examine potential environmental exposures. Since the completion of the PEA, DTSC has sought further investigations by Parks to assess environmental conditions.

In 2005, California State Parks and the environmental group, Baykeeper, settled a lawsuit that required certain steps to be made in order to address potential historic mining and milling operations effects on local waterways. Further, in early 2006, the Central Valley Regional Water Quality Control Board required the park to obtain a permit for mine water emitted from the Magenta Drain. The permit establishes a compliance schedule which requires Parks to resolve the technical issues related with the Magenta Drain discharge by 2010.

In the summer of 2006, California State Parks and Newmont USA Ltd. initiated a series of Work Plans to evaluate environmental conditions and support clean-up activities at

the Park related to the historic mining and milling activities. As part of previous evaluations and the evaluations conducted with the work plans, certain specific areas of the Park have been temporarily closed (Appendix B). Continued assessment and clean-up work are expected over the next few years.

5.0 PUBLIC INPUT

To better understand stakeholder interests and concerns, DTSC advocates conducting stakeholder interviews (refer to www.dtsc.ca.gov/LawsRegsPolicies/Policies/PPP/PublicParticipationManual). A stakeholder is defined as anyone who has or may have an interest in the environmental activities at the Park.

In January 2007, a team of communications specialists from DTSC, Parks and Newmont interviewed 23 individuals who represent a broad range of EMSHP stakeholders including employees, volunteers, neighbors, community leaders, special interest groups, local and state elected officials, and representatives of local businesses. All people interviewed reported English to be their primary language. The majority of the interviews were done in person using a standard questionnaire to guide the discussions (see Appendix C). The individuals interviewed are listed in Appendix D. Responses in the report are not attributed to a particular individual to encourage more candid responses.

The purpose of the interviews was to:

Identify key areas of interest and concern;

Obtain feedback regarding current and future communication efforts; and,

Incorporate public input about preferred communications channels and information needs into the Public Participation Plan.

Interview Summary

Level of Interest

Most of the people interviewed are regular Park users who appreciate having this “unique amenity” in their community. Uses of the Park include running, walking, biking, horseback riding, dog walking, volunteer maintenance work, and attendance at weddings and other special events. Those who visit the historic grounds area most often bring out-of-town guests.

Interest in environmental activities at EMSHP varied among the groups interviewed. Employees, volunteers, immediate neighbors and environmental interest groups expressed the highest level of interest.

None of the 23 people interviewed expressed a high level of environmental concern.

A number of people said that if “real” environmental issues need to be addressed, they are glad Parks and Newmont are working to resolve them. An environmental group expressed concern about potential impact to the area’s watershed.

On the other end of the spectrum, four participants questioned the necessity of the cleanup work at all, noting they view it as a “waste of taxpayer dollars.” These people felt the time and attention on the issue was “overkill” and the impacts from mining had been exaggerated.

While the interest level was generally high among interviewees, their knowledge and awareness of the environmental work recently conducted at EMSHP is moderate. Employees and volunteers were the most knowledgeable about the recent work. Elected officials, special interest groups and community leaders had the least amount of information.

The topic that generated much more interest than the environmental activities at the Park is the “adit” project. The adit is an underground tour ride being built at the Park to provide the public the experience of underground mining. Elected officials, in particular, were critical of the delays in construction and would like to see the project completed.

Elected officials and business leaders believe the adit will be a major tourist draw for EMSHP and Grass Valley, and thereby contribute to the local economy. Most of the participants who mentioned the adit project believed that environmental concerns at the Park caused construction delays.

Only one person was pleased that the project had been temporarily suspended, noting the money should be spent on environmental cleanup instead of building the adit.

Park staff shared concerns they had heard from the public about the exclusion fencing recently installed. They said that some people had complained they were no longer able to run or walk a continuous loop at the Park. Those Park users felt there had not been adequate notice about the fencing before it was installed. Park staff indicated this had been the most frequent complaint/comment they received from the public. It was suggested that the Park do more to communicate other Park trails available to the public in the "Union Hill" area. Staff noted that those areas are underutilized by the public and could provide more contiguous loops for users. However, no representatives of the jogging or equestrian groups noted the new fences as a key issue, since they were able to find other routes within the park to meet their needs.

The elected officials interviewed have received few telephone calls from their constituents about the environmental cleanup, which in their view, indicated low interest. Only one office had received an inquiry. It was from a local developer who was having a difficult time developing land adjacent to EMSHP due to issues they had experienced with DTSC.

A variety of comments were heard from the interviewees associated with their interest and concern related to the Park. The following are a representation of specific comments shared by the interviewees:

"How concerned am I? On a scale of 1 to 100, zero (with 100 the highest)."

"I'm not interested, unless it affects me."

"I'm very interested because it affects us."

"I'm very interested because (Empire Mine) is the heart of something amazing.

"...My only interest is the adit; if the environmental work delays it, that's my concern."

"I am not the least bit concerned. It's ridiculous the state is paying for this. These (minerals) are naturally occurring."

"I've known about these issues and I'm not afraid. I come from a family of miners."

"I understand they are testing the water and soil. I read about it in the paper, but I don't trust the paper."

"I walk the Park everyday. I just assumed they were cleaning up old mine tailing."

"I don't know about the cleanup; I know about the adit."

"I know quite a bit, but I don't know where we are now."

"I've been following Magenta Drain as a result of DeltaKeeper's lawsuit. I have not heard much lately."

"The staff who went through "HAZWHOPER" training had concerns at first. But that anxiety has gone down since then."

"Unless you are ingesting this, you are OK."

"The volunteers are not concerned."

"We hear from the old-timers that they played in the water and at the Park for years and they are all fine."

"I am concerned if they don't prioritize the environmental work. It is going to affect the schedule for the adit. The cost of building materials will only go up."

"Common sense has to kick in on this at some point."

"I feel that something should be done if hazards really exist."

"We are only interested as it relates riding the trails. We are also interested in toxicity of water, since the horses drink it."

"My interest is this mine as a tourist attraction. This is a beautiful location that is underutilized."

"Some of the employees who live here are concerned."

"I'm not the slightest bit concerned about the so-called hazardous waste. I think the money used (on cleanup) could be better spent."

Recollection of the notification information disseminated in July 2006 was relatively low. A few people recalled receiving the fact sheets and others noted seeing an article in the *Union*. There was, however, a fairly high level concern expressed among a number of people interviewed about the editorial content and accuracy of the *Union*. Only one person recalled seeing the information on Yubanet.com or hearing it on the radio. Others said they had noticed the signage/fencing installed at the Park.

Written materials delivered via U.S. mail would be the most preferred manner of receiving information about EMSHP with public meetings being the next preferred way. While five of the 23 noted they would never attend a meeting on the subject, most said they would attend some meetings depending on the topic, timing and their availability. Weekday evenings were the preferred days and time for such meetings. Most we spoke to about using a traditional-lecture format versus an open-house format preferred the latter.

Receiving information through the news media, specifically the *Union* newspaper, was the least desirable method of communicating. A number of people recalled seeing two or three articles on EMSHP environmental issues over the past year, yet few could recall specific information about the stories.

Some of the regular trail users indicated the best way to communicate with them is through postings at the trail heads. Others said updates/articles in local newsletters published by groups (Empire Mine Park Association, the Chamber of Commerce, the Sierra Trail Blazers running club) would be a good way to reach members of those groups. One group requested a presentation at its upcoming membership meeting.

In terms of the frequency of communications, most people surveyed indicated they would read "some of the materials" sent to them depending on the content. A few were emphatic that they wanted to receive "no" information about EMSHP's environmental activities. Employees and volunteers indicated the highest level of interest for ongoing and frequent updates.

6.0 PUBLIC PARTICIPATION AND COMMUNICATIONS PLAN

6.1 Objectives

- Provide stakeholders with information about the environmental activities being planned or conducted at the EMSHP to facilitate public participation and understanding.
- Ensure employee, volunteer and public safety during the site investigation and remediation.
- Provide accurate and easy-to-understand information on a timely basis to stakeholders.
- Provide forums for stakeholders to provide feedback, ask questions and express areas of interest or concern.
- Respond promptly to stakeholder questions and concerns.

6.2 Stakeholders

Following is a list of identified stakeholders who have or may express an interest in the environmental activities.

EMSHP Staff and Volunteers

- EMSHP Service employees
- EMSHP volunteers

Neighbors

- Fence-line neighbors to the EMSHP
- Neighbors within close proximity to the Park (e.g., one-quarter mile)
- Neighbors living along Woodpecker Ravine

Park Visitors/Users

- Trail users (walkers, equestrians, cyclists)
- Visitors to the historic grounds areas
- Event guests
- Local school district/school groups

Grass Valley Residents/Nevada County Residents

Local Businesses

- Grass Valley Chamber of Commerce

Elected Officials/Government

- Grass Valley government officials (Mayor, City Administrator, City Council, planning office)
- Nevada County government officials (District 3 Supervisor) and environmental/public health staff
- State legislators
- Governor's office
- Federal legislators

Regulators

- California Department of Toxic Substances Control
- California Regional Water Quality Control Board

Non-Governmental Organizations

- Baykeeper
- Bicyclists of Nevada County
- Downtown Association
- Empire Mine Park Association
- Grass Valley Chamber of Commerce
- Nevada County Chamber of Commerce
- Nevada County Horseman, Inc.
- Rural Quality Coalition
- Sierra Club, local chapter
- South Yuba River Citizens League
- Sierra Trail Blazers Running Club
- Trail Builders
- Wolf Creek Community Alliance
- Local homeowner associations
- Gold Country Trails Council

6.3 Strategies

- Assemble and prepare a project communications leadership team to serve as the primary points of contact and the information resources for stakeholders and the news media.
- Use DTSC as the point of contact for formal public comments/inquiries relating to environmental investigation and clean-up plans.

- Provide ongoing information and updates to EMSHP staff, key community leaders and officials, and volunteer leadership. Particular attention will be given to the community leaders who serve as “gatekeepers of information” to ensure they are prepared to address and handle public questions and information needs.
- Customize type and content of communications and information to the stakeholder groups (e.g., employees versus daily visitors).
- Ensure that all individuals who meet the public at the Park are informed and prepared to handle questions, or direct them to the appropriate contact.
- Coordinate communications about environmental activities with regulatory agencies. Share drafts of written materials concerning environmental activities with the regulatory agencies for their review and comment in advance of public distribution.
- Create mechanisms and forums for ongoing public input (e.g., stakeholder interviews, visitor survey cards, public information open house meetings).

7.0 PUBLIC PARTICIPATION AND COMMUNICATIONS ACTIVITIES

7.1 Stakeholder Notification

- In conjunction with implementation of the 2006 environmental work, DTSC, Parks and Newmont notified stakeholders of the purpose and timeframe for work using the following methods:
- Developed a stakeholder mailing list, including neighbors living within a one-quarter mile radius of the Park.
- Developed a general fact sheet outlining the work and publicizing a public comment period for the work plans (see Appendix E). Distributed the fact sheet to employees, volunteers and the stakeholder mailing list.
- Developed and distributed a general visitor card at Park trailheads and through the Empire Mine Visitor Center describing work planned and its impact on the Park.
- Briefed Park employees and volunteers.
- Briefed the news media and provided an on-site tour; distributed a press release.
- Briefed elected officials and community leaders.
- Established an Information Repository at the Grass Valley Public Library, located at 207 Mill St., the Empire Mine Visitor’s Center and the Sector Office. The full administrative record is located at the Department of Toxic Substances Control’s 8800 Cal Center, Sacramento, California office.
- Provided contacts for public and media inquiries.

7.2 Communications Tools

- Maintain and update a stakeholder mailing list on a quarterly basis to ensure the list is kept current.
- Develop fact sheets and other written materials explaining key milestones.
- Update information card as appropriate and distribute through kiosks and Visitor Center.
- Provide updates to the Information Repository.
- Add/offer information to the Department of Toxic Substances Control, California State Parks and the EMPA Web sites informing visitors of site environmental status and updates.
- Provide a public review and comment period for cleanup activities performed at the Park.

8.0 COMMUNICATIONS BY AUDIENCE

8.1 Regulators

- Continue ongoing dialogue and coordinate communications with the points of contact for each agency, the Park staff and Newmont.
- Work with agency staff to review communications materials prior to public distribution.
- Involve agency staff in planning and implementation of public outreach activities.

8.2 Park Staff and Volunteer Communications

- Provide verbal and written updates to EMSHP employees and volunteers to prepare them for public interface and to answer questions.
- Update Park staff and volunteers on clean-up activities prior to start of work.
- Include staff and volunteers in mailings and community information meetings.
- Provide a point of contact for questions, comments and concerns regarding the work.
- Provide periodic updates through the Empire Mine Park Association newsletter.

8.3 Visitors/Park Users

- Update information cards, distribute at the EMSHP Visitor Center and post at trailheads informing visitors of closure status of any trails and other areas of the Park.
- Provide volunteers and staff with information to answer basic questions and contacts they can refer to for more in-depth questions.

- Have a visitor response card available for individuals to fill out if they want more detailed information or have questions/concerns that are not addressed by staff/volunteers.
- Post informative signage at trail heads on investigation, clean-up activities or closures that may affect public use of the Park.

8.4 Neighbors

- Provide written updates to fence-line neighbors to update them of the intended work as needed.
- Include quarter-mile neighbors in mailings/invitations to information meetings.

8.5 Community

- Schedule community open-house meetings as warranted to communicate environmental investigation and clean-up activities. The open-house format would feature posters and information displays explaining the environmental activities. The displays would be staffed by competent experts who would provide information and handle inquiries one-on-one. Fact sheets and other appropriate handouts would be available as well.
- Provide updates as requested at regularly scheduled community forums as requested.
- Update materials at the Information Repository on a regular basis.

8.6 Government Officials/Business Community

- Offer one-on-one briefings about environmental activities to government officials/business leaders prior to more broad-scale public outreach to prepare them to handle questions/inquiries as needed.
- Distribute written materials to officials.
- Invite officials to information meetings.

8.7 Non-Governmental Organizations

- Distribute written materials with updates on the work.
- Respond to requests for speaking engagements.
- Provide information to individual groups' newsletters.
- Invite groups to information meetings.

8.8 Media Relations

- Provide news release updates to local news media to share key milestones.
- Respond to informational requests in a timely manner.
- Update media list annually.

APPENDIX A – LOCATOR MAP

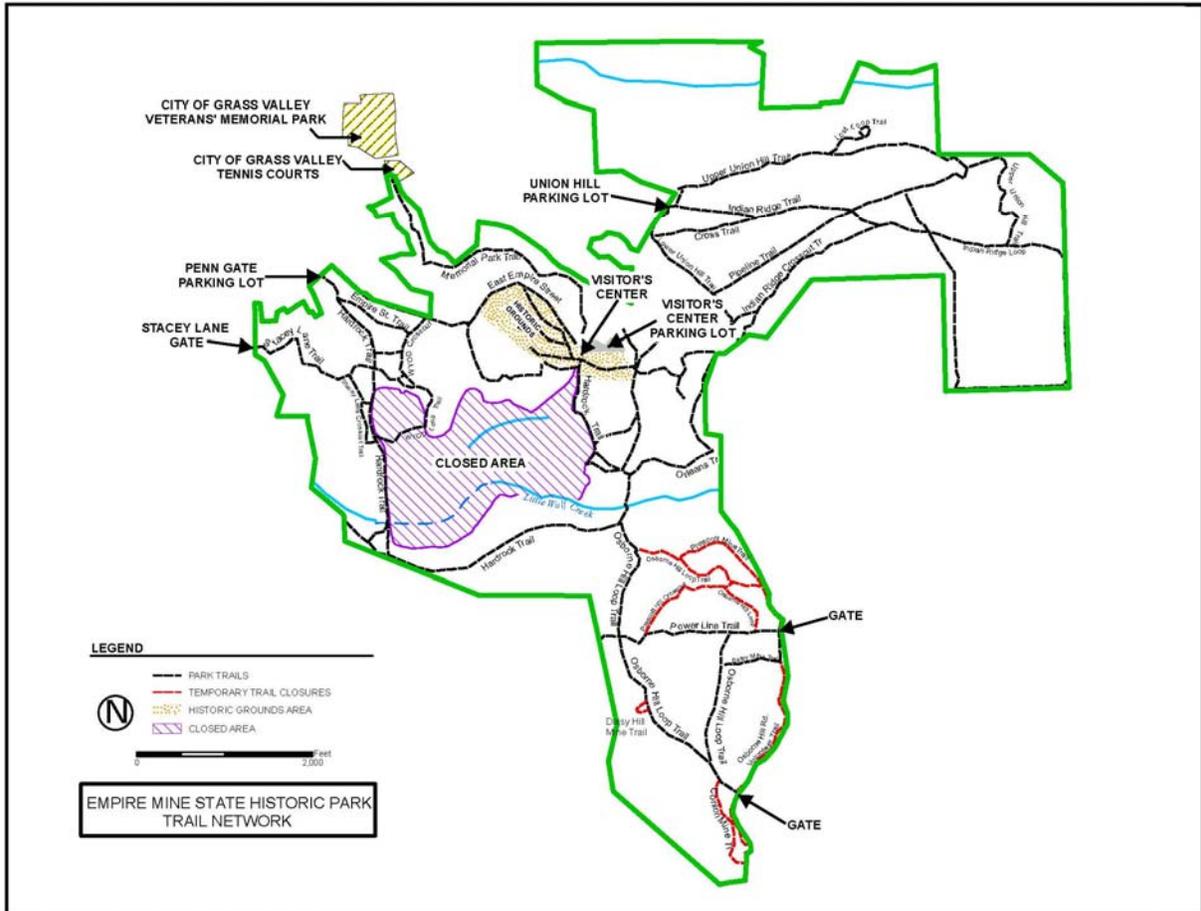


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January 2007

EMPIRE MINE STATE HISTORIC PARK

APPENDIX B – PARK MAP



APPENDIX C – INTERVIEW QUESTIONNAIRE

Please indicate your level of interest in the environmental investigation and cleanup at the Empire Mine State Historic Park. Please mark the answer that best represents your interest.

- No interest Some interest Very interested

Please indicate your current knowledge about the environmental investigation and cleanup at the Park. Please mark one answer.

- No knowledge I know some I know a great deal

Please indicate whether you would attend public meetings about this site. Please mark one answer.

- I would not attend meetings I will attend some meetings I will attend as many as possible

Please indicate whether you will read written material about the environmental investigation and cleanup at the Park. Please mark one answer.

- I would not read anything I would read a little I would read everything

Do you know of any groups that have been/would be interested in the environmental investigation and cleanup at the Park?

- Yes No

If you chose yes, can you provide a way to contact them?

What language do you use primarily in your home?

- English
- Spanish
- Russian
- Hmong
- Korean
- Other_____

What is the best way to provide you with information? Please number the following, 1 through 3, with 1 being the best method.

_____Written material and/or letters to your home

- E-mail messages
- Web site

_____Notices in the local newspaper

_____Community meetings

- During the day
- In the evening
- On a Saturday

Are you aware of any media coverage for the environmental investigation and cleanup at the Park?

- No
- Yes

If yes, please name the newspaper(s), radio station(s) or television station(s) and approximately when you saw/heard it.

9. How often do you use the Park?

- 3 days per week or more
- 1-2 days per week
- 1-3 days per month
- Less than once per month
- Never

10. What type of activities do you participate in at the Park?

- Viewing the gardens
- Touring the historic grounds
- Trail use -- hiking, biking, walking, running, equestrian

11. Do you volunteer at the Park?

- No (skip to 12)
- Yes - If so, in what capacity?

12. How far do you live from the Park's boundaries?

Please list any additional concerns or suggestions you may have regarding the environmental investigation and cleanup at the Park.

APPENDIX D – INTERVIEW PARTICIPANTS

Rick Sanger, President, Wolf Creek Alliance

Jonathan Keehn, Board Member, Wolf Creek Alliance

Jerry Pressler, Volunteer Docent, Empire Mine State Historic Park

Jane Hall, Unit Ranger (employee), Empire Mine State Historic Park

Jim and Pat Coe, volunteer (Pat), members of Nevada County Horseman's Inc.

Senator Sam Aanestad, Fourth District, California Legislature

Lisa Zea, Deputy Chief of Staff for Senator Aanestad

John Spencer, Nevada County Supervisor, Third District

Dr. Terry McAteer, Nevada County Superintendent of Schools

Andrew Schedlock, Legislative Staff Member, California Assemblyman Rick Keene

John Gardiner, President, Bicyclists of Nevada County

Vern Browning, neighbor and jogger

Julie Clark, Park Maintenance Supervisor

Bill Blout, new volunteer, trail walker

Frank Ribeiro, President of Sierra Trail Blazers, walker/hiker

Mary Ann Mueller, President, Grass Valley Chamber of Commerce

Dan and Karen Wheat, neighbors (live near Magenta Drain)

Susan Fitch-MacNeil, Byer's LeafGuard, neighboring business

Al Winslow, President, Empire Mine Association

Deb Self, Executive Director, BayKeeper

City of Grass Valley

APPENDIX E – DTSC ENVIRONMENTAL FACT SHEET



Department of
Toxic Substances
Control

*Preventing
environmental
damage from
hazardous waste,
and restoring
contaminated
sites for all
Californians.*



State of California



California
Environmental
Protection Agency

Fact Sheet, July 2006

Actions Addressing Mining Waste to Begin At Empire Mine State Historic Park

The purpose of this fact sheet is to provide information regarding activities taking place at the Empire Mine State Historic Park near Grass Valley, California (referred to as the Site) to address wastes from historic mining and milling operations. The Department of Toxic Substances Control (DTSC), Central Valley Regional Water Quality Control Board (Regional Board), California Department of Parks and Recreation (California State Parks), and Newmont USA Limited (Newmont) reached agreement on five Priority Action Work Plans (called the Work Plans) that specify environmental sampling and cleanup actions to be conducted during 2006. The Work Plans were prepared under provisions of federal law as time critical removals. This designation allows the Work Plans to be approved and the work to begin in an expedited manner. Work will begin in August, 2006. The Work Plans are available for public review and comment from August 1, 2006 through September 1, 2006. This fact sheet provides:

- The history and description of the Empire Mine
- Role of the regulatory agencies, California State Parks and Newmont
- An Area Map
- The type of mining wastes present
- A summary of the Work Plans
- What visitors and neighbors should expect to see
- How to get information and submit comments
- A description of future actions

Priority Action Work Plans Available for Public Review and Comment

DTSC and the Regional Board approved five Priority Action Work Plans in July, 2006. They are available for review and comment from:

August 1, 2006 through September 1, 2006.

Written or email comments should be submitted to Perry Myers, DTSC, 8800 Cal Center Drive, Sacramento, CA 95826 or pmyers@dtsc.ca.gov.

The locations of the information repositories that hold the Priority Action Workplans and related documents are on page 6 of this fact sheet.



History and Description of the Empire Mine

The Site includes the Park, located just east of Route 49 at 10791 East Empire Street near Grass Valley, and the unnamed creek that runs through Memorial Park in Grass Valley. The Empire Mine was the richest hard-rock mine in the State of California, producing 5.8 million ounces of gold in its operating history of 106 years (1850-1956). In 1929, Empire Star Mines Company, a predecessor of Newmont, purchased the Empire Mine. Gold mining operations ceased in 1956. In 1974, California State Parks purchased the property to create the Empire Mine State Historic Park. Newmont retained limited ownership of certain sub-surface mineral rights. The Park consists of 856 acres.

As with many of the mines in the gold country of California, mining and milling operations at the Site left behind a mixture of naturally occurring contaminants (arsenic, lead, cadmium, and other metals) and cyanide and mercury (used in the gold extraction process). Operations produced ore rock and generated tailings (finely crushed rock after the ore is produced) and waste rock (rock that was not processed because it contained little to no economic value). Contamination produced by these operations is concentrated in certain areas at the Site and may pose a hazard to people, wildlife, and area waterways.

What are the Roles of DTSC, the Regional Board, California State Parks and Newmont?

California State Parks, who is the current owner of the Park, and Newmont, one of the previous owners of the mine, are working together to fund and implement the 2006 Work Plans. DTSC and the Regional Board are the regulatory agencies responsible for overseeing environmental investigations and cleanup activities. DTSC and the Regional Board approved the Work Plans

and will oversee their implementation as well as future cleanup actions that may be required at the Site.

What is Known About the Mining Waste at the Site?

During the operating life of the mine, waste rock and tailings from the milling process were stockpiled south of the former Cyanide Plant and were conveyed to the Sand Dam in the drainage below that location. Elevated levels of arsenic, lead, mercury, cadmium, and vanadium have been identified in these areas. Exposure to some of the substances at levels found in these areas may cause adverse human health effects and may affect wildlife and the environment.

The Work Plans will address the following areas:

Red Dirt Pile - This area is down the Hard Rock Trail about a quarter mile from the Visitors Center and contains acidic soil with elevated levels of metals. This is a concern primarily for storm water runoff, and for anyone spending time directly on the Red Dirt Pile. Warning signs have been posted for several years to restrict public access.

Sand Dam Area - This is the area between the former cyanide plant and the Hard Rock Trail where it crosses Little Wolf Creek. Tailings from the milling process were deposited here. The area has been found to contain elevated levels of several metals. Warning signs have been posted for several years to restrict public access.

Magenta Drain - The portal of the Magenta Drain Tunnel is located west of Highway 174 and south of the Memorial Park Tennis Court. The portal discharges water that flows to an unnamed creek, historically referred to as Woodpecker Ravine, which flows through a residential area and

Memorial Park before entering a concrete channel. Based on preliminary monitoring, the portal water contains arsenic, thallium, iron, and manganese in excess of Federal and State primary and secondary drinking water standards. The discharge has also resulted in sediment contamination in the unnamed creek downstream from the portal.

Trail System – There is an extensive trail system throughout the Site used by joggers, equestrians, hikers, and bikers. Segments of the WYOD, Sand Dam, and Conlon trails have been identified as containing historic mine or mill-related materials.

Staff Residences – There are eight staff residences located within the boundaries of the Site that may have been affected by past mining and milling activities.

Work to be Conducted in 2006

Five Priority Action Work Plans have been approved by DTSC and the Regional Board. They are intended to address areas where contamination from mining waste is known or suspected. Below is a summary of each Work Plan.

Red Dirt Pile Priority Action Work Plan - The purpose of this Work Plan is to limit potential human exposure and isolate mining wastes from storm water runoff at the Red Dirt Pile. The key component of this work is installation of a cap over the Red Dirt Pile. As proposed, the cap will consist of both an asphalt surface for use as a parking lot over roughly 1/3 of the area, and a vegetative cover of clean soil over the remaining 2/3 of the area. The cap will also include an additional barrier layer beneath the asphalt cover to impede downward movement of any rainwater that percolates through it. Prior to installation of a cap, lime and limestone will be mixed into the surface of the Red Dirt Pile to neutralize the acidic

soil. A storm water collection system will add further protection by controlling and managing runoff.

Residences Priority Action Work Plan - The purpose of this Work Plan is to limit potential human exposure to elevated levels of contamination that may exist at eight staff residences on the Site. Residential soils, household dust, and water supplies will be evaluated and addressed as described in the Work Plan.

Trails Priority Action Work Plan - The purpose of this Work Plan is to implement control measures on three trail segments to limit potential human exposure to elevated levels of metals. Measures implemented will consist of either a cap, relocating portions of the trail, or, if necessary, temporary closure of the trail to visitor use. In addition, surface sampling for metals throughout the entire trail network will be conducted. Every effort will be made to continue to provide a network of trails and public access to outdoor recreational opportunities, while assuring public health and safety.

Exclusions Priority Action Work Plan – The purpose of this Work Plan is to restrict access to areas of the Site where exposure to mine and mill related materials have been identified. The exclusion measures will be a combination of fencing, natural barriers, signage, and educational materials for the visiting public, employees, and volunteers. Specific exclusion areas include the Cyanide Plant, Red Dirt Pile, Cyanide Plant drainage area, Sand Dam tailing area, and the Magenta Drain and the creek that runs through Memorial Park.

Sampling and Monitoring Program for the Magenta Drain Tunnel – The purpose of this Monitoring Program is to evaluate the water quality and flow from the Magenta Drainage Tunnel. Water sampling and flow

monitoring will occur in the creek below the tunnel for one year. Work also includes sediment sampling in the creek from the portal through Memorial Park to evaluate possible impacts downstream. The Regional Board issued a National Pollutant Discharge Elimination System permit which will require California State Parks to treat the discharge from the portal according to a schedule, or stop the discharge to prevent further deposit of waste into the creek.

What Should the Visitors and Neighbors Expect to See During Work this Summer?

The Empire Mine State Historic Park will remain open to the public during work this summer. Some areas will be fenced preventing public access, but this will affect only a small part of the 856 acres.

Fencing will be installed along the unnamed creek related to the Magenta Drain, potentially across some trails, and around the currently closed area that is roughly bounded by the former Cyanide Plant to the east, the Hard Rock Trail to the west, Little Wolf Creek to the south, and the northern edge of the Sand Dam area. The fencing will be in place until final remedies are identified and implemented. Any trail closings will be posted at hiking kiosks and at the Visitors Center. Visitors are advised to please observe and comply with all signage indicating areas that are closed. Soil sampling will be done on all of the designated trails in the Park. The sampling will be done by hand and will consist of either in-place (in-situ) monitoring or soil sample collection for laboratory analysis. It should not disrupt use of the trails.

Earth moving equipment will be used for the work at the Red Dirt Pile. Standard dust control and storm water measures will be used during the construction. Trucks

will be used to bring in clean fill materials from outside the Park. Part of this area is adjacent to the Hard Rock Trail (above the former Cyanide Plant) and may require intermittent closure of this section of the trail for safety reasons.

Future Actions

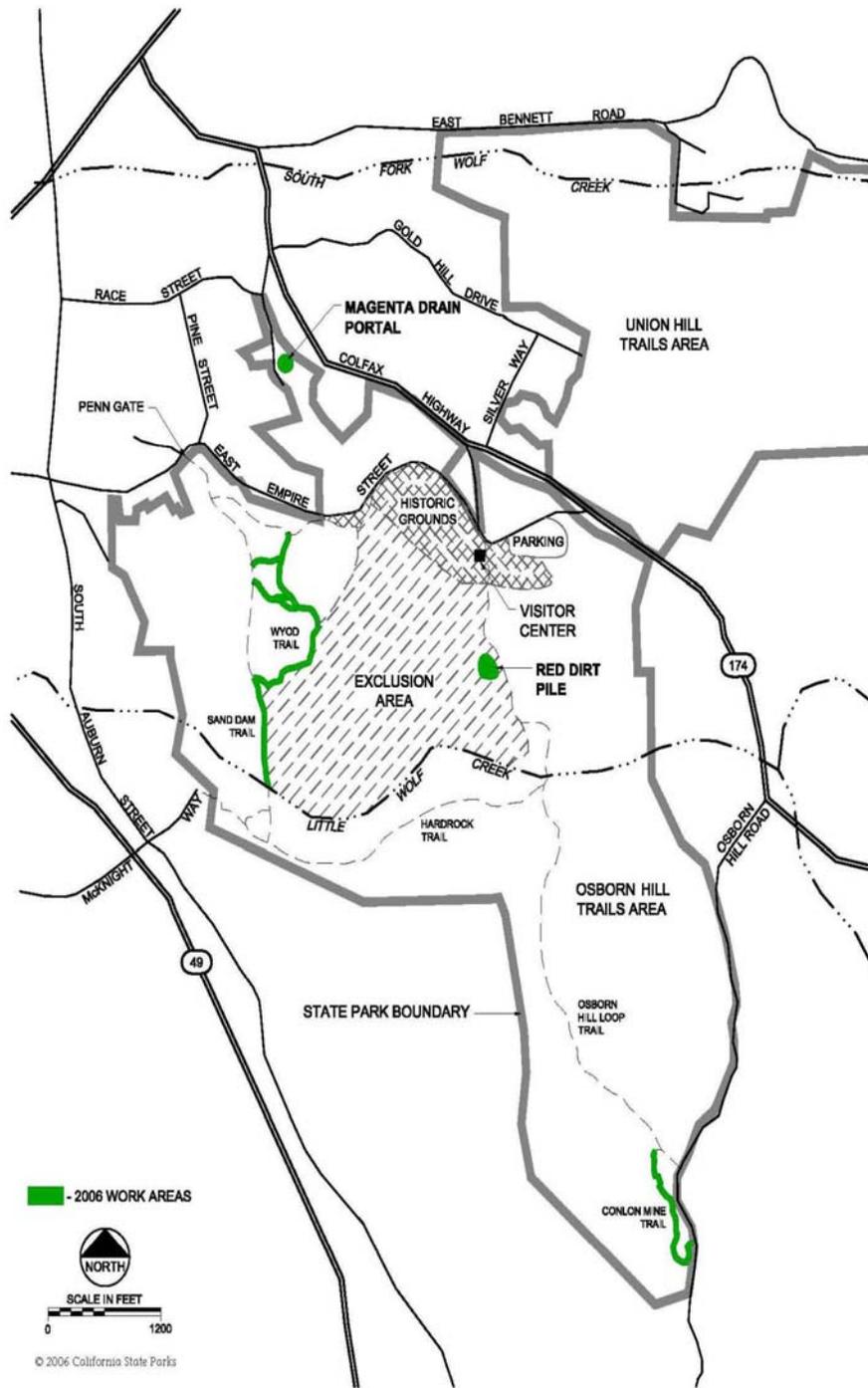
The activities in the Work Plans for this summer are time-critical and are planned for completion prior to the start of the 2006 rainy season. These interim actions have been designed to be consistent with potential final remedies and will be evaluated further in the future. Part of the current work includes sampling that will guide future investigations to determine what and how much additional cleanup work will be needed at the Site. The sampling results and any future work plans will be available electronically through the DTSC EnviroStor website and as part of the complete Administrative Record. In addition, DTSC will develop a Public Participation Plan to keep the community informed and involved in Site cleanup activities.

If You Have Questions or Want Additional Information

If you have questions about the cleanup, please call the Department of Toxic Substances Control, Mr. Perry Myers, Project Manager, at 916- 255-3708, or via email at pmyers@dtsc.ca.gov.

Heidi Nelson, Department of Toxic Substances Control, Public Participation Specialist at 916- 255-3575 or via email at hnelson@dtsc.ca.gov. You may call Ms. Nelson toll free at 866-495-5651.

If you have questions about water quality at the Site, please call Central Valley Regional Water Quality Control Board, Mr. Steve Rosenbaum, Senior Engineering Geologist, at 916-464-4631, or via email at srosenbaum@waterboards.ca.gov.



If you are a member of the media, please contact Carol Singleton, Public Information Officer, Department of Toxic Substances Control at 916-255-6578 or email her at csinglet@dtsc.ca.gov.

Electronic Information

You may visit the DTSC EnviroStor website to review the Work Plans and other information about the Site at www.envirostor.dtsc.ca.gov/public/search.asp?basic=true. Once there, type in the name 'Empire Mine' in the site name block and hit enter. Double click on the first 'Empire Mine' name provided to view the section on Empire Mine. If you would like to see the Department of Toxic Substances Control's website you can find it at www.dtsc.ca.gov.

Additional information is available at the Central Valley Regional Water Quality Control Board's website at <http://www.waterboards.ca.gov/centralvalley/>

Notice to the Hearing Impaired

You may obtain additional information by using the California State Relay at 1-888-877-5378 (TDD). Ask them to contact Mr. Perry Myers at 916-255-3708 regarding the Empire Mine site.

Repository Information

The Work Plans and related documents may be reviewed at:

The Empire Mine State Historic Park Visitors Center
10791 East Empire Street
Grass Valley, California 95945

The Sierra Gold Sector Office
10556 East Empire Street
Grass Valley, California 95945.

The Grass Valley Public Library
207 Mill Street
Grass Valley, California 95945
Call 530-273-4117 for hours of operation.

Online at the DTSC EnviroStor website at www.envirostor.dtsc.ca.gov/public/search.asp?basic=true.

The complete Administrative Record is available at:
The Department of Toxic Substances Control
8800 Cal Center Drive
Sacramento, California 95826.
Contact Bobbi Jensen at 916-255-3758 for an appointment.

ARE YOU ON DTSC'S MAILING LIST?

If you are not on our **Empire Mine** site mailing list but would like to be, please fill out the information below and mail back to: Heidi Nelson, DTSC Public Participation Specialist, 8800 Cal Center Drive, Sacramento, CA 95826

Please print name and address clearly.

Name:

Address:

City/State/Zip:

Phone:

Fax:

E-mail:

Comment:

Please take me off the mailing list.

Note: While this mailing list is solely for DTSC use, the list is considered a public record.

