



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

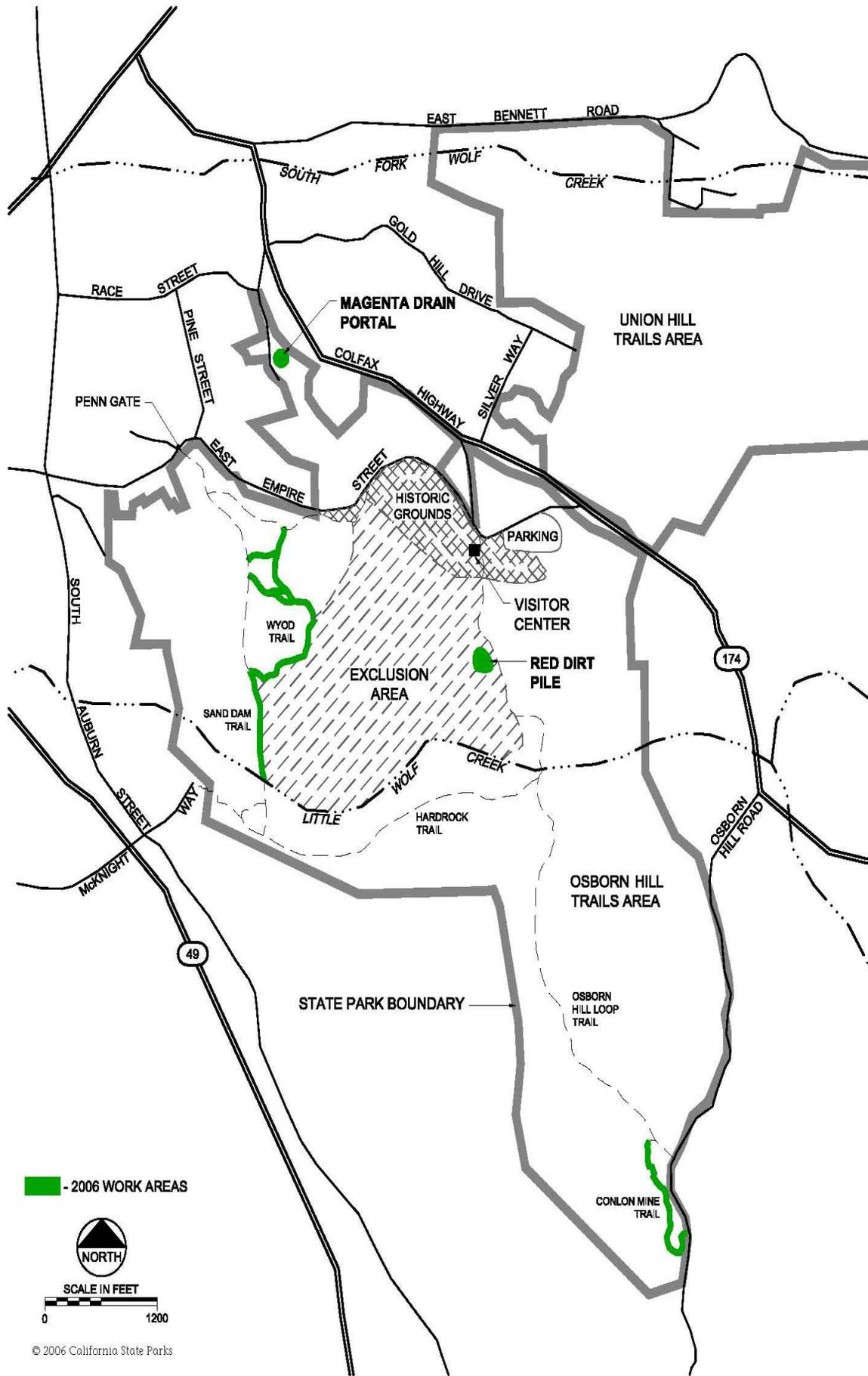
The activities in the Work Plans for this summer are time-critical and are planned for completion prior to the start of the 2006 rainy season. These interim actions have been designed to be consistent with potential final remedies and will be evaluated further in the future. Part of the current work 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.