

**Request for Supplemental Funding for FY 2004
Bureau of Land Management – Nevada - Carson City Field Office
Yerington Mine Project**

Introduction

During discussions held on 8/19/04 between the BLM Nevada State Director, BLM managers and staff, and DOI CHF case attorney, Casey Padgett, BLM NV made the decision to pursue CERCLA cost avoidance/cost recovery actions against ARCo/BP.

This proposed supplemental funding request represents the top priority work items that BLM will be requesting Atlantic Richfield Company/British Petroleum to perform at the Yerington Site. Timeliness of implementation of this work by ARCo/BP is of great concern, as evidence of the potential risk to human health and the environment from identified contaminants of concern found at the site is mounting.

Background

In June 2004, the BLM Carson City Field Office (BLM-CCFO) contracted with Construction Remediation and Engineering, Inc. to analyze both historic and current data, and to collect and analyze surface soil data for the purpose of developing a BLM Health and Safety Plan (HASP) for public lands in the Process Areas of the Yerington Mine. The HASP presents the human health and safety requirements and guidelines for BLM staff to perform work on Public Lands within the Yerington Mine site. The HASP is compliant with 29 CFR 1910.120 and 110.1200.

Based upon the results from the surface soil analysis, it has been determined that surface and subsurface soils and groundwater within the Process Areas, and other areas of the mine site determined to be of concern, need to be investigated further to fully evaluate the level of radioactivity that workers can expect to encounter from the proposed subsurface field investigations at the Yerington Mine. Also, measures need to be taken to secure the site perimeter and to implement remedial actions that address fugitive dust emanating from public lands administered by the BLM.

Results

CRE, Inc. and its subcontractor Walker and Associates, Inc. began work on June 22, 2004. Field data was collected with a Geiger-Mueller Counter and Dosimeter; soil samples were collected and then sent to ACZ Laboratory in Steamboat Springs, Colorado for analysis. Sample analysis included total metals concentration including uranium and thorium concentrations; radioactivity measurements included gross-alpha, gross-beta, Radium-226 and Radium-228. Approximately 120 surface soil samples were collected within and outside of the Process Areas.

Nine soil samples were expedited for laboratory analysis because field instrument readings were determined to be significantly above background values (see Table 1). Field readings indicated that radioactivity levels in some locations within the Process Area are in some cases more than 900 counts per minute (CPM), which is greater than 0.300 millirem/hr (mrem/hr). Laboratory

analysis results indicate radioactivity levels of up to 1,440 pico Curie per gram (pCi/g) of gross-alpha and 592 pCi/g of gross-beta (see Table 1). Results also indicate levels of Radium-226 and Radium-228 of 157 pCi/g and 139 pCi/g, respectively. Based on these results, 3 locations within the Process Areas have been deemed as exclusion zones. Areas that are identified as exclusion zones are off-limits to everyone until risks can be fully evaluated and the appropriate health and safety requirements determined. Other areas within the mine site on both private and public lands have also been investigated with results higher than background readings.

The average annual dose to a person in the U.S. is about 360 mrem (ATSDR, 1999). A "rem" is a unit of dose that is used in the regulatory, administrative, and engineering design aspects of radiation safety practice. Occupational Health and Safety Administration (OSHA) standard for workers exposed to ionizing radiation is 5,000 mrem/yr (5 rem/yr). In order to provide time for a radiation protection program to take steps to protect workers from unnecessary exposure, an action level of 500 mrem/yr has been set. This equals about 20 mrem/day (3 mrem/hr for an eight hour workday) for workers.

Table 1. Laboratory results for Yerington Mine site samples collected week of 6/21/04.

Sample Location and ID	CPM	mrem/hr	Alpha pCi/g	Beta pCi/g	Ra 226 pCi/g	Ra 228 pCi/g	U ppm	Th ppm
Background Process Area-G12	91	0.029	7.9	8	3.3	1.8	2	10
Sulfide Plant-AP10	192	0.059	242	152	17	9.3	177	80
Cementation Vats-HH1	6,200	1.92	325	262	13	3	4	20
Cementation Vats-HH2	640	0.202	55	35	38	5	6	50
Lower Disposal Pond-DP2	300	0.097	194	85	25	16	14	170
Lower Disposal Pond-DP4	967	0.322	1,440	592	157	139	31	1,350
Lower Disposal Pond-DP11	480	0.146	736	391	76	4	430	410
Lower Disposal Pond-DP14	270	0.08	199	107	26	7.5	100	120
VLT Disposal/Covered-DA3	162	0.047	15	12	4.2	5	2	20

The data results support the need for vigilant monitoring of worker health and safety on public and private lands within the mine boundary. However, the results also confirm that releases of hazardous materials to the environment originating from private, and public lands administered by the BLM, have and continue to occur (Geophysical Survey Results of the Yerington Mine Mason Valley, Nevada, BLM 2000; Ground-water Quality Downgradient From Copper-Ore Milling Wastes at Weed Heights, Lyon County, Nevada, U.S. Geological Survey Open File Report 80-1217). Soil, water and air are affected by the ongoing releases of hazardous materials.

Funding Objective

BLM requests an additional \$622,000 for FY 2004 to: cover BLM-CCFO salaries for 6 months; implement the HASP; perform time-critical response action to secure perimeter and interior of the mine site; perform time-critical response action to mitigate fugitive dust emanating from public lands; and to fully evaluate the level of radioactivity on public lands that workers can expect from the proposed field investigations at the Yerington Mine. Specifically, the additional funding will be used to implement the following (in order of need and priority):

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- 1) Cover salaries for 2.0 FTEs for 6 months. FTE's include one Project manager and one support staff.
- 2) Extend contractor and subcontractor functions to include HASP implementation which includes health and safety monitoring of BLM employees and its contractors including implementation of a health screening and monitoring program; implementation of monitoring programs on public lands such as air monitoring of fugitive dust; complete radiological assessment of public lands within the mine site boundary; attend Yerington Technical Work Group meetings, public meetings and BLM internal meetings.
- 3) Secure public lands by installing and repairing approximately 10 miles of perimeter and interior fencing.
- 4) Application of surfactant on approximately 100 acres of public lands identified as areas generating fugitive dust.

Table 2 presents the estimated cost breakdown.

Table 2. Estimated Cost Breakdown for Additional Funding for FY04	
Activity Description	Estimated Cost
BLM Salaries for 2.0 FTE's for 6 months <i>\$22K/mo</i>	\$132,000
Health and Safety Officer; HASP Implementation	\$225,000
Secure public lands portion of mine site - Fencing	\$55,000
Fugitive dust mitigation - Surfactant	\$250,000
Total	\$662,000

FY2004 Spending Breakdown

\$277,000 –Project Manager and project support; PRP work plan review; attend regulatory, internal and community meetings. Prepared and executed a \$150,000 contract for development of BLM Health and Safety Plan, including sampling effort (2645).