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Ref: EPR- ER

POLLUTION REPORT
American Fork (Pacific Mine – Trout Unlimited) Site
Utah County, Utah

I. HEADING

Date:	September 27, 2006
Site Name:	American Fork (Pacific Mine – Trout Unlimited) Site
From:	Peter Stevenson, On-Scene Coordinator
To:	Eugene Lee, EPA Headquarters
POLREP No.:	#1

II. BACKGROUND

Site No.:	08-CW
Response Authority:	CERCLA
CERCLIS No:	UTD988074951
Action Memorandum:	10/06/05
Start Date:	10/11/05

III. SITE INFORMATION

A. Incident Category

Non-Time Critical, PRP-Third Party Lead

B. Site Description

1. Site Location and Characteristics

The Site is located east of Forest City within Sections 22, T3S, R3E, SLB&M, adjacent to the North Fork of the American Fork River in the American Fork Canyon, Utah County, Utah.

The removal was at the Pacific Mine (private land portion) and was conducted by Trout Unlimited. It is a part of the American Fork Canyon Watershed Reclamation Project and is eligible for listing in the National

Register of Historic Places (*Heritage Resource Inventory of American Fork Area Mine Closures, 11/8/94*). Various areas along the American Fork River are being considered for removal action, but the purpose of this removal was to address the removal and disposal at property owned by *Snowbird Corporation* in the Pacific Mine area. The Site contains contamination from mine waste dumps and adits generated by historic mining activity on the claim.

2. Description of Threat

The threat is posed by high concentrations of metals (especially lead, zinc, arsenic, and mercury) in the waste rock, tailings pile, and mine drainage from the former Pacific Mill site, Scotchman 2, Blue Rock, and Pacific Mine & Mill Tailings/Rock Pile, all of which total about 10 acres.

C. Removal Site Evaluation

Through funding under the Clean Water Act, water quality sampling, macro-invertebrate inventories, soils analyses, sediment sampling, and fish tissue sampling have been conducted for various studies at the American Fork Mining District during 1988, 1992, 1998 & 1999, and 2000.

In 2000 the Bureau of Reclamation (BOR) was contracted to conduct an XRF soil sampling to delineate the extent of heavy metal contamination at the Dutchman mine, the Sultana smelter, the Pacific and Dutchman smelter, and various other mine sites in the American Fork Canyon. A site which exhibited and released large concentrations of hazardous materials from the American Fork Mining District was the Pacific Mine area. Its tailings deposit impinges on the North Fork of the American Fork River (in places forming the banks of the stream) and contains an abundance of heavy metals, including lead at an average concentration of 17,000 parts per million (ppm), cadmium 44 ppm, copper 335 ppm, zinc 6,000 ppm, arsenic 165 ppm, barium 1850 ppm, and iron 14,000 ppm in the surface soil.

Using the Resource Conservation and Recovery Act (RCRA) TCLP Metals Method 1311 for an inorganic analysis of these field samples, the BOR report shows that arsenic, cadmium, and lead exceed the EPA regulatory standards (RS) at several of the sampling areas at Pacific Mine (OU2) - with lead testing as high as 220 mg/L (RS = 5 mg/L), arsenic as high as 56 mg/L (RS = 5 mg/L), and cadmium as high as 1.9 mg/L (RS = 1 mg/L).

Macro-invertebrate inventories and fish tissue samples showed that: 1) macro-invertebrate populations in the river above the Site were reduced from approximately 14,000 individuals per square meter to less then 4,000 below the Site - the diversity index of species also fell from 12 to 8; and 2) fish below the Site had an <u>average</u> of 10 times as much (with a high of 20 times as much) lead as the fish above the Site. The lead-level in the fish was above the amount recommended for human consumption (the Food and Drug Administration has established safe [action or guidance] levels for lead of 1.5 and 1.7 ppm in crustaceans and shellfish, respectively.

IV. RESPONSE INFORMATION/REMOVAL ACTIONS

On October 11, 2005, removal actions were implemented by Trout Unlimited at the property owned by *Snowbird Corporation* in the Pacific Mine area to remove and dispose of contaminated soils, while maintaining the integrity of the historic Pacific Mine concrete foundations, with said soils to be shaped or transported to and disposed of in an area on-site.

Specifically, waste rock, contaminated soil, and tailings with arsenic concentrations greater than 400 mg/Kg and/or lead concentrations of 2000 mg/Kg were excavated at the locations previously specified, shaped, and capped on the Pacific Mine/Mill Site.

Trout Unlimited produced a design and work plan for the consolidation and capping of the tailings/waste rock on its (private) property. The tailings were covered with topsoil and rocks as necessary, to discourage trespass by ATV and other off-road vehicles. The repository was shaped to encourage the run-off from the repository into drainage channels which surround the repository; hence, "run-on" will be eliminated and "run-off" will be directed off the pile. When completed, the stockpile was seeded with a seed-mix approved by USFS.

IV. FUTURE ACTIONS

On September 27, 2006, the OSC from EPA and representatives from Trout Unlimited, Snowbird Corporation, and Natural Resource Conservation Services conducted an on-site inspection of the Removal Action at the Site. They found the removal action had been completed as per the "Design and Work Plan" and was acceptable. Therefore, the work at this site has been performed in compliance with the NCP and this Removal Action is considered to be complete, pending the "Final Report from Trout Unlimited".

V. COST INFORMATION

This removal action was conducted by Trout Unlimited; therefore, the EPA costs were minimal and merely pertained to evaluating the work plan, monitoring the removal, and participating in the on-site inspection.