

U.S. ENVIRONMENTAL PROTECTION AGENCY
POLLUTION/SITUATION REPORT
North Star Mill Tailings - Iron Springs Mining District - Removal Polrep
Initial Removal Polrep



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region VIII

Subject: **POLREP #1**
Removal Site Evaluation Findings
North Star Mill Tailings - Iron Springs Mining District
08QM
Ophir, CO
Latitude: 37.8585850 Longitude: -107.8157580

To:
From: Steven Merritt, On-Scene Coordinator
Date: 8/10/2009
Reporting Period: 05/28/2009 - 08/04/2009

1. Introduction

1.1 Background

Site Number:	08QM	Contract Number:	EP-W-05-050
D.O. Number:	TO-0904-05	Action Memo Date:	
Response Authority:	CERCLA	Response Type:	Time-Critical
Response Lead:	EPA	Incident Category:	Removal Assessment
NPL Status:	Non NPL	Operable Unit:	01
Mobilization Date:	5/27/2009	Start Date:	5/28/2009
Demob Date:	8/5/2009	Completion Date:	8/4/2009
CERCLIS ID:	CO0001916360	RCRIS ID:	
ERNS No.:		State Notification:	
FPN#:		Reimbursable Account #:	

1.1.1 Incident Category

Inactive Production Facility - Mining Ore Processing Mill

1.1.2 Site Description

The CERCLIS ID number of the Site is CO0001916360 – Iron Springs Mining District. The SSID is 08QM (Carbonero Mine) and the Operable Unit is OU01 (North Star Mill Tailings). The five acre North Star Mill Claim is currently owned by Mr. David Wolf, who resides there year-round with his family, including an adolescent child, in a yurt. There is another yurt on the property that is used as a recreational dwelling during the summer. The property is surrounded on all sides by U.S. Forest Service land, with recreational use year-round. Additionally, there is uncontrolled access to the mill tailings and mine waste rock piles on the site by recreational visitors and residents (See Site Map PDFs in Documents).

The history of the property coincides with the origin of the town of Ophir. The town was originated in 1878 by 17 prospectors exploring the region with U.S. Army Lieutenant Howard, after whom the Howards Fork of the San Miguel River was named. Between 1878 and 1897, prospectors began staking claims and developing the various mines throughout the Ophir Valley, including the Carbonero Mine, approximately 1.5 miles to the northeast of town, high on the southern slopes of Silver Mountain. The ore from these claims yielded gold, silver, copper, lead, zinc, and tungsten. Due to the lack of milling and smelting infrastructure in the Ophir Valley during that time, prospectors had to hand-sort ore and ship it by pack animal over Ophir Pass to the Silverton Smelter 15 miles east of Ophir.

By the 1890s, the Rio Grande Southern Railroad had established the Ophir Station along the rail line connecting Ridgway and Durango primarily to service the large Alta Mine on the north slopes of Silver Mountain approximately 2 miles north of the town of Ophir. Immediately the prospectors and mining companies working the mines within the Ophir Valley began hauling high-grade ore and sorted second-class ore to the Ophir Station for onward transport and processing at smelters and refineries in Durango, Salida, Leadville and Denver. The railroad brought significant growth and development to the mining industry in Ophir by the turn of the century.

In 1897, development of the Carbonero Mine began in earnest by George Pickett, the majority owner of the claim. At the time he did not have the resources to build a mill to concentrate ore and was forced to sort and haul only high-grade ore to Ophir Station by pack animal. In 1903 and 1904, Pickett acquired two adjacent claims, the North Star and the Mohawk, which enabled him to work the mine at lower levels.

Between 1904 and 1909, Pickett expanded the Carbonero Mine with a crew of up to 15 miners and proved its profitability to investors, producing an average of \$25,000 in ore during the early years. In 1909, Pickett formed the Carbonero Mines & Reduction Company of Colorado Springs, which held ownership in the mine for the next 40 years and leased parts of the mine to others periodically.

The Rutilla-Brown Leasing Company ran the mine from 1919-1921, expanding production to \$75,000 per year, despite being handicapped by the lack of a mill to concentrate the ore and reduce transportation costs. In 1923, the Tejon Investment Company of Colorado Springs leased the Carbonero. In 1924, Tejon Investment Company constructed the 50-ton-per-day North Star Mill and a new bunkhouse on the mill claims downhill from the Carbonero Mine, which constitute the present day North Star Mill Tailings Site. The North Star Mill was serviced by a two-bucket aerial tramway that ran a length of 3,300 feet and lowered the ore 1,300 vertical feet from the primary Carbonero Mine portal. The mill used comminution and froth-flotation processes to concentrate the valuable silver, lead, gold and copper metal from the gangue.

The construction of the North Star Mill dramatically enhanced production at the Carbonero Mine, yielding \$160,000 in 1925 and nearly \$190,000 in 1926. A lease-to-own arrangement was made between Carbonero Mines and Reduction Company and two local miners Carlo Girardi and Martin Anderson in 1927. Girardi and Anderson increased production to over \$700,000 annually for the next three years with a crew of up to 40 miners. This was the peak production for the Carbonero Mine and two-thirds of the value was in lead with most of the remainder in silver. The partnership failed in the midst of the Great Depression and the Carbonero Mine was shut down in 1931, when the price of lead dropped to less than \$0.04 per pound, a 40% reduction over 1930 prices. When Girardi closed the Carbonero Mine, he had paid \$80,000 of the agreed upon \$100,000 purchase price, but he could not continue payments and the ownership reverted to Carbonero Mines and Reduction Company.

Between 1931 and 1942, the Carbonero Mine rarely operated. When it did, as in 1934 and 1936, only small-scale mining operators, such as Rutilla, leased the mine with crews of four or five miners. Production in these years was minimal, amounting to only a handful of tons of ore per year. Western Mines, Inc., leased the Carbonero in 1942, but did not work the mine or mill during the lease. The Carbonero Mine was shuttered from 1942 until 1951, when Carbonero Mines and Reduction Company sold the mine to the Silver Bell Mining Company of Milwaukee, Wisconsin. Silver Bell Mining Company demolished the North Star Mill and the aerial tramway, burned the old mine buildings near the portal, improved the road leading to the portal, and hauled extracted ore by truck to their Silver Bell Mine and Mill, near the Ophir Station, for concentrating prior to onward shipment by rail to the smelters.

Over \$450,000 of lead-silver ore was produced by the Silver Bell Mining Company at the Carbonero Mine from 1951 to 1954 before the mine was shut down for the final time due to falling lead prices. Over the half-century of productive years at the Carbonero Mine, nearly 154,000 tons of ore were extracted, containing an average of 0.24 ounce gold (2,314 oz/\$59,086), 8.7 ounce silver (1,259,864 oz/\$821,629), 6.99 percent lead (21,557,385 lbs/\$1,480,174), 4.7 percent zinc (238,711 lbs/\$29,401), and 0.16 percent copper (523,622 lbs/\$91,451). At least two-thirds of this total estimated production was processed by the North Star Mill at the Site.

Following the mine closure in 1954, nearly two decades passed when no mining or maintenance was conducted on the Carbonero Mine and related claims. In 1970, Silver Bell Industries, Inc. cleaned out and placed a substantial drainage pipe in the portal of the mine to ensure a constant flow of water. The portal had collapsed multiple times in 1969 and 1970 causing flooding of the underground workings in the upper levels. As a result, there were at least two significant flash floods originating at the Carbonero Mine that significantly eroded roads and stream channels below the mine when hydraulic pressure behind the collapsed portal caused the natural dams to fail.

In 1980, Norman Fleet of Fleet Resources, Inc., a small Colorado investment firm, purchased both the Carbonero Mine and the North Star Mill claims from the Silver Bell Mining Company. In 1993, the 5-acre North Star Mill claims were purchased by a private party, Mr. Wolf, who established his year-round residence on the Site shortly after the purchase and lives there with his family to this day. In 1996, the Carbonero Mine was purchased by another private party, Glenn Pauls, who has been acquiring property and working with the Trust for Land Restoration to rehabilitate and transfer ownership of abandoned mining properties in and around Telluride and the Ophir Valley to the U.S. Forest Service for reclamation.

1.1.2.1 Location

The Site is located approximately one-half mile east of the town of Ophir, Colorado, which has a population of about 150. It is situated just south of the former access road to the Carbonero Mine which was washed out by the portal blowouts discussed previously. The Site legal description identifies it as a historical 5-acre patented mill claim for the North Star Mill, Survey Number 20302, which has been converted to residential use by the current property owner. The site is situated on the lower southern slope of a spur originating at the 13,000' peak of Silver Mountain, between Spring Gulch to the west and what has become "Carbonero Gulch" due to the heavy erosion from the mine drainage to the east. The site itself sits at approximately 10,500' and is about 1000' above the valley floor and the town below. There is another patented mining claim that has also been converted to residential use approximately 450' southeast of the Site. Ophir is 15 miles due south of Telluride in southwestern Colorado; approximately 145 miles south of Grand Junction, Colorado and approximately 350 miles southwest of Denver, CO.

1.1.2.2 Description of Threat

The results of the Removal Site Evaluation showed elevated concentrations of lead and arsenic in soils at the Site that pose a potential risk to human health in exposed residents and the immediate environment, including the Howards Fork of the San Miguel River. START analyzed the samples collected from the Site using an XRF instrument and laboratory sample preparation protocols. Some of these samples were sent for confirmatory analysis at a commercial laboratory. Soil samples taken from the Lower Mill Tailings Pile ranged in concentration from 45 ppm arsenic to as much as 8,400 ppm arsenic (LM17 – South End of Pile Tail), and from 2200 ppm lead to as much as 143,000 ppm lead, or over 14% lead by weight (LM17 – South End of Pile Tail). Composites of samples from the Lower Mill Tailings Pile showed concentrations over 200

ppm arsenic and over 8,000 ppm lead. Lead and arsenic contamination appear to be most pronounced at the southern edge of the Lower Mill Tailings Pile, where eroded material has migrated down slope.

Soil samples from the Upper Mill Tailings Pile, nearest the former North Star Mill and residential structures, ranged in concentration from 102 ppm arsenic to as much as 7,600 ppm arsenic (UM20 – Flume Loading Area), and from 6,800 ppm lead to as much as 106,000 ppm lead (UM20 – Flume Loading Area), or over 10% by volume. In the Upper Mill Tailings Pile, lead and arsenic contamination appear to coincide with a surface drainage channel in the center of the pile that leads away from the former tailings flume loading area and toward the road at the toe of the slope. Composites of samples from the Upper Mill Tailings Pile showed concentrations over 2,700 ppm arsenic and over 60,000 ppm lead. Samples collected from the ore and crushed rock stockpiles adjacent to and inside the former North Star Mill ranged in concentration from 968 ppm arsenic to as much as 4,200 ppm arsenic (MU04 – Mill Chute), and from 41,000 ppm to as much as 118,000 ppm lead (MU04 – Mill Chute), or nearly 12% by weight. Composites of samples from stockpiles adjacent to and inside the former North Star Mill showed concentrations over 2,000 ppm arsenic and over 72,000 ppm lead. All of the 27 samples taken from visually impacted areas of the property had elevated concentrations of both lead and arsenic.

The sampling data from the site has been reviewed by an EPA Toxicologist, who has determined that areas with lead concentrations greater than 400 ppm and arsenic concentrations ranging from 0.39 - 39 ppm pose a potential risk to residential populations exposed at the Site. Based upon sample results and composite samples, nearly half of the surface area of the Site has metal contamination exceeding these two suggested maximum concentrations. Although the scope of the pending Removal Action will be aimed at protecting the residential population at this Site, sample results and composite samples exceeded the recommended maximum concentrations for recreational users as well. Thus, there is a significant portion of the property that presents a risk to the residents, those recreating on the Site, and the residents living on an unrelated claim 450' southeast of the Lower Mill Tailings Pile.

The sampling and analyses conducted to date consistently indicate the presence of hazardous substances at the Site. Of particular concern are the presence of high concentrations of the heavy metals lead and arsenic in the tailings material and surrounding Site soils. Lead and arsenic are listed hazardous substances per 40 C.F.R. §302.4. These contaminants are found at and below the ground surface and are being continuously eroded due to poor grading and the lack of run-on and run-off drainage controls. This results in subsequent migration of the contamination throughout the Site and to adjacent areas. Contaminated soils at the ground surface present a risk to human populations due to the potential for inadvertent ingestion of site soils by residents of the area.

Children, including the one living at the Site and the two living at the adjacent mining claim that has also been converted into residential property, appear to be the segment of the population at greatest risk from toxic effects of lead and arsenic. Exposure, either by inhalation or ingestion pathways, to the lead and arsenic contaminated soils at the Site can cause severe and irreversible health effects. The release of these hazardous substances (heavy metals) into the environment poses an imminent threat to public health.

1.1.3 Preliminary Removal Assessment/Removal Site Inspection Results

During operations at the North Star Mill, tailings were transported via a wooden flume approximately 1,200 feet downslope to a tailings pile on the valley floor adjacent to the Howards Fork of the San Miguel River. At the time, the Carbonero Mine was discharging approximately 150 gallons-per-minute that flowed directly into the Howards Fork of the San Miguel River. The mill and tailings flume relied upon this water, as there is evidence that a significant portion of the water flowing out of the Carbonero Mine workings was diverted into an earthen channel constructed upslope and northeast of the mill for use in processing the ore and providing sufficient flow to transport the tailings via the flume which began just south of the North Star Mill.

The earthen diversion channel and limited evidence of the flume still exist at the site. There is also evidence of an area of significant spillage of tailings along its length at the Site and at the Carbonero Tailings Site on U.S. Forest Service Land along the Howards Fork of the San Miguel River in the valley below the mill. There are two piles of tailings materials on the Site that appear to be centered on what was likely the loading platform for the flume and on an area approximately 250' downslope that may have been a temporary terminus before the flume was extended to where the Carbonero Tailings Site now exists. These two piles will henceforth be referred to as the Upper Mill Tailings Pile, which is immediately south of the North Star Mill building footprint, and the Lower Mill Tailings Pile, which is the pile of material at the temporary terminus (See Site Map PDFs in Documents).

The Colorado Department of Public Health and Environment ("CDPHE"), in partnership with the EPA Site Assessment Program, conducted a Preliminary Assessment and Site Inspection of the Carbonero Mine and the rest of the Iron Springs Mining District in 1999 in an effort to evaluate the area for listing on the NPL. There was very limited mention of the North Star Mill in these investigations. Since then, the USFS has been working to remediate the mining-related wastes in the Ophir Valley and restore the fisheries along the Howards Fork of the San Miguel River. The North Star Mill Tailings Site was referred to the EPA Federal Facilities Program by the USFS as part of their efforts to reclaim areas impacted by the Carbonero Mine. The EPA Federal Facilities program conducted limited field screening of metals concentrations throughout the two piles on the Site using a portable X-Ray Fluorescence ("XRF") instrument in October 2008. The EPA Federal Facilities Program then referred the North Star Mill Tailings Site to the Removal Program in February 2009.

2. Current Activities

2.1 Operations Section

2.1.1 Narrative

During this reporting period, EPA worked to collect information about the history of the site, identify any potentially responsible parties (PRP), collect field data about the location and quantity of contaminated tailings and mine waste at the site, investigate the exposure pathways and possible receptors at/near the

site, gain approval to proceed with the action, and develop a preliminary design for the remedy to be implemented at the site. The Removal Site Evaluation (RSE) was conducted in three phases over a four month period from May 2009 to August 2009. The first phase of the RSE was field sampling and laboratory analysis of contamination at the site. This was conducted on May 28, 2009. The second phase of the RSE was coordination and negotiations with the USFS about the possibility of constructing a joint repository to deal simultaneously with the Carbonero Tailings and the North Star Mill site. This phase lasted from early June through the end of July 2009. The outcome of these negotiations was a decision by each agency (EPA and USFS) to continue remediation work independently in each of the two areas instead of constructing a joint repository. This decision was based upon technical concerns about the location of the Carbonero Tailings and budgetary constraints associated with the end of the fiscal year. The third phase of the RSE was geotechnical investigation and preliminary engineering design for the repository to be constructed on the North Star Mill Claim. This was conducted on August 4, 2009.

2.1.2 Response Actions to Date

The first part of the Removal Site Evaluation included an inspection of the Upper and Lower Mill Tailings Piles, the former North Star Mill area, ore and crushed rock stockpiles adjacent to the mill, the tailings flume path, and nearby areas including the Carbonero Tailings Site. As described in the Removal Site Evaluation Report, dated June 2009 (see the Administrative Record for the Site), 27 soil samples were collected by START on May 28, 2009. 16 samples were collected from the Lower Mill Tailings Pile, 5 samples were collected from the Upper Mill Tailings Pile, and 6 samples were collected from the Mill and adjacent stockpiles. Three individual samples and two composites were sent to a commercial laboratory and analyzed for metals, SPLP, and acid base accounting. Preliminary results, which will be discussed later in this document, indicate significant quantities of lead and arsenic in tailings and soils at the Site.

In addition to the high concentrations of lead and arsenic metal in the Site soils, the topography of the Site and improper drainage features, including the lack of surface water run-on controls and any run-off management, contribute to erosion and further migration of contamination throughout the residential property and surrounding areas. The slope and lack of vegetation on the Upper Mill Tailings Pile increase the velocity of surface flow and direct it across the areas with the highest heavy metals concentrations before depositing it on the road below the slope and into the earthen channel previously mentioned, which flows by the Lower Mill Tailings Pile on the way to the Howards Fork of the San Miguel River another 500 feet down the slope. All of the samples collected from along this surface flow pathway proved to be the highest concentrations of both lead and arsenic anywhere at the Site.

2.1.3 Enforcement Activities, Identity of Potentially Responsible Parties (PRPs)

Between the first phase of the RSE and the completion of the signed Action Memorandum for the removal, the EPA Enforcement Specialist and Site Attorney reviewed the Title Search Report provided by START and attempted to identify any viable PRPs. Most of the owners and operators of the North Star Mill throughout its history are no longer in existence. However, a 104(e) Information Request letter has been sent to the current property owner and to Fleet Resources to determine their ability/responsibility to contribute to the planned remediation. EPA expects to enter into an Administrative Order on Consent with the current property owner, which will outline potential liability, material contributions to be made to the remediation effort, and long-term environmental covenants/deed restrictions to be placed on the property to ensure the constructed repository is left undisturbed, even if the property changes ownership in the future.

2.1.4 Progress Metrics

The removal action has not yet commenced, so no progress has been made toward mitigating the hazards associated with the Site. Values in the table below provide an estimate of the volumes associated with different piles at the site that will be consolidated and capped as part of the final remedy. Since the repository will be constructed atop a large portion of the Lower Mill Tailings Pile, over half of the material from that location is already inside the repository footprint.

<i>Wastestream Location</i>	<i>Contaminants</i>	<i>Quantity</i>	<i>Amount Hauled</i>	<i>Amount in Repository</i>	<i>Percent Complete</i>
<i>Lower Mill Tailings Pile</i>	<i>Lead and Arsenic</i>	<i>2,500 cu. yd.</i>	<i>0 cu. yd.</i>	<i>1,500 cu. yd.</i>	<i>60%</i>
<i>Upper Mill Tailings Pile</i>	<i>Lead and Arsenic</i>	<i>500 cu. yd.</i>	<i>0 cu. yd.</i>	<i>0 cu. yd.</i>	<i>0%</i>
<i>Tailings in Mill</i>	<i>Lead and Arsenic</i>	<i>500 cu. yd.</i>	<i>0 cu. yd.</i>	<i>0 cu. yd.</i>	<i>0%</i>
<i>Mill Stockpiles</i>	<i>Lead and Arsenic</i>	<i>1,000 cu. yd.</i>	<i>0 cu. yd.</i>	<i>0 cu. yd.</i>	<i>0%</i>

2.2 Planning Section

2.2.1 Anticipated Activities for Next Reporting Period

The Action Memorandum for this site was signed on August 13, 2009. The Removal Action is expected to begin on August 17, 2009. Equipment and personnel mobilization will take until the end of the day on August 18, 2009. The EPA OSC will provide a briefing to the Town of Ophir General Assembly on August 18, 2009 at 7:00 PM to discuss the Removal Action. August 19, 2009 is expected to be the first day of

work at the site. The next reporting period will contain a summary of activities conducted during mobilization and the first week of the Removal Action.

2.2.1.1 Planned Response Activities

Specific actions are described below and will be implemented at the Site to address contaminated waste rock from the Upper Mill Tailings Pile, the Lower Mill Tailings Pile, and the ore and crushed rock stockpiles adjacent to the former North Star Mill. The priority is to excavate and consolidate the Upper Mill Tailings Pile and the stockpiles at an on-site repository to be constructed at the Lower Mill Tailings Pile area, which will be approximately 4,000 cubic yards of tailings material total.

Description of some of the proposed removal activities is itemized below:

- *Clearing and Grubbing:* Routes for new access to waste piles will be cleared of trees and grubbed by removing undergrowth and duff. The repository footprint and associated features will also need to be cleared of trees and vegetation to facilitate construction.
- *Excavate, Load, and Haul Waste:* Site waste will be removed and loaded by conventional excavation equipment and transported to the on-site repository. Excavation depth will generally be to natural grade or approximately one foot below grade.
- *Waste Treatment (if needed):* If waste treatment is needed it will be done onsite with either a phosphate or pozzolanic based agent. At this time, no treatment is planned.
- *Place and Compact Waste in Repository:* Waste will be placed and compacted in the repository. Repository construction will involve preparing engineering designs, site preparations, grading, waste placement and consolidation, capping and installing appropriate drainage controls for run-on and run-off. The selected repository location will avoid groundwater and surface water and minimize ecological disturbance. Cap design detail will be consistent with typical mine waste capping standards consisting of a multi-layer soil cover with a vegetative cover. If a low permeability cover using a geo-membrane is determined to be necessary, it is possible to include that in this action. However, findings to date do not indicate a need for a synthetic liner.
- *Re-grade/Cover/Re-vegetate Disturbed Areas:* All disturbed areas within the construction boundaries will be re-graded and re-vegetated after construction is completed. Re-vegetation prescriptions may include amount and types of organic matter, fertilizer, seeding, mulching, erosion control blankets, and soil cover. Generally, cover soil will be placed to replace soils in excavation areas such that appropriate grades are created to facilitate drainage and prevent erosion. Where wastes are left in place, cover soil will be placed to a depth of approximately one foot as necessary to prevent human exposure and reduce contaminant migration and still preserve sensitive ecosystems.

The scope of this Removal Action is to reduce and/or eliminate the threats posed to residential populations through contact with surface soils. EPA will excavate and consolidate tailings at the Lower Mill Tailings area. The consolidated wastes will be capped and perimeter control channels will be constructed to direct run-off around the repository cell. All of which will greatly reduce the exposure risk present at the Site.

Excavation of tailings will be based initially on visual observation; the tailings are primarily a yellow-orange color and are devoid of any vegetation. Specific clean-up targets for the Site will be developed based upon background metals concentrations and the particular chemical species of metals in the tailings. Adherence to these targets will be greatly dependent upon the geological setting and conditions found throughout the excavation of waste materials. As described earlier, the Site is located in a mountainous area with steep topography. Removal of tailings must be conducted such that slopes are not de-stabilized and at some areas of the site there may be shallow, fractured bedrock, which could limit EPA's ability to consistently excavate to a prescribed level.

Throughout the Removal Action, in-situ XRF analyses will be used to determine metals concentrations in the excavation zones. EPA will seek to meet the risk based soil screening levels defined above; however the Site conditions mentioned (i.e. steep slopes, shallow, fractured bedrock) may limit the ability to meet those risk levels. Thus, there may be instances where lead and/or arsenic concentrations exceed the recommended levels. Where this occurs, the area will be demarcated and noted for the record and additional clean, backfill material/soils will be brought in to create appropriate cover over the area. Finally, the area will be recontoured to facilitate proper drainage and reduce erosion. In some instances, EPA may excavate to greater depths within the tailings piles if lead/arsenic concentrations are still greatly above the recommended risk based soil screening levels.

Some waste has been deposited (through erosion and migration) amid a large grove of aspen trees. This is a small volume relative to the total at the Site (approximately 200 cubic yards). To try to preserve the ecosystem, EPA will limit the excavation and equipment use near the aspen grove, meaning some waste may be left in-place. Where this occurs, clean fill will be brought in to cover the waste material and the grade will be recontoured immediately outside the area to limit migration of waste away from the tree grove.

2.2.1.2 Next Steps

Mobilize to the site to begin the Removal Action as described above.

2.2.2 Issues

Completing this Removal Action before inclement weather and early seasonal snowfall is imperative. Given the elevation of the Site and the relatively short construction season, any delays to this project may require the EPA to temporarily close the site, cease work, and the resume the Removal Action next spring. Without any delays, the project is expected to be completed by September 20, 2009, which has historically been about two weeks before the first snowfall in the area.

2.3 Logistics Section

There are currently no resource needs associated with the Site.

2.4 Finance Section

2.4.1 Narrative

Costs listed in the table below are those associated with the Removal Site Evaluation only. The costs and ceilings associated with the actual Removal Action and listed in the signed Action Memorandum will be included in the next Pollution Report to be issued on August 31, 2009.

2.4.2 Metrics

Developed cost tracking metrics will be applied to the spending associated with the Removal Action and will appear in the next Pollution Report.

Estimated Costs *

	Budgeted	Total To Date	Remaining	% Remaining
Extramural Costs				
ERRS - Cleanup Contractor	\$3,000.00	\$2,500.00	\$500.00	16.67%
TAT/START	\$65,000.00	\$42,870.00	\$22,130.00	34.05%
Intramural Costs				
USEPA - Direct	\$10,000.00	\$8,500.00	\$1,500.00	15.00%
USEPA - InDirect	\$10,000.00	\$9,000.00	\$1,000.00	10.00%
Total Site Costs	\$88,000.00	\$62,870.00	\$25,130.00	28.56%

* The above accounting of expenditures is an estimate based on figures known to the OSC at the time this report was written. The OSC does not necessarily receive specific figures on final payments made to any contractor(s). Other financial data which the OSC must rely upon may not be entirely up-to-date. The cost accounting provided in this report does not necessarily represent an exact monetary figure which the government may include in any claim for cost recovery.

2.5 Other Command Staff

2.5.1 Safety Officer

On August 19, 2009, the Site Health and Safety Plan (SHASP) was finalized and signed by all personnel working at the site. In accordance with the SHASP, START immediately began perimeter air monitoring and simultaneous air sampling with a DataRAM 4 to determine the amount of respirable dust and the percentage of that dust which contains airborne metals contamination. Air samples will be submitted to a commercial laboratory for analysis and perimeter air monitoring will continue whenever there is construction activity at the site. A water truck will be used to wet excavated soils and prevent respirable dust levels from exceeding the action level of 50 ug/m3.

2.6 Liaison Officer

No change.

2.7 Information Officer

EPA will present information about the removal project at the Town of Ophir General Assembly on August 18, 2009 at 7:00PM. The Administrative Record for the site will be available from Town Manager Jason Wells beginning on September 15, 2009, when EPA will provide another update to the Town of Ophir General Assembly.

3. Participating Entities

3.1 Unified Command

Not applicable.

3.2 Cooperating Agencies

U.S. Forest Service - Linda Lanham

Town of Ophir - Jason Wells

Colorado Department of Public Health and Environment - Mark Rudolph

Colorado Division of Reclamation, Mining and Safety - Camille Price

The Trust for Land Restoration - Patrick Willits

4. Personnel On Site

Steven Merritt - On-Scene Coordinator
Craig Myers - On-Scene Coordinator
Tim Bosco - START
Cordell Schmidt - START
Jason Hilgers - START
Chuck Jackson - ERRS

5. Definition of Terms

ERRS - Emergency and Rapid Response Services - EPA's Construction Contractor
START - Superfund Technical Assessment and Response Team - EPA's Technical Contractor
NPL - Superfund National Priorities List
ATSDR - Agency for Toxic Substances and Disease Registry

6. Additional sources of information

6.1 Internet location of additional information/report

For additional information please refer to <http://www.epaosc.net/NorthStarMill>.

6.2 Reporting Schedule

The next POLREP will be submitted on Monday, August 31, 2009.

7. Situational Reference Materials

[ATSDR Lead ToxFAQs](#)

[ATSDR Arsenic ToxFAQs](#)

POLREP #1 Last Updated 9/30/2009