



## ecology and environment, inc.

International Specialists in the Environment

720 Third Avenue, Suite 1700, Seattle, WA 98104

Tel: (206) 624-9537, Fax: (206) 621-9832

January 29, 2007

Mr. Greg Weigel  
On-Scene Coordinator  
U.S. Environmental Protection Agency  
1435 North Orchard Street  
Boise, Idaho 83706

Rc: Contract EP-S7-06-02  
Monarch Stamp Mine Removal Action  
TDD: 06-06-0001

Dear Mr. Weigel:

This letter report documents the three visits that START personnel made during construction of the removal action at the subject site. Construction of the removal action included excavating mill tailings at selected areas and placing them in an adjacent repository, which was subsequently covered with clean fill. The construction also included installation of fabric-enclosed soil pillows and rock vanes for erosion protection. Construction activities were conducted by the EPA ERRS contractor. E & E's role was primarily to assist the EPA in characterizing the extent of contamination in the tailings pile.

A photograph identification sheet for activities observed by E & E is provided in Attachment A. Pollution Reports filed for this removal action are included in Attachment B. A summary table of samples collected with results is included in Attachment C.

The Monarch Stamp Mine site former mill site is located approximately 1/4 mile west of Atlanta, ID (see Figures 1 and 2). The site was used for milling silver and gold ore from approximately the 1860s until about 1936. Mercury and arsenic were used in the milling process, and remain in the tailings. Mill tailings were not contained and threaten the water quality of the Middle Fork of the Boise River. The objectives of the removal action were to: isolate and stabilize tailings that are in contact with and adjacent to the Middle Fork of the Boise River, and mitigate potential threats of off-site migration. A local borrow pit was excavated to supply clean fill; all excavated tailings were managed on site.

The established excavation locations included an approximately 50-foot wide strip extending from the river towards the center of site, and excavation of the periphery towards the center of the site. The repository was constructed to prevent additional mill tailings from migrating off site, and to prevent the public or wildlife from entering the site and spreading contamination or being exposed. Tailings deposited in the repository were covered by a 1-foot minimum of clean fill soil, compacted, and seeded. Construction details are summarized in the Pollution Reports under Attachment B; a "Record Drawing" for the site was submitted under separate cover on January 25, 2007 to the EPA OSC.

On September 11, 2006, START mobilized to Atlanta, ID to assist USEPA OSC Greg Weigel in characterizing the presence and concentration of mine tailings. START was directed by the OSC

10:START-3\06060001

recycled paper

to collect soil samples and to field screen these using X-Ray Fluorescence (XRF) to determine the presence of arsenic and mercury around the periphery of the site. START also conducted sampling in test pits on the site periphery to determine the depth and concentration of contamination. Soil samples SS00XRF001-SS04XRF160 were collected during this period, and their locations were marked by pin flags, and surveyed using a Global Positioning System (GPS) instrument. Eleven confirmation soil samples were collected and sent to Alchem Laboratory in Boise, Idaho to correlate with field screening results. Data between the XRF and laboratory showed a high correlation (0.95) for arsenic contamination. An analytical results summary is provided in Attachment C.

START also was directed to conduct dust monitoring on site; START installed three DataRam DR-4000 (DataRam) instruments. Two DataRams were rotated between the NW, SW, and SE corners of the site. One DataRam was located near the ERRS trailer. The DataRams were placed to measure the amount of dust migrating off site. START also installed a Personal DataRam (PDR) in the ERRS cab of a D5 Caterpillar being used by ERRS. The PDR was placed in the ERRS cab to measure the potential exposure of ERRS to dust. The air monitoring equipment indicated that field screening results were below the 15 mg/m<sup>3</sup> TWA. START departed from the site on September 15, 2006.

START returned to the Monarch Stamp Mine site on September 25, 2006, for additional site characterization and cleanup confirmation using XRF and GPS instruments, and collection of samples for laboratory confirmation. START conducted soil screening with the XRF to determine if excavated portions of the site were below the arsenic action level of 700 ppm. If field screening results were above the action level, START provided XRF data to the OSC to determine if excavation was needed.

START was directed by the OSC to conduct "surgical sampling" to determine if excavated soils were above or below the action level of 700 ppm for arsenic. START continued to field screen as the ERRS excavator was removing soil, and determined if the soil samples were above or below the action level. START also characterized the bench near the ERRS trailer for contamination. This bench is located immediately above the large masonry wall of the old mill site that once was part of the mill structure. ERRS deposited a layer of clean fill soil on the bench.

The EPA OSC determined that excavation would not occur on the bench area. The site owner (Mr. Israel Ray) will determine if removal will be conducted with his own funds.

Soil samples SS00XRF161-SS00XRF264 were collected during this period, and their locations were surveyed using a Global Positioning System (GPS) instrument. Eighteen confirmation soil samples were collected and sent to Alchem Laboratory in Boise, Idaho for arsenic and mercury analysis. Data between the XRF and laboratory showed a high correlation for arsenic (0.77) as well as mercury (> 0.95) contamination. START left the site on September 28, 2006. XRF and laboratory results are summarized in Attachment C.

START returned on October 9, 2006, to conduct GPS mapping of the site, and to field screen potentially contaminated areas with the XRF instrument. START was directed by OSC to field screen the bench and hillside below the ERRS trailer for potential contamination. ERRS was on site and continued with removal of previously screened contaminated areas. ERRS did not excavate additional soil based on XRF field screening. The OSC informed START that the upper plateau of the Monarch Stamp Mine will be managed as-is, and that the removal was near completion.

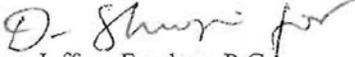
START was directed by OSC to create a data table correlating XRF field results with laboratory confirmation results. Soil samples SS00XRF265-SS04XRF278 were collected during this period, and their locations were surveyed using a Global Positioning System (GPS) instrument. No confirmation soil samples were collected for laboratory analysis. START left the site on October 10, 2006. XRF field results are listed in Attachment C.

In summary, START assisted the EPA OSC in characterizing the extent of contamination in the tailings pile. START collected a total of 278 XRF field screening samples with 29 co-located laboratory confirmation samples during three field trips. A high correlation was observed between field and laboratory data for arsenic and mercury concentrations, thereby facilitating field decisions during tailings excavation activities.

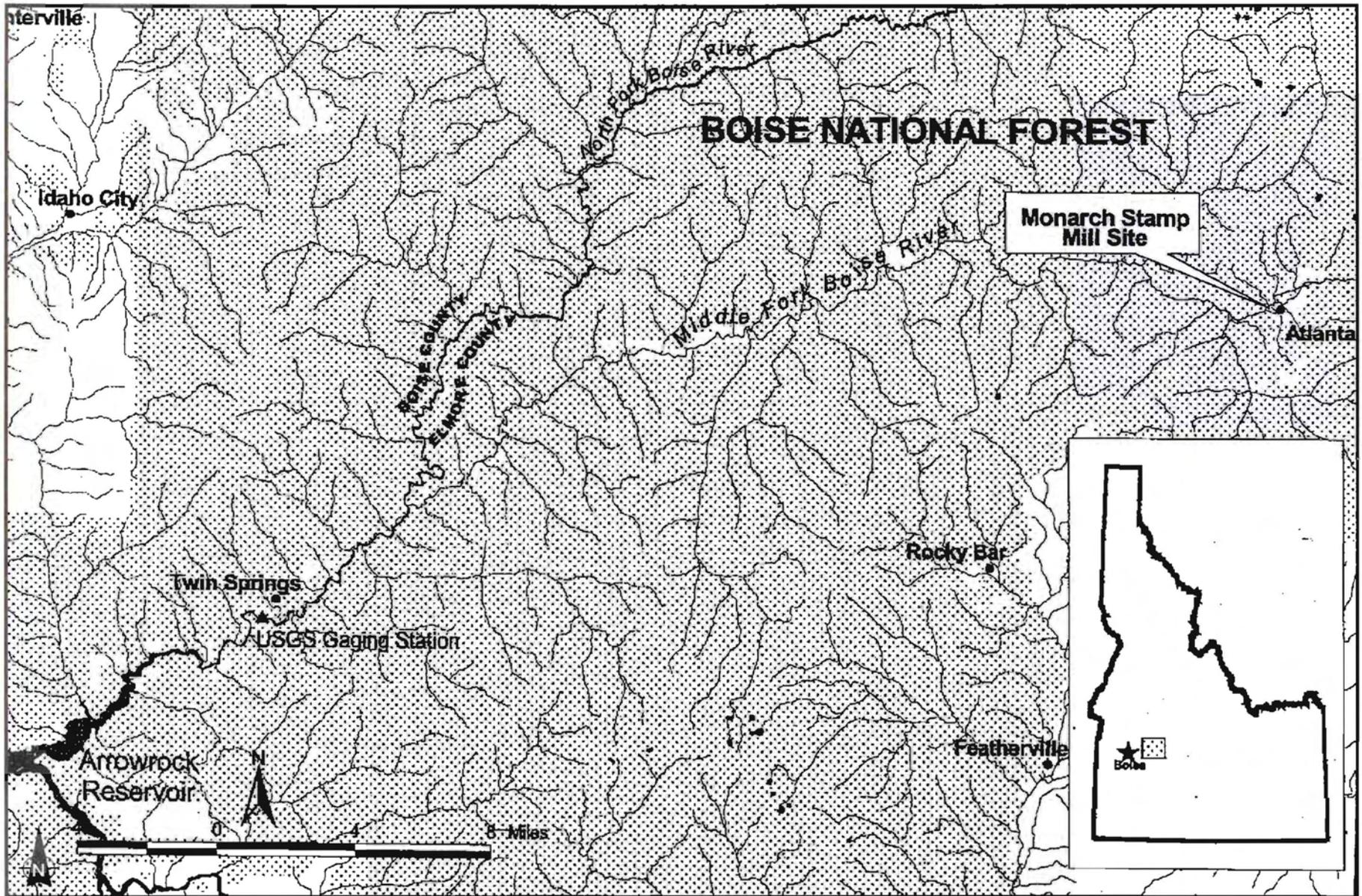
If you have any questions, please contact me at (206) 624-9537.

Sincerely,

Ecology & Environment Inc.

  
Jeffrey Fowlow, P.G.  
START Project Leader

cc: Alexander Whitman, E&E, START-3 Project Manager, Seattle, WA



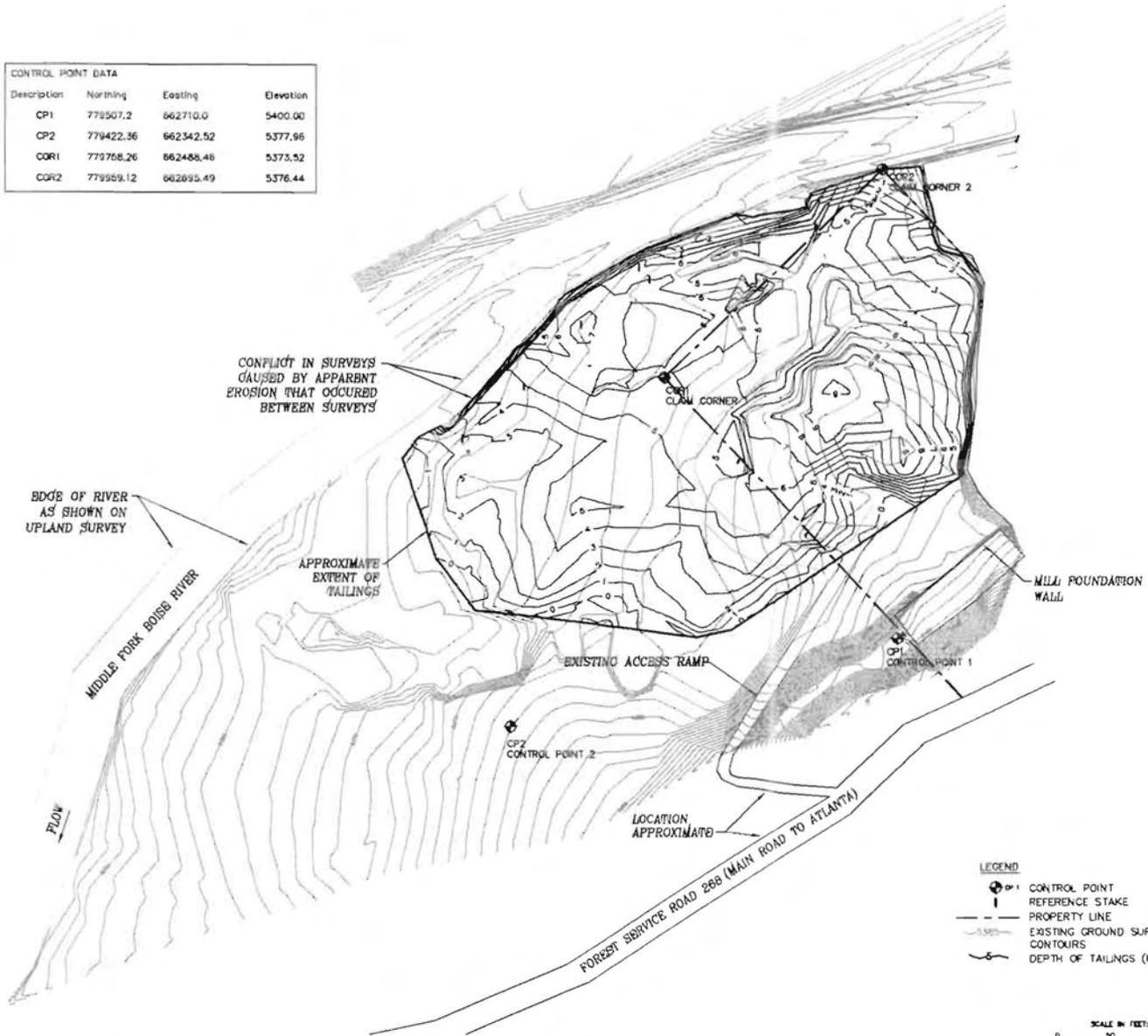
 <b>ecology and environment, inc.</b> International Specialists in the Environment Seattle, Washington	<b>MONARCH STAMP MILL SITE</b> Atlanta, Idaho		Figure 1 <b>LOCATION MAP</b>	
	Base Map Reference: Science Applications International Corporation, 2001.	Date: 1/29/07	Drawn by: AES	10:START-3\06060001\fig 1

CONTROL POINT DATA			
Description	Northing	Easting	Elevation
CP1	779507.2	662710.0	5400.00
CP2	779422.36	662342.52	5377.96
COR1	779768.26	662488.46	5373.52
COR2	779559.12	662695.49	5376.44



**NOTES:**

1. UPLAND SURVEY PERFORMED BY THE FOREST SERVICE IN AUGUST 1995.
2. RIVER CROSS-SECTIONS SURVEYED BY THE FOREST SERVICE JULY 31 THROUGH AUGUST 1, 2000.
3. EXTENT OF TAILINGS DEVELOPED USING DATA COLLECTED FROM BOREHOLE DRILLING PERFORMED BY ENVROSEARCH INTERNATIONAL SEPTEMBER 28 THROUGH OCTOBER 3, 1995. REFER TO ENVROSEARCH INTERNATIONAL'S SUBSURFACE INVESTIGATION REPORT, DATED JANUARY 31, 1996, FOR MORE INFORMATION.



IF SHEET MEASURES LESS THAN 22" X 34" IT IS A REDUCED PRINT. REDUCE SCALE ACCORDINGLY.

		U.S. ENVIRONMENTAL PROTECTION AGENCY REGION 10	
MONARCH STAMP MILL REMOVAL ACTION <b>Figure 2</b> <b>SITE MAP</b>			
ATLANTA		ID#410	
DATE	DESCRIPTION	ISSUED BY	DATE
		09/01/2006	G-2
SCALE		DATE	2 OF 11

**ATTACHMENT A**  
**PHOTOGRAPHIC DOCUMENTATION**

**PHOTOGRAPH IDENTIFICATION SHEET**

**Camera Serial Number: 9091370 XEQ 017**

**TDD Number: 06-06-0001**

**Lens Type: Sony Cybershot P 73**

**Site Name: Monarch Mine**

<b>Photo</b>	<b>Date</b>	<b>By</b>	<b>Direction</b>	<b>Description</b>
0459	9/12/2006	BWR	N	Site air monitoring near sampling point.
0463	9/12/2006	BWR	NE	Test pit sampling near site periphery.
0488	9/13/2006	BWR	S	Multiple samples on riverbank.
0563	9/13/2006	BWR	N	Close-up of suspected smelting furnace.
0590	9/15/2006	BWR	NE	Silt fence and straw bales for BMPs.
0622	9/25/2006	BWR	SE	Multiple samples at various depths.
0715	9/26/2006	BWR	NE	ERRS removing mine tailings near riverbank.
0722	9/27/2006	BWR	N	Samples collected on upper bank.
0763	9/27/2006	BWR	SE	Samples collected on upper bank hillside.

Key:

BWR = Bryce Robbert  
BMP = Best management practices  
ERRS = Emergency Response Removal Services



Photo 1 Site air monitoring near sampling point.

Direction: North Date: 9/12/06 Time: 04:59



Photo 2 Test pit sampling near site periphery.

Direction: Northeast Date: 9/12/06 Time: 04:63



Photo 3 Multiple samples on riverbank.

Direction: South Date: 9/13/06 Time: 04:88



Photo 4 Close-up of suspected smelting furnace.

Direction: North Date: 9/13/06 Time: 05:63

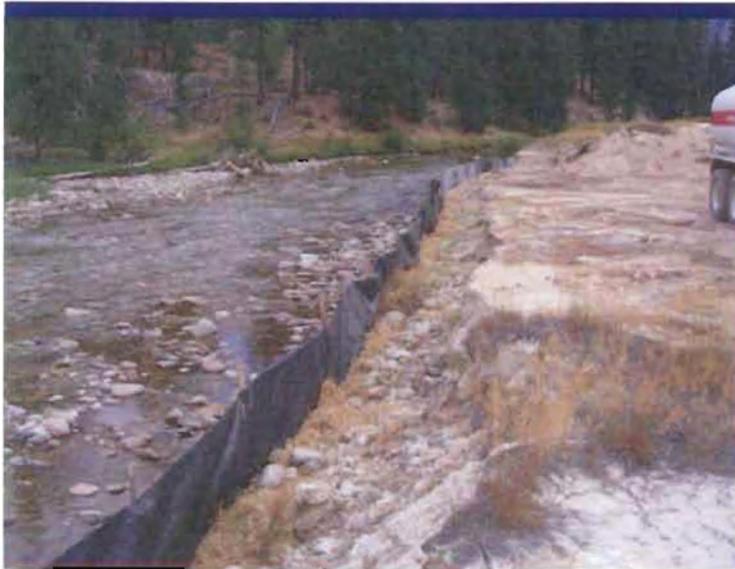


Photo 5 Silt fence and straw bales for BMPs.

*Direction: Northeast Date: 9/15/06 Time: 05:90*



Photo 6 Multiple samples at various depths.

*Direction: Southeast Date: 9/25/06 Time: 06:22*



Photo 7 ERRS removing mine tailings near riverbank.

*Direction: Northeast Date: 9/26/06 Time: 07:15*



Photo 8 Samples collected on upper bank.

*Direction: North Date: 9/27/06 Time: 07:22*

Monarch Mine

TDD Number: 06-06-0001  
Taken by: Bryce Robbert



Photo 9 Samples collected on upper bank hillside.

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*Direction: Southeast Date: 9/27/06 Time: 07:63*

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**ATTACHMENT B**

**POLLUTION REPORTS  
(POLREPS)**

**United States Environmental Protection Agency  
Region X  
POLLUTION REPORT**

**Date:** Thursday, September 14, 2006

**From:** Greg Weigel, OSC

**To:** Maggie Manderbach, Forest Service  
Chris Field, EPA Region 10 (POLREP List)  
Bruce Schuld, Idaho DEQ  
James Wertz, EPA Region 10 (POLREP List)  
Jim Curtis, Boise National Forest

**Subject:** Inital POLREP  
Monarch Stamp Mill  
Atlanta, ID  
Latitude: 43.80357  
Longitude: -115.13547

<b>POLREP No.:</b>	1	<b>Site #:</b>	10EA
<b>Reporting Period:</b>	9/5/2006 to 9/13/2006	<b>D.O. #:</b>	
<b>Start Date:</b>	9/5/2006	<b>Response Authority:</b>	CERCLA
<b>Mob Date:</b>	9/5/2006	<b>Response Type:</b>	Time-Critical
<b>Completion Date:</b>		<b>NPL Status:</b>	Non NPL
<b>CERCLIS ID #:</b>	ID0001413723	<b>Incident Category:</b>	Removal Action
<b>RCRIS ID #:</b>		<b>Contract #</b>	

### Site Description

The Site is a mixed-ownership former mill site, located partially on private land and partially on National Forest System lands within the established boundaries of the Boise National Forest, approximately 1/4 mile west of the town of Atlanta. Significant physical characteristics of the Site include the ruins of the former mill, the exposed tailings which cover an area approximately 550 feet by 350 feet on a flat bench area adjacent to the Middle Fork of the Boise River, and a cut bank which is formed by approximately 3 to 5 feet thick of tailings along approximately 500 feet of the South bank of the Middle Fork of the Boise River. The Site was used for milling silver and gold ore from about the 1860s intermittently through at least 1936. Ore was brought to the Site from nearby mines. Mercury was used in the milling process. Mill tailings were not contained and allowed to flow onto the adjacent down gradient bench area and into the Middle Fork of the Boise River. A U.S. Forest Service site investigation report documented mercury concentrations in tailings at the Site as high as 29,500 mg/kg. Arsenic concentrations were as high as 10,900 mg/kg. The report calculated the total volume of tailings at the site at approximately 22,500 cubic yards. The objectives of the proposed action are to isolate and stabilize tailings that are in contact with and adjacent to the Middle Fork of the Boise River and mitigate the threat of continued erosion and off-site migration. Also consolidate the tailings pile and construct a permanent clean cover to mitigate the threat of direct contact by recreational users of the Site, and revegetate the covered tailings pile, the river bank and other disturbed areas to minimize future wind and hydraulic erosion at the site.

### Current Activities

The Forest Service completed a Biological Assessment and consultation with U.S. Fish & Wildlife

Service prior to mobilization. Also completed cultural resources survey and consultation with State Historic Preservation Office.

EPA ERRS contractor began mobilization of personnel and equipment on 9/05/06. From Tuesday, 9/05 through Saturday, 9/09/06, ERRS contractor received equipment, set up office trailer, set up fuel storage and containment, cleared trees at off-site barrow location (approximately 1 mile from site), began developing clean material for cover and fill from off-site barrow source, developed a clean pad for processing of cover material on site, and hauled material from barrow source to site.

On 9/7/06, EPA OSC and ERRS met with Boise National Forest (BNF) personnel to evaluate potential sources for large, angular rock for in-stream erosion control structures. EPA OSC demobilized from site on 9/8/06.

On 9/11/06, EPA OSC re-mobilized to the site. ERRS contractor began excavating tailings from approximately 10 feet from river bank to 50 feet. Screen plant down because of broken belt. Continued hauling clean cover material from barrow source. Personnel on site for 9/11/06:

EPA - 1

ERRS contractor - 9

Equipment on site for 9/11/06:

30-Ton Haul Truck - 1

Fixed Box Dump Truck - 1

Dozer, CAT D5 - 1

4000 Gal Water Truck - 1

2000 Gal Water Truck - 1

225 Excavator - 1

315 Excavator - 1

Wheel Loader - 1

Mobil Screen Plant - 1

On 9/12/06, START contractor personnel arrived and began characterization of tailings and arsenic/mercury concentrations around tailings pile perimeter, using Innovex XRF, to determine necessary extent of excavation and/or clean cover. Also, OSC met with BNF personnel to review site progress and examine selected barrow source for large angular rock. ERRS contractor continued hauling from barrow source. Fixed screen plant and began screening cover material on site. Dug test pits around site periphery. Continued excavating tailings from near river and moving to repository.

Personnel on site for 9/12/06:

EPA - 1

Forest Service - 3

START contractor - 2

ERRS contractor - 9

Equipment on site for 9/12/06 same as day before.

On 9/13/06, START contractor continued characterization of tailings pile periphery and dust monitoring. ERRS contractor continued hauling and screening clean cover/fill material. As of 9/13/06, 1,350 cubic yards of cover/fill material had been hauled, of total estimated 10,000 yards needed for project. Continued excavating tailings from near river and moving to repository. OSC met with Pat Trainor, Forest Service, and Bruce Schuld, Idaho DEQ, to review design and technical aspects for construction of in-stream structures and river bank re-construction.

Personnel on site for 9/13/06:

EPA - 1

Forest Service - 1  
Idaho DEQ - 3  
START contractor - 2  
ERRS contractor - 10  
Equipment on site for 9/13/06 same as day before.

### **Planned Removal Actions**

For rest of week: Continue hauling and developing clean cover/fill material from off-site borrow source, approximately 1 mile away on private property. Continue screening material necessary for river bank re-construction and cover. Install silt fence and BMPs along river. Begin excavating tailings from along river bank and moving to repository. Identify and mark lateral extent of excavation and/or cover, based on XRF field analysis. Send confirmation soil samples to lab (for correlation with XRF results). Begin excavation of thin tailings deposits south of main tailings pile and move to repository.

### **Key Issues**

Current rate of production for clean cover material is inadequate to complete project within projected time frame. ERRS will order another dump truck to increase haul rate from borrow site. Also, EPA OSC will re-explore with Forest Service possibility of using near site borrow source on FS lands.

Proposed cleanup goal of 360 ppm for Arsenic (consistent with nearby Talache mine site cleanup of depositional tailings in recreational use area) may be difficult to achieve without extending cover and/or excavating way beyond what was originally anticipated, thus extending time and costs. EPA OSC will review data with START, and discuss with Forest Service.

[www.epaosc.org/MonarchMill](http://www.epaosc.org/MonarchMill)

**United States Environmental Protection Agency  
Region X  
POLLUTION REPORT**

**Date:** Monday, September 25, 2006

**From:** Greg Weigel, OSC

**To:** Maggie Manderbach, Forest Service                      Bruce Schuld, Idaho DEQ  
Chris Field, EPA Region 10 (POLREP List) James Werntz, EPA Region 10 (POLREP  
List)  
Jim Curtis, Boise National Forest

**Subject:** On-Going Removal  
Monarch Stamp Mill  
Atlanta, ID  
Latitude: 43.80357  
Longitude: -115.13547

<b>POLREP No.:</b>	3	<b>Site #:</b>	10EA
<b>Reporting Period:</b>	9/19 - 27/2006	<b>D.O. #:</b>	
<b>Start Date:</b>	9/5/2006	<b>Response Authority:</b>	CERCLA
<b>Mob Date:</b>	9/5/2006	<b>Response Type:</b>	Time-Critical
<b>Completion Date:</b>		<b>NPL Status:</b>	Non NPL
<b>CERCLIS ID #:</b>	ID0001413723	<b>Incident Category:</b>	Removal Action
<b>RCRIS ID #:</b>		<b>Contract #</b>	

#### Site Description

See POLREPs #1 and #2.

#### Current Activities

ERRS contractor under OSC direction continues to haul clean cover material from the Green Valley Ranch borrow site. One excavator remains at the site and a haul truck runs between the borrow site and Monarch Mill site. Material is screened and separated on site. Approximately 40% is usable cover soil, 30% is oversized rock, and another 30% is cobble size rock. The cobble rock is being used as a sub-base to final soil cover on repository. Some of the oversized rock is being back-hauled to barrow site for use in reclaiming that area, the remaining will be scattered or piled on repository cover. As of 9/27/06, a total of 5,100 cubic yards of clean material had been hauled from barrow site.

ERRS continues to excavate tailings along the river, pulling back approximately 50 feet to the repository. The 50 foot wide area is excavated to clean native material, or to approximate river level, whichever is higher. The tailings are pulled back to the repository area where they are graded to an approximate 10:1 slope onto the repository.

ERRS contractor continues to cut and soak willow stakes to be used for river bank stabilization.

On Tuesday (9/19), OSC Andy Smith arrived on site to provide relief for OSC Weigel. Weigel left site on Wednesday, 9/20.

On Thursday (9/21), excavator was walked down the Middle Fork Road to a rock slope on Forest Service property. Angular rock was hauled back to the site and stockpiled to be used for installing a river vane. These rocks are preferred for the river vane construction to those of the Green Valley Ranch borrow site because they are angular and large.

On Friday (9/22), Pat Trainor and Tom Crawford of Forest Service were on site to advise on installation of in-stream river vane. A river vane is designed to deflect river flow so as to minimize scouring of a river bank, and avoid the need for hard armoring of the bank. Locations for three vanes were identified. One vane was constructed using an excavator with oversight assistance from Pat and Tom. The vane design calls for a 20 to 30 degree angle from the river bank against the river flow (i.e., pointing against the river flow). The design calls for a slight downward slope. The vane is 2 to 3 feet wide and just below the water surface. The river flow is low now but will rise as winter sets in submerging the vane.

On Saturday (9/23), we began construction of fabric enclosed soil (FES) river bank at northern, upstream end of excavated bank. FES pillows are constructed in step fashion, using two 1-foot lifts, with willow stakes laid horizontally perpendicular to the river beneath each lift. The top lift of FES is designed to be at an elevation no higher than bank full elevation. From there the design calls for secondary floodplain with a slight slope up to the toe of the repository, approximately 50 feet back from river bank.

On Monday (9/25) Steve Mitchell relieved Jason Coury as ERRS contractor Response Manager. START contractor personnel (2) returned to site to conduct additional characterization and cleanup confirmation using XRF, and collecting samples for laboratory confirmation.

On Tuesday (9/26) OSC Weigel returned to site and OSC Andy Smith demobilized. START worked with ERRS excavator to do surgical "dig and chase" excavation of tailings at south end of site.

On Wednesday (9/27) we completed cleanup of tailings deposition at the south (downstream) end, where tailings were deposited unevenly amongst some trees, and hauled contaminated material back to repository. Forest Service Mike Kellett and Herb Roerick were on site to look at and provide input on FES constructed river bank. Kellett and Roerick had a number of ideas to improve our construction technique, which will be incorporated for the remaining FES river bank reconstruction. Determined, in coordination with Forest Service, that we did not need to backfill excavated areas amongst trees at south end, where we had only excavated to a couple feet deep. START conducted characterization of soils on top of bench above mill site, along Middle Fork Road. Found elevated arsenic in soils in this area.

### **Planned Removal Actions**

On Thursday (9/28) we expect to complete excavation of tailings and contaminated material from river bank to approximately 50 feet back. Excavator will then be decontaminated for use in construction of additional river vanes. We will continue to haul cover material from Green Valley Ranch borrow site, and will be back hauling oversized rock to the borrow site for reclamation of the site, as space allows. START will demobilize on Thursday (9/28). Grading of the repository should be complete by Friday of this week. Final capping is dependent on development of screened cover material. Next week focus will be on FES river bank construction and construction of in-stream structures.

### **Next Steps**

We will coordinate with property owner to remove junk, equipment and debris from upper bench (along Middle Fork Road), so that we can cover contaminated soils in this area with clean material. OSC Weigel will request another \$50,000 be put onto the ERRS Task Order in order to be able to complete this work.

**Key Issues**

We currently project to be done with on site construction by October 10, 2006, so that the site will be clear for the Trout Unlimited-led site revegetation volunteer effort on October 12, 2006. Additional unexpected delays could impact this schedule.

[www.epaossc.org/MonarchMill](http://www.epaossc.org/MonarchMill)

**United States Environmental Protection Agency  
Region X  
POLLUTION REPORT**

**Date:** Thursday, October 26, 2006

**From:** Greg Weigel, OSC

**To:** Maggie Manderbach, Forest Service  
Chris Field, EPA Region 10 (POLREP List)  
Bruce Schuld, Idaho DEQ  
James Wertz, EPA Region 10 (POLREP List)  
Jim Curtis, Boise National Forest

**Subject:** Final POLREP  
Monarch Stamp Mill  
Atlanta, ID  
Latitude: 43.80357  
Longitude: -115.13547

<b>POLREP No.:</b>	4	<b>Site #:</b>	10EA
<b>Reporting Period:</b>		<b>D.O. #:</b>	
<b>Start Date:</b>	9/5/2006	<b>Response Authority:</b>	CERCLA
<b>Mob Date:</b>	9/5/2006	<b>Response Type:</b>	Time-Critical
<b>Completion Date:</b>	10/19/2006	<b>NPL Status:</b>	Non NPL
<b>CERCLIS ID #:</b>	ID0001413723	<b>Incident Category:</b>	Removal Action
<b>RCRIS ID #:</b>		<b>Contract #</b>	

#### Site Description

See POLREPS #1 and #2.

#### Current Activities

ERRS contractor completed work (except for hydroseed) and demobilized all personnel on 10/13/06. Hydroseeding of site and other disturbed areas, including barrow area, took place 10/18-19/06.

Total volume of mill tailings moved from river bank and other peripheral areas to on-site repository is approximately 7,000 cubic yards. Final tailings repository area is approximately 3.5 acres. Length of river bank cleaned up and stabilized is approximately 600 linear feet. Volume of clean fill material brought to site for tailings repository cover and river bank re-construction is approximately 8,000 cubic yards. Area treated for re-vegetation (hydroseeding - using native grass and forb species recommended by the USDA Forest Service) is approximately 7 acres.

On 10/12 and 10/13/06, Trout Unlimited volunteers, along with EPA and Forest Service personnel, planted approximately 1,500 willow stakes along the re-constructed river bank, in order to enhance river bank stability and riparian habitat.

#### Next Steps

START contractor will complete as-built site drawing and a brief removal action report.

[www.epaosc.org/MonarchMill](http://www.epaosc.org/MonarchMill)

**ATTACHMENT C**  
**TABLE OF SAMPLE RESULTS**

**Table 1**  
*XRF and Laboratory Data*  
 Monarch Stamp Mill Site  
 1/26/2007

<b>Sample #</b>	<b>XRF Arsenic (ppm)</b>	<b>Std. Dev.</b>	<b>XRF Mercury (ppm)</b>	<b>Std. Dev.</b>	<b>Depth</b>	<b>Time</b>	<b>Date</b>	<b>Lab As (mg/kg)</b>	<b>Lab Hg (mg/kg)</b>	<b>GPS N</b>	<b>GPS W</b>
SS00XRF001	855	12	<21		0	10:20	9/12/2006			43.48.238	115.08.134
SS04XRF002	1909	21	<26		4	10:55	9/12/2006			43.48.239	115.08.134
SS04XRF003	2298	24	<27		4	10:57	9/12/2006	2860	3.14	43.48.234	115.08.102
SS00XRF004	145	5	<19		0	11:00	9/12/2006			43.48.224	115.08.140
SS00XRF005	253	7	<20		0	11:10	9/12/2006			43.48.237	115.08.146
SS04XRF006	135	5	22	7	4	11:20	9/12/2006	156	0.163	43.48.235	115.08.161
SS04XRF007	1134	16	<25		4	11:34	9/12/2006			43.48.233	115.08.177
SS04XRF008	97	5	<18		4	11:37	9/12/2006			43.48.234	115.08.177
SS02XRF009	1711	20	<27		2	11:40	9/12/2006			43.48.240	115.08.180
SS03XRF010	284	8	30	8	3	12:55	9/12/2006			43.48.239	115.08.180
SS00XRF011	416	9	<20		0	13:05	9/12/2006			43.48.249	115.08.174
SS03XRF012	1214	16	30	8	3	13:10	9/12/2006	1300	0.821	43.48.248	115.08.174
SS03XRF013	389	9	<22		3	13:25	9/12/2006			43.48.244	115.08.179
SS03XRF014	1390	17	<23		3	13:39	9/12/2006			43.48.254	115.08.175
SS01XRF015	147	5	<19		1	14:24	9/12/2006			43.48.237	115.08.187
SS00XRF016	295	7	<18		0	14:20	9/12/2006			43.48.256	115.08.192
SS01XRF017	555	11	<21		1	14:25	9/12/2006	424	0.346	43.48.236	115.08.199
SS00XRF018	464	9	<21		0	14:32	9/12/2006			43.48.240	115.08.200
SS00XRF019	234	6	<19		0	14:38	9/12/2006			43.48.223	115.08.198
SS01XRF020	218	6	<18		1	14:40	9/12/2006			43.48.223	115.08.198
SS00XRF021	116	5	<17		0	14:45	9/12/2006			43.48.239	115.08.280
SS00XRF022	437	9	<21		0	14:58	9/12/2006			43.48.208	115.08.194
SS01XRF023	798	13	<25		1	15:03	9/12/2006	1090	0.488	43.48.208	115.08.194
SS00XRF024	168	5	<16		0	15:10	9/12/2006			43.48.215	115.08.211
SS01XRF025	197	6	<16		1	15:21	9/12/2006			43.48.215	115.08.211
SS00XRF026	170	6	<20		0	15:28	9/12/2006			43.48.229	115.08.188
SS01XRF027	160	6	19	6	1	15:37	9/12/2006			43.48.229	115.08.189
SS01XRF028	301	7	<19		1	15:54	9/12/2006			43.48.251	115.08.191

SS03XRF029	262	7	<20		3	15:59	9/12/2006			43.48.251	115.08.191
SS04XRF030	110	5	<18		4	16:02	9/12/2006			43.48.251	115.08.191
SS01XRF031	2087	23	<27		1	16:08	9/12/2006			43.48.249	115.08.202
SS03XRF032	765	12	<23		3	16:11	9/12/2006			43.48.249	115.08.202
SS00XRF033	323	8	24	7	0	16:18	9/12/2006	369	0.359	43.48.218	115.08.180
SS00XRF034	218	7	<20		1	16:24	9/12/2006			43.48.218	115.08.180
BG00XRF035	69	5	<19		0	17:30	9/12/2006	70.8	0.092	43.48.216	115.08.059
SS01XRF036	185	6	<17		0	8:14	9/13/2006			43.48.236	115.08.183
SS01XRF037	74	4	<16		1	8:17	9/13/2006			43.48.236	115.08.183
SS00XRF038	733	17	<21		0	8:19	9/13/2006			43.48.235	115.08.178
SS01XRF039	190	6	<16		1	8:22	9/13/2006			43.48.235	115.08.178
SS00XRF040	131	5	<15		0	8:29	9/13/2006			43.48.231	115.08.171
SS01XRF041	112	5	<15		1	8:33	9/13/2006			43.48.231	115.08.171
SS00XRF042	186	6	<17		0	8:35	9/13/2006			43.48.228	115.08.167
SS01XRF043	119	5	<16		1	8:38	9/13/2006			43.48.228	115.08.167
SS00XRF044	487	9	<20		0	8:44	9/13/2006			43.48.247	115.08.192
SS01XRF045	359	8	<18		1	8:47	9/13/2006			43.48.247	115.08.192
SS00XRF046	938	13	25	7	0	8:50	9/13/2006			43.48.252	115.08.179
SS01XRF047	1118	15	<22		1	8:53	9/13/2006			43.48.252	115.08.179
SS00XRF048	1968	21	<25		0	8:56	9/13/2006			43.48.246	115.08.187
SS01XRF049	333	8	<19		1	9:00	9/13/2006			43.48.246	115.08.187
SS00XRF050	432	8	<17		0	9:02	9/13/2006			43.48.240	115.08.186
SS01XRF051	288	7	<18		1	9:04	9/13/2006			43.48.240	115.08.186
SS00XRF052	641	11	<21		0	9:07	9/13/2006			43.48.244	115.08.192
SS01XRF053	866	13	<23		1	9:09	9/13/2006			43.48.244	115.08.192
SS00XRF054	730	11	<19		0	9:12	9/13/2006			43.48.243	115.08.197
SS01XRF055	519	5	<20		1	9:16	9/13/2006			43.48.243	115.08.197
SS00XRF056	198	6	<16		0	9:17	9/13/2006			43.48.242	115.08.202
SS01XRF057	239	7	<18		1	9:20	9/13/2006			43.48.242	115.08.202
SS00XRF058	961	11	<15		0	9:23	9/13/2006			43.48.249	115.08.209
SS01XRF059	4230	43	<34		1	9:25	9/13/2006			43.48.249	115.08.209
SS00XRF060	258	7	<19		0	9:30	9/13/2006			43.48.240	115.08.206
SS01XRF061	182	6	<20		1	9:32	9/13/2006			43.48.240	115.08.206
SS00XRF062	128	5	<16		0	9:35	9/13/2006			43.48.238	115.08.214
SS01XRF063	120	5	<19		1	9:37	9/13/2006			43.48.238	115.08.214
SS00XRF064	136	5	<17		0	11:34	9/13/2006			43.48.272	115.08.062
SS01XRF065	106	5	<17		1	11:39	9/13/2006			43.48.272	115.08.062

SS00XRF066	263	7	<17		0	11:41	9/13/2006			43.48.276	115.08.058
SS01XRF067	134	5	<18		1	11:45	9/13/2006			43.48.276	115.08.058
SS00XRF068	298	7	<17		0	11:48	9/13/2006			43.48.265	115.08.064
SS01XRF069	300	7	<18		1	11:50	9/13/2006			43.48.265	115.08.064
SS00XRF070	130	5	<17		0	12:44	9/13/2006			43.48.283	115.08.066
SS01XRF071	181	6	<17		1	12:50	9/13/2006			43.48.283	115.08.066
SS00XRF072	1184	16	27	8	0	12:54	9/13/2006			43.48.275	115.08.067
SS01XRF073	145	6	<20		1	12:57	9/13/2006			43.48.275	115.08.067
SS00XRF074	1187	16	75	10	0	13:01	9/13/2006			43.48.276	115.08.065
SS01XRF075	458	9	59	8	1	13:05	9/13/2006			43.48.276	115.08.065
SS01XRF076	182	7	<18		1	13:07	9/13/2006			43.48.273	115.08.067
SS00XRF077	1412	20	115	11	0	13:09	9/13/2006	981	3.47	43.48.273	115.08.067
SS02XRF078	143	6	<16		2	13:11	9/13/2006			43.48.273	115.08.067
SS04XRF079	81	4	<14		4	13:14	9/13/2006			43.48.273	115.08.067
SS00XRF080	1491	18	<26		0	13:17	9/13/2006			43.48.275	115.08.074
SS01XRF081	1801	21	<26		1	13:19	9/13/2006			43.48.275	115.08.074
SS00XRF082	1957	22	<26		0	13:21	9/13/2006			43.48.280	115.08.074
SS01XRF083	573	11	89	10	1	13:25	9/13/2006			43.48.280	115.08.074
SS00XRF084	854	18	<28		0	13:30	9/13/2006			43.48.279	115.08.083
SS01XRF085	315	8	<21		1	13:33	9/13/2006			43.48.279	115.08.083
SS00XRF086	919	16	<22		0	13:39	9/13/2006			43.48.288	115.08.087
SS01XRF087	1392	17	<25		1	13:43	9/13/2006			43.48.288	115.08.087
SS00XRF088	315	8	<18		0	13:46	9/13/2006			43.48.297	115.08.077
SS01XRF089	173	6	<18		1	13:49	9/13/2006			43.48.297	115.08.077
SS00XRF090	227	6	<16		0	13:52	9/13/2006			43.48.297	115.08.083
SS01XRF091	169	6	<18		1	13:57	9/13/2006			43.48.297	115.08.083
SS00XRF092	469	9	<18		0	14:00	9/13/2006			43.48.301	115.08.088
SS01XRF093	2738	29	<28		1	14:05	9/13/2006			43.48.301	115.08.088
SS00XRF094	1253	16	<23		0	14:07	9/13/2006			43.48.303	115.08.084
SS01XRF095	1953	23	310	15	1	14:16	9/13/2006			43.48.303	115.08.084
SS00XRF096	146	7	<25		0	14:19	9/13/2006			43.48.308	115.08.082
SS01XRF097	332	8	30	8	1	14:21	9/13/2006			43.48.308	115.08.082
SS00XRF098	491	9	38	7	0	14:36	9/13/2006			43.48.321	115.08.101
SS01XRF099	351	8	172	10	1	14:41	9/13/2006			43.48.321	115.08.101
SS00XRF100	1139	16	<22		0	14:44	9/13/2006			43.48.304	115.08.096
SS01XRF101	421	9	78	9	1	14:47	9/13/2006			43.48.304	115.08.096
SS00XRF102	106	5	29	7	0	15:03	9/13/2006			43.48.292	115.08.065

SS01XRF103	126	6	53	8	1	15:06	9/13/2006			43.48.292	115.08.065
SS00XRF104	113	5	32	7	0	15:09	9/13/2006			43.48.285	115.08.062
SS01XRF105	76	5	27	7	1	15:11	9/13/2006			43.48.285	115.08.062
SS00XRF106	7923	79	1447	35	0	15:16	9/13/2006			43.48.302	115.08.059
SS00XRF107	5531	56	336	19	0	15:21	9/13/2006			43.48.303	115.08.068
SS00XRF108	2628	29	652	21	0	15:24	9/13/2006			43.48.300	115.08.058
SS00XRF109	842	15	221	13	0	15:27	9/13/2006			43.48.304	115.08.053
SS00XRF110	319	8	44	8	0	15:29	9/13/2006			43.48.309	115.08.050
SS00XRF111	670	11	150	10	0	15:34	9/13/2006			43.48.299	115.08.097
SS01XRF112	1799	22	1645	32	1	15:38	9/13/2006			43.48.299	115.08.097
SS00XRF113	1430	17	26	8	0	15:41	9/13/2006			43.48.301	115.08.106
SS01XRF114	309	7	32	6	1	15:44	9/13/2006			43.48.301	115.08.106
SS00XRF115	908	12	<19		0	15:47	9/13/2006			43.48.295	115.08.116
SS01XRF116	3820	38	41	11	1	15:49	9/13/2006			43.48.295	115.08.116
SS00XRF117	197	6	<16		0	15:54	9/13/2006			43.48.301	115.08.117
SS01XRF118	465	8	<16		1	15:56	9/13/2006			43.48.301	115.08.117
SS00XRF119	4368	42			0	11:04	9/14/2006			no GPS	
SS00XRF120	4317	41			0	11:06	9/14/2006			no GPS	
SS00XRF121	808	12			0	11:08	9/14/2006			no GPS	
SS00XRF122	86	5	<14		0	11:10	9/14/2006			no GPS	
SS00XRF123	87	6	<15		0	11:28	9/14/2006			no GPS	
SS00XRF124	44	4	<15		0	11:30	9/14/2006			no GPS	
SS00XRF125	16	3	<15		0	11:32	9/14/2006			no GPS	
SS00XRF126	110	5	<14		0	11:36	9/14/2006			no GPS	
SS00XRF127	67	4	<17		0	11:38	9/14/2006			no GPS	
SS00XRF128	60	4	<16		0	11:40	9/14/2006			no GPS	
SS00XRF129	212	6	<17		0	11:42	9/14/2006			no GPS	
SS00XRF130	1314	18	<21		0	11:44	9/14/2006			no GPS	
SS00XRF131	1314	18	<21		0	11:46	9/14/2006			no GPS	
SS06XRF132	830	11	46	7	6	12:45	9/14/2006	1220	0.825	43.48.287	115.08.127
SS06XRF133	3118	27	<26		6	12:48	9/14/2006			43.48.287	115.08.119
SS06XRF134	560	9	<17		6	12:52	9/14/2006	459	0.421	43.48.287	115.08.121
SS00XRF135	480	10	<19		0	16:23	9/14/2006			43.48.219	115.08.138
SS00XRF136	358	8	<15		0	16:25	9/14/2006			43.48.219	115.08.134
SS00XRF137	27	7	<17		0	16:27	9/14/2006			43.48.216	115.08.139
SS00XRF138	312	8	<18		0	16:29	9/14/2006			43.48.211	115.08.139
SS00XRF139	170	6	<19		0	16:30	9/14/2006			43.48.210	115.08.135

SS00XRF140	194	6	<14		0	16:32	9/14/2006			43.48.212	115.08.127
SS00XRF141	319	8	<19		0	16:34	9/14/2006			43.48.205	115.08.137
SS00XRF142	238	7	<19		0	16:35	9/14/2006			43.48.215	115.08.142
SS00XRF143	300	7	<18		0	16:38	9/14/2006			43.48.225	115.08.139
SS00XRF144	218	6	<15		0	16:39	9/14/2006			43.48.224	115.08.241
SS00XRF145	477	9	22	7	0	16:41	9/14/2006			43.48.226	115.08.136
SS00XRF146	83	4	<14		0	16:43	9/14/2006			43.48.223	115.08.134
SS00XRF147	184	7	<18		0	16:45	9/14/2006			43.48.225	115.08.135
SS00XRF148	238	6	<15		0	16:49	9/14/2006	264	0.514	43.48.223	115.08.138
SS01XRF149	1910	24	<26		1	7:41	9/14/2006			43.48.292	115.08.078
SS01XRF150	998	15	377	15	1	7:43	9/14/2006			43.48.294	115.08.081
SS02XRF151	161	6	<16		2	7:48	9/14/2006			43.48.296	115.08.076
SS02XRF152	3115	37	1457	34	2	7:54	9/14/2006			43.48.303	115.08.083
SS01XRF153	1896	33	868	34	1	7:55	9/14/2006			43.48.303	115.08.083
SS00XRF154	178	6	<20		0	9:13	9/14/2006			43.48.219	115.08.139
SS01XRF155	109	6	<18		1	9:14	9/14/2006			43.48.219	115.08.139
SS04XRF156	141	6	<15		4	9:16	9/14/2006			43.48.219	115.08.139
SS00XRF157	210	7	<19		0	9:18	9/14/2006			43.48.224	115.08.138
SS01XRF158	142	5	<17		1	9:20	9/14/2006			43.48.224	115.08.138
SS03XRF159	108	5	<15		3	9:21	9/14/2006			43.48.224	115.08.138
SS04XRF160	226	8	<16		4	9:24	9/14/2006			43.48.224	115.08.138
SS04XRF161	1812	21	<25		4	14:00	9/25/2006			43.804461	-115.135950
SS06XRF162	34	37	<33		6	14:05	9/25/2006			no GPS	
SS02XRF163	112	5	<19		2	14:08	9/25/2006			no GPS	
SS04XRF164	128	5	83	8	4	14:10	9/25/2006			no GPS	
SS00XRF165	1491	19	283	14	0	14:45	9/25/2006			43.805062	-115.134318
SS00XRF166	317	10	<24		0	14:48	9/25/2006			43.804833	-115.134408
SS04XRF167	233	7	<18		4	14:56	9/25/2006			43.804575	-115.136037
SS04XRF168	122	5	<18		4	14:58	9/25/2006			43.804561	-115.136006
SS04XRF169	673	11	<20		4	15:01	9/25/2006			43.804558	-115.135996
SS02XRF170	454	9	25	7	2	15:03	9/25/2006			43.804557	-115.135990
SS01XRF171	370	8	<20		1	15:05	9/25/2006			43.804543	-115.136015
SS04XRF172	742	12	26	7	4	15:06	9/25/2006			43.804538	-115.135952
SS02XRF173	665	13	41	9	2	15:08	9/25/2006			no GPS	
SS02XRF174	1664	21	46	9	2	15:10	9/25/2006			43.804522	-115.135909
SS03XRF175	47	4	<14		3	15:11	9/25/2006			43.804516	-115.135893
SS01XRF176	218	13	<20		1	15:13	9/25/2006			43.804514	-115.135888

SS01XRF177	319	7	<18		1	15:15	9/25/2006			43.804476	-115.136128
SS02XRF178	266	8	<20		2	15:16	9/25/2006			no GPS	
SS02XRF179	193	7	<18		2	15:21	9/25/2006			43.804442	-115.136092
SS02XRF180	54	4	<16		2	15:22	9/25/2006			43.804432	-115.136077
SS02XRF181	91	4	27	5	2	15:24	9/25/2006			43.804429	-115.136069
SS00XRF182	154	5	54	7	0	15:29	9/25/2006			43.804999	-115.134669
SS00XRF183	484	11	129	11	0	15:35	9/25/2006			43.805090	-115.134692
SS00XRF184	371	9	<21		0	15:39	9/25/2006	215	5.11	43.805124	-115.134773
SS02XRF185	143	5	23	6	2	15:45	9/25/2006			43.804999	-115.135056
SS02XRF186	153	5	<17		2	15:48	9/25/2006	217	7.62	43.804962	-115.135165
SS02XRF187	603	10	<20		2	15:50	9/25/2006			43.804888	-115.135328
SS02XRF188	104	5	<16		2	15:52	9/25/2006			43.804842	-115.135454
SS02XRF189	305	8	24	7	2	15:56	9/25/2006			43.804792	-115.135587
SS02XRF190	38	3	28	6	2	16:00	9/25/2006			43.804695	-115.135736
SS02XRF191	302	8	<16		2	16:03	9/25/2006			43.804632	-115.135847
SS02XRF192	316	8	21	7	2	16:06	9/25/2006	3010	408	43.804569	-115.135913
SS00XRF193	73	57	668	21	0	16:20	9/25/2006	2250	138	no GPS	
SS00XRF194	1957	23	227	13	0	16:22	9/25/2006	823	117	no GPS	
SS00XRF195	783	12	188	11	0	16:25	9/25/2006			no GPS	
SS00XRF196	579	10	<18		0	8:20	9/26/2006	628	6.67	43.804551	-115.135969
SS00XRF197	416	9	<20		0	8:24	9/26/2006			no GPS	
SS00XRF198	453	9	<18		0	8:25	9/26/2006			no GPS	
SS00XRF199	1059	14	<19		0	8:29	9/26/2006			no GPS	
SS00XRF200	489	9	<17		0	8:35	9/26/2006			43.804549	-115.135856
SS00XRF201	593	10	<17		0	8:42	9/26/2006			no GPS	
SS00XRF202	209	6	116	9	0	8:55	9/26/2006	217	41.4	43.804644	-115.135693
SS00XRF203	895	14	<23		0	9:01	9/26/2006	289	5.69	43.804674	-115.135630
SS00XRF204	385	8	<16		0	9:05	9/26/2006			no GPS	
SS00XRF205	454	8	<16		0	9:06	9/26/2006			no GPS	
SS00XRF206	117	4	<14		0	9:10	9/26/2006			43.804702	-115.135565
SS00XRF207	2338	25	84	11	0	9:11	9/26/2006			no GPS	
SS00XRF208	717	11	45	8	0	9:11	9/26/2006			no GPS	
SS00XRF209	1465	18	<22		0	9:12	9/26/2006			no GPS	
SS00XRF210	1134	15	<18		0	9:13	9/26/2006			no GPS	
SS00XRF211	1766	22	<24		0	9:16	9/26/2006			no GPS	
SS00XRF212	1144	18	<19		0	9:18	9/26/2006			no GPS	
SS00XRF213	681	11	<17		0	9:22	9/26/2006			no GPS	

SS00XRF214	774	11	<17		0	9:22	9/26/2006			no GPS	
SS00XRF215	1202	15	<22		0	9:25	9/26/2006			no GPS	
SS00XRF216	689	11	<19		0	9:28	9/26/2006			no GPS	
SS00XRF217	1466	17	<21		0	9:29	9/26/2006			no GPS	
SS00XRF218	396	9	<16		0	9:34	9/26/2006			no GPS	
SS00XRF219	750	12	<25		0	9:35	9/26/2006			no GPS	
SS00XRF220	369	7	<16		0	10:46	9/26/2006	348	0.688	no GPS	
SS00XRF221	232	6	<14		0	10:48	9/26/2006			no GPS	
SS02XRF222	237	7	<15		2	10:55	9/26/2006			no GPS	
SS00XRF223	1748	22	<27		0	7:47	9/27/2006			43.804053	-115.134048
SS00XRF224	3200	32	<29		0	7:49	9/27/2006	3580	3.62	43.804054	-115.134177
SS00XRF225	1965	23	32	10	0	7:55	9/27/2006			43.803862	-115.134165
SS00XRF226	279	8	<18		0	7:57	9/27/2006	330	1.41	43.803741	-115.134372
SS00XRF227	1567	19	<23		0	8:02	9/27/2006			43.803748	-115.134006
SS00XRF228	5267	53	<36		0	8:04	9/27/2006	3780	0.96	43.803699	-115.134157
SS00XRF229	692	11	<20		0	8:08	9/27/2006			43.803633	-115.134195
SS00XRF230	86	4	<17		0	8:10	9/27/2006	86.8	0.04	43.803674	-115.134080
SS00XRF231	1939	22	<25		0	8:13	9/27/2006			43.803915	-115.134002
SS00XRF232	1631	23	<27		0	12:33	9/27/2006	2130	2.8	43.803965	-115.133953
SS00XRF233	591	12	<20		0	12:36	9/27/2006	356	0.568	43.803847	-115.133861
SS00XRF234	681	11	<18		0	12:38	9/27/2006			43.803834	-115.133727
SS00XRF235	108	5	<17		0	12:41	9/27/2006			43.803641	-115.134359
SS00XRF236	6547	59	<39		0	12:43	9/27/2006			43.803641	-115.134471
SS00XRF237	321	10	<20		0	12:45	9/27/2006	603	3.24	43.803664	-115.134572
SS00XRF238	193	6	<18		0	12:47	9/27/2006			43.803575	-115.134697
SS00XRF239	282	7		50	7	0	12:51	9/27/2006		43.803408	-115.134800
SS00XRF240	1430	18	<26		0	12:53	9/27/2006			43.804016	-115.133945
SS00XRF241	106	5	<15		0	12:56	9/27/2006			43.804256	-115.133831
SS00XRF242	316	8		49	8	0	12:58	9/27/2006		43.804334	-115.133962
SS00XRF243	299	7	<16		0	13:01	9/27/2006			43.804342	-115.134064
SS00XRF244	36	40	<34		0	13:02	9/27/2006			43.804373	-115.134137
SS00XRF245	204	6	<15		0	13:05	9/27/2006			43.804348	-115.134098
SS00XRF246	995	14	<22		0	13:07	9/27/2006			43.804463	-115.134178
SS00XRF247	259	6	<13		0	13:09	9/27/2006			43.804509	-115.134199
SS00XRF248	1465	18	<24		0	13:11	9/27/2006			43.804510	-115.134255
SS00XRF249	344	8	<18		0	13:13	9/27/2006			43.804486	-115.134328
SS00XRF250	1270	16	<22		0	13:15	9/27/2006	3030	6.55	43.804495	-115.134376

SS00XRF251	276	7	62	8	0	13:17	9/27/2006			43.804477	-115.134414
SS00XRF252	165	6	<19		0	13:20	9/27/2006			43.804424	-115.134378
SS00XRF253	380	8	<17		0	13:22	9/27/2006			43.804436	-115.134355
SS00XRF254	270	8	<18		0	13:23	9/27/2006	221	3.51	43.804463	-115.134304
SS00XRF255	1076	15	<24		0	13:25	9/27/2006			43.804520	-115.134316
SS00XRF256	857	18	29	9	0	13:27	9/27/2006			43.804455	-115.134241
SS00XRF257	2030	24	<27		0	13:31	9/27/2006			43.804318	-115.134154
SS00XRF258	223	14	<20		0	14:27	9/27/2006			no GPS	
SS00XRF259	789	20	81	12	0	14:29	9/27/2006			no GPS	
SS00XRF260	167	8	<21		0	14:33	9/27/2006			43.803824	-115.133594
SS00XRF261	1116	6	<18		0	14:35	9/27/2006			43.803842	-115.133516
SS00XRF262	313	8	<18		0	14:37	9/27/2006			43.803852	-115.133433
SS00XRF263	309	8	<16		0	14:38	9/27/2006			43.803898	-115.133606
SS00XRF264	554	11	<20		0	14:40	9/27/2006			43.803976	-115.133545
SS00XRF265	3780	37	<31		0	15:27	10/9/2006			no GPS	
SS00XRF266	1828	21	<24		0	15:30	10/9/2006			no GPS	
SS00XRF267	2182	24	<26		0	15:32	10/9/2006			no GPS	
SS00XRF268	2931	44	<37		0	15:34	10/9/2006			no GPS	
SS00XRF269	587	11	<21		0	15:36	10/9/2006			no GPS	
SS00XRF270	1251	16	<22		0	15:38	10/9/2006			no GPS	
SS00XRF271	280	7	<17		0	15:39	10/9/2006			no GPS	
SS00XRF272	2211	25	<27		0	15:41	10/9/2006			no GPS	
SS00XRF273	139	5	<15		0	15:43	10/9/2006			no GPS	
SS00XRF274	88	4	<17		0	15:45	10/9/2006			no GPS	
SS00XRF275	73	4	<17		0	15:47	10/9/2006			no GPS	
SS00XRF276	95	4	<16		0	15:49	10/9/2006			no GPS	
SS00XRF277	282	7	<15		0	15:51	10/9/2006			no GPS	
SS00XRF278	508	9	<19		0	15:54	10/9/2006			no GPS	

Key:  
SS Soil Sample  
XRF X-Ray Flourcent  
Std. Dev. Standard Deviation