

***ABBREVIATED PRELIMINARY ASSESMENT***

***STANDARD MINE***



Wallowa-Whitman National Forest  
Grant County, OR

August 2006

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## EXECUTIVE SUMMARY

The United States Department of Agriculture, Forest Service (Forest Service) performed an Abbreviated Preliminary Assessment for the Standard Mine (Site) to determine the need for further site characterization. The Site is located approximately 6.5 aerial miles north of Granite, Oregon off County Road 73, then by Forest Service Road 7340-130, which has a gate at the beginning of 130 and locked with a couple of private and Forest Service padlocks. The Site is situated on moderate side slopes at an elevation of 6100 feet above mean sea level.

The Site consists of a large collapsed adit with minor seepage, approximately 2000cy of wasterock (difficult to estimate because of the amount of disturbed area and the scattering of material), and a collapsed adit with approximately 500cy of wasterock. A road was cut through this wasterock pile for trenching to locate the vein and to serve as an upper access road to the mine. There is a small creek flowing approximately 10 gpm located adjacent to one of the wasterock piles.

A Niton XLt, 700 S series unit was used for In Situ screening of wasterock and tailings material. Water and sediment samples were not collected as part of this investigation.

All metals detected at the site exceeded screening criteria for bird, invertebrate, or plants. Of these, only arsenic (198.3 to 322 mg/kg) exceeded EPA Region IX Preliminary Remediation Goals for industrial screening levels of 1.6 mg/kg. In general, based upon human health and ecological risk assessments conducted at other mine sites throughout Oregon, arsenic would be considered a high risk for this Site. For example, risk assessments at other mine sites have shown arsenic levels generally less than 85 mg/kg do not pose serious risk to human health and the environment and anything above this level would require a removal action.

This site has been given a Medium Priority for further assessment work rather than a High Priority for the following reasons:

1. The Site did have high arsenic concentrations;
2. Mine seepage exists, although the seepage does not appear to reach any surface water sources nor does it appear to be visually impacted;
3. The proximity of wasterock material to a small creek, which runs through a very large meadow area;
  - a. The creek does not show up on any topographic maps.
  - b. The creek appears it would freeze over during winter months, thus the possibility of supporting any type of fishery is remote, at best.
  - c. The vegetation in the meadow appeared healthy and it was noted the creek ran underground in sections;
4. The site is a couple of miles via road 130 behind a locked gate, thus the general public would not have access to the Site.

## **1.0 INTRODUCTION**

An Abbreviated Preliminary Assessment (APA) was performed by the United States Department of Agriculture, Forest Service (Forest Service) in accordance with:

- EPA “Guidance for Performing Preliminary Assessments Under CERCLA”,
- EPA “Improving Site Assessment: Abbreviated Preliminary Assessments” of 1999,
- Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) of 1980,
- Superfund Amendments and Reauthorization Act (SARA) of 1986,
- National Contingency Plan as outlined in 40 CFR Parts 300.410I(1)(i-v).

The purpose:

- Determine whether or not there is a potential for a release of contaminants to the environment and/or to human health.
- Document whether further site characterization is warranted.

A Niton XLt 700 Series was utilized to help in the preliminary screening of this Site.

## **2.0 SITE DESCRIPTION, OPERATIONAL HISTORY, AND WASTE CHARACTERISTICS**

The Standard Mine (Site) is located:

- Approximately 6.5 aerial miles north of Granite, OR.
- Located at an elevation of 6100 feet above mean sea level (MSL).
- Via County Road 73, then by Forest Service Road 7340-130, which has a gate at the beginning of 130 and locked with a couple of private and Forest Service padlocks.
- On National Forest System lands administered and managed by the Wallowa-Whitman National Forest.

Location:

- Lat./Long: Adit 1 44° 52' 57"N/118° 22' 18.2"W
- Elevation: 6100 feet above MSL
  
- Lat/Long: Shaft 44° 52' 57.6"N/118° 22' 16.2"W
- Elevation: 6120 feet above MSL
  
- Legal: Willamette Meridian, T8S, R35.5E, S12
- USGS quadrangle: Crawfish Lake. Plate 1, Appendix C
- Mining District: Granite

The Site consists of:

- Adit
  - Water seepage from the collapsed adit.
    - Visually, does not appear impacted nor does it reach any surface water sources.
  - Large meadow with small creek downhill from the adit.
    - Approximately 10gpm flow rate.
    - Creek was observed going underground in sections and then reappearing on the surface further downgradient.
    - The Creek could not be located on any topographic maps.

- The Creek is too small and shallow to support any type of fishery. Also, it would freeze over during winter months.
    - No signs of distressed vegetation in the meadow.
  - Approximately 2000cy of wasterock, although difficult to estimate because of the wasterock scattered over the large disturbed area.
- Shaft
  - Approximately 500cy of material left.
    - A road was cut through this area in order to excavate a deep trench to locate the vein and to serve as an upper access road to the mine.

Historical Information

- Unknown.

Currently, the mine is inactive.

**3.0 SITE SAMPLING AND TEST RESULTS**

A Niton XLt, 700 Series was used to assess the material from the wasterock dump for potential contamination.

- In Situ testing was performed per EPA Method 6200.
- Surface soils were removed to approximately 4 to 6 inches below grade in order to get below highly oxidized surface layers and to create a flat surface to place the Niton.
- Rocks, debris and other deleterious materials were removed.

Refer to Appendix A for a listing of elements that were detected as well as those that exceeded any regulatory requirements.

**4.0 REMOVAL ACTION JUSTIFICATION**

The NCP states that an appropriate removal action may be conducted at a site when a threat to human health or welfare or the environment is identified.

- The removal action is undertaken to abate, prevent, minimize, stabilize, mitigate, or eliminate the release or the threat of a release at a site.
- Section 300.415(b)(2)(i-viii) of the NCP outlines eight factors to be considered when determining the appropriateness of a removal action.
- The applicable factors are outlined below and provide justification for completing the removal action, if required.

<b>Factor</b>	<b>Site Condition</b>	<b>Justification</b>
1) Actual or potential exposure to nearby human populations, animals, or the food chain from hazardous substances or pollutants or contaminants	Arsenic, see Appendix A	Yes
2) Actual or potential contamination of drinking water supplies or sensitive ecosystems	Small creek within a large meadow area	Yes
3) Hazardous substances or pollutants or contaminants in drums, barrels, tanks, or other bulk storage containers, that may pose a threat of release.	None located at the site.	No

4) High levels of hazardous substances or pollutants or contaminants in soils largely at or near the surface that may migrate	Arsenic	Yes
5) Weather conditions that may cause hazardous substances or pollutants or contaminants to migrate or be released	Heavy rain or rain on snow events and bank scour by the small creek	Yes
6) Threat of fire or other explosion	None	No
7) The availability of other appropriate federal or state response mechanisms to respond to the release	N/A	No
8) Other situations or factors that may pose threats to public health or welfare of the United States or the environment	None	No

## **5.0 SUMMARY**

All metals detected at the site exceeded screening criteria for bird, invertebrate, or plants. Of these, only arsenic (198.3 to 322 mg/kg) exceeded EPA Region IX Preliminary Remediation Goals for industrial screening levels of 1.6 mg/kg.

- Based upon human health and ecological risk assessments conducted at other mine sites throughout Oregon, arsenic would be considered a high risk for this Site.
  - For example, risk assessments at other mine sites have shown arsenic levels generally less than 85 mg/kg do not pose serious risk to human health and the environment and anything above this level would require a removal action.

## **6.0 RECOMMENDATION**

This site has been given a Medium Priority for further assessment work rather than a High Priority for the following reasons:

1. The Site did have high arsenic concentrations;
2. Mine seepage exists, although the seepage does not appear to reach any surface water sources nor does it appear to be visually impacted;
3. The proximity of wasterock material to a small creek, which runs through a very large meadow area;
  - a. The creek does not show up on any topographic maps.
  - b. The creek appears it would freeze over during winter months, thus the possibility of supporting any type of fishery is remote, at best.
  - c. The vegetation in the meadow appeared healthy and it was noted the creek ran underground in sections;
4. The site is a couple of miles via road 130 behind a locked gate, thus the general public would not have access to the Site.

Appendix D contains additional photos of the Site.

## **7.0 DISCLAIMER**

This abandoned mine/mill site was created under the General Mining Law of 1872 and is located solely on National Forest System (NFS) lands administered by the Forest Service. The United States has taken the position and courts have held that the United States is not liable as an “owner” under CERCLA Section 107 for mine contamination left behind on NFS lands by miners operating under the 1872 Mining Law. Therefore, Forest Service believes that this site should not be considered a “federal facility” within the meaning of CERCLA Section 120 and should not be listed on the Federal Agency Hazardous Waste Compliance Docket. Instead, this site should be included on EPA’s CERCLIS database. Consistent with the June 24, 2003 OECA/FFEO “Policy on Listing Mixed Ownership Mine or Mill Sites Created as a Result of the General Mining Law of 1872 on the Federal Agency Hazardous Waste Compliance Docket,” we respectfully request that the EPA Regional Docket Coordinator consult with the Forest Service and EPA Headquarters before making a determination to include this site on the Federal Agency Hazardous Waste Compliance Docket.

## **REFERENCES**

Brooks, Howard C., 1968; *Gold and Silver in Oregon*; Oregon Department of Geology and Mineral Industries; Bulletin 61.

<http://www.topozone.com>

## **Appendix A**

### **NITON ANALYTICAL RESULTS**



SAMPLE LOCATION	TEST RESULTS		STATE GUIDELINES		EPA	
	Element	mg/kg	Receptor	mg/kg	Standard	mg/kg
Sample #1 Wasterock by small creek	Arsenic	198.3	Plants	<b>8.0</b>	Industrial	<b>1.6</b>
	Chromium	129.1	Invertebrates	<b>0.4</b>	Industrial	450
	Copper	50.4	Invertebrates	<b>50.0</b>	Industrial	41,000
	Iron	25349	Plants	<b>10.0</b>	Industrial	100,000
	Lead	21.48	Birds	<b>16.0</b>	Industrial	750
	Manganese	561	Invertebrates	<b>100.0</b>	Industrial	19,000
	Mercury	1.49	Invertebrates	<b>0.1</b>	Industrial	310
	Nickel	71.1	Plants	<b>30.0</b>	Industrial	20,000
	Zinc	85	Plants	<b>50.0</b>	Industrial	100,000
Sample #2 Wasterock by small creek	Arsenic	236	Plants	<b>8.0</b>	Industrial	<b>1.6</b>
	Chromium	107.5	Invertebrates	<b>0.4</b>	Industrial	450
	Copper	58.6	Invertebrates	<b>50.0</b>	Industrial	41,000
	Iron	28922	Plants	<b>10.0</b>	Industrial	100,000
	Lead	21.2	Birds	<b>16.0</b>	Industrial	750
	Manganese	925	Invertebrates	<b>100.0</b>	Industrial	19,000
	Mercury	1.19	Invertebrates	<b>0.1</b>	Industrial	310
	Nickel	89.8	Plants	<b>30.0</b>	Industrial	20,000
	Zinc	104.3	Plants	<b>50.0</b>	Industrial	100,000
Sample #3 Wasterock by shaft	Arsenic	322	Plants	<b>8.0</b>	Industrial	<b>1.6</b>
	Copper	57.3	Invertebrates	<b>50.0</b>	Industrial	41,000
	Iron	31,299	Plants	<b>10.0</b>	Industrial	100,000
	Lead	17.4	Birds	<b>16.0</b>	Industrial	750
	Manganese	486	Invertebrates	<b>100.0</b>	Industrial	19,000
	Mercury	4.79	Invertebrates	<b>0.1</b>	Industrial	310
	Nickel	51.9	Plants	<b>30.0</b>	Industrial	20,000
	Zinc	125.7	Plants	<b>50.0</b>	Industrial	100,000

**Appendix B**

**ABBREVIATED PRELIMINARY ASSESSMENT  
CHECKLIST**

## ABBREVIATED PRELIMINARY ASSESSMENT CHECKLIST

This checklist can be used to help the site investigator determine if an Abbreviated Preliminary Assessment (APA) is warranted. This checklist should document the rationale for the decision on whether further steps in the site assessment process are required under CERCLA. Use additional sheets, if necessary.

**Checklist Preparer:**

<u>Dennis Boles, Environmental Engineer</u> (Name/Title)	<u>August 22, 2006</u> (Date)
<u>Ochoco NF, 3160 NE 3<sup>rd</sup> St, Prineville, OR 97754</u> (Address)	<u>541.923.0393</u> (Phone)
<u>djboles@fs.fed.us</u> (E-Mail Address)	

**Site Name:** Standard Mine

**Previous Names:** N/A

**Site Location:** The Site is located approximately 6.5 aerial miles north of Granite, OR.

**Legal Description:** Willamette Meridian, T8S, R35.5W, S12

**Describe the release (or potential release) and its probable nature:** Arsenic would be a concern as the wasterock is situated adjacent to a small creek.

**Part 1 - Superfund Eligibility Evaluation**

If All answers are “no” go on to Part 2, otherwise proceed to Part 3	YES	NO
1. Is the site currently in CERCLIS or an “alias” of another site?		<b>X</b>
2. Is the site being addressed by some other remedial program (Federal, State, or Tribal)?		<b>X</b>
3. Are the hazardous substances potentially released at the site regulated under a statutory exclusion (i.e., petroleum, natural gas, natural gas liquids, synthetic gas usable for fuel, normal application of fertilizer, release located in a workplace, naturally occurring, or regulated by the NRC, UMTRCA, or OSHA)?		<b>X</b>
4. Are the hazardous substances potentially released at the site excluded by policy considerations (i.e., deferred to RCRA corrective action)?		<b>X</b>
5. Is there sufficient documentation to demonstrate that no potential for a release that could cause adverse environmental or human health impacts exist (i.e., comprehensive remedial investigation equivalent data showing no release above ARARs, completed removal action, documentation showing that no hazardous substance release have occurred, or an EPA approved risk assessment completed)?		<b>X</b>

**Please explain all “yes” answer(s).** \_\_\_\_\_

**Part 2 - Initial Site Evaluation**

For Part 2, if information is not available to make a “yes” or “no” response, further investigation may be needed. In these cases, determine whether an APA is appropriate. Exhibit 1 parallels the questions in Part 2. Use Exhibit 1 to make decisions in Part 3.

<b>If the answer is “no” to any questions 1, 2, or 3, proceed directly to Part 3.</b>	<b>YES</b>	<b>NO</b>
1. Does the site have a release or a potential to release?	X	
2. Does the site have uncontained sources containing CERCLA eligible substances?	X	
3. Does the site have documented on-site, adjacent, or nearby targets?		X

<b>If the answers to questions 1, 2, and 3 above were all “yes” then answer the questions below before proceeding to Part 3.</b>	<b>YES</b>	<b>NO</b>
4. Does documentation indicate that a target (i.e., drinking water wells, drinking surface water intakes, etc.) has been exposed to a hazardous substance released from the site?		X
5. Is there an apparent release at the site with no documentation of exposed targets, but there are targets on site or immediately adjacent to the site?		X
6. Is there an apparent release and no documented on-site targets or targets immediately adjacent to the site, but there are nearby targets (i.e., targets within 1 mile)?		X
7. Is there no indication of a hazardous substance release, and there are uncontained sources containing CERCLA hazardous substances, but there is a potential to release with targets present on site or in proximity to the site?		X

**Notes:**

**EXHIBIT 1**  
**SITE ASSESSMENT DECISION GUIDELINES FOR A SITE**

Exhibit 1 identifies different types of site information and provides some possible recommendations for further site assessment activities based on that information. You will use Exhibit 1 in determining the need for further action at the site, based on the answers to the questions in Part 2. Please use your professional judgment when evaluating a site. Your judgment may be different from the general recommendations for a site given below.

<b>Suspected/Documented Site Conditions</b>		<b>APA</b>	<b>SI</b>
1. There are no releases or potential to release.		True	<b>False</b>
2. No uncontained sources with CERCLA-eligible substances are present on site.		True	<b>False</b>
3. There are no on-site, adjacent, or nearby targets		<b>True</b>	False
4. There is documentation indicating that a target (i.e., drinking water wells, drinking surface water intakes, etc.) has been exposed to a hazardous substance released from the site.	Option 1: APA    SI	True	True
	Option 2: SI	False	<b>False</b>
5. There is an apparent release at the site with no documentation of exposed targets, but there are targets on site or immediately adjacent to the site.	Option 1: APA    SI	True	True
	Option 2: SI	<b>False</b>	N/A
6. There is an apparent release and no documented on-site targets and no documented immediately adjacent to the site, but there are nearby targets. Nearby targets are those targets that are located within 1 mile of the site and have a relatively high likelihood of exposure to a hazardous substance migrating from the site.		<b>False</b>	True
7. There is no indication of a hazardous substance release, and there are uncontained sources containing CERCLA hazardous substances, but there is a potential to release with targets present on site or in proximity to the site.		False	<b>True</b>

**Part 3 - EPA Site Assessment Decision**

When completing Part 3, use Part 2 and Exhibit 1 to select the appropriate decision. For example, if the answer to question 1 in Part 2 was “no,” then an APA may be performed and the “NFRAP” box below should be checked. Additionally, if the answer to question 4 in Part 2 is “yes,” then you have two options (as indicated in Exhibit 1): Option 1 -- conduct an APA and check the “Lower Priority SI” or “Higher Priority SI” box below; or Option 2 -- proceed with a combined PA/SI assessment.

<b>Check the box that applies based on the conclusions of the APA:</b>	
<input type="checkbox"/> NFRAP	<input type="checkbox"/> Refer to Removal Program – further site assessment needed
<input type="checkbox"/> Higher Priority SI	<input type="checkbox"/> Refer to Removal Program – NFRAP
<input type="checkbox"/> Lower Priority SI	<input type="checkbox"/> Site is being addressed as part of another CERCLIS site
<input type="checkbox"/> Defer to RCRA Subtitle C	<input type="checkbox"/> Other: <u>Medium Priority</u>
<input type="checkbox"/> Defer to NRC	
Regional EPA Reviewer: <u>  N/A  </u>	
Print Name/Signature	Date

PLEASE EXPLAIN THE RATIONALE FOR YOUR DECISION:

High Priority Sites:

1. Water discharge from adit and/or wasterock/tailings material, and
2. Wasterock adjacent to surface water sources, and
3. Sensitive fishery habitat, and
4. May or may not be readily accessible by the general public.

Medium Priority Sites:

1. No water discharge from adit or wasterock/tailings material, and
2. There is surface water in the area, but not immediately adjacent to the Site, and
3. Easily accessible by the general public.

Low Priority Sites:

1. No water discharge from the adit or wasterock/tailings material, and
2. No surface water in the area, and
3. Not easily accessible to the general public.

Based upon the information and discussion provided in the APA and the above criteria, this site has been given a Medium Priority for further evaluation.

# **Appendix C**

## **Quadrangle**

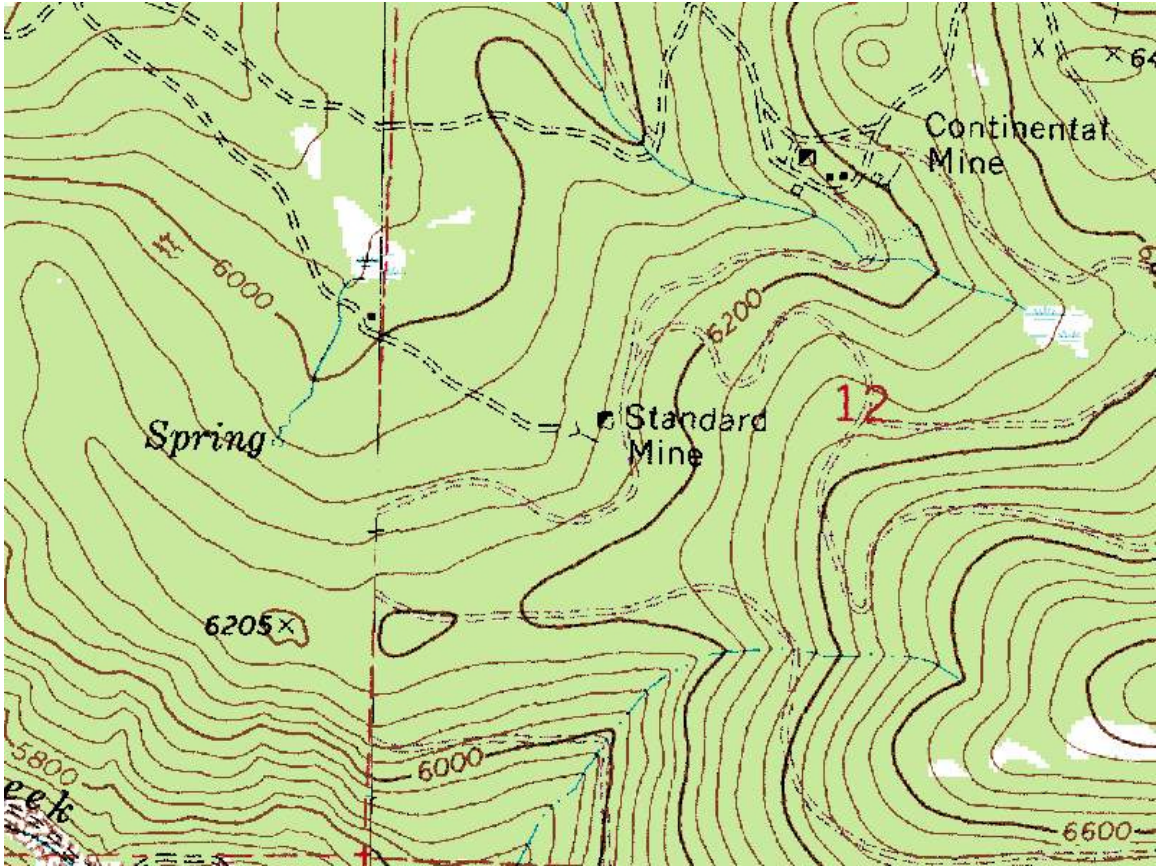


Plate 1. Granite Quadrangle showing the location of the Standard Mine. The locations for the adit and shaft, as shown, were accurate in the field.



# **Appendix D**

## **Site Photos**



Photo 1. Collapsed shaft. (Photo by D. Boles)



Photo 2. Deep trench below shaft area. (Photo by D. Boles)



Photo 3. Wasterock extending to edge of small creek. (Photo by D. Boles)