ABBREVIATED PRELIMINARY ASSESSMENT

RABBIT MINE AND MILL

Wallowa-Whitman National Forest
Grant County, OR

March 2004

TABLE OF CONTENTS

page

EXECUTIVE SUMMARY…….……..…….. i
1.0 INTRODUCTION…….……...1
2.0 SITE DESCRIPTION, OPERATIONAL HISTORY, AND WASTE CHARACTERISTICS…….…….1
3.0 SITE SAMPLING AND TEST RESULTS…….…….1
4.0 SUMMARY…….…… 2
5.0 RECOMMENDATION…….…….. 2
REFERENCES……..……...…… 2

APPENDICES

Appendix A Niton Analytical Results
Appendix B Abbreviated Preliminary Assessment Checklist
Appendix C Site Photos

EXECUTIVE SUMMARY

The Forest Service performed an Abbreviated Preliminary Assessment for the Rabbit Mine and Millsite (Site) to determine the need for further site characterization. The Site is located approximately 8 aerial miles southwest of the town of Granite, Oregon. The Site is situated on moderate to steep side slopes. The site consists of burned debris of the mill, open adit and an airshaft filled with water, with associated waste dumps.

A Niton XRF unit was used for In Situ field screening of material from the waste and tailings pile. Water and sediment samples were not collected as part of this investigation.

Numerous chemical elements exceeded either State or Federal regulations or guidelines (Appendix A). However, the most notable element of concern is Arsenic with readings as high as 807 mg/kg, which exceeded EPA Region IX Preliminary Remediation Goals (PRG) as to acceptable industrial levels in soil of 1.6 mg/kg for cancer endpoint and 260 mg/kg for non-cancer endpoint.

There are also extreme physical hazards associated with the Site. The main health and safety concerns involve the two partially covered shafts that are open to the surface.

Based on the environmental and extreme physical hazards associated with the Site, it is recommended that a Site Inspection (SI) be performed.

1.0 INTRODUCTION

An Abbreviated Preliminary Assessment (APA) was performed by the US Forest Service in accordance with the EPA "Guidance for Performing Preliminary Assessments Under CERCLA", EPA "Improving Site Assessment: Abbreviated Preliminary Assessments" of 1999, the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) of 1980, the Superfund Amendments and Reauthorization Act (SARA) of 1986, and the National Contingency Plan as outlined in 40 CFR Parts 300.410(c)(1)(i-v).

The purpose of this assessment was to determine whether or not there is a potential for a release of contaminants to the environment and/or to human health. The purpose of an APA is to determine whether further site characterization is warranted. A Niton XRF 700 Series was utilized to help in the preliminary screening of this Site.

1.0 SITE DESCRIPTION, OPERATIONAL HISTORY, AND WASTE CHARACTERISTICS

The Site is located approximately 8 aerial miles southwest of Granite, OR at an elevation of 6030 feet above mean sea level (MSL). The Site is on National Forest System lands administered and managed by the Wallowa-Whitman National Forest.

Location information:

Lat./Long.:	44° 42' 42"N 118° 28' 40"W
Legal:	Willamette Meridian, T10S, R35E, SE ¼ Section 10
USGS quadrangle:	Greenhorn

Little information is available about the mine and millsite. However, the Site was discovered in 1925 and produced $40,000 prior to 1940 with a five-stamp mill.

The Site is developed with 1000 feet of adits and a 160-foot shaft with drifts. The vein averages approximately two feet wide in granodiorite.

The site consists of burned ruins of the mill, two open shafts of which one is inundated with water, and numerous waste and tailings piles.

Access to the Site can be accomplished from Granite, OR by following County Route 24 to the southwest and following Clear Creek for approximately 15 miles to the intersection with County Route 503, and proceeding west for approximately 2 miles.

Currently, the Site is inactive.

2.0 SITE SAMPLING AND TEST RESULTS

A Niton XRF, XL-722S was used to assess the material from the waste dumps for potential contamination. In Situ testing was performed on the Site 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. Rocks, debris and other deleterious materials were removed. The soil was worked to gain a flat surface area on which to set the Niton.

The following constituents exceeded EPA Region IX PRG industrial levels:

Location	Constituent	Result (mg/kg)	PRG (mg/kg)
Waste Dump	Arsenic*	60 - 807	1.6
	Chromium (total)	1620 – 2939	450

*Arsenic – for noncancer endpoint, the PRG is 260 mg/kg. For cancer endpoints, the PRG is 1.6 mg/kg.

3.0 SUMMARY

The constituents of concern that exceeded EPA Region IX industrial levels in soil were arsenic and chromium. Appendix A shows all Niton testing results along with associated State and Federal regulations and guidelines.

The Site poses significant physical hazards to the general public recreating at the Site. Two shafts are inadequately covered and present a serious health and safety hazard.

5.0 RECOMMENDATION

Based on the In Situ screening of the waste dumps with the Niton XRF unit, physical hazards associated with the Site, and EPA's APA Checklist (Appendix B), it is recommended that a Site Inspection (SI) be completed. As part of this inspection, a thorough study of the area to determine the extent of contamination is warranted. The area should be sampled to determine the presence of all waste material and tailings, and if present, the potential waste dumps and tailings should be sampled at depth and a determination of volumes should be calculated. Acid base accounting (ABA) is required if waste material is present besides what had been observed during this assessment.

Appendix C contains additional photos of the Site.

REFERENCES

Webber, Bert, 1995, *Gold Mining in Oregon*, Webb Research Group Publishers. 117 p

Appendix A

NITON ANALYTICAL RESULTS

SAMPLE LOCATION	TEST RESULTS Element	mg/kg	STATE GUIDELINES Receptor	mg/kg	EPA Standard	mg/kg
Waste Pile	Arsenic	296	Plants	8.0	Industrial	1.6
	Chromium	2000	Plants	5.0	Industrial	450
	Iron	64,256	Plants	10.0	Industrial	100,000
	Lead	29.8	Birds	16.0	Industrial	750
	Nickel	660	Plants	30.0	Industrial	20,000
	Zinc	68	Plants	50.0	Industrial	100,000
Tailings	Chromium	2148	Plants	5.0	Industrial	450
	Iron	66,099	Plants	10.0	Industrial	100,000
	Nickel	16,998	Plants	30.0	Industrial	20,000
Below Main Waste Pile	Arsenic	24	Plants	8.0	Industrial	1.6
	Chromium	2939	Plants	5.0	Industrial	450
	Iron	95,590	Plants	10.0	Industrial	100,000
	Nickel	6240	Plants	30.0	Industrial	20,000
Main Waste Pile	Arsenic	807	Plants	8.0	Industrial	1.6
	Chromium	1699	Plants	5.0	Industrial	450
	Iron	61,286	Plants	10.0	Industrial	100,000
	Nickel	3398	Plants	30.0	Industrial	20,000
Waste Pile by Shaft	Arsenic	60	Plants	8.0	Industrial	1.6
	Chromium	1620	Plants	5.0	Industrial	450
	Iron	63,795	Plants	10.0	Industrial	100,000
	Lead	22	Birds	16.0	Industrial	750
	Nickel	660	Plants	30.0	Industrial	20,000
	Zinc	77	Plants	50.0	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:

Dennis Boles, Environmental Engineer — July 10, 2002
(Name/Title) — (Date)

Winema NF, 2819 Dahlia St, Klamath Falls, OR 97601 — 541-273.1195
(Address) — (Phone)

djboles@fs.fed.us
(E-Mail Address)

Site Name: Rabbit Mine and Millsite

Previous Names (if any):

Site Location: The Site is located approximately 8 aerial miles southwest of Granite, OR.

Legal Description: Willamette Meridian, T10S, R35E, SE ¼ Section 10

Latitude: N44° 42’ 42” Longitude: W118° 28’ 40”

Describe the release (or potential release) and its probable nature: The material in the mine waste dumps is contaminated. Arsenic concentrations of 60 to 807 mg/kg exceed EPA Region IX PRGs for industrial soils of 1.6 mg/kg for cancer endpoint and 260 mg/kg for non-cancer endpoint. Total Chromium (1620 to 2939 mg/kg) exceed EPA PRGs of 450 mg/kg for industrial use.

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?		X
2. Is the site being addressed by some other remedial program (Federal, State, or Tribal)?		X
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)?		X
4. Are the hazardous substances potentially released at the site excluded by policy considerations (i.e., deferred to RCRA corrective action)?		X
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 ARAR’s, completed removal action, documentation showing that no hazardous substance release have occurred, or an EPA approved risk assessment completed)?		X

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.

If the answer is “no” to any questions 1, 2, or 3, proceed directly to Part 3.	**YES**	**NO**
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	

If the answers to questions 1, 2, and 3 above were all “yes” then answer the questions below before proceeding to Part 3.	**YES**	**NO**
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.

Suspected/Documented Site Conditions		**APA**	**FULL PA**	**PA/SI**	**SI**
1. There are no releases or potential to release.		Yes	No	No	**No**
2. No uncontained sources with CERCLA-eligible substances are present on site.		Yes	No	No	**No**
3. There are no on-site, adjacent, or nearby targets		Yes	No	No	**No**
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	Yes	No	No	Yes
	Option 2: PA/SI	No	No	Yes	**No**
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	Yes	No	No	**Yes**
	Option 2: PA/SI	No	No	Yes	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.		No	Yes	No	**No**
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.		No	Yes	No	**No**

<u>Part 3 - EPA Site Assessment Decision</u>

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.

Check the box that applies based on the conclusions of the APA:

( ) NFRAP
(X) Higher Priority SI
( ) Lower Priority SI
( ) Defer to RCRA Subtitle C
( ) Defer to NRC
( ) Refer to Removal Program – further site assessment needed
( ) Refer to Removal Program – NFRAP
( ) Site is being addressed as part of another CERCLIS site
( ) Other: _____

Regional EPA Reviewer: __N/A_____ _____
Print Name/Signature Date

PLEASE EXPLAIN THE RATIONALE FOR YOUR DECISION:

Appendix C

ADDITIONAL SITE PHOTOS

Photo 1. Remains of mill foundation (photo by G. Visconty, 7/11/2002).

Photo 2. Main Shaft (photo by G. Visconty 7/11/2002).

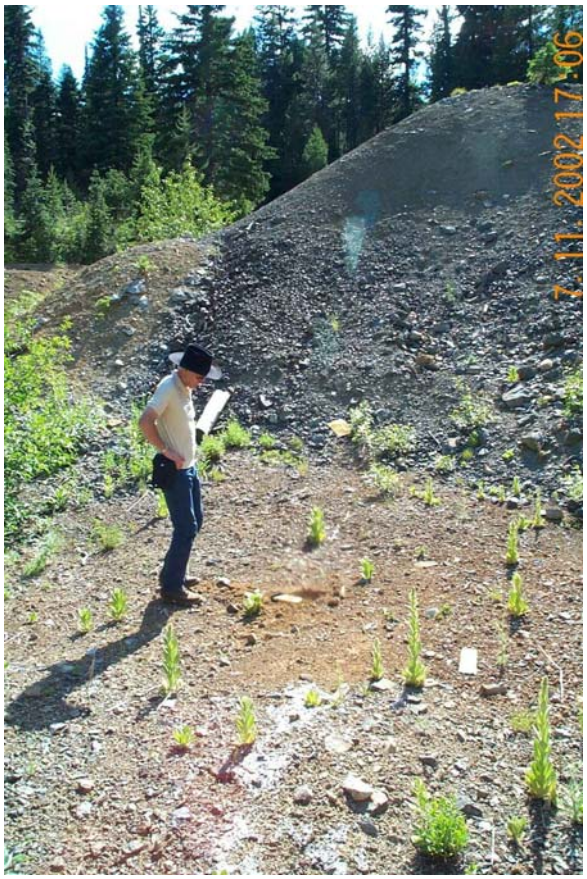

Photo 3. Main Waste Dump (photo by G. Visconty, 7/11/2002).

Photo 4. Airshaft (photo by G. Visconty, 7/11/2002).

Photos 5. Waste Dump Below Airshaft (photo by G. Visconty, 7/11/2002).