Oswego Prospect
(a.k.a., Oswego patented mining claim)

Preliminary Assessment Report

Blaine County
State of Idaho

Idaho Department of
Environmental Quality

November 2007

Submitted to:
U. S. Environmental Protection Agency
Region 10
1200 Sixth Avenue
Seattle, WA 98101
December 19, 2007

Jane Andrews Estate  
C/O Ms. Marcia Penny  
2547 Dorm Road  
Twin Falls, Idaho 83301-8407

RE: Site Assessment of the Oswego Prospect (a.k.a., Oswego patented mining claim)

Dear Ms Penny:

The Idaho Department of Environmental Quality (IDEQ) has completed a review of historical mining data and geological information, and subsequent to that review IDEQ conducted a site visit of the Oswego Prospect and associated claim. During the site visit, mining facilities were mapped and sampled to complete a Preliminary Assessment (PA).

PA's are conducted according to the federal Comprehensive Environmental Response, Compensation and Liabilities Act (CERCLA). The reasons to complete a PA include:

1) To identification those sites which are not CERCLIS caliber because they do not pose a threat to public health or the environment (No Remedial Action Planned (NRAP));

2) To determine if there is a need for removal actions or other programmatic management of sites;

3) To determine if a Site Investigation, which is a more detailed site characterization, is needed; and/or

4) To gather data to facilitate later evaluation of the release through the Hazard Ranking System (HRS)

IDEQ also completed PA's under contract with the U.S. Environmental Protection Agency in order to identify risks to human health and the environment, and make recommendations to land owners regarding how risks might be managed, if necessary.

Based on existing conditions and uses, historic information, and mine waste sample analysis, the IDEQ has determined that further site characterization and reclamation activities may be warranted to address elevated metal concentrations and mitigate physical hazards associated with open workings.
Although IDEQ’s Source Water Assessments were used to evaluate potential affects of this mine on public drinking water supplies no inferences can be made about the affects that this and adjoining mines have on local private wells. Furthermore, based on the historical information regarding mine development and production, and sample analysis, IDEQ recommends if you develop the mine site, particularly for residential purposes, you complete a more thorough site characterization and include risk management provisions in development plans.

IDEQ noted one (1) incline shaft with an observed depth of at least 108 feet; one (1) open adit (# 3) with an observed length of 40 feet; and one (1) partially open adit (# 4) at the Oswego Prospect. The incline shaft is enclosed by steep walls and cannot be seen when approached from above. Adit 3 is equally as dangerous, owing to its accessibility and the collapsing of the tunnel’s roof. All of these openings present physical hazards that should be managed or closed.

Attached is the Preliminary Assessment Report of the property and mine facilities. The report contains a brief mine history, limited geologic information, maps and additional discussion of observations made at the property. There is also a sample analysis of mine waste dump material and a brief checklist of how IDEQ came to its recommendation.

IDEQ very much appreciates your cooperation and approval for our access, and looks forward to addressing any questions you may have regarding our findings. Please call me if you have any comments, questions, or I may be of any other assistance. We very much appreciate any feedback you can give us relative to our services.

Sincerely,

Bruce A. Schuld
Mine Waste Projects Coordinator

attachments

cc: Ken Marcie – U.S. Environmental Protection Agency
    Megan Stelma – Blaine County
    file
SECTION ONE

Introduction

This document presents the results of the Preliminary Assessment (PA) of the Oswego Prospect, a.k.a., Oswego patented mining claim. The Idaho Department of Environmental Quality (IDEQ) was contracted by Region 10 of the United States Environmental Protection Agency (EPA) to provide technical support for completion of PAs at various mines within the Mineral Hill Mining District in Blaine County, Idaho.

IDEQ often receives complaints or information about sites that may be contaminated with hazardous waste. These sites can include abandoned mines, rural airfields that have served as bases for aerial spraying, old landfills, illegal dumps, and abandoned industrial facilities that have known or suspected releases.

In February 2002, IDEQ initiated a Preliminary Assessment Program to evaluate and prioritize assessment of such potentially contaminated sites. Due to accessibility and funding considerations, priority is given to sites where potential contamination poses the most substantial threat to human health or the environment. Priority was also given to mining districts where groups or clusters of sites could be assessed on a watershed basis.

For additional information about the Preliminary Assessment Program, see the following:

http://www.deq.idaho.gov/waste/prog_issues/mining/pa_program.cfm

Access to assess the Oswego Mine was provided by Ms. Marcia Penny, representative for the Jane Andrews Estate, in June of 2007.
SECTION TWO

Ownership

Jane Andrews Estate
2547 Dorm Road
Twin Falls, Idaho 83301-8407

c/o Ms. Marcia Penny

Claims

United States of America
Department of Interior
U.S. Bureau of Land Management
Adjoining public lands

Although it appears that the mine workings are beneath the patented mining claim, the claim is entirely surrounded by lands administered by the Department of Interior, Bureau of Land Management (BLM).

Patented Claim evaluated for this PA was selected because of its proximity to the surface expression of the mine workings and its location in the Mammoth Gulch sub-watershed.

Location

The Oswego Mine is located in Mammoth Gulch approximately 2.5 mile west east of Bellevue, Idaho, in Section 27 Township 2 North, Range 18 East of the Boise Meridian, at Latitude 43° 28’ 29.33”N, and Longitude 114° 18’ 15.71”W. The mine is located on the southern slope of Mammoth Gulch approximately ¾ miles from the mouth of the gulch.

Access to the Oswego property is gained by traveling west from Bellevue, Idaho on Broadford Road. The paved road crosses the Big Wood River at 0.3 miles and turns sharply northward 1.0 miles at the intersection with Minnie Moore Gulch. Proceed to the north for another 0.8 miles to Mammoth Gulch Road. The entrance to the road is gated, though not locked, and the caretaker’s house lies adjacent. Mammoth Gulch Road continues west for 0.25 miles, where the road forks. The left-hand fork leads to the west to Mammoth Gulch. The road crosses an unnamed creek at a shallow ford before reaching the entrance to the gulch. A narrow jeep trail continues westward for approximately 0.7 miles, paralleling the streambed. The mine is situated on a moderately steep hillside overlooking the ephemeral drain in the bottom of Mammoth Gulch (see Figure 1).
SECTION THREE

Site Background

History

Little is known about the Oswego’s operational history and production. According to the Idaho Geological Survey’s database (IGS, 2007), the estimated production is: silver (501 to 1,000 ounces), copper (<50 pounds) and lead (5001 to 10,000 pounds). Specific production records and years of operation were not learned by IDEQ.

General Geology

The Hailey-Bellevue mineral best is underlain by a varied assemblage of sedimentary and igneous rocks, which, except for volcanics of mid-Tertiary age and some still younger unconsolidated sedimentary rocks, are all older than the ore deposits. The earlier rocks include fairly wide exposures of the Milligen and Wood River formations—the host of so many of the ore deposits in the Wood River region—and also rather large intrusive bodies of diorite and quartz monzonitic rock which are regarded as outliers of the Idaho batholith. There is also a younger group of intrusive rocks which are of more pertinent interest because of their close association with the mineralization. In addition to the Milligen formation (Mississippian age) and the Wood River formation (Pennsylvanian age), the area contains some strata in and beneath a series of Tertiary volcanics (Oligocene) and much poorly consolidated and unconsolidated slope wash, terrace gravels, and stream alluvium of Quaternary age (Anderson, 1950, p.2).

The Oswego is in, and about three fourths of a mile above, the mouth of Mammoth Gulch with workings extending from the gulch bottom to the top of the ridge overlooking Galena Gulch. The development consists of an inclined shaft 200 feet or more deep near the crest of the ridge and five or six tunnels on the slope below, two of which were partly open.

The workings are in white marbleized limestone just under the diorite contact. The limestone measures several hundred feet thick, strikes N. 40° W. and dips 40° SW. The inclined shaft is on a bedded vein with walls about 6 feet apart. No ore is visible either along the vein or on the dump. Another vein exposed at the portal of the next to the lowest tunnel strikes N. 20° - 30° W. and dips 60° NE. This vein holds several feet of oxidized material and has been explored by several hundred feet of workings along and above the tunnel level.

At the head of a tributary gulch, just northwest of the Oswego, are three tunnels on what may be another property. These tunnels, the lower two of which are caved, are on a prominent lode in the Milligen argillites very close to the diorite contact. The lode is developed along a prominent zone of fissuring 8 to 10 feet wide at the portal of the upper tunnel and strikes about N. 35° W. and dips 70° SW. The lode contains conspicuous bands of iron and manganese oxides along the prominent fractures that parallel the fissuring. Lumps of iron and manganese oxides are also piled on the dump and on the dump of the
tunnel below (ibid, p. 22). Geological relationships and structural components are illustrated in Figure 2.
SECTION FOUR

Current Site Conditions

The Oswego Prospect is situated near the head of Mammoth Gulch. The workings extend from the gulch bottom upwards to near the crest of the north-facing ridge separating Mammoth Gulch from Galena Gulch (a.k.a., Minnie Moore Gulch). Mammoth Gulch is an ephemeral drainage and the workings appear to be dry, as well. A thick stand of aspen trees lies upgradient of the Oswego, but surface expression of the spring(s) supporting this healthy grove, is not evident.

Warning and/or private property signs are not posted. The shaft, which is was reportedly the major development on the property was driven to approximately 200 feet. None of the adits were worked extensively, as may be evident by their waste dumps that contained less than 50 cubic yards each, mostly of limestone, argillite and diorite. There were not any reported ore shipments from the Oswego.

Sulfide odors were detected on the eastern flank of the shaft’s waste dump, though mineralization among the waste rock was not noted. This waste dump measures approximately 1,000 cubic yards. Owing to the olfactory presumption of sulfides, the shaft’s waste dump was sampled (OSWEGO WD SS-1).
SECTION FIVE

Current and Potential Future Uses

Though the site is bordered by public lands, recreational (bike riding, hiking and hunting) access appears minimized by the gated roadway. No communication has been received from the owner’s representative regarding plans to develop this property for residential usage.
SECTION SIX

Sources

The Oswego Prospect’s workings are located 0.65 miles west of the confluence of Mammoth Gulch and the Big Wood River Valley (see Sketch & Figure 3). The volume of the waste dumps varies slightly among the workings. The inclined shaft’s dump is the largest, measuring about 1,000 cubic yards. IDEQ collected a representative sample [OS WD SS1] from the shaft’s dump as well as a background sample [UK BG SS1] from the ridgeline to the southeast. The analyses are included in the following table.

Table 1: Total Metals Analysis

<table>
<thead>
<tr>
<th>Description</th>
<th>Units: mg/kg</th>
<th>EPA IDTLs</th>
<th>EPA Region 6 HHSLs</th>
<th>Sample No.</th>
<th>Sample No.</th>
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<td></td>
<td></td>
<td></td>
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<td>OS-WD-SS1</td>
</tr>
<tr>
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<td>Zinc</td>
<td>886</td>
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<td>91</td>
<td>27000</td>
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</table>
Prospects

Adit 3
open

Adit 2

Adit 1

Jeep Trail

OS-WD-SS1

Inclined Shaft
open

Adit 4
open

Mammoth Gulch

Oswego Prospect Sketch
Figure 3
Oswego Prospect Photographs

Inclined shaft; 37° incline (right-left), overhanging headwall (top). When approached from the ridgeline above, the headwall is not visible and presents a significant physical hazard. This opening is very dangerous.

Interior of inclined shaft; depth measured to support post (left) is 108 feet, but historical accounts list the total depth at 200 feet.
Oswego Adit # 3 is also open but does not appear to be very deep. Like Adit #4, it presents significant physical hazards as evidenced by the rock debris accumulating from the collapsing back (roof).

Oswego Adit #4 is open at the outcrop face, but does not appear to be very deep. Nonetheless, a physical hazard persists if entered by the curious.
Oswego Adit Waste Dump #1 is typical of the four adit waste dumps in that it is very small (<50 cubic yards) and does not contain any visual evidence of sulfide ores. Nevertheless, the sample collected from the shaft’s waste dump indicates an elevated level of potential concentrations of metals which could adversely affect human health, if human receptors have prolonged exposure.
SECTION SEVEN

Pathways and Receptors

No precipitation data is available for the Oswego. Therefore, precipitation data, maintained from 1948 through 1988, was used from a recording station located 3 miles north-northwest from Hailey at an elevation of 5,350 feet amsl. The mean annual precipitation is 15.89 inches, and the 100-year, 24-hour event is 2.68 inches (WRCC, 2007).

There are not any residences, schools or day-care facilities within 200 feet. The caretaker’s house is the nearest residence. It is located approximately 0.85 miles to the east-southeast at the intersection of Mammoth Gulch and Broadford roads.

Air

Concentrations of metals in wind borne fugitive dust have been the driving force behind cleanups in the former mining properties of the Wood River area, particularly at the Triumph Mine Site and the nearby Minnie Moore tailings impoundment. However, the Oswego’s waste dumps are fairly well vegetated and moderately consolidated. Consequently, the likelihood of exposure to fugitive dust from the dumps is expected to be minor.

Groundwater

During the cleanup activities of the nearby Minnie Moore, the first concerns were related to potential human health risks as a result of contamination of public and private drinking water supplies. Generally speaking, contamination of drinking water systems was thought likely to occur from two types of sources (ore bodies and waste dumps) and along three pathways, as illustrated by the following three scenarios. First, heavy metals are leached from mine waste dumps, enter ephemeral or perennial drains and then contaminate the area’s shallow ground water system. Second, heavy metals leach from the local ore bodies and are transported through the geologic structure to the shallow ground water. Third, heavy metals could leach out of the ore bodies, and be discharged from the underground workings as adit water, that is then conveyed through ephemeral and perennial drains to the shallow ground water systems.

For the purposes of completing Preliminary Assessments, Source Water Assessments (completed for local public drinking water supplies) were used to identify any known affects to those systems. Although IDEQ’s Source Water Assessments were used to evaluate potential affects of this mine on public drinking water supplies no inferences can be made about the affects that this and adjoining mines have on local private wells.

Source water assessments provide information on the potential contaminant threats to public drinking water sources. In the Big Wood River Valley Idaho, most of those sources (>95%) are ground water (IDEQ 2000). Each source water assessment:
• Defines the zone of contribution, which is that portion of the watershed or subsurface area contributing water to the well or surface water intake (source area delineation)

• Identifies the significant potential sources of drinking water contamination in those areas (contaminant source inventory)

• Determines the likelihood that the water supply will become contaminated (susceptibility analysis)

Each assessment is summarized in a report that describes the above information and provides maps of the location of the public water system, the source area delineation, and the locations of potential contaminant sources. Idaho began developing source water assessments in 1999, and in May 2003 met its obligation under the amendments of the Safe Drinking Water Act by completing delineations for all 2100+ public water systems that were active in Idaho as of August 1999 (IDEQ 2000). Source water assessments for new public drinking water systems are being developed as those systems come online. Each public water system is provided with two copies of its final assessment report. Four source water assessments for drinking water supplies have been used in this Preliminary Assessment Process to evaluate the potential impacts to both public and private drinking water supplies in and around Sun Valley, Ketchum, Hailey and Bellevue.

The information extrapolated from these reports is based on data that existed at the time of their writing, and the professional judgment of IDEQ staff. Although reasonable efforts were made to present accurate information, no guarantees, including expressed or implied warranties of any kind are made with respect to these reports or this Preliminary Assessment by the State of Idaho or any of its agents who also assume no legal responsibility for accuracy of presentation, comments or other information in these publications or this Preliminary Assessment report. The results should not be used as an absolute measure of risk, and they should not be used to undermine public confidence in public drinking water systems.

The Source Area delineation process establishes the physical area around a well or surface water intake that becomes the focal point of the source water assessment. The process includes mapping the boundaries of the zone of contribution the area contributing water to the well or to the surface water intake) into time of travel zones (TOT) indicating the number of years necessary for a particle of water to reach a well or surface water intake (IDEQ 2000). The size and shape of the source water assessment area depend on the delineation method used, local hydrogeology, and volume of water pumped from the well or surface water intake.

IDEQ used a refined computer model approved by EPA to determine the 3-year (Zone 1B), 6-year (Zone 2), and 10 year (Zone 3) time of travel associated with the Big Wood River Aquifer and its sources (IDEQ 2000). This information is illustrated in Figure 4.
This process involves collecting, recording, and mapping existing data and geographical information system (GIS) coverage to determine potential contaminant sources (e.g., gas stations) within the delineated source water assessment area. The potential contaminant source inventory is one of three factors used in the susceptibility analysis to evaluate the
overall potential risk to the drinking water supply (IDEQ 2000). The inventory process goal is to locate and describe those facilities, land uses, and environmental conditions that are potential sources of ground water or surface water contamination.

This susceptibility analytical process determines the susceptibility of each public water system well or surface water intake to potential contamination within the delineated source water assessment area. It considers hydrogeologic characteristics, land use characteristics, potentially significant contaminant sources, and the physical integrity of the well or surface water intake. The outcome of the process is a relative ranking into one of three susceptibility categories: high, moderate, and low. The rankings can be used to set priorities for drinking water protection efforts (IDEQ 2000).

There are numerous public and private drinking water supplies in the Big Wood River Basin. The Sun Valley Water and Sewer District operates and maintains nine wells in two groupings (IDEQ 2000). The City of Ketchum drinking water system consists of seven wells in two groupings. The City of Hailey’s drinking water system consists of six wells and a spring (IDEQ 2000). The City of Bellevue drinking water system consists of two wells and three springs (IDEQ 2000).

Generally speaking, public drinking waters systems in the Big Wood River Valley are rated as moderate to high (IDEQ 2000). Multiple factors affect the likelihood of movement of contaminants from the sources to the aquifer, which lead to this moderate to high score. Soils in the area are poorly to moderately drained. The vadose zone is predominantly gravel, which increases the score. On the valley floors the average depth to ground water is twenty to fifty feet.

To date, routine water quality monitoring of public drinking water indicates that there are no significant volumes of heavy metals migrating through the regional or localized ground water systems. More specifically, there are not any long-term or recurring water chemistry problems in the Sun Valley Water and Sewer District drinking water sources. One well in the Sun Valley system has had one instance (August 1991) when cadmium exceeded the MCLs (IDEQ 2000). There is no current, long term or recurring water chemistry problems in the City of Ketchum’s drinking water sources. Arsenic, nickel, antimony, barium, selenium, chromium, cyanide and nitrate have been detected in Ketchum’s wells, but all were well below MCLs (IDEQ 2000). There is no long term or recurring water chemistry problems in the City of Hailey’s drinking water sources. Manganese, Zinc, chromium, and mercury have been detected in Hailey’s wells, but all were well below MCLs (IDEQ 2001). Currently, there are no data that indicate that any metal concentrations have exceeded MCLs in the Bellevue drinking water systems (IDEQ 2000).

**Surface Water**

The Oswego lies near the upper reaches of Mammoth Gulch. Though springs and/or seeps appear to support aspen groves, locally, the gulch can be characterized as an ephemeral stream.
There are no drinking water intakes within the 15-mile Total Distance Limit (TDL). The following TDL in-water segment was calculated from the lowest elevation workings on the Oswego. The gulch’s streambed merges with an unnamed creek at 0.65 miles, near the confluence of Mammoth Gulch and the Big Wood River Valley. The creek continues flowing to the southwest for approximately 1.25 miles until it merges with the Big Wood River. The Big Wood River continues to the south for the remainder of the 15-mile TDL (see Figure 5).
Sensitive Species and Wetlands

The national wetland data base indicates that wetlands exist along the Big Wood River downstream from the Oswego Prospect (see Figure 6). The riparian areas within the gulch and downgradient from the workings do not appear to have suffered any phytotoxic affects.

Mammoth Gulch lies adjacent to the Big Wood River Valley which is a wintering range for the Bald Eagle, a threatened species. The site lies to the south of the potential wolf range. However, since wolves range over a wide area, exposure to heavy metals at the site may be limited, thus minimizing any dose. Therefore, it does not appear as though the site could cause adverse affects in this sensitive species.
Figure 6
Conclusions and Recommendations

Based on existing conditions and uses and historic information, the IDEQ has determined that No Remedial Action is Planned (NRAP) for this property. Although IDEQ’s Source Water Assessments were used to evaluate potential affects of this mine on public drinking water supplies no inferences can be made about the effects that this and adjoining mines have on local private wells. Furthermore, based on the historical information regarding mine development and production, IDEQ recommends if you develop the mine site, particularly for residential purposes, you complete a more thorough site characterization and include risk management provisions in development plans.

The Oswego claim includes four shallow adits and one inclined shaft. The inclined shaft is open to a measured depth of 108 feet, though historical accounts indicate 200 feet. Two of the adits are at least partially open. All of these workings warrant closure to minimize safety hazards. If constructions of homes or other buildings do occur above mine workings, unstable ground conditions or subsidence may be experienced.
References


Environmental Protection Agency Region VI, May 2007. [http://www.epa.gov/Region6/6pd/rcra_c/pd-n/screen.htm](http://www.epa.gov/Region6/6pd/rcra_c/pd-n/screen.htm)


Western Regional Climate Center (WRCC), 2007. [http://www.wrcc.dri.edu/cgi-bin/cliGCStP.pl?id3942](http://www.wrcc.dri.edu/cgi-bin/cliGCStP.pl?id3942)
APPENDIX A
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 investigation process are required under CERCLA. Use additional sheets, if necessary.

Checklist Preparer:          Bruce A. Schuld   - IDEQ     11/16/07
                               (Name/Title)      (Date)
                               1410 N. Hilton     208-373-0554
                               (Address)          (Phone)
                               bruce.schuld@deq.idaho.gov
                               (E-Mail Address)

Site Name:  Oswego Mine

Previous Names (if any): aka Oswego Patented Mine Claim

Site Location:  Mammoth Gulch Road 25 miles east of Bellevue
               (Street)

Latitude:    43 28' 29.33"N         Longitude:  114 18' 15.71"W

Describe the release (or potential release) and its probable nature: Sediment and heavy metals were suspected as having been release to the air and both surface an ground waters. Exposures to local residents, recreators, and wildlife was also suspected prior to completing a site visit.

Part 1 - Superfund Eligibility Evaluation

If all answers are “no” go on to Part 2, otherwise proceed to Part 3.

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<thead>
<tr>
<th>Question</th>
<th>YES</th>
<th>NO</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Is the site currently in CERCLIS or an “alias” of another site?</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>2. Is the site being addressed by some other remedial program (Federal, State, or Tribal)?</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>3. Are the hazardous substances potentially released at the site regulated under a statutory exclusion (e.g., 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)?</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>4. Are the hazardous substances potentially released at the site excluded by policy considerations (i.e., deferred to RCRA corrective action)?</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>5. Is there sufficient documentation to demonstrate that no potential for a release that could cause adverse environmental or human health impacts exists (e.g., comprehensive remedial investigation equivalent data showing no release above ARARs, completed removal action, documentation showing that no hazardous substance releases have occurred, or an EPA approved risk assessment completed)?</td>
<td></td>
<td>X</td>
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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 of questions 1, 2, or 3, proceed directly to Part 3.

<table>
<thead>
<tr>
<th>Yes</th>
<th>No</th>
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<tbody>
<tr>
<td>1. Does the site have a release or a potential to release?</td>
<td>X</td>
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<tr>
<td>2. Does the site have uncontained sources containing CERCLA eligible substances?</td>
<td>X</td>
</tr>
<tr>
<td>3. Does the site have documented on-site, adjacent, or nearby targets?</td>
<td>X</td>
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If the answers to questions 1, 2, and 3 above were all “yes” then answer the questions below before proceeding to Part 3.

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<th>Yes</th>
<th>No</th>
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<tbody>
<tr>
<td>4. Does documentation indicate that a target (e.g., drinking water wells, drinking surface water intakes, etc.) has been exposed to a hazardous substance released from the site?</td>
<td>X</td>
</tr>
<tr>
<td>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?</td>
<td>X</td>
</tr>
<tr>
<td>6. Is there an apparent release and no documented on-site targets or targets immediately adjacent to the site, but there are nearby targets (e.g., targets within 1 mile)?</td>
<td>X</td>
</tr>
<tr>
<td>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?</td>
<td>X</td>
</tr>
</tbody>
</table>

**Notes:** Although the potential exists for a release the source is remotely located, the pathways are incomplete to viable receptors, or there is no indication at the proximity to receptors that and exposure(s) have occurred.
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.

<table>
<thead>
<tr>
<th>Suspected/Documented Site Conditions</th>
<th>APA</th>
<th>Full PA</th>
<th>PA/SI</th>
<th>SI</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. There are no releases or potential to release.</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>2. No uncontained sources with CERCLA-eligible substances are present on site.</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>3. There are no on-site, adjacent, or nearby targets.</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>4. There is documentation indicating that a target (e.g., drinking water wells, drinking surface water intakes, etc.) has not been exposed to a hazardous substance released from the site.</td>
<td>Option 1: APA SI</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Option 2: PA/SI</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
<td>NA</td>
</tr>
<tr>
<td>5. There is not an apparent release at the site with no documentation of targets, but there are targets on site or immediately adjacent to the site.</td>
<td>Option 1: APA SI</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Option 2: PA/SI</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
<td>NA</td>
</tr>
<tr>
<td>6. There is an apparent release and no documented on-site targets and no documented targets 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 migration from the site.</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>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.</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
</tr>
</tbody>
</table>

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.

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

<table>
<thead>
<tr>
<th>NFRAP</th>
<th>Refer to Removal Program - further site assessment needed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Higher Priority SI</td>
<td>Refer to Removal Program – NFRAP</td>
</tr>
<tr>
<td>Lower Priority SI</td>
<td>Site is being addressed as part of another CERCLIS site</td>
</tr>
<tr>
<td>Defer to RCRA Subtitle C</td>
<td>Other: ________________________________</td>
</tr>
<tr>
<td>Defer to NRC</td>
<td></td>
</tr>
</tbody>
</table>

Regional EPA Reviewer: ____________________________ Date: ____________

Print Name/Signature: ____________________________
PLEASE EXPLAIN THE RATIONALE FOR YOUR DECISION: No direct discharges of mine adit drainage to surface waters were identified, and the amount of wastes did not cover a large enough area to represent a significant source of human or ecological receptors. Therefore the source pathway and exposure were incomplete.

NOTES: