



STATE OF IDAHO
DEPARTMENT OF
ENVIRONMENTAL QUALITY

1410 North Hilton • Boise, Idaho 83706 • (208) 373-0502

C.L. "Butch" Otter, Governor
Curt Fransen, Director

March 28, 2012

Mr. Ken Marcy
U.S. Environmental Protection Agency
12928 SW 276th Street
Vashon, WA 98070

RE: Abbreviated Preliminary Assessment Report for the North Star Mine, Idaho County, Idaho.

Dear Mr. Marcy:

Attached is an Abbreviated Preliminary Assessment (APA) for the North Star Mine near Dixie, Idaho. The Idaho Department of Environmental Quality (DEQ) was unable to access the property after various attempts to contact the property owners were unsuccessful.

The North Star Mine was investigated by the Idaho Geological Survey (IGS) in 1999. IGS reported following:

The partially open, dry adit has a moderate-size waste dump that measures 50 feet long, 30 feet wide, and 25 feet thick indicating several hundred feet of workings. The dump is partly overgrown with trees 4-5 inches in diameter and consists mainly of granite with little sign of any sulfides. In front of the adit is a collapsed log cabin. An old Ingersoll-Rand air compressor and a boiler are at the cabin. A second dry hole is about 100 feet up the hill. The entire area is being developed for home sites, and a new home is above the adit and collapsed cabin. The area disturbed by mining is less than 0.5 acre.

No samples were collected from the site during the IGS field visit.

The site inspection by IGS involving direct observations confirmed that contaminants of concern including hazardous materials and petroleum products were not reported in concentrations that present a threat to human health or the environment. No surface water, ground water or airborne pathways were detected. There is a partly opened adit that can be entered. With new homes being built in the area, the adit could be a significant hazard and IGS recommended the adit be closed. Therefore, DEQ recommends the landowners take action to close the adit.

As a result of the above information, **DEQ is recommending the North Star Mine site be designated as No Remedial Action Planned (NRAP).**

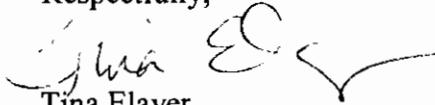
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A link to DEQ's North Star Mine APA can also be found on DEQ's Mining Preliminary Assessment Web page at:

<http://www.deq.idaho.gov/waste-mgmt-remediation/remediation-activities/mining-preliminary-assessments.aspx>

If you have any questions about this site, the report, or DEQ's recommendations, please do not hesitate to call me at (208) 373-0563.

Respectfully,



Tina Elayer
Mine Waste Specialist

attachment

cc: Clint Hughes – USFS
Scott Sanner – BLM
North Star Mine File

ABBREVIATED PRELIMINARY ASSESSMENT

This is an Abbreviated Preliminary Assessment (APA) for the North Star Mine near Dixie, Idaho. This document provides the rationale for the determination of No Remedial Action Planned (NRAP) and that no additional analysis or site investigation is necessary for the North Star Mine. The information to produce this document was taken from the 2003 Idaho Geological Survey (IGS) report. A map generated during desktop research is attached.

Preparer: Tina Elayer **Date:** 3/22/12
Idaho Department of Environmental Quality
1410 N. Hilton
Boise, ID 83706
(208) 373-0563
tina.elayer@deq.idaho.gov

Site Name: North Star Mine

Previous Names (aka): North Star Group

Site Owner: Wentzel Family Trust
Address: c/o Wesley Coppernoll
PO Box 107
Dixie, ID 83525

Site Owner: Toni Tash
Address: 11411 Blue Heron Lane NE
Dixie, ID 83525

Site Owner: Steve McLeod
Address: N/A

Site Owner: Roger Blewett
Address: N/A

Site Location: From IGS 2003:

The North Star Mine is west of North Star Meadows near the headwaters of a southeast-flowing tributary of Rhett Creek. The mine is on FS Road 9545 about 1 mile southeast of the junction with FS Road 222D. Road 222D joins FS Road 222 about 1 mile to the northwest at the Dixie cemetery. The mine is on patented claims, now being subdivided for home sites, which extend west into section 3 and southeast nearly to the Dillinger claim. National Forest land surrounds the claims.

Township 25 North, Range 8 East, Sections 2, 3

Latitude: 45.53556°N **Longitude:** -115.44949°W

Describe the release (or potential release) and its probable nature:

DEQ was unable to access the property after various attempts to contact the property owners were unsuccessful.

The North Star Mine was investigated by IGS on July 15, 1999. IGS reported the following about the site conditions:

The partially open, dry adit has a moderate-size waste dump that measures 50 feet long, 30 feet wide, and 25 feet thick indicating several hundred feet of workings. The dump is partly overgrown with trees 4-5 inches in diameter and consists mainly of granite with little sign of any sulfides. In front of the adit is a collapsed log cabin. An old Ingersoll-Rand air compressor and a boiler are at the cabin. A second dry hole is about 100 feet up the hill. The entire area is being developed for home sites, and a new home is above the adit and collapsed cabin. The area disturbed by mining is less than 0.5 acre.

No samples were collected from the site during the IGS field visit.

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 that may be released from 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)?		x
4. Are the hazardous substances that may be released from the site excluded by policy considerations (i.e., deferred to RCRA corrective action)?		x
5. Is there sufficient documentation to demonstrate that there is no potential for a release that constitutes risk to human or ecological receptors? <i>(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)?</i>	x	

Please explain all “yes” answer(s):

A site inspection by IGS involving direct observations confirmed that contaminants of concern including hazardous materials and petroleum products were not reported in concentrations that present a threat to human health or the environment. No contaminants or hazardous substances remain on the site. No surface water, ground water or airborne pathways were detected.

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.	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 (e.g., drinking water wells, drinking surface water intakes, etc.) has been exposed to a hazardous substance released from the site?		
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?		
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 one mile)?		
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?		

Notes:

It is unlikely any human health risks or ecological health risks are associated with this mine site. No surface water, ground water or airborne pathways were reported by IGS.

During the site assessment, DEQ used references from several different documents including U.S. Geological Survey (USGS) maps, county tax rolls, and historical reports that have spelled numerous claim names, town sites, and/or geographic features differently from one and another. DEQ’s use of the different spellings is to remain in context with the reference used for each given section of text or written in this report.

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. The assessor should 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. Releases or potential to release are not documented at the site. YES		Yes			
2. Uncontained sources with CERCLA-eligible substances have not been documented as being present on the site. (i.e., they do exist at site) YES		Yes			
3. On-site, adjacent, or nearby receptors are not present. YES		Yes			
4. There is no documentation or observations made leading to the conclusion that a sensitive receptor is present or may have been exposed (e.g., drinking water system user inside four mile TDL). YES	Option 1: APA	Yes			
5. There is documentation that a sensitive receptor has been exposed to a hazardous substance released from the site. NO	Option 2: Full PA or PA/SI	No			
6. There is an apparent release at the site with no documentation of targets, but there are targets on site or immediately adjacent to the site. NO	Option 1: APA SI	No			
	Option 2: PA/SI	No			
7. 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 one mile of the site and have a relatively high likelihood of exposure to a hazardous substance migration from the site. YES		Yes			
8. There are: no indications of a hazardous substance release; 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			

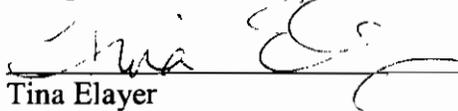
Part 3 - DEQ Site Assessment Decision

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 “NRAP” 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:

<input checked="" type="checkbox"/>	No Remedial Action Planned (NRAP)	Defer to NRC
<input type="checkbox"/>	Higher Priority SI	Refer to Removal Program
<input type="checkbox"/>	Lower Priority SI	Site is being addressed as part of another CERCLIS site
<input type="checkbox"/>	Defer to RCRA Subtitle C	Other:

DEQ Reviewer:


Tina Elayer

3/27/12
Date

Please Explain the Rationale for Your Decision:

The site inspection by IGS involving direct observations confirmed that contaminants of concern including hazardous materials and petroleum products were not reported in concentrations that present a threat to human health or the environment. No surface water, ground water or airborne pathways were detected. There is a partly opened adit that can be entered. With new homes being built in the area, the adit could be a significant hazard and IGS recommended the adit be closed. Therefore, DEQ recommends the landowners take action to close the adit.

As a result of the information contained in this APA, DEQ recommends the property status of the North Star Mine be designated as No Remedial Action Planned (NRAP).

Notes:

The italicized text below was taken directly from the 2003 IGS report.

Site Description: The partially open, dry adit has a moderate-size waste dump that measures 50 feet long, 30 feet wide, and 25 feet thick indicating several hundred feet of workings. The dump is partly overgrown with trees 4-5 inches in diameter and consists mainly of granite with little sign of any sulfides. In front of the adit is a collapsed log cabin. An old Ingersoll-Rand air compressor and a boiler are at the cabin. A second dry hole is about 100 feet up the hill. The entire area is being developed for home sites, and a new home is above the adit and collapsed cabin. The area disturbed by mining is less than 0.5 acre.

Geologic Features: *Rock in the area consists of granite with quartz veins and stringers. The waste dump shows little evidence of sulfides.*

History: *The North Star group of claims was located two road miles south of Dixie on an extension of the Dixie Queen. Sam Dillinger located the North Star and South Star quartz claims in 1891, reportedly the first lode claims in Dixie. He developed the property for four years and then built an arrastra to recover gold from this and other veins. The ore yielded \$14-\$25 per ton in gold. Thomas and Frank Hye bought the mine in 1898. Four of the claims (Northern Star, Center Star, Defender, and Evening Star) were patented in 1905. In the late 1930s two veins were exposed, one about 3' wide and dipping steeply northeast with a 400' adit, the other from a few inches to 2' wide with a 150' adit and a shallow shaft. The latter vein was cut off by a lamprophyre dike at the face of the adit. The country rock was quartz monzonite. The veins had gouge on both walls, and the sulfides occurred in sheared quartz on both the hanging wall and the foot wall of the zone of shearing.*

In 1901 a crew working at the North Star installed a steam hoist and sank a shaft. The Hye brothers built a four-stamp mill, reported to be a "model mill," in 1902, and they planned to install a cyanide plant. In 1904, Sam Dillinger sold the property to Col. Plummer and associates of Spokane. At that time, about 1,000' of development work had been done, and the ore had an average value of about \$12 per ton. Over the next several years, the North Star milled ore from the Black Diamond and Dillinger mines and occasionally the North Star itself. In 1909, ore from the North Star averaged \$20 per ton on a 30" vein. George Trader bought the North Star group in 1912. Ten men worked on development of the mine in 1934. In 1936 he leased it to the Keith Star Mining Company, and the next year the mill was remodeled. The mill at that time had a jaw crusher, a 3' x 3' ball mill, a small Straub ball mill for regrinding, two Fagergren flotation cells, and a concentrating table. The mill was powered by an 18-horsepower steam drive driven by a fire-tube boiler that burned half a cord of wood in eight hours.

Between 1901 and 1941, the North Star Mine produced 1,138 tons of ore. This material yielded 138.89 ounces of gold and 118 ounces of silver (Neumann and Close, 1991).

Structures: *The collapsed cabin at the adit was the only mining-related building found at the site.*

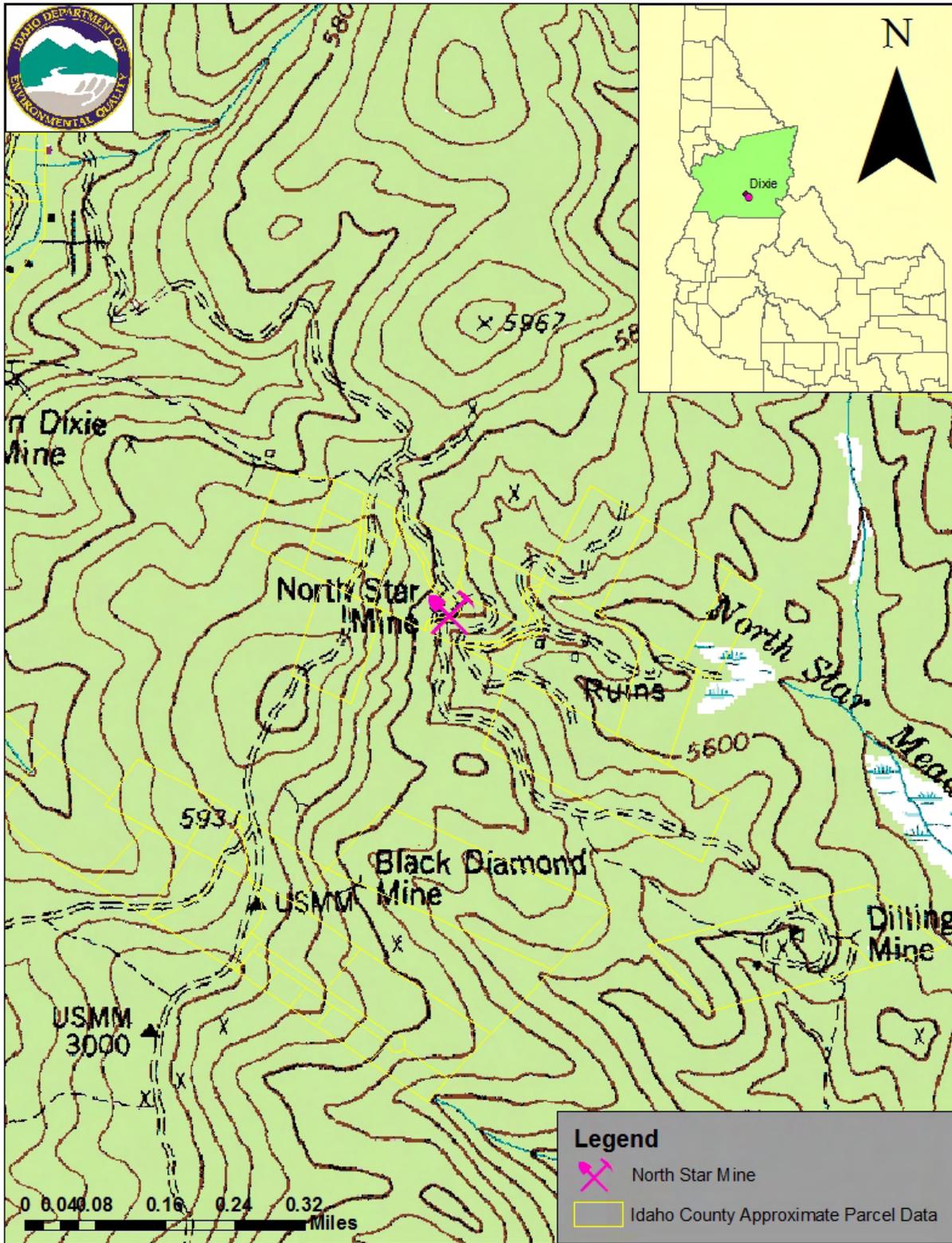
Safety: *The adit is partly opened and can be entered. With the new homes being built in the area, the adit could be a significant hazard.*

Reference:

IGS (Idaho Geological Survey), Bennett, Earl H., Kauffman, John, and Mitchell, Victoria E.
2003. *Site Inspection Report for the Abandoned and Inactive Mines in Idaho on U.S. Forest
Service Lands (Region 1), Nez Perce National Forest: Volume II, Dixie Area, Idaho County,
Idaho.*

Attachment:

Map



**Topographic Location of the North Star Mine in Idaho County, Idaho
(Map Source: USGS 24k Quads)**