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Ref: 8EPR-ER

ACTION MEMORANDUM

SUBJECT: Request for a Removal Action at the Uintah Mining District Site in Summit County, Utah

FROM: Martin McComb
Federal On-Scene Coordinator

THRU: Laura Williams, Unit Leader
Emergency Response

TO: David A. Ostrander, Program Director
Emergency Response & Preparedness

Site ID# A8K3

I. PURPOSE

The purpose of this Action Memorandum is to request and document approval of the removal action described herein at the Uintah Mining District Site (Site) (as generally defined in Attachment A) located in Park City, Summit County, Utah. Lead and other heavy metals are the hazardous substances of concern.

This time-critical removal action involves the creation or construction and subsequent protection of erosion control features at the Site to address migration of hazardous substances in areas where historic mining operations have occurred.

Conditions existing at the Site present a threat to public health and the environment and meet the criteria for initiating a removal action under 40 CFR 300.415(b)(2) of the National Contingency Plan (NCP).

In an August 12, 2015 email, EPA regional Superfund programs were instructed to immediately cease any field work at mines. Subsequent memorandums on August 14, 2015 and September 4, 2015 provided additional details for determining if work should be discontinued at sites subject to the work stoppage. Because there is no substantial hydraulic component (e.g., water-containing mining features such as mine workings, tailings dams, open pits and heap leach piles) related to the Site and the Site has no known water in the mines which present a hazard with the potential to create an emergency, the Site is considered a category 1 Site as defined in the

September 4 memo and work is appropriate to proceed with implementation of this TCRA as documented by approval of this Action Memorandum.

This time-critical removal action involves no nationally-significant nor precedent-setting issues. This removal action will not establish any precedent for how future response actions will be taken and will not commit the EPA to a course of action that could have a significant impact on future responses or resources.

II. SITE CONDITIONS AND BACKGROUND

Site Name:	Uintah Mining District
Site ID (SSID):	A8K3
NRC Case Number:	Not Applicable
CERCLIS Number:	UTN000801643
Site Location:	Summit County, Utah
Lat/Long:	40.6461/-111.4980
Potentially Responsible Party:	United Park City Mines (UPCM)
NPL Status:	non-NPL
Removal Start Date:	10/01/2015

A. Site Description

1. Removal Site Evaluation

Mining began in the Uintah Mining District around 1869 and the area produced substantial quantities of ore between 1875 and 1982. Mining operations involved tunnels to extract the ore, tramways and railroads to transport ore, and milling facilities to process the ore. As a result of these mining operations, tailings and other mine waste containing heavy metals were deposited throughout the mining district.

In 2014, EPA's Remedial Program requested an assessment of areas where mining activities once occurred and that could be sources of contaminated material. EPA's Response Unit subsequently utilized existing sampling data and information on the location of former mining activities, visual inspections and in-situ x-ray fluorescence (XRF) analysis to evaluate soil conditions in the following drainages:

- Ontario Canyon
- Empire Canyon
- Woodside Gulch
- Treasure Hollow
- Thaynes Canyon

Ontario Canyon

Historic mining features in Ontario Canyon included the Judge Loading Station as well as the Ontario Mine, Mill and Tunnel. The surface concentrations of lead in the waste piles at the Ontario Mine exceed 1,000 mg/kg and the piles display obvious signs of erosion. The historic Ontario Mill was effectively capped and re-vegetated during the construction of a runaway truck

ramp. The concentrations of lead in exposed soil at the Judge Loading Station and Ontario Tunnel area exceed 10,000 mg/kg in several locations and the soil displays obvious signs of erosion.

Empire Canyon

Historic mining features in Empire Canyon included the Judge and Alliance waste pile. The surface concentrations of lead at the Judge and Alliance waste pile exceed 1,000 mg/kg of lead and some locations exceed 10,000 mg/kg. The pile displays obvious signs of erosion and contaminated soil was identified down gradient of this waste pile. The area is located on the outskirts of town just up gradient of the residential properties along Daly Avenue and is regularly used by hikers and bikers.

Woodside Gulch

Historic mining features in Woodside Gulch include the Silver King Mine and Mill. The Silver King Mine and Mill area contains approximately 56,000 cubic yards of mine waste and the surface concentrations of lead exceed 10,000 mg/kg in several locations. The waste piles display obvious signs of erosion. The main drainage comes into direct contact with this mine waste and contaminated soil was identified downstream of the waste piles in the middle reaches of Woodside Gulch.

Treasure Hollow

Historic mining features in Treasure Hollow include the Treasure Hollow waste pile. The waste pile at Treasure Hollow contains approximately 102,000 cubic yards of mine waste. The pile is relatively homogeneous and surface concentrations of lead exceed 1,000 mg/kg. The pile is poorly vegetated and displays obvious signs of erosion. A summer trail crosses the pile.

Thaynes Canyon

Historic mining features in Thaynes Canyon include the California Mine, Comstock Mine, Apex Mine and Thaynes Shaft. These features together contain approximately 263,000 cubic yards of waste material and the surface concentrations of lead exceed 10,000 mg/kg in several locations. The waste piles display obvious signs of erosion including use of an excavator to maintain an access road on the ski resort. The main Thaynes drainage channel comes into direct contact with the waste piles and mine waste was identified in the drainage downstream of the piles.

2. Physical Location

The Site is located in the upper Silver Creek watershed of the Wasatch Mountains in central Utah and includes areas containing remnant mine waste associated with the historic Ontario Mine, Ontario Tunnel and Judge Loading Station in Ontario Canyon, the Judge and Alliance waste pile in Empire Canyon, the Silver King Mine and Mill in Woodside Gulch, the waste pile at Treasure Hollow and the California Mine, Comstock Mine, Apex Mine and Thaynes Shaft in Thaynes Canyon. These areas are generally depicted in Attachment 2.

3. Site Characteristics

The general area is home to several ski resorts and, depending on the time of year, the tourist population exceeds the number of permanent residents (which were estimated to be 7,558 in 2010). The areas are used primarily for recreational purposes, mainly hiking or skiing.

Woodside Gulch, Treasure Hollow and Thaynes Canyon are located at or proximate to the Park City Ski Resort. Ontario Canyon and Empire Canyon are located just upstream of residential properties in Park City, Utah.

4. Release or Threatened Release into the Environment of a Hazardous Substance, Pollutant, or Contaminant

The presence of lead in the soils presents a release of hazardous substances to the environment. Lead is a listed hazardous substances in 40 CFR §302.4. This contaminant is found at the ground surface and is being released due to erosion.

According to the Agency for Toxic Substances and Disease Registry (ATSDR), "The effects of lead are the same whether it enters the body through breathing or swallowing. Lead can affect almost every organ and system in your body. The main target for lead toxicity is the nervous system, both in adults and children. Long-term exposure of adults can result in decreased performance in some tests that measure functions of the nervous system. It may also cause weakness in fingers, wrists, or ankles. Lead exposure also causes small increases in blood pressure, particularly in middle-aged and older people and can cause anemia. Exposure to high lead levels can severely damage the brain and kidneys in adults or children and ultimately cause death. In pregnant women, high levels of exposure to lead may cause miscarriage. High level exposure in men can damage the organs responsible for sperm production.

Children are more vulnerable to lead poisoning than adults. A child who swallows large amounts of lead may develop blood anemia, severe stomachache, muscle weakness, and brain damage. If a child swallows smaller amounts of lead, much less severe effects on blood and brain function may occur. Even at much lower levels of exposure, lead can affect a child's mental and physical growth.

Exposure to lead is more dangerous for young and unborn children. Unborn children can be exposed to lead through their mothers. Harmful effects include premature births, smaller babies, decreased mental ability in the infant, learning difficulties, and reduced growth in young children. These effects are more common if the mother or baby was exposed to high levels of lead. Some of these effects may persist beyond childhood."¹

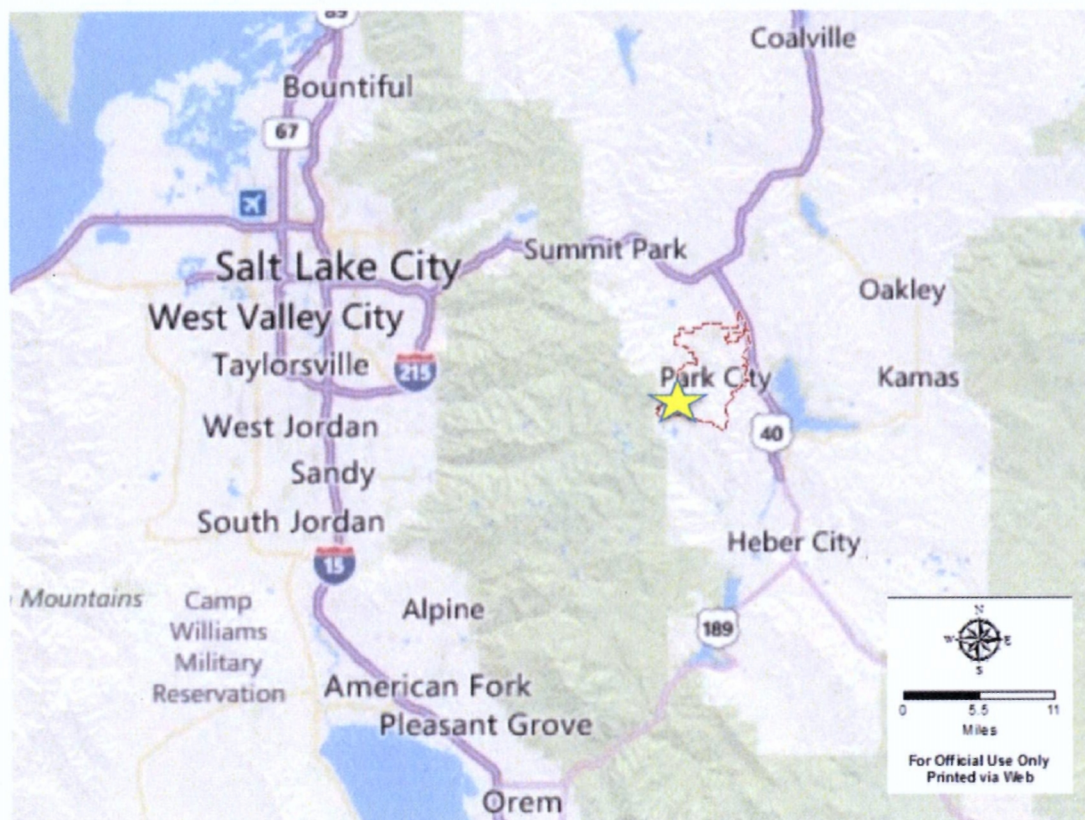
5. NPL Status

The Uintah Mining District Site is not on EPA's National Priorities List (NPL).

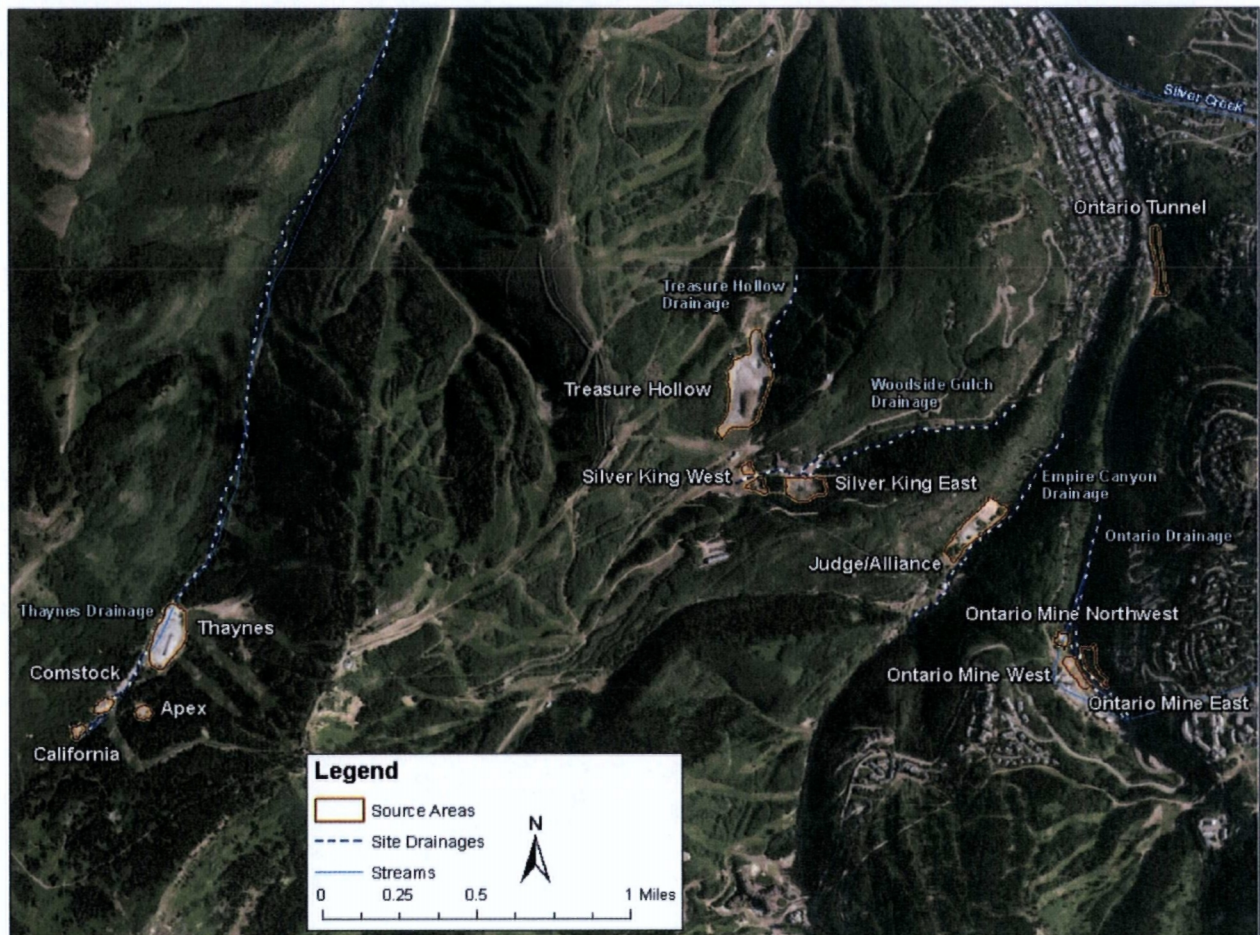
¹ Website, <http://www.atsdr.cdc.gov/toxfaqs/tf.asp?id=93&tid=22>.

6. Maps, Pictures, Other Geographic Representations

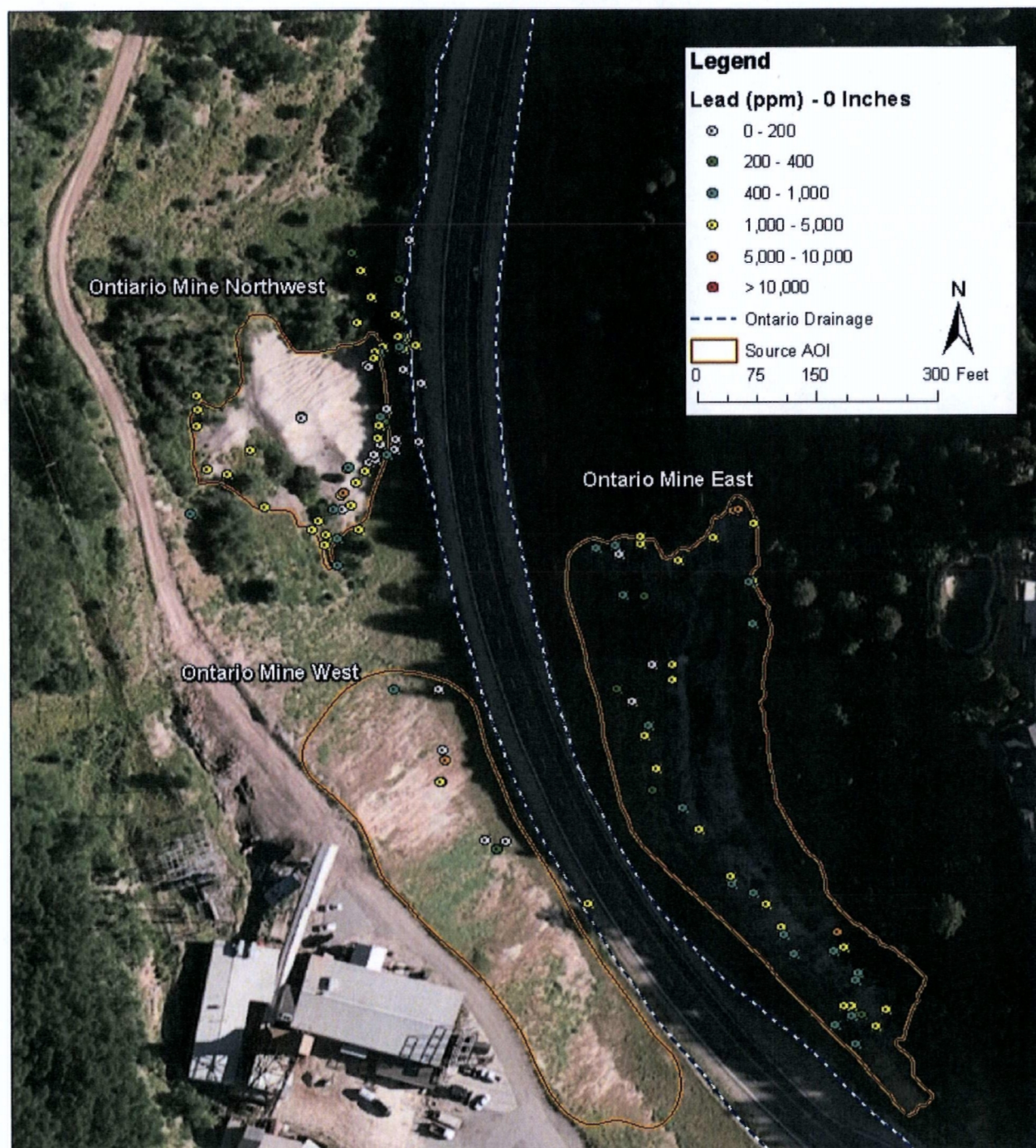
Location of the Uintah Mining District Site in Park City, Utah



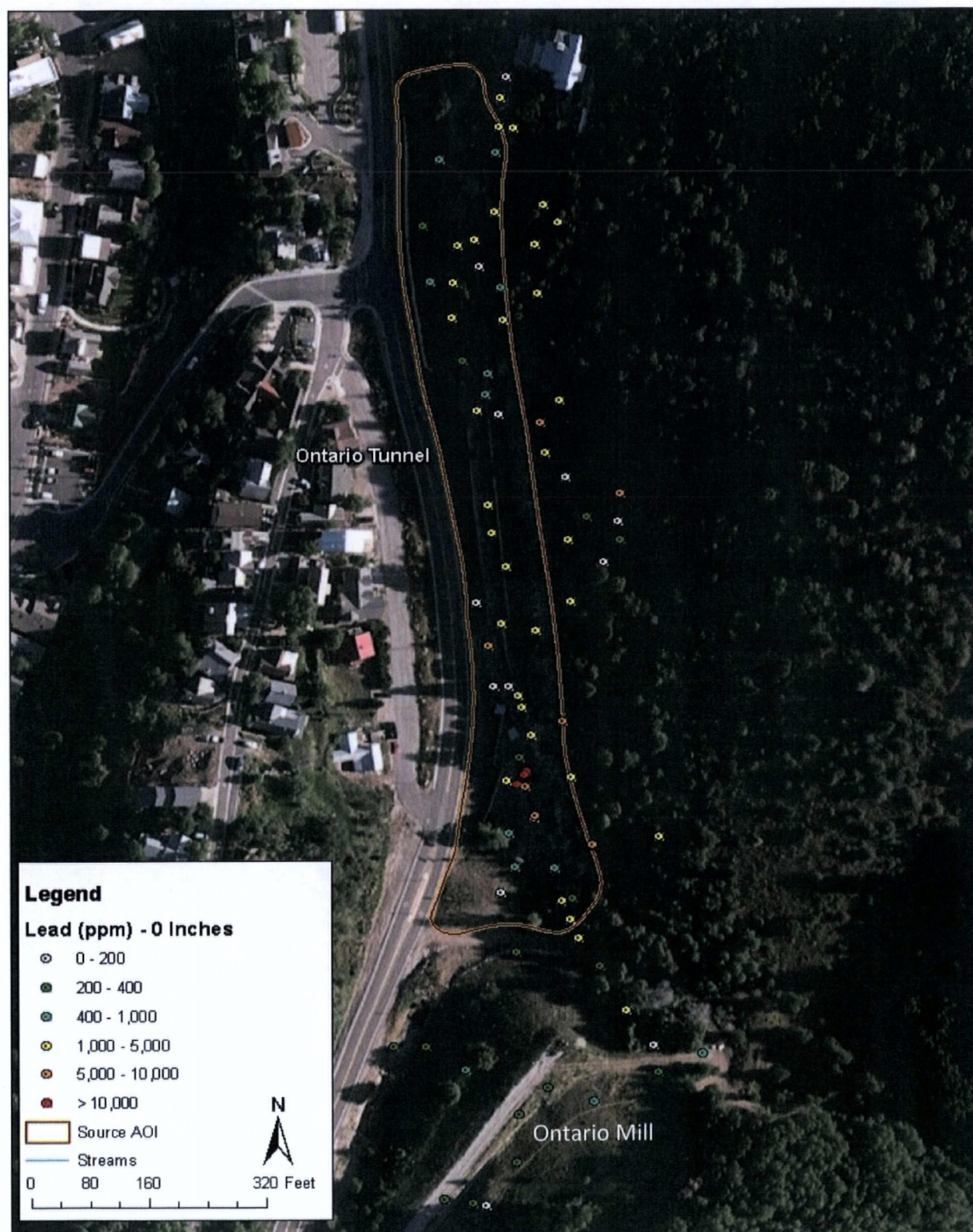
Areas of Interest at the Site (detailed)



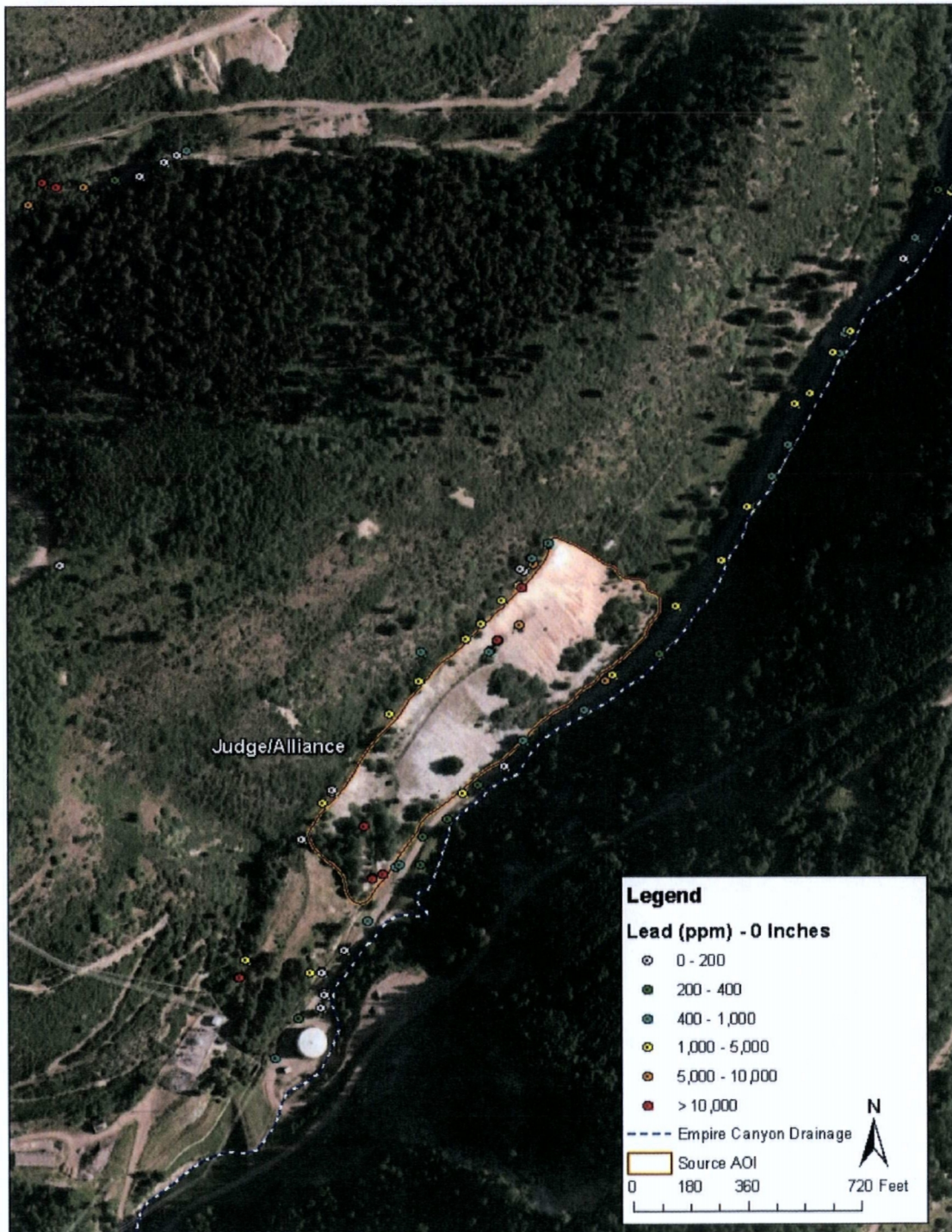
Soil lead concentrations at the surface in the Ontario Mine Area of Interest (Ontario Canyon)



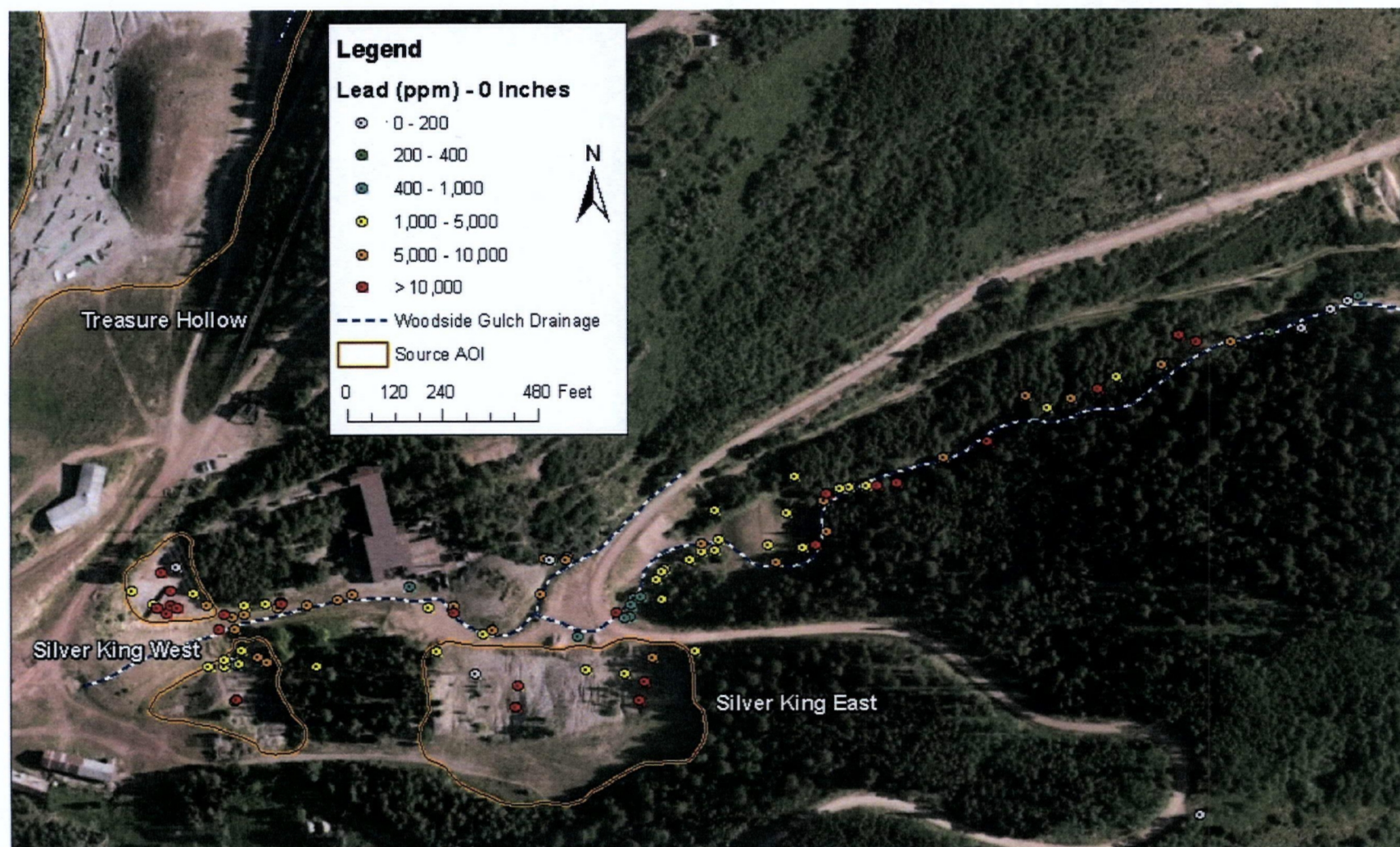
Soil lead concentrations at the surface in the Judge Loading Station, Ontario Tunnel and Ontario Mill Areas of Interest (Ontario Canyon)



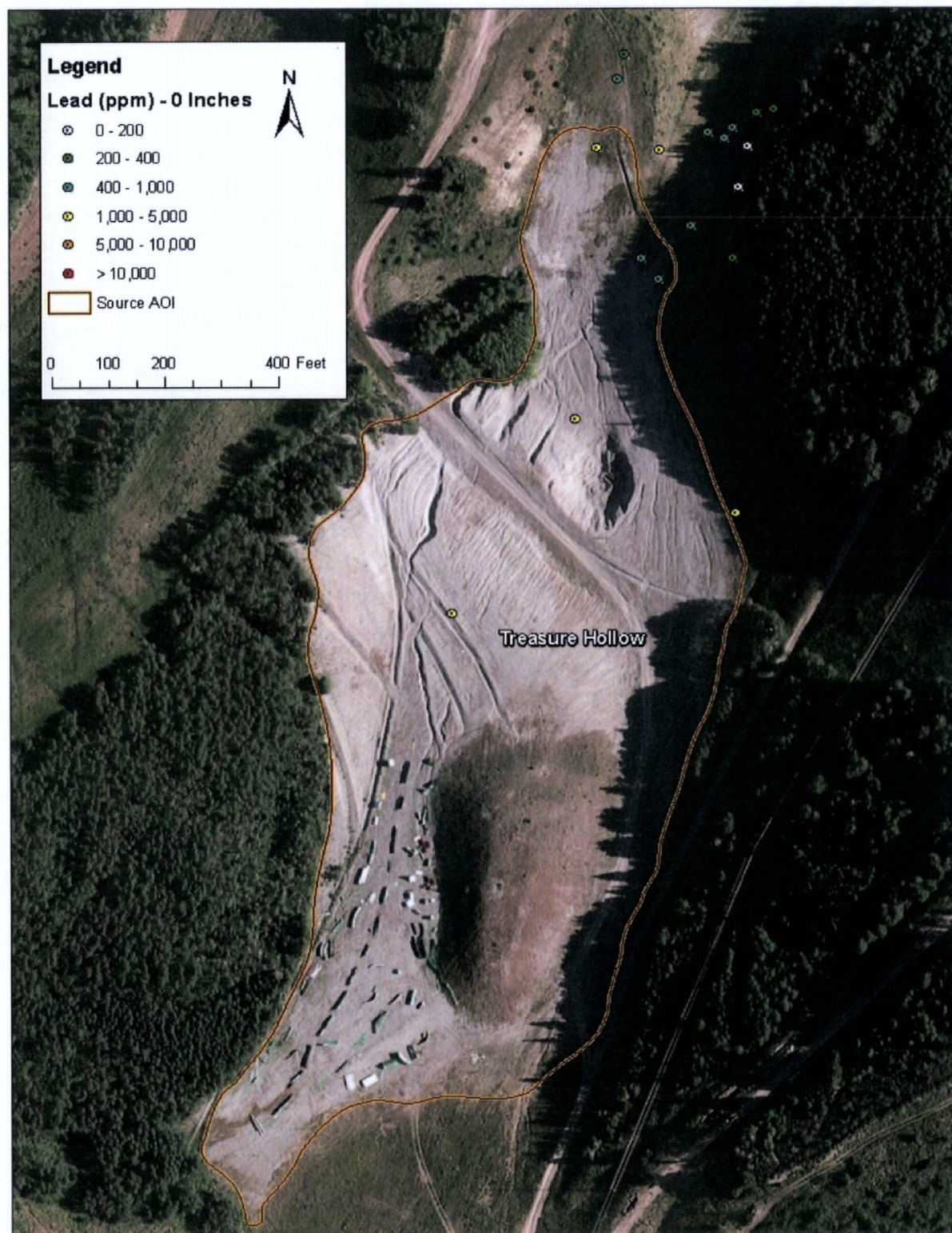
Soil lead concentrations at the surface in the Judge / Alliance waste pile Area of Interest (Empire Canyon)



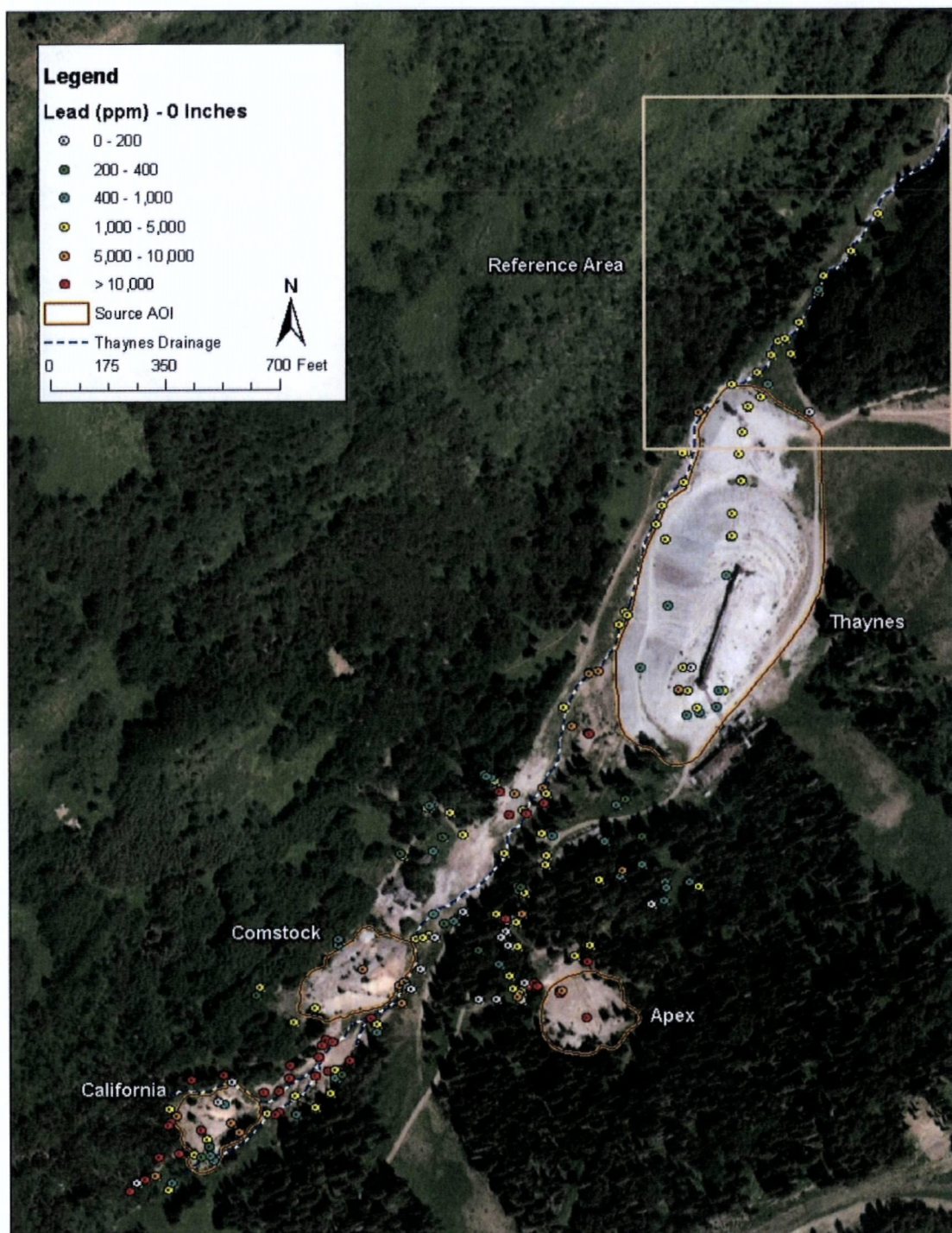
Soil lead concentrations at the surface in the Silver King Mine and Mill Areas of Interest (Woodside Gulch)



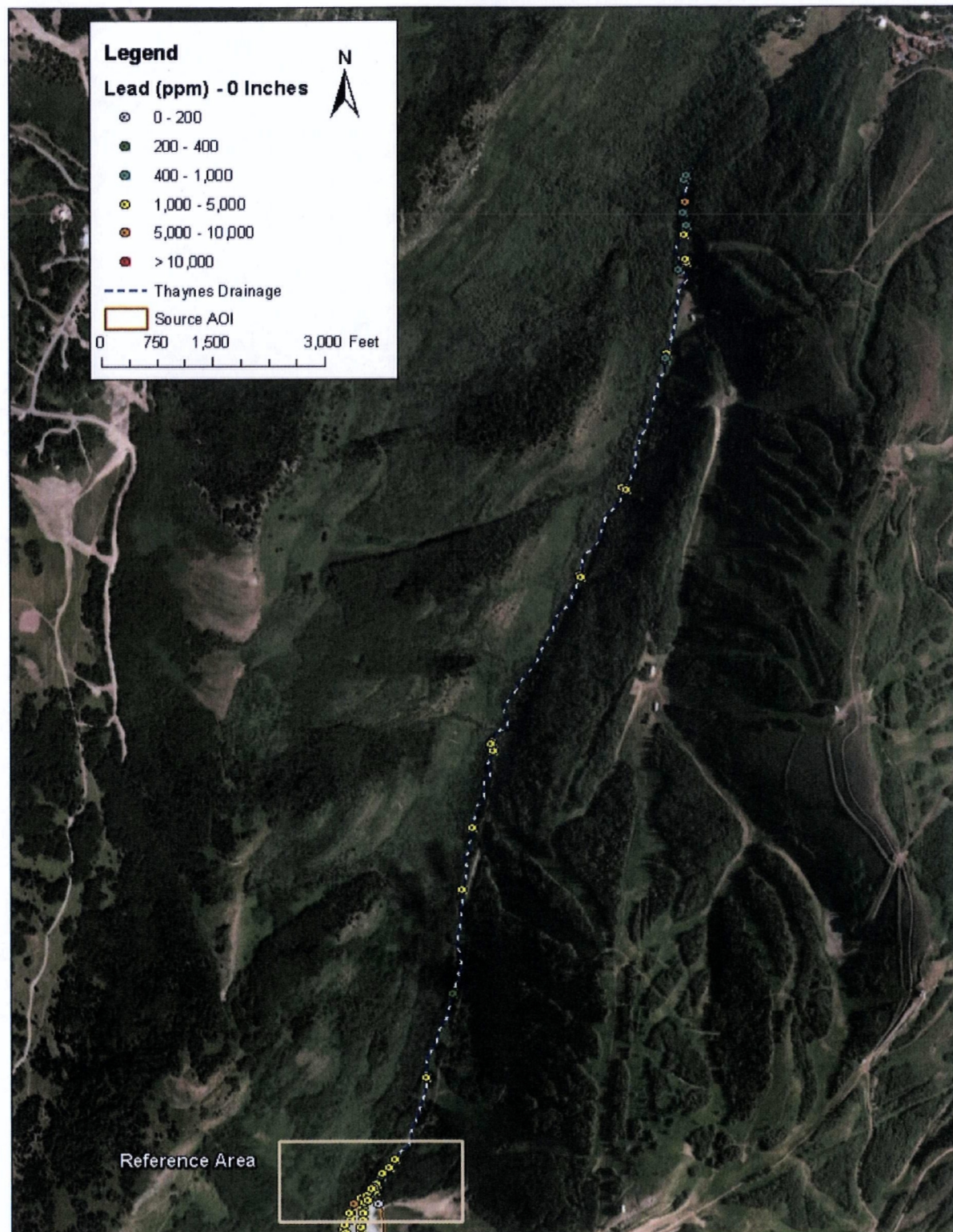
Soil lead concentrations at the surface in the Treasure Hollow waste pile Area of Interest



Soil lead concentrations at the surface in the California Mine, Comstock Mine, Apex Mine and Thaynes Shaft Areas of Interest (Thaynes Canyon)



Soil contamination downstream of mining features in Thaynes Canyon



Erosion and disturbance of contaminated soil at the Thaynes Shaft waste pile



B. Other Actions to Date

1. Previous Actions

In 2014 at the request of EPA's Site Assessment Program, EPA's Response Unit evaluated residential properties near the location of the historic Marsac Mill where sampling data collected during a volunteer cleanup of the mill indicated that the soil in the area may be contaminated. EPA found that the soil in this neighborhood has likely been impacted by historic mining activities but that a traditional yard-by-yard removal of this material is not practical due to the general steepness and small size of the properties in the area.

After consultation with the Utah Department of Environmental Quality (UDEQ) and the Municipality of Park City (Park City) regarding the scarcity of information and lack of existing remedial efforts in other locations, EPA's Response Unit also evaluated soil conditions at the Treasure Mountain Junior High School and associated recreation areas. EPA found that the surface cover at the school was protective and intact but that contamination exists below this cover.

2. Current Actions

The Park City School District is currently planning major renovations to the Treasure Mountain Junior High School property. EPA will evaluate the need for response action once these plans have been finalized.

C. State and Local Authorities' Role

1. State and Local Actions to Date

State and local authorities have reviewed existing information, helped identify residential areas of interest and otherwise provided assistance wherever possible. Park City, Summit County, and the Utah Department of Environmental Quality are consulting with EPA to determine how best to address the elevated soils in the Marsac neighborhood as well as other residential areas. Options include providing educational and/or disposal assistance to property owners.

2. Potential for Continued State/Local Response

State and Local entities do not have the resources nor the authority to conduct this removal action.

III. THREATS TO PUBLIC HEALTH OR WELFARE OR THE ENVIRONMENT, AND STATUTORY AND REGULATORY AUTHORITIES

Conditions at the Site present a threat to public health and the environment, and meet the criteria for initiating a removal action under 40 CFR 300.415(b)(2) of the NCP.

EPA has considered all the factors described in 40 CFR 300.415(b)(2) of the NCP and determined that the following factors apply at the Site.

(i) Actual or potential exposure to nearby human populations, animals, or the food chain from hazardous substances, or pollutants or contaminants.

Contaminated soils exist at the Site in areas that are regularly accessed by hikers and bikers.

(iv) High levels of hazardous substances or pollutants or contaminants in soils largely at or near the surface that may migrate.

The results of EPA's removal assessment show that high levels of contamination exist at or near the surface and that this contamination has and will continue to migrate if it is not addressed.

(v) Weather conditions that may cause hazardous substances or pollutants or contaminants to migrate or be released.

Park City experiences substantial snowmelt runoff during the annual spring thaw. This runoff as well as rain on snow events and intense summer thunderstorms have the potential of increasing the rate of migration of contaminated material.

(vii) The availability of other appropriate federal or state mechanisms to respond to the release.

Local and state governments do not have the capability to conduct the action in a timely manner.

IV. ENDANGERMENT DETERMINATION

Actual or threatened releases of hazardous substances from this Site, if not addressed by implementing the response action described in this Action Memorandum, may present an imminent and substantial endangerment to public health, or welfare, or the environment.

V. EXEMPTION FROM STATUTORY LIMITS

Not applicable.

VI. PROPOSED ACTIONS AND ESTIMATED COSTS

A. Proposed Actions

1. Proposed Action Description

United Park City Mines (UPCM), consistent with an Administrative Order on Consent (AOC) with EPA, will create or construct erosion control features at the Site to address the downstream migration of contaminated sediments at the Site.

Primary and secondary runoff channels will be directed around waste piles, stabilized and/or otherwise improved. Waste piles will be re-contoured and berms and terraces will be constructed to control erosion. The majority of excess soil generated during the construction of these erosion control features will be consolidated and capped in-situ. Some material (approximately 1000 cubic yards from Ontario Canyon and Empire Canyon) may be transported to the existing repository at Richardson Flat. Special consideration will be given to protecting existing vegetation and bare areas will be re-vegetated to the extent practicable.

UPCM will establish appropriate post-removal site control measures to maintain the erosion control features including vegetation at the Site.

2. Contribution to Remedial Performance

This effort will, to the extent practical, contribute to any future remedial effort at the Site. However, no further federal action is anticipated at this time.

3. Engineering Evaluation/Cost Analysis

An EE/CA is not required for a time-critical removal action.

4. Applicable or Relevant and Appropriate Requirements (ARARs)

This Action Memorandum addresses the proposed time-critical removal action at the Uintah Mining District Site. Lead is the principal contaminant of concern. Removal actions conducted under CERCLA are required, to the extent practicable considering the exigencies of the situation, to attain ARARs. In determining whether compliance with an ARAR is practicable, EPA may consider appropriate factors, including the urgency of the situation and the scope of the removal action to be conducted. A table containing potential Site-specific ARARs is provided as Exhibit B.

5. Project Schedule

Due to characteristically cold and snowy winters and a limited summer construction season at the Site, the erosion control features will be constructed over two construction seasons. The erosion control features in Ontario Canyon and Empire Canyon will be completed by the fall of 2015. The erosion control features in Thaynes Canyon, Woodside Gulch and Treasure Hollow will be completed by the fall of 2016.

B. Estimated Costs

EPA's costs for this PRP-led removal action, estimated to be \$48,000, will be limited to project oversight. EPA direct and indirect costs, although cost recoverable, do not count toward the Removal Ceiling for this removal action. Liable parties may be held financially responsible for costs incurred by the EPA as set forth in Section 107 of CERCLA.

VI. EXPECTED CHANGE IN THE SITUATION SHOULD ACTION BE DELAYED OR NOT TAKEN

A delay in action or no action at this Site would increase the actual or potential threats to the public health and/or the environment.

VII. OUTSTANDING POLICY ISSUES

None.

VIII. ENFORCEMENT

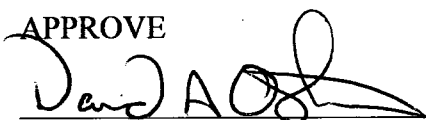
A separate Enforcement Addendum has been prepared providing a confidential summary of current and potential future enforcement activities.

IX. RECOMMENDATIONS

This decision document represents the selected removal action for the Uintah Mining District Site in Summit County, Utah, developed in accordance with CERCLA as amended, and is not inconsistent with the NCP. This decision is based on the administrative record for the Site.

Conditions at the Site meet the NCP section 300.415(b) criteria for a removal action and I recommend your approval of the proposed removal action. EPA's costs for this PRP-led removal action, estimated to be \$48,000, will be limited to project oversight which is subject to reimbursement.

APPROVE



David A. Ostrander, Director
Emergency Response and Preparedness Program

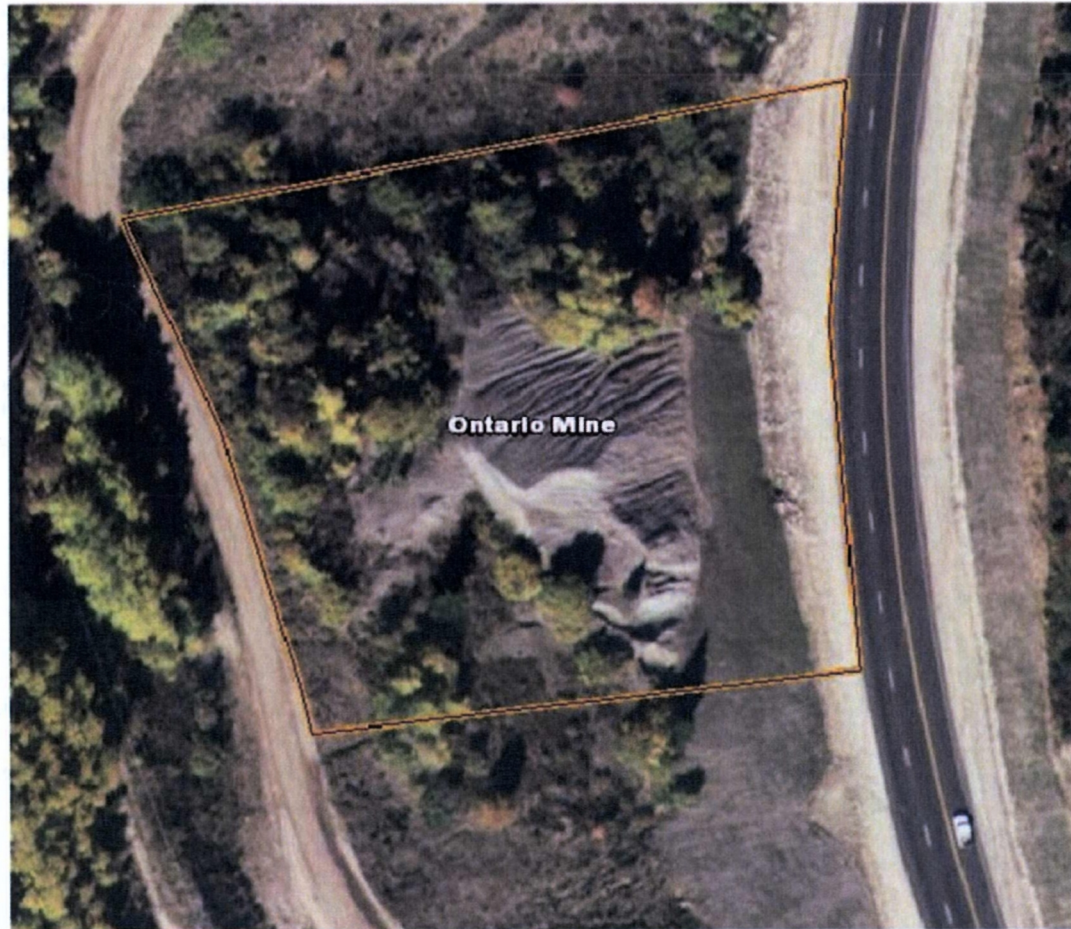
9/10/2015
Date

DISAPPROVE

David A. Ostrander, Director
Emergency Response and Preparedness Program

Date

Exhibit A: General Site Boundaries



 Site Boundary

Exhibit A
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 Site Boundary

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Site Boundary

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Site Boundary



 Site Boundary

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 Site Boundary

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Attachment 1: Applicable or Relevant and Appropriate Requirements (ARARs)

Standard, Requirement, Criteria, or Limitation	Citation	Description	Applicable or Relevant and Appropriate	Comments
FEDERAL				
National Historic Preservation Act	16 USC § 470 <u>et seq.</u> , 30 CFR Part 63, Part 65, Part 800	Regulates impacts to historic places and structures	Applicable	This removal action is limited in scope. Applicable if impacts to historic structures occur. Will be complied with to the extent practicable.
The Historic and Archaeological Data Preservation Act of 1974	16 USC 469	Protects sites with archeological significance	Applicable	This removal action is limited in scope. Applicable if impacts to places of archeological significance occur. Will be complied with to the extent practicable.
Historic Sites Act of 1935, Executive Order 11593	16 USC §§ 461 <u>et seq.</u>	Regulates designation and protection of historic places	Applicable	This removal action is limited in scope. Applicable if impacts to historic places occur. Will be complied with to the extent practicable.

STATE				
Utah Air Quality Rules	UAC R307-205-5	Addresses fugitive dusts from construction activities greater than a quarter-acre in size.	Relevant and Appropriate	To be complied with to the extent practical considering the exigencies of the removal action.
Utah Air Quality Rules	UAC R307-205-8	Specifically describes the proper management of fugitive dusts, construction activities, and roadways associated with tailings piles and ponds.	Applicable	To be complied with to the extent practical considering the exigencies of the removal action.
Utah Water Quality Rules	UAC R317-8-7	Defines UPDES permit requirements for Storm Water Discharges associated with a small construction activity and insures stormwater discharges from the site do not pollute waters of the state.	Relevant and Appropriate	To be complied with to the extent practical considering the exigencies of the removal action.
Archeological and Historical Preservation	Utah Code Section 9-8-307 (notification), and Section 9-8-309 (procedures) UAC R455-4	Addresses disturbance of human remains, including ancient remains, on lands under State jurisdiction.	Applicable	Applicable if human remains, scientific, historic, and archaeological artifacts are identified. To be complied with considering the exigencies of the removal action to the extent practical.