



October 20, 2006

Mr. Tom Dunkelman
On Scene Coordinator
U.S. EPA Region IX – Emergency Response Section
75 Hawthorne Street
San Francisco, CA 94015

**Subject: Site Activity/Removal Report – Anaconda Mine Site, Yerington, Nevada
TDD TO1-09-06-04-0004**

Dear Mr. Dunkelman:

1.0 INTRODUCTION

The United States Environmental Protection Agency Region 9 (EPA) Emergency Response Section (ERS) tasked the Team 9 Superfund Technical Assessment and Response Team (START) to provide support and oversight during removal activities at the Anaconda Mine site in Yerington, Lyon County, Nevada from April 13, 2006 to May 12, 2006. START activities at the site included: photo documentation, oversight, radiation monitoring, air sampling, radiation surveying, and GPS mapping. These removal activities were authorized in an Action Memorandum, and included construction of a soil cap over exposed sulfide tailings, and application of a soil sealant to other areas of the site believed to be contributing to offsite migration of dust. This letter report summarizes site activities conducted and observations made at the site. Figure 1 presents the site location. Figure 2 presents the areas capped with vat leach tailings (VLT) materials. Figures 3 and 4 present the areas where soil sealant was applied. Figure 5 presents the GPS survey of the soil sealant areas. The capped areas were not GPS surveyed, because the capped areas were located on the previously surveyed areas shown on Figure 2. Photo documentation of site activities is included as Appendix B. Team 9 staff mobilized to the site from April 13, 2006 to May 12, 2006, as requested by EPA On-Scene Coordinator (OSC) Tom Dunkelman.



2.0 SITE DESCRIPTION

The Anaconda Mine Site is located approximately 2 miles west of Yerington, directly off of Highway 95, at 103 Birch Drive, in Lyon County, Nevada, and includes portions of Township 13N, Range 25E, Sections 4, 5, 8, 9, 16, 17, 20, and 21 (Mount Diablo Baseline and Meridian) on the Mason Valley and Yerington USGS 7.5-minute quadrangles. The geographic coordinates are 38° 59' 53.06" North latitude and 119° 11' 57.46" West longitude (Figure 1). The site occupies 3,468.50 acres of disturbed land in a rural area, bordered to the north by open fields of alfalfa and residential acreage, and to the east by Highway 95A, which separates the site from the town of Yerington. Approximately 50 percent of the site is privately owned land, and the rest is land within the jurisdiction, custody and control of the United State Bureau of Land Management (BLM). Federal range land continues to the south, and to the west and southwest are the federally owned Singatse Mountains.

The site includes an open mine pit, a large sulfide tailings area, sulfide tailings ponds, a manufacturing area with processing buildings, and evaporation ponds (Figure 1). Throughout the site are roadways and berms, which intersect the ponds and tailings areas, and consist of aggregate VLT material. To the southwest of the site is the town of Weed Heights, and to the east is the town of Yerington. The wind direction at the site varies dramatically, although the prevailing wind direction onsite, approximately 34 percent of the time, is from the southwest to the northeast.

3.0 SITE BACKGROUND

Facilities associated with copper mining operations at the site include an open-pit mine, mill buildings, tailing piles, waste fluid ponds, and the adjacent residential settlement known as Weed Heights. A network of leach vats, heap leaching pads, and evaporation ponds remain throughout the site, in addition to a lead-working shop, a welding shop, a maintenance shop, two warehouses, an electro-winning plant, and an office building.

The site began operation in or about 1918, and was originally known as the Empire Nevada Mine. From 1951 to 1978, the site was occupied by the Anaconda Copper Company. In



approximately 1978, Atlantic Richfield Company (Atlantic Richfield) acquired Anaconda, and began operations. In approximately 1982, Atlantic Richfield sold its interests in the private lands within the site to Don Tibbals, a local resident, who conducted minor mining operations at the site. Mr. Tibbals subsequently sold his interests, with the exception of the Weed Heights community, to Arimetco, Inc. (Arimetco), the current owner. Arimetco operated a copper recovery operation from existing ore heaps within the site from 1989 to November 1999. Arimetco terminated operations at the site, and is currently managed under the protection of the United States Bankruptcy Court in Tucson, Arizona. The approved bankruptcy plan anticipates a liquidation of Arimetco's operations at the site (E&E, 2001).

During the 25-year period that Anaconda and Atlantic Richfield operated the site, they removed approximately 360 million tons of ore and debris from the open pit mine, much of which now remains in tailings or leach heap piles. Anaconda and Atlantic Richfield extracted copper from the mine by two separate methods for processing copper ore, depending on the ore type. The mined ore contained copper oxides in the upper portion of the open pit, and copper sulfides in a lower portion of the open pit. During on-site milling operations, a copper precipitate was produced from the oxide ore and a copper concentrate was produced from the sulfide ore. One processing method involves the operator laying the copper oxide ore in leaching vats and leach out copper with sulfuric acid. The resulting tailings are referred to as vat leach tailings (VLT). The copper subsequently precipitated out after passing the leachate over scrap iron. Anaconda and Atlantic Richfield also used a second process for the oxide ore starting in 1965 in which dilute sulfuric acid was spread over the top of low-grade oxide ore piles leaching out the copper. The resulting acidic solution containing copper was collected and the copper recovered by precipitation, by passing the leachate over scrap iron. The copper sulfide ore was processed by crushing and concentration by flocculation. Lime was then added to maintain an alkaline pH, and the resulting copper concentrate was shipped off-site for final processing (NDEP, 1994; Arimetco, 1998).

In another processing method, Arimetco leached the ore successively with a mild acid solution and kerosene in three process vats (approximately 200,000 gallons). A stronger sulfuric acid solution subsequently removed copper from the kerosene solution. A final electro-winning



plant plated the copper onto stainless steel sheets. The operator recirculated the acid solution from the electro-winning vats back into the leach heaps. The leach heaps remain on-site and are a continuing source of acidic run-off (E&E, 2001).

Byproducts of the milling operation were wet gangue from the sulfide ore and wet tailings and iron- and sulfate-rich acid brine from the oxide ore. Uranium is also present naturally in virtually all soil and tailings onsite.

The ore material from the Yerington Mine contains naturally occurring radioactive minerals. Processing of that ore produced Technologically Enhanced Naturally Occurring Radioactive Materials (TENORM) in which the radioactive minerals were concentrated above natural levels in tailings and process solutions (EPA, 2006). Based on the human health risk of fugitive dusts high in metals and radionuclides blowing offsite and into the neighboring communities, the EPA has prioritized the mitigation of fugitive dust from blowing offsite by capping and sealing areas of the site.

4.0 SITE ACTIVITIES OBSERVATIONS

From April 13, 2006 to May 12, 2006, Craig Tiballi and John West, START Team 9, were mobilized to the site with OSC Tom Dunkelman. OSCs Jason Musante and Will Duncan were also onsite for separate weeks during the capping and sealing activities. Additional onsite personnel included 9 Emergency and Rapid Response Services (ERRS) personnel and several U.S. EPA Environmental Response Team (ERT) personnel. ERT was responsible for the collection of air samples and sampling data throughout the project. The ERT results were not available for incorporation in this report.

4.1 Capping Activities

The goal of the soil capping activity was to minimize the offsite migration of fugitive dust that was potentially contaminated with metals and radionuclides. In 1987 and 1988, prior to leaving the site, Arimetco covered the majority of the sulfide tailings area with VLT material. There were approximately 75 to 100 acres of sulfide tailings that were not capped by Arimetco, reportedly due to wet conditions at the time. These exposed sulfide tailings, depicted as



Areas 1 through 8 on Figure 2, were capped by EPA using the VLT material. The sulfide tailings, being very fine grained, were prone to wind dispersion. Sand dunes surrounding the areas of exposed sulfide tailings were indicative of ongoing aerial transport of the sulfide tailings.

The VLT material consists of crushed aggregate, which contains less fine-grained material than the sulfide tailings. During operation of the mine, the VLT material was generated by the excavation, crushing, and processing of oxide ore. Because the VLT material is a coarse aggregate, it is less prone to creating a wind dispersion hazard.

As part of their capping operations, Anaconda had placed a large amount of extra VLT material in the sulfide tailings area in the form of berms and roads. This material was used by EPA to construct that cap over the remaining areas of exposed sulfide tailings. Capping work was conducted by ERRS personnel, using the following equipment: one excavator, four off-road articulated dump trucks, two bulldozers, and a water truck (Photos 1 and 2). This equipment was used to transport the VLT material from the berms and roads to the designated capping areas. The material was applied in lifts, with a final total cap thickness of approximately 18 inches.

The areas capped with VLT material during the project are as follows:

- Area 1 (approximately 48,641 square feet [ft²]);
- Area 2 (approximately 16,516 ft²);
- Area 3 (approximately 12,466 ft²);
- Area 4 (approximately 17,583 ft²);
- Area 5 (approximately 8,000 ft²);
- Area 6 (approximately 6,531 ft²);
- Area 7 (approximately 14,817 ft²); and
- Area 8 (approximately 4,774 ft²).



When START initially arrived at the site on April 13, 2006, the ERRS personnel were continuing work to cap Areas 1 and 2 with VLT material from roadways R5 and R6. Work at the site commenced on April 7, 2006, and oversight was initially conducted by Ecology & Environment, Inc. (E&E). Capping activities were the primary activity conducted onsite during the duration of the project and were conducted at Areas 1 through 8 of the sulfide tailings (Figure 2).

On April 24, 2006, ERRS personnel had finished capping areas 1 and 2, and started excavating VLT from roadway R7 (between Areas 2 and 7) and transporting it to the northern section of Area 7, where it was spread into approximately 12-inch lifts with the bull dozer. VLT material from roadway R15, between Areas 1 and 3, was used to cap the northern portion of Area 3. Areas 3, 4, and 7 were capped by ERRS personnel during the week of May 1st, 2006.

Areas 5, 6, and 8 were capped by ERRS during the week of May 8, 2006. Once capping was completed in Areas 1 through 8, a bulldozer was sent to the top of a tailings pile furthest north along Highway 95A. The bulldozer reworked the top lip of the tailings pile to cover and cap fine, loose sand material, which was built up along the lip of the tailings pile (Photos 3 and 4).

5.0 APPLICATION AND DETERMINATION OF SOIL SEALANT

Previous radiation surveys performed at the site found elevated levels of radiation in the South Sulfide Tailings Area, the North Sulfide Tailings Areas, and in the Process Area (Figure 1). Based on these results, radiation survey measurements were performed around the surface of the three areas in order to determine placement of soil sealant. These preliminary measurements were performed using a Ludlum Model 2241 (serial #100423) with a Model 44-9 Pancake Probe, for a total measurement of direct radiation (gamma radiation exposure rates measured in units of microRoentgens ($\mu\text{R/h}$)). Ludlum Measurements, Inc. calibrated the Ludlum unit on February 21, 2006.

For general area surveys, radiation exposure rate measurements were recorded at foot level (approximately 0.5 to 1.0 foot above ground surface). When elevated levels were observed on the instrument, an additional surface (on contact) level measurement was also performed and recorded along with the foot level value.



It was also decided to apply the soil sealant to portions of the North Evaporation Pond Area, the North Sulfide Tailings Area, and other miscellaneous areas containing loose, fine-grained sand material thought to be contributing to fugitive dust emissions at the site. Although the application of the soil sealant is not a permanent remedy, the soil sealant is expected to have an effective life-span of 1 to 2 years. The intent of the application of a soil sealant is to reduce fugitive dust emissions at the site until a long-term solution is established. The actual product applied is called Soiltac. This product is on the Nevada Department of Transportation's approved list of products. According to the U.S. Army Corps of Engineers, this product has also been used extensively by the military for dust suppression activities in Iraq and Afghanistan.

The North Evaporation Pond, South Sulfide Tailings, and the Process Area were surveyed by EPA and START personnel at the site for determining areas to place soil sealant. The North Evaporation Pond is to the far northwest of the site, the South Sulfide Tailings Area are to the north-northeast of the mine offices and southwest of the primary work sites, and the Process Area is northwest of the mine offices (Figure 1). The areas identified in this report as having radiation readings higher than 0.20 mR/hr, or miscellaneous areas consisting of loose sand material, were treated with the soil sealant. This radiation action level is consistent with the level in the previous study by Atlantic Richfield Company (ARCO), Radiological and Chemical Exposure Control Plan (RCECP) (RMEC 2005). This is considered a minimum action level, and other adjacent areas with lower readings will be treated with soil sealant as a conservative approach in regard to worker health and safety, but should not be considered as definitive for a human health risk assessment (Figures 3 and 4).

5.1 SOUTH SULFIDE TAILINGS AREA (Areas S2, S3, and S4)

The screening work was done with a Ludlum Model 2241 with a Model 44-9 Pancake Probe. This work was initiated because BLM had posted radiation warning signs around the southern ponds.

The first area of concern consists of two ponds bordered to the northwest by road R9 and to the northeast by berm B17 (Areas S2 & S3; Figure 3) and one small pond west of Road R9 across



from the southern pond mentioned above (Area S4). Area S2 is a sulfide tailings basin immediately southwest of Basin q of approximately 60,000 ft². Area S3 is the northeast portion of the basin just south of the S2 area, which contains red/brown sand, and is approximately 45,000 ft². Area S4 is a small basin just southwest of area S3 of approximately 15,000 ft² (Figure 3).

In Area S3, the radiation readings taken within 6 inches of the surface were at background levels (0.03 mR/hr) at the edges and over most of the light gray surface with levels around 0.03 mR/hr. The readings increased over areas covered by a material the size of medium- to coarse-grained sand that is brown to dark red in color, with a radiation reading up to 6 times the background levels, with readings between 0.12 mR/hr at the boundaries, and 0.25 mR/hr near the center of the areas. The other secondary evaporation ponds, Areas S2 and S4, to the north and west of this area of concern, were surveyed by START and EPA personnel, and not found to have radiation readings significantly above background.

Two excavations were located in the southernmost pond, Area S3. The first excavation, in the northwest corner of the pond, is the deepest, at approximately 10 feet. This pit indicates that there were at least 3 feet of VLT originally placed on top of the evaporation ponds (Photo 5). The ponds then had more slurry pumped out of them for evaporation, resulting in a minimal amount of evaporate deposition on top of the VLT material. The second pit is in the northeast corner of the pond and is approximately 3 feet in deep. The excavation does not penetrate through the VLT material. Areas S2, S3, and S4 were sprayed with the soil sealant on May 11, 2006 (Photo 6 and 7; Figure 5). In addition, ERRS also sprayed Basin q, which is directly north of Area S2, with the soil sealant. The entire basin was covered during the application (Figure 5).

5.2 SULFIDE TAILINGS AREA (Area S1)

The second area of concern is a sulfide tailings pond just south of the primary work area, between Basins 6 and h. This basin is approximately 160,000 ft² and was previously identified in the Fugitive Dust Study (Foxfire Scientific, 2004) as having elevated radiation levels. This



area is bounded by Road R1 to the southeast, Road R13 to the northeast, and Road R12 to the west (Figure 4).

This area also has the medium- to coarse- grained sandy material identified in the first area. This material is brown and does not shade to the dark red color as in the first area, but the walk-around survey confirmed the difference between the brown material and the surrounding light gray and white material. The readings taking at up to 0.5 foot above ground level showed radiation at levels five times that of background (0.03 mR/hr). The light gray material had readings around 0.15 mR/hr. The brown areas had readings above 0.20 mR/hr and up to 0.30 mR/hr. The center of the pond area had VLT piles, which were deposited but never spread out. These VLT piles had radiation readings just above background levels, with all readings under 0.08 mR/hr (Photos 8 and 9). Soil Sealant was applied to the entire S1 basin area on May 11, 2006 (Photo 10; Figure 5).

5.3 PROCESS AREA (Areas S5 and S6)

In April 2005, the EPA Radiation and Indoor Environments (R&IE) National Laboratory conducted a survey of the Yerington Mine Site and surrounding areas. The Laboratory's scanner van was used to locate and assess anomalously high gamma-ray-emitting sources. The Process Area was studied during the EPA Scanner Van Survey and the BLM Site Study (BLM, 2004). The EPA and START personnel walked through the areas identified by both studies to verify those findings. The conclusions of the walkthrough are as follows. The trench identified in the BLM study does have elevated readings. START found a maximum 1.0 mR/hr where the BLM study found areas with readings as high as 5.7 mR/hr. The reason for this discrepancy is not know. The Scanner Van also identified two areas not noted by the BLM study. The first is just west-northwest of a small maintenance building. This area is a small patch of material that read 0.96 mR/hr on contact with the soil. The soil was coarser than the surrounding material but was the same color, and would be hard to identify without an instrument. The second area is a pond located north of the process area. The pond has dark brown granular material that had readings up to 0.30 mR/hr.



Process area S5 consists of a rectangular area of approximately 60,000 ft², and S6 is a small basin to the north, referred to as Basin KK, of approximately 50,000 ft² (Figure 3). The two areas—S5 and S6—were sprayed with the soil sealant on May 10 and 11, 2006 (Photos 11 and 12; Figure 5).

5.4 NORTH EVAPORATION POND

Areas S7 and S8

Area S7 is the southern corner of the North Evaporation Pond and consists of approximately 150,000 ft² (Figure 4). Area S8 is a small basin south of the North Evaporation Pond, just south of Area S7, and consists of approximately 60,000 ft² (Figure 4). Both areas contain fine, loose-gained sandy material that was discovered to potentially contribute to off-site dust migration. Both areas were sprayed with the soil sealant on May 11, 2006; however, the North Evaporation Pond was wet in the area of S7, and the water truck got stuck in the soft material. As a result, only portions of Area S7 accessible from the roadway were sprayed with the soil sealant (Photos 13 and 14).

Areas S12 and S13

Area S12, located at the northern corner of the Northern Evaporation Pond, is approximately 40,000 ft², and contains areas with dark red dirt material, which is thought to have elevated levels of radiation (Figure 4) based on the Scanner Van Survey. Area S13 contains loose, sandy material along the western side wall of the evaporation pond, just south of area S12, and consists of a rectangular area of approximately 30,000 ft² (Figure 4). Both areas were sprayed with the soil sealant on May 12, 2006; however, due to soft, wet material inside the North Evaporation Pond, areas of S12 and S13 were only sprayed in portions that were accessible from the roadway (Photos 15 and 16).



5.5 NORTH SULFIDE TAILINGS AREA

Areas S9 and S10

Area S9 is located at the toe of the sulfide tailings along the western edge or face, just east of the eastern edge of the North Evaporation Pond, and contains a long rectangular area of loose, sandy material. Area S9 is approximately 60,000ft² (Figure 4). Area S10 is located just northeast of Area S9, along the northern face of the Sulfide Tailings, facing the neighboring Peri property to the north (Figure 4). Area S10 is approximately 6,000 ft². Areas S9 and S10 were determined to potentially contribute to fugitive dust migration at the site. Area S9 and S10 were sprayed with soil sealant on May 11, 2006 (Photo 17).

Area S11

Area S11 is at the base of the Sulfide Tailings along the northern edge, which fronts Highway 95A, and is approximately 40,000 ft² (Figure 4). The face of the Sulfide Tailings along Interstate 95 Alt, Area S11, consists of loose, sandy material that is believed to contribute to fugitive dust migration offsite. Area S11 was sprayed with soil sealant on May 12, 2006 (Photo 18).

5.6 MISCELLANEOUS AREA

Additional areas that were sprayed with the soil sealant include Area R2, located on either side of and at the base of road R12. Road R12 leads to the VLT pond and is located west of Area S1. ERRS sprayed both the east and west toes of the roadway on May 12, 2006 (Photos 19 and 20; Figure 5).

6.0 HEALTH AND SAFETY

6.1 Dosimetry Readings

All ERRS, START, and EPA personnel wore dosimeters during work activities at the site. Radiation levels were recorded at the end of the day for all personnel by START, to ensure adherence to health and safety guidance. Throughout the course of the project, no daily



radiological readings from on-site personnel were above the lowest health and safety daily allowance level of 1.0 mR/day.

6.2 Radiation Scanning Activities

Every work day at approximately 12 noon, and at the end of the work day (5:00 pm), the ERRS personnel were scanned for radiation using the Ludlum 2241 radiation meter with a pancake probe. Radiation readings during the entire project were consistently less than or equal to 0.03 mR/hr, which is consistent with site background readings.

6.3 Air Monitoring

Air monitoring was conducted at the site to protect the health and safety of equipment operators, other onsite workers, and the surrounding community. Real-time monitoring, time-integrated monitoring, and short-term analytical sampling were used to identify airborne concentrations of metals and radionuclides, and quantify potential emissions during a Removal/Remedial Action. Airborne particulates were monitored and sampled at background location(s), within the immediate work zone, and at the site perimeter. Air monitoring was conducted during all excavation and capping activities, in order to assess the engineering controls such as watering and use of respirator for mitigating airborne exposures, in the event that action was necessary.

During capping activities, DataRam particulate samples were run every day by START and EPA personnel, from April 13, 2006 to May 9, 2006 (Photo 21). High-volume F&J air samplers were also run during 10 days of the excavation and capping activities and filter samples were collected each day by ERT personnel. The DataRam data and F&J filter samples and data were collected and downloaded by ERT personnel, who will report on the air sampling activities and sample results under separate cover.

7.0 CONCLUSIONS

From April 13, 2006 to May 12, 2006, START personnel documented soil capping and soil sealing activities at the Yerington Mine Site. In addition to oversight of the sealing and



capping activities, START personnel also assisted in the air monitoring program at the site, and the health and safety of onsite workers by daily collection and recording of personal dosimeters and scanning personnel for radiation during and after work activities.

If you have any questions regarding this letter report, please contact the undersigned at 415.243.3760.

Sincerely,

URS Operating Services

A handwritten signature in blue ink that reads "Craig Tiballi".

Craig Tiballi
Project Manager

ATTACHMENTS:

Figures

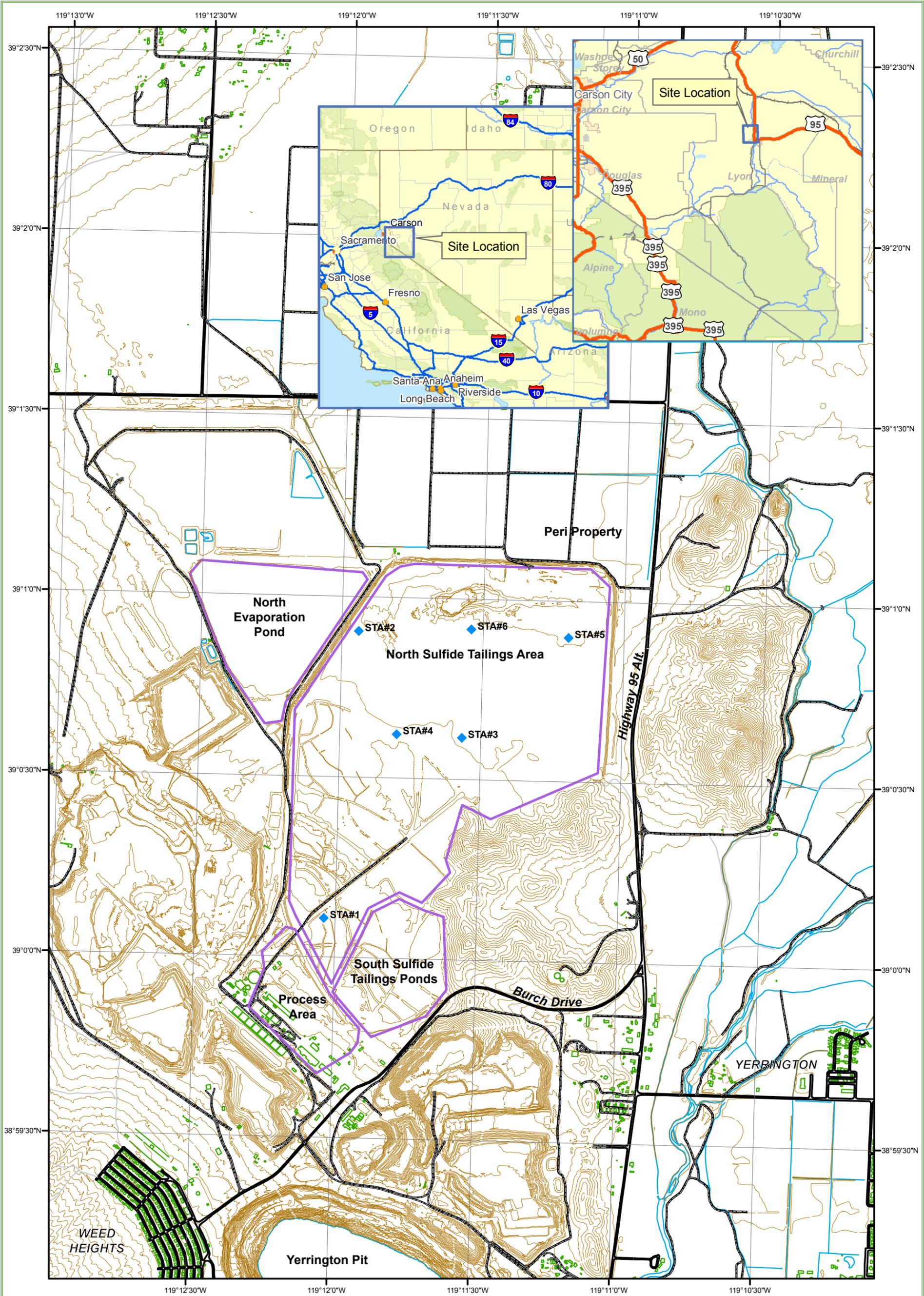
Appendix A

Appendix B

References

Site Photographs

FIGURES



Legend

- ◆ STA#1 Approximate Location of Air Sampling Monitors, Station #1
- Paved Roads
- - - Unimproved Roads
- Trail
- Buildings
- Water Feature
- Topographic Contour (10ft interval)

0 250 500 750 1,000 Meters

0 1,000 2,000 3,000 4,000 Feet

NOTES:
 1) Projection: Transverse Mercator
 2) Horizontal Datum: NAD 1983 Zone 11N

SITE LOCATION MAP

Site Activity Report
 Anaconda Mine
 Yerrington, NV

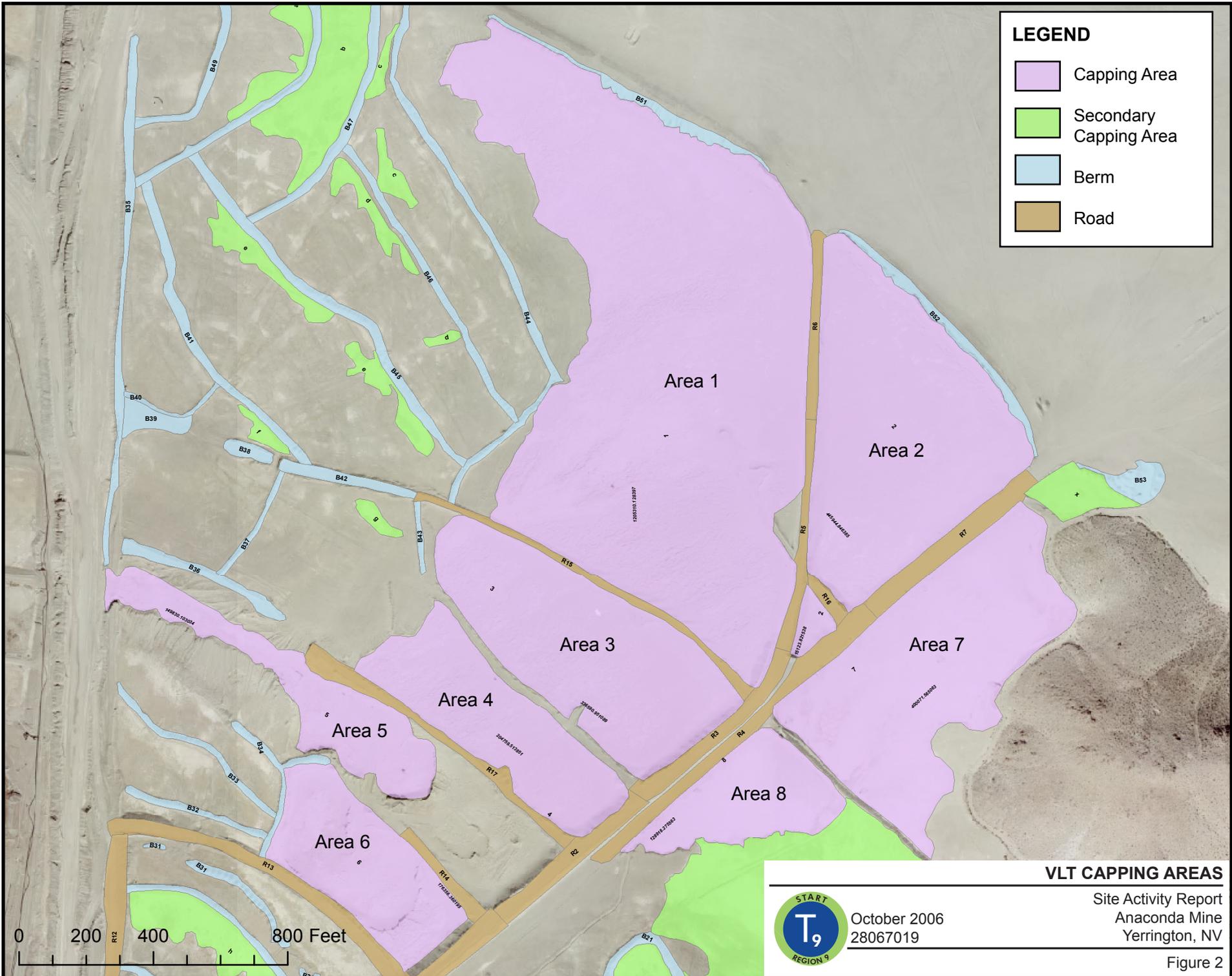
October 2006
 28067019

Figure 1

V:\START\SITE FOLDERS\Anaconda\Figures\Figure 1.ai

LEGEND

-  Capping Area
-  Secondary Capping Area
-  Berm
-  Road



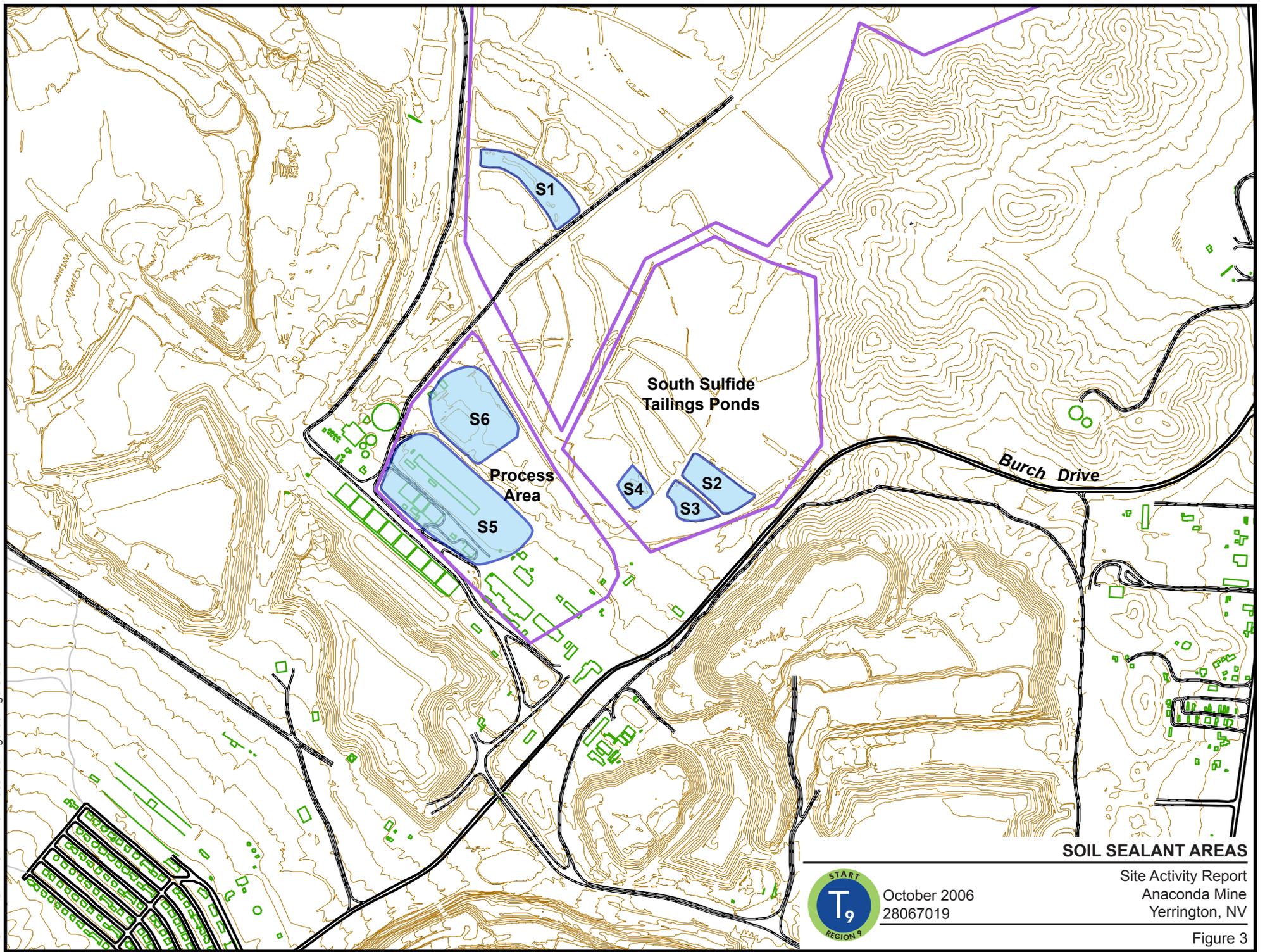
VLT CAPPING AREAS

Site Activity Report
Anaconda Mine
Yerrington, NV



October 2006
28067019

Figure 2



SOIL SEALANT AREAS

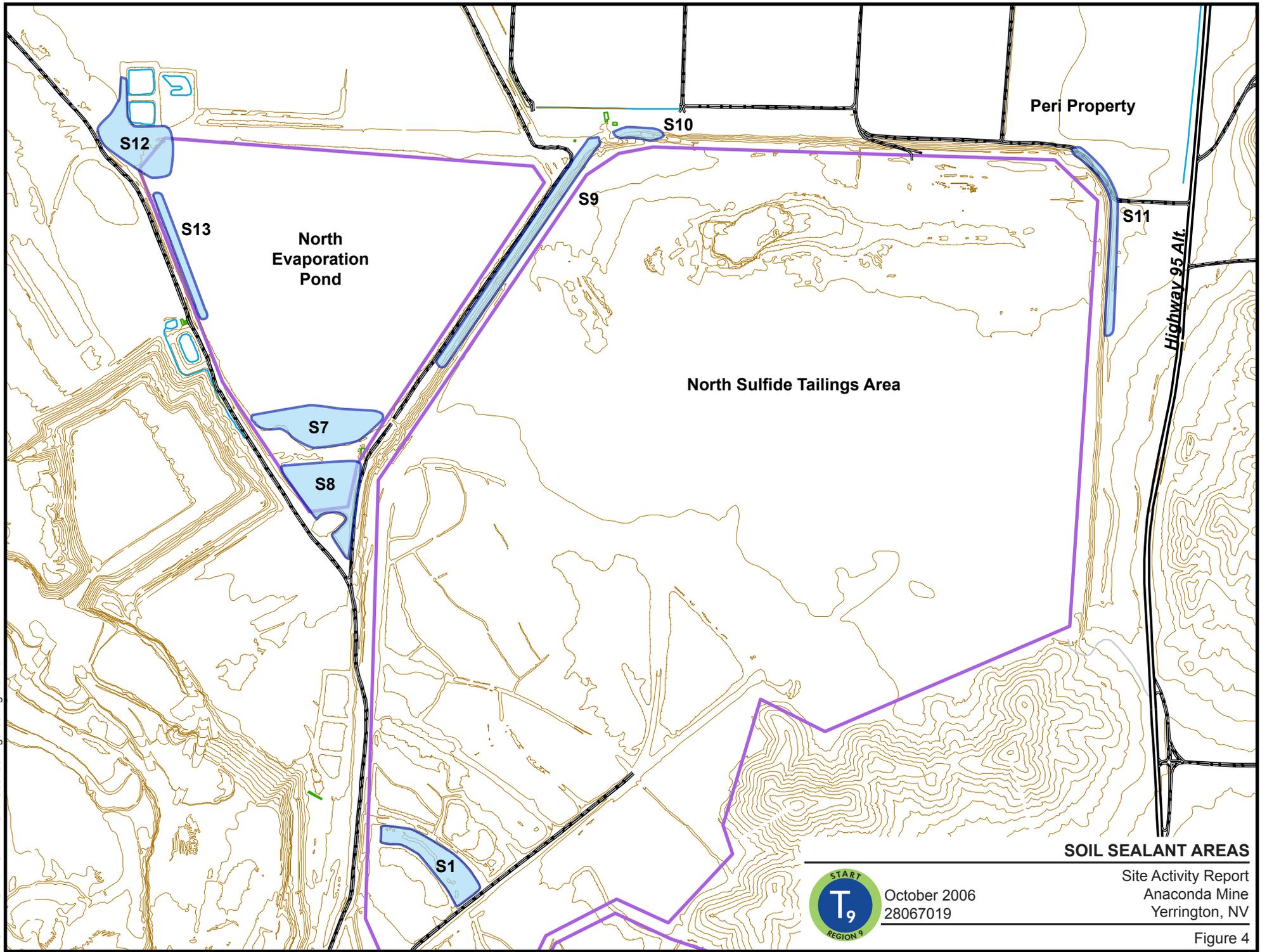


October 2006
28067019

Site Activity Report
Anaconda Mine
Yerrington, NV

Figure 3

V:\START\SITE_FOLDERS\Anaconda\Figures\Figure 4.ai



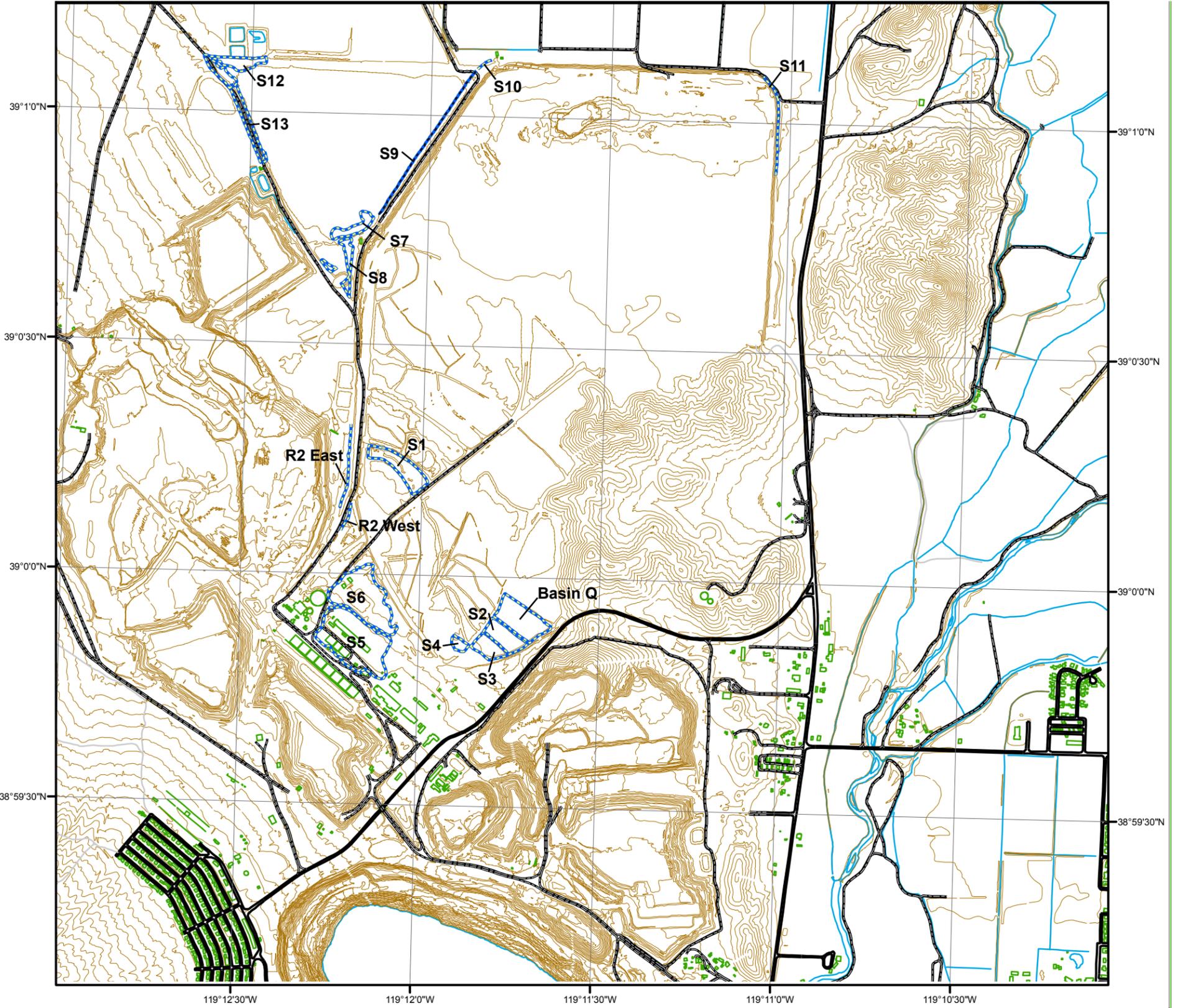
SOIL SEALANT AREAS



October 2006
28067019

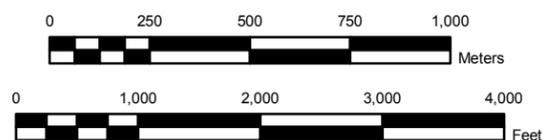
Site Activity Report
Anaconda Mine
Yerrington, NV

Figure 4



Legend

- GPS Survey Area
- Paved Roads
- Unimproved Roads
- Trail
- Buildings
- Water Feature
- Topographic Contour (10ft interval)



NOTES:
 1) Projection: Transverse Mercator
 2) Horizontal Datum: NAD 1983 Zone 11N



GPS SURVEY OF SOIL SEALANT AREAS



October 2006
 28067019

Site Activity Report
 Anaconda Mine
 Yerrington, NV

Figure 5

**APPENDIX A
SITE REFERENCES**

SITE REFERENCES

- Bureau of Land Management, 2004. Review of Yerington Mine Characterization Activities, Technical Resources Group. December 9.
- Dennis Dalton, 1998. *Arimetco Yerington Mine and Process Facility Site Assessment of Groundwater Quality*. Submitted to Arimetco, Inc., July.
- Foxfire Scientific, 2004. *Yerington Mine Site Fugitive Dust Radiological Dose Assessment*, September 19.
- Nevada Department of Environmental Protection, Superfund Branch, Bureau of Corrective Actions, 1994. Nevada Site Inspection Prioritization: Anaconda Copper Company, Yerington Mine, Weed Heights, Nevada. Submitted to the United States Environmental Protection Agency, Region IX; September 8.
- RMEC Environmental, Inc., 2005. *Yerington Mine Site Investigation Operations Lyon County Nevada, Atlantic Richfield Company*, October 10.
- Superfund Technical Assessment and Response Team (START), Ecology & Environment, Incorporated (E&E), 2001. Anaconda, Yerington Mine Site Emergency Response Assessment Final Report, June 30.
- U.S. EPA Radiation and Indoor Environments National Laboratory, 2005. Scanner Van Survey of the Yerington Mine Site and Surrounding Areas, EPA Radiation and Indoor Environments National Laboratory, April 18-26.
- U.S. EPA, 2005. Request for a Time-Critical Removal Action at the Anaconda Yerington Mine Site, Tom Dunkelman, On-Scene Coordinator, US EPA Region IX; December 2.
- U.S. EPA, 2006. *Air Sampling, Monitoring, and Contingency Plan for The Yerington Mine Site*, March 21.

**APPENDIX B
SITE PHOTOGRAPHS**

**Anaconda Mine Site
Yerington, Nevada**



PHOTOGRAPH 1:
Excavator (center), dump truck (right), and bulldozer (left) spreading out VLT material in Area 1 as part of the capping activities. (Facing Southwest)



PHOTOGRAPH 2:
Dump trucks and bulldozer used by ERRS personnel for capping activities.



PHOTOGRAPH 3:
Excavator reworking sand sized material at lip of tailings pile along interstate 95 ALT. (Facing East)

**Anaconda Mine Site
Yerington, Nevada**



PHOTOGRAPH 4.:
Bulldozer reworking loose sand material along the north edge of tailings pile, along interstate 95 ALT. (Facing East)



PHOTOGRAPH 5.:
Photo taken standing in southernmost pond (Area S3) looking northeast at excavation in northwestern corner. This excavation shows at least 3 feet of VLT material on top of the pre-existing evaporation pond.



PHOTOGRAPH 6.:
Water Truck applying sealant at the northwest corner of Area S3. (Facing Southeast)

**Anaconda Mine Site
Yerington, Nevada**



PHOTOGRAPH 7.:
Water Truck applying soil sealant in small sulfide basin, Area S4.
(Facing West)



PHOTOGRAPH 8.:
Photo taken from road R1 looking southwest into the pond (Area S1), showing the brown material all the way to the southwest edge of the basin.
(Facing Northwest)



PHOTOGRAPH 9.:
Photo taken from road R1 looking west into the basin showing the brown material along the southern edge of the basin. The brown material in the western corner had a reading of 0.30 mR/hr.
(Facing Northwest)

**Anaconda Mine Site
Yerington, Nevada**



PHOTOGRAPH 10.:
Sealant applied along the northern portion of the S1 basin. From the northeast corner of the basin looking west.
(Facing West)



PHOTOGRAPH 11.:
Application of Soil Sealant in Process Area S5.
(Facing Southeast)



PHOTOGRAPH 12.:
Application of Soil Sealant in Process Area S5.
(Facing East)

**Anaconda Mine Site
Yerington, Nevada**



PHOTOGRAPH 13.:
Application of soil sealant
along west portion of Area
S7.
(Facing Northwest)



PHOTOGRAPH 14.:
Water truck stuck in soft
material of North
Evaporation Pond, Area S7.
(Facing North)



PHOTOGRAPH 15.:
Application of soil sealant
of north portion of North
Evaporation Pond, Area
S12.
(Facing Northeast)

**Anaconda Mine Site
Yerington, Nevada**



PHOTOGRAPH 16.:
Application of soil sealant
along west edge of North
Evaporation Pond, covering
dark reddish material, Area
S13.
(Facing South-southeast)



PHOTOGRAPH 17.:
Application of Soil Sealant
along west toe of Sulfide
Tailings, Area S9.
(Facing Northeast)



PHOTOGRAPH 18.:
Application of soil sealant
along the northern face of
the Sulfide Tailings, Area
S11.
(Facing West)

**Anaconda Mine Site
Yerington, Nevada**



PHOTOGRAPH 19.:
Application of soil sealant along west toe of road R12, Area R2.
(Facing South)



PHOTOGRAPH 20.:
Application of soil sealant along east toe of road R12, Area R2.
(Facing South)

**Anaconda Mine Site
Yerington, Nevada**



PHOTOGRAPH 21.:
Air monitoring station with
DataRAM 4 particulate
sampler above and F&J
high volume sampler below.