PHASE I ENVIRONMENTAL SITE ASSESSMENT

Valmont Butte Property
3000 North 63rd Street
Boulder, Colorado

Alisto Project No. 50-071

Prepared for:

City of Boulder
Real Estate/Open Space
P.O. Box 791
Boulder, Colorado 80306

Prepared by:

Alisto Engineering Group
Denver, Colorado

September 18, 2000

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September 18, 2000

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Reviewed by:

Al Sevilla
President and Principal

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EXECUTIVE SUMMARY
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3000 North 63rd Street
Boulder, Colorado

As authorized by Mr. Wally Cameron of the City of Boulder Real Estate/Open Space Department on August 10, 2000, Alisto Engineering Group performed an environmental site assessment (ESA) of the Valmont Butte Property (Site), which is just south and east of the intersection of Valmont Road and 63rd Street in Boulder, Colorado.

The site encompasses approximately 102 acres of land that has been developed with a mined ore mill for the past 60 years. The property is occupied by the original mill building, an office building, assay office, wash room, pump house, converted garage and other small buildings housing support operations. An approximately 17-acre tailings pond and associated dams near the center of the property have been inactive for many years and have been covered with several feet of clean fill to eliminate the potential exposure of the tailings to the general public or on-site personnel. The undeveloped areas of the property are vegetated by native grasses and small deciduous trees.

Soils in the area are underlain by Cretaceous sediments of the Upper Pierre Formation, which generally consist of thick shales with thin interbedded sandstones, siltstones, and limestones. The Valmont Dike, an igneous intrusive, is a linear geologic feature that crops out along the northern portion of the site. Its intrusion caused a layer of metamorphosis of the host shale. The topographic plateau that crosses the western portion of the site and bounds the site to the south, coupled with the Valmont Dike's presence along the northern site boundary, forms a small, closed basin where the tailings were deposited and substantially limits the regional drainage onto the site. A site investigation completed by the US Environmental Protection Agency (EPA) in March 1985, did not encounter groundwater at the site and concluded that groundwater was not present south of the Valmont Dike.

The regulatory database search revealed the site is specifically included in the CERCLIS and State Solid Waste facilities databases. Review of the CERCLIS file indicated the presence of low-level radiation being emitted from the soil and that no groundwater was encountered above the shale bedrock. The limited site investigation completed by the EPA concluded that the cover material on the tailings pond is adequate to eliminate exposure pathways. Although several regulated facilities were identified within the extended search radius, none was considered an environmental concern to the site based on location and depth of groundwater.

The historical use of the property is primarily related to the mined ore mill that has operated at the site since the nearly 1940s. The mill operated for 30 years as a processing facility to recover fluorspar from ore mined near the Jamestown area in western Boulder County. From approximately 1977 until 1985 when the mill operations ceased, Hendricks Mining and Milling

operated the facility to recover gold and silver from ore brought to the site. In 1994, the Valmont Butte Corporation acquired the property as an investment with several small tenants residing at the property since that time.

The fluorspar ore that was processed contained low concentrations of naturally occurring radioactive materials (NORMs). However, neither the tailings nor the original ore material was ever processed to recover the radioactive material. Tailings from the processing, including the NORMs, were disposed of into a large pond on the central portion of the site. The Colorado Department of Health, now the Colorado Department of Public Health and Environment (CDPHE), issued a Radioactive Materials License to Allied Chemical in 1971 and transferred the license to Hendricks in the late 1970s. Since the purchase of the property in 1994, Valmont Butte Corporation has worked with CDPHE to terminate the license. In 1999, CDPHE and Valmont Butte Corporation signed a license termination agreement that included deed restrictions or covenants for the site.

Both Allied and Hendricks ore processing operations used Actinol, a non-petroleum-based oil, to separate the mineral from the waste rock. Reportedly, only a few chemicals were used on site, mostly related to the maintenance of the mill equipment, such as lube oils, diesel fuel, lime, soda ash, and paint. Hendricks personnel have indicated that no cyanide or mercury was used in their operations and that the tailings were also disposed of into the tailings pond constructed by Allied. Following completion of the site milling operations, 4 to 12 feet of clean fill were placed on the tailings pond.

During site inspection, several wastes were identified in the mill building, which included the following:

- Two partially filled 55-gallon drums of unknown solids near the east door, which according to Mr. Tim Smith of Valmont Butte could be soda ash reportedly used in the ore processing.
- Several one-gallon containers of paint.
- Numerous burlap sacks of lime.
- Several bags of apparent gold/silver ore.
- Several partially filled 3-gallon cans of lubricating oil.
- Several bags of concrete mix.
- Three open, 55-gallon drums containing apparent asbestos-containing thermal system insulation.

Suspect asbestos containing materials (ACMs) were also visually observed on and in multiple mechanical systems and piping inside and adjoining the mill building. The ACMs are in significantly damaged condition with debris is present in several areas. A more detailed discussion of the ACM present at the site is presented in a separate report.

In addition, there were several drums with unknown contents present in an area of abandoned equipment west of the former tailings pond. One of the drums contains liquid, but there was no evidence of leakage. According to Mr. Smith, the former plant operator, Mr. Tom Hendricks, owns the drums, which will be removed from the site.

There are five above ground storage tanks (AST) at the site, of which two used previously for diesel fuel during the mill operations are presently empty. One of the ASTs contains approximately 2,000 gallons of Actinol and one formerly used for gasoline fuel has been empty for at least the past six years. One small AST is used by Timmerhaus, a log homebuilder at the site, for diesel fuel.

Mr. Tim Smith, the property owner representative, indicated that the drains from the mill building flowed to the tailings pond. The wash house and restrooms in the office building discharge to a septic tank and leach field just west of the former tailings pond. It is likely that process wastes such as lube oils, lime, soda ash, paint, and asbestos debris could have been disposed of into the tailings pond.

Since any wastes potentially discharged into the tailings pond are contained and covered with clean fill, and groundwater was not encountered during the investigation, there is no apparent exposure pathway to impact public health or the environment. On that basis, and because of the drilling restrictions by CDPHE for the tailings pond, no additional investigation is recommended at this time. If the soil or waste discharged to the tailings pond is to be disturbed, the material should be analyzed for hazardous constituents and managed accordingly.

The City of Boulder or the current property owner should require Mr. Hendricks to immediately remove the drums and equipment from the area to the east of the yard embankment. If the containers are allowed to remain at the site and a release occurs, the City or the current property may be held responsible for addressing the release and investigating the extent of impacts.

If demolition of the mill building is planned in the near future, the contract specifications should include the characterization and removal of all unused chemicals and unknown wastes within the building, including ACM. If no demolition is planned, the wastes should be characterized and disposed of in accordance with applicable regulations; and the premises decontaminated, if warranted.

At the time the buildings are demolished, the piping associated with the diesel ASTs for the mill operations should be excavated and removed. If there is evidence of leakage from the piping, additional excavation or exploratory borings should be performed along with confirmation soil sampling and analysis to determine the nature and extent of impact, if any.

The local utility company should be contacted for information as to the ownership of the transformer on-site and the presence of polychlorinated biphenyls (PCBs) in the oil. If no information is available or can be obtained, the City should consider testing the transformer oil for PCBs, which if detected should be removed and replaced with non-PCB oil. Recommendations related to the ACMs present at the property are presented in a separate report.

The Phase I ESA of the property did not include a health risk assessment to evaluate the potential exposure of future site occupants to recognized environmental conditions. Since the former tailings pond contains low-level radioactive materials beneath the clean fill cover, the City should be aware that the State of Colorado has notification requirements and building restrictions that may limit the future use of the site, particularly, at and near the former tailings pond area.

1.0 INTRODUCTION

As authorized by the City of Boulder, Real Estate/Open Space Department on August 10, 2000, Alisto Engineering Group (Alisto) performed an environmental site assessment (ESA) of the Valmont Butte Property (site) in Boulder, Colorado. The site vicinity map is shown on Figure 1.

1.1 Purpose

The purpose of the conducting the ESA was to identify potential sources of contamination or environmental issues and concerns associated with the past and current use of the property that may impact its future use by the City of Boulder.

1.2 Scope of Work

The ESA was performed in accordance with generally accepted standards of practice, including but not limited to the American Society for Testing and Materials (ASTM) Standard Guidance on Environmental Site Assessments for Commercial Real Estate (E 1527 and E 1528), 41 CFR 101-47.202-2 (b) (9) and (10); and applicable sections of Comprehensive Environmental Response Compensation and Liability Act (CERCLA). Other state and local regulations related to site assessments and investigation of potential releases of hazardous substances or waste to the environment were also considered.

The scope of work included the following tasks:

- Survey and visual inspection of the site and adjacent properties to identify potentially sensitive environmental characteristics.
- Review of available reports, and regulatory agency lists and documents to identify potential environmental concerns at and in the immediate vicinity of the property.
- Review of site history and land use to identify past activities of environmental concern.
- Review of state and federal regulatory agency lists to identify sites with known or suspected soil or groundwater contamination within 1.5 mile of the property that may potentially impact its future use or occupants.
- Interview of persons knowledgeable of the site history and use.
- Preparation of this report presenting the results and findings of the above activities.
- Completion of a pre-demolition asbestos survey provided under separate cover.

ASTM Standard E1527-97 is consistent with the environmental due diligence requirements established by the Superfund Amendments and Reauthorization Act (SARA), which includes completion of limited research, review of specified and reasonably ascertainable regulatory listings and a site reconnaissance to identify "recognized environmental conditions". As defined in the ASTM Standard, recognized environmental conditions are those that indicate "the presence or likely

presence of any hazardous substances or petroleum products on a site under conditions that indicate an existing release, a past release, or a material threat of release of any hazardous substances or petroleum products into structures on the property or into the ground, groundwater or surface water of the property."

2.0 GENERAL SITE CHARACTERISTICS

The location of the property and pertinent features are shown on Figure 2 and described in the following section. Recent photographs of the site are presented in Appendix A.

2.1 Site Description

The site encompasses approximately 102 acres of land that has been developed with a mined ore mill for the past 60 years. The property is occupied by the original mill building, an office building, assay office, wash room, pump house, converted garage and other small buildings housing support operations. An approximately 17-acre tailings pond and associated dams near the center of the property have been inactive for many years and have been covered with several feet of clean fill to eliminate the potential exposure of the tailings to the general public or on-site personnel. The undeveloped areas of the property are vegetated by native grasses and small deciduous trees.

The predominant topographic features of the site and vicinity include Valmont Butte, which is just west of the site, and the Valmont Dike along the northern site boundary. The property is northeast of downtown Boulder in portions of the southeast quadrant of Section 22 and the southern half of Section 23, Township 1 North, Range 70 West of the 6th Principal Meridian. Access to the site is from 63rd Street at the southwest corner.

2.2 Adjoining Property Description

The properties adjoining the site are as follows:

North: Valmont Road beyond which is a gravel mining operation.

East: Vacant land controlled by Public Service Company of Colorado (PSCo), which reportedly, has a fill area containing fly ash from the power plant south of the site.

South: Vacant land serving as a buffer zone for the PSCo power plant approximately one mile to the south. Valmont Cemetery adjoins a small area near the south-central portion of the site.

West: A portion of La Farge sand and gravel processing facility.

2.3 Physical Setting

Following is a description of the physical setting and pertinent environmental features of the Valmont Butte property.

2.3.1 Topography

As shown on the USGS 7.5-minute Quadrangle for Niwot, Colorado prepared in 1967 and revised in 1979, the site extends east from the east side of Valmont Butte. The elevation of the site ranges from approximately 5,391 feet above mean sea level (msl) on the butte at the northwest corner down to approximately 5,170 feet above msl on the north-central portion of the site where it extends north of Valmont Road.

2.3.2 Geology and Soils

Surface soils at the site consist of soil identified as part of the Ascalon-Nunn-Manter Association. There are several specific soil types present at the site, but are predominantly sandy loams with a lesser extent of clay soils (USDA 1975). The soils are underlain by Cretaceous sediments of the Upper Pierre Formation (USGS 1979), which generally consists of thick shales with thin interbedded sandstones, siltstones, and limestones. The Valmont Dike, an igneous intrusive, is a linear geologic feature that crops out along the northern portion of the site and caused a layer of metamorphosis of host shale.

2.3.3 Groundwater

Information of hydrogeologic conditions in the vicinity of the site was based on Groundwater Atlas of the United States, Segment 2, Hydrological Atlas 730-C, published by the U.S. Geological Survey. In most of Boulder County, there are no principal water supply aquifers. The principal water supply aquifers of the area, including several zones in the Tertiary and Upper Cretaceous, outcrop east of the site.

The shallow groundwater, if present, will likely follow the general slope of surface topography, which is toward the southeast. The topographic plateau that crosses the western portion of the site and bounds the site to the south, coupled with the presence of Valmont Dike along the northern site boundary, forms a small, closed basin where the tailings were deposited. This closed basis substantially limits the regional drainage onto the site. A site investigation completed by the US Environmental Protection Agency (EPA) in March 1985, did not encounter groundwater at the site and concluded that groundwater was not present south of the Valmont Dike.

3.0 HISTORICAL RECORDS REVIEW

Information from local governmental agencies, historic Sanborn fire insurance maps, city directories, and interviews of people knowledgeable of the property were reviewed to determine historical use of the site and vicinity, the results of which are discussed below.

3.1 Aerial Photographs

Results of review of aerial photographs depicting the development of the site and its vicinity are summarized in the table below. The aerial photographs were reviewed in the office of Colorado Aerial Photograph Service, Denver, Colorado.

Summary of Aerial Photograph Review

Photo date Photo Numbers	Description of Photograph
May 22, 1955 66-26, 27	Only the extreme western portion of the site is visible. One AST on the west side of the mill is visible. Southwest and west of the site is an apparent brick kiln operation with cylindrical kilns and stacks evident.
August 18, 1960 110-28, 29	The mill site and outbuildings are present with the office and garage to the east. Railroad cars are present on a spur below the mill building. A tailings pond is farther east and south of the Valmont Dike. The area between the primary and secondary dams appears to contain water and tailings. Valmont Road and a sand and gravel mining operation are present north of the site with vacant range to the east and south. A cemetery adjoins the south central portion of the site and farther to the south is a large reservoir with a smaller dammed pond (possible tailings pond) on the ridge. A power plant is farther south of the large reservoir.
May 24, 1966 126-34, 35	The west half of the site is visible with no changes from previous photographs. Additional sand and gravel operations are evident to the north.
April 27, 1970 133-25, 26	No changes observed on the site or vicinity.
November 7, 1974 141-9, 10	(High Altitude) No changes observed.
May 12, 1979 73, 74	No changes observed on site. Buildings are present north of the mill at the base of the ridge to the north, just south of Valmont Road. The cylindrical structures on the operations to the southwest and west of the site have been removed.
November 18, 1984 18, 28, 29	No changes on site. Roads from the power plant extend to the east of the site where fill operations are in progress. The City's general development is expanding to the east toward the site with commercial development.
June 20, 1991 42, 43	The tailings pond on site is dry. No other changes are evident.
June 21, 1995 142, 143	Some water is present in the west end of the tailings pond. The upper yard area appears to be used extensively for storage, probably related to the current tenant, a log homebuilder. The last of the former brick operations at the area to the southwest is not evident.
May 2, 2000 122, 123	No changes on site. The southwest property has been redeveloped with another commercial business.

From review of available aerial photographs, it is apparent that the site has been used for ore milling operations from at least 1955 until the early 1990s, when the operation of the current tenant was evident. The adjoining property to the north has been a sand and gravel mining and processing operation since before 1955. To the east is vacant land that has been partially filled, apparently by the utility company. To the south is vacant land that previously had a small tailings pond, but now serves as a vacant buffer zone between the utility company operations and the reservoir. Valmont

Cemetery adjoins the central portion of the site's southern boundary. West of the site are commercial businesses including part of the sand and gravel processing facility to the north. Historically, a brick manufacturing facility developed the areas to the southwest and west.

3.2 Sanborn Fire Insurance Maps

The Sanborn Company has prepared maps for use by fire insurance companies since the late 1900s. These maps, which have been updated and expanded geographically on a periodic basis, provide information on the historical use of properties, including the name and business of the building occupants, construction materials, and features such aboveground or underground storage tanks. Sanborn Maps are typically published for central business districts. Review of Sanborn maps of the area indicated no coverage for the site vicinity.

3.3 Interviews

Mr. Tim Smith of the Valmont Butte Corporation was interviewed regarding the site ownership and history. Mr. Smith stated that Valmont Butte Corporation purchased the site in about 1994 from Tusco, a company that leased it to the former Hendricks (gold) mill since the 1970s. Prior to Hendricks, the site had been owned and operated by Allied Chemical from the 1940s until the 1970s. He was not aware of the site history before Allied's ownership.

Mr. Smith indicated that Allied operated the mill to for process fluorspar from its Jamestown mines for many years. The ore that was processed contained low concentrations of naturally occurring radioactive materials (NORMs) associated with the fluorspar. However, neither the tailings nor the original ore material was processed to recover the radioactive material. Tailings from the processing, including the NORMs, were placed into a large pond on the central portion of the site. The Colorado Department of Health, now CDPHE, issued a Radioactive Materials License to Allied Chemical in 1971 and transferred the license to Hendricks in the late 1970s. Since the purchase of the property in 1994, Valmont Butte Corporation has worked with CDPHE to terminate the license. In 1999, CDPHE and Valmont Butte Corporation signed a license termination agreement that included deed restrictions or covenants for the site. A copy of the license termination agreement is included in Appendix D.

According to Mr. Smith, the fluorspar processing operations used Actinol, a non-petroleum-based oil, to separate the mineral from the waste rock. Reportedly, only a few chemicals were used on site, mostly related to the maintenance of the mill equipment, such as lube oils, diesel fuel, lime, soda ash, and paint. Diesel fuel was stored in ASTs at the site for use in the mill operations. Natural gas was also used as fuel in the mineral drying process.

Mr. Smith stated that Hendricks operations also used the same process for flotation of the gold from the ore. Hendricks personnel reportedly have indicated that no cyanide or mercury was used in their operations and that the tailings were also disposed of into the tailings pond constructed by Allied. Following completion of the site milling operations, 4 to 12 feet of clean fill were placed on the tailings pond.

The outbuildings at the site had a variety of uses including an old assay laboratory, offices, washrooms, a pump house and a garage. Both Allied and Hendricks sublet the former garage to

Mr. Al McGowen who converted it to a small gold recovery operation using physical processes and no chemicals in the operation.

Several other buildings and portions of the site are currently leased to businesses that do not represent a significant threat to the environmental condition of the site.

3.4 Additional Sources

Alisto reviewed files maintained by the EPA related to the facility. A copy of the two documents reviewed on the operational history and results of regulatory agency investigation of the site is included in Appendix D. The two documents on file were: Reconnaissance Visit to Hendricks' Mill, prepared by Ecology and Environment on December 31, 1984 (E&E, 1984), and Sampling Activities Report for Allied Chemical Tailings Pond, prepared by Ecology and Environment on March 25, 1985 (E&E, 1985). These documents supported the information provided by Mr. Smith and described the subsurface conditions observed at the site.

The 1985 sampling report stated that St. Joseph's Mineral Corporation started the original site operations in about 1936 for milling fluorspar until Allied purchased the mill in 1941. The report further indicated that the radioactive material in the fluorspar ore was radium, which emits low level radiation. Reportedly, the tailings generated from the gold ore processing had substantially covered the fluorspar tailings by 1985 when the EPA began its investigation at the site. The 1985 sampling activities included drilling of two groundwater monitoring wells following completion of a geophysical survey. Both wells were drilled into the Cretaceous Pierre Shale without encountering groundwater.

Historical USGS topographic maps of the site and its vicinity for 1902 were reviewed to obtain additional information on site history. The 1902 map shows the site as predominantly vacant land. A trail crosses the site from southwest to northeast from the intersection of old Valmont Road and 63rd Street. A possible animal shelter is evident near the northwest corner of the site.

3.5 Summary

The site was vacant land in about 1900 except for a trail crossing the site, which indicates that the land was probably used for grazing. By the late 1930s, St. Joseph's Mineral Corporation had acquired the site, which was then purchased by Allied in the early 1940s. Allied constructed and operated an ore processing mill until the 1970s to process fluorspar from mines near Jamestown. The mill tailings included naturally occurring radioactive materials that were disposed into the tailings ponds on site.

From the 1970s until the mid-1980s, Hendricks Mining Company operated the mill for recovery of gold and silver from ore mined west of Nederland. The mill operations also used the same flotation medium as Allied. No cyanide or mercury was used in the recovery process at the site. In the early 1990s, Valmont Butte Corporation, the current owner, acquired the property and leased it to a variety of tenants. One tenant, Timmerhaus, maintains a small aboveground storage tank for diesel fuel to operate its equipment.

The surrounding area has been a mixture of vacant land and commercial businesses since the early 1900s. None of the businesses or adjacent land uses appears to be potential environmental concern or source of impact to the subsurface soil or groundwater at the site.

4.0 REGULATORY DATABASE RECORDS REVIEW

The results of the regulatory database search and review of available information are summarized in this section. In accordance with ASTM standards, pertinent regulatory databases encompassing the recommended radius of research were reviewed. Alisto contracted VISTA Information Solutions (a.k.a. ENTRAC) of Englewood, Colorado to obtain and research records available from the U.S. Environmental Protection Agency, Colorado Department of Public Health and Environment, and the Colorado Department of Labor and Employment.

Because of the aerial extent of the site, the standard search radius was extended by one-half mile. The database search and review of available information indicated that the subject property is specifically included in the CERCLIS and Solid Waste Landfill databases. The results of the regulatory database search are included in Appendix B and summarized below.

4.1 Federal Agency Records

The federal regulatory agency databases researched for this ESA included the following:

- **Federal National Priority List (NPL)**

The NPL is the EPA's database of uncontrolled or abandoned hazardous waste sites identified for priority remedial actions under the Superfund program. In order to be included in the NPL, a site must meet or exceed a predetermined hazard ranking system score, be designated as a state top priority site, or meet three specific criteria set jointly by the US Department of Health and Human Services and the EPA in order to become an NPL site. No NPL facilities within the search radius were identified in the database.

- **Federal CERCLIS Database**

The CERCLIS List includes sites, which are either proposed to or on the NPL, or in the screening and assessment phase for possible inclusion on the NPL. The information on each site includes a history of pre-remedial, remedial, and removal and community relations activities or events at the site, financial funding information for the events, and unrestricted enforcement activities.

There are two CERCLIS facilities within 0.5 mile of the property included in the databases. One of the listed facilities is Hendricks Mining and Milling, which was a former site tenant. The investigation completed by the EPA detected low level radiation emanating from NORMs in the fluorspar tailings. As described in the preceding section, the EPA concluded that no additional investigation was warranted and that there was no sufficient cause to include the facility on the NPL.

The second facility included in the list is former Culbertson Mill, which was approximately

0.02 mile south of the site. A preliminary assessment indicated the ore mill processed radium from about 1895 until 1905. Interviews with Public Service Company of Colorado who owns the property asserted that the land was already contaminated by wastes from the mill to the north (Allied's ore mill on the subject site). Reportedly, Culbertson Mill received process water from Allied between 1944 and 1972. There was no information available on the quality of process water. Considering no groundwater is present beneath the area and the location of the Culbertson facility relative to the subject site, it is unlikely that it would impact the environmental condition of the Valmont Butte property.

- **Federal RCRA Databases**

Facilities listed in the RCRA databases are designated as hazardous waste treatment, storage, and disposal (TSD) facilities and hazardous waste generators. The database search identified no RCRA TSD, generator or Violator facilities within the search radius. One CORRACTS facility, Roche Colorado, was identified from the database. Since this facility is approximately one mile southwest and upgradient of the site and no groundwater is present in the area, it is unlikely that the facility is a potential threat to the environmental condition of the site.

- **Federal ERNS Database**

A review of the ERNS database was conducted to identify reported releases of oil and hazardous substances on or adjacent to the site. The database contains information from spill reports submitted to federal agencies including the EPA, U.S. Coast Guard, National Response Center, and Department of Transportation. No releases or spills have been reported for the property or other sites within the search radius.

- **Toxic Release Inventory System Database**

Section 313 of the Emergency Planning and Community Right-to-Know Act (also known as SARA Title III) of 1986 requires EPA to establish an inventory of toxic chemicals emissions from certain facilities. No TRIS facilities within the search radius are included in the database.

- **USGS Water Wells**

The database includes a listing of water supply wells registered with the US Geological Survey. These wells do not represent potential threats to the site's environmental condition, but do reflect the use of groundwater within the site vicinity and may be potential sensitive receptors in the event subsurface contamination is present at the site. Nine registered water supply wells within the search radius were identified from the database.

4.2 State Agency Records

For this ESA, the following state regulatory databases were researched.

- **State Equivalent Priorities Database**

The Hazardous Materials and Waste Management Division of Colorado Department of Public Health and Environment (CDPHE) provides and maintains the State of Colorado's Equivalent Priorities database. Although the State does not maintain a list of priority clean up sites similar to the NPL, it does track facilities that have been accepted into the Voluntary Clean Up Program. There are no sites within the 1.5-mile radius of the property included in the database.

- **State Solid Waste Disposal Facility Databases**

Several State and County databases were reviewed for information regarding solid waste disposal facilities. There were nine solid waste disposal facilities within a 1-mile radius of the site identified from the databases.

One of the listed facilities is the Allied Pile, which is on site and refers to the tailings pond operated by Allied Chemical and Hendricks Mining as described in the previous sections. Five of the listed facilities to the north and northwest do not pose a threat to the site since they are either hydraulically cross-gradient or downgradient. The remaining three facilities to the farwest and southwest are generally considered hydraulically upgradient, although, previous environmental investigations conducted on site by the EPA did not encounter groundwater. As such, these off-site facilities are not likely to pose a threat to the environmental condition of the site.

- **State Registered Leaking Underground Storage Tank (LUST) Database**

The State tracks the status of facilities or sites where a release of petroleum hydrocarbons from underground storage tanks have been confirmed or reported. There are six facilities within a one-mile radius of the property listed in the State Registered LUST database.

Five of the facilities, including four hydraulically upgradient, have been approved for case-closure by the State. One facility to the south and hydraulically cross-gradient should not pose a threat to the site. The sixth facility, the Boulder Asphalt Plant, adjoining the site to the north, is hydraulically cross-gradient to downgradient of the site. Previous EPA investigations completed for the Valmont Butte site concluded that there is no groundwater flowing to the site from the north through the Valmont Dike, an igneous intrusion. As such, the facility should not impact the site.

- **State Registered AST/UST Database**

The State maintains a registry of aboveground and underground storage tank facilities. This database does not include information on registered LUST sites. Seven facilities within a 0.75-mile radius of the property are included in the State Registered AST/UST database.

The USTs at three of the five upgradient facilities had been removed, and as such should not pose a threat to the site. The remaining two facilities have active tanks in service, but hydrological studies have indicated that no groundwater beneath the site. It is not likely that these facilities would impact the site.

- **State Spill Events Database**

The State maintains a database of spill reports separate from that maintained by EPA. There were no reports of spills or releases within 0.625-mile radius of the property identified in the database.

5.0 SITE RECONNAISSANCE

On August 23 and 29, 2000, an inspection or reconnaissance of the property was performed to visually observe evidence of recognized environmental conditions or identify areas of potential environmental concern. The adjoining properties were also visually surveyed to identify land uses and conditions of potential environmental concern. A layout of the site and pertinent features is shown on Figure 2, and photographs of the site taken during the visual survey are included in Appendix A.

The site encompasses approximately 102 acres of industrial/mining land. There are several buildings on site related to the previous ore milling operation. To the east of the buildings and an outdoor storage yard is an approximately 17-acre closed mill tailings pond that extends the length of the low area at the site. Buffer zones to the north, east, and south comprise the balance of the site.

The following tenants presently use the buildings and storage yard areas on site except the old mill building:

Tenant	Leased Area
Timmerhaus Log Homes	Yard, Office, Old Assay Office
Steve McGowan	Old garage
Clean Cut Construction & Blue River Builders	Wash House
Quality Walls	Block Building

- **Source of Drinking Water**

Drinking water is supplied to the site by the two water supply wells and a 70,000-gallon storage tank near the top of Valmont Butte.

- **Sewage Disposal/Septic System**

Domestic sewage is disposed of to a septic tank and leach field near the west end of the tailings pond.

- **Hazardous Substances and Petroleum Products**

Historic operations at the site have included the processing of ores containing low-level radiation, reportedly from radium, the tailings of which remain on site in the pond. Estimates of the total volume of tailings range from 40,000 to 300,000 cubic yards, with an unknown percentage attributable to the fluorspar tailings.

During site inspection, several wastes were identified in the mill building, which included the following:

- Two partially filled 55-gallon drums of unknown solids near the east door, which according to Mr. Tim Smith of Valmont Butte could be soda ash, reportedly used in the ore processing.
- Several one-gallon containers of paint.
- Numerous burlap sacks of lime.
- Several bags of apparent gold/silver ore.
- Several partially filled 3-gallon cans of lubricating oil.
- Several bags of concrete mix.
- Three open, 55-gallon drums containing apparent asbestos-containing thermal system insulation.

Suspect asbestos containing materials (ACMs) were also visually observed on and in several mechanical systems and piping inside and adjoining the mill building. The ACMs are in significantly damaged condition with debris present in several areas. A more detailed discussion of the ACM present at the site is presented in a separate report.

In addition, there were several drums with unknown contents present in an area of abandoned equipment west of the former tailings pond. One of the drums contains liquid, but there was no evidence of leakage. According to Mr. Smith, the former plant operator, Mr. Tom Hendricks, owns the drums, which will be removed from the site.

- **Storage Tanks and Associated Equipment**

There were three ASTs present on the west side of the mill building. Two of the tanks previously contained diesel fuel, but are now empty. One contains approximately 2,000 gallons of non-petroleum-based oil, Actinol, which was used in the ore processing for the flotation of the fluorspar and gold/silver concentrates.

Timmerhaus operates one small diesel AST at the site for its equipment fueling. There was no evidence of staining of the soils around the AST.

One empty gasoline farm tank has been empty since Valmont Butte acquired the property. There was no evidence of USTs observed on the site during inspection.

- **Surficial Staining or Corrosion and Stressed Vegetation**

No surficial soil staining, corrosion, or stressed distressed vegetation was observed during site reconnaissance.

- **PCBs**

A pole-mounted transformer was observed in the yard north of the office building. There was no label on the equipment identifying ownership or PCB content. It was observed to be in good condition with no evidence of leakage. The property owner typically owns on-site transformers

and not the utility company. Mr. Smith indicated that he did not know who owned this transformer. In the event of a release, it is the responsibility of the transformer owner to investigate and remediate any impact on the environment..

- **Drains and Sumps**

Floor drains are present throughout the mill building but were not observed in other buildings at the site. Discharges from this building were to the tailings pond. One above ground sump in the mill building, which was dry at the time of inspection, appeared to be designed to contain blowdown or overflow water from the boiler.

- **Pits, Ponds or Lagoons**

No pits or lagoons were observed on the site. A large, dry, tailings pond is present on the central portion of the site, which received ore tailings from the 1930s or 1940s through the mid 1980s. Some of the tailings waste contained low-level radioactive material as previously discussed. Since its closure, several feet of clean fill has been placed over the tailings.

- **Solid Waste Disposal and Wastewater Discharges**

There was no evidence of wastewater discharges from the site observed during visual inspection. Physical evidence of reported wastewater discharges to the property to the south were not observed.

At least one area on site contains abandoned equipment from the historic milling operations. The equipment is stored to the west of the former tailings pond below the embankment for the yard that Timmerhaus currently operates. As previously described, ore tailings were disposed on the central portion of the site.

- **Wells**

There was no visual evidence of groundwater monitoring wells observed on the site.

- **Adjoining Properties**

The properties adjoining the site were observed from public access right-of-ways. There was no visual evidence of potential recognized environmental conditions observed on the adjoining properties.

6.0 SUMMARY OF FINDINGS

The following is a summary of pertinent findings of the ESA of the Valmont Butte property being considered by the City of Boulder:

- The Valmont Butte site was developed in the 1940s with an ore processing mill, which used a non-petroleum based oil in the milling and recovery process as a flotation medium.

- During the time of its operation, the mill tailings were discharged into an on-site pond, which also contained low level NORMs that still remain on site. A clean fill cover has been placed over the tailings, effectively minimizing or eliminating exposure pathways. The State has approved its closure, but has placed restrictive covenants on the land's future use.

- Several drums of unknown wastes are stored in an equipment storage area at the west end of the tailings pond, below the upper storage yard. These drums are reportedly owned by Hendricks Mining Company and will be removed from the site.

- The site is included in the federal CERCLIS and State solid waste landfill regulatory databases researched. The EPA completed a preliminary investigation of the site related to the low-level radioactive materials discharged to the tailings pond and concluded that no further action is necessary at that time. The State does not intend to pursue additional investigation or enforcement actions on the facility although it is still included on the landfill database.

- Wastes and process waters from the mill building were also disposed of into the tailings pond. Lube oils, solvents, lime, soda ash, paint, and asbestos debris could have potentially been disposed of into the tailings pond.

- Two existing but out-of-service ASTs by the west side of the building previously stored diesel fuel that was used at the mill building for ore processing. A third AST still contains approximately 2,000 gallons of Actinol. A gasoline AST has not been used in the past six years and a small diesel AST is maintained by Timmerhaus for fueling its on-site equipment.

- The owner of one unlabeled transformer identified at the site is not known. The transformer appeared to be in good condition, but its ownership should be determined.

- Numerous asbestos containing materials were identified in the mill building, many of which were in significantly damaged condition. State regulations require that the damaged ACM be cleaned up and abated accordingly. The results of the asbestos survey and recommendations for additional work are presented in a separate report.

7.0 CONCLUSIONS AND RECOMMENDATIONS

Based on the results and findings of the environmental site assessment, it is apparent that there are recognized environmental conditions associated with historic use of the property. Several potential issues were identified, which include:

1. Discharges to the floor drains in the mill building, which could have included paints, lube oil, solvents, and asbestos may have also been disposed of to the tailings pond. A previous investigation conducted by the EPA, however, did not encounter groundwater at or above the Pierre Shale, which eliminates the potential for off-site migration. Any impact on soil would most likely be below 4 to 12 feet of clean cover material. The CDPHE had already approved the pond closure and placed restrictions on drilling in this area through its covenant agreement with the property owners.

2. No information is available as to the content of the abandoned drums, reportedly used by the former Hendricks operation.

3. Releases from leaking pipes associated with the two diesel ASTs, if any could potentially impact the subsurface soil in the vicinity.

Since process wastes or tailings are reportedly contained in the pond, are covered with clean fill, and groundwater has not been encountered in the area, it is apparent that there is no exposure pathway to impact public health or the environment. On that basis, and since the State has placed drilling restrictions on the tailings pond area, no additional investigation is recommended at this time. At such time as the soils within the tailings pond will be disturbed, it should first be sampled and analyzed for the presence of hazardous constituents and managed accordingly.

The City or Valmont Butte Corporation should require Mr. Hendricks to immediately remove the drums and equipment from the area to the east of the yard embankment. If the containers are allowed to remain at this location, the City may be responsible for the investigation and remediation of the subsurface in the event of a release.

Demolition or continued use of the mill building should include the characterization and removal of all unused chemicals and unidentified wastes within the building. The wastes should be characterized and disposed of at an offsite permitted facility in accordance with applicable regulations.

The piping associated with the diesel ASTs for the mill building would need to be excavated and removed from the site. If there is evidence of leak or release in the soil from the piping, additional excavation or exploratory borings should be completed to determine the extent of the impacts.

The local utility should be contacted for information as to the ownership of the transformer on site. If the owner of the transformer on site can not be identified, the City should consider sampling and testing the transformer oil for PCB. If the oil contains PCBs, the transformer oil should be removed and disposed of accordingly and re-filled with non-PCB oil.

Recommendations related to the asbestos containing materials present at the site are presented in a report to be submitted under separate cover.

8.0 LIMITATIONS

This environmental site assessment report was prepared on behalf of and for the exclusive use of the City of Boulder. Alisto has prepared the report in accordance with generally accepted industry practices for similar type of work completed in the area at the time of the project.

The conclusions and recommendations presented above are based on the agreed scope of work outlined in this report. Alisto makes no warranties or guarantees as to the accuracy or completeness of information provided or compiled by others. It is possible that information exists beyond the scope of this investigation. Also, changes in site use may have occurred some time in the past due to rainfall, temperature, water usage, economic, agricultural, or other

factors. Additional information that was not located, available, or could not be obtained during the preparation of this report may result in modification of the conclusions and recommendations presented herein.

Alisto does not represent that the site contains no hazardous or toxic materials, products, or other latent conditions beyond that observed during the site assessment. Further, the services herein are in no way to be construed or intended to be relied upon as a legal opinion, interpretation or advice.

REFERENCES

Department of Agriculture, Soil Conservation Service, Soil Survey of the Boulder County Area, Colorado, compiled by Donald C. Moreland *etal.*, January 1975.

Department of Interior, US Geological Survey, Geologic Map of Colorado, compiled by Ogden Tweto, 1979.

Department of Interior, US Geological Survey, Groundwater Atlas of the United States, Segment 2, Hydrological Investigation Series Map HA 730 C, 1997.

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Department of Interior, US Geological Survey, 7.5 minute Topographic Quadrangle Map of Niwot, Colorado, 1950.

Department of Interior, US Geological Survey, 7.5 minute Topographic Quadrangle Map of Niwot, Colorado, 1967.

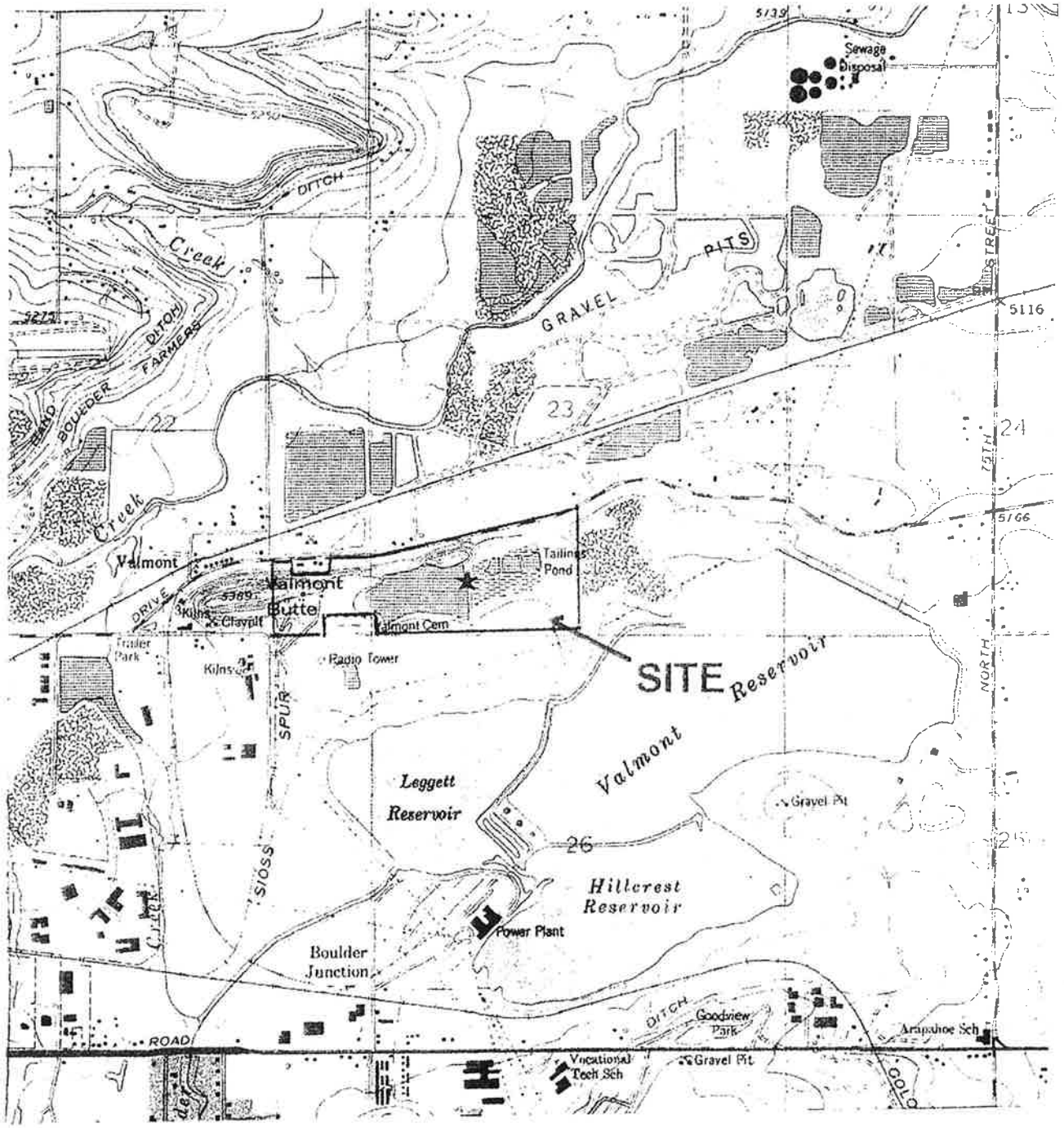
Department of Interior, US Geological Survey, 7.5 minute Topographic Quadrangle Map of Niwot, Colorado, 1967, photorevised 1971.

Department of Interior, US Geological Survey, 7.5 minute Topographic Quadrangle Map of Niwot, Colorado, 1967, revised 1979.

VISTA Information Solutions, Site Assessment Plus Report, Report No. 000731002, July 31, 2000.

FIGURES

R 70 W



N

0' 1000' 2000'

SOURCE:
USGS MAP, NIWOT QUADRANGLE,
7.5 MINUTE SERIES. 1967,
PHOTOREVISED 1979.

FIGURE 1

SITE VICINITY MAP

VALMONT BUTTE PROPERTY
3000 NORTH 63RD STREET
BOULDER, COLORADO

PROJECT NO. 50-071

ALISTO ENGINEERING GROUP
DENVER, COLORADO

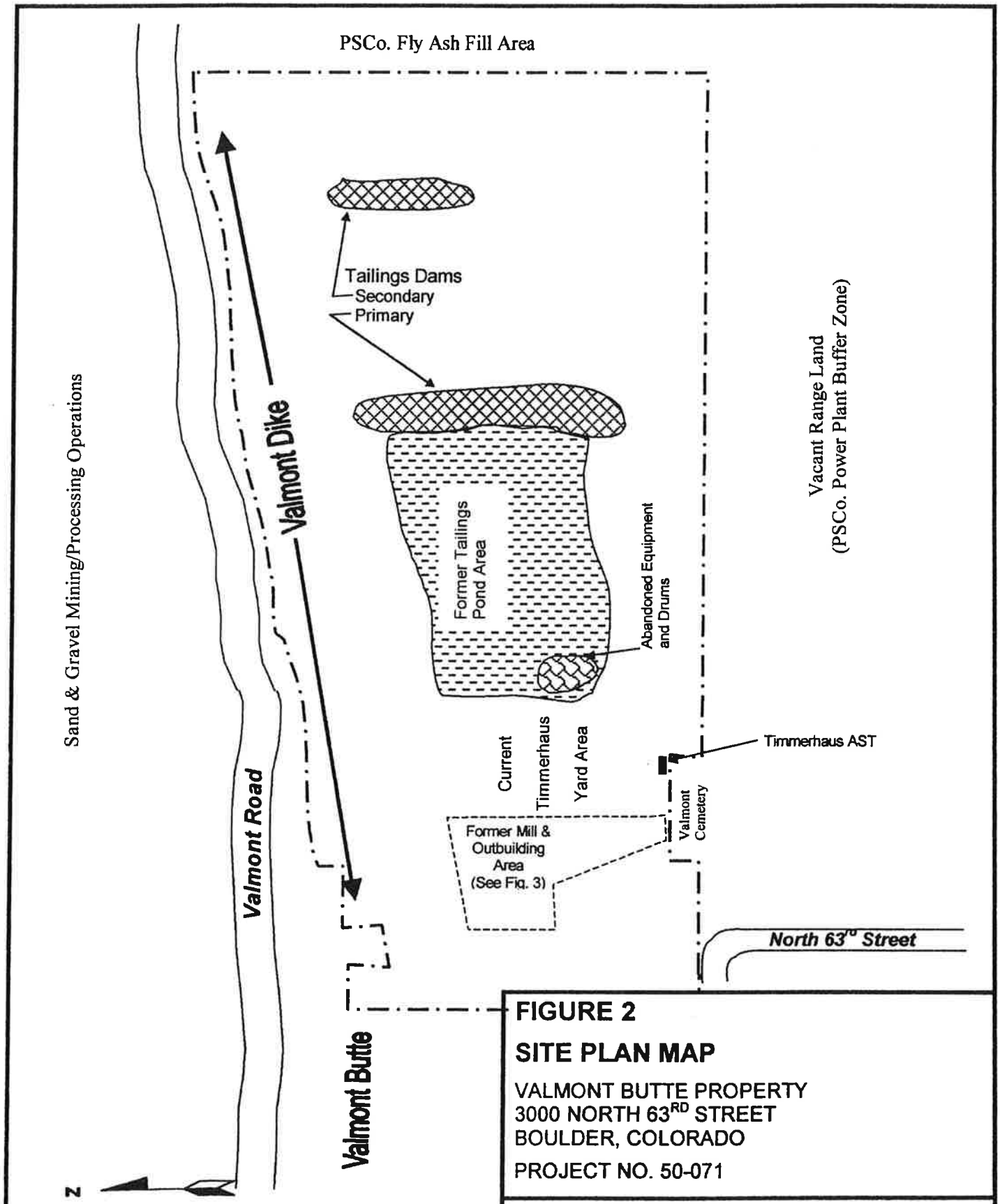


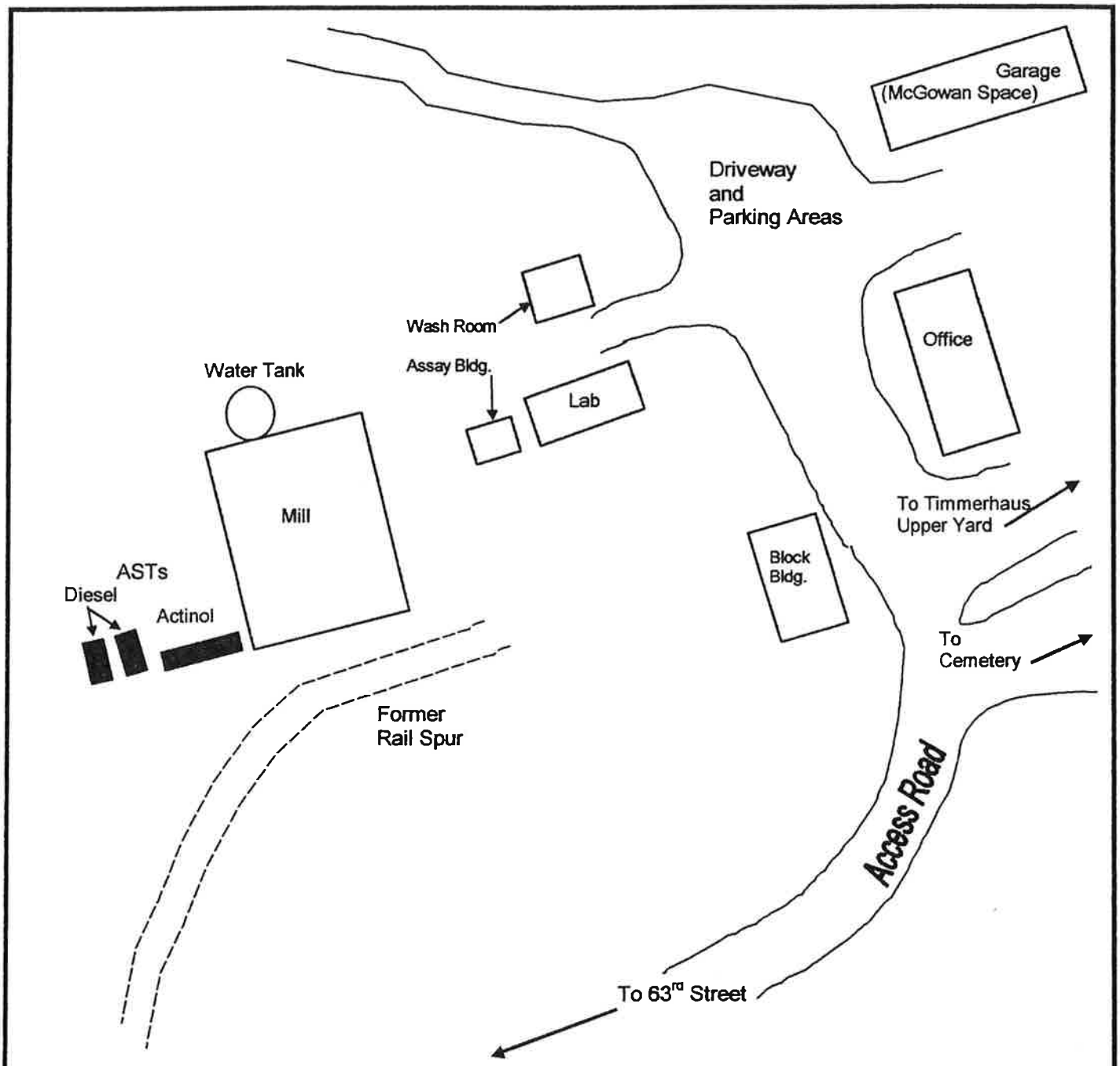
FIGURE 2

SITE PLAN MAP

VALMONT BUTTE PROPERTY
3000 NORTH 63RD STREET
BOULDER, COLORADO

PROJECT NO. 50-071

ALISTO ENGINEERING GROUP
DENVER, COLORADO



N

NOT TO SCALE

FIGURE 3

FORMER MILL & OUTBUILDING AREA

VALMONT BUTTE PROPERTY
3000 NORTH 63RD STREET
BOULDER, COLORADO

PROJECT NO. 50-071

ALISTO ENGINEERING GROUP
DENVER, COLORADO

APPENDIX A

SITE PHOTOGRAPHS

Photo #1: View west-northwest of the mill building(left & background), laboratory and assay buildings (center foreground), and washroom (right).

Photo #2: View east of the south side of the mill building.

Photo #3: View southeast of the "office building". Note the pole-mounted transformer to the left.

Photo #4: View northeast of the old garage used by Al McGowan.

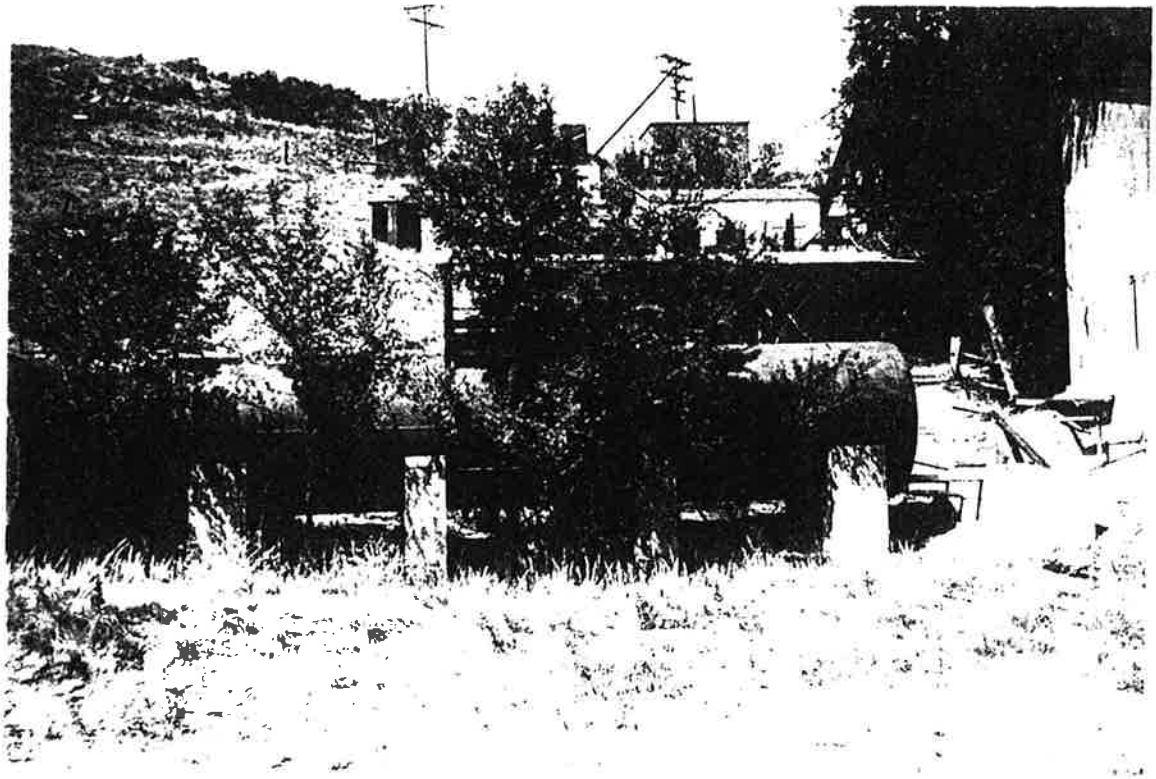


Photo #5: View north of the Actinol tank (partially full) near the southwest corner of the mill building.

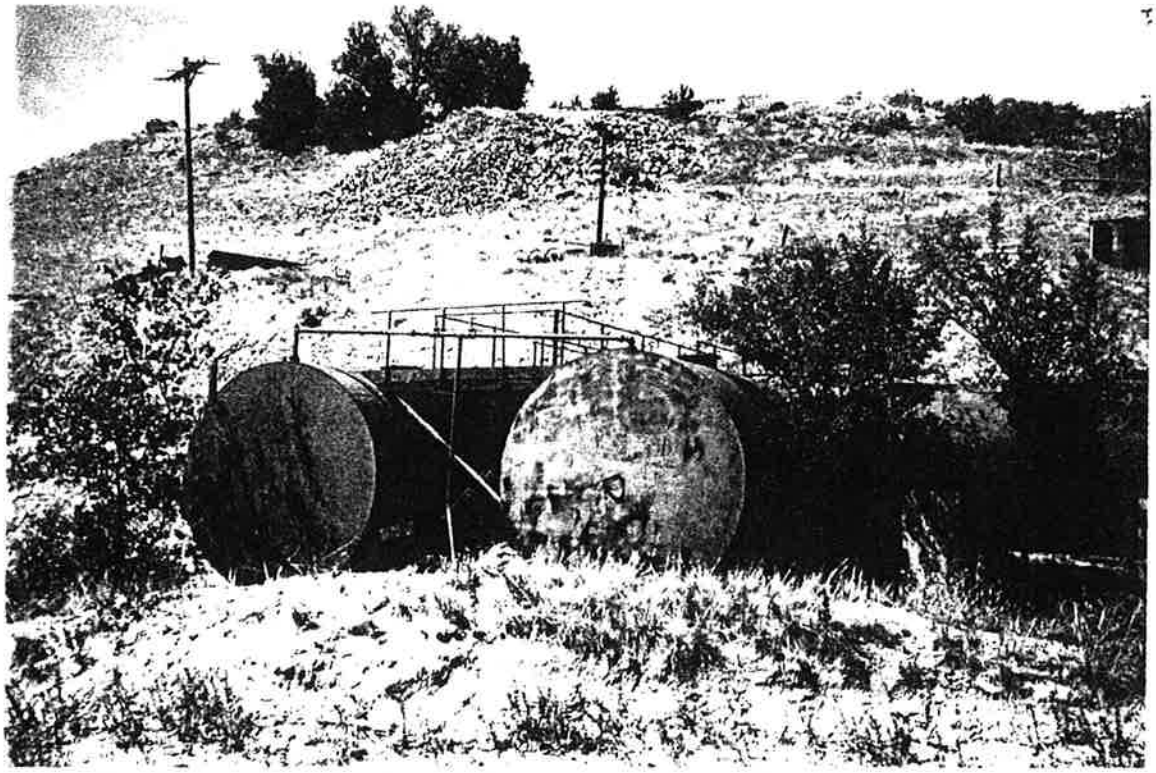


Photo #6: View northwest of the two large empty diesel ASTs near the southwest corner of the mill building.

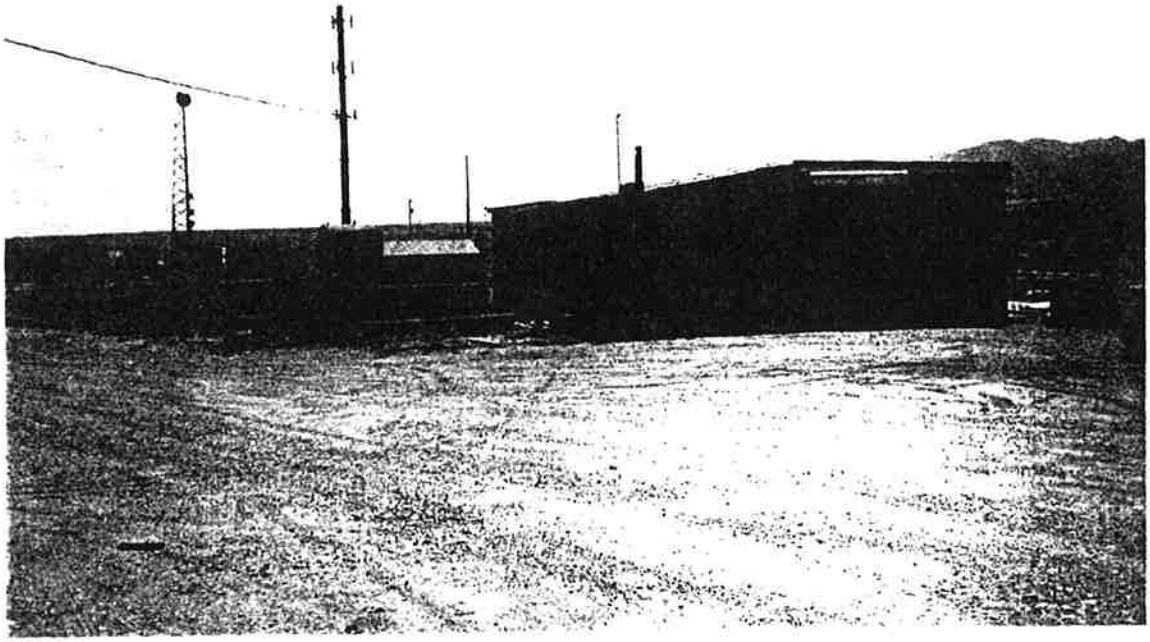


Photo #7: View south from the driveway of the cinder block storage building. An unused gasoline AST is on the east side.

Photo #8: View northeast of part of the Timmerhaus storage yard. The AST (center) contains diesel fuel for their on-site equipment.

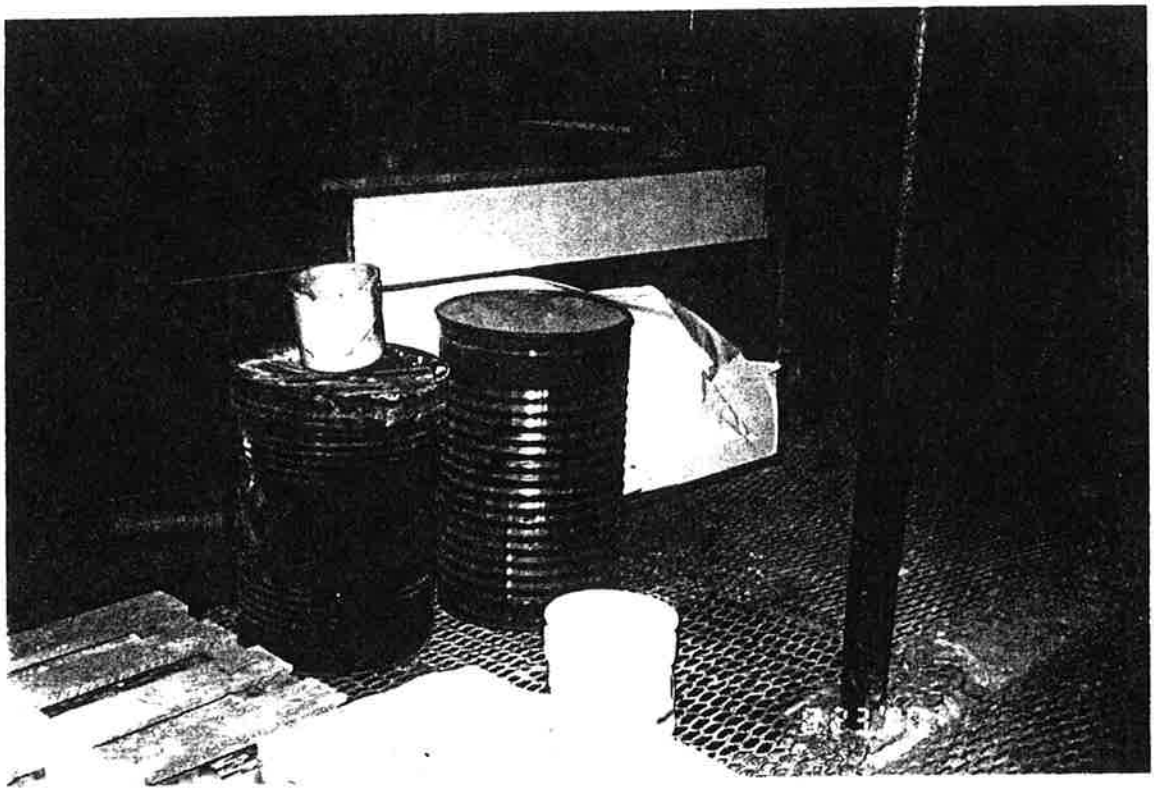


Photo #9: Two drums of unknown contents inside the mill building's east door.

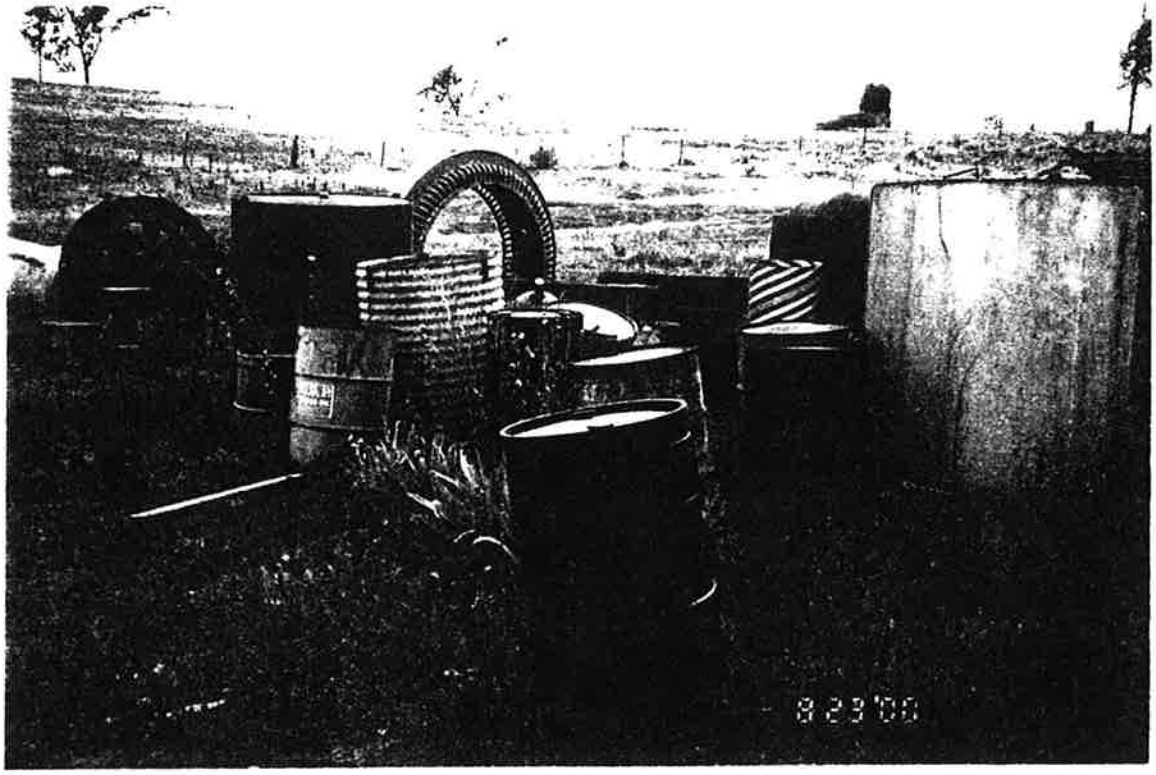


Photo #10: Several drums of unknowns in an old equipment area east of the main yard and just west of the old tailings pond. View south.

Photo #11: View southeast of the former tailings pond from the west end.

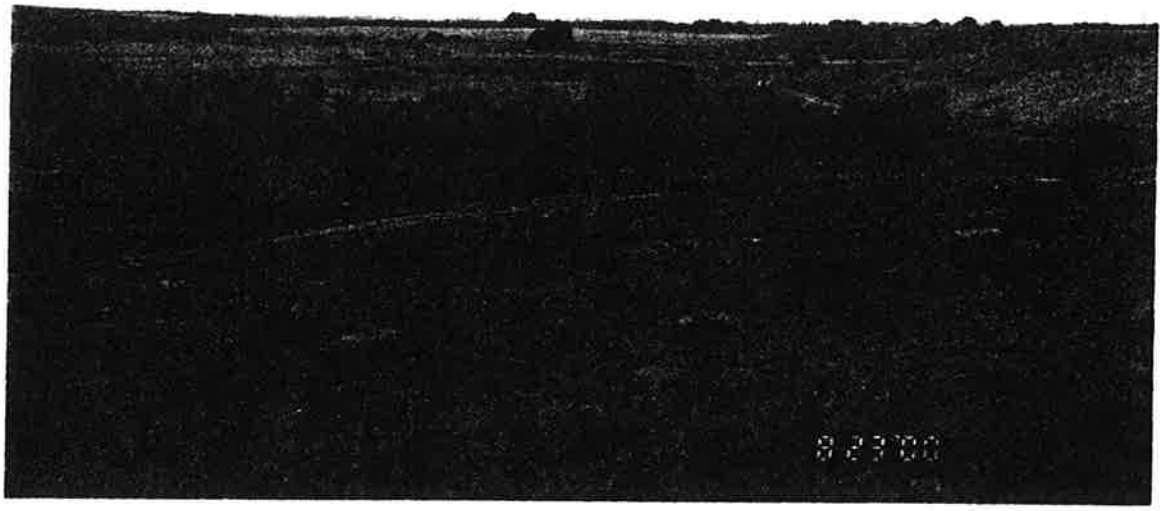


Photo #12: View northeast of the tailings pond and areas to the east of the site in the distance.

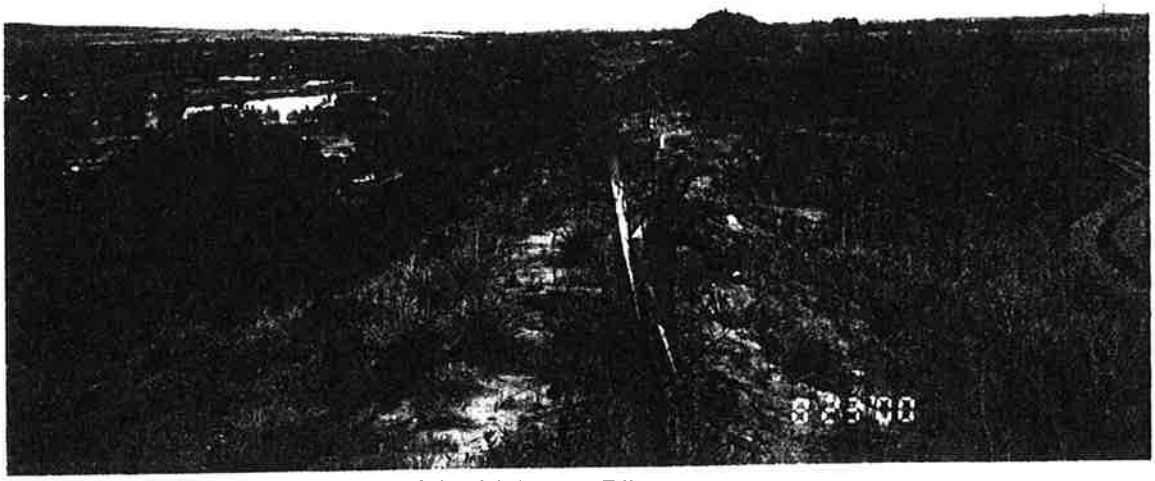


Photo #13: View east of part of the Valmont Dike.

Photo #14: View north of the adjoining property operated as a sand and gravel pit. Valmont Road is in the trees at the base of the slope.

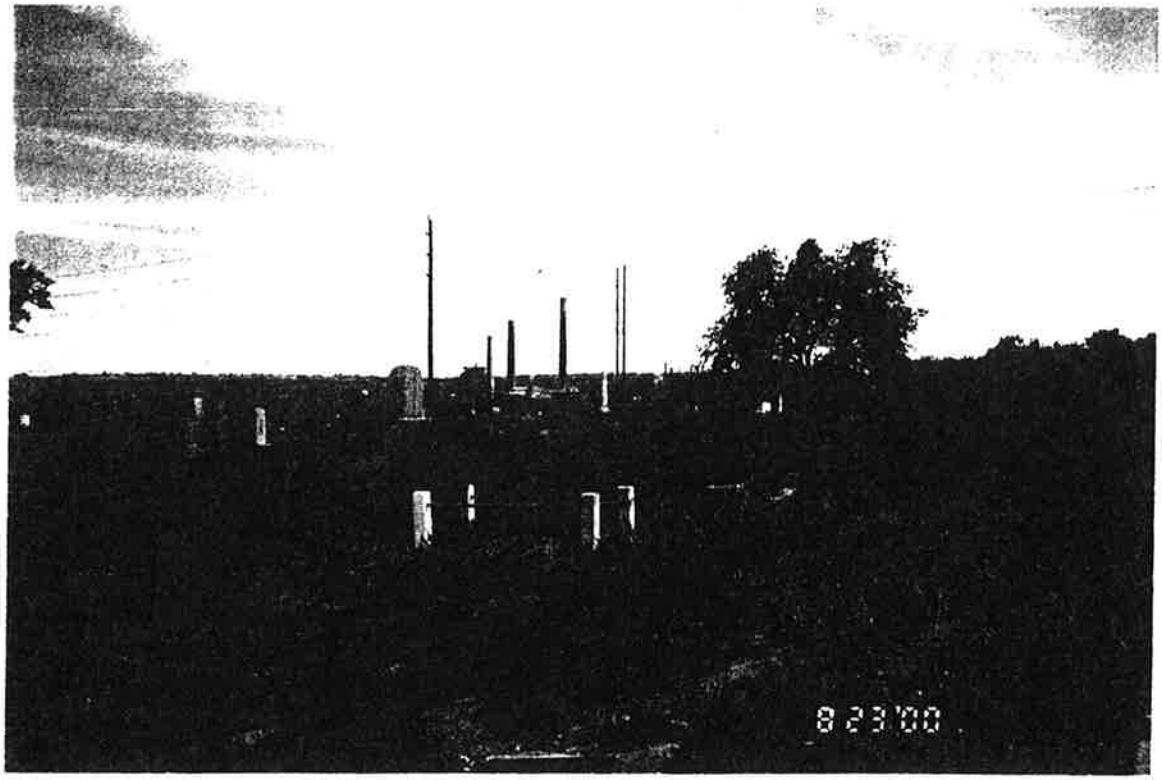


Photo #15: View south of the Valmont Cemetery. Stacks in the distance are the Public Service Company power plant.

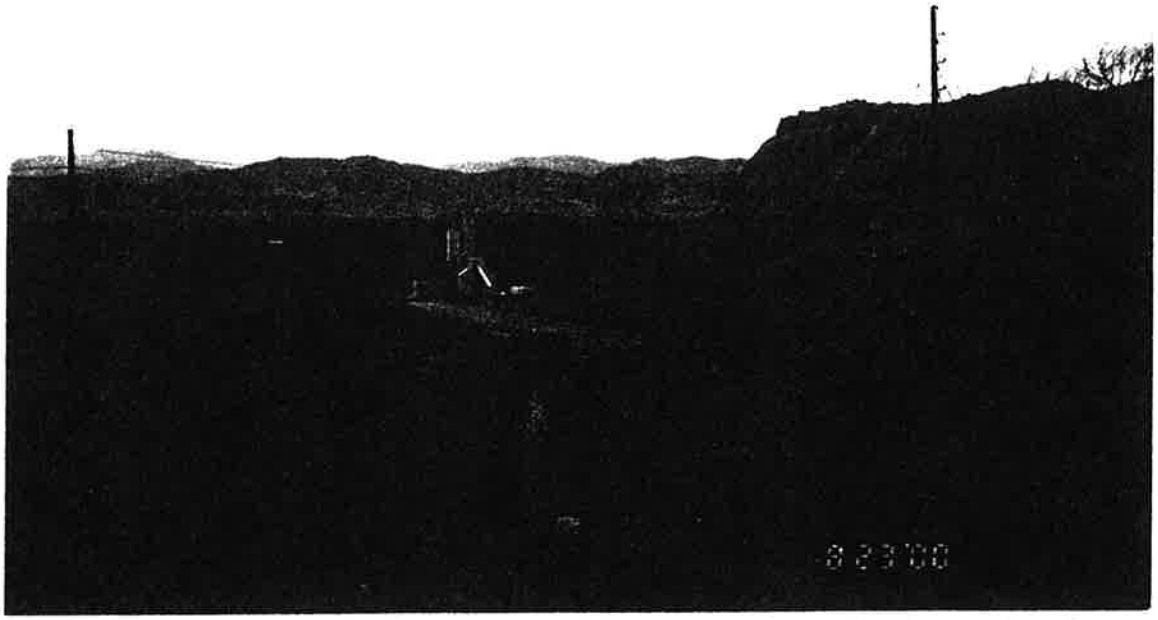


Photo #16: View west of the far west end of the site, La Farge plant (center), and Valmont Butte (far right).

APPENDIX B

REGULATORY AGENCY REPORT

SITE ASSESSMENT PLUS REPORT
(EXTENDED BY 1/2 MILE)

PROPERTY INFORMATION	CLIENT INFORMATION
Project Name/Ref #: 50-071 VALMONT BUTTE PROPERTY NEC VALMONT RD AND 63RD ST BOULDER, CO Latitude/Longitude: (40.031069, 105.202092)	RICK LUCE ALISTO ENGINEERING GROUP 7100 NORTH BROADWAY SUITE 1B-PH DENVER, CO 80221-2917

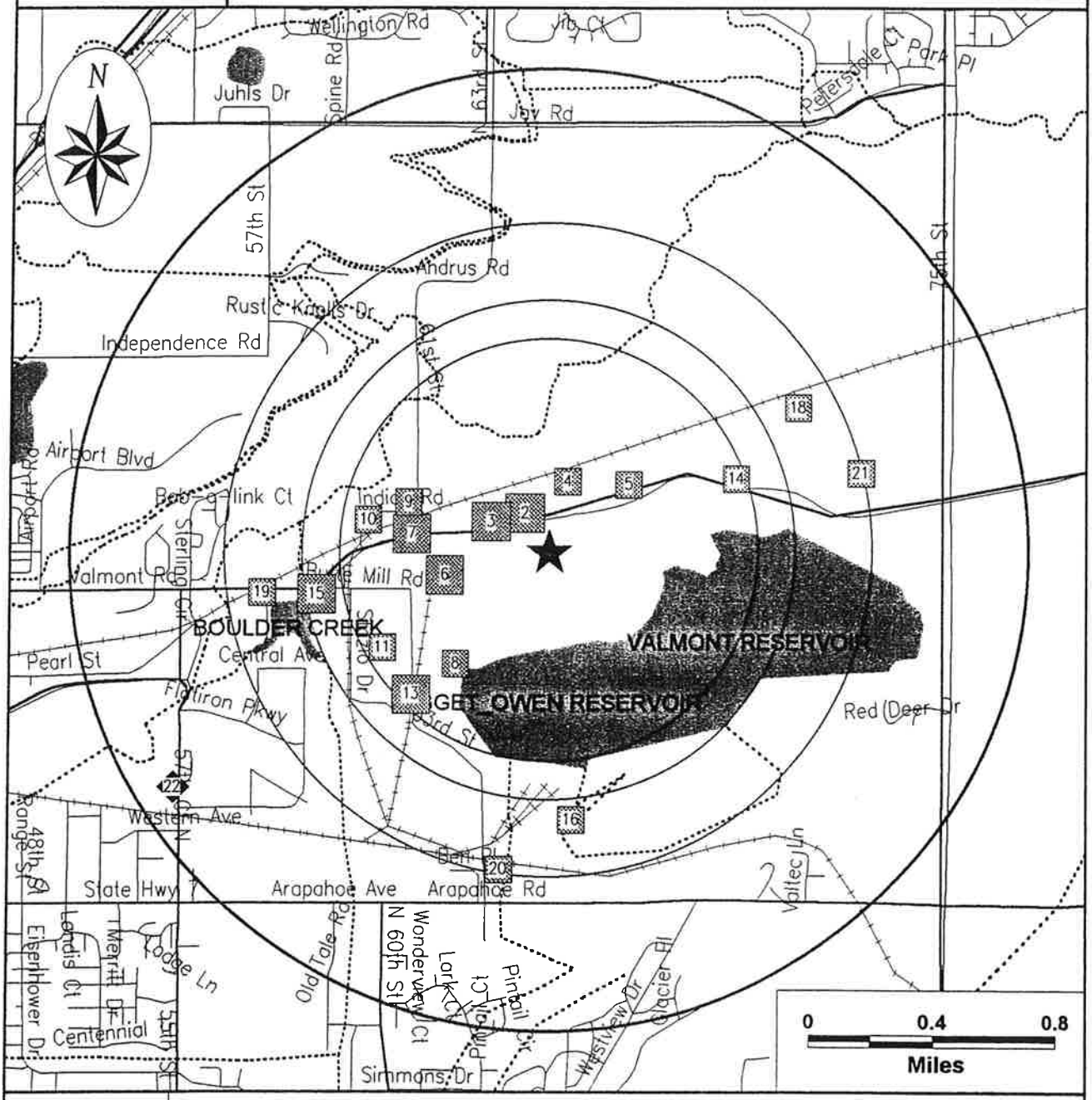
Site Distribution Summary Agency / Database - Type of Records			within 5/8 mile	5/8 to 3/4 mile	3/4 to 1 mile	1 to 1 1/2 mile
A) Databases searched to 1 1/2 mile:						
US EPA	NPL	National Priority List	0	0	0	0
US EPA	CORRACTS	RCRA Corrective Actions	0	0	0	1
STATE	SPL	State equivalent priority list	0	0	0	0
B) Databases searched to 1 mile:						
US EPA	CERCLIS / NFRAP	Sites currently or formerly under review by US EPA	2	0	0	-
US EPA	TSD	RCRA permitted treatment, storage, disposal facilities	0	0	0	-
STATE REG CO	LUST	Leaking Underground Storage Tanks	4	0	2	-
STATE/ REG/CO	SWLF	Permitted as solid waste landfills, incinerators, or transfer stations	6	2	1	-
USGS/STAT	WATER WELLS	Federal and State Drinking Water Sources	5	1	3	-
C) Databases searched to 3/4 mile:						
US EPA	RCRA Viol	RCRA violations/enforcement actions	0	0	-	-
US EPA	TRIS	Toxic Release Inventory database	0	0	-	-
STATE	UST/AST	Registered underground or aboveground storage tanks	6	1	-	-
D) Databases searched to 5/8 mile:						
US EPA	ERNS	Emergency Response Notification System of spills	0	-	-	-
US EPA	GNRTR	RCRA registered small or large generators of hazardous waste	0	-	-	-
STATE	SPILLS	State spills list	0	-	-	-

This report meets the ASTM standard E-1527 for standard federal and state government database research in a Phase I environmental site assessment. A (-) indicates a distance not searched because it exceeds these ASTM search parameters.

NOTES

SITE ASSESSMENT PLUS REPORT
(EXTENDED BY 1/2 MILE)

Map of Sites within 1 1/2 Miles



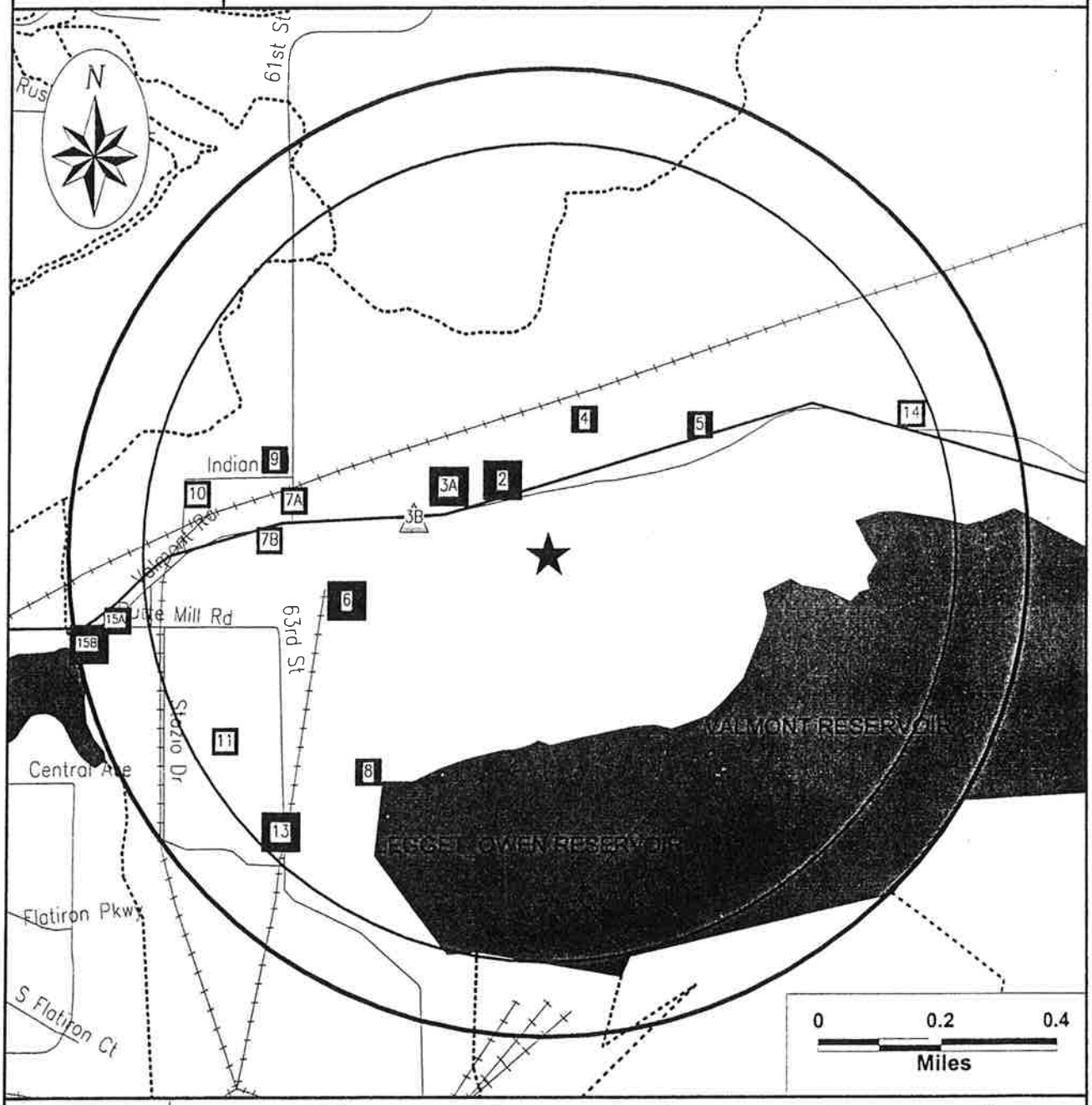
Subject Site	Category:	A	B	C	D
★	Databases Searched to:	1 1/2 mi.	1 mi.	3/4 mi.	5/8 mi.
	Single Sites	◆	■	△	○
	Multiple Sites	◆	■	△	○
		NPL, SPL, CORRACTS (TSD)	CERCLIS\ NFRAP, TSD, LUST, SWLF, SCL	UST	ERNS, GENERATORS

Highways and Major Roads
Roads
Railroads
Rivers or Water Bodies
Utilities

If additional databases are listed in the cover page of the report they are also displayed on this map. The map symbol used corresponds to the database category letter A,B,C,D.

SITE ASSESSMENT PLUS REPORT
(EXTENDED BY 1/2 MILE)

Map of Sites within 3/4 Miles



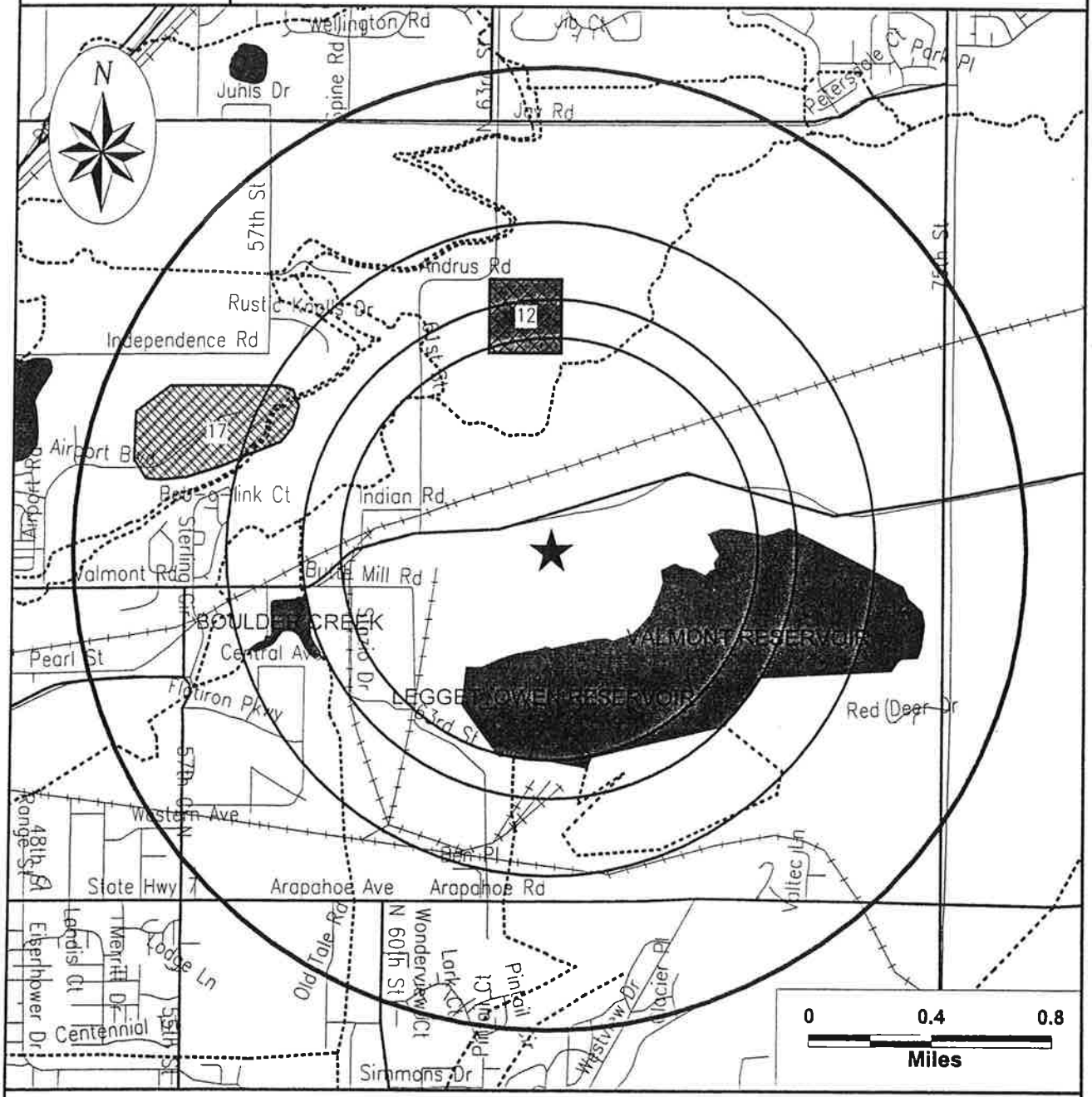
Subject Site	Category:	A	B	C	D
★	Databases Searched to:	1 1/2 mi.	1 mi.	3/4 mi.	5/8 mi.
	Single Sites	◆	■	△	○
	Multiple Sites	◆	■	△	○
		NPL, SPL, CORRACTS (TSD)	CERCLIS\ NFRAP, TSD, LUST, SWLF, SCL	UST	ERNS, GENERATORS

Highways and Major Roads
Roads
Railroads
Rivers or Water Bodies
Utilities

If additional databases are listed in the cover page of the report they are also displayed on this map. The map symbol used corresponds to the database category letter A,B,C,D.

SITE ASSESSMENT PLUS REPORT (EXTENDED BY 1/2 MILE)

Sites Represented as Polygons



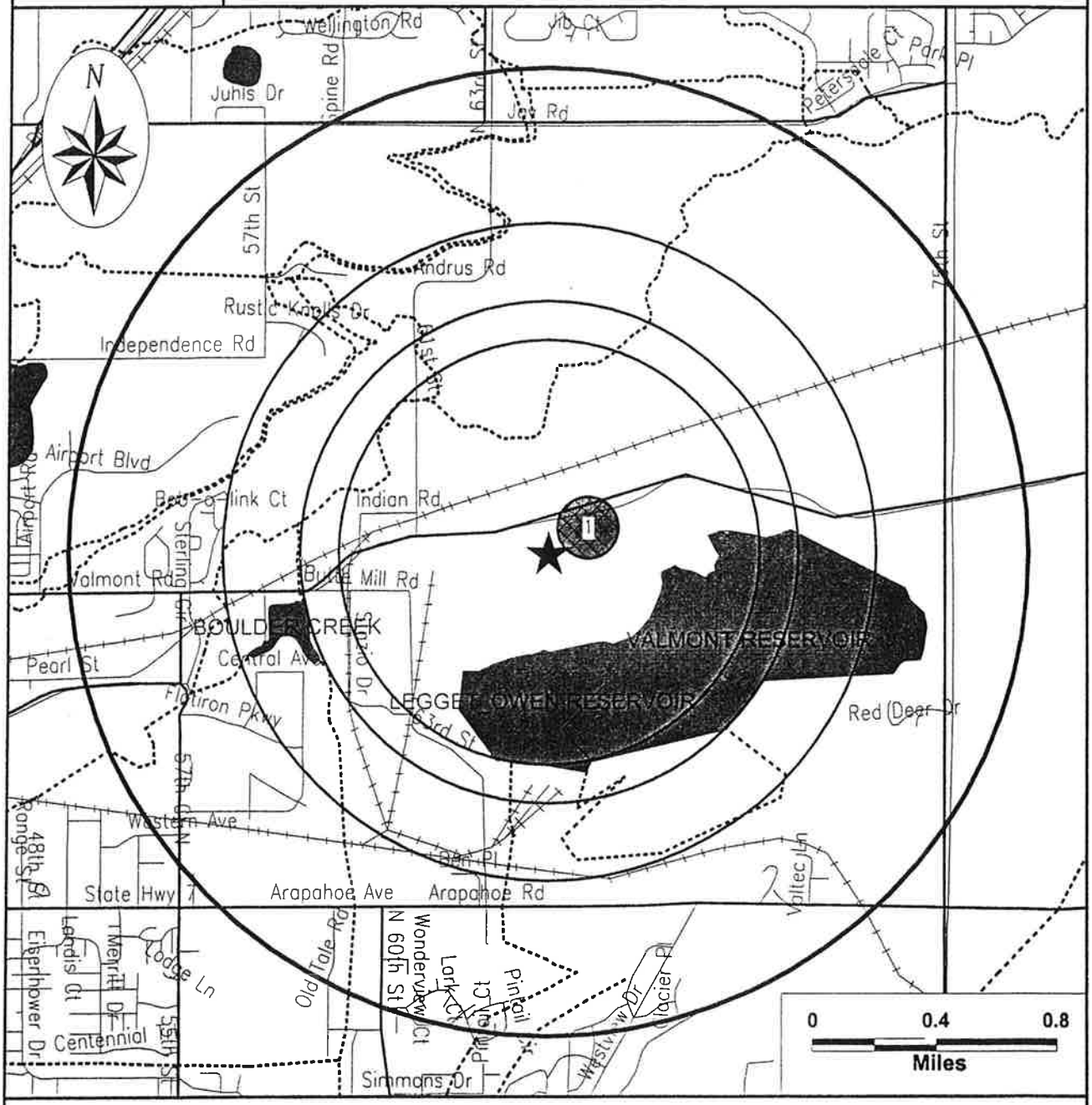
These boundaries are approximated from agency records or other sources such as published maps. They may represent property boundaries, impact zones, or study areas. For more information contact the agency referenced by source number in the site listing.

★ Subject Site

Highways and Major Roads
Roads
Railroads
Rivers or Water Bodies
Utilities

SITE ASSESSMENT PLUS REPORT
(EXTENDED BY 1/2 MILE)

Sites Represented as Radius Buffers

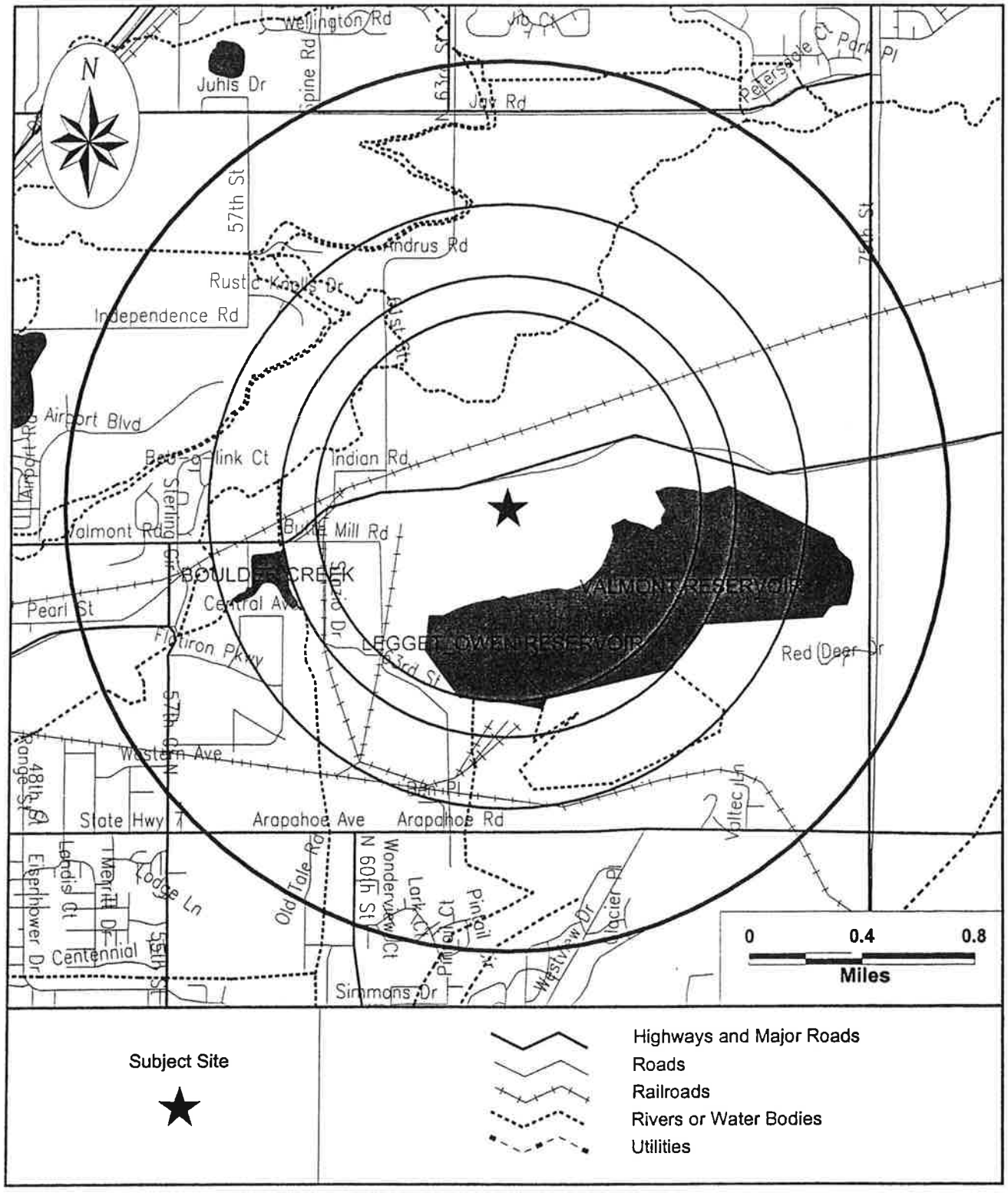


These radii are estimated from agency records or detailed street maps. The radii may be based on the furthest boundary of each property or study area from its center. For more information contact the agency referenced by source number in the site listing.

★ Subject Site	Highways and Major Roads
	Roads
	Railroads
	Rivers or Water Bodies
	Utilities

SITE ASSESSMENT PLUS REPORT (EXTENDED BY 1/2 MILE)

Street Map



SITE ASSESSMENT PLUS REPORT (EXTENDED BY 1/2 MILE)

SITE INVENTORY

MAP ID	PROPERTY AND THE ADJACENT AREA (within 5/8 mile)	VISTA ID DISTANCE DIRECTION	A			B					C			D		
			NPL	CORRACTS	SPL	CERCLIS/NFRAP	TSD	LUST	SWLF	WATER WELLS	RCRA VIOL	TRIS	UST/AST	ERNS	GNRTR	SPILLS
1	SAWHILL LAKES 6500 VALMONT BOULDER, CO	5501025 0.00 MI NA							X							
2	USGS WATER WELL ID #400158105121301 , CO	8912424 0.08 MI NW								X						
2	BOULDER ASPHALT PLANT 6405 VALMONT ROAD BOULDER, CO 80301	64791335 0.09 MI NW						X					X			
3A	KEETER DUMP 6379 VALMONT DR BOULDER, CO	5501024 0.14 MI NW							X							
3A	HARLEY I KEETER JR 6379 VALMONT RD BOULDER, CO 80301	806617 0.14 MI NW											X			
3B	FLATIRON PAVING COMPANY OF BOULDER 63RD ST AND VALMONT RD BOULDER, CO 80301	153408 0.17 MI W											X			
4	ANDERSONS RUBBLE DUMP 0110, CO	501746055 0.17 MI N							X							
5	USGS WATER WELL ID #400203105115001 , CO	8912454 0.28 MI NE								X						
6	HENDRICKS MINING _MILLING 3000 N 63RD ST _E VALMONT RD BOULDER, CO 80302	192224 0.29 MI W				X										
6	ALLIDE PILE , CO	501746054 0.29 MI W							X							
7A	BOULDER READY-MIX CONCRETE 3180 61ST BOULDER, CO 80301	806526 0.38 MI W						X					X			
7B	WESTERN DISPOSAL 6032 VALMONT RD BOULDER, CO 80301	1510514 0.41 MI W						X								
8	CULBERTSON MILL NW OF LEGGETT RESERVOIR BOULDER, CO 80301	6977792 0.41 MI SW				X										

MAP ID	PROPERTY AND THE ADJACENT AREA (within 5/8 mile)	VISTA ID DISTANCE DIRECTION	A			B						C			D		
			NPL	CORRACTS	SPL	CERCLIS/NFRAP	TSD	LUST	SWLF	WATER WELLS	RCRA VIOL	TRIS	UST/AST	ERNS	GNRTR	SPILLS
9	USGS WATER WELL ID #400200105123901 , CO	8912442 0.43 MI W								X						
10	USGS WATER WELL ID #400157105124801 , CO	8912416 0.54 MI W								X						
11	ARAPAHOE RUBBLE FILL W. OF BO 0110, CO	501746056 0.57 MI SW							X							
12	ILLEGAL DUMP 63RD AND ADRUS ROAD , CO	5500912 0.58 MI							X							
13	BOULDER SERVICE CENTER 2655 N 63RD ANTON, CO 80801	6565068 0.59 MI SW											X			
13	PSCO - BOULDER SERVICE CENTER 2655 N 63RD ST BOULDER, CO 80301	806670 0.59 MI SW						X					X			
14	USGS WATER WELL ID #400204105112601 , CO	8912457 0.59 MI E								X						

MAP ID	SITES IN THE SURROUNDING AREA (within 5/8 - 3/4 mile)	VISTA ID DISTANCE DIRECTION	A			B						C			D		
			NPL	CORRACTS	SPL	CERCLIS/NFRAP	TSD	LUST	SWLF	WATER WELLS	RCRA VIOL	TRIS	UST/AST	ERNS	GNRTR	SPILLS
15A	USGS WATER WELL ID #400146105125701 , CO	8912357 0.68 MI W								X						
15B	WESTERN DISPOSAL SERVICES 5880 BUTTE MILL RD BOULDER, CO 80301	1511049 0.72 MI W											X			
15B	WESTERN DISPOSAL TRANSFER STATI 5880 BUTTE MILL ROAD NEAREST TOWN - BOULDER, CO	64791239 0.73 MI W							X							
15B	WESTERN DISPOSAL TS 5880 BUTTE MILL BOULDER, CO 80301	2613434 0.74 MI W							X							

MAP ID	SITES IN THE SURROUNDING AREA (within 3/4 - 1 mile)	VISTA ID DISTANCE DIRECTION	A			B						C			D		
			NPL	CORRACTS	SPL	CERCLIS/NFRAP	TSD	LUST	SWLF	WATER WELLS		RCRA VIOL	TRIS	UST/AST	ERNS	GNRTR	SPILLS
16	VALMONT STEAM PLANT 1800 N 63RD ST BOULDER, CO 80301	4916296 0.82 MI S						X						•			
17	STENGEL'S DUMP EAST OF BOULDER CITY AIRPORT , CO	5500919 0.87 MI							X								
18	USGS WATER WELL ID #400216105111201 , CO	8912520 0.88 MI NE								X							
19	MARGRET LEICHNER 5690 VALMONT RD BOULDER, CO 80301	7033534 0.89 MI W						X									
20	USGS WATER WELL ID #400058105121801 , CO	8912149 0.98 MI S								X							
21	USGS WATER WELL ID #400205105105801 , CO	8912461 0.99 MI E								X							

MAP ID	SITES IN THE SURROUNDING AREA (within 1 - 1 1/2 mile)	VISTA ID DISTANCE DIRECTION	A			B						C			D		
			NPL	CORRACTS	SPL	CERCLIS/NFRAP	TSD	LUST	SWLF	WATER WELLS		RCRA VIOL	TRIS	UST/AST	ERNS	GNRTR	SPILLS
22	ROCHE COLORADO CORPORATION 2075 NORTH 55TH STREET BOULDER, CO 80301	416197 1.38 MI SW		X								•			•	•	•

X = search criteria; • = tag-along (beyond search criteria).

For more information call VISTA Information Solutions, Inc. at **1 - 800 - 767 - 0403.**

Report ID: **000808204** Date of Report: **August 29, 2000**

UNMAPPED SITES	A			B					C			D		
VISTA ID	NPL	CORRACTS	SPL	CERCLIS/NFRAP	TSD	LUST	SWLF	WATER WELLS	RCRA VIOL	TRIS	UST/AST	ERNS	GNRTR	SPILLS
No Records Found														

SITE ASSESSMENT PLUS REPORT (EXTENDED BY 1/2 MILE)

DETAILS

PROPERTY AND THE ADJACENT AREA (within 5/8 mile)

VISTA Address*:	SAWHILL LAKES 6500 VALMONT BOULDER, CO	VISTA ID#:	5501025	Map ID
		Distance/Direction:	0.00 MI / NA	1
		Plotted as:	Radius	
County SWLF - County Solid Waste Landfill / SRC# 167		Agency ID:	C3013	

Agency Address:	*SAME AS ABOVE*
Facility Type:	*NOT AVAILABLE*
Facility Status:	*INACTIVE*
Facility Life:	*NOT REPORTED*
Permit Status:	*NOT AVAILABLE*
Waste:	*NOT REPORTED*

VISTA Address*:	USGS WATER WELL ID #400158105121301 CO	VISTA ID#:	8912424	Map ID
		Distance/Direction:	0.08 MI / NW	2
		Plotted as:	Point	
USGS Wells - Federal Drinking Water Sources / SRC# 3		EPA/Agency ID:	N/A	

Agency Address:	*SAME AS ABOVE*
Well ID:	*400158105121301*
Use:	*DOMESTIC*
Depth:	*25.00*
Latitude:	*40.032777777777*
Longitude:	*-105.2036111111*
Section Township Range:	*SENWSWS23T001NR070WS*
Surface Elevation:	*5171.*
Static Water Level:	*12.00*
County FIPS:	*8013*

VISTA Address*:	BOULDER ASPHALT PLANT 6405 VALMONT ROAD BOULDER, CO 80301	VISTA ID#:	64791335	Map ID
		Distance/Direction:	0.09 MI / NW	2
		Plotted as:	Point	
AST - Above Ground Storage Tank / SRC# 182		Agency ID:	1268	

Agency Address:	*BOULDER ASPHALT PLANT* *6405 VALMONT ROAD* *BOULDER, CO 80308*
Underground Tanks:	*NOT REPORTED*
Aboveground Tanks:	*7*
Tanks Removed:	*NOT REPORTED*

Tank ID:	*NOT REPORTED*	**Tank Status:**	*ACTIVE/IN SERVICE*
Tank Contents:	*GASOLINE (UNSPECIFIED)*	**Leak Monitoring:**	
Tank Age:	*NOT REPORTED*	**Tank Piping:**	*NOT AVAILABLE*
Tank Size (Units):	*2000 (NOT AVAILABLE)*	**Tank Material:**	*NOT AVAILABLE*

Tank ID:	*NOT REPORTED*	**Tank Status:**	*NOT AVAILABLE*
Tank Contents:	*DIESEL*	**Leak Monitoring:**	
Tank Age:	*NOT REPORTED*	**Tank Piping:**	*UNKNOWN*
Tank Size (Units):	*12000 (NOT AVAILABLE)*	**Tank Material:**	*UNKNOWN*
Tank ID:	*NOT REPORTED*	**Tank Status:**	*NOT AVAILABLE*
Tank Contents:	*GASOLINE (UNSPECIFIED)*	**Leak Monitoring:**	
Tank Age:	*NOT REPORTED*	**Tank Piping:**	*UNKNOWN*
Tank Size (Units):	*10000 (NOT AVAILABLE)*	**Tank Material:**	*UNKNOWN*
Tank ID:	*NOT REPORTED*	**Tank Status:**	*NOT AVAILABLE*
Tank Contents:	*DIESEL*	**Leak Monitoring:**	
Tank Age:	*NOT REPORTED*	**Tank Piping:**	*UNKNOWN*
Tank Size (Units):	*18000 (NOT AVAILABLE)*	**Tank Material:**	*UNKNOWN*
Tank ID:	*NOT REPORTED*	**Tank Status:**	*NOT AVAILABLE*
Tank Contents:	*UNKNOWN*	**Leak Monitoring:**	
Tank Age:	*NOT REPORTED*	**Tank Piping:**	*UNKNOWN*
Tank Size (Units):	*10000 (NOT AVAILABLE)*	**Tank Material:**	*UNKNOWN*
Tank ID:	*NOT REPORTED*	**Tank Status:**	*ACTIVE/IN SERVICE*
Tank Contents:	*DIESEL*	**Leak Monitoring:**	
Tank Age:	*NOT REPORTED*	**Tank Piping:**	*NOT AVAILABLE*
Tank Size (Units):	*12000 (NOT AVAILABLE)*	**Tank Material:**	*NOT AVAILABLE*
Tank ID:	*NOT REPORTED*	**Tank Status:**	*NOT AVAILABLE*
Tank Contents:	*DIESEL*	**Leak Monitoring:**	
Tank Age:	*NOT REPORTED*	**Tank Piping:**	*UNKNOWN*
Tank Size (Units):	*12000 (NOT AVAILABLE)*	**Tank Material:**	*UNKNOWN*

STATE LUST - State Leaking Underground Storage Tank / SRC# 184	Agency ID:	1268

Agency Address:	*BOULDER ASPHALT PLANT* *6405 VALMONT ROAD* *BOULDER, CO 80308*
Leak ID#:	*8030*
Remediation Status:	*ACTIVE*
Description / Comment:	*BOULDER*

VISTA Address*:	**KEETER DUMP** **6379 VALMONT DR** **BOULDER, CO**	VISTA ID#:	5501024
		Distance/Direction:	0.14 MI / NW
		Plotted as:	Point
County SWLF - County Solid Waste Landfill / SRC# 167		Agency ID:	C3042

Map ID **3A**

Agency Address:	*SAME AS ABOVE*
Facility Type:	*NOT AVAILABLE*
Facility Status:	*INACTIVE*
Facility Life:	*NOT REPORTED*
Permit Status:	*NOT AVAILABLE*
Waste:	*NOT REPORTED*

VISTA Address*:	HARLEY I KEETER JR 6379 VALMONT RD BOULDER, CO 80301	VISTA ID#:	806617	Map ID 3A
		Distance/Direction:	0.14 MI / NW	
		Plotted as:	Point	
AST - Above Ground Storage Tank / SRC# 182		Agency ID:	10088	

Agency Address:	SAME AS ABOVE
Underground Tanks:	NOT REPORTED
Aboveground Tanks:	1
Tanks Removed:	NOT REPORTED

Tank ID:	NOT REPORTED	Tank Status:	ACTIVE/IN SERVICE
Tank Contents:	DIESEL	Leak Monitoring:	
Tank Age:	NOT REPORTED	Tank Piping:	UNKNOWN
Tank Size (Units):	15500 (NOT AVAILABLE)	Tank Material:	UNKNOWN

VISTA Address*:	FLATIRON PAVING COMPANY OF BOULDER 63RD ST AND VALMONT RD BOULDER, CO 80301	VISTA ID#:	153408	Map ID 3B
		Distance/Direction:	0.17 MI / W	
		Plotted as:	Point	
STATE UST - State Underground Storage Tank / SRC# 183		Agency ID:	8624	

Agency Address:	FLATIRON PAVING CO OF BOULDER 6379 VALMONT RD BOULDER, CO 80306
Underground Tanks:	5
Aboveground Tanks:	NOT REPORTED
Tanks Removed:	NOT REPORTED

Tank ID:	NOT REPORTED	Tank Status:	CLOSED
Tank Contents:	UNKNOWN	Leak Monitoring:	
Tank Age:	NOT REPORTED	Tank Piping:	BARE STEEL
Tank Size (Units):	9000 (NOT AVAILABLE)	Tank Material:	OTHER
Tank ID:	NOT REPORTED	Tank Status:	CLOSED
Tank Contents:	UNKNOWN	Leak Monitoring:	
Tank Age:	NOT REPORTED	Tank Piping:	BARE STEEL
Tank Size (Units):	7000 (NOT AVAILABLE)	Tank Material:	OTHER
Tank ID:	NOT REPORTED	Tank Status:	CLOSED
Tank Contents:	USED OIL	Leak Monitoring:	
Tank Age:	NOT REPORTED	Tank Piping:	BARE STEEL
Tank Size (Units):	6000 (NOT AVAILABLE)	Tank Material:	OTHER
Tank ID:	NOT REPORTED	Tank Status:	CLOSED
Tank Contents:	USED OIL	Leak Monitoring:	
Tank Age:	NOT REPORTED	Tank Piping:	BARE STEEL
Tank Size (Units):	2000 (NOT AVAILABLE)	Tank Material:	OTHER
Tank ID:	NOT REPORTED	Tank Status:	CLOSED
Tank Contents:	UNKNOWN	Leak Monitoring:	
Tank Age:	NOT REPORTED	Tank Piping:	BARE STEEL
Tank Size (Units):	20000 (NOT AVAILABLE)	Tank Material:	OTHER

PROPERTY AND THE ADJACENT AREA (within 5/8 mile) CONT.

VISTA Address*:	ANDERSONS RUBBLE DUMP 0110, CO	VISTA ID#:	501746055	Map ID 4
		Distance/Direction:	0.17 MI / N	
		Plotted as:	Point	
STATE SWLF - Solid Waste Landfill / SRC# 181		EPA/Agency ID:	N/A	

Agency Address:	*SAME AS ABOVE*
Facility Type:	*LANDFILL*
Facility Status:	*NOT AVAILABLE*
Facility Life:	*NOT REPORTED*
Permit Status:	*NOT AVAILABLE*
Waste:	*REFUSE*

VISTA Address*:	USGS WATER WELL ID #400203105115001 CO	VISTA ID#:	8912454	Map ID 5
		Distance/Direction:	0.28 MI / NE	
		Plotted as:	Point	
USGS Wells - Federal Drinking Water Sources / SRC# 3		EPA/Agency ID:	N/A	

Agency Address:	*SAME AS ABOVE*
Well ID:	*400203105115001*
Use:	*DOMESTIC*
Depth:	*40.00*
Latitude:	*40.034166666666*
Longitude:	*-105.1972222222*
Section Township Range:	*SENESWS23T001NR070WS*
Surface Elevation:	*5157.*
Static Water Level:	*21.00*
Date Well Drilled:	*01/01/1966*
County FIPS:	*8013*

VISTA Address*:	HENDRICKS MINING _MILLING 3000 N 63RD ST _E VALMONT RD BOULDER, CO 80302	VISTA ID#:	192224
		Distance/Direction:	0.29 MI / W
		Plotted as:	Point
NFRAP / SRC# 18		EPA ID:	COD078348737
		Agency ID:	0800156

Map ID **6**

Agency Address:	*HENDRICKS MINING MILLIN 3000 N 63RD ST E VALMONT RD BOULDER, CO 80302*
EPA Region:	*8*
Congressional District:	*0*
Federal Facility:	*NOT A FEDERAL FACILITY*
Facility Ownership:	*NOT AVAILABLE*
Site Incident Category:	*MINES/TAILINGS*
Federal Facility Docket:	*Agency Code ( )*
NPL Status:	*NOT ON NPL*
Incident Type:	*Unknown*
Proposed NPL Update #:	*0*
Final NPL Update #:	*0*
Financial Management System ID:	*0825*
Latitude:	*0*
Longitude:	*0*
Lat/Long Source:	*Agency Code ( )*
Lat/Long Accuracy:	*Unknown*
Dioxin Tier:	*Unknown*
USGS Hydro Unit:	*10190005*
RCRA Indicator:	*Unknown*

Type:	*DISCOVERY*	**Lead Agency:**	*EPA FUND-FINANCED*
Qualifier:	*UNKNOWN*	**Category:**	*Unknown*
Name:	*NOT REPORTED*	**Actual Start Date:**	*NOT REPORTED*
Plan Status:	*Unknown*	**Actual Completion Date:**	*SEPTEMBER 1, 1980*
Type:	*UNKNOWN*	**Lead Agency:**	*EPA FUND-FINANCED*
Qualifier:	*UNKNOWN*	**Category:**	*Unknown*
Name:	*NOT REPORTED*	**Actual Start Date:**	*NOT REPORTED*
Plan Status:	*Unknown*	**Actual Completion Date:**	*DECEMBER 1, 1982*
Type:	*PRELIMINARY ASSESSMENT*	**Lead Agency:**	*EPA FUND-FINANCED*
Qualifier:	*LOWER PRIORITY*	**Category:**	*Unknown*
Name:	*NOT REPORTED*	**Actual Start Date:**	*NOT REPORTED*
Plan Status:	*Unknown*	**Actual Completion Date:**	*AUGUST 1, 1982*
Type:	*UNKNOWN*	**Lead Agency:**	*EPA FUND-FINANCED*
Qualifier:	*UNKNOWN*	**Category:**	*Unknown*
Name:	*NOT REPORTED*	**Actual Start Date:**	*NOT REPORTED*
Plan Status:	*Unknown*	**Actual Completion Date:**	*SEPTEMBER 1, 1982*

Site Description:	*HAZARDOUS MATERIAL GENERATED: UNSTABLE MINE TAILINGS WITH RADIUM RADON. BEGAN OPERATION ON AN UNKNOWN DATE AS A FACIL ITY MILLING VARIOUS ORES. ONLY GOLD SLIVER HAVE BEEN PROCESSED RECENTLY. WAS STILL ACTIVE IN 9/82.*
Alias Name:	*ALLIED PILE*

PROPERTY AND THE ADJACENT AREA (within 5/8 mile) CONT.

Alias Street:	*3000 N 63RD ST_E VALMONT RD*		
Alias City:	*BOULDER*	**Alias Latitude:**	*0*
Alias Zip:	*80302*	**Alias Longitude:**	*0*
Alias State:	*CO*		
Alias Name:	*ALLIED PILE*		
Alias Street:	*3000 N 63RD ST_E VALMONT RD*		
Alias City:	*BOULDER*	**Alias Latitude:**	*0*
Alias Zip:	*80302*	**Alias Longitude:**	*0*
Alias State:	*CO*		
Alias Description:	*HAZARDOUS MATERIAL GENERATED: UNSTABLE MINE TAILINGS WITH RADIUM_RADON. BEGAN OPERATION ON AN UNKNOWN DATE AS A FACILITY MILLING VARIOUS ORES. ONLY GOLD_SLIVER HAVE BEEN PROCESSED RECENTLY. WAS STILL ACTIVE IN 9/82.*		

VISTA Address*:	**ALLIDE PILE** **CO**	VISTA ID#:	501746054	Map ID
		Distance/Direction:	0.29 MI / W	**6**
		Plotted as:	Point	
STATE SWLF - Solid Waste Landfill / SRC# 181		EPA/Agency ID:	N/A	

Agency Address:	*SAME AS ABOVE*
Facility Type:	*NOT AVAILABLE*
Facility Status:	*ACTIVE*
Facility Life:	*NOT REPORTED*
Permit Status:	*NOT AVAILABLE*
Waste:	*NOT AVAILABLE*

VISTA Address*:	**BOULDER READY-MIX CONCRETE** **3180 61ST** **BOULDER, CO 80301**	VISTA ID#:	806526	Map ID
		Distance/Direction:	0.38 MI / W	**7A**
		Plotted as:	Point	
STATE UST - State Underground Storage Tank / SRC# 183		Agency ID:	5030	

Agency Address:	*BOULDER READY-MIX CONCRETE* *3180 61ST* *BOULDER, CO 80302*		
Underground Tanks:	*1*		
Aboveground Tanks:	*NOT REPORTED*		
Tanks Removed:	*NOT REPORTED*		
Tank ID:	*NOT REPORTED*	**Tank Status:**	*CLOSED*
Tank Contents:	*DIESEL*	**Leak Monitoring:**	
Tank Age:	*NOT REPORTED*	**Tank Piping:**	*GALVANIZED STEEL*
Tank Size (Units):	*2000 (NOT AVAILABLE)*	**Tank Material:**	*OTHER*

STATE LUST - State Leaking Underground Storage Tank / SRC# 184	Agency ID:	5030

Agency Address:	*BOULDER READY-MIX CONCRETE* *3180 61ST* *BOULDER, CO 80302*
Leak ID#:	*2048*
Remediation Status:	*CLOSED*
Description / Comment:	*BOULDER*

PROPERTY AND THE ADJACENT AREA (within 5/8 mile) CONT.

VISTA Address*:	WESTERN DISPOSAL 6032 VALMONT RD BOULDER, CO 80301	VISTA ID#:	1510514	Map ID
		Distance/Direction:	0.41 MI / W	7B
		Plotted as:	Point	
STATE LUST - State Leaking Underground Storage Tank / SRC# 184		Agency ID:	13694	

Agency Address:	*SAME AS ABOVE*
Leak ID#:	*2659*
Remediation Status:	*CLOSED*
Description / Comment:	*BOULDER*

VISTA Address*:	CULBERTSON MILL NW OF LEGGETT RESERVOIR BOULDER, CO 80301	VISTA ID#:	6977792	Map ID
		Distance/Direction:	0.41 MI / SW	8
		Plotted as:	Point	
CERCLIS / SRC# 17		EPA ID: Agency ID:	CO0001910991 0801608	

Agency Address:	*SAME AS ABOVE*
EPA Region:	*8*
Congressional District:	*0*
Federal Facility:	*NOT A FEDERAL FACILITY*
Facility Ownership:	*NOT AVAILABLE*
Site Incident Category:	*unknown*
Federal Facility Docket:	*Agency Code ( )*
NPL Status:	*NOT ON NPL*
Incident Type:	*Unknown*
Proposed NPL Update #:	*0*
Final NPL Update #:	*0*
Financial Management System ID:	*NOT REPORTED*
Latitude:	*0*
Longitude:	*0*
Lat/Long Source:	*Agency Code ( )*
Lat/Long Accuracy:	*Unknown*
Dioxin Tier:	*Unknown*
USGS Hydro Unit:	*0*
RCRA Indicator:	*Unknown*

Type:	*DISCOVERY*	**Lead Agency:**	*EPA FUND-FINANCED*
Qualifier:	*UNKNOWN*	**Category:**	*Unknown*
Name:	*NOT REPORTED*	**Actual Start Date:**	*NOT REPORTED*
Plan Status:	*Unknown*	**Actual Completion Date:**	*APRIL 24, 1997*

Type:	*PRELIMINARY ASSESSMENT*	**Lead Agency:**	*EPA FUND-FINANCED*
Qualifier:	*HIGHER PRIORITY*	**Category:**	*Unknown*
Name:	*NOT REPORTED*	**Actual Start Date:**	*NOT REPORTED*
Plan Status:	*Unknown*	**Actual Completion Date:**	*DECEMBER 30, 1999*

PROPERTY AND THE ADJACENT AREA (within 5/8 mile) CONT.

VISTA Address*:	USGS WATER WELL ID #400200105123901 CO	VISTA ID#:	8912442	Map ID 9
		Distance/Direction:	0.43 MI / W	
		Plotted as:	Point	
USGS Wells - Federal Drinking Water Sources / SRC# 3		EPA/Agency ID:	N/A	

Agency Address:	*SAME AS ABOVE*
Well ID:	*400200105123901*
Use:	*DOMESTIC*
Depth:	*10.00*
Latitude:	*40.033333333333*
Longitude:	*-105.2108333333*
Section Township Range:	*SENWSES22T001NR070WS*
Surface Elevation:	*5172.*
Static Water Level:	*5.00*
Date Well Drilled:	*01/01/1949*
County FIPS:	*8013*

VISTA Address*:	USGS WATER WELL ID #400157105124801 CO	VISTA ID#:	8912416	Map ID 10
		Distance/Direction:	0.54 MI / W	
		Plotted as:	Point	
USGS Wells - Federal Drinking Water Sources / SRC# 3		EPA/Agency ID:	N/A	

Agency Address:	*SAME AS ABOVE*
Well ID:	*400157105124801*
Use:	*DOMESTIC*
Depth:	*30.00*
Latitude:	*40.0325*
Longitude:	*-105.2133333333*
Section Township Range:	*NWSWSES22T001NR070WS*
Surface Elevation:	*5126.*
Static Water Level:	*5.00*
Date Well Drilled:	*01/01/1963*
County FIPS:	*8013*

VISTA Address*:	ARAPAHOE RUBBLE FILL W. OF BO 0110, CO	VISTA ID#:	501746056	Map ID 11
		Distance/Direction:	0.57 MI / SW	
		Plotted as:	Point	
STATE SWLF - Solid Waste Landfill / SRC# 181		EPA/Agency ID:	N/A	

Agency Address:	*SAME AS ABOVE*
Facility Type:	*LANDFILL*
Facility Status:	*NOT AVAILABLE*
Facility Life:	*NOT REPORTED*
Permit Status:	*NOT AVAILABLE*
Waste:	*REFUSE*

VISTA Address*:	ILLEGAL DUMP 63RD AND ADRUS ROAD CO	VISTA ID#:	5500912	Map ID 12
		Distance	0.58 MI	
		Plotted as:	Polygon	
County SWLF - County Solid Waste Landfill / SRC# 167		Agency ID:	C3022	

Agency Address:	*SAME AS ABOVE*
Facility Type:	*NOT AVAILABLE*
Facility Status:	*INACTIVE*
Facility Life:	*NOT REPORTED*
Permit Status:	*NOT AVAILABLE*
Waste:	*NOT REPORTED*

VISTA Address*:	BOULDER SERVICE CENTER 2655 N 63RD ANTON, CO 80801	VISTA ID#:	6565068	Map ID 13
		Distance/Direction:	0.59 MI / SW	
		Plotted as:	Point	
AST - Above Ground Storage Tank / SRC# 182		Agency ID:	1488	

Agency Address:	*BOULDER SERVICE CENTER* *2655 N 63RD* *BOULDER, CO 80301*
Underground Tanks:	*NOT REPORTED*
Aboveground Tanks:	*2*
Tanks Removed:	*NOT REPORTED*

Tank ID:	*NOT REPORTED*	**Tank Status:**	*ACTIVE/IN SERVICE*
Tank Contents:	*DIESEL*	**Leak Monitoring:**	
Tank Age:	*NOT REPORTED*	**Tank Piping:**	*UNKNOWN*
Tank Size (Units):	*6000 (NOT AVAILABLE)*	**Tank Material:**	*UNKNOWN*
Tank ID:	*NOT REPORTED*	**Tank Status:**	*ACTIVE/IN SERVICE*
Tank Contents:	*GASOLINE (UNSPECIFIED)*	**Leak Monitoring:**	
Tank Age:	*NOT REPORTED*	**Tank Piping:**	*UNKNOWN*
Tank Size (Units):	*6000 (NOT AVAILABLE)*	**Tank Material:**	*UNKNOWN*

VISTA Address*:	PSCO - BOULDER SERVICE CENTER 2655 N 63RD ST BOULDER, CO 80301	VISTA ID#:	806670	Map ID 13
		Distance/Direction:	0.59 MI / SW	
		Plotted as:	Point	
STATE UST - State Underground Storage Tank / SRC# 183		Agency ID:	1633	

Agency Address:	*BOULDER SERVICE CENTER* *2655 N 63RD ST* *BOULDER, CO 80301*
Underground Tanks:	*4*
Aboveground Tanks:	*NOT REPORTED*
Tanks Removed:	*NOT REPORTED*

Tank ID:	*NOT REPORTED*	**Tank Status:**	*CLOSED*
Tank Contents:	*GASOLINE (UNSPECIFIED)*	**Leak Monitoring:**	
Tank Age:	*NOT REPORTED*	**Tank Piping:**	*BARE STEEL*
Tank Size (Units):	*5000 (NOT AVAILABLE)*	**Tank Material:**	*OTHER*
Tank ID:	*NOT REPORTED*	**Tank Status:**	*CLOSED*
Tank Contents:	*DIESEL*	**Leak Monitoring:**	
Tank Age:	*NOT REPORTED*	**Tank Piping:**	*BARE STEEL*
Tank Size (Units):	*5000 (NOT AVAILABLE)*	**Tank Material:**	*OTHER*

PROPERTY AND THE ADJACENT AREA (within 5/8 mile) CONT.

Tank ID:	*NOT REPORTED*	**Tank Status:**	*CLOSED*
Tank Contents:	*GASOLINE (UNSPECIFIED)*	**Leak Monitoring:**	
Tank Age:	*NOT REPORTED*	**Tank Piping:**	*BARE STEEL*
Tank Size (Units):	*10000 (NOT AVAILABLE)*	**Tank Material:**	*OTHER*
Tank ID:	*NOT REPORTED*	**Tank Status:**	*CLOSED*
Tank Contents:	*USED OIL*	**Leak Monitoring:**	
Tank Age:	*NOT REPORTED*	**Tank Piping:**	*BARE STEEL*
Tank Size (Units):	*560 (NOT AVAILABLE)*	**Tank Material:**	*OTHER*

STATE LUST - State Leaking Underground Storage Tank / SRC# 184	Agency ID:	1633

Agency Address:	*BOULDER SERVICE CENTER* *2655 N 63RD ST* *BOULDER, CO 80301*
Leak ID#:	*869*
Remediation Status:	*CLOSED*
Description / Comment:	*BOULDER*

VISTA Address*:	**USGS WATER WELL ID #400204105112601 CO**	VISTA ID#:	8912457	Map ID **14**
		Distance/Direction:	0.59 MI / E	
		Plotted as:	Point	
USGS Wells - Federal Drinking Water Sources / SRC# 3		EPA/Agency ID:	N/A	

Agency Address:	*SAME AS ABOVE*
Well ID:	*400204105112601*
Use:	*DOMESTIC*
Depth:	*40.00*
Latitude:	*40.034444444444*
Longitude:	*-105.1905555555*
Section Township Range:	*SWNESES23T001NR070WS*
Surface Elevation:	*5168.*
Date Well Drilled:	*01/01/1966*
County FIPS:	*8013*

SITES IN THE SURROUNDING AREA (within 5/8 - 3/4 mile)

VISTA Address*:	**USGS WATER WELL ID #400146105125701 CO**	VISTA ID#:	8912357	Map ID **15A**
		Distance/Direction:	0.68 MI / W	
		Plotted as:	Point	
USGS Wells - Federal Drinking Water Sources / SRC# 3		EPA/Agency ID:	N/A	

Agency Address:	*SAME AS ABOVE*
Well ID:	*400146105125701*
Use:	*DOMESTIC*
Depth:	*18.00*
Latitude:	*40.029444444444*
Longitude:	*-105.2158333333*
Section Township Range:	*NENENWS27T001NR070WS*
Surface Elevation:	*5186.*
Static Water Level:	*4.00*
Date Well Drilled:	*01/01/1971*
County FIPS:	*8013*

SITES IN THE SURROUNDING AREA (within 5/8 - 3/4 mile) CONT.

VISTA Address*:	WESTERN DISPOSAL SERVICES 5880 BUTTE MILL RD BOULDER, CO 80301	VISTA ID#:	1511049	Map ID 15B
		Distance/Direction:	0.72 MI / W	
		Plotted as:	Point	
STATE UST - State Underground Storage Tank / SRC# 183		Agency ID:	4916	

Agency Address:	*SAME AS ABOVE*
Underground Tanks:	*2*
Aboveground Tanks:	*NOT REPORTED*
Tanks Removed:	*NOT REPORTED*

Tank ID:	*NOT REPORTED*	**Tank Status:**	*ACTIVE/IN SERVICE*
Tank Contents:	*DIESEL*	**Leak Monitoring:**	
Tank Age:	*NOT REPORTED*	**Tank Piping:**	*FIBERGLASS*
Tank Size (Units):	*10000 (NOT AVAILABLE)*	**Tank Material:**	*STEEL*
Tank ID:	*NOT REPORTED*	**Tank Status:**	*ACTIVE/IN SERVICE*
Tank Contents:	*GASOLINE (UNSPECIFIED)*	**Leak Monitoring:**	
Tank Age:	*NOT REPORTED*	**Tank Piping:**	*FIBERGLASS*
Tank Size (Units):	*10000 (NOT AVAILABLE)*	**Tank Material:**	*STEEL*

VISTA Address*:	WESTERN DISPOSAL TRANSFER STATI 5880 BUTTE MILL ROAD NEAREST TOWN - BOULDER, CO	VISTA ID#:	64791239	Map ID 15B
		Distance/Direction:	0.73 MI / W	
		Plotted as:	Point	
STATE SWLF - Solid Waste Landfill / SRC# 179		Agency ID:	013-TRS-005	

Agency Address:	*SAME AS ABOVE*
Facility Type:	*NOT AVAILABLE*
Facility Status:	*NOT AVAILABLE*
Facility Life:	*NOT REPORTED*
Permit Status:	*NOT AVAILABLE*
Waste:	*NOT REPORTED*

VISTA Address*:	WESTERN DISPOSAL TS 5880 BUTTE MILL BOULDER, CO 80301	VISTA ID#:	2613434	Map ID 15B
		Distance/Direction:	0.74 MI / W	
		Plotted as:	Point	
STATE SWLF - Solid Waste Landfill / SRC# 181		EPA/Agency ID:	N/A	

Agency Address:	*WESTERN DISPOSAL TS 5880 BUTTE MILL BOULDER, CO*
Facility Type:	*TRANSFER STATION*
Facility Status:	*NOT AVAILABLE*
Facility Life:	*NOT REPORTED*
Permit Status:	*NOT AVAILABLE*
Waste:	*NOT AVAILABLE*

SITES IN THE SURROUNDING AREA (within 3/4 - 1 mile)

VISTA Address*:	VALMONT STEAM PLANT 1800 N 63RD ST BOULDER, CO 80301	VISTA ID#:	4916296	Map ID 16
		Distance/Direction:	0.82 MI / S	
		Plotted as:	Point	
STATE LUST - State Leaking Underground Storage Tank / SRC# 184		Agency ID:	1614	

Agency Address:	*SAME AS ABOVE*
Leak ID#:	*4754*

* VISTA address includes enhanced city and ZIP.

Remediation Status:	*CLOSED*
Description / Comment:	*BOULDER*
Leak ID#:	*4758*
Remediation Status:	*CLOSED*

VISTA Address*:	**STENGEL'S DUMP EAST OF BOULDER CITY AIRPORT CO**	VISTA ID#:	5500919	Map ID 17
		Distance	0.87 MI	
		Plotted as:	Polygon	
County SWLF - County Solid Waste Landfill / SRC# 167		Agency ID:	C3033	

Agency Address:	*SAME AS ABOVE*
Facility Type:	*NOT AVAILABLE*
Facility Status:	*INACTIVE*
Facility Life:	*NOT REPORTED*
Permit Status:	*NOT AVAILABLE*
Waste:	*NOT REPORTED*

VISTA Address*:	**USGS WATER WELL ID #400216105111201 CO**	VISTA ID#:	8912520	Map ID 18
		Distance/Direction:	0.88 MI / NE	
		Plotted as:	Point	
USGS Wells - Federal Drinking Water Sources / SRC# 3		EPA/Agency ID:	N/A	

Agency Address:	*SAME AS ABOVE*
Well ID:	*400216105111201*
Use:	*DOMESTIC*
Depth:	*14.00*
Latitude:	*40.037777777777*
Longitude:	*-105.1866666666*
Section Township Range:	*SWSWNWS24T001NR070WS*
Surface Elevation:	*5140.*
Static Water Level:	*6.00*
Date Well Drilled:	*01/01/1965*
County FIPS:	*8013*

VISTA Address*:	**MARGRET LEICHNER 5690 VALMONT RD BOULDER, CO 80301**	VISTA ID#:	7033534	Map ID 19
		Distance/Direction:	0.89 MI / W	
		Plotted as:	Point	
STATE LUST - State Leaking Underground Storage Tank / SRC# 184		Agency ID:	12407	

Agency Address:	*SAME AS ABOVE*
Leak ID#:	*4298*
Remediation Status:	*CLOSED*
Description / Comment:	*BOULDER*

VISTA Address*:	**USGS WATER WELL ID #400058105121801 CO**	VISTA ID#:	8912149	Map ID 20
		Distance/Direction:	0.98 MI / S	
		Plotted as:	Point	
USGS Wells - Federal Drinking Water Sources / SRC# 3		EPA/Agency ID:	N/A	

Agency Address:	*SAME AS ABOVE*
Well ID:	*400058105121801*
Use:	*OTHER*

Depth:	*18.00*
Latitude:	*40.016111111111*
Longitude:	*-105.205*
Section Township Range:	*SWSWSWS26T001NR070WS*
Surface Elevation:	*5241.*
Static Water Level:	*7.00*
Date Well Drilled:	*01/01/1936*
County FIPS:	*8013*

VISTA Address*:	**USGS WATER WELL ID #400205105105801 CO**	VISTA ID#:	8912461
		Distance/Direction:	0.99 MI / E
		Plotted as:	Point
USGS Wells - Federal Drinking Water Sources / SRC# 3		EPA/Agency ID:	N/A

Map ID **21**

Agency Address:	*SAME AS ABOVE*
Well ID:	*400205105105801*
Use:	*DOMESTIC*
Depth:	*40.00*
Latitude:	*40.034722222222*
Longitude:	*-105.1827777777*
Section Township Range:	*SENWSWS24T001NR070WS*
Surface Elevation:	*5150.*
Static Water Level:	*4.00*
Date Well Drilled:	*01/01/1970*
County FIPS:	*8013*

SITES IN THE SURROUNDING AREA (within 1 - 1 1/2 mile)

VISTA Address*:	ROCHE COLORADO CORPORATION 2075 NORTH 55TH STREET BOULDER, CO 80301	VISTA ID#:	416197	Map ID
		Distance/Direction:	1.38 MI / SW	22
		Plotted as:	Point	

CORRACTS / SRC# 14		EPA ID:	COD076470525
Agency Address:	SAME AS ABOVE		
Prioritization Status:	MEDIUM		
RCRA Facility Assessment Completed:	YES		
Notice of Contamination:	NO		
Determination of need For a RFI (RCRA Facility Investigation):	YES		
RFI Imposed:	YES		
RFI Workplan Notice of Deficiency Issued:	NO		
RFI Workplan Approved:	YES		
RFI Report Received:	NO		
RFI Approved:	NO		
No Further Corrective Action at this Time:	NO		
Stabilization Mesaures Evaluation:	YES		
CMS (Corrective Measure Study) Imposition:	NO		
CMS Workplan Approved:	NO		
CMS Report Received:	NO		
CMS Approved:	NO		
Date for Remedy Selection (CM Imposed):	NO		
Corrective Measures Design Approved:	NO		
Corrective Measures Investigation Workplan Approved:	NO		
Certification of Remedy Completion:	NO		
Stabilization Measures Implementation:	YES		
Stabilization Measures Completed:	NO		
Corrective Action Process Termination:	NO		

RCRA-TSD CORRACTS / SRC# 556		EPA ID:	COD076470525
Agency Address:	SAME AS ABOVE		
Off-Site Waste Received:	NO		
Land Disposal:	NO		
Incinerator:	NO		
Storage/Treatment:	NO		

UNMAPPED SITES
No Records Found

SITE ASSESSMENT PLUS REPORT (EXTENDED BY 1/2 MILE)

DESCRIPTION OF DATABASES SEARCHED

A) DATABASES SEARCHED TO 1 1/2 MILE

NPL
SRC#: 19

VISTA conducts a database search to identify all sites within 1.5 mile of your property.
The agency release date for National Priorities List was April, 2000.

The NPL Report is the US EPA's registry of the nation's worst uncontrolled or abandoned hazardous waste sites. NPL sites are targeted for possible long-term remedial action under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) of 1980.

SPL
SRC#: 176

VISTA conducts a database search to identify all sites within 1.5 mile of your property.
The agency release date for Voluntary Cleanup List was January, 2000.

This database is provided by the Colorado Department of Public Health and Environment, Haz Mat Waste Division. The agency may be contacted at: 303-692-3380.

CORRACTS
SRC#: 14

VISTA conducts a database search to identify all sites within 1.5 mile of your property.
The agency release date for RCRIS Corrective Action Sites was December, 1999.

The CORRACTS database contains information concerning RCRA facilities that have conducted, or are currently conducting a corrective action. A Corrective Action Order is issued pursuant to RCRA Section 3008 (h) when there has been a release of hazardous waste or constituents into the environment from a RCRA facility. Corrective actions may also be imposed as a requirement of receiving and maintaining a TSDF permit.

RCRIS-TSDC
SRC#: 556

VISTA conducts a database search to identify all sites within 1.5 mile of your property.
The agency release date for RCRIS TSDs Subject to Corrective Action was December, 1999.

The EPA's Resource Conservation and Recovery Act (RCRA) Program identifies and tracks hazardous waste from the point of generation to the point of disposal. The RCRA Facilities database is a compilation by the EPA of facilities which report generation, storage, transportation, treatment or disposal of hazardous waste. RCRA TSDCs are treatment, storage and/or disposal facilities that are subject to corrective action under RCRA.

B) DATABASES SEARCHED TO 1 MILE

CERCLIS
SRC#: 17

VISTA conducts a database search to identify all sites within 1 mile of your property.
The agency release date for Comprehensive Environmental Response, Compensation and Liability Information Sys was April, 2000.

The CERCLIS database is a comprehensive listing of known or suspected uncontrolled or abandoned hazardous waste sites. These sites have either been investigated, or are currently under investigation by the U.S. EPA for the release, or threatened release of hazardous substances. Once a site is placed in CERCLIS, it may be subjected to several levels of review and evaluation, and ultimately placed on the National Priorities List (NPL).

NFRAP
SRC#: 18

VISTA conducts a database search to identify all sites within 1 mile of your property.
The agency release date for No Further Remedial Action Planned was April, 2000.

The No Further Remedial Action Planned Report (NFRAP), also known as the CERCLIS Archive, contains information pertaining to sites which have been removed from the U.S. EPA's CERCLIS database. NFRAP sites may be sites where, following an initial investigation, either no contamination was found, contamination was removed quickly without need for the site to be placed on the NPL, or the contamination was not serious enough to require federal Superfund action or NPL consideration.

RCRIS-TSD
SRC#: 12

VISTA conducts a database search to identify all sites within 1 mile of your property.
The agency release date for RCRIS Treatment, Storage and Disposal Facilities was December, 1999.

The EPA's Resource Conservation and Recovery Act (RCRA) Program identifies and tracks hazardous waste from the point of generation to the point of disposal. The RCRA Facilities database is a compilation by the EPA of facilities which report generation, storage, transportation, treatment or disposal of hazardous waste. RCRA TSDs are facilities which treat, store and/or dispose of hazardous waste.

SWLF
SRC#: 23

VISTA conducts a database search to identify all sites within 1 mile of your property.
The agency release date for USGS Solid Waste Landfills was December, 1991.

This database is provided by the United States Geological Survey. The agency may be contacted at: 703-648-5613.

SWLF
SRC#: 179

VISTA conducts a database search to identify all sites within 1 mile of your property.
The agency release date for Transfer Stations was January, 2000.

This database is provided by the Colorado Department of Public Health and Environment. The agency may be contacted at: 303-692-3450.

SWLF
SRC#: 180

VISTA conducts a database search to identify all sites within 1 mile of your property.
The agency release date for Solid Waste Facility List was January, 2000.

This database is provided by the Colorado Department of Public Health and Environment. The agency may be contacted at: 303-692-3450.

SWLF
SRC#: 181

VISTA conducts a database search to identify all sites within 1 mile of your property.
The agency release date for Historical Landfill Database was January, 2000.

This database is provided by the Colorado Department of Public Health and Environment. The agency may be contacted at: 303-692-3450.

SWLF-CO
SRC#: 167

VISTA conducts a database search to identify all sites within 1 mile of your property.
The agency release date for Boulder County Old Landfill Sites Methane Sites was May, 1986.

This database is provided by the Boulder County Health Department The agency may be contacted at: 303-441-1180.

LUST
SRC#: 178

VISTA conducts a database search to identify all sites within 1 mile of your property.
The agency release date for Leaking Underground Storage Tank Trust Fund Sites was January, 2000.

This database, formerly provided by the Colorado Department of Labor, State Oil Inspector, is no longer distributed by the source agency.

LUST
SRC#: 184

VISTA conducts a database search to identify all sites within 1 mile of your property.
The agency release date for Leaking Underground Storage Tanks - Active Closed was May, 2000.

This database is provided by the Department of Labor, State Oil Inspector. The agency may be contacted at: 303-620-4302.

USGS-WELLS
SRC#: 3

VISTA conducts a database search to identify all sites within 1 mile of your property.
The agency release date for USGS Water Wells was March, 1998.

The Ground Water Site Inventory (GWSI) database was provided by the United States Geological Survey (USGS). The database contains information for over 1,000,000 wells and other sources of groundwater which the USGS has studied, used or documented during research.

C) DATABASES SEARCHED TO 3/4 MILE

RCRIS-VIOL
SRC#: 11

VISTA conducts a database search to identify all sites within 3/4 mile of your property.
The agency release date for RCRIS Facilities with Violations was December, 1999.

The EPA's Resource Conservation and Recovery Act (RCRA) Program identifies and tracks hazardous waste from the point of generation to the point of disposal. The RCRA Facilities database is a compilation by the EPA of facilities which report generation, storage, transportation, treatment or disposal of hazardous waste. The RCRIS Other report contains information concerning facilities that are "unclassified" within the RCRIS database (not classified as a Large Quantity Generator, Transporter, etc.).

UST
SRC#: 183

VISTA conducts a database search to identify all sites within 3/4 mile of your property.
The agency release date for Underground Storage Tanks was May, 2000.

This database is provided by the Department of Labor, Oil Inspection Section. The agency may be contacted at: 303-620-4300. Be advised that some states do not require registration of heating oil tanks, especially those used for residential purposes.

AST
SRC#: 182

VISTA conducts a database search to identify all sites within 3/4 mile of your property.
The agency release date for Aboveground Storage Tanks was May, 2000.

This database is provided by the Department of Labor, Oil Inspection Section. The agency may be contacted at: 303-620-4300.

TRIS
SRC#: 2

VISTA conducts a database search to identify all sites within 3/4 mile of your property.
The agency release date for Toxic Release Inventory System was January, 1998.

All facilities that manufacture, process, or import toxic chemicals in quantities in excess of 25,000 pounds per year are required to register with the EPA under Section 313 of the Superfund Amendments and Reauthorization Act (SARA Title III) of 1986. Data contained in the TRIS system covers approximately 20,000 sites and 75,000 chemical releases.

D) DATABASES SEARCHED TO 5/8 MILE

ERNS
SRC#: 8

VISTA conducts a database search to identify all sites within .625 mile of your property.
The agency release date for Emergency Response Notification System was August, 1999.

ERNS is a national computer database system that is used to store information on the sudden and/or accidental release of hazardous substances, including petroleum, into the environment. The ERNS reporting system contains preliminary information on specific releases, including the spill location, the substance released, and the responsible party.

RCRA-LQG
SRC#: 16

VISTA conducts a database search to identify all sites within .625 mile of your property.
The agency release date for RCRIS Large Quantity Generators was December, 1999.

The EPA's Resource Conservation and Recovery Act (RCRA) Program identifies and tracks hazardous waste from the point of generation to the point of disposal. The RCRA Facilities database is a compilation by the EPA of facilities which report generation, storage, transportation, treatment or disposal of hazardous waste. RCRA Large Generators are facilities which generate at least 1000 kg./month of non-acutely hazardous waste (or 1 kg./month of acutely hazardous waste).

RCRIS-SQG
SRC#: 15

VISTA conducts a database search to identify all sites within .625 mile of your property.
The agency release date for RCRIS Small Quantity Generators was December, 1999.

The EPA's Resource Conservation and Recovery Act (RCRA) Program identifies and tracks hazardous waste from the point of generation to the point of disposal. The RCRA Facilities database is a compilation by the EPA of facilities which report generation, storage, transportation, treatment or disposal of hazardous waste. RCRA Small Quantity Generators are facilities which generate less than 1000 kg./month of non-acutely hazardous waste.

SPILLS
SRC#: 186

VISTA conducts a database search to identify all sites within .625 mile of your property.
The agency release date for Colorado ERNS Database was October, 1999.

This database is provided by the Colorado Department of Public Health _Environment. The agency may be contacted at: 303-692-3023.

End of Report

BOULDER LANDFILLS

ENTRAC ENHANCEMENT

As a special service to our clients, ENTRAC provides additional details from local sources that are often difficult to incorporate into the automated database fields on a national level. Following are ENTRAC's details for the specific sites identified in the database report.

SOURCES

Colorado Depart. of Health; 4300 Cherry Creek Dr. South, Denver, 303/ 692-3300

- Raymond Vail's Methane Study (1970's)
- DRCOG's Methane Study (none)
- CDH's Methane Gas Study (1979)
- CDH's Master Database List (see prior Sources page)
- CDH's Solid Waste Site Inventory (1987)
- CDH's Currently Open Landfills List (see prior Sources page)
- 2 Other CDH Landfill Lists (see prior Sources page)

Boulder County Health Department; 3450 Broadway, Boulder

- Boulder County Health Dept. Methane in Landfills (1979).
- Boulder County Health Dept. Old Landfill Sites (1986).
- Boulder County Health Dept. Illegal Dump, Solid Waste Files list (undated).
- For further information, contact the Air Quality and Solid Waste Depart., 303/ 441-1180.

MAP# SITE NAME; ADDRESS

#1 ALLIDE PILE; LISTED IN BOULDER COUNTY

Sources and Comments

- Colorado Department of Health: Current Landfills Database

  Comments: ALLIDE PILE: Facility Type: MILL WASTE. Hazard Type: RADIOACTIV (sic). Waste Type: E (Radioactive). Comments: DATE - 1972. Impact: GW (Groundwater). Operator Code: D (Private). Permit: F (RML). Source Ref: D (RCD/CDH). No other information was given. Chuck Matson with the Colorado Department of Health indicated that this listing as the Hendricks Mining and Milling CERCLIS site, listed as site #____ in this report. HENDRICKS PILE: Nearest Town: 0000. Facility Type: MILL WASTE. Hazard Type: UNKNOWN. Waste Type: TAILINGS. Impact: UNK. Operator Code: D (Private). Permit: A (C.O.D.). Source Ref: A (WMD/CDH). Private: HENDRICKS.

#4 KEETER DUMP; 6379 VALMONT DR., BOULDER, CO.

Sources and Comments

- Boulder County Health Dept. Old Landfill Sites (1986).
  Comments: No other information was given. For further information, see the contact listed at the beginning of this Landfill section.
- Boulder County Health Dept. Illegal Dump, Solid Waste Files list (undated).
  Comments: "6379 VALMONT RD" No other information was given. For further information, see the contact listed at the beginning of this Landfill section.

#6 SAWHILL LAKES; 6500 VALMONT, BOULDER, CO

Sources and Comments

- Boulder County Health Dept. Old Landfill Sites (1986).
  Comments: Sawhill Lakes could not be located on any of ENTRAC's maps. This facility has been mapped at the above address. The size of the site is not known. No other information was given. For further information, see the contact listed at the beginning of this Landfill section.
- Boulder County Health Dept. Illegal Dump, Solid Waste Files list (undated).
  Comments: "FLATIRONS PAVING, NEAR SAWHILL LAKES 6500 VALMONT" No other information was given. For further information, see the contact listed at the beginning of this Landfill section.

#8 ANDERSONS RUBBLE DUMP; LISTED IN BOULER COUNTY

Sources and Comments

- Colorado Department of Health: Current Landfills Database
  Comments: Nearest Town: 0110 (Boulder). Hazard Type: UNKNOWN. Waste Type: REFUSE. Impact: UNK. Operator Code: D (Private). Permit: A (C.O.D.). Source Ref: A (WMD/CDH). Private: DICK ANDERSON. No other information was given. Diane Niemic with the Boulder County Health Department indicated that this facility was located at 6585 Valmont (Mail delivery was at 6707 Valmont), and that it was a trash fill.

#12 ILLEGAL DUMP; 63RD AND ANDRUS ROAD, NW1/4 NW1/4 SECTION 23, T1N, R70W

Sources and Comments

- Boulder County Health Dept. Old Landfill Sites (1986).
  Comments: No other information was given. For further information, see the contact listed at the beginning of this Landfill section.
- Boulder County Health Dept. Illegal Dump, Solid Waste Files list (undated).
  Comments: "KELSO ROAD, NW1/4 NW1/4 Sec 23, T1N R70W". No other information was given. For further information, see the contact listed at the beginning of this Landfill section.

#15 WESTERN DISPOSAL TRANSFER STATION; 5880 BUTTE MILL ROAD

Sources and Comments

- Colorado Department of Health: Currently Open Landfills List
  Comments: Nearest Town: BOULDER. T/R/S: blank. Full Address: same as above. Operator/Owner: WESTERN DISPOSAL, DANNY SOUDERS/GLENN OVERTURF, 5880 BUTTE MILL ROAD, BOULDER, CO 80301 (303) 444-2037.
- Colorado Department of Health: Historic Landfills Databases
  Comments: Facility Name: WESTERN DISPOSAL TS. Facility Addresss: 5880 BUTTE MILL. Class: O (Open?). Nearest Town: BOULDER. Facility Type: TRANSFER STATION. Owner: WESTERN DISPOSAL, 5880 BUTTE MILL RD, BOULDER, CO 80301, 303-444-2037. Operator: WESTERN DISPOSAL, 5880 BUTTE MILL RD, BOULDER, CO 80301, GLENN OVERTURF, 303-444-2037. Size/Acres: 1. Incorp: Y. Recycling: Y. Transfer: Y.

#18 STENGEL'S DUMP; EAST OF BOULDER CITY AIRPORT AND SOUTH

Sources and Comments

- Boulder County Health Dept. Old Landfill Sites (1986).
  Comments: No other information was given. For further information, see the contact listed at the beginning of this Landfill section.
- Boulder County Health Dept. Illegal Dump, Solid Waste Files list (undated).
  Comments: "STENGEL DUMP, CHARLES STENGEL EAST BOULDER" No other information was given. This dump has been mapped in the same location as the Stengel Dump listed above; this may or may not be the correct location of this facility. For further information, see the contact listed at the beginning of this Landfill section.

APPENDIX C

ACRONYMS

REGULATORY AND TECHNICAL ACRONYMS

ACM	Asbestos-Containing Material
AHERA	Asbestos Hazard Emergency Response Act
AST	Aboveground Storage Tank
CERCLIS	Comprehensive Environmental Response, Compensation and Liability Information System
CDPHE	Colorado Department of Public Health & Environment
CORRACTS	RCRA Corrective Action Sites
DOT	Department of Transportation
EPA	Environmental Protection Agency
ERNS	Emergency Response Notification System
ESA	Environmental Site Assessment
LUST	Leaking Underground Storage Tank
NPDES	National Pollutant Discharge Elimination System
NPL	National Priorities List
OIS	Oil Inspection Section, Colorado Department of Labor & Employment
PCB	Polychlorinated Biphenyl
PLM	Polarized Light Microscopy
RCRA	Resource Conservation and Recovery Act
TRIS	Toxic Release Inventory System
USDA	United States Department of Agriculture
USGS	United States Geological Survey
UST	Underground Storage Tank

APPENDIX D

RECORDS OF COMMUNICATION

RECORD OF COMMUNICATION

Contact: Tim Smith **Of:** Owner

Date: 8/23/02 **Time:** 0900 **Project No.:** 50-071

Contact Telephone No.: 303/444-5253

Subject: Site History/Operations

Results: Operated by Allied Chem from early 1940s til 1970s as fluorspar mill. Ore from Jamestown. Used Actinol (see MSDS) for flotation - non-pet based. Few chems mostly to run machines. Tusco bot & leased to (Tom) Hendricks Mining until the mid 1980's for gold & silver. They used Actinol too. No cyanide or merc. on site.

Leased some space to Al McGowan who did gold recovery fr gravels mined in Boulder. Used mechanical separation only.

Vulcan/Butte Corp bot in ~1994. Worked w/ CDPHE to delicense from Radioactive Matls

Recorded by: [signature] **Of:** AEL

RECORD OF COMMUNICATION

Contact: Tim Smith **Of:** Owner

Date: 8/29/00 **Time:** 1000 **Project No.:** 50-071

Contact Telephone No.:

Subject: Ops - Moore

Results: Septic & leach field for washrooms, etc
Process waters & floordrains went to
tailings pond. Transformer ownership ??
Diesel AST's empty. Actual AST
has ~2,000 gal. Never used gasoline
AST next to cinder block bldg.

Recorded by: **Of:** AEC

STATE OF COLORADO

Bill Owens, Governor
Jane E. Norton, Executive Director

Dedicated to protecting and improving the health and environment of the people of Colorado

HAZARDOUS MATERIALS AND WASTE MANAGEMENT DIVISION
http://www.cdphe.state.co.us/hm/

4300 Cherry Creek Dr. S.
Denver, Colorado 80246-1530
Phone (303) 692-3300
Fax (303) 759-5355

222 S. 6th Street, Room 232
Grand Junction, Colorado 81501-2768
Phone (970) 248-7164
Fax (970) 248-7198

Colorado Department
of Public Health
and Environment

October 12, 1999

Mr. Thomas S. Hendricks
Hendricks Mining Company
P.O. Box 653
Nederland, Colorado 80466-0000

Re: **License Amendment # 01 (Termination), Radioactive Materials License No. 329-01**
Hendricks Mining Company, Boulder County, Colorado

Dear Mr. Hendricks:

This letter transmits Amendment No. 01, which terminates your Colorado Radioactive Materials License No. 329-01 for the Valmont Butte site located in Boulder County, Colorado.

The license expired in 1980 and was not renewed either by you or Tusco, nor was it terminated. In June 1994, Valmont Butte Corporation purchased the site from Tusco for possible resale or development. The Corporation requested that the Colorado Department of Public Health and Environment (Department) review all information related to the former Allied tailings pile and determine if a license for continued storage was necessary, and if not, what administrative action was needed to fully close out the Hendricks license.

The Department performed radiological surveys of the property and required the tailing deposits to be covered with clean fill dirt ranging in depth from 3-14 ft. with the thickest cover at the center of the tailings. A more complete description of the remedial actions can be found in a decision analysis entitled, *Assurance of Equivalent Protection to Public Health and Environment in the Absence of a Colorado Radioactive Materials License for (the) Valmont Butte Site*. In addition, the Department and Valmont Butte Corporation entered into an agreement and declaration of covenants as a legal document to be executed and delivered as an instrument for recording against the title to the property. The covenants are perpetual, run with the property, and are binding on the owners and their successors. With these covenants and restrictions in place, and with the remedial actions performed at the site, the Department finds that equal protection of public health and safety or property is assured in the absence of a radioactive material license. Therefore, the Department has initiated the action at this time to terminate your license.

If you have any questions, please contact me at (303) 692-3387.

Sincerely,

Jeff Deckler
Uranium and Special Projects Unit

cc: Jerry Goad, Colorado Attorney General's Office

enclosure: CRML No. 329-01, Amendment No. 01

STATE OF COLORADO
DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT

RADIOACTIVE MATERIALS LICENSE

Pursuant to the Radiation Control Act Title 25, Article 11, CRS 1989, Replacement Volume, as amended, and the Colorado *Rules and Regulations Pertaining to Radiation Control* (6 CCR 1007-1), and in reliance on statements and representations heretofore made by the licensee designated below,

COLORADO RADIOACTIVE MATERIALS LICENSE NO. 329-01 IS HEREBY TERMINATED.

FOR THE COLORADO DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT

By: _____ Date: 10/12/99

Jeff Deckler
Uranium and Special Projects Unit
Hazardous Materials and Waste Management Division

AUG 3 1 1999

8/25/99

AGREEMENT AND DECLARATION OF COVENANTS

THIS AGREEMENT AND DECLARATION OF COVENANTS, dated as of October 12, 1999, is entered into by and among Valmont Butte Corporation, a Colorado corporation having an address at 2450 Central Avenue, Suite A-1, Boulder, Colorado 80301, and Lincoln Trust Company, a Colorado corporation having an address at 6312 South Fiddlers Green Circle, Englewood, Colorado, as Custodian FBO William G. Smith (collectively, "Landowner"), and the State of Colorado, acting by and through the Colorado Department of Public Health and the Environment (the "Department").

RECITALS

WHEREAS, Landowner is the owner in fee simple of certain real property located in Boulder County, Colorado, consisting of more than 100 acres and more particularly described on Exhibit A attached to and made a part of this instrument (the "Valmont Butte Property"); and

WHEREAS, portions of the Valmont Butte Property have historically been used for milling and processing of mineral ores; specifically, from the 1940s until early 1974, the Allied Chemical Corporation ("Allied") processed fluoride ores mined in the Jamestown, Colorado mining district (the "Allied Operations"), and from 1977 until 1985, Hendricks Mining Company ("Hendricks") processed gold ores, principally from the Cross and Caribou mines located west of Nederland, Colorado (the "Hendricks Operations"); and

WHEREAS, approximately 300,000 cubic yards of tailings from the Allied Operations and the Hendricks Operations were deposited in a roughly 14.11-acre portion of the Valmont Butte Property, near its center. That portion of the Valmont Butte Property had been dammed and contoured to create a primary tailings pond (the "Primary Tailings Pond") and a secondary overflow tailings pond located directly east of the Primary Tailings Pond (the "Secondary Tailings Pond")(collectively, the "Tailings Ponds"), as more particularly described on Exhibit B attached to and made a part of this instrument. The tailings deposit in the Primary Tailings Pond is estimated to be approximately 14 feet thick, and the tailings deposit in the Secondary Tailings Pond is estimated to be approximately 1-2 feet thick; and

WHEREAS, the fluoride ore processed in the Allied Operations contained, and the resulting tailings deposited in the Tailings Ponds contain, naturally occurring radioactive materials at concentrations that are greater than those native to the Valmont Butte Property; and

WHEREAS, as a result of the occurrence of the naturally occurring radioactive materials in the tailings produced by the Allied Operations and deposited in the Tailings Ponds, the State of Colorado, acting by and through the Colorado Department of Health (now, the Colorado Department of Public Health and the Environment), issued to Allied, in August of 1971, Radioactive Materials License No. Colo. 117-01 (together with amendments thereto, the "Allied License"), pursuant to the Colorado Radiation Control Act Chapter 66, Article 26 CRS 1963, as amended (now codified as Colorado Revised Statutes Sections 25-11-101, et seq.), and the Radiation Control Regulations Part III (collectively, the "Control Act and Regulations"); and

WHEREAS, subsequently in 1971, approximately 1500 cubic yards of soil containing low concentrations of radium from a housing construction site in the City of Boulder (the "City Soils") were deposited in the Primary Tailings Pond and capped, at or about that time, with an approximately 4-6 foot thick layer of inert clean fill material, all in accordance with an amendment to the Allied License; and

WHEREAS, in April of 1977, the State of Colorado, acting by and through the Colorado Department of Health, terminated the Allied License and issued to Hendricks Radioactive Materials License No. Colo. 329-01 (together with amendments thereto, the "Hendricks License"), also pursuant to the Control Act and Regulations; and

WHEREAS, the tailings from the Allied Operations deposited in the Primary Tailings Pond, and such capped City Soils, were subsequently capped by an approximately 2-4 foot thick layer of inert tailings material, principally composed of silica sand, from the Hendricks Operations, and by an additional approximately 2-4 foot thick layer of inert clean fill material, all in accordance with the Hendricks License; and

WHEREAS, as a result of such activities, the tailings and City Soils located in the Primary Tailings Pond are currently capped and stabilized by an approximately 8-14 foot thick layer of inert materials in the approximate center of the Primary Tailings Pond, which layer of inert cap materials diminishes to a thickness of approximately 3-4 feet at the outer edges of the Primary Tailings Pond; and

WHEREAS, the approximately 1-2 foot thick layer of tailings from the Allied Operations and the Hendricks Operations deposited in the overflow Secondary Tailings Pond is currently capped and stabilized by an approximately 2-4 foot thick layer of inert clean fill material; and

WHEREAS, the potential health and environmental risks associated with the Tailings Ponds identified by the Department

are (i) radon gas and its decay products in enclosed buildings, (ii) penetrating gamma radiation from naturally occurring materials contained in the Tailings Ponds, or from the City Soils, which could result if the inert materials which currently cap and stabilize the Tailings Ponds are materially disturbed or diminished, and (iii) inhalation or ingestion of tailings materials if they are dispersed by wind, surface water or groundwater (collectively, the "Identified Risks"); and

WHEREAS, the Tailings Ponds are currently capped and stabilized by inert materials which (i) contain the tailings deposits and the City Soils, (ii) protect the tailings deposits and the City Soils against material wind and surface water erosion, and (iii) substantially mitigate and reduce to acceptable levels the gamma radiation measurable on the surface of the Tailings Ponds; and

WHEREAS, the small amounts of dispersed tailings materials located on the Property which are not currently capped and stabilized by inert materials in the Tailings Ponds as described in the immediately preceding paragraph have been determined by the Department to occur in sufficiently low concentrations, and/or in sufficiently stable locations, to be considered not contributory to the Identified Risks; and

WHEREAS, it has been determined that no groundwater pathway exists to transport the tailings deposits or City Soils away from the Tailings Ponds, and that no threat of such a groundwater pathway exists so long as the impervious Pierre shale layer underlying the Tailings Ponds (which Pierre shale layer is estimated to be more than 3000 feet thick) remains intact; and

WHEREAS, the Department wishes to provide for the continued protection of the public from the Identified Risks; and

WHEREAS, continued protection of the public from the Identified Risks will be furthered by the imposition of appropriate conditions and restrictions on future uses and development of the Valmont Butte Property which ensure that the stability of the Tailings Ponds and the existing thicknesses of inert cap materials on the Tailings Ponds are preserved and maintained, and which ensure that enclosed buildings constructed on the Valmont Butte Property are designed and constructed in a manner which reasonably prevents radon gas levels in such buildings from exceeding the guidelines recommended by the United States Environmental Protection Agency ("EPA"), or its successor agency; and

WHEREAS, Landowner voluntarily wishes to impose such conditions and restrictions on future uses and development of the Valmont Butte Property, in the form of permanent restrictive

covenants running with the Valmont Butte Property as more particularly set forth in this instrument; and

WHEREAS, the Department has determined that monitoring and enforcing such permanent restrictive covenants running with the Valmont Butte Property will be an effective means of preserving and maintaining the stability of the Tailings Ponds and otherwise providing for the continued protection of the public from the Identified Risks; and

WHEREAS, the Department has determined that, to the best of the Department's knowledge, there are no unresolved issues potentially affecting health, safety or the environment resulting from historic activities conducted on the Valmont Butte Property, under either the Allied License or the Hendricks License, or otherwise, that would warrant further regulatory action by the Department; and

WHEREAS, contemporaneously with the execution, delivery and recording of this Agreement and Declaration of Covenants, the Department has terminated the Hendricks License, and has confirmed that both the Allied License and the Hendricks License shall have no further force or effect.

NOW, THEREFORE, in consideration of the mutual covenants and obligations hereinafter set forth, Landowner and the Department hereby agree, and Landowner, on behalf of itself and its successors and assigns as owners of any portion of the Valmont Butte Property, hereby declares, as follows:

1. **Landowner's declaration of covenants:**

(A). No Habitable Structures within the Tailings Ponds. No buildings or other enclosed structures that serve as living quarters for any person (collectively, "Habitable Structures") shall be constructed or maintained within any portion of the Tailings Ponds. Subject to the foregoing, and to the requirements of Paragraph 1(B), below, buildings or other enclosed structures that serve as working quarters for any person (collectively, "Working Structures"), and other buildings and structures other than Habitable Structures, may be constructed, maintained and repaired within the Tailings Ponds.

(B). Compliance with radon guidelines. Without limiting the effect of Paragraph 1(A), above, prior to Landowner's application for issuance of a final certificate of occupancy with respect to any Habitable Structure or Working Structure constructed within any portion of the Valmont Butte Property, Landowner shall furnish to the Department (i) a true and complete report of a certified laboratory analysis confirming that such structure meets the then-current radon guidelines recommended by the EPA or its successor agency, which guidelines currently

establish an annual average maximum radon concentration of 4 picocuries of radon per liter of air, (ii) a reasonably detailed description of the methods of radon testing, measurement and analysis utilized to achieve such results, and (iii) in the event any radon mitigation design, devices or equipment were employed or installed in the tested structure in order to achieve such results, a reasonably detailed description of such design, devices or equipment, together with true and complete reports of all radon testing, measurements and analyses completed with respect to such structure, including, without limitation, before and after the employment or installation of such radon mitigation design, devices or equipment.

(C). Tailings Ponds Improvements, Surface Changes, and Permitted Disturbances. All grading, site preparation, construction and related activities conducted in the Tailings Ponds by or on behalf of Landowner in connection with the construction, improvement, maintenance and/or repair of Working Structures or other permitted structures (i.e., other than Habitable Structures, which are prohibited within the Tailings Ponds pursuant to Paragraph 1(A), above), landscaping and other site improvements (collectively, "Tailings Ponds Improvements") shall be subject to the following conditions and requirements:

(i) Landowner shall notify the Department of Landowner's application to Boulder County (or other governmental agency having jurisdiction over the development and use of the Valmont Butte Property) for any building, grading, land use or other similar permit or approval required in connection with any Tailings Ponds Improvements, and shall furnish to the Department with such notice true and complete copies of all documents submitted to such governmental agency in connection with such application, within ten (10) business days following Landowner's submission of such application to such governmental agency.

(ii) The features, contours and integrity of the existing earthen dam structures which contain and define the Tailings Ponds shall at all times be preserved and maintained.

(iii) All grading, re-contouring or other material alterations of the surface features of the Tailings Ponds (collectively, "Surface Changes") shall be accomplished by importing and depositing additional clean fill material on the affected portions of the Tailings Ponds.

(iv) All excavations, removals and other material disturbances of existing surface materials, soils or tailings within the Tailings Ponds shall be limited to those activities related to the construction, maintenance and repair of (a) foundations, caissons, pilings or other sub-surface structural components, and (b) water, sewer, gas, telephone, electric or other sub-surface utility components,

all in connection with Tailings Ponds Improvements (collectively, "Permitted Disturbances"), subject to the provisions of Paragraphs 1(C)(v) and 1(C)(vi), below.

(v) Any existing surface materials, soils or tailings within the Tailings Ponds which are excavated, removed or disturbed in connection with any Permitted Disturbance shall be (a) fully contained at such construction site, within the Tailings Ponds, during such construction and related activities, and (b) completely re-covered and re-capped within the Tailings Ponds, upon completion of such construction and site restoration activities, with the effect that any such excavated, removed or disturbed surface materials, soils or tailings shall be no less stable and contained within the Tailings Ponds after completion of such construction and related activities than prior to the commencement thereof.

(vi) No wells shall be allowed in any portion of the Tailings Ponds. No drill holes or penetrations of existing surface materials, soils and tailings shall be allowed in any portion of the Tailings Ponds except in connection with any Permitted Disturbances; provided, however, that all such permissible drill holes or penetrations shall be filled with materials that do not materially change or increase water infiltration or flows. In the event of material burrowing, tunneling, penetrations or other similar disturbances of the Tailings Ponds by prairie dogs or other wildlife which the Department reasonably determines will pose a substantial risk of contributing materially to the Identified Risks, Landowner and the Department shall cooperate to develop, and Landowner shall implement, an appropriate plan for managing and controlling such wildlife disturbances.

(vii) All Surface Changes, Tailings Ponds Improvements and Permitted Disturbances shall be completed in a manner which does not materially increase (a) surface water drainage or flows to or from the Tailings Ponds, or (b) surface water accumulation on, or infiltration in or through, the Tailings Ponds.

(viii) In addition to, but not in limitation of, the notice requirements set forth in Paragraph 1(C)(i), above, not later than thirty (30) days prior to the commencement of work within the Tailings Ponds in connection with any Surface Changes, Tailings Ponds Improvements or Permitted Disturbances, Landowner shall notify the Department thereof in order to afford the Department a reasonable opportunity to review any plans, specifications or other documentation prepared by Landowner in connection with such work, and to consult with and provide reasonable advice and suggestions to Landowner in connection with the means employed by

Landowner to comply with the covenants set forth in this Paragraph 1.

(D). Improvements or alterations to, or removal of, existing ore mill building and improvements. Landowner shall notify the Department not later than thirty (30) days prior to the commencement of any material improvements or alterations to, or demolition or removal of, any of the ore mill buildings or other structures or improvements located on the Valmont Butte Property as of the date hereof. Landowner shall conduct and perform reasonable and appropriate radiation monitoring and control activities during the performance of any such improvement, alteration, demolition or removal work. Any tailings materials discovered in the course of such work which are reasonably determined to pose, as a result of disturbances caused by such work, a substantial risk of contributing materially to the Identified Risks shall be appropriately deposited, capped and stabilized within the Primary Tailings Pond or in another suitable location acceptable to both Landowner and the Department.

2. Term of covenants. Except as otherwise amended or terminated in accordance with the provisions of Paragraph 3, below, the covenants set forth in Paragraph 1, above, shall be perpetual; provided, however, that any covenant to which the rule against perpetuities or the rule against restraints on alienation may be determined to be applicable shall continue only until twenty-one years after the death of the last survivor of the now living descendants of Elizabeth II, Queen of England.

3. Covenants running with the land; further conveyances; amendments and termination. The covenants set forth in Paragraph 1, above, shall constitute a burden on title to the Valmont Butte Property and perpetual covenants running with the land which shall bind and inure to the benefit of Landowner and Landowner's successors and assigns as owners of any portion of the Valmont Butte Property, and the State of Colorado, acting by and through the Colorado Department of Public Health and the Environment or its successor agency. All deeds and other instruments evidencing any conveyance of title or other real property interest in any portion of the Valmont Butte Property shall specifically refer to this instrument and incorporate this instrument by reference. The covenants, terms and provisions set forth in this instrument shall bind and inure to the benefit of the parties hereto and their respective successors and assigns, and may be amended or

terminated only by a written instrument executed, acknowledged, delivered and properly recorded against the Valmont Butte Property by the Department (or its successor agency) and by all of the then current owners of the Valmont Butte Property.

4. Enforcement of covenants. This instrument and the covenants set forth herein shall be construed in accordance with Colorado law, and shall be enforceable in a court of competent jurisdiction.

IN WITNESS WHEREOF, Landowner and the Department have executed and delivered this instrument for recording as of the date first written above.

LANDOWNER:
VALMONT BUTTE CORPORATION

By: _____
Timothy L. Smith,
Vice President

LINCOLN TRUST COMPANY,
CUSTODIAN FBO WILLIAM G. SMITH

By: _____
Its: Manager

DEPARTMENT:
THE STATE OF COLORADO, ACTING BY AND THROUGH THE COLORADO DEPARTMENT OF PUBLIC HEALTH AND THE ENVIRONMENT

By: _____
Howard Roitman

By: _____
Robert M. Quillin

STATE OF COLORADO)
) ss.
COUNTY OF BOULDER)

The foregoing Agreement and Declaration of Covenants instrument was acknowledged before me this 29th day of September 1999, by Timothy L. Smith, as Vice-President of Valmont Butte Corporation, a Colorado corporation.

Witness my hand and official seal.

My commission expires: November 13, 2001.

NOTARY PUBLIC
TAMMY T. LINTON
STATE OF COLORADO

My Commission Expires 11/13/2001

Tammy T. Linton
Notary Public

STATE OF COLORADO)
) ss.
COUNTY OF Arapahoe)

The foregoing Agreement and Declaration of Covenants instrument was acknowledged before me this 9th day of September, 1999, by Barry Coon, as Manager of Lincoln Trust Company, Custodian FBO William G. Smith.

Witness my hand and official seal.

My commission expires: My Commission Expires 10/20/01.

KRISTY STEVENSON
NOTARY
PUBLIC
STATE OF COLORADO

Kristy Stevenson
Notary Public

STATE OF COLORADO)
) ss.
COUNTY OF)

The foregoing Agreement and Declaration of Covenants instrument was acknowledged before me this 6th day of OCTOBER, 1999, by Howard Roitman, as HWMD Director of The Colorado Department of Public Health and the Environment.

Witness my hand and official seal.

My commission expires: October 21, 1999.

Claudette M. Ferris
Notary Public

STATE OF COLORADO)
) ss.
COUNTY OF)

The foregoing Agreement and Declaration of Covenants instrument was acknowledged before me this 6th day of OCTOBER, 1999, by Robert M. Quillin, as LARS Director of The Colorado Department of Public Health and the Environment.

Witness my hand and official seal.

My commission expires: October 21, 1999.

Claudette M. Ferris
Notary Public

AUG 3 1 1999

EXHIBIT "A"

PARCEL A:

Part of Sections 22 and 23, Township 1 North, Range 70 West of the 6th P.M., described as follows:

Beginning at the Southeast corner of said Section 22; thence Northerly along the East line of said Section 22, a distance of 214.50 feet; thence Westerly and parallel with the South line of said Section 22, a distance of 625.00 feet; thence Southerly and parallel with the East line of said Section 22, a distance of 214.50 feet to the South line of said Section 22; thence Westerly along the South line of said Section 22, a distance of 654.00 feet; thence North, 26.00 feet; thence West, 304.00 feet; thence North 720.00 feet; thence East, 304.00 feet; thence South, 215.00 feet; thence North 78°30' East, 299.88 feet; thence North 00°16'30" West, 385.00 feet to the South bank of the Housel Mill Ditch; thence Northeasterly along the South bank of said Housel Mill Ditch to the East line of said Section 22; thence Southerly along said East line to the centerline of County Road No. 1 as shown on the recorded Plat of said County Road No. 1 which is recorded in Public Roads Book C at Page 87; thence Northeasterly along the centerline of said County Road No. 1 to the East line of the SW1/4SW1/4 of said Section 23; thence Northerly along said East line to the Northwest corner of the SE1/4SW1/4 of said Section 23; thence Easterly along the North line of said SE1/4SW1/4 to the centerline of said County Road No. 1; thence Northeasterly along the centerline of said County Road No. 1 to the East line of the NE1/4SW1/4 of said Section 23; thence South along the East line of the SW1/4 of said Section 23, a distance of 1,638.90 feet to the South Quarter corner of said Section 23; thence Westerly along the South line of said Section 23, a distance of 2,626.12 feet to the POINT OF BEGINNING;

EXCEPT a parcel in the SE1/4SE1/4 of said Section 22, described as follows:

Commencing at the Northwest corner of said Southeast 1/4 of the Southeast 1/4; thence South, 21 rods; thence East, 20 rods to the TRUE POINT OF BEGINNING; thence South, 8 rods; thence East, 20 rods; thence North, 8 rods; thence West, 20 rods to the TRUE POINT OF BEGINNING.

PARCEL B:

Part of the Southeast 1/4 of the Southwest 1/4 of Section 22, Township 1 North, Range 70 West of the 6th P.M., described as follows:

Beginning at the Southeast corner of the Southwest 1/4 of said Section 22; thence North along the East line of said Southwest 1/4, a distance of 355.26 feet; thence South 36°39' West, 433.80 feet; thence on a 20° curve to the right to the South line of said Southwest 1/4; thence East along said South line to the POINT OF BEGINNING.

Continued....

PARCEL C:

Part of the Southeast 1/4 of the Southwest 1/4 of Section 22, Township 1 North, Range 70 West of the 6th P.M., described as follows:

Beginning at the Southeast corner of the Southwest 1/4 of said Section 22; thence North along the east line of said Southwest 1/4, a distance of 355.26 feet; thence South 47° West to the South line of said Southwest 1/4; thence East along said South line to the POINT OF BEGINNING;

EXCEPT that parcel described herein as Parcel B;

AND EXCEPT from the above tracts any portion thereof conveyed by Lucile C. Cannon to Design Products, Inc., in Deed recorded December 20, 1965 on Film 534 as Reception no. 802406.

AND EXCEPT portions deeded to Boulder County by deeds recorded May 23, 1984 on Film 1303 as Reception Nos. 622620 and 622628;

AND EXCEPT any portions thereof conveyed to The Colorado Brick Company, Inc., by deed recorded September 14, 1987 on Film 1495 as Reception No. 876679.

All being in the County of Boulder, State of Colorado.

EXHIBIT B

LEGAL DESCRIPTION - TAILINGS POND:

A PARCEL OF LAND LOCATED IN THE SOUTH ONE-HALF OF THE SOUTHWEST ONE-QUARTER OF SECTION 23, TOWNSHIP 1 NORTH, RANGE 70 WEST OF THE 6TH PRINCIPAL MERIDIAN, COUNTY OF BOULDER, STATE OF COLORADO, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

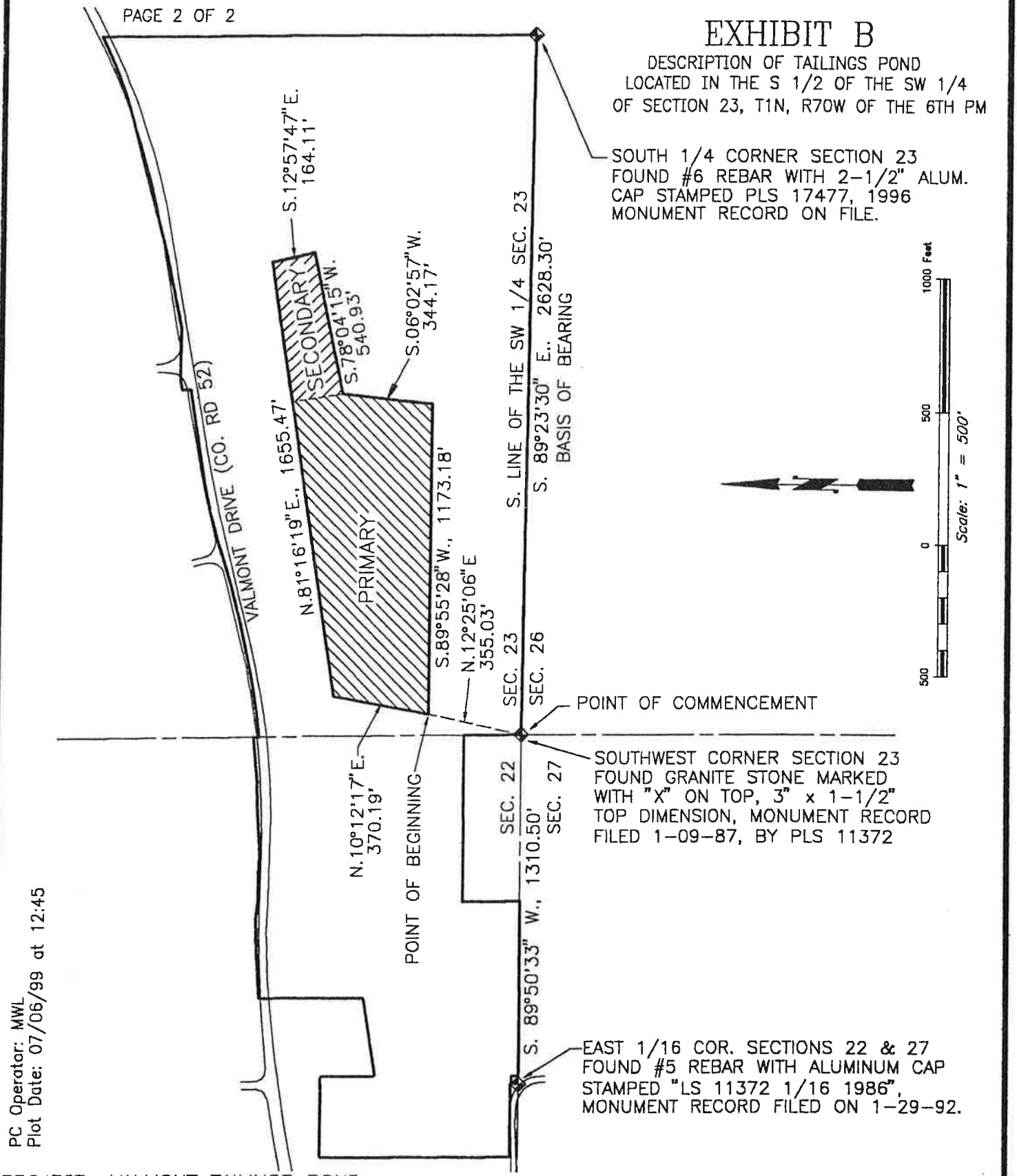
COMMENCING AT THE SOUTHWEST CORNER OF SAID SECTION 23, FROM WHICH THE SOUTH ONE-QUARTER CORNER OF SAID SECTION 23 BEARS S. 89°23'30" E., WITH ALL BEARINGS HEREIN RELATIVE THERETO;
THENCE N. 12°25'06" E., A DISTANCE OF 355.03 FEET TO THE **TRUE POINT OF BEGINNING**;
THENCE N. 10°12'17" E., A DISTANCE OF 370.19 FEET;
THENCE N. 81°16'19" E., A DISTANCE OF 1655.47 FEET;
THENCE S. 12°57'47" E., A DISTANCE OF 164.11 FEET;
THENCE S. 78°04'15" W., A DISTANCE OF 540.93 FEET;
THENCE S. 06°02'57" W., A DISTANCE OF 344.17 FEET;
THENCE S. 89°55'28" W., A DISTANCE OF 1173.18 FEET TO THE **TRUE POINT OF BEGINNING**;
CONTAINS 614635 SQUARE FEET OR 14.110 ACRES, MORE OR LESS.

PREPARED 7-06-99 BY:

JOHN W. CHRISTY, P.L.S. 17477
4100 E. MISSISSIPPI AVE.
SUITE 1200
GLENDALE, CO 80246

EXHIBIT B

DESCRIPTION OF TAILINGS POND
LOCATED IN THE S 1/2 OF THE SW 1/4
OF SECTION 23, T1N, R70W OF THE 6TH PM



PC Operator: MWL
Plot Date: 07/06/99 at 12:45

PROJECT VALMONT TAILINGS POND
PROJECT NO.
CROSS REFERENCE NO.
DATE OF SURVEY 6-29-99 | SURVEYED BY JWH, MJP
FILE NAME C:\LESSMITH\VALMONT\TAILINGS

FORESIGHT WEST SURVEYING INC.
4100 E. Mississippi Ave., Suite 1200
Glendale, CO 80246 (303) 504-4440

ecology and environment, inc.
4105 EAST FLORIDA AVENUE, SUITE 350, DENVER, COLORADO 80222, TEL. 303-757-4984
International Specialists in the Environmental Sciences

TO : David Schaller, Project Officer, EPA
FROM : Michael Glaze, ARPM, E&E
DATE : December 31, 1984
SUBJECT: Reconnaissance Visit to Hendricks' Mill, Boulder, Colorado (TDD R8-8408-18).

On December 28, 1984 FIT members, John Hadley, Michael Glaze and Kenneth Beiser visited the Hendricks' Mill, formerly the Allied Chemical Mill. The purpose of the visit was to familiarize the FIT with aspects of the site that would influence the placement of ground water monitoring wells. FIT met with Mr. Thomas Hendricks, owner of the company, prior to performing the reconnaissance.

FIT discussed the objectives of the proposed sampling program with Mr. Hendricks and the reason a site reconnaissance was necessary. Mr. Hendricks was very receptive to the discussion and provided historical information concerning operations at the site. This information will be used in developing the preliminary assessment and site inspection reports.

Mr. Hendricks described the basic differences between his operation and the previous occupants, Allied Chemical. Allied Chemical operated a mill for extracting fluorospar, processing 200 tons/day during peak operations. The ore was rich with fluorospar (approximately 50 percent) and pyrite. The ore also contained radium associated with the fluorospar, resulting in tailings with low level radiation. The ore mined by Hendricks' from the Caribou Mine, is gold and silver bearing quartz rock. The milling process uses pine oil and xanthates to separate the metals and does not use cyanide extraction. Approximately 60,000 tons of milled quartz have been placed in the tailings pond, and Mr. Hendricks estimates that nearly 70 percent of the tailings pond is now covered with tailings from the Caribou Mine. In addition, Hendricks

applies a hydro-mulch to the pond surface every 6 months by spraying. A contractor was spraying on the day of the site visit.

Mr. Hendricks told us that Allied Chemical sold water to the Public Service Company's Valmont Plant. The water was pumped from the Allied Chemical pond to Valmont Reservoir. The pump house is still standing. FIT will attempt to sample sediment in the vicinity of the pipe outlet into Valmont Reservoir.

During the reconnaissance FIT observed that the tailings are placed in a closed valley. The igneous Valmont dike bounds the tailings on the north. This rock may act as a barrier to groundwater flow. The dike may be fractured along its length, but there is a zone of metamorphosed shale baked by the intrusion, which could add to the impermeability. FIT observed weathered shale in a cut on the hill above the tailings. This shale is probable the Pierre Shale which is locally several thousand feet thick. The tailings probably rest directly on the Pierre. This material should serve as a barrier to downward migration.

Using this information FIT has postulated that locally near surface groundwater, if present, should flow eastward toward an erosional break in the Valmont dike. On the southeast side of this break is a rise on which uncovered coal fly ash from the Valmont power plant has been placed. Using this interpretation of groundwater flow, FIT staked the location of four monitoring wells. Their locations are described in a separate memo that may be used as a basis for communication of well locations to Hendricks' Mining and TUSCO.

FIT decided that a well could not be drilled anywhere alone the north side of the Valmont dike. The dike and its rubble are not easily accessable, and Valmont Drive covers the alluvium immediately below this intrusion. The sampling plan will be amended to incorporate this change. FIT observed that extensive gravel excavation has taken place north of Valmont Drive leaving numerous ponds. We will be contacting gravel operators to ask about sampling at least one of the ponds.

FIT suggests that the sample plan be amended further to include geophysical surveying using the EM-31 Conductivity meter for refinement of well placement. The survey will look for anomalies in conductivity that will be used to assist in placing wells. Two lines will be run from north to south below the main berm. This task will require two people for one day of work.

FIT monitored radiation levels during the visit. Background was measured off-site at 17 microrems/hour. Near the main tailings radiation levels were between 20 and 30 microrems/hour. The highest levels (50 to 55 microrems/hour) were found in the area immediately east of the major berm in the vicinity of one of the proposed wells. Radiation monitoring during drilling and sampling activities will be a high priority for safety. It is possible that drilling could bring up materials with higher radiation levels. FIT requests that EPA consider using its radiation division during this exercise to monitor for changes in radiation and the presence of radon gas.

One final item --- FIT informed the Hendricks' Mill manager, Ms. Jennifer Nowak, of the proposed well locations. She expressed negative feelings about placing a well below the major berm due to her concern that we might drill through the shale. FIT considers this area to be a prime location for a well and feels that drilling can be easily controlled to prevent penetration of the shale into any underlying aquifers. FIT expects that the company or its lessee may contest this well location.

cc: Keith O. Schwab
Thomas Staible

P.S. The safety waiver for the Hendricks' Mill is attached.

SAMPLING ACTIVITIES REPORT
FOR
ALLIED CHEMICAL TAILINGS POND
BOULDER, COLORADO

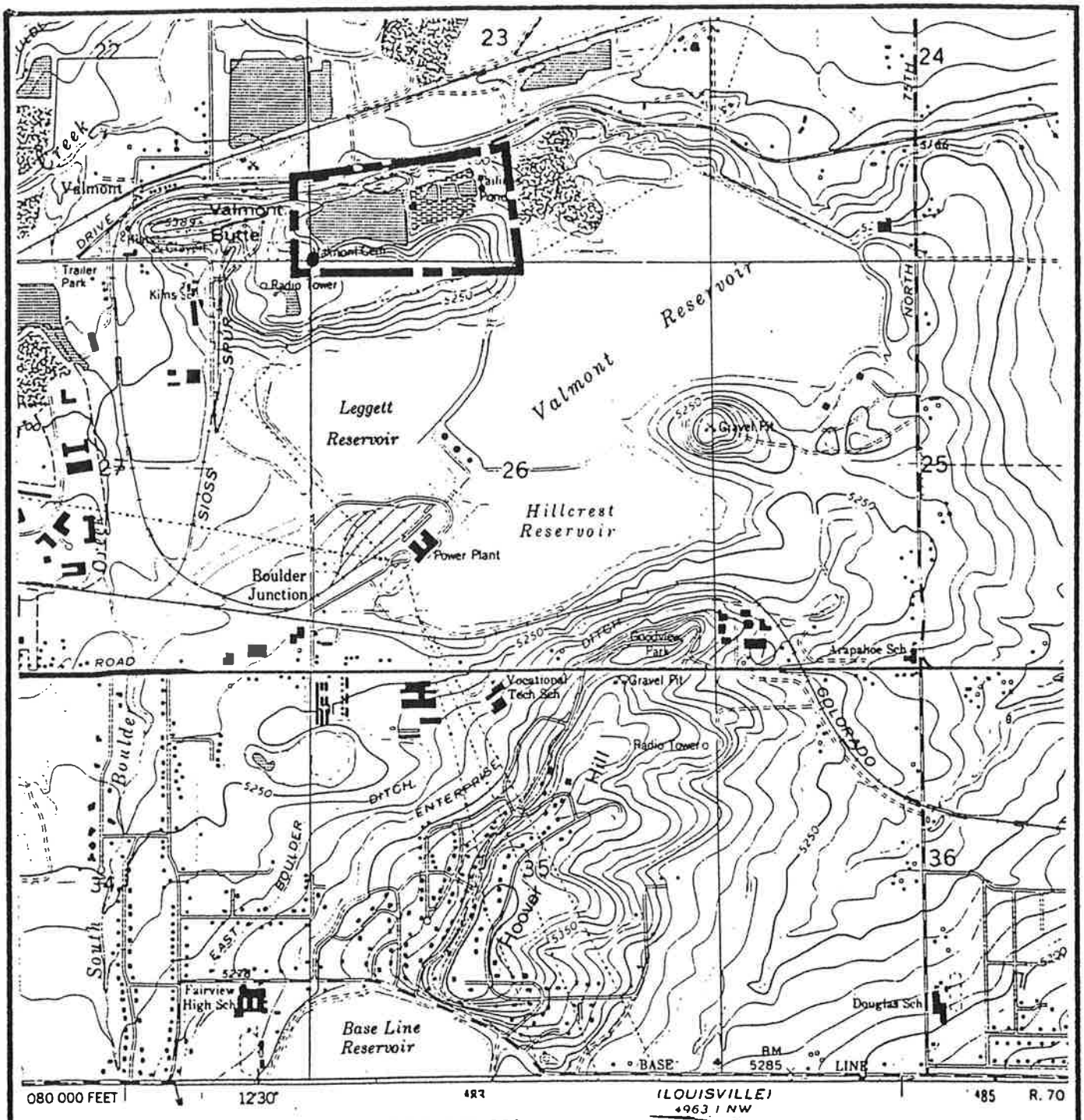
TDD R8-8501-02

EPA REGIONAL SITE PROJECT OFFICER: DAVID SCHALLER

FIT PROJECT OFFICER: JOHN HADLEY

SUBMITTED TO: KEITH SCHWAB, FIT-RPO
JUDY WONG, REM-RPO

DATE SUBMITTED: MARCH 25, 1985



SCALE 1:24 000

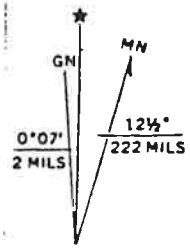
1 0 1

1000 0 1000 2000 3000 4000 5000 6000 7000 FEET

1 .5 0 1 KILOMETER

CONTOUR INTERVAL 10 FEET
NATIONAL GEODETIC VERTICAL DATUM OF 1929

Source: NIWOT QUAD, USGS



FIELD INVESTIGATIONS OF UNCONTROLLED HAZARDOUS WASTE SITES
TASK REPORT TO THE E.P.A.

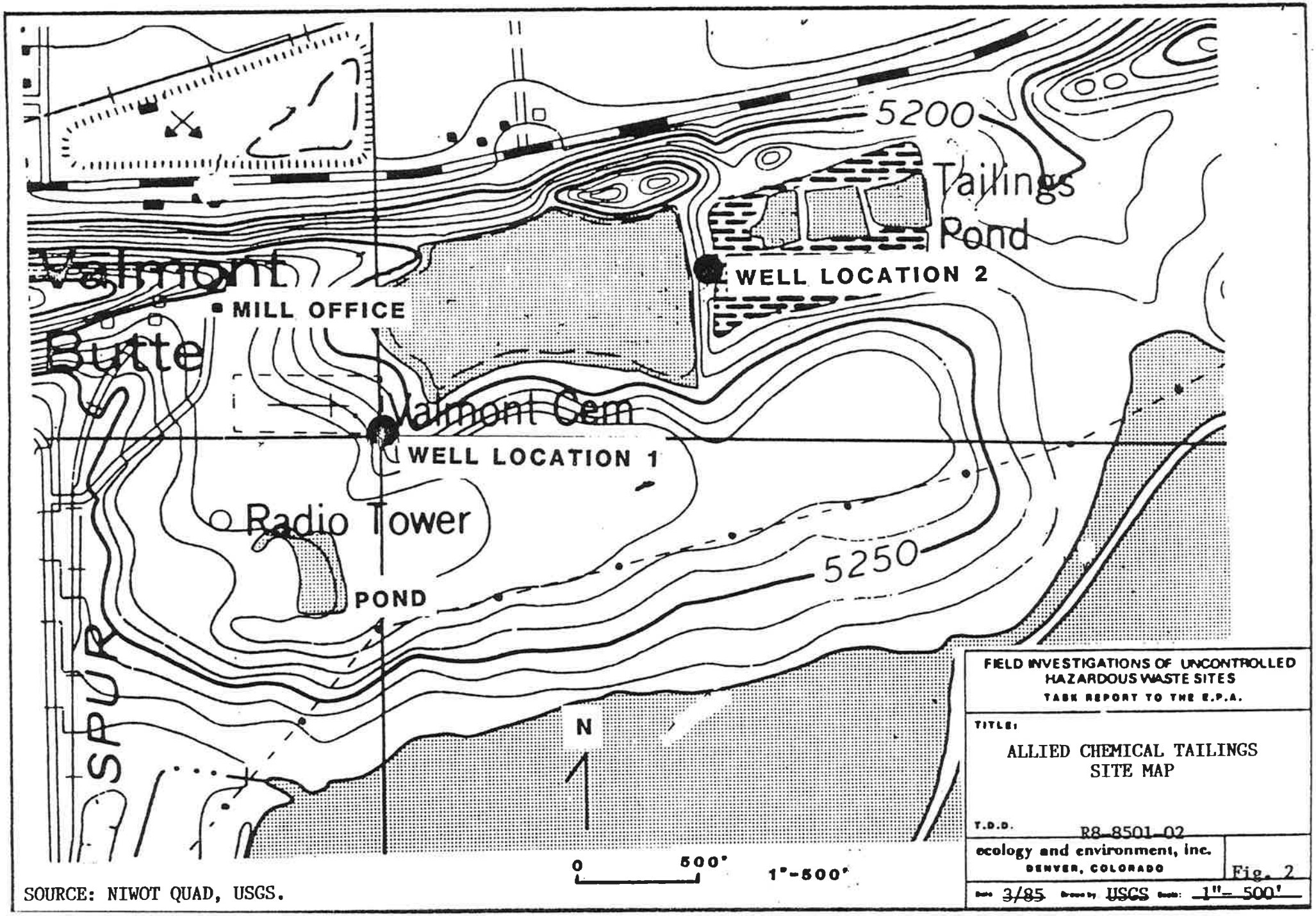
TITLE: ALLIED CHEMICAL TAILINGS SITE LOCATION MAP

T.D.D. R8-8501-02

ecology and environment, inc.
DENVER, COLORADO

Fig. 1

Date 3/85 Drawn by USGS Scale 1:24000



SOURCE: NIWOT QUAD, USGS.

FIELD INVESTIGATIONS OF UNCONTROLLED HAZARDOUS WASTE SITES
TASK REPORT TO THE E.P.A.

TITLE:

ALLIED CHEMICAL TAILINGS
SITE MAP

T.D.D. R8-8501-02

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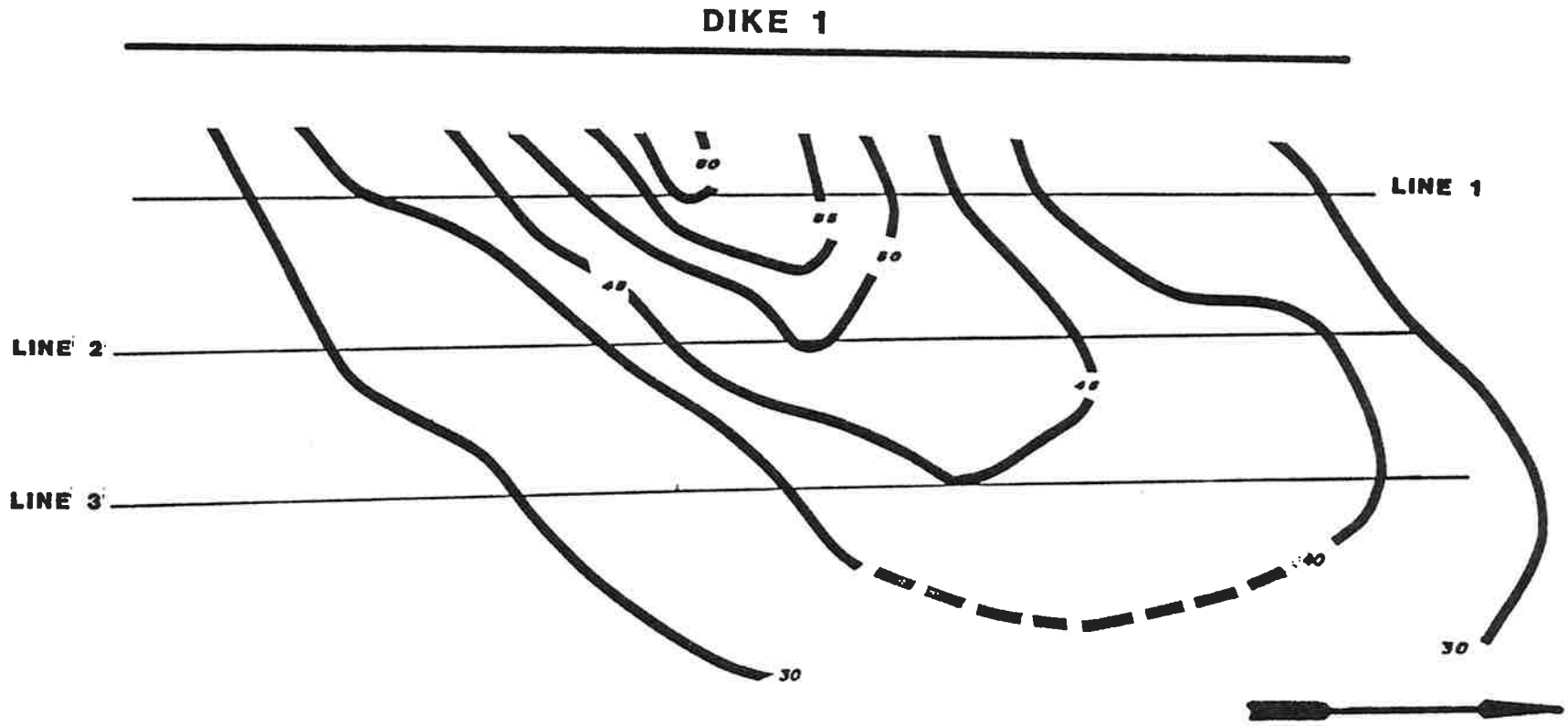
Fig. 2

3/85 USGS 1"= 500'



CONTOUR MMHOS/METER
DASHED WERE INFERRED
CONTOUR INTERVAL VARIBLE.

7.5 METER DEPTH

FIELD INVESTIGATIONS OF UNCONTROLLED HAZARDOUS WASTE SITES
TASK REPORT TO THE E.P.A.

TITLE: ALLIED CHEMICAL TAILINGS
GEOPHYSICAL STUDY
EAST OF DIKE 1

TDD R8-8501-02

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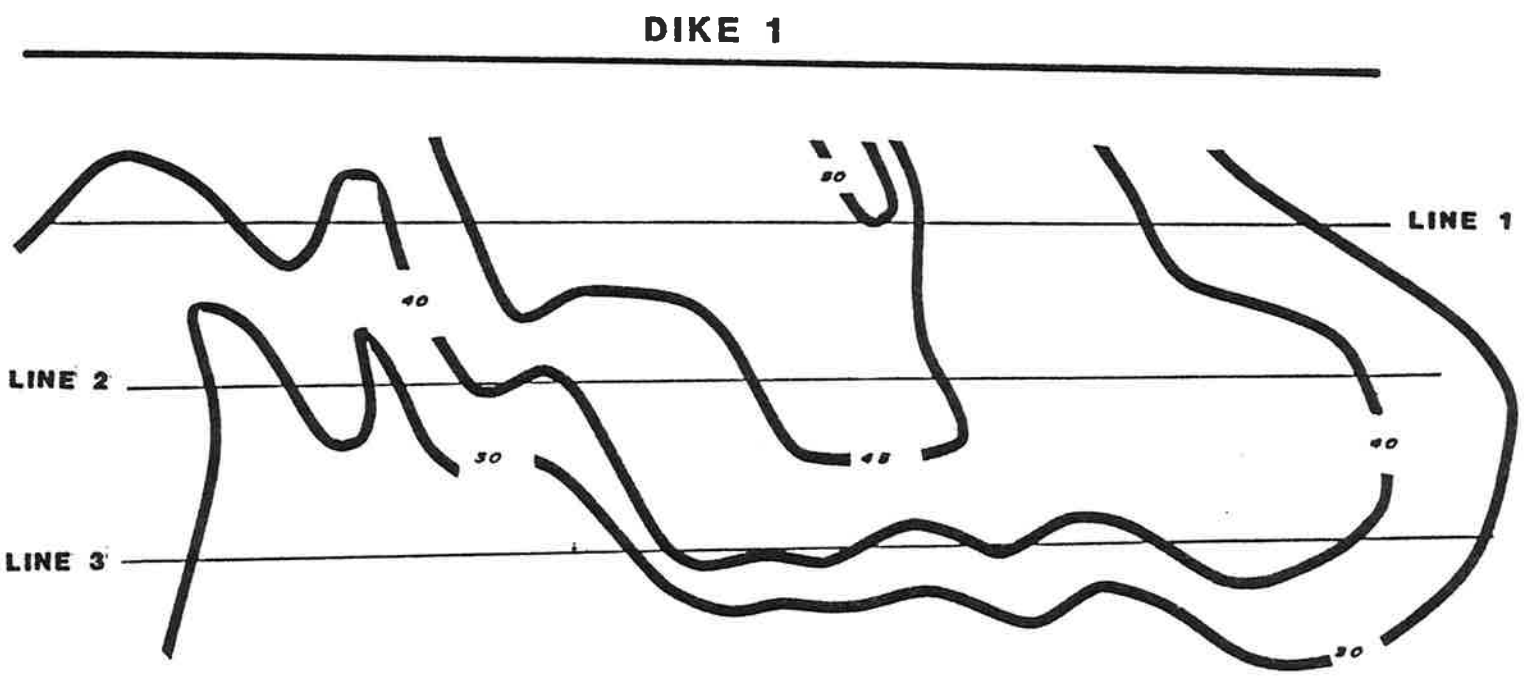
FIG 3

3/85 JH 1" = 100'



CONTOURS IN MMHOS/METER
DASHED WHERE INFERRED
CONTOUR INTERVAL VARIBLE.

15 METER DEPTH

FIELD INVESTIGATIONS OF UNCONTROLLED HAZARDOUS WASTE SITES
TASK REPORT TO THE E P A

TITLE: ALLIED CHEMICAL TAILINGS GEOPHYSICAL STUDY EAST OF DIKE 1

E.D.D. R8-8501-02

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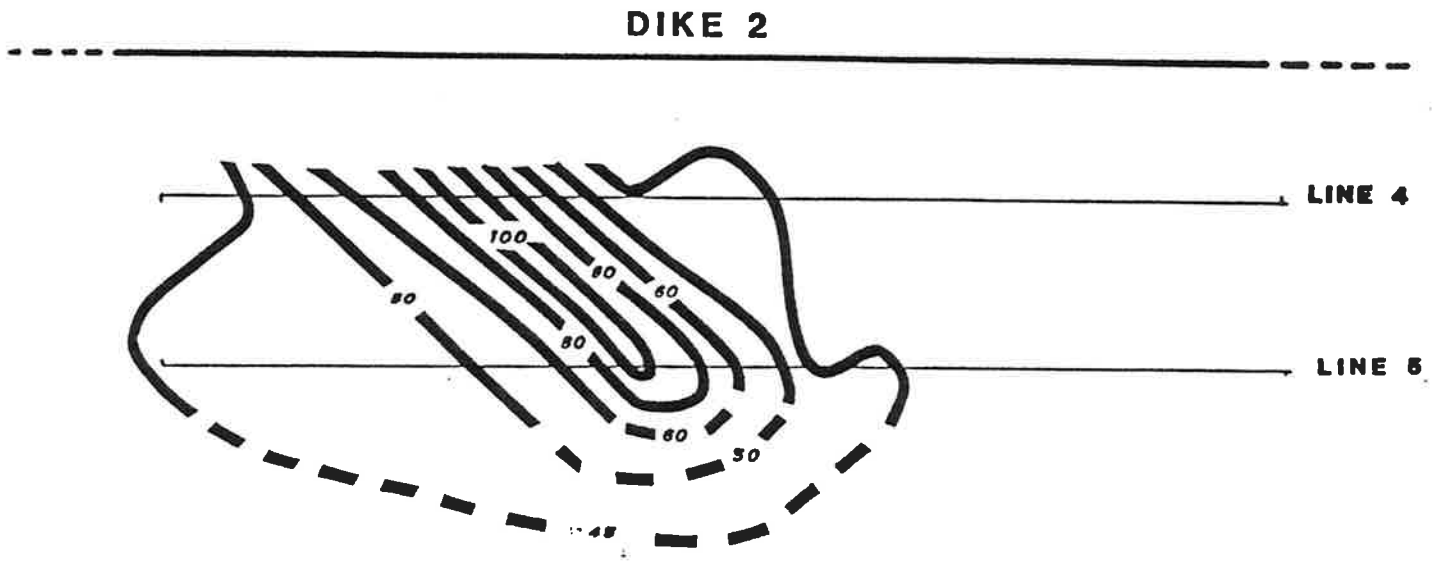
FIG 4

DATE 3/85 DRAWN JH SCALE 1" = 100'



CONTOUR IN MMHOS/METER
DASHED WHERE INFERRED
CONTOUR INTERVAL VARIBLE.

7.5 METER DEPTH

FIELD INVESTIGATIONS OF UNCONTROLLED HAZARDOUS WASTE SITES
TASK REPORT TO THE E.P.A.

TITLE ALLIED CHEMICAL TAILINGS
GEOPHYSICAL STUDY
EAST OF DIKE 2

T.O.D. R8-8501-02

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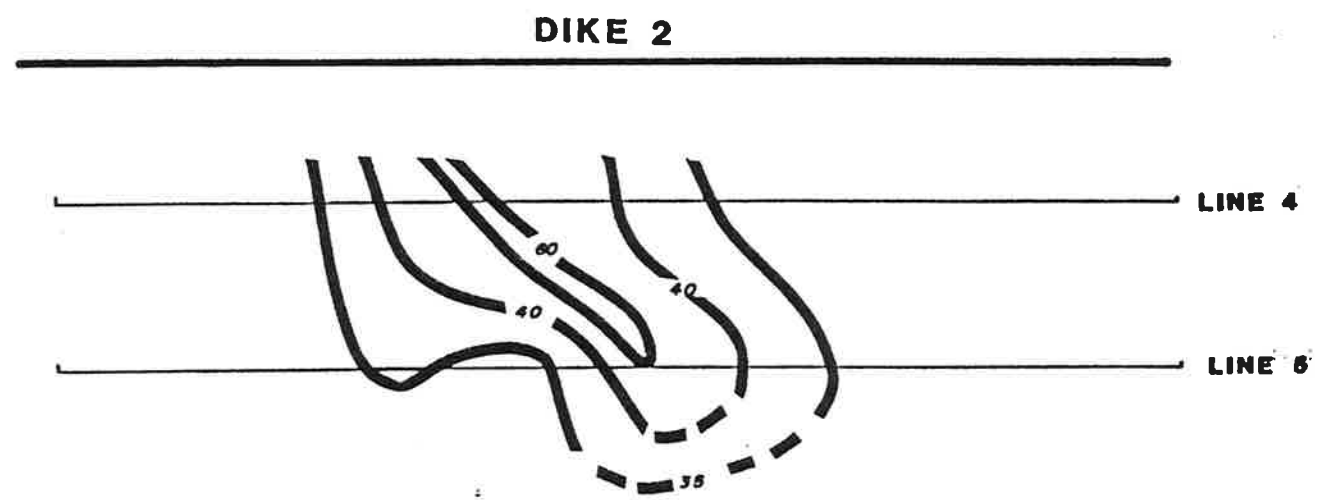
FIG 5

3/85 JH 1" = 100'



CONTOURS IN MMHOS/METER
DASHED WERE INFERRED
CONTOUR INTERVAL VARIBLE.

15 METER DEPTH

FIELD INVESTIGATIONS OF UNCONTROLLED HAZARDOUS WASTE SITES
TASK REPORT TO THE E P A

TITLE ALLIED CHEMICAL TAILINGS
GEOPHYSICAL STUDY
EAST OF DIKE 2

T D D R8-8501-02

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FIG 6

3/85 JH 1" = 100'

TABLE 1

WELL LOG FOR BACKGROUND WELL AC-GW-1

DEPTH	DESCRIPTION
0	Topsoil Snow Cover
0 - 5	Fine Sand, Small Amounts of Quartz Sand
5 - 10	Fine to Very Fine Light Brown Quartz Sand
10 - 20	Brown Silty Sand with Some Gravel to 1"
20 - 25	Brown Silt
25 - 35	Light Brown Silt
35	Weathered Gray Clay
35 - 45	Dark Grey Marine Shale of Pierre Shale
45	Total Depth in Pierre Shale

TABLE 2

WELL LOG FOR WELL AC-GW-2

DEPTH	DESCRIPTION
0	Topsoil Snow Cover
0 - 5	Brown Silt
5 - 10	Brown Silt with Small Amount of Clay
10 - 20	Weathered Grey Marine Shale of the Pierre
20 - 30	Grey Marine Shale of the Pierre
30	Total Depth in Peirre Shale

SAMPLING REPORT
ALLIED CHEMICAL TAILINGS
BOULDER COUNTY, COLORADO
TDD R8-8501-02

I. INTRODUCTION

This report has been prepared to satisfy the requirements of Technical Directive Document (TDD) R8-8501-02 issued to Ecology and Environment's Field Investigation Team (E&E FIT) by the Region VIII U.S. Environmental Protection Agency (EPA). Sampling of Allied Chemical Tailings located in Boulder County (Figure 1) was conducting this investigation were Ken Moll, drilling supervisor; Karl Ford, sampler; and John Hadley, Project Officer. FIT was accompanied by Phil Nyberg, EPA Radiation Group as a radiation monitor.

The scope of work included conducting a geophysical study, installing four monitoring wells, and sampling ground water, surface water, soils and sediments. Two holes were drilled and found to be dry. Consequently the holes were not completed as wells. Samples were taken from the borings.

II. OBJECTIVES

The objective of this investigation was to determine the existence and extent of contamination resulting from disposal of radioactive and precious metal tailings from a mill to the west of the site (Figure 2). This investigation was tasked to determine ground water characteristics of the site. Because previous sampling activities failed to generate this information. FIT was tasked to install four wells to determine the presence and extent of ground water contamination, in addition to sampling surface water, soil, and sediment.

III. SITE DESCRIPTION

The Allied Chemical tailings pond is located in the southwest 1/4 of the southwest 1/4 of Section 23, Township 1 North, Range 70 West, of the 6th Principal Meridian (Figure 1). The tailings pond is adjacent to a mill located northeast of Boulder near the intersection of Valmont Road and 63rd Road. Access to the area is gained through the Hendricks Mill gate on 63rd Road.

The Cretaceous Pierre Shale underlies the site and is exposed in some areas. The facility is located near the top of this formation. The shale may be in excess of 4,000 feet thick at this location and dips locally at 8° to the east (Scott & Cobban, 1965). Other areas of the site are mantled with the Slocum Alluvium, consisting of coarse gravel with some boulder-size fragments. The Valmont dike, a basaltic intrusive, forms the northern site boundary for the pond. The shale adjacent to the dike was baked during intrusion. The dike may act as a semi-permeable barrier to ground water flow.

The facility began operation in 1936 when St. Joe's Mineral Corporation completed construction of the mill. St. Joe's processed locally mined fluorspar at the mill. Fluorspar (CaF_2) is the mineralogical name for calcium fluoride. This compound was used to produce hydrofluoric acid. Allied Chemical bought the mill and surrounding land in 1941. They continued to process fluorspar ore. Allied's ore was 50 percent rich in fluorspar with associated uranium and radium. Milling of the ore produced tailings containing radioactive wastes. Allied processed about 100 tons of ore per day. When Allied owned the tailings pond, a spill occurred in which wave action carried tailings over a low spot in Valmont Dike. The spill was cleaned up, but traces are still in evidence.

Filling of the tailings pond must have begun shortly after the mill was constructed. Current operators speculate that some excavation into the Pierre Shale took place before disposal of mill waste began. The tailings pond contains approximately 41,000 cubic

yards of tailings and covers nearly 20 acres. It is located on the southern slope of Valmont Dike. The dike stabilizes this flank of the tailings. An earthen berm approximately 40 feet high contains the tailings on the east end of the pond. A second berm approximately 20 feet high is constructed about 1,000 feet east of the major berm. The area behind the second berm serves as a catchment basin in case of failure of the primary berm. Within this area are several smaller areas showing evidence of disturbance to the topsoil.

During milling operations, Allied Chemical produced more water than could be contained in the tailings pond. According to Mr. Hendricks, an arrangement between Allied Chemical and the Public Service Company provided for the excess water to be pumped from the pond over the ridge and into Valmont Reservoir. An intermediate holding pond was located atop the ridge. This pond probably served as a settling pond prior to delivery of water to the reservoir (Figure 1).

The mill and property were sold in 1974 to Tusco, a firm based in Commerce City, Colorado. Tusco leases the mill and facilities to Hendricks Milling Company, owned by Mr. Thomas Hendricks. Hendricks Milling Company currently uses the mill to process small amounts of gold and silver ore.

Public Service Company has placed an undetermined amount of coal fly ash in the area immediately east of the mill property. The ash is uncovered, and there is a potential for ash to be transported onto mill property by surface runoff and wind erosion. Both Hendricks and Tusco have expressed concern that contaminants possibly emanating from the ash piles might be attributed to the mill operation. Sampling activities in this area must attempt to differentiate between the two potential sources for contamination.

III. FIELD OPERATIONS

A. GEOPHYSICAL STUDY

On Friday, February 8, 1985, FIT members Marc Gesink, Ken Moll, and John Hadley, conducted a geophysical survey of the Allied Chemical tailings site. A Geonics EM-34 Terrain Conductivity Meter was used for the survey. Five tranverses were surveyed with the EM-34, three below the first tailings berm and two below the second tailings berm. Conductivity data were generated, plotted, and contoured to determine the best location for the placement of monitoring wells. Contours of these lines are shown in Figure 3 through Figure 6.

B. DRILLING ACTIVITIES

The drilling phase followed the one day geophysical investigation on Monday, February 11, 1985. FIT members Ken Moll, Karl Ford, and John Hadley, met at the Allied Chemical Tailings site with members of the drilling subcontractor, Eldorado Exploration Co. FIT was accompanied by Phil Nyberg, EPA Radiation Branch, who served as radiation monitor for the project. FIT conducted a safety meeting with the drilling team and proceeded with the drilling activities.

The first well drilled (AC-MW#1) was to be used as the background well. It was drilled in the southwest corner of Section 23. The boring was drilled to a depth of 45 feet, penetrating 10 feet into unweathered Pierre Shale (Table 1). The final depth was reached without encountering any water. The hole was backfilled and abandoned because it was dry, although samples were taken from the drill cuttings.

The second well was drilled to a depth of 30 feet, 10 feet into unweathered Pierre Shale (Table 2). Water was not encountered in this hole either. After samples were taken from the cuttings, the hole was backfilled and abandoned.

On the basis of the two dry holes, FIT decided not to drill any of the other scheduled wells. It was hypothesized that if no water was found in the downgradient well, migration of contaminants was very limited in the area. Soil samples taken from the cuttings should give information to confirm this theory.

C. SAMPLING ACTIVITIES

A total of three composited soil samples were taken from the two holes. Two samples were taken from the background well, one of which was a duplicate. One sample was prepared from cuttings generated during the drilling of the downgradient well.

All three samples were composited from the intervals 0 to 5 feet, 5 to 10 feet, 10 to 15 feet, and 15 to 20 feet. All were prepared according to E&E Standard Operating Procedure.

Split samples were given to Dennis Sheehan of Tusco, and all Chain of Custody procedures were followed as stated in the Standard Operating Procedures.

One drum sample was also collected by FIT. Mr. Hendricks, mill operator, told FIT that the drum contained trona, a sodium carbonate mineral used for pH control. The sample was collected, field checked, and found to be trona. Consequently, the sample was not submitted for analysis.

Additional samples were not collected at this site, for two reasons. No ground water data were generated from the drilling activities. Second, FIT decided sampling activities were not cost effective if ground water samples could not be collected. Without ground water data, the HRS score would remain unchanged. Consequently, sampling activities were postponed until soil sample analyses are available.

Once the data are received, a decision can be made about further work.

D. SAMPLE DOCUMENTATION

All samples collected were handled in strict accordance with Chain of Custody procedures as prescribed by the NEIC. Chain of Custody record numbers, sample tag numbers, and other pertinent data are contained in Table 3. Samples were hand delivered to the EPA Region VIII Laboratory.

IV. CONCLUSIONS AND RECOMMENDATIONS

Geophysics, drilling, and sampling activities were conducted at Allied Chemical in Boulder, Colorado. Two dry holes were drilled into Pierre Shale. The major purpose of the investigation was to collect ground water samples, but such was not possible. Soil samples were collected. Lab analyses may show whether contamination exists from past ground water movement. Further drilling and sampling were deemed unnecessary at this time due to lack of ground water data generated. Further work may be necessary once sample data is received. Until soil data are reviewed, a recommendation of further work at the site cannnot be made.

V. REFERENCES

Scott, G.R. and Cobb, W.A., 1965, Geologic and Biostratigraphic Map of the Pierre Shale between Jarre Creek and Loveland, Colorado. USGS Misc. Geol. Inv. Map I-439.