

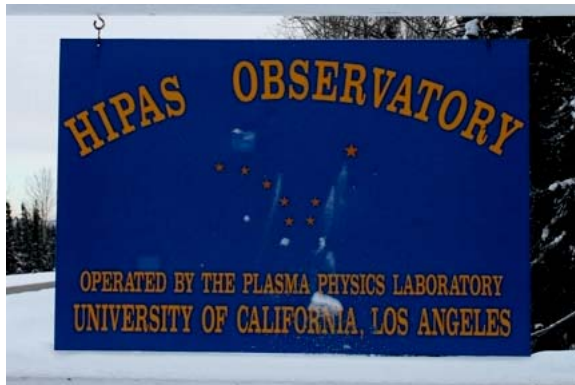
PHASE I ENVIRONMENTAL SITE ASSESSMENT

**HIPAS OBSERVATORY
7795 CHENA HOT SPRINGS ROAD
FAIRBANKS (TWO RIVERS), ALASKA**

JANUARY 14, 2009

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1.0 EXECUTIVE SUMMARY

NORTECH has completed a Phase I Environmental Site Assessment (ESA) for the High Power Aurora Stimulation Observatory (HIPAS) addressed as 7795 Chena Hot Spring Road, Fairbanks Alaska. The legal address of the Site is Tax Lot 3604, Section 36, Township 1 North, Range 4 East, Fairbanks Meridian. The property is located approximately 25 miles east of Fairbanks in the community of Two Rivers. The property is owned by the University of Alaska and is leased to the University of California, Los Angeles (UCLA). This assessment was completed in general accordance with the American Society of Testing and Materials (ASTM) Standard E 1527-05.

The property was originally developed by the University of Alaska Fairbanks (UAF) Geophysical Institute in the 1960s as the Chena Valley Radio facility. A lease arrangement with UCLA led to the development of HIPAS in the early 1980s. The HIPAS development continued to use some portions of the previous development and also constructed several new buildings and antenna arrays. Seven primary structures are currently present on the Site: the Bunkhouse, an ATCO unit, the LIDAR Building, the Shop/Garage adjacent to the LIDAR building, the Dipole shed/antenna, the Generator Building, and the Transmitter Building. Additional structures include an old trailer structure in the boneyard, numerous conex boxes at multiple locations, and modified semi-trailers used for storage.

The facility uses heating oil to heat each of the structures and diesel fuel to power the two generators needed for research at the facility. Many of the electronic devices also contain dielectric fluids and/or glycol-based coolants and may contain other potentially hazardous materials. Additionally, a number of laboratory grade liquid chemicals and compressed gases are stored at the Site for research projects. Overall, **NORTECH** ranks the significance of on-site contamination at the Site as *medium-risk* based on the site inspections and available documentation.

The ESA has identified two recognized environmental condition at the property, both of which are located at the LIDAR Building. The first is the reported accidental overfilling of the heating oil tank, which resulted in a release estimated to be more than 10 gallons and less than 150 gallons. No assessment or corrective action was conducted and the release has not been reported to ADEC. The tank should be removed and the release area assessed to identify vertical and horizontal limits of contamination and the potential for contamination beneath the building slab. This assessment data should be used to develop a corrective action plan. The corrective action plan should be submitted to ADEC as notification of the release and for approval of the proposed corrective action.





The LIDAR Building also houses a liquid mirror telescope (LMT) that utilized a rotating disk of mercury to create a lens that was used for research projects. Normal use of this equipment is assumed to have contaminated the LMT room and all contents with mercury. At this time, the LMT is no longer expected to be used for research and the system is expected to be decommissioned. A work plan for assessment and cleanup of the LMT should be developed to address the decontamination and disposal of the mercury that remains containerized in the LMT room, other items in the LMT room, and building materials within the LMT space. Operational controls appear to have limited the migration of mercury outside the LMT room, but the work plan should also outline a limited sampling effort outside the LMT to verify that mercury contamination is not present outside the sealed area. This work plan should also address the mercury containing switches stored near the LMT room and the mercury shipping containers located in the Shop.

In addition to the recognized environmental conditions above, several potential environmental concerns were observed that should be addressed through some combination of operational and decommissioning planning documents for the facility. These are organized by the type of concern and specific discussion of the concerns at individual locations across the property is included in Section 6.

Aboveground storage tanks (ASTs) for heating oil are located adjacent to each heated structure. The exception is the Generator and Transmitter Buildings which share a tank that is also used to fuel the generators. The facility exceeds the minimum aboveground storage threshold within the SPCC Plan regulations and an SPCC Plan has not been developed for the facility. Development of an SPCC Plan is recommended if portions of the facility will continue operation. Each AST installation was observed to need one or more upgrades to comply with the SPCC regulations, including secondary containment and/or appropriate engineering controls. Replacement of several of these tanks may be more cost-effective than trying to upgrade the units. The ground surface beneath each tank should be inspected for potential contamination during removal or upgrades and all fuel lines should be inspected for potential leaks and weeping. The drum used as a gasoline dispenser by the Shop should be removed.

In addition to the heating oil and diesel storage tanks, 55-gallon drums of petroleum also fall under the SPCC regulations and were observed in multiple interior and exterior storage locations. The drums currently at the Site have been field characterized for disposal as part of this scope of work and removal and disposal of many of the drums observed is planned for early 2009. The only drum storage location that appears to meet the SPCC requirements is located in the northern generator room and can hold four drums. Drums across the facility should be consolidated to the extent possible and secondary containment and other engineering controls should be installed as





necessary. No staining or obvious evidence of releases were observed in October 2008 at the exterior drum storage locations and a second inspection is recommended following removal of the drums and melting of the snow during the spring of 2009.

The facility also has a variety of chemicals and cylinders stored in the buildings across the Site. In general, the research related chemicals have been consolidated in the LIDAR Building and these chemicals have been inventoried for disposal in early 2009. A central chemical storage location for the facility, such as the LIDAR cabinet, is recommended and access to this storage area should be limited. In addition to the research chemicals, small containers of paints, cleaners, and other chemicals were observed in each building. These appeared appropriate for the operation and maintenance of equipment in the area. Many of these items appeared to be old and the materials currently present should be consolidated and disposed of appropriately. New materials should be purchased and appropriate storage cabinets should be provided as necessary if the facility continues operations.

Materials from more than 40 years of operation have accumulated in the boneyard, in and around the shop area, and in various conex boxes across the facility. The boneyard area contains electronics trailers, an antenna dish, and other equipment from the Chena Valley Radio facility that should be fully decommissioned, including assessment and removal from the Site. The parties that have operated the Site need to reach an agreement regarding responsibility for disposal of items in the boneyard and shop that may have been present prior to installation of HIPAS.

Each storage areas or unit needs to be inspected and/or inventoried to develop a plan for proper disposal of all obsolete equipment and materials. This is expected to include unloading and/or rearranged some stored materials and equipment to check for potential fluid reservoirs that would need to be addressed through the disposal plan. Inert material is expected to be recycled or disposed of locally while electronics may require shipment out of Alaska. The ground surface should be inspected for environmental concerns following relocation of vehicles, tanks, equipment, conex boxes, and any other fluid-filled containers.

A wide variety of electronic equipment is present across the Site. Some units are known to contain lubricating fluid, cooling fluid, dielectric fluid, and/or other potentially hazardous substances. Proper maintenance of these items is necessary to prevent future releases during operation of the units and some units may be subject to transportation and disposal restrictions. As mentioned above, most electronic equipment is expected to have to be transported outside of Alaska for disposal if the facility is decommissioned.





The future plans for the operation of the HIPAS Observatory are not currently known. Many items may have residual value if the facility is decommissioned, while many others may require special handling and/or disposal methodology. A decommissioning plan should be developed for structures and/or areas that will be decommissioned to create a clear scope of work and generate competitive bids from contractors that are interested in all or part of the work. At a minimum, full hazardous building material inspections will be necessary for any building that is slated for demolition. Additionally, the ground beneath the foundation of the Generator Building should be inspected if the building is demolished. However the demolition of the building is not required specifically for an environmental inspection. This process will also identify appropriate recycling and/or beneficial reuse of materials and/or equipment that will reduce the overall cost of the decommissioning activities.

Four water wells are located on the property and are associated with the following buildings: the Bunkhouse, the LIDAR Building, the Generator Building, and the Transmitter Building. Water wells that will not be used in the future should be decommissioned in accordance with ADEC documentation and any wells that remain for use should be protected from damage with bollards or other appropriate devices. The property also has two wastewater disposal systems: one for the Generator and Transmitter Buildings and one for the Bunkhouse and LIDAR Building. At least three septic tanks are assumed to be present. These systems should be decommissioned in accordance with ADEC guidance. No testing of septic tank sludge or soil absorption systems is considered necessary at this time.

The known development of the Site has been as a radio research facility since the original development in the 1960s. While the exact nature of each piece of equipment or research project has not been documented, the available evidence indicates that the development has generally been on or above the ground surface. No evidence of unusual clearings, excavations, or dumping has been documented at the Site. A thorough inspection of all areas of the Site is not considered necessary as part of this Phase I ESA, however a limited site inspection of the antennas and associated conduits is recommended in April or May 2009 after the snow has melted. Visual inspections are also expected to be adequate to evaluate the potential for contamination at any areas not specifically addressed within this report.





2.0 INTRODUCTION

2.1 Purpose

The University of California Los Angeles (UCLA) contracted **NORTECH** to perform a standard Phase I Environmental Site Assessment (ESA) of the High Power Aurora Stimulation (HIPAS) Observatory property (the Site) located in the community of Two Rivers, Alaska. The Site is located approximately 25 miles east of Fairbanks, Alaska and is addressed as 7795 Chena Hot Springs Road. The property is described in the Fairbanks North Star Borough (FNSB) records as Tax Lot TL-3604 and encompasses approximately 130 acres. Access to the facility is via Chena Hot Springs Road to HIPAS Street and then Barley Avenue. The Site has about 10 permanent and temporary structures that are situated across the Site. The property is owned by the University of Alaska (UA) and has been leased to UCLA and this investigation has been requested as part of termination of that lease. This investigation provides a search of prior and current property uses at the Site and adjacent properties to determine the likelihood of past or present contamination by toxic or hazardous substances.

2.2 Methodology

This report summarizes **NORTECH's** investigation, findings, analysis, and opinions regarding the environmental conditions at the Site. The scope of **NORTECH's** site assessment services is in accordance with American Society of Testing and Materials (ASTM) Practice E 1527-05. The information is provided to assist in the completion of "all appropriate inquiry" and to meet the "due diligence" requirements of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA or "Superfund") as amended by the Superfund Amendment and Re-authorization Act (SARA) in 1986. Any exceptions to, or deletions from, this practice are described in Section 2.3 of this report.

To accomplish the objectives of the project, the following services were provided:

- Review of relevant documentation of the Site, including aerial photographs and Fairbanks North Star Borough records
- Review of federal and state databases for known or suspected contaminated sites and leaking underground storage tanks within ASTM search radii
- Visual assessment of the property for indications of potential environmental issues
- Interviews with individuals knowledgeable about the Site and its history





Upon completion of the research, **NORTECH** reports identified environmental conditions and rates the Site based on the perceived risk of contamination impacts. The risk categories are defined below:

No Risk: No evidence was found to indicate contamination of the Site or that hazardous substances, including petroleum products, have been improperly handled on site. **NORTECH** does not find cause for further investigation.

Low Risk: Investigation has revealed the potential for on-site contamination, the possibility that hazardous substances have been mishandled, a threat of their release exists, and/or off-site contamination has potential to impact the property. The report will include discussion and/or recommendations for further action, as warranted.

Medium Risk: Mishandled hazardous substances or soil and/or water contamination may have been identified at the Site. Identified concerns warrant a Phase II investigation.

High Risk: Mishandled hazardous substances were encountered or there is a high potential for significant on-site contamination. Phase II assessment will be recommended to determine the actual presence and/or levels of contamination and the need for remedial action.

2.3 Exceptions of Assessment and Limitations

This report summarizes our investigation, findings, analyses, and opinions regarding the environmental condition of the property based on a review of records and site observations. The work scope delineated by ASTM Practice E 1527-05 is considered adequate to identify significant indications of contamination and major concerns that would represent pivotal environmental issues important to a property owner. The extent of our assessment, by definition, was not of a scope necessary to reveal all conditions with regard to environmental contamination or conformance with regulations, codes, permits of all the agencies having jurisdiction. The purpose of the ESA is to identify existing environmental conditions; our findings should be considered representative only of the time at which the ESA was completed.

Limitations exist with the assessment provided and all environmental issues cannot be addressed in the scope of this effort. For example, ASTM E 1527-05 (Section 13) *Non-Scope Considerations* such as asbestos-containing materials, radon, lead in drinking water, lead-based paint, wetlands, regulatory compliance, cultural and historic resources, industrial hygiene, health and safety, ecological resources, endangered species, indoor air quality, and high voltage power lines are only addressed if pertinent





information is discovered during the assessment and/or is specifically authorized by the client. *Non-Scope Considerations* are not included in this assessment.

This report is a record of research and observations of the subject property as described, and was prepared for the exclusive use of UCLA and their assigns with respect to the Site. If it is made available to others, it should be for information on factual data only and not as a warranty of surface or subsurface conditions, such as those interpreted from results presented or discussions herein. No other warranty or presentation, either expressed or implied, is included or intended.

3.0 SITE DESCRIPTION

3.1 Location and Legal Description, Site Owner and Current Occupant

The Site is located in the Fairbanks North Star Borough in the community of Two-Rivers, approximately 25 miles east of the Fairbanks urban area. The Site is identified by FNSB assessment records as Tax Lot 3604 in Section 36, Township 1 North, Range 4 East of the Fairbanks Meridian. The property is owned by the University of Alaska, and is leased to the University of California, Los Angeles (UCLA).

The property is approximately 130 acres in area and is generally rectangular with a small portion sticking out to the west. The property is bound to the east by Chena Access Lane, to the north by parcels TL-3606 and TL-3607, to the south by parcel TL-3600, and to the west by parcels TL-3603, TL-3605 and TL-3608. Figure 1 is the general geographical location map. Figure 2 shows the Site and vicinity, including the uses of surrounding properties and other potentially contaminated properties in the area (discussed in Section 4.2). Figure 3 shows the layout of the Site, including Site structures as interpreted from the 2007 aerial photograph.

Site Owner (TL-3604): University of Alaska
Land Management
910 Yukon Drive, Suite 106
Fairbanks, Alaska 99775

Current Occupant: HIPAS Observatory
Operated by UCLA

3.2 General Site Setting and Description

The Site covers 130 acres of land approximately 25 miles east of Fairbanks in the community of Two Rivers, Alaska. This area is a broad relatively flat floodplain of the Chena River, which is located to the south of the Site. The property is in a





residential/agricultural area with a mixture of private and public properties near the western edge of the Chena River State Recreation Area. The property has been used for university research with original development as the Chena Valley Radio facility operated by the University of Alaska, Fairbanks (UAF) and then as the High Powered Aurora Stimulation (HIPAS) Observatory operated by the UCLA Plasma Physics Laboratory.

Site Structures: Numerous permanent and temporary structures are currently situated at the Site. Permanent structures include a bunkhouse, a garage/shop, the LIDAR building, Generator Building, Transmitter Building, and several antenna arrays. Temporary structures include an ATCO trailer, the Dipole antenna and associated structure, and numerous conex and trailers units at various locations across the Site. The Site also contains a storage area referred to as the "boneyard" which includes the dilapidated remains of an old radio control structure and dish, as well as older vehicles, a tank, and a variety of materials and objects related to the development of the Site.

Site Utilities: Domestic water supply for the Site is provided via on-site wells and domestic wastewater is via on-site septic systems. Telephone service and electric service to the buildings are supplied by commercial providers. Heat for the buildings is provided by oil-fired boilers/furnaces and most of the structures maintain their own heating oil storage tanks.

Floor Drains: No floor drains were observed in any of the buildings.

Climate: Climate data for Fairbanks area is generally established from the long-term weather observations taken at the Fairbanks International Airport, approximately 30 miles west at an elevation of approximately 440 feet. The Two Rivers area is at a slightly higher elevation (625 feet). The climate in the vicinity of the Site is generally similar to Fairbanks. Over the 64-year station record for Fairbanks, the average air temperature has been 25.9 degrees Fahrenheit. The average annual precipitation in Fairbanks is 11.2 inches water equivalent. Average monthly temperatures are generally below freezing from October through April.

3.3 Vicinity Characteristics and Hydrogeologic Characteristics

Topography and Slope: The elevation of the Site is approximately 620 to 630 feet above mean sea level (MSL). The topography is relatively flat with few abrupt changes in elevation. The area around the Generator Building and the primary antennas field is generally slightly higher than the boneyard and bunkhouse areas. The grade at the Site is generally similar to most of the surrounding properties.



Local Geology and Hydrogeology: The Site is located in the Yukon-Tanana Uplands physiographic province, a band of low domed mountains comprised primarily of metamorphic rocks. The Site itself is located within the Chena River floodplain, which is comprised primarily of alluvial sediments derived from the surrounding uplands. Topographically, the Site is situated within a relatively flat vegetated floodplain including low terraced benches of the Chena River. The Chena River runs generally east-west at a slope of approximately 3.5 feet per mile with significant meandering in this area.

Typical soils in the Chena flood plain consist of several feet of silt, underlain by alluvial sands and gravels to a considerable depth. These granular deposits generally become coarser with depth, exhibit wide variability in structure and stratification and apparently represent ancient glacio-alluvial deposition. Silt-filled swales and oxbow lakes generally represent former positions of rivers and streams. The thickness of alluvial sediments overlying bedrock in the region can be as great as 400 to 500 feet. Lenticular deposits of silt, sand, and gravel produce a wide range of permeability and transmissivity.

The primary sources of recharge to the groundwater are snowmelt and precipitation. The water table throughout this portion of the Chena floodplain is typically 15 to 25 feet below the surface, depending on ground elevations and groundwater stage. It is not uncommon to experience water table fluctuations on the order of 2 to 4 feet throughout the floodplain during rapid recharge events. Runoff from spring snow melt and summer storms can cause periodic flooding over parts of the Chena floodplain, especially near the confluence with the Tanana River closer to the City of Fairbanks. During flood stage, the Chena River may act as a source of recharge for the groundwater in the area, otherwise, the Chena River acts primarily as a drain.

The Site is approximately three-quarters of a mile from the closest reach of the Chena River, which meanders in a generally westerly trending direction (see Figure 1). Groundwater under the Site is influenced by infiltration of precipitation as well as by changes in water level of the Chena River. The Chena River acts primarily as a drain, but high water events will significantly recharge the aquifer and raise the water table.

Depth to Groundwater and Groundwater Flow Direction: Depth to groundwater at the Site is approximately 15 to 25 feet below ground surface. The depth to groundwater is expected to change seasonally as a result of spring snowmelt, summer precipitation, and may also be influenced based on the stage of the Chena River. Groundwater flow is expected to be generally to the southwest (towards the river) with transient effects to the west (along the river) at higher groundwater elevations. Groundwater is expected to be visible at the surface at the bottom of the gravel pit located east of the Site during periods of high groundwater.





Surface Water and Surface Water Drainage: Approximately four to twelve inches of snow was present on the ground across the Site at the time of the site inspections and surface water was not observed. Surface drainage from the Site is assumed to be primarily through infiltration through surface vegetation into the ground. Limited runoff in localized channels, ditches, or swales, may occur in cleared areas that have been developed.

Nearest Surface Water Body: The nearest surface water body to the Site is the Chena River which meanders in a westward trending direction south of the Site. The closest reach of the Chena River is located approximately 0.75 miles southwest of the Site. Surface water may also be observed in the gravel pit east of the Site during periods of high groundwater.

On-site Wells: A total of four wells were observed at the site during the on-site inspections. No documentation of well logs or other historic data regarding the wells was identified during the research of historical records and/or state databases as part of this investigation. Well logs may be available from the driller if the information is necessary and the driller of each well can be identified.

4.0 RECORDS REVIEW

4.1 Local Government Records

The Fairbanks North Star Borough (FNSB) Tax Assessing/Property Records and the State of Alaska Department of Natural Resources (ADNR) Recorder database were reviewed by **NORTECH** to gather information regarding past or present uses of the Site and surrounding properties. FNSB records date to the founding of the FNSB in 1965 and contain information on ownership, assessed value, improvements, land classification, and utilities. The ADNR database provides more of a title history.

4.1.1 Site Ownership (FNSB Assessment Records)

The Site:

The property is identified as Tax Lot 3604 in the FNSB records. The property is owned by the University of Alaska and the status is listed as Educational Exempt. The property is described as vacant land and no indication of improvements or other assessment information is included.

TL 3604	
1984	Quit Claim Deed (State of Alaska DNR to University of Alaska)
1965	Lease (listed in FNSB records, no document listed in ADNR database)
1965	Lease (listed in FNSB records, no document listed in ADNR database)





4.1.2 Adjacent Property Ownership (FNSB Assessment Records)

The area surrounding the Site is comprised of mixed private and public lands which are predominantly agricultural and to a lesser extent, residential properties. Nearby property uses are shown in Figure 2. Adjacent properties are identified and ownership records are listed below. When available, the current owner(s), year purchased, construction date(s) for existing structures, and other pertinent information is included for each property. Previous development of specific lots and/or areas is discussed in general terms in the aerial photo review in Section 4.3. :

North:

TL 3607 (Sec 36 T1N, R4E). The current owners are Stephen and Cyndi Tack. This property is described as a vacant 40 acre lot.

TL 3606 (Sec 36 T1N, R4E). The current owner is Eddie Landers. This property is described as a vacant 40 acre lot.

West:

TL 3605 (Sec 36 T1N, R4E). The current owner is the Friends of Fairbanks Hospitality House Inc, which is a charitable organization exempt from property tax. This property is described as a residential 25 acre lot and maintains an address of 7609 Chena Hot Springs Road. The primary residential structure was constructed in 1979.

TL 3603 (Sec 36 T1N, R4E). The current owner is the Wong Revocable Living Trust. This property is described as an industrial 5 acre lot. The primary building was constructed in 2006 and is listed as a storage garage.

South:

TL 3608 (Sec 36 T1N, R4E). The current owner is the Wong Revocable Living Trust. This property is described as a vacant 150 acre lot.

TL 3600 (Sec 36 T1N, R4E). The current owners are Arthur and Ann Ward. This property is described as a vacant 120 acre lot.

East:

TL 3104 (Sec 36 T1N, R5E). The current owner is the Alaska Department of Agriculture and the property is contracted to Darren and Christina DeMattio. This 319 acre property is located southeast of the Site and is addressed 7950 Barley Avenue.





Tract A1-A, Pleasant Valley (previously un-subdivided and identified as Tract A, Pleasant Valley). The current owner of this property is Eddie Anders. Tract A1-A is described as a 72 acre vacant land with an address of 7790 Barley Avenue.

4.2 Environmental Database Searches

Environmental Data Resources, Inc. (EDR) was subcontracted to perform a search of available environmental databases and meet or exceed the requirements of ASTM E 1527-05. Standard ASTM federal databases include:

- NPL (National Priority List)/Superfund and Proposed NPL sites
- Delisted NPL sites
- NPL Recovery (Superfund Liens)
- CERCLIS (Comprehensive Environmental Response, Compensation and Liability Information System), CERLCIS NFRAP (No Further Remedial Action Planned) sites, and CERCLA Lien Information
- RCRA (Resource Conservation and Recovery Act) CORRACTS (Corrective Action) Sites
- RCRA TSDF (Treatment, Storage and Disposal) facilities
- RCRA LQG (Large Quantity Generators)
- RCRA SQG (Small Quantity Generators)
- RCRA Nongen (Non Generators)
- US ENG CONTROLS (EPA Engineering Controls Sites List)
- US INST CONTROL (EPA Sites with Institutional Controls)
- ERNS (Emergency Response Notification System) Petroleum and Hazardous Substance Release sites
- HMIRS (Hazardous Materials Information Reporting System) sites
- DOT OPS (US Department of Transportation Incident and Accident Data)
- US CDL (EPA Clandestine Drug Labs)
- U.S. Brownfields (Federal "brownfield" database) sites
- DoD (Department of Defense) sites
- FUDS (Formerly Used Defense Sites)
- NPL CONSENT (Consent Decree) sites





- NPL ROD (Record of Decision) sites
- UMTRA (Uranium Mill Tailings Sites),
- DEBRIS REGION 9 (Torres Martinez Reservation Illegal Dump Site Locations)
- ODI (Open Dump Inventory)
- MINES (Mines Master Index File) sites
- TRIS (Toxic Chemical Release Inventory System) sites
- TSCA (Toxic Substances Control Act) sites
- FTTS/HIST FITTS (FIFRA – Federal Insecticide, Fungicide, and Rodenticide Act and TSCA Tracking System and Administrative Case Listing)
- SSTS (Section 7 Tracking System) sites
- ICIS (Integrated Compliance Drug Labs) and LUCIS (Land Use Control Information System)
- PADS (PCB Activity Database System) sites
- MLTS (Materials Licensing Tracking System) sites
- RADINFO (Radiation Information Database) sites
- FINDS (Facility Index System) sites
- RCRA RAATS (Administrative Tracking System) sites
- SCRDRYCLEANERS (State Coalition for Remediation of Drycleaners Listing)

EDR also searched the following state databases:

- SHWS (State Hazardous Waste Sites, including petroleum-contaminated sites)
- SWF/LF (Solid Waste Facilities and Landfills)
- LUST (Leaking Underground Storage Tanks)
- UST (Underground Storage Tank) registration
- AST (Aboveground Storage Tank) registration
- SPILLS (Alaska Spills Database)
- Eng Controls (state engineering controls) sites
- Inst Control (state institutional controls) sites
- VCP (voluntary Cleanup Program) sites
- Alaska Drycleaners





- Brownfields (state brownfields)
- CDL (Illegal Drug Manufacturing Sites)
- NPDES (Wastewater Discharge Permit Listing)
- AIRS (Airs Facility Listing)

EDR also searched the USGS INDIAN RESERV database (Indian-administered lands greater than 640 acres), INDIAN ODI (Open Dump Inventory on Indian Land), INDIAN LUST (Leaking Underground Storage Tanks on Indian Land), INDIAN UST (UST registration on Indian Land), and INDIAN VCP (Voluntary Cleanup Program).

The complete copy of the EDR report is attached as Appendix 3. The release date of each database that EDR searched is included in the EDR report. A summary listing of the number of sites identified by databases searched within the specified target radius of the Site or the Site itself is shown on pages 4 and 5 of the Map Findings Section of the EDR report. This list shows no (0) listings within the ASTM radii. The Orphan Summary indicates that twenty (20) sites could not be located accurately within the EDR system and each of these was reviewed to identify the approximate location. Sites that were identified within the ASTM search radii in the EDR report are shown in Figure 2.

4.2.1 The Site

The Site was not specifically identified by address in any of the Federal, State, or local databases searched by EDR. However, one property listed in the orphan summary was identified as being the Site. This property was listed as being in the ADEC UST database and a separate property-specific report was provided by EDR and the ADEC UST file are both attached in Appendix 4.

The documentation in the EDR report is minimal and review of the ADEC UST file did not yield significantly more information. These documents indicated that an underground storage tank was present at the Chena Valley Radio Facility and was 25+ years old in 1991. That tank is listed as large (capacity unknown) and the most recently stored product was unknown. ADEC indicated that the UST database defaults to diesel when the material stored is not specified, so the database listing may not be accurate. The records indicate that it was removed, but the date of removal and/or a site assessment is not included in the file. No evidence of payment of the tank registration fee or registration forms for additional years is present in the file.

UAF Environmental Health and Safety – Risk Management (EHS-RM) was contacted and has been unable to locate any additional information as of the time of this report. The presence of buried tanks was discussed with Richard Dickman (see Section 5), who indicated that one buried tank had been removed around 1990 or 1991. The





Bunkhouse had a buried heating oil tank (1,500 -2,000 gallon capacity) that was assumed to be installed during the construction of the Chena Valley Radio facility. This tank was removed and replaced with the aboveground tank that is currently in use for the Bunkhouse. He was not aware of the specific UST regulations, but indicated that this former tank would have originally belonged to UAF. Mr. Dickman was not aware of any other buried tanks on the property and he indicated specifically that the HIPAS operation had not used buried tanks.

Under ADEC UST regulations, a buried tank used for storing heating oil for consumptive use on the premises where the heating oil is stored does not require registration. The evidence available indicates that the tank that was registered with ADEC was removed and that UAF was never required to pay any fee associated with the tank, suggesting that either than tank had already been removed or did not need to be registered in the first place. In this case, the one reported buried heating oil tank fits both those categories because it would not have required ADEC registration and had already been removed at the time the ADEC registration forms were filled out. This type of ADEC database listing is common from the early days of the ADEC UST program when regulated parties often filled out forms incorrectly. Additionally, ADEC quality control on form completion and/or database entry from this time period was not always successful at identifying tanks that did not require registration.

Based on our experience with this type of research, **NORTECH** assumes that the ADEC database listing refers to the former buried heating oil tank at the Bunkhouse. No site assessment was completed, but contamination and/or tank damage were not reported by personnel that were present during the removal. The former Bunkhouse tank is not considered an environmental concern. Unless specific evidence is found that another buried tank was present on the property, no additional investigation of this ADEC database listing is considered necessary.

4.2.2 Nearby Known Contaminated Sites

No Federal, Tribal, or State database contained an addressed listing within the specified target radii of the Site.

4.3 Aerial Photographs

Aerial photographs from 1951, 1962, 1968, 1973, 1982, 1986, 1999, 2002, and 2007 were reviewed for past development/uses of the Site and nearby property. These aerial photos are reproduced as Figures 4 through 12, respectively, in Appendix 1 and are discussed in more detail below. Aerial photographs were obtained from the Alaska Department of Transportation and Public Facilities (ADOT/PF) office in Fairbanks and the **NORTECH** aerial photo archive.





1951 Aerial Photo (Figure 4): This photograph shows the Site and surrounding area with very little development. The only visible sign of development is a gravel airstrip a few miles north of the Site. Limited evidence of a trail may be present slightly north of the airstrip. The area south of the airstrip, including the Site does not appear to have undergone any sort of clearing or development at this time. Chena Hot Springs Road has not been constructed and the BLM Township and Range survey of the area has not been completed.

1962 Aerial Photo (Figure 5): The Site remains undeveloped, while overall development in the area has increased. Chena Hot Springs Road has been constructed north of the Site and several trails/roads to the Chena River are present east of the Site. The section lines have been cleared in the vicinity of the Site, including the eastern boundary. This section line has been used for access to three clearings, including two adjacent to the eastern edge of the site. The areas appear to have been recently cleared and the long linear features are assumed to be windrows related to clearing. The only obvious structure in these clearings is north of the Site, although a somewhat rectangular feature that cannot be definitively identified is located to the east of the smallest clearing.

1968 Aerial Photo (Figure 6): This photograph shows the initial development of the Site, which appears to be the Chena Valley Radio facility. Access to the Site is along a section line on the eastern property line. The Bunkhouse and Shop are present on the east side of the property, along with a clearing and possible building on the south side of the access road in this area. The access road then leads to the current boneyard area near the western edge of the Site, which appears to have one rectangular structure and one dish. A second structure may be present slightly north of this area. A linear trail leads off-site to the west and southwest from this area toward a slough and the Chena River. A second possible trail off-site follows a vegetation pattern consistent with an old slough south toward the Chena River. A short section of access road leads to a small rectangular structure in the southeast portion of the site. A third trail leads off-site to the south from this location and ends in a small clearing south of the Site. On adjacent properties, more land has been cleared to the east, and a dark spot in the southeast corner of the clearing suggests that removal of gravel in this area has reached groundwater. A large gravel pit that appears to have reached groundwater is present to the north along Chena Hot Springs Road. A trail/road is also visible at the current location of Barley Avenue, terminating at the eastern side of the Site.

1973 Aerial Photo (Figure 7): The developed portions of the Site appear generally similar to 1968. A small structure may have been built to the west of the Shop. A linear feature extends from the access road on the southeastern portion of the Site. This extends off-site and intersects with the trail observed in the 1968 photograph. A clearing on the south side of Barely Avenue appears to extend onto the southeastern corner of the Site, but does not appear to connect to the development in this area.





1982 Aerial Photo (Figure 8): This photo shows the Site shortly after construction began for the HIPAS facility. The Bunkhouse and Shop appear approximately the same as previously observed and a new building is present to the south of these structures. The location of the main HIPAS antenna array has been cleared and a few small structures are present near the middle of the clearing. The boneyard area clearly shows two adjacent trailers that may be connected and the dish appears to be pointing straight up. In the southeast corner, a row of circular clearings is present on the west side of the trail observed in 1973. These extend off the edge of the Site to the south and the nature of these clearings cannot be determined. Access to the facility appears to be similar to the current configuration with a driveway from Barley Avenue. Near the Site, several new structures are present to the northeast and northwest, while a portion of the western boundary of the Site has also been cleared. Additional clearing appears to have occurred near the southwestern corner of the Site.

1986 Aerial Photo (Figure 9): Major new development at the site includes the Generator Building and a small structure at the location of the Transmitter Building, as well as a driveway to these structures. An item that may be the aboveground storage tank is visible to the east of the Generator Building. The remainder of the Site appears relatively unchanged, although the road and clearing in the southeast corner appears more overgrown. Clearing on the property to the south appears to have encountered the southern end of the circular clearings that extended from the Site in this area.

1999 Aerial Photo (Figure 10): This photo shows the Site more clearly and several changes to building configurations are visible. These include the addition of southern portion of the LIDAR Building, the installation of the ATCO unit and associated antenna south of the Shop, and the square clearing for the antenna north of the Generator Building. This photo also clearly shows the aboveground diesel storage tank for the generators. Additionally, the small Transmitter Building appears to have four trailers setup around it with hardware trails that lead from these trailers to the antennas. The previous clearings in the southeastern portion of the Site appear almost completely overgrown. The property adjacent to the southwest corner of the Site has been cleared on both the south and west sides.

2002 Aerial Photo (Figure 11): This higher resolution image of the Site shows most of the basic configuration that is present today. Each of the buildings on the eastern portion of the Site (Bunkhouse, Shop, LIDAR, and ATCO) is the same general size and shape as today. The Generator Building and storage tank with the dark liner of the containment structure are also clearly visible. The transmitting equipment appears to remain in the trailers, which is the primary difference in structures from the current configuration. The boneyard area appears to be generally the same size and shape as previously observed and the southeastern portion of the Site remains generally overgrown.





2007 Aerial Photo (Figure 12): This image of the Site shows the basic configuration that was observed at the time of the site visit. Significant changes from 2002 include the clearing of the southeastern portion of the site and installation of the Dipole antenna in this area. This photograph also shows storage of materials and equipment in this area that were related to a DoD project. These materials were removed in October 2008. Clearing in this area included the northern end of the previous circular clearings. This photograph also shows the larger transmitter building and some changes to the wiring hardware that leads to the antennas. The conex units and other trailer units are visible north of the Generator Building. Two new structures are present near (or on) the western edge of the Site, but the larger building was removed in October 2008. The lower contrast of this photograph does not clearly show the boneyard and other small site features as well as the 2002 photograph.

5.0 SITE INSPECTIONS AND INTERVIEWS

NORTECH has completed several on site visual inspections at the property. The initial on site inspection was conducted by Ron Pratt and Peter Beardsley on October 3, 2008. Representatives from UCLA Environment, Health & Safety, UA Land Management, UAF Environmental Health and Safety, the Department of Defense, and a contractor familiar with the current HIPAS operations. A former HIPAS manager arrived during the inspection and provided additional insight into the history of the structures and operations. Several other HIPAS contractors were present and briefly discussed some of the equipment. The following individuals were considered "interviewed" for environmental purposes during this initial site visit and may have been contacted following the site visit to clarify statements or observations: Bill Farren (current contractor), Richard Dickman (former manager), and Thadd Williamson (UAF Environmental Health and Safety). A complete list of individuals present during the initial site visit is available upon request.

This initial inspection was intended to provide an overview of the facility and operations as a whole and an opportunity to discuss the major issues, including obvious environmental concerns, with most of the parties involved. Subsequent inspections were conducted on October 28, 2008 and November 7, 2008 to evaluate potential environmental concerns and/or document specific environmental issues, including inventories of the drums and containerized chemicals. During this time, UCLA hired Ron Richards, a former HIPAS manager, to maintain the facility in a warm dormant state for the winter to reduce the likelihood of damage to remaining equipment. Mr. Richards has an extensive knowledge of historical operations at the facility and is also considered an interviewee.



This section provides a summary of the inspections and observations of the various inspections conducted at the Site. The details from these inspections and interviews are discussed cumulatively for each area of the Site. This discussion divides the Site into the “operable units” listed below to facilitate discussion and understanding of the Site. Figure 3 shows the basic location of each of the main buildings and units discussed here. These are ordered generally east to west, as they would be accessed upon entering the facility from Barley Avenue:

1. Bunkhouse and Emergency Generator
2. ATCO Unit (south of bunkhouse)
3. Shop
4. LIDAR Building
5. Dipole Antenna/Shed and Southeastern Cleared Area
6. Boneyard (former Chena Valley Radio/equipment storage complex)
7. Generator Building (Interior)
8. Transmitter Building (Interior)
9. Generator/Transmitter Area Exterior Storage
10. Antenna Arrays
11. Other areas

A thorough inspection of the entire ground surface for stained or disturbed soil and/or dead or stressed vegetation was not possible due to several inches of snow cover during the site inspections. Snow was removed to investigate specific areas of potential concern that were identified from interviews, aerial photographs, and observations during the site visits.

Bunkhouse and Emergency Generator

The Bunkhouse is located on the eastern portion of the property near the entrance gate to the facility (Figure 3). This structure is a single-story residential building utilized for housing of personnel working at the facility and appeared to be a pre-manufactured modular building that was put together at the Site. The building appeared to be older than most of the other buildings at the Site. Interior furnishings and finish were consistent with dormitory-style housing. No recognized environmental concerns were identified during the interior inspection of this structure.

The Bunkhouse has a well and septic system. The well is located behind the Bunkhouse and the septic system appears to be between the Bunkhouse and the Shop (discussed below). The Bunkhouse formerly had a buried heating oil tank located behind the structure, near the furnace. As discussed in Section 4.2, this tank was believed to have been installed at the time the structure was installed and was removed around 1990. The Bunkhouse now shares an aboveground heating oil storage tank with the emergency generator discussed below. The fuel line is believed to be buried





under the driveway and may run through the crawlspace under the Bunkhouse, but this was not verified. No specific concerns were noted on the exterior of the Bunkhouse or the immediately surrounding area.

A small structure that contains the emergency generator for basic power to the facility is located between the Bunkhouse and the road to access the rest of the facility. The structure was not opened during the inspection, but it was reported to be a 60 kilowatt unit in operable condition, although the switchgear is outdated. An aboveground storage tank (AST) that stores fuel for the generator is located near the building and reportedly supplies fuel for the Bunkhouse furnace as well. The AST appears to be an aluminum unit similar to containers used for the air transportation of bulk fuel. The estimated size was 500 gallons and the tank was in good condition. No visible or olfactory indications of leaks or spills associated with this tank or the emergency generator were observed during the site inspection.

ATCO Office

An ATCO modular building unit that is set up as an office and/or storage is located to the south of the Bunkhouse (Figure 3). No specific concerns were noted during the interior inspection of the unit. One 500-gallon AST, similar to the emergency generator tank, was used to store heating oil for the heater in the ATCO structure. This AST appeared to be structurally sound and no visible or olfactory indications of leaks or spills associated with the tank or the fuel line were observed. The ATCO structure appeared to be related to an antenna located to the west of the ATCO structure. A visual inspection of the area surrounding this antenna did not reveal any recognized environmental concerns.

Shop/Garage

A shop and garage structure is located west of the Bunkhouse. This building is primarily used for storage of equipment and tools and for maintenance of equipment. Two fifty-five gallon steel drums and one AST with an estimated capacity of 500 gallons were identified on the western side of this building. One drum is located near the northwest corner of the building and was estimated to contain approximately 20 gallons. The drum label indicated that the contents were a polymer compound, but this drum was not further inspected to verify the contents. The second drum was mounted horizontally on a stand and fitted with a dispensing nozzle. This drum was used for storing and dispensing gasoline, reportedly to small engine equipment. This drum was also partially full (estimated to contain approximately 10-15 gallons) at the time of the inspection. The AST appears to rest on the ground surface and is reportedly utilized to store heating oil for use inside the garage/shop. Both drums and the AST appeared to be structurally sound and no visible or olfactory indications of leaks or spills associated with the drums or the AST were observed during the site visit. An older model front-end loader was also parked in this area, but snow cover prevented a good inspection of the ground surface beneath this piece of equipment.



The interior inspection of the garage revealed numerous containers of various sizes and contents. Most of the containers were labeled and included materials used for maintenance of the facility and equipment. Materials present included paints, paint thinner, sealants, quick cement, and dry-wall spackling. One unmarked glass container appeared to contain used oil. In addition, several gas cylinders were observed inside the garage that appeared to be related to welding supplies and equipment. No visible or olfactory indications of leaks or spills associated with these containers and/or gas cylinders were observed during the site visit. These gas cylinders have been reportedly removed by the vendor.

In addition, a total of four steel cylinders were observed on the lower shelf of the work bench, three of which were labeled "net 76 lbs. virgin mercury". The fourth container did not contain any identifying label but was assumed to have also contained mercury. Based on the weight of the containers, each is assumed to be empty. No visible evidence of mercury was observed on the exterior of containers, the workbench, or the floor inside the garage.

The shop portion of this structure is separate from the garage and is accessed via a door on the south side of the structure. The interior inspection of the shop revealed various tools and equipment for conducting automotive/mechanical repairs including numerous containers of various size and contents. The containers were all labeled and included several cans of paint, a can of paint thinner, a can of spray on adhesive, hand cleaners, and a spray can of parts cleaning compound. All of the containers were observed on a shelf along with random automotive parts and new replacement oil and air filters of various sizes. A parts cleaning bin was also identified in the shop which appeared to be empty during the inspection. In general, the storage of materials inside the shop was tidy and no observable indications of contamination related to these materials were noted during the inspection.

This building also has a cold storage section located on the east side. This area contains hundreds of boxes of materials that may have been used at the site. Some materials were in original boxes while many boxes were unmarked and may or may not contain the original content. Several boxes were inspected, but the boxes were not generally inspected. No staining was observed on the boxes, shelving, or ground in this area and no specific environmental concerns were noted.

LIDAR Building

The LIDAR Building is located west of the Shop in the same general cleared area (see Figure 3). The building is primarily a single story structure with a two-story section on the south end of the structure. The southern end of the building was constructed to house a 2.8 meter liquid mirror telescope (LMT), which uses a rotating disc of mercury to form a reflective mirror surface. This reflective mirror telescope is used in





conjunction with several high powered lasers to conduct ionospheric stimulation and observational experiments. The northern portion of the structure appeared to have been constructed more recently to house additional laser equipment, but this equipment did not appear to have been fully installed at the time of the inspection.

The interior inspection of this building did not include entry into the room that houses the LMT equipment. The LMT room is self contained from the remainder of the building and is monitored by a VM-300 mercury vapor monitoring system and has been sealed to prevent accidental exposure to mercury from the equipment. Observations of LMT room were made through several windows accessing the room. Approximately 35 one-liter containers were observed inside the LMT room, which were reported to contain the estimated 400 pounds of mercury used to form the mirror surface during experiments. Additional containers of various sizes were observed inside the LMT room, including two, five-gallon plastic containers, a one-gallon metal container, and a glass container. The contents of these containers were not assessed during this investigation. An industrial type vacuum was also present inside the room which was reportedly utilized to remove the mercury from the mirror platform when not being used.

Two steel fifty-five gallon drums were identified near the sealed access to the LMT room. Each drum was clearly marked "Mercury" on the outside of the drum and both were observed to be fitted with sealed lids. These drums each contain mercury switches that are utilized by the sodium laser at the facility. The drums were not opened for further inspection during the site inspection(s). The exterior of these drums is not contaminated with mercury.

The first and second floors of the southern part of the LIDAR building contained work space and office space supporting the LMT research, including laser installations, equipment storage, and research offices. A variety of chemicals and dye compounds used in conjunction with the laser systems were identified in a cupboard in the small LMT observation room located upstairs. These have been inventoried for disposal with other containers discussed below. No visual or olfactory indications of contamination were observed related to these chemical.

The primary work room occupies the majority of the northern building footprint with storage rooms located around the exterior. A storage room adjacent to the primary work room contained several banks of capacitors, some of which were reportedly no longer functional. In addition, a flammables cabinet was identified in the work room that contained numerous chemical containers. Some of the chemicals, primarily alcohols and dyes, were related to the research that occurred in the LIDAR Building. Other chemicals in the cabinet, including carbon tetrachloride and benzene, were reportedly gathered from a plasma-torch incineration pilot project at another location on the property and placed in this cabinet for storage following completion of that work. Several cylinders of compressed gas were also identified in the primary work room and





an adjacent storage room. These chemicals and cylinders have been inventoried for disposal in the next few months and the inventory is available upon request. No visual or olfactory indications of chemical contamination of the floor, storage locker, or other work surfaces were observed related to the capacitors, chemicals, or gas cylinders noted during the site inspections.

An inspection of the exterior of the LIDAR Building identified one well located north of the structure. The well was reportedly used for water within the LIDAR Building. This structure was reportedly tied in to the septic system for the Bunkhouse, but this was not confirmed during the site visit. An unidentified piece of electrical equipment (possibly a small transformer or electrical capacitor) was observed among the trees northeast of the LIDAR building. This piece of equipment was partially buried in snow and was not further assessed during the site inspection(s).

One AST was observed near the northeast corner of the structure. The AST appeared to have a capacity of approximately 500 gallons and was used to store heating oil for the heater in the LIDAR Building. The AST appeared to be a single-walled tank and was located on a stand several feet above the ground surface. According to HIPAS personnel, this tank was accidentally overfilled during filling from a tank located in the back of a pickup truck. The amount of fuel released was not known and the release was not reported to ADEC. The tank in the back of the pickup truck had a capacity of approximately 150 gallons and still contained fuel when the fuel transfer was stopped. Soil beneath the filter of this tank had some staining and an odor consistent with heating oil. The visual and olfactory extents of contamination were not assessed as part of this investigation.

Several bright objects were observed in north and west of the LIDAR Building in historical aerial photographs. One item is a conex that was removed from the area directly east of the LIDAR Building during October 2008. The items cannot be identified in the image and the ground was inspected in this area to try to identify any objects that may be present. An excavation several feet deep was identified in the woods and several chunks of concrete were found nearby. No metal or other building materials were found in this area. No other objects were identified in the surrounding woods.

Dipole Antenna/Shed and Southeastern Cleared Area

The access road goes west from the Shop/LIDAR area and then jogs to the south for a short distance before turning west again. At the turn to the west, a small road turns to the east into a large clearing. A Dipole antenna and associated shed are located near the northern edge of this clearing. The shed has a small AST that is used for heating oil storage for the heater in the building. This AST appeared to be structural sound and no visible or olfactory indications of leaks or spills associated with the tank or the antenna were observed during the site visit.



This large cleared area has several access roads and still contains several large windrows of material related to clearing and grubbing the area. HIPAS personnel indicated that wires and cables had been found periodically during the clearing and some sections may have been inadvertently mixed into the windrows, but that no drums, electronics, or other equipment had been found during this process. Materials related to an over the horizon (OTH) radar system were reportedly stored in this area and had recently been removed as evidenced by the tracks in the snow. The OTH system was reportedly not installed on the HIPAS property. The only items that remained during the site inspection were wooden cribbing, broken pallets, and banding. No environmental concerns were noted in this area.

Boneyard

The access road heads west and a clearing on the south side of the road was reportedly used as a runway. Near the western end, an excavation consistent with a loading dock is present. Where the main access road turns north to the main HIPAS facility, a shorter road turns south to the area known as the boneyard (see Figure 3). This area was originally developed during the time when the Chena Valley Radio facility operated at the Site, prior to the HIPAS Observatory. The HIPAS facility has reportedly utilized the area as storage for old equipment, miscellaneous building material, and other items that appear to no longer be of use at the Site. A complete inventory of items stored at the boneyard was not compiled as part of this investigation. The inspection(s) did identify the following items, some of which are considered to be potential environmental concerns.

The boneyard contains a few items that appear relatively fixed and/or not readily movable. The primary structure appears to be comprised of two conjoined trailers. The roofs are collapsing and/or leaking in several locations and are in an advanced state of deterioration. The interior of this structure was observed to contain a variety of relic electronic equipment including computers and transmitters as well as assorted debris including old windows, doors, and furniture. Some items appear to have been installed for use in the units while some material appears to have been placed in the trailers for storage. The exterior area surrounding the trailers is utilized for the storage of a wide variety of equipment and debris. No items appeared to be leaking fluids, but the deterioration of the trailers suggests that any fluid reservoirs would probably have leaked by this time.

An old transformer was identified south of the trailer structure. The transformer contained a legible identification plate with the following information: General Electric Type H, 37 ½ KVA. The ID plate also references; 31 Gallon capacity of No. 10C Transil Oil. This transformer was not further inspected to ascertain if it contained any fluid. In addition, during the June 2007 site inspection conducted by Bill Krause, a UL power transformer (dry type?) yellow tag 79TS22D (Square D Co.) was also identified in the





boneyard. Several capacitors were also observed near the trailer structure, but were not further inspected due to snow cover in the area.

A collapsed dish antenna is also present in the vegetation to the south of the trailers. HIPAS personnel indicated they believed the dish had collapsed by the time HIPAS began operation and indicated that this type of steerable may use a hydraulic system to reposition the dish. This dish was not investigated further as the density and diameter of the trees growing through the collapsed pieces indicated the dish pre-dated the use of the property by HIPAS.

One automobile, one additional engine, and a few pieces of mechanical equipment were also identified in the boneyard. The largest petroleum reservoirs are believed to be on a yellow hydraulic bucket hoist (Stratotower model BSU 101) observed during the Site inspection(s). According to the inspection notes provided by Bill Krause, the fuel tank on this hoist was approximately half full, but it was not determined if the hoist operated on gasoline or diesel fuel. A lead-acid battery was also noted during the 2007 inspection and this unit also is assumed to have a hydraulic fluid tank. This unit was reportedly used at the UAF Poker Flat Research Range and was brought to HIPAS during construction of the primary antenna array. The unit does not meet the safety standards necessary for that type of work and has been "retired" to the boneyard.

One skid-mounted brown tank was identified near the entrance to the boneyard and markings indicate the tank was manufactured by GREER, most likely in Fairbanks. The tank has an estimated volumetric capacity of 5,000 gallons and was reportedly empty when it was transported to the current location. The tank has a drain valve at the bottom and no evidence of leaking or dripping was observed near the valve. An Airstream travel trailer was also located in the boneyard near the tank. A brief inspection of the interior revealed a pronounced moldy smell. Overall, no specific environmental concerns were noted near the tank and travel trailer.

The remainder of the boneyard is filled with miscellaneous construction material and other equipment, most of which is located west of the trailers and dish. An inventory of materials was not compiled, but the materials included various sized pipes and/or conduits, numerous empty cable or conduit spools, miscellaneous cabinets, furniture, and wooden construction debris, and scrap metals. A few items that appeared to be tanks or drums were found and inspected, but were determined to be some other item. Most of this material appears to be on the easily movable on the ground surface. No obvious environmental concerns were noted in and among these stored materials, but the ground surface was covered with snow.

A new driveway leads northwest from the driveway of the boneyard area to a recently cleared area. At the time of the initial inspection, two buildings were present in this area, as well as a variety of small portable antennas and other stored items. At the



time of the November inspection, the larger building had been removed and a large pile of electronic equipment had been dumped in the storage area. The electronic equipment had reportedly been dumped from a conex that was taken from the Site by DoD. The buildings are reportedly on an adjacent parcel that is not part of the HIPAS Site and no further investigation was completed in this area.

Generator Building Interior

The Generator Building is located up a small hill on the western portion of the property as shown in Figure 3. The Generator Building is a two-story structure specifically designed to house the diesel generators that provide up to approximately 2.4 megawatts for the HIPAS transmitters and antenna array. The building was originally constructed to contain three generators, but currently has two generators that occupy separate high-bay areas in the eastern two-thirds of the building. The third generator area has been transformed into a kitchen/common area on the first floor and unfinished storage on the second floor. The western one-third of the building has parts storage and a power control system on the first floor and offices and meeting areas on the second floor.

The generators were not operable and needed maintenance to be used again at the time of the site inspection. The two generators each have a separate space within the building. The generators appeared to be relatively clean and no visible oil and/or lubricant leaks were observed on the surface of the generator or the adjacent floor. A fifty-five gallon drum was observed beside each the generator and was used as a reservoir for coolant during the operation of the generator. A small amount of coolant was observed inside these drums during the inspection. Both generators are mounted to large concrete pads within the concrete floor of the building. Both concrete pads and floors appeared to have minimal cracks and had been repainted in the last year or two. Overall, these units appeared to be well maintained and did not appear to have the environmental issues that can commonly be found around generators.

The southern generator room also contained various shop equipment and metal working tools for working on the generators and fabrication of antennas and other devices for use at the facility. Metal shavings and cutting oil was observed on and near these devices, similar with standard machine shop practices. No specific concerns with this equipment were observed.

A 500-gallon diesel storage tank was observed on a cradle near the ceiling of the northeastern portion of the north generator room. This tank is utilized as a day tank for operating the generators and the heating system for the building. The tank is assumed to contain diesel fuel. Several fifty-five gallon capacity steel drums were observed on secondary containment pallets on the floor of the north generator room beneath the day tank. These drums contained new oil, used oil, and glycol associated with the operation of the generators. Each drum was observed to be in very good condition and tightly





sealed with factory bungs. The containment pallets had some evidence of previous minor spills that had been cleaned up and petroleum sorbent pads were present on top of the drums to catch any drips during transfers. The floor in this area appeared generally clean and had also been repainted recently. No specific environmental concerns were noted in this area.

Additional containers of various materials including paints, paint thinners, cleaning supplies, and other shop materials were identified on shelves within the north generator room. In general, these stored materials were observed to be tidy and no visible evidence of leaks or spills associated with these materials was observed.

The remainder of the building was generally well-kept, although some of the storage areas appeared to have slightly more material than originally intended. A few capacitors were observed in the kitchen area, but these did not appear to be leaking. A detailed inspection and inventory of parts and equipment in the storage areas was not completed as part of this inspection. Overall, no evidence of leaks, spills, or other releases of potentially hazardous substances were observed in these areas.

Transmitter Building Interior

The Transmitter Building is located on the western portion of the property immediately east of the Generator Building (as shown in Figure 3). This is a single story structure which houses the transmitting equipment utilized at the facility. During the interior inspection of this building, two steel, fifty-five gallon drums were identified. Both drums were labeled "Diala" electrical insulating oils and each drum was partially to mostly full. One drum was marked as used oil and the other contained new insulating oil. Each drum was observed to be in very good condition and tightly sealed with factory bungs. No observations of leaks or spills were observed on any of the drums or on the ground surface in the vicinity of the drums.

In addition, three electrical equipment components were observed on the floor of the building and identified by Mr. Farren as rectifiers. Each rectifier contained approximately five gallons of insulating oil and these rectifiers were apparently in the process of being refurbished with new oil. No observations of leaks or spills were observed in the vicinity of the rectifiers.

The primary room inside this building contained numerous banks of electrical transmitting equipment. The transmitters produce a significant amount of heat and have radiator cooling systems outside the building. The lines to the exterior of the building reportedly contain glycol while the internal lines contain distilled water. Several capacitors were also observed inside the building during the inspections in addition to numerous pieces of electronic equipment and computers. According to Mr. Farren, electrical insulating oil was used in most of the equipment inside the building. No





observations of leaks or spills were observed inside the building related to the transmitting equipment during the inspection(s).

UAF notes indicated that the transmitter equipment that contains vacuum tubes that may contain beryllium oxide. This is based on a reported tube failure at the facility that was cleaned up by facility personnel. The presence of beryllium oxide in the equipment could not be determined during the inspection. The presence or absence of hazardous substances in this type of specialized equipment is expected to require additional research.

Generator/Transmitter Area Exterior Storage

This section summarizes the inspections of the exterior areas surrounding the Generator and Transmitter Buildings. This area is loosely bounded by the edge of the forest on the south and west sides, the southern edge of the antenna footprint on the north side, and the eastern side of the Transmitter Building. A total of two wells were identified in this area as well as the septic system. One well is located on the south side of the Generator Building and the second well is located near the northwest corner of the Transmitter Building. These two buildings share a septic system that is located west of the Generator Building.

A large (estimated 10,000 gallon) AST was observed in the area between the Generator and Transmitter buildings. This AST stores diesel fuel that is used to operate the diesel generators and heater in the Generator Building through the day tank discussed above. In addition, this tank also supplies heating oil to the heater in the Transmitter Building. The AST is located within a lined secondary containment area. UAF EHS personnel indicated that the containment liner had holes in it during an inspection in June 2007, but this could not be confirmed due to snow cover. Also in June 2007, the exposed fuel line to the Transmitter Building was reported to be weeping, but this location could not be found due to the snow cover.

The area north of the tank and between the two buildings is used for storage of portable tanks and drums, as well as a variety of other materials. No secondary containment was observed in this area. The tanks were reported to have been used for diesel fuel and were stored empty. The ports on the bottoms of the tanks were inspected and no leaks or stains were observed, but the interior of the tanks were not inspected. A total of fifteen, fifty-five gallon steel drums were observed in the area between the two buildings. In general, the drums were in good condition with both bungs sealed, but the ground surface around each drum was not inspected. The drums and contents were inventoried for disposal purposes and contained primarily new and used motor oil, dielectric insulating oil, and glycol. The inventory is available upon request.

Four conex boxes and another modified tractor trailer were observed to the north of the Generator Building, adjacent to the perimeter of another antenna. The conex boxes





contained a wide variety of items including various electronic equipment, construction debris, furniture, and miscellaneous materials. Additional materials were stored between the boxes. These boxes were not inspected other than what could be observed through the open doors on the end of the structures, generally due to the apparent lack of stability of stored materials. One box was observed to contain numerous five gallon buckets fitted with lids and other smaller containers, but this was behind some other material and was not inventoried. According to Mr. Richards, these materials were consolidated from various locations throughout the facility and stored in the locked box. Following the initial inspection, one box was removed and a large object that appeared to be the plasma torch apparatus was left on the ground surface. No evidence of staining was observed on the exterior of any of the boxes or other materials that were stored in this general area.

A total of thirteen additional drums were observed on pallets to the north of the conex boxes. The labeling on these drums identified the contents as motor oil, coolant, and electrical insulating oil. These drums were new and un-opened and no evidence of leaks or spills was observed in this area. Two additional drums were observed in the bed of a large truck parked adjacent to the conex boxes. These drums were sealed with bungs and contained small quantities of waste oil and water. The drums appeared to be in good condition and no evidence of leaks or spills were observed on the bed of the truck. A second group of modified tractor trailers were observed north of the conex boxes. These trailers appeared to be custom-retrofitted for some sort of activity, such as field observations during experiments at the Site. The trailers appeared to be now used for storage of miscellaneous materials.

Two generators were observed to the south of the generator building. The larger generator was mostly covered in tarps and was reportedly the same size/type as the two generators installed in the Generator Building. This generator had either no longer worked or had never been installed at the Site and was being used for parts for the installed generators. The smaller generator was not covered and was reportedly related to the DoD OTH project/materials stored in the southeast of the Site. A third generator mounted on a flatbed trailer was observed along the western side of the Transmitter Building during the initial site visit. This generator had been used to complete a few experiments after the large generators had stopped working. This generator was being used to complete the remaining experiments and had been removed by the time of the final site visit. No observations of leaks or spills were observed during the inspection of the areas surrounding these generators, although the ground surface was obscured by the presence of snow. At the time of the November site inspection, the smaller generator and trailer-mounted units had been removed from the Site and only the large generator under the tarps remained at the Site.





Antenna Arrays

The primary antenna array at the HIPAS facility is located to the east of the Transmitter Building and consists of eight antennas arranged in a circle. At the time the ground was cleared, the southeastern portion of the array was at a slightly lower elevation and the cleared materials (soil, etc) from the rest of the array were used to make the entire array level. Electrical conduits extend from the Transmitter Buildings to each antenna. A small building was formerly located near the middle antenna and burned down several years ago. This ground surface beneath this array was not inspected due to the snow cover, but no specific environmental concerns are expected from this array.

A second large antenna is present north of the Generator and Transmitter Buildings. This antenna is square and turned 45 degrees relative to the buildings. As discussed above, three trailers with miscellaneous storage are present near the southern edge of this antenna. The ground surface beneath this antenna was covered with snow and was not inspected, but no environmental concerns are expected from this installation.

A third tower is located northwest of the Generator Building. This tower is reportedly operated by a telephone provider and provides wireless internet and possibly some phone service to residential customers in the area. The tower was located on the HIPAS property through some form of cooperative agreement with HIPAS and draws power from the HIPAS facility. No environmental concerns were noted near this tower.

Other Areas

The Site has been developed for approximately 40 years. While the footprint of the previous development is mostly included in the areas described above, historical aerial photographs indicated that development occurred in a few other locations, mostly in the southern portion of the Site. This development appears consistent with some sort of antenna array, but no documentation of the installation has been identified at this time. Additionally, the aerial photographs provide evidence that buildings have been moved on and off the site, particularly near the current ATCO unit. Due to the snow cover and large extent of the Site, no effort was made to try to identify these former structures or to walk the entire 130-acre Site looking for historical artifacts.

6.0 ANALYSIS

NORTECH has completed a Phase I Environmental Site Assessment (ESA) for HIPAS Observatory property addressed as 7795 Chena Hot Spring Road, Fairbanks Alaska. The legal address of the Site is Tax Lot 3604, Section 36, Township 1 North, Range 4 East, Fairbanks Meridian. The property is located approximately 25 miles east of Fairbanks in the community of Two Rivers and is accessed from Chena Hot Springs Road by HIPAS Street and Barley Avenue. The property is owned by the University of Alaska and is leased to the University of California, Los Angeles. This assessment was





completed in general accordance with American Society of Testing and Materials (ASTM) Standards E 1527-05. This section summarizes the history of the Site and details **NORTECH's** opinions related to both the on-site and off-site environmental concerns.

6.1 Site Summary

This property, like all property in the area, was undeveloped until the construction of Chena Hot Springs Road in the 1950s. The BLM survey around the same time established section lines for legal access and slowly development began in the area, primarily driven by agriculture. The original development of the Site as the Chena Valley Radio facility began in the mid 1960s as an operation run by the UAF Geophysical Institute. This facility was apparently shuttered at some point in the 1970s, but some of the installations remained at the Site.

In the early 1980s, the UAF Geophysical Institute and the UCLA Plasma Physics Laboratory identified the Site as a location to perform ionospheric research and development of the current HIPAS facility began. The HIPAS operation used the Bunkhouse and Shop from the original construction, but did not utilize the electronic gear or dish antenna that remained. New development for HIPAS has included one large antenna array, other smaller antennas, and construction of three permanent buildings to house the generators, transmitters, and LIDAR research equipment. HIPAS has also installed and/or moved several temporary facilities over the years and has maintained the infrastructure necessary to operate the facility, including storage of fuel, equipment, and construction materials.

6.2 On-site Environmental Concerns

As described above, the HIPAS Observatory and previous Chena Valley Radio facility have been conducting a variety of research projects for over four decades. Petroleum products and a few hazardous materials have been used at different locations across the Site for a variety of purposes. This use has resulted in several current or potential recognized environmental concerns at the Site. These environmental concerns are grouped together by the general location on the property for discussion below.

6.2.1 Bunkhouse and Emergency Generator

The Bunkhouse is located on the eastern portion of the property near the entrance gate to the facility (Figure 3). This structures dates to the original Chena Valley Radio facility at the Site. No environmental concerns were observed and the only potential concern expected from this type of facility is related to heating oil storage and handling. The original heating oil storage tank was buried on the back side of the facility, in the general vicinity of the furnace. This tank was reportedly excavated and removed from the Site around 1990. UAF appears to have registered the former tank with ADEC, but



registration of a buried heating oil tank for on-premises use is not necessary. No contamination was reported by personnel familiar with the excavation or identified in the ADEC or UAF files. This ADEC listing and former buried tank are not considered recognized environmental conditions and no additional investigation regarding this former tank is recommended or considered necessary at this time. ADEC has requested additional information for the file if additional information can be found.

The Bunkhouse currently shares an aboveground storage tank (AST) with the emergency generator that is located between the Bunkhouse and the access road to the south. The fuel tank appears generally well maintained and no concerns were noted in the vicinity of the tank. The fuel line to the Bunkhouse furnace is believed to be at least partially buried and runs either underneath or adjacent the Bunkhouse. The full length of this fuel line was not inspected, but no concerns were observed in the short sections that were visible. The length of the line indicates the potential for a joint or splice somewhere in the line and these joints often develop very slow leaks over time that may not be noticeable unless the furnace has been shut off for an extended period of time. The line should be fully inspected when weather conditions permit. In the event that the building will be demolished, the line and tank should be fully removed and inspected for potential contamination.

As indicated above, the emergency generator also draws diesel fuel from the aboveground tank. The line from the tank to the generator appeared to be in good condition and no obvious leaks were observed. The generator is an older model that is reportedly in operable condition, but the interior of the shed was not inspected because the switchgear was reportedly quite outdated. The need for this type of generator should be re-evaluated within the long-term plan for this facility. Regardless of the need, this particular installation is expected to be removed. The area beneath the generator shed and fuel line should be inspected for potential contamination after removal of the generator.

No known release or contamination has been documented in this area and the potential concerns described above are not considered recognized environmental conditions. The inspections above are recommended as a best management practice. Collection of environmental laboratory samples for characterization or closure of these areas is not expected to be necessary as long as no evidence of a release is observed during the inspections.

In addition to the petroleum storage, the Bunkhouse has a well for drinking water and septic tank and soil absorption system (ST/SAS) for wastewater disposal. In the event the building is demolished and no new development is planned, the well and ST/SAS should be decommissioned in accordance with ADEC guidelines. In general, this includes removal of the well casing while grouting the annulus. The septic tank is also typically removed to reduce the potential for a sinkhole when the structure deteriorates.





6.2.2 ATCO Office

An ATCO unit that is currently setup as an office and/or storage is located south of the Bunkhouse and emergency generator. This facility was moved to this location during operation of the Site as the HIPAS Observatory. This facility also has an AST for heating oil storage and a fuel line that runs to the building at or slightly below the ground surface. This AST appeared to be structurally sound and no visible or olfactory indications of leaks or spills associated with the tank or the fuel line were observed. This portable structure does not appear to be in use any longer. Any remaining fuel should be removed from the tank, fuel line, and furnace. The tank and line should be removed and these locations should be inspected for potential contamination. The tank appears to be of adequate quality for reuse or sale. As with the Bunkhouse area, this inspection is considered a best management practice and laboratory sampling is not necessary unless a specific potential release is observed.

6.2.3 Shop/Garage

A shop and garage structure is located west of the Bunkhouse, adjacent to the LIDAR Building. The original structure dates to the Chena Valley Radio operation of the Site. A portion of this building was reportedly added on so that a larger piece of equipment could fit inside, but the date of this addition was not documented during this effort. The building has an AST for heating oil storage that is located near the northwestern corner. This installation appears marginal and should be upgraded if the building is not demolished. Inspection of this area and any exterior lines should be conducted after removal of the tank, even if it replaced in the same location.

A 55-gallon drum is installed horizontally on a stand as a gasoline dispenser for small equipment near the northeast corner of the building. This installation should be completely removed. This type of dispenser typically seeps fuel around the valves on the drum and operator error commonly results in drips or larger releases. The drum and any remaining fuel should be disposed of along with other drummed materials at the Site (described in other sections). This area should be inspected following removal of the dispenser installation to verify that spills or drips have not resulted in a release to the environment.

One drum and an older model front end loader are also stored near the Shop. No obvious signs of releases were observed from these two items, but both could release fluids. The drum appears to contain a polymer compound and should be disposed of with the other drums on the Site. The operational status of the loader should be determined and the need for the loader at the Site should be evaluated. If the loader is functional and desired at the Site, a proper storage location should be installed. Inspection of the areas beneath these two items should be completed to verify that a release has not occurred at either location.





Numerous small containers of a wide variety of paints, paint thinners, sealants, and vehicle related fluids were observed in the interior of the shop and garage sections of the building. Most of these are clearly marked or can be quickly field characterized for disposal. Several compressed gas cylinders related to common welding equipment were observed and are thought to have been removed by a local provider based on an agreement in November 2008. If the facility will remain in operation, most of these items could remain as useful products for the maintenance of the facility and equipment. These items should be bulked together with the other small containers of similar materials found in the other buildings for disposal if the building will be demolished.

In addition to these standard shop items, four steel canisters were observed that are either labeled or assumed to have been shipping and storage containers for mercury. Based on the weight of the canisters, each is assumed to be empty but may contain mercury residue in the interior. These should be disposed of as mercury contaminated waste with the other similar waste found in the LIDAR Building that is discussed below.

A wide variety of boxed materials are also present on the exterior of the building in a cold storage area that contains hundreds of boxes. Some materials were in original boxes while many boxes were unmarked and may or may not contain the original content. Most of these materials appear old and may not still be useful at the Site. The material should be reviewed and any obsolete materials should be disposed of properly. Most of this material appears inert, but some may contain electronics or other potentially sensitive wastes that require segregation prior to disposal. No staining was observed on the boxes, shelving, or ground in this area and no specific environmental concerns were noted during the inspection.

6.2.4 LIDAR Building

The LIDAR Building is located west of the Shop in the same general cleared area (see Figure 3). This building was built in two phases to facilitate research at the HIPAS Observatory. The two-story southern portion of the building was built first and contains the 2.8 meter liquid mirror telescope (LMT), and associated lasers, equipment, and offices. The northern half was built more recently and contains additional lasers and storage. This facility has two known recognized environmental concerns: the mercury contaminated LMT Room and a heating oil release near the AST. Additionally, this facility contains the primary chemical storage locker for the facility.

As indicated above, the LMT Room houses the liquid mirror telescope, which used a rotating disc of mercury to form a reflective mirror surface. The LMT room is self contained from the remainder of the building and is monitored by a VM-300 mercury vapor monitoring system and has been sealed to prevent accidental exposure to mercury from the equipment. Limited surface sampling of some surface outside the





sealed area is recommended to verify that mercury contamination is not present outside the LMT. The mercury for the LMT is containerized in the room and all surfaces and equipment inside this room are presumed to be contaminated with mercury. At this time, the future operation of the LMT is considered unlikely. The elemental mercury should be removed from the Site and recycled or disposed of properly. The other equipment and building materials in the LMT Room should be decontaminated and/or disposed of as mercury-contaminated waste. Other containerized liquids and/or wastes in the LMT Room may require additional characterization for proper disposal. Once the mercury contamination has been removed, the LMT area can be demolished or remodeled as outlined in the overall plan for the Site.

Two steel fifty-five gallon drums labeled as "Mercury" were identified near the sealed access to the LMT room. Each drum was clearly marked and observed to be fitted with sealed lids. These drums are reported to contain mercury switches that are utilized by the sodium laser at the facility. The drums were not opened for further inspection during the site inspection(s). The exterior of these drums is not suspected of being contaminated with mercury. If no longer necessary, these devices should be properly shipped to a facility that can use them or disposed of properly.

The heating oil tank was reportedly overfilled during a fuel transfer from a truck-mounted tank several years ago. The volume of the release is not known, but the total volume of the truck-mounted tank was 150 gallons and some fuel reportedly remained in that tank when the transfer was stopped. Additionally, the LIDAR Building tank had some capacity as fuel was initially pumped into the tank. Therefore, the upper limit on the released fuel is something less than 150 gallons. The lowest estimated volume released is approximately 10 gallons based on the pump flow rates and the time between when the incident was observed and the fuel transfer could be stopped. Based on these estimates, the release was probably a reportable quantity under ADEC regulations and is therefore considered a recognized environmental condition. However, facility personnel indicate that this release was not reported to ADEC.

Due to the anecdotal nature of the facts reported for the release, **NORTECH** recommends completing a site characterization effort prior to contacting ADEC regarding this release. This characterization effort should include removal of the tank and excavation at least several feet deep with heavy equipment to determine the extent of the contamination. The area is primarily silt, sand, and gravel and contamination tends to move vertically upon release, but the total depth would be controlled by the silt content and the quantity of fuel. The proximity of the tank to the LIDAR Building indicates the potential that contamination is present within the structural prism of the LIDAR Building. If the LIDAR building is slated for demolition, the assessment should be completed following demolition to allow better access to the potential contamination. Once the extent of contamination is better defined, the appropriate agency reporting can be completed through a proposed corrective action plan.





In addition to the mercury and petroleum issues, the LIDAR Building contains storage for most of the non-petroleum chemicals at the facility. Chemicals include carbon tetrachloride, methanol, other solvents, and several compressed gas cylinders. Most chemicals are stored in a Flammables cabinet that appears adequate for the current use of the facility. Most of these were associated with either the LIDAR and LMT research or testing of a plasma torch for disposal of wastes. No evidence of a release from the jars or cylinders was observed and the jars and cylinders have been inventoried for disposal. Smaller containers of some chemicals were observed in the office and other locations within the LIDAR Building and these should be consolidated by the disposal contractor. In the event that the facility is reopened, new chemicals should be purchased for the specific research undertaken and a formal chemical storage plan and appropriate handling procedures should be developed.

The LIDAR Building has a well for drinking water and septic tank and soil absorption system (ST/SAS) for wastewater disposal. The facility is believed to share the SAS with the Bunkhouse described above. In the event the building is demolished and no new development is planned, the well and ST/SAS should be decommissioned in accordance with ADEC guidelines. In general, this includes removal of the well casing while grouting the annulus. The septic tank is also typically removed to reduce the potential for a sinkhole when the structure deteriorates. Although the presence and use of chemicals within the LIDAR has been documented, these appear to have been used within controlled experiments following clear guidance and protocols. Waste chemicals were collected and are stored in the chemical locker with the new chemicals and the mercury protocols indicate that mercury would not have been intentionally or inadvertently brought out of the LMT Room. Therefore, no testing of the ST/SAS is recommended during decommissioning activities.

6.2.5 Dipole Antenna/Shed and Southeastern Cleared Area

A dipole antenna and associated shed have been installed in the southeastern portion of the Site in the last few years. This installation has an AST that holds heating oil for a small heater. This AST appeared to be structurally sound and no visible or olfactory indications of leaks or spills associated with the tank or the fuel line were observed. If this installation is no longer in use, any remaining fuel should be removed from the tank, fuel line, and heater and these items should be inspected for potential releases. This inspection should be adequate to document the environmental condition at this location, even if the antenna is left in place after removal of the AST. Laboratory sampling is not necessary unless a specific potential release is observed.

The dipole antenna is located along the northern edge of a large cleared area in the southeastern portion of the Site, with some windrows of clearing debris remaining in the southern portion of this area. This clearing was started for installation of another research project and many truckloads of equipment were stored in this area. The





equipment was never installed and has been removed from the Site for use elsewhere. The aerial photos indicate that some sort of array was present in this area during the Chena Valley Radio operation and extended off-site to the south. HIPAS personnel indicated that wires and cables were found periodically during the clearing and some sections may have been inadvertently mixed into the windrows, but that no drums, electronics, or other equipment had been found during this process. The only items that were observed during the site inspection were wooden cribbing, broken pallets, and banding related to the recent storage of equipment. No environmental concerns were noted in this area and no additional assessment and/or laboratory testing of the ground surface or windrows is considered necessary at this time.

6.2.6 Boneyard

The boneyard area contains the obsolete equipment and/or unneeded materials from four decades of research on the property. The two deteriorating trailers and the collapsed dish appear to remain at the locations they were installed during operation of the Chena Valley Radio facility. Additional electronic gear and building materials from an unknown source appears to have been added to the gear that was originally installed in the trailers. A transformer observed in the woods appears to have been related to this operation. No staining or obvious releases were observed, but the oil reservoirs in the transformer, trailers, and collapsed dish may have been on the site for more than 40 years and need to be properly characterized, drained and/or decommissioned.

A variety of portable equipment in the boneyard may also contain oil-filled reservoirs. These include an old automobile, an automobile engine, a travel trailer, an old lift for working on antennas, and relatively new 5,000 gallon tank. The tank and the travel trailer were reportedly moved to the boneyard in the last few years. The tank was reportedly empty and no evidence of dripping was observed at the valve on the bottom. The travel trailer, and old automobile and engine were also inspected and no specific concerns were noted. The lift is reported to contain a fuel tank and probably a hydraulic fluid reservoir. This unit was reportedly brought from another UAF facility for use during the installation of the HIPAS antennas. This unit was reportedly considered out-dated at that time and clearly does not meet current safety standards for this type of work. Each piece of equipment in the boneyard should be inspected for oil-filled reservoirs and each reservoir should be inspected for possible leaking on both the equipment and the adjacent ground surface. Functional equipment should be returned to use at this or another property and obsolete equipment should be drained of all fluids and recycled or disposed of properly.

The remainder of the boneyard is filled with miscellaneous construction material and other equipment, most of which is located west of the trailers and dish. An inventory of materials was not compiled, but the materials included various sized pipes and/or





conduits, numerous empty cable or conduit spools, miscellaneous cabinets, furniture, and wooden construction debris, and scrap metals. A few items that appeared to be tanks or drums were found and inspected, but were determined to be some other piece of equipment. No obvious environmental concerns were noted in and among these stored materials. Most of this material appears to be inert and is expected to be easily movable on the ground surface. This material should be recycled or disposed of properly and the ground surface beneath stored materials should be inspected for any potential environmental concerns following the removal of the materials.

A new driveway leads northwest from the driveway of the boneyard area to a recently cleared area on an adjacent parcel. One of two buildings observed in October 2008 remain at the property. A variety of equipment was also stored in this area, but none was observed to have the potential for an environmental concern. The location of the lot line between the HIPAS Observatory and the other parcel was not clear at the time of the site inspection. HIPAS owned materials should be consolidated at HIPAS buildings to avoid confusion with other operations in the area. Any materials unrelated to HIPAS that are inappropriately stored on HIPAS property should be moved to an appropriate location off HIPAS property. Inspection of this area is not considered necessary unless a specific environmental concern is noted during relocation activities.

6.2.7 Generator Building Interior

The Generator Building is a two-story structure specifically designed to house the diesel generators that provide power to the HIPAS transmitters and antenna array. The building was originally constructed to contain three generators, but currently has two generators that occupy separate high-bay sections in the eastern two-thirds of the building. The third generator section has been transformed into a kitchen/common area on the first floor and unfinished storage on the second floor. The western one-third of the building has parts storage and a power control system on the first floor and offices and meeting areas on the second floor. These areas were generally well-kept. A few capacitors were noted in the kitchen and should be consolidated with other similar capacitors. No environmental concerns were observed outside of the two current generator rooms.

The current two generator installation can produce up to 2.4 megawatts of power, but requires maintenance before either generator can be operated. The generators are reportedly in good condition, but the fuel delivery systems to the generators are believed to be vapor-locked. The facility was conducting limited experiments with a smaller trailer-mounted generator, but this reportedly did not produce enough energy to fully power the transmitters. The operability of these generators should be verified before the facility is either reopened or dismantled. If the facility is dismantled, these generators are expected to have some residual value on the resale market.





The generators and generator rooms appeared to be relatively clean and no visible oil and/or lubricant leaks were observed on the surface of the generator or the adjacent floor. A fifty-five gallon drum was observed beside each the generator for use as a coolant reservoir or the generator. A small amount of coolant was observed inside each of these drums during the inspection. Both generators are mounted to large concrete pads within the concrete floor of the building. Both concrete pads and floors appeared to have minimal cracks and had been repainted in the last year or two. Overall, these units appeared to be well maintained and did not appear to have the environmental issues that can commonly be found around generators. No specific investigation of the interior around the generators is considered necessary at this time.

The southern generator room contained various machine shop equipment and metal working tools for fabrication of antennas and other devices for use at the facility. Small quantities of metal shavings and cutting oil were observed on and near these devices, similar with standard machine shop practices. No cracks, drains, or significant stains were observed on the floor in the areas around the shop equipment and no specific investigation of these areas is considered necessary.

The northern generator room contains the day tank for the generator fuel system as well as the drum storage location for generator fluids. The day tank is a 500-gallon tank located on a cradle near the ceiling of the northeastern corner of this room. This tank also provides fuel for the heater for the building. The tank is assumed to contain diesel fuel for the boiler at this time. Several fifty-five gallon steel drums were observed on secondary containment pallets beneath the day tank. These drums contained new and used lubricants and glycol associated with the operation of the generators. Each drum was observed to be in very good condition and tightly sealed with factory bungs. The containment pallets had some evidence of previous minor spills that had been cleaned up and petroleum sorbent pads were present on top of the drums to catch any drips during transfers. The floor in this area appeared generally clean and had also been repainted recently. No specific environmental concerns were noted in this area and the storage practices appear to be adequate for the current operation of the facility.

Additional containers of various materials including paints, paint thinners, cleaning supplies, and other shop materials were identified on shelves within the north generator room. In general, these stored materials were observed to be tidy and no visible evidence of leaks or spills associated with these materials was observed. Most of these containers are partially used and the contents may not longer be necessary or functional for the original purpose. These items should be consolidated with other similar items from the Shop and other facilities and disposed of properly. Any other chemicals that may be located in the facility should be handled similarly. In the event that research resumes at the facility, new containers of these items can be purchased as necessary for operational purposes.





Due to the generally clean condition of the generator rooms and other portions of the Generator Building, no additional investigation of the building or footprint is considered necessary at this time or to return the building to operation. In the event the generators are removed, removal of the building is not considered necessary specifically for the environmental inspection and/or assessment. However, if the building is dismantled or demolished, the soil beneath the building footprint should be inspected for possible environmental contamination. Environmental sampling is not expected to be necessary unless a specific concern is noted during or after demolition of the concrete.

6.2.8 Transmitter Building Interior

The Transmitter Building is a one-story building located immediately east of the Generator Building. This structure contains the transmitting equipment and controllers for the main antenna array. The southern portion of the building appears to be older and related to the control of the transmitters. No specific environmental concerns were noted in the southern part of the building, but this section has a large amount of electronic equipment.

The actual transmitters are located in the northern section of the building, which appears newer based on the review of aerial photographs. This portion of the building also has a small electronics "shop" area and a few storage areas. The primary room inside this building contained numerous banks of electrical transmitting equipment. The transmitters produce a significant amount of heat and have cooling systems outside the building. These cooling systems contain distilled water (inside the equipment) and glycol (lines to the exterior of the building). The glycol system should be properly drained if the units are dismantled. UAF personnel have reported that some of the equipment has vacuum tubes containing beryllium oxide and is expected to require special handling during transportation and/or disposal. The transmitter equipment should also be evaluated for the possible presence of other hazardous components prior to transportation and/or disposal. In the current installation, these transmitters are not considered an environmental concern.

According to Mr. Farren, electrical insulating oil is also present in much of the equipment inside the building. During the inspection, three electrical rectifiers were being refurbished with new oil on the floor and each rectifier contained approximately five gallons of insulating oil. Two mostly full 55-gallon drums inside the building were identified as "Diala" electrical insulating oil. One drum was marked as used oil and the other appeared to contain new insulating oil. Each was in good condition and no observations of leaks or spills were observed on any of the transmitters, equipment, drums, or adjacent floor areas. The drums are adequate for the apparent use if new research is planned at the facility. These drums should be disposed of with the other drums at the Site and new product can be obtained if the facility is expected to be





closed. Equipment that may require transportation and/or disposal should be investigated and any dielectric oil or other potential hazardous materials should be removed from the equipment prior to removal from the Site.

6.2.9 Generator/Transmitter Building Exterior Areas

The exterior area between and north of the Generator and Transmitter Buildings appears to be used for storage of bulk fuel, drums, and other materials that are of more recent origin than those in the boneyard. This area is loosely bounded by the edge of the forest on the south and west sides, the southern edge of the antenna footprint on the north side, and the eastern side of the Transmitter Building.

The largest feature in this area is the estimated 10,000 gallon AST that stores diesel fuel for the diesel generators and heaters in the Generator and Transmitter Buildings. This tank is within a lined secondary containment structure, but the liner appears to be compromised. Additionally, the fuel line to the Transmitter Building was observed to be weeping during a visit by UAF in 2007. The tank should be moved from the current location to allow removal and assessment of the secondary containment and all fuel lines leading from the tank. New containment and fuel lines should be installed if the facility will return to operation. The tank should be evaluated by a certified tank inspector to determine if it is adequate for reuse at this or another facility.

The area north of the AST has been used for storage of portable tanks and drums, as well as a variety of other materials. No secondary containment was observed for the tanks or drums in this area. The tanks were reported to have been used for diesel fuel and were stored empty. The ports on the bottoms of the tanks were inspected and no leaks or stains were observed. The contents of the tanks should be verified and the tanks should be relocated to an appropriate tank storage area or disposed of properly. Each of the 55-gallon drums observed in this area was inspected and field characterized for disposal in early 2009. The drums contained new and used motor oil, dielectric insulating oil, and glycol. In general, the drums were in good condition with both bungs sealed and no evidence of leaking from the tops. The ground surface under these tanks and drums should be inspected following removal of the containers. Based on the current observations, contamination is expected to be de-minimus and no laboratory sampling is expected to be necessary.

Four conex boxes and another modified tractor trailer were observed to the north of the Generator Building, adjacent to the perimeter of another antenna. The conex boxes contained a wide variety of items including various electronic equipment, construction debris, furniture, and miscellaneous materials with additional materials storage between the boxes. At least one box was observed to contain numerous five gallon buckets fitted with lids and other smaller containers that may contain materials requiring special





handling for disposal. No evidence of staining was observed on the exterior of any of the boxes or other materials that were stored in this general area. These boxes were not considered safe to enter during the limited inspection that was performed as part of this assessment. Each box should be unloaded to identify potential hazardous materials within the structure prior to disposal of the contents and reuse or disposal of the boxes.

Two additional drums were observed in the bed of a large military-surplus type truck parked adjacent to the conex boxes. These drums contained small quantities of waste oil and water. The drums appeared to be in good condition and had appropriate bungs. The truck reported ran in the last year or two and is not believed to have been drained prior to parking at this location. A limited inspection of the bed of the truck and the ground surface beneath the truck did not identify any obvious signs of contamination. These drums have been inventoried for disposal in early 2009. The ground beneath the truck should be inspected once the truck has been relocated as part of the overall plan for the equipment in this area, but sampling is not expected to be necessary.

A total of thirteen additional drums were observed on pallets to the north of the conex boxes. These drums were labeled as motor oil, coolant, and dielectric oil. These drums appeared to be new and un-opened and field characterization was not considered necessary. No evidence of leaks or spills was observed on or adjacent to these drums. These fluids can be used at the Site if operations resume or may have some resale potential to other facilities in the Fairbanks area. These drums should be moved to a more secure location with secondary containment if they remain on the Site. The ground surface should be inspected following relocation of the drums, but no contamination is expected and laboratory sampling is not expected to be necessary.

A group of semi-trailers were also observed north of the conex boxes. These trailers appeared to be custom-retrofitted for some sort of activity. Historical aerial photographs suggest that these were used to house some of the transmitting equipment prior to construction of the northern portion of the Transmitter Building. The trailers currently appear to be used for storage of miscellaneous materials. These units are not road-worthy in their current condition and will need to be dismantled prior to reuse or disposal. No environmental or hazardous materials concerns were noted in regards to these units and additional inspection is not considered necessary.

Two unused generators were stored on a gravel area south of the Generator Building and a third trailer-mounted generator was installed near the west side of the Transmitter Building. The larger generator was mostly covered in tarps and was reportedly used for spare parts of the units installed in the Generator Building. The smaller unit appeared to be setup for an exterior installation and was not covered or providing power for anything. This unit had been removed by the time of the November site visit. The trailer mounted unit was used to complete a few experiments after the primary



generators in the Generator Building had stopped working. This generator was being used to complete the remaining experiments and had been removed by the time of the final site visit. No observations of leaks or spills were observed during the inspection of the areas surrounding these generators. The location that the two unused generators were stored should be inspected when the generators and snow are no longer present. Additional inspection in the vicinity of the trailer mounted unit is not considered necessary.

A total of two wells were identified near the Generator and Transmitter Buildings. One well is located on the south side of the Generator Building and the second well is located near the northwest corner of the Transmitter Building. These two buildings share a ST/SAS that is located west of the Generator Building. Due to the location of the wells and some wastewater cleanouts near active driveways, installation of protective bollards should be considered if the facility remains in operation. If the facility is closed down, the wells and ST/SAS should be decommissioned in accordance with ADEC guidelines.

6.2.10 Antenna Arrays

The primary antenna array at the HIPAS facility is located to the east of the Transmitter Building and consists of eight antennas arranged in a circle. A small building was formerly located near the middle antenna and burned down several years ago. The ground surface within the antenna array was not inspected due to snow cover. A limited inspection of the ground surface near the base of each antenna and representative portions of the electrical conduits is recommended after the snow melts. No environmental concerns are expected and sampling is not expected to be necessary.

A large antenna is also located north of the Generator Building and a smaller antenna is located near the ATCO unit. A telephone tower that is believed to be privately owned is present northwest of the Generator Building. No specific environmental concerns were observed in regards to these antennas and no additional inspection is considered necessary.

6.2.11 Other Areas

The Site has been developed for approximately 40 years. While the footprint of the previous Chena Valley Radio facility is mostly included in the areas described above, historical aerial photographs suggest that some sort of development occurred in a few other locations, mostly in the southeastern portion of the Site. This development appears consistent with some sort of antenna array and the northern and southern ends are assumed to have been removed during clearing of these area. The most likely locations for transformers and other equipment would have been at the northern





end where road access was best. This area has been cleared recently with no reports of equipment, other than a few old cables. The actual installation has not been verified on the ground or through historical research as this obviously predates the HIPAS operations.

Due to the snow cover and large extent of the Site, no effort was made to try to identify the former structures or to walk the entire 130-acre Site looking for historical artifacts. This type of inspection is not considered necessary due to the high quality aerial photographs and reasonably well contained research operations that have occurred at the Site over the years. Additional inspection of the currently undeveloped areas is not considered necessary unless a specific concern or historical development is documented through additional research or anecdotal reports.

6.2.12 Site-wide Issues

The single most significant site-wide issue is the relatively unorganized storage of drums and inadequate secondary containment for aboveground tanks at the Site. The Site exceeds the minimum threshold of the Spill Prevention, Control, and Countermeasure (SPCC) Plan regulations and no documentation of a plan was provided or believed to be available. While the current status of the facility could be argued, the facility will clearly be out of compliance with the SPCC regulations by November 2009. At a minimum, the following basic items would need to be addressed in an SPCC Plan for the facility:

- Development of one or more organized drum storage area(s) with appropriate secondary containment
- Secondary containment and engineering controls for the following tanks:
 - Generator Building
 - LIDAR Building
 - Shop/Garage
 - Dipole Antenna
- Appropriate engineering controls for the Bunkhouse and ATCO tanks
- An appropriate spill response kit at one or more locations at the facility

While this facility may be far enough from a water of the United States to not require Professional Engineer approval, this type of plan provides a valuable tool to organize and document fuel storage locations and practices. Development of this sort of plan also provides administrative continuity at a research facility such as this that often has visiting staff and regular turnover of graduate students and employees. An SPCC Plan





review should be conducted if the facility will remain open and the development of the plan is considered a best management practice even if the plan is not required by regulation.

Another site-wide issue is the volume of electronic equipment that is present at the facility. Several conex boxes already contain electronic gear and the total volume of electronics is estimated to fill at least 7 to 10 conex boxes. If the facility is decommissioned, this electronic waste will most likely have to be hauled out of Alaska to an appropriate recycling or reclamation facility. While this is not generally within the ASTM Phase I ESA scope, this is an issue that will need to be researched prior to demolition of the facility. Additionally, some pieces of equipment will most likely need to be researched to verify that hazardous substances that may require special handling or disposal are not present in the units.

If all equipment and buildings are to be removed from the Site as was briefly discussed at the initial meeting, a demolition survey for hazardous building materials will be necessary. This is also not included in the ASTM Phase I scope of work. The older buildings are of a vintage that most likely contain asbestos and lead-based paint. Buildings built in the early to mid-1980s are also suspect, particularly in Alaska where building materials may be ordered one or two seasons in advance of construction. The glycol in the heating/cooling systems is often considered a building component for demolition and would need to be drained prior to demolition.

6.3 Nearby Potential or Known Contaminated Sites

No known or suspected contaminated properties were identified within the ASTM search radii for the Site. This was expected given the rural location of the Site. However, experience in the area, including activities at the Site, indicate a potential for undocumented releases to occur. This Site is relatively unlikely to be impacted by an undocumented release from an adjacent property because the adjacent properties are either undeveloped or do not contain development with a significant environmental threat.





7.0 CONCLUSIONS & RECOMMENDATIONS

NORTECH has completed a Phase I Environmental Site Assessment (ESA) for HIPAS Observatory property addressed as 7795 Chena Hot Spring Road, Fairbanks Alaska. The legal address of the Site is Tax Lot 3604, Section 36, Township 1 North, Range 4 East, Fairbanks Meridian. The property is located approximately 25 miles east of Fairbanks in the community of Two Rivers and is accessed from Chena Hot Springs Road by HIPAS Street and Barley Avenue. The property is owned by the University of Alaska and is leased to the University of California, Los Angeles. This assessment was completed in general accordance with American Society of Testing and Materials (ASTM) Standards E 1527-05.

NORTECH ranks the significance of on-site contamination at the Site as *medium-risk* at present. The ESA has identified two recognized environmental condition at the property. The conditions and recommendations for corrective actions are summarized below:

LIDAR Heating Oil Tank Release

- The tank was accidentally overfilled by an employee of the facility
 - The volume has been estimated to be between 10 and 150 gallons
 - No assessment or corrective action has taken place to date
 - The release has not been reported to ADEC
- The tank should be removed and the release area assessed to identify vertical and horizontal limits of contamination
 - The type of soil at the release location is expected to control the depth and area of contamination
 - Contamination is expected to extend beneath the foundation of the building
- This assessment data should be used to develop a corrective action plan that should be submitted to ADEC as notification of the release and for approval of the corrective action

LIDAR Mercury Contaminated Materials

- The use of the liquid mirror telescope (LMT) has contaminated the LMT room and all contents with mercury





- The LMT is no longer expected to be used
 - A work plan for assessment and cleanup of the LMT should be developed to verify that all specific concerns will be addressed during the cleanup activity
 - At a minimum, this work plan should address the following:
 - Limited testing outside the LMT to verify that mercury has not impacted areas outside the LMT
 - Disposed of the mercury containers
 - Decontamination and/or disposal of mercury contaminated items
 - Decontamination and/or disposal of building materials within the LMT space
- Operational controls appear to have limited the migration of mercury outside the LMT room and mercury decontamination is not necessary outside the sealed LMT area
- Mercury containing switches in the original shipping drums should be reused or disposed of appropriately

In addition to the recognized environmental condition, numerous potential environmental concerns were observed that should be addressed through a long-term planning document or decommissioning of the facility. These are generally listed by the type of concern and specific discussion of the concerns at each location is included in Section 6, above.

Other Tanks and Lines (Gasoline, Heating Oil & Diesel)

- The drum of gasoline installed with a dispenser at the Shop should be removed
- An ADEC UST file for the site indicates a large tank was removed around 1990
 - This is believed to have been an 1,500 or 2,000 gallon heating oil tank that was buried by the bunkhouse
 - The tank was removed around 1990 and no contamination was observed
 - The tank did not require registration with ADEC under the on-premises heating oil tank exemption





- Diesel/heating oil tanks at the facility are aboveground and present at the Bunkhouse, ATCO Unit, Shop/Garage, LIDAR Building, Dipole Antenna, and Generator/Transmitter Area
- The facility exceeds the minimum threshold within the SPCC Plan regulations
 - An SPCC Plan has not been developed for the facility
 - The secondary containment for the 10,000 gallon tank at the Generator Building is believed to be compromised and needs to be replaced
 - Each AST requires one or more upgrades to meet the SPCC regulations
 - Most tanks require installation of secondary containment
 - All tanks require some form of engineering control
- The ground surface beneath each tank should be inspected for potential contamination during removal or upgrades
- All fuel lines should be inspected for potential leaks and weeping
 - Weeping has been reported on the line feeding the Transmitter Building
 - The distance between the Bunkhouse tank and furnace indicates a union or splice may be present and should be inspected

Interior and Exterior Drum Storage

- The drums currently at the Site have been field characterized for disposal
 - Disposal of materials identified as no longer necessary at the facility is planned for early 2009
 - Drums of new product should be stored in secondary containment and protected from the weather
- Drums are covered under the SPCC regulations and a site-wide drum management plan should be developed for future operations at the site
- The ground surface at exterior drum locations should be inspected following removal of the drums and melting of the snow





Interior Chemical and Cylinder Storage

- A variety of chemicals are present at the facility
- Research related chemicals have been consolidated in the LIDAR Building
 - The chemicals have been inventoried for disposal in early 2009
 - A central chemical storage location, such as the LIDAR cabinet, is recommended
 - Access to this storage area should be limited
- Small containers of paints, cleaners, and other chemicals appropriate for the activities are located in each building
 - The current materials should be consolidated and disposed of appropriately
 - New materials should be purchased as necessary if the facility renews operations
 - Appropriate storage lockers should be provided in each building

Boneyard and Storage Area (including Conex Boxes) Cleanup

- Materials from more than 40 years of operation have accumulated in the boneyard, the shop area, and various conex boxes across the facility
- The parties that have operated the Site need to reach an agreement regarding disposal of items in the boneyard and shop
- Trailers, the dish, and other equipment from the Chena Valley Radio facility should be fully decommissioned, including assessment, inventory, and removal from the Site
- Other obsolete equipment and parts should be recycled or disposed of appropriately
 - Storage materials may need to be unloaded or rearranged for proper inspection prior to disposal
 - Decommissioned equipment should be inspected for potential petroleum and other fluid reservoirs
 - Reservoirs and containers should be inspected and drained prior to disposal
 - Electronic gear may require disposal outside of Alaska





- Inert items may be recycled or disposed of locally
- The ground surface should be inspected for environmental concerns following relocation of vehicles, tanks, equipment, conex boxes, and any other fluid filled containers

Electronic Equipment Disposal

- A wide variety of electronic equipment is present across the Site
- Some units are known to contain cooling fluid, dielectric fluid, or other potentially hazardous substances
 - Proper maintenance of these items is necessary to prevent future releases during operation of the units
 - Some units may be subject to transportation and disposal restrictions
- Most electronic equipment is expected to have to be transported outside of Alaska for disposal if the facility is decommissioned

Building Demolition

- Full hazardous building material inspections are recommended for any building that is slated for demolition
- Fluids from the generators may have penetrated the concrete slab of the Generator Building
 - Removal of the building is not considered necessary for assessment of the soil beneath
 - The slab should be inspected during demolition
 - The ground beneath the foundation should be inspected following demolition

Water Wells and Wastewater Disposal

- A total of four water wells are located on the property and are associated with the following buildings: the Bunkhouse, the LIDAR Building, the Generator Building, and the Transmitter Building
 - Water wells that will not be used in the future should be decommissioned in accordance with ADEC documentation





- Remaining water wells should be protected from damage with bollards or other devices
- Two wastewater disposal systems are present on the property: one for the Generator and Transmitter Buildings and one for the Bunkhouse and LIDAR Building
 - At least three septic tanks are probably present and associated with the Bunkhouse, LIDAR Building, and Generator/Transmitter Buildings
 - Septic tanks that will not be used in the future should be decommissioned in accordance with ADEC guidance
 - No testing of septic tank sludge or soil absorption systems is considered necessary at this time

Other Areas

- The known development of the Site is as a radio research facility
- No evidence of unusual clearings, excavations, or dumping has been documented at the Site
- Limited site inspection of the antennas and associated conduits is recommended following melting of the snow in April or May 2009
- Visual inspections are expected to be adequate to evaluate the potential for contamination at any areas not specifically addressed above





8.0 SIGNATURES & QUALIFICATIONS OF ENVIRONMENTAL PROFESSIONALS

NORTECH is a Fairbanks-based, professional consulting firm, established in 1981, offering environmental engineering, civil engineering, and industrial hygiene consulting services. **NORTECH** has offices in Fairbanks, Anchorage and Juneau and has completed numerous Phase I ESAs and other property and/or building inspections across Alaska.

We declare that, to the best of our professional knowledge and belief, we meet the definition of environmental professional as defined in §312.10 of 40 CFR 312. We have the specific qualifications based on education, training, and experience to assess a property of the nature, history, and setting of the site. We have developed and performed all the appropriate inquiries in conformance with the standards and practices set forth in 40 CFR Part 312.

Ronald Pratt, Environmental Scientist for **NORTECH**, has a B.S. in Geography and Masters in Environmental Studies. He has extensive experience conducting environmental assessments, hazardous materials investigations, remedial investigations, and other environmental fieldwork throughout California, Washington, and Alaska.

A handwritten signature in black ink, appearing to read "Ronald J. Pratt".

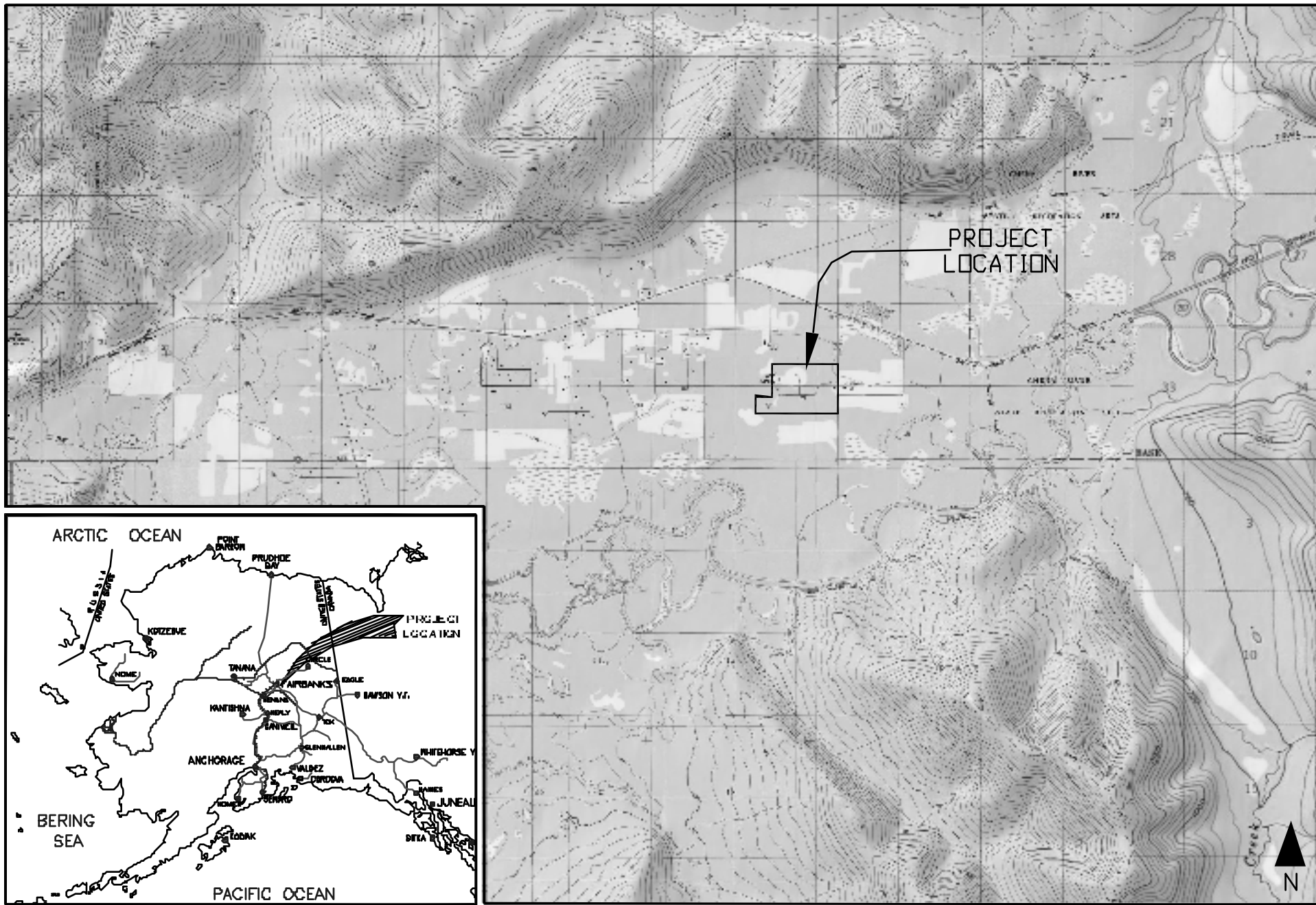
Ronald J. Pratt
Environmental Scientist

Peter Beardsley, PE, Environmental Engineer for **NORTECH** has a B.S. degree in Environmental Engineering and has been in responsible charge of **NORTECH's** Phase I ESA program for the last four years. He is a registered professional engineer in Alaska (CE 10934) and has over 10 years of experience as a consulting environmental engineer. He has worked on all aspects of environmental assessments, field investigations, and cleanup efforts and is well versed in applicable regulatory requirements.

A handwritten signature in black ink, appearing to read "Peter Beardsley".

Peter Beardsley, PE
Environmental Engineer

Appendix 1

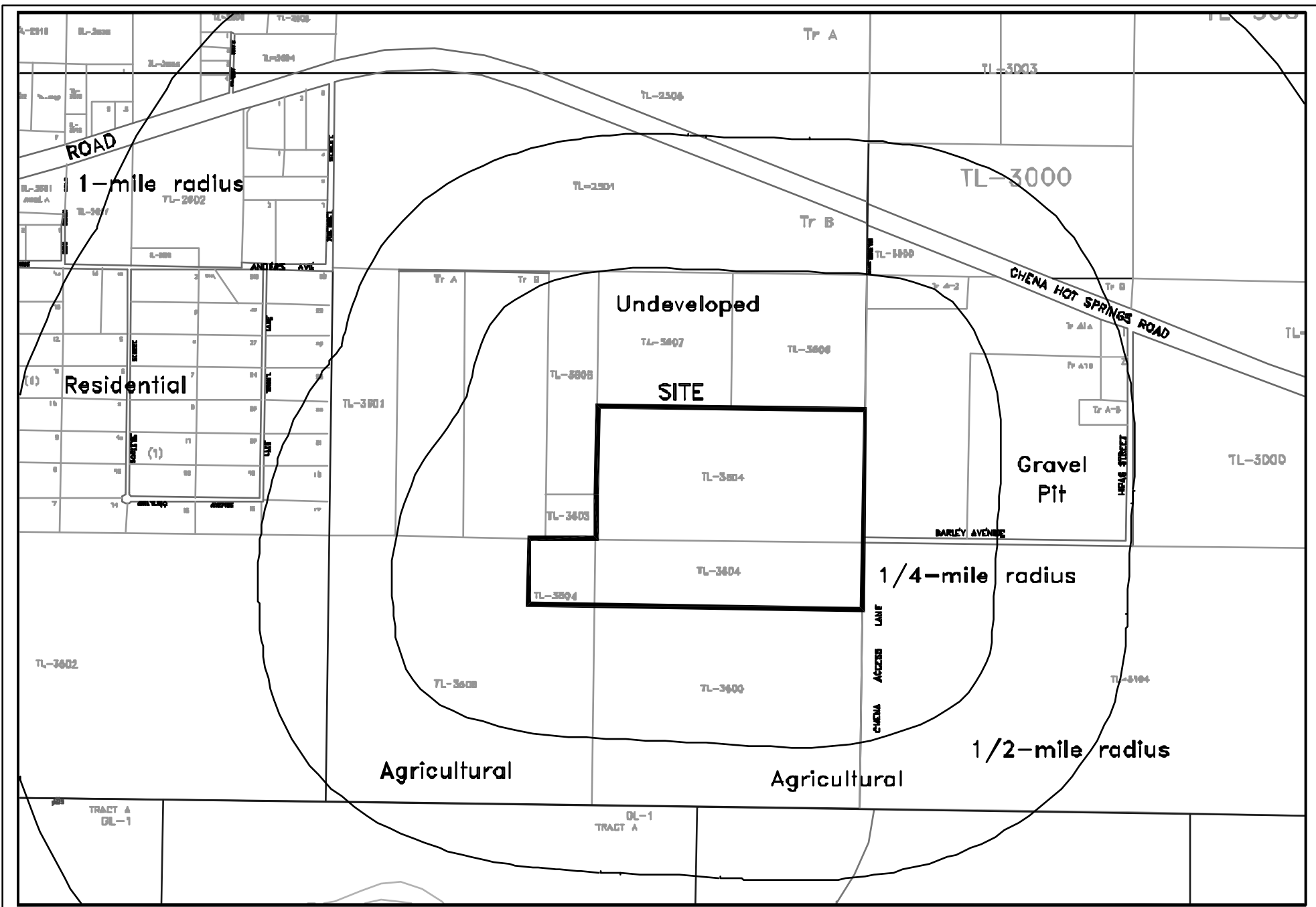


ENVIRONMENTAL & ENGINEERING CONSULTANTS
 2400 College Road, Fairbanks, Alaska 99709
 (907) 432-3600 FAX: (907) 432-3684

Location Map
 HIPAS Observatory
 Fairbanks (Two Rivers), Alaska

DATE: 12/29/08	SCALE: 1"=5280'
DESIGN: PLB	PROJECT: 08-1091
DRAWN: PLB	DWG: 081091a(01)

FIGURE
 1

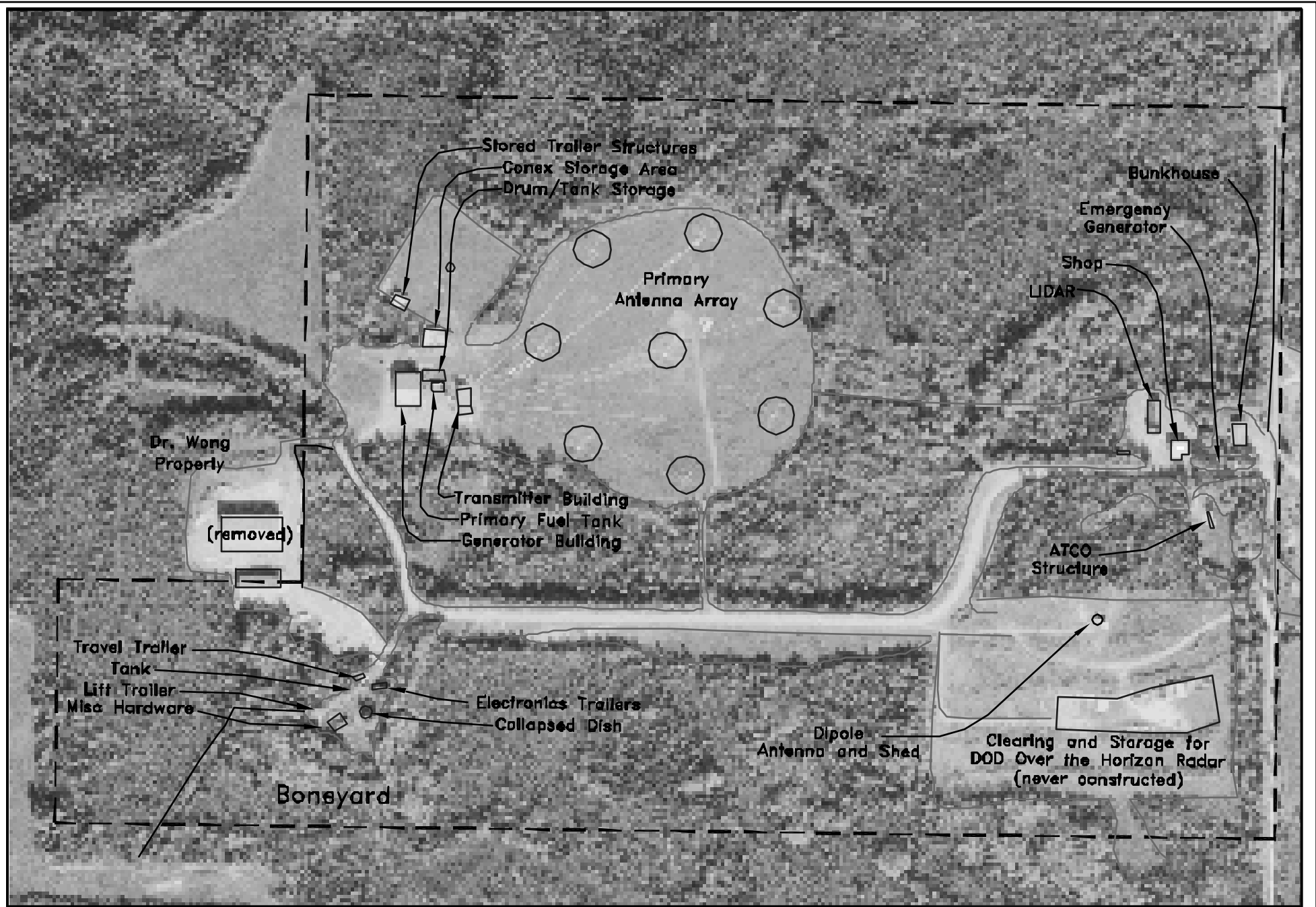


ENVIRONMENTAL & ENGINEERING CONSULTANTS
 2400 College Road, Fairbanks, Alaska 99709
 (907) 452-5688 FAX: (907) 452-5894

Nearby Uses & Known Contaminated Sites
 HIPAS Observatory
 Fairbanks (Two Rivers), Alaska

DATE: 01/02/09	SCALE: 1"=500'
DESIGN: PLB	PROJECT: 08-1081
DRAWN: PLB	DWG: 081091a(02)

FIGURE
 2

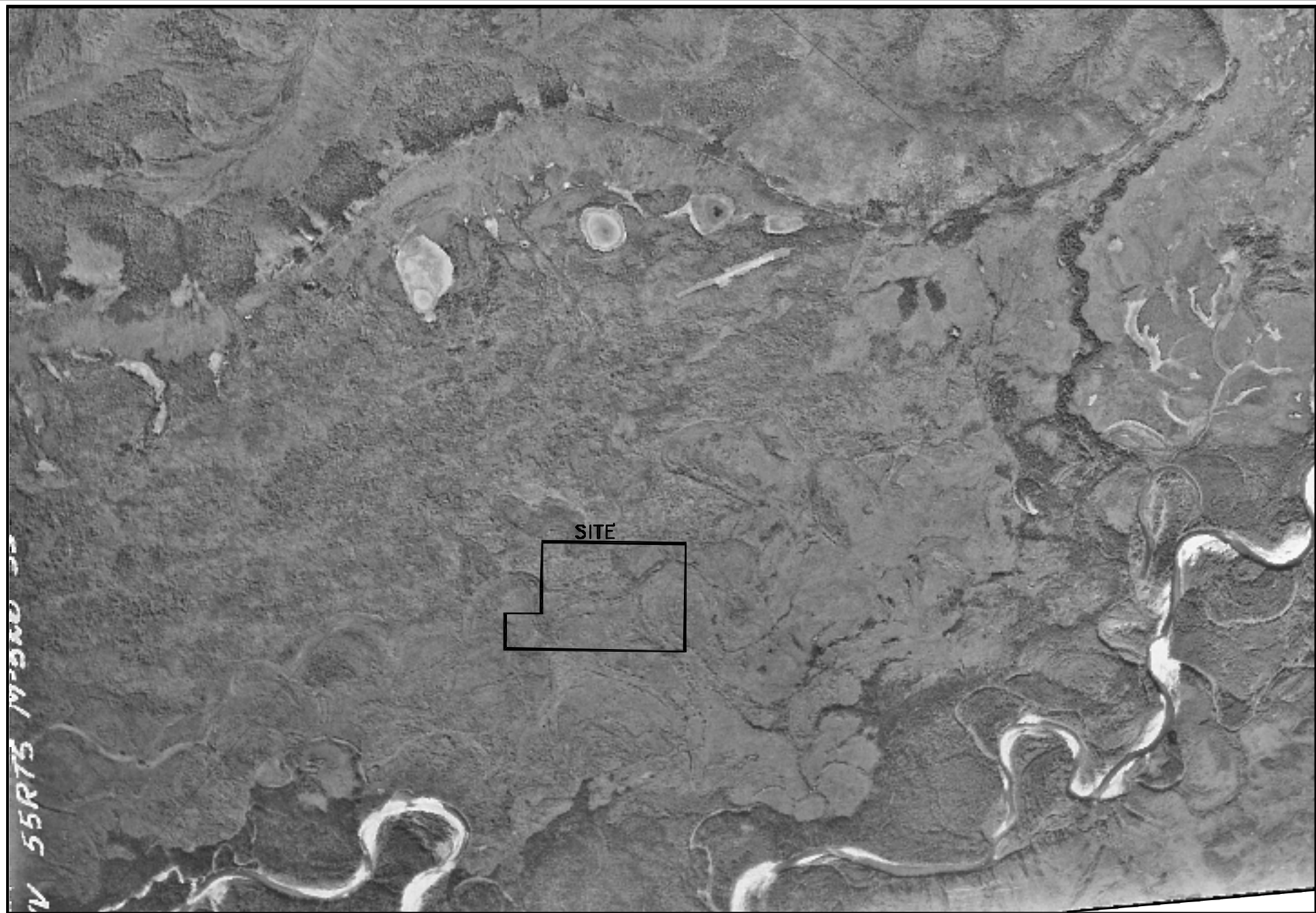


**ENVIRONMENTAL & ENGINEERING
CONSULTANTS**
2400 College Road, Fairbanks, Alaska 99709
(907) 452-5688 FAX: (907) 452-5894

Site Map (2007 Aerial Photo)
HIPAS Observatory
Fairbanks (Two Rivers), Alaska

DATE: 01/02/09	SCALE: 1"=350'
DESIGN: PLB	PROJECT: 08-1081
DRAWN: PLB	DWG: 081091a(02)

FIGURE
2



V 55RT5 17-500 55

SITE

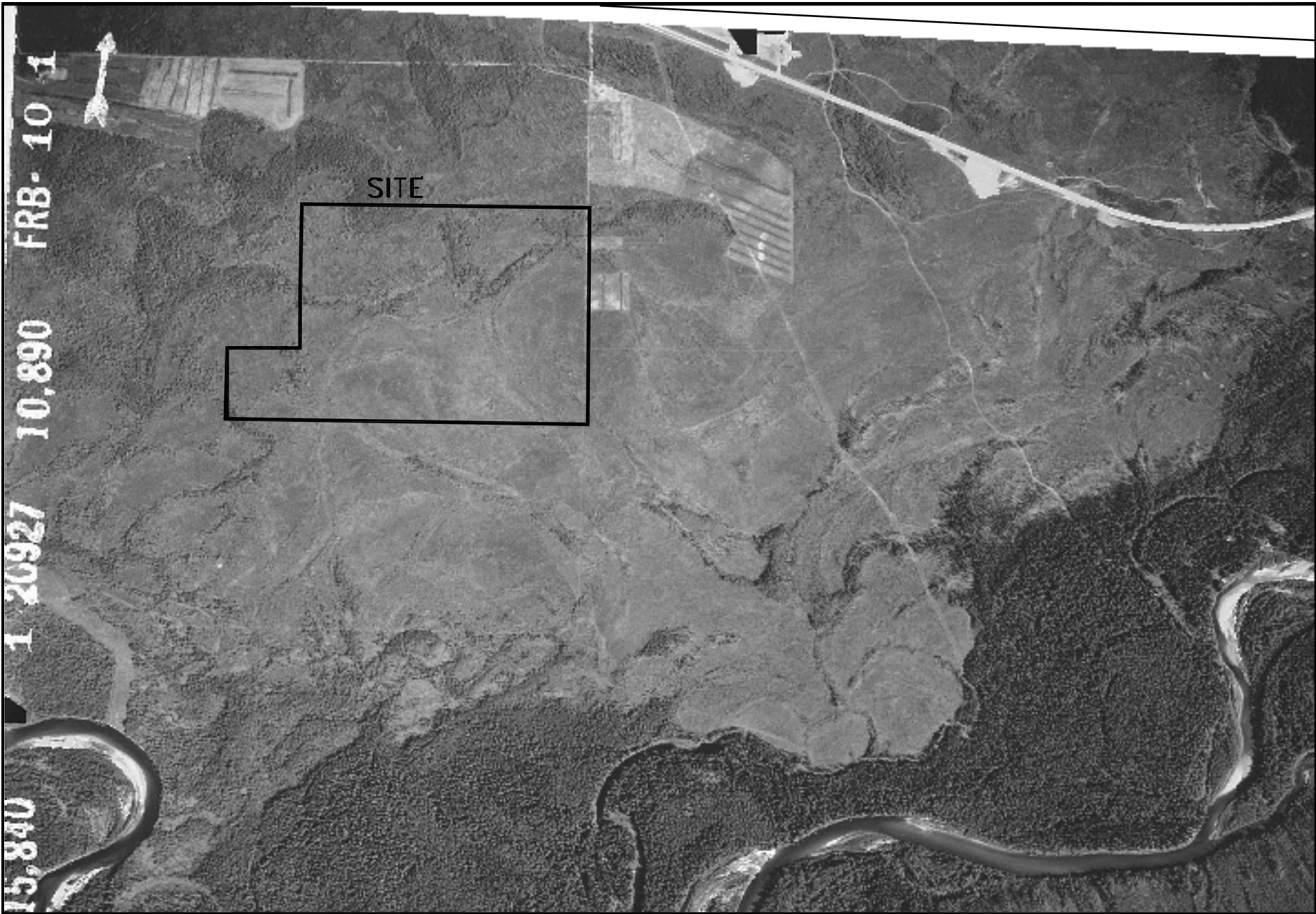


**ENVIRONMENTAL & ENGINEERING
CONSULTANTS**
2400 College Road, Fairbanks, Alaska 99709
(907) 452-5688 FAX: (907) 452-5894

1951 Aerial Photo
HIPAS Observatory
Fairbanks (Two Rivers), Alaska

DATE: 01/02/09	SCALE: 1"=2400'
DESIGN: PLB	PROJECT: 08-1081
DRAWN: PLB	DWG: 081081α(04)

FIGURE
4



**ENVIRONMENTAL & ENGINEERING
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2400 College Road, Fairbanks, Alaska 99709
(907) 452-5688 FAX: (907) 452-5894

1962 Aerial Photo
HIPAS Observatory
Fairbanks (Two Rivers), Alaska

DATE: 01/02/09	SCALE: 1"=1200'
DESIGN: PLB	PROJECT: 08-1081
DRAWN: PLB	DWG: 081091a(05)

FIGURE
5



SITE

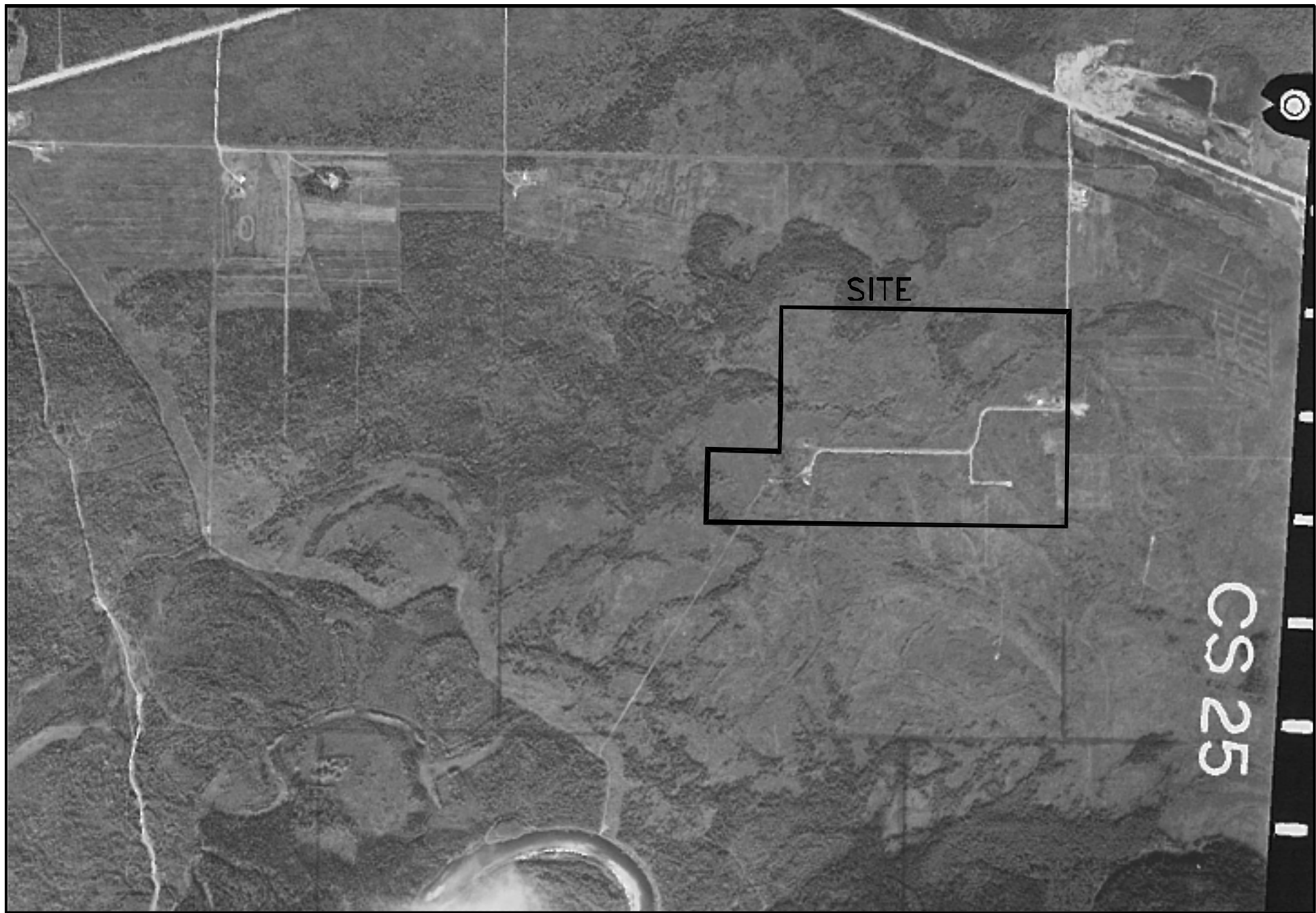


**ENVIRONMENTAL & ENGINEERING
CONSULTANTS**
2400 College Road, Fairbanks, Alaska 99709
(907) 452-5688 FAX: (907) 452-5894

1968 Aerial Photo
HIPAS Observatory
Fairbanks (Two Rivers), Alaska

DATE: 01/02/09	SCALE: 1"=800'
DESIGN: PLB	PROJECT: 08-1081
DRAWN: PLB	DWG: 081081a(05)

FIGURE
6



**ENVIRONMENTAL & ENGINEERING
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2400 College Road, Fairbanks, Alaska 99709
(907) 452-5688 FAX: (907) 452-5894

1973 Aerial Photo
HIPAS Observatory
Fairbanks (Two Rivers), Alaska

DATE: 01/02/09	SCALE: 1"=1600'
DESIGN: PLB	PROJECT: 08-1081
DRAWN: PLB	DWG: 081081a(07)

FIGURE

7



SITE

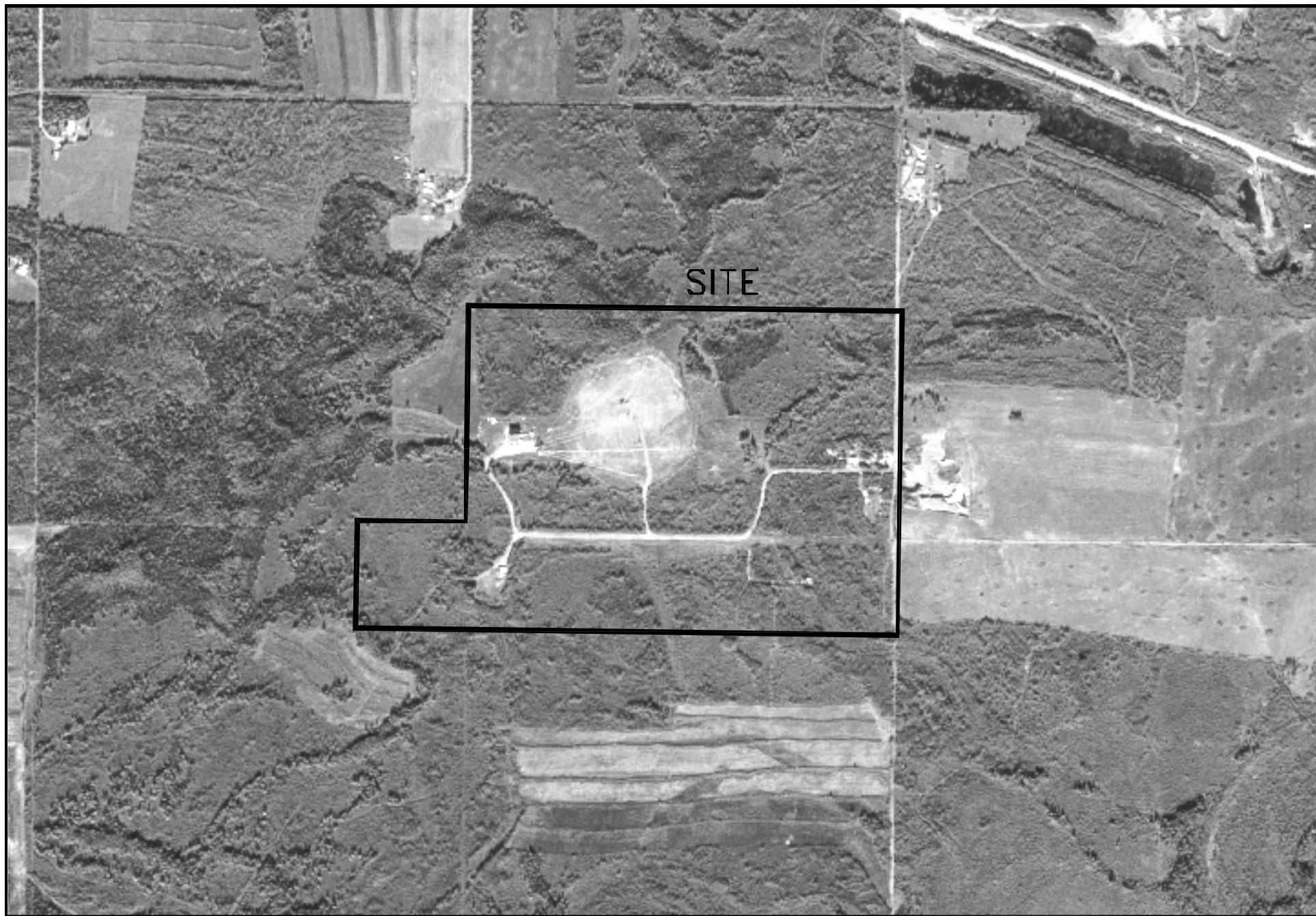


**ENVIRONMENTAL & ENGINEERING
CONSULTANTS**
2400 College Road, Fairbanks, Alaska 99709
(907) 452-5688 FAX: (907) 452-5894

1982 Aerial Photo
HIPAS Observatory
Fairbanks (Two Rivers), Alaska

DATE: 01/02/09	SCALE: 1"=800'
DESIGN: PLB	PROJECT: 08-1081
DRAWN: PLB	DWG: 081081a(05)

FIGURE
8



SITE



**ENVIRONMENTAL & ENGINEERING
CONSULTANTS**

2400 College Road, Fairbanks, Alaska 99709
(907) 452-5688 FAX: (907) 452-5894

1986 Aerial Photo
HIPAS Observatory
Fairbanks (Two Rivers), Alaska

DATE: 01/02/09	SCALE: 1"=800'
DESIGN: PLB	PROJECT: 08-1091
DRAWN: PLB	DWG: 081091a(09)

FIGURE
9

SITE



**ENVIRONMENTAL & ENGINEERING
CONSULTANTS**
2400 College Road, Fairbanks, Alaska 99709
(907) 452-5688 FAX: (907) 452-5894

1999 Aerial Photo
HIPAS Observatory
Fairbanks (Two Rivers), Alaska

DATE: 01/02/09	SCALE: 1"=400'
DESIGN: PLB	PROJECT: 08-1081
DRAWN: PLB	DWG: 081091a(10)

FIGURE
10

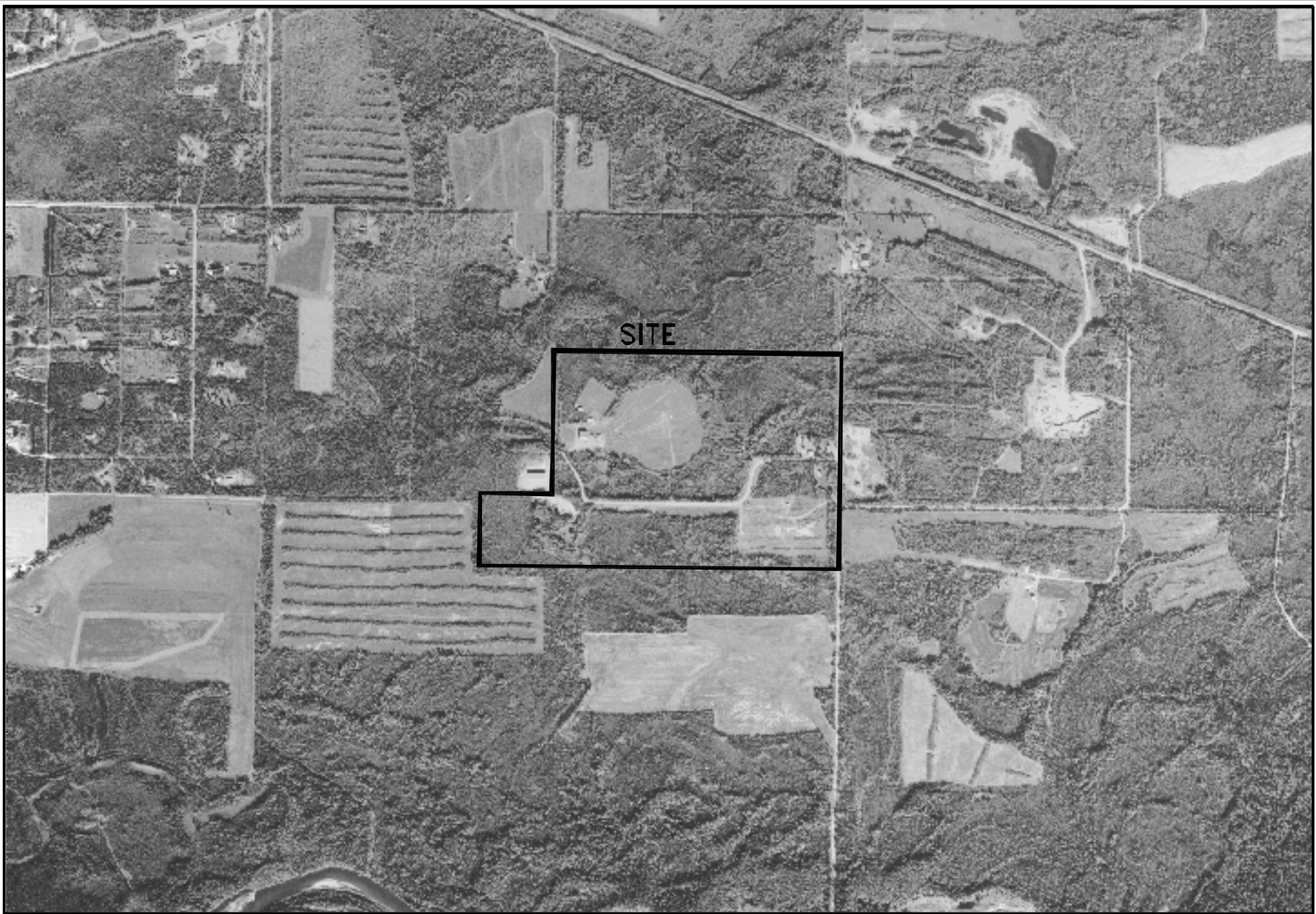


**ENVIRONMENTAL & ENGINEERING
CONSULTANTS**
2400 College Road, Fairbanks, Alaska 99709
(907) 452-5688 FAX: (907) 452-5894

2002 Aerial Photo
HIPAS Observatory
Fairbanks (Two Rivers), Alaska

DATE: 01/02/09	SCALE: 1"=400'
DESIGN: PLB	PROJECT: 08-1081
DRAWN: PLB	DWG: 081091a(11)

FIGURE
11



SITE



**ENVIRONMENTAL & ENGINEERING
CONSULTANTS**
2400 College Road, Fairbanks, Alaska 99709
(907) 452-5688 FAX: (907) 452-5894

2007 Aerial Photo
HIPAS Observatory
Fairbanks (Two Rivers), Alaska

DATE: 01/02/09	SCALE: 1"=1200'
DESIGN: PLB	PROJECT: 08-1081
DRAWN: PLB	DWG: 081091a(12)

FIGURE
12

Appendix 2

Appendix 2 - Site Photographs
Phase I ESA - HIPAS Observatory, Fairbanks, Alaska



Photo 01 - One of two generators inside generator building; both appear well maintained with minimal staining around the oil and glycol (yellow drum) filters and reservoirs



Photo 02 - Oil and coolant storage inside generator building: coolant overflow from generator in foreground, used and new coolant and oil in drums on spill pallet, and fuel storage "day tank" above drums

Appendix 2 - Site Photographs
Phase I ESA - HIPAS Observatory, Fairbanks, Alaska



Photo 03 - Unused generators stored to south of the Generator Building; smaller unit has been removed from the Site



Photo 04 - 10,000 gallon diesel/heating oil storage tank in secondary containment on east side of Generator Building that supplies fuel to the generators and furnaces in both the Generator and Transmitter Buildings

Appendix 2 - Site Photographs
Phase I ESA - HIPAS Observatory, Fairbanks, Alaska



Photo 05 - Tank and drum storage north of 10,000 gallon tank; smaller tanks are empty and drums have been characterized for disposal (new and used antifreeze, lubricating oil, and dielectric oil)



Photo 06 - Storage containers and one transmitter trailer located north of the Generator Building; at least one of the containers has been removed since the initial inspection

Appendix 2 - Site Photographs
Phase I ESA - HIPAS Observatory, Fairbanks, Alaska



Photo 07 - Electrical equipment stored in one of the containers



Photo 08 - Miscellaneous material stored in another container, including 5-gallon buckets of unidentified materials (inspection not possible due to poor stability of stored materials)

Appendix 2 - Site Photographs
Phase I ESA - HIPAS Observatory, Fairbanks, Alaska



Photo 09 - Vehicle with drums stored adjacent to storage containers; drums have been characterized and vehicle did not appear to be leaking



Photo 10 - Drums of unopened product, primarily motor oil drums with a few dielectric oil and glycol drums, located north of storage containers

Appendix 2 - Site Photographs
Phase I ESA - HIPAS Observatory, Fairbanks, Alaska



Photo 11 - North and west sides of transmitter building with water supply well in foreground and drum of used dielectric oil near overhead door



Photo 12 - Primary circular antenna array northeast of the Transmitter Building

Appendix 2 - Site Photographs
Phase I ESA - HIPAS Observatory, Fairbanks, Alaska



Photo 13 - Driveway into boneyard area with large tank (reported empty) and other newer equipment on right, older electronic/transmitter related to Chena Valley Radio operation on left, and general storage in background



Photo 14 - Typical storage of spools, cable, and other materials in boneyard

Appendix 2 - Site Photographs
Phase I ESA - HIPAS Observatory, Fairbanks, Alaska



Photo 15 - Typical storage of smaller pieces of material, including tubing, culverts, and other equipment in boneyard (the item in the upper left is a boiler, not a drum)



Photo 16 - Typical storage of larger equipment and materials in boneyard (the use of the item in the center was not identified, but it was not a fuel tank)

Appendix 2 - Site Photographs
Phase I ESA - HIPAS Observatory, Fairbanks, Alaska



Photo 17 - Old electronic equipment inside the trailer structures located in the boneyard and believed to have been used by the Chena Valley Radio facility in conjunction with the collapsed dish nearby



Photo 18 - Exterior electrical transformer believed to have powered the equipment in the Chena Valley Radio trailers in the boneyard (this unit is not believed to be powered currently)

Appendix 2 - Site Photographs
Phase I ESA - HIPAS Observatory, Fairbanks, Alaska



Photo 19 - Looking northeast at the exterior of the LIDAR Building



Photo 20 -Heating oil storage tank near northeast corner of LIDAR Building, which was reportedly overfilled but has not been reported to ADEC

Appendix 2 - Site Photographs
Phase I ESA - HIPAS Observatory, Fairbanks, Alaska



Photo 21 - Gas cylinders of various size and content located inside the LIDAR Building; several of the larger tanks have been removed while smaller tanks remain in the building



Photo 22 - Chemical storage locker inside LIDAR Building; reported to be central collection point for chemicals and not all chemicals were used in the LIDAR Building

Appendix 2 - Site Photographs
Phase I ESA - HIPAS Observatory, Fairbanks, Alaska



Photo 23 - Rotating mirror in sealed mirror room of LIDAR Building without mercury reflecting surface



Photo 24 - Containers of mercury stored inside the sealed mirror room within the LIDAR Building

Appendix 2 - Site Photographs
Phase I ESA - HIPAS Observatory, Fairbanks, Alaska



Photo 25 - Typical capacitors stored inside the LIDAR Building; similar capacitors also installed or stored in most other buildings



Photo 26 - Drums reportedly used as shipping containers for mercury switches related to laser installations inside the LIDAR Building

Appendix 2 - Site Photographs
Phase I ESA - HIPAS Observatory, Fairbanks, Alaska



Photo 27 - Looking east across the front of the LIDAR Building at the west side of the Garage/Shop with fuel drum and heating oil tank visible



Photo 28 - Detail view of heating oil tank on west exterior wall of Garage/Shop with fuel dispensing drum in background

Appendix 2 - Site Photographs
Phase I ESA - HIPAS Observatory, Fairbanks, Alaska



Photo 29 - Drum used as gasoline fuel dispenser along west exterior wall of Garage/Shop



Photo 30 - Steel cylinders (empty) used for transportation/delivery of mercury located inside the Garage/Shop

Appendix 2 - Site Photographs
Phase I ESA - HIPAS Observatory, Fairbanks, Alaska



Photo 31 - Typical storage of miscellaneous materials (paint and cement in this image) inside the Garage/Shop; similar materials stored in the Generator Building and likely to be present in other buildings



Photo 32 - Looking north the emergency generator building (foreground right) and associated fuel storage tank with at the Bunkhouse in the background

Appendix 2 - Site Photographs
Phase I ESA - HIPAS Observatory, Fairbanks, Alaska



Photo 33 - Looking south at the ATCO unit and associated fuel storage tank



Photo 34 - Looking west at the more recent Dipole Antenna and associated structure, that includes a heating oil storage tank located to right of the small building

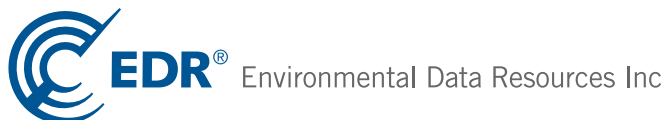
Appendix 3

HIPAS Observatory

7795 Chena Hot Springs Road
Fairbanks, AK 99712

Inquiry Number: 2378855.1s
December 09, 2008

The EDR Radius Map™ Report



440 Wheelers Farms Road
Milford, CT 06461
Toll Free: 800.352.0050
www.edrnet.com

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GEOCHECK ADDENDUM

GeoCheck - Not Requested

Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

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EXECUTIVE SUMMARY

A search of available environmental records was conducted by Environmental Data Resources, Inc (EDR). The report was designed to assist parties seeking to meet the search requirements of EPA's Standards and Practices for All Appropriate Inquiries (40 CFR Part 312), the ASTM Standard Practice for Environmental Site Assessments (E 1527-05) or custom requirements developed for the evaluation of environmental risk associated with a parcel of real estate.

TARGET PROPERTY INFORMATION

ADDRESS

7795 CHENA HOT SPRINGS ROAD
FAIRBANKS, AK 99712

COORDINATES

Latitude (North): 64.872250 - 64° 52' 20.1"
Longitude (West): 146.829770 - 146° 49' 47.2"
Universal Transverse Mercator: Zone 6
UTM X (Meters): 508066.1
UTM Y (Meters): 7194034.5
Elevation: 630 ft. above sea level

USGS TOPOGRAPHIC MAP ASSOCIATED WITH TARGET PROPERTY

Target Property: N/A
Source: USGS 7.5 min quad index

TARGET PROPERTY SEARCH RESULTS

The target property was not listed in any of the databases searched by EDR.

DATABASES WITH NO MAPPED SITES

No mapped sites were found in EDR's search of available ("reasonably ascertainable ") government records either on the target property or within the search radius around the target property for the following databases:

FEDERAL RECORDS

NPL..... National Priority List
Proposed NPL..... Proposed National Priority List Sites
Delisted NPL..... National Priority List Deletions
NPL LIENS..... Federal Superfund Liens
CERCLIS..... Comprehensive Environmental Response, Compensation, and Liability Information System
CERC-NFRAP..... CERCLIS No Further Remedial Action Planned
LIENS 2..... CERCLA Lien Information
CORRACTS..... Corrective Action Report
RCRA-TSDF..... RCRA - Transporters, Storage and Disposal
RCRA-LQG..... RCRA - Large Quantity Generators

EXECUTIVE SUMMARY

RCRA-SQG.....	RCRA - Small Quantity Generators
RCRA-CESQG.....	RCRA - Conditionally Exempt Small Quantity Generator
RCRA-NonGen.....	RCRA - Non Generators
US ENG CONTROLS.....	Engineering Controls Sites List
US INST CONTROL.....	Sites with Institutional Controls
ERNS.....	Emergency Response Notification System
HMIRS.....	Hazardous Materials Information Reporting System
DOT OPS.....	Incident and Accident Data
US CDL.....	Clandestine Drug Labs
US BROWNFIELDS.....	A Listing of Brownfields Sites
DOD.....	Department of Defense Sites
FUDS.....	Formerly Used Defense Sites
LUCIS.....	Land Use Control Information System
CONSENT.....	Superfund (CERCLA) Consent Decrees
ROD.....	Records Of Decision
UMTRA.....	Uranium Mill Tailings Sites
DEBRIS REGION 9.....	Torres Martinez Reservation Illegal Dump Site Locations
ODI.....	Open Dump Inventory
MINES.....	Mines Master Index File
TRIS.....	Toxic Chemical Release Inventory System
TSCA.....	Toxic Substances Control Act
FTTS.....	FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
HIST FTTS.....	FIFRA/TSCA Tracking System Administrative Case Listing
SSTS.....	Section 7 Tracking Systems
ICIS.....	Integrated Compliance Information System
PADS.....	PCB Activity Database System
MLTS.....	Material Licensing Tracking System
RADINFO.....	Radiation Information Database
FINDS.....	Facility Index System/Facility Registry System
RAATS.....	RCRA Administrative Action Tracking System
SCRD DRYCLEANERS.....	State Coalition for Remediation of Drycleaners Listing

STATE AND LOCAL RECORDS

SHWS.....	Contaminated Sites Database
SWF/LF.....	Solid Waste Facilities
LUST.....	Leaking Underground Storage Tank Database
UST.....	Underground Storage Tank Database
AST.....	Regulated Aboveground Storage Tanks
SPILLS.....	Spills Database
ENG CONTROLS.....	Engineering Controls Site Listing
INST CONTROL.....	Contaminated Sites with Institutional Controls
VCP.....	Voluntary Cleanup Program sites
DRYCLEANERS.....	Drycleaner Facility Listing
BROWNFIELDS.....	Identified and/or Proposed Brownfields Sites
CDL.....	Illegal Drug Manufacturing Sites
NPDES.....	Wastewater Discharge Permit Listing
AIRS.....	AIRS Facility Listing

TRIBAL RECORDS

INDIAN RESERV.....	Indian Reservations
INDIAN ODI.....	Report on the Status of Open Dumps on Indian Lands
INDIAN LUST.....	Leaking Underground Storage Tanks on Indian Land

EXECUTIVE SUMMARY

INDIAN UST..... Underground Storage Tanks on Indian Land
INDIAN VCP..... Voluntary Cleanup Priority Listing

EDR PROPRIETARY RECORDS

Manufactured Gas Plants..... EDR Proprietary Manufactured Gas Plants

SURROUNDING SITES: SEARCH RESULTS

Surrounding sites were not identified.

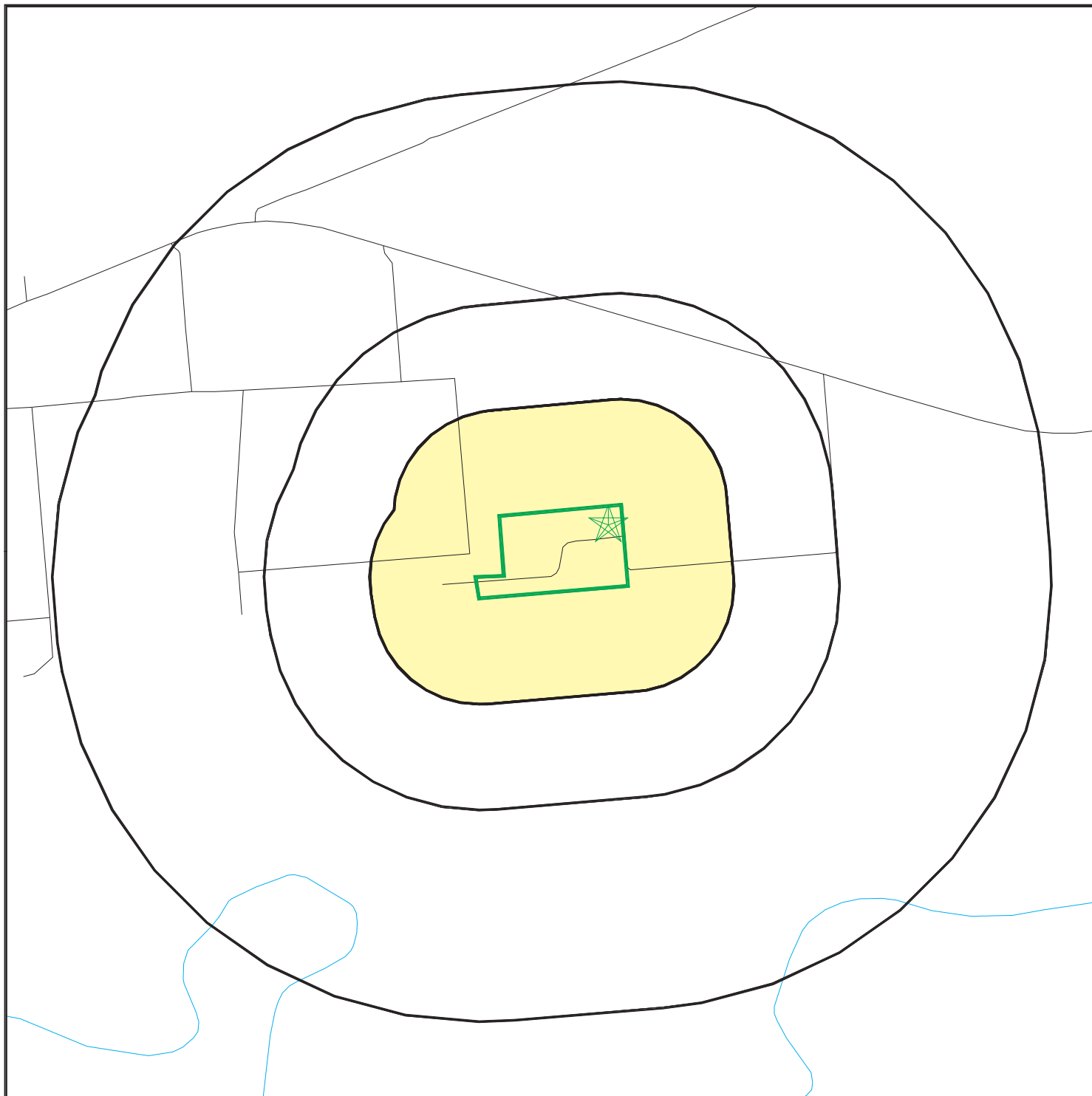
Unmappable (orphan) sites are not considered in the foregoing analysis.







EXECUTIVE SUMMARY

Due to poor or inadequate address information, the following sites were not mapped:

<u>Site Name</u>	<u>Database(s)</u>
FOX MILL PROCESSING FACILITY	SHWS, BROWNFIELDS
CITY OF FAIRBANKS GARAGE, BLOCK 39	SHWS, INST CONTROL
FORT WAINWRIGHT (2P) FARMERS LOOP	SHWS, INST CONTROL
CHILIS RESTAURANT SITE	SHWS
UNIVERSITY OF ALASKA POKER FLAT RES RANG	FINDS, CORRACTS, RCRA-CESQG
PETROLEUM SALES CLEAN SOILS FILL	SWF/LF
MURPHY DOME/AK AIR COMMAND	SWF/LF
ADOTPF - BIRCH LAKE MAINTENANCE STATION	LUST
JOYCE PROPERTY	LUST
HILLTOP TRUCKSTOP	LUST
ADOTPF - 7 MILE MAINTENANCE STATION	LUST
ADOTPF - LIVENGOOD MAINTENANCE STATION	LUST
CANYON CREEK RADIO SITE	LUST
MAT-SU	LUST
ADOTPF - MONTANA CREEK MAINTENANCE FACILITY	LUST
GEOPHYSICAL INSTITUTE - TECHNICAL	UST
FIRE STATION #2	UST
SWEDE'S PLACE	UST
USDOI BLM CLEARY HILL ABANDOND MINE LAND	RCRA-SQG
ADEC STEESE HWY DRUMS	FINDS, RCRA-NonGen

OVERVIEW MAP - 2378855.1s



-  Target Property
-  Sites at elevations higher than or equal to the target property
-  Sites at elevations lower than the target property
-  Manufactured Gas Plants
-  National Priority List Sites
-  Dept. Defense Sites



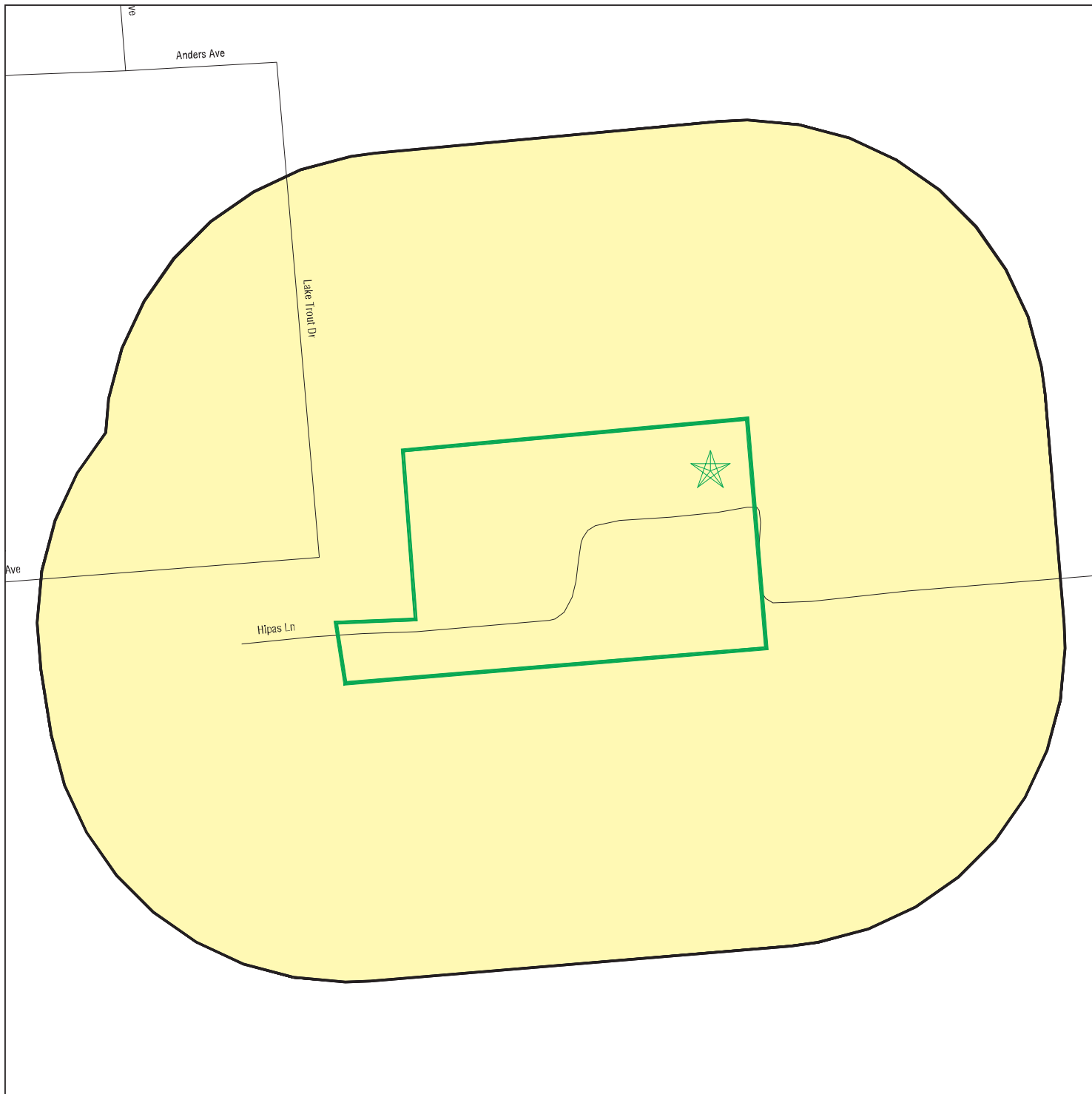
 Indian Reservations BIA










SITE NAME: HIPAS Observatory
ADDRESS: 7795 Chena Hot Springs Road
Fairbanks AK 99712
LAT/LONG: 64.8722 / 146.8298

CLIENT: Nortech Environmental & Engineering Co.
CONTACT: Peter Beardsley
INQUIRY #: 2378855.1s
DATE: December 09, 2008 9:50 am

DETAIL MAP - 2378855.1s



-  Target Property
-  Sites at elevations higher than or equal to the target property
-  Sites at elevations lower than the target property
-  Manufactured Gas Plants
-  Sensitive Receptors
-  National Priority List Sites
-  Dept. Defense Sites



 Indian Reservations BIA



SITE NAME: HIPAS Observatory
 ADDRESS: 7795 Chena Hot Springs Road
 Fairbanks AK 99712
 LAT/LONG: 64.8722 / 146.8298

CLIENT: Nortech Environmental & Engineering Co.
 CONTACT: Peter Beardsley
 INQUIRY #: 2378855.1s
 DATE: December 09, 2008 9:50 am

MAP FINDINGS SUMMARY

Database	Target Property	Search Distance (Miles)	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
<u>FEDERAL RECORDS</u>								
NPL		1.000	0	0	0	0	NR	0
Proposed NPL		1.000	0	0	0	0	NR	0
Delisted NPL		1.000	0	0	0	0	NR	0
NPL LIENS	TP		NR	NR	NR	NR	NR	0
CERCLIS		0.500	0	0	0	NR	NR	0
CERC-NFRAP		0.500	0	0	0	NR	NR	0
LIENS 2	TP		NR	NR	NR	NR	NR	0
CORRACTS		1.000	0	0	0	0	NR	0
RCRA-TSDF		0.500	0	0	0	NR	NR	0
RCRA-LQG		0.250	0	0	NR	NR	NR	0
RCRA-SQG		0.250	0	0	NR	NR	NR	0
RCRA-CESQG		0.250	0	0	NR	NR	NR	0
RCRA-NonGen		0.250	0	0	NR	NR	NR	0
US ENG CONTROLS		0.500	0	0	0	NR	NR	0
US INST CONTROL		0.500	0	0	0	NR	NR	0
ERNS	TP		NR	NR	NR	NR	NR	0
HMIRS	TP		NR	NR	NR	NR	NR	0
DOT OPS	TP		NR	NR	NR	NR	NR	0
US CDL	TP		NR	NR	NR	NR	NR	0
US BROWNFIELDS		0.500	0	0	0	NR	NR	0
DOD		1.000	0	0	0	0	NR	0
FUDS		1.000	0	0	0	0	NR	0
LUCIS		0.500	0	0	0	NR	NR	0
CONSENT		1.000	0	0	0	0	NR	0
ROD		1.000	0	0	0	0	NR	0
UMTRA		0.500	0	0	0	NR	NR	0
DEBRIS REGION 9		0.500	0	0	0	NR	NR	0
ODI		0.500	0	0	0	NR	NR	0
MINES		0.250	0	0	NR	NR	NR	0
TRIS	TP		NR	NR	NR	NR	NR	0
TSCA	TP		NR	NR	NR	NR	NR	0
FTTS	TP		NR	NR	NR	NR	NR	0
HIST FTTS	TP		NR	NR	NR	NR	NR	0
SSTS	TP		NR	NR	NR	NR	NR	0
ICIS	TP		NR	NR	NR	NR	NR	0
PADS	TP		NR	NR	NR	NR	NR	0
MLTS	TP		NR	NR	NR	NR	NR	0
RADINFO	TP		NR	NR	NR	NR	NR	0
FINDS	TP		NR	NR	NR	NR	NR	0
RAATS	TP		NR	NR	NR	NR	NR	0
SCRD DRYCLEANERS		0.500	0	0	0	NR	NR	0
<u>STATE AND LOCAL RECORDS</u>								
SHWS		1.000	0	0	0	0	NR	0
SWF/LF		0.500	0	0	0	NR	NR	0
LUST		0.500	0	0	0	NR	NR	0
UST		0.250	0	0	NR	NR	NR	0

MAP FINDINGS SUMMARY

Database	Target Property	Search Distance (Miles)	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
AST		0.250	0	0	NR	NR	NR	0
SPILLS	TP		NR	NR	NR	NR	NR	0
ENG CONTROLS		0.500	0	0	0	NR	NR	0
INST CONTROL		0.500	0	0	0	NR	NR	0
VCP		0.500	0	0	0	NR	NR	0
DRYCLEANERS		0.250	0	0	NR	NR	NR	0
BROWNFIELDS		0.500	0	0	0	NR	NR	0
CDL	TP		NR	NR	NR	NR	NR	0
NPDES	TP		NR	NR	NR	NR	NR	0
AIRS	TP		NR	NR	NR	NR	NR	0
<u>TRIBAL RECORDS</u>								
INDIAN RESERV		1.000	0	0	0	0	NR	0
INDIAN ODI		0.500	0	0	0	NR	NR	0
INDIAN LUST		0.500	0	0	0	NR	NR	0
INDIAN UST		0.250	0	0	NR	NR	NR	0
INDIAN VCP		0.500	0	0	0	NR	NR	0
<u>EDR PROPRIETARY RECORDS</u>								
Manufactured Gas Plants		1.000	0	0	0	0	NR	0

NOTES:

TP = Target Property

NR = Not Requested at this Search Distance

Sites may be listed in more than one database

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

NO SITES FOUND

ORPHAN SUMMARY

City	EDR ID	Site Name	Site Address	Zip	Database(s)
CHATANIKA	1007988715	USDOI BLM CLEARLY HILL ABANDOND MINE LAND	STEESE HWY MP 24.2	99712	RCRA-SQG
FAIRBANKS	S105555647	FOX MILL PROCESSING FACILITY	TL - 3130 OLD STEESE HWY.	99712	SHWS, BROWNFIELDS
FAIRBANKS	1000904390	UNIVERSITY OF ALASKA POKER FLAT RES RANG	MI 30 STEESE HWY	99712	FINDS, CORRACTS, RCRA-CESQG
FAIRBANKS	1000856042	ADEC STEESE HWY DRUMS	MP 38.6 STEESE HWY	99712	FINDS, RCRA-NonGen
FAIRBANKS	S105247038	ADOTPF - BIRCH LAKE MAINTENANCE STATION	MP 58 RICHARDSON HIGHWAY		LUST
FAIRBANKS	S107465520	CITY OF FAIRBANKS GARAGE; BLOCK 39	BTWN NOBLE AND LACEY		SHWS, INST CONTROL
FAIRBANKS	U003952006	GEOPHYSICAL INSTITUTE - TECHNICAL	CHENA RADIO FACILITY 25 MILE CHENA HOT SPRINGS RD	99712	UST
FAIRBANKS	S105627076	FORT WAINWRIGHT (2P) FARMERS LOOP	0.5 MI. FARMERS LOOP RD.		SHWS, INST CONTROL
FAIRBANKS	S106165975	JOYCE PROPERTY	2951 SOUTH GEO. PARKS HWY;		LUST
FAIRBANKS	S107504740	CHILIS RESTAURANT SITE	JOHANSEN EXPRESSWAY AND	99712	SHWS
FAIRBANKS	U003951823	FIRE STATION #2	2.2 MILE CHENA RIDGE RD		UST
FAIRBANKS	S103785569	PETROLEUM SALES CLEAN SOILS FILL	2.5 MILE STEESE HIGHWAY		SWF/LF
FAIRBANKS	S105246671	HILLTOP TRUCKSTOP	5.5 MILE ELLIOT HWY.; P.O. BOX 70890		LUST
FAIRBANKS	U003952043	SWEDE'S PLACE	MILE 329.5 PARKS HWY		UST
FAIRBANKS	S105246756	ADOTPF - 7 MILE MAINTENANCE STATION	7 MILE/MILE POST 62 DALTON HIGHWAY		LUST
FAIRBANKS	S106165947	ADOTPF - LIVENGOD MAINTENANCE STATION	MILEPOST 68; ELLIOT HIGHWAY		LUST
FAIRBANKS	S106165966	CANYON CREEK RADIO SITE	MILEPOST 302; RICHARDSON HIGHWAY		LUST
FAIRBANKS	S105246636	MAT-SU	343 MOOSE CREEK AVENUE; 343 OLD RICHARDSON HWY		LUST
FAIRBANKS	S106677174	MURPHY DOME/AK AIR COMMAND	MURPHY DOME ROAD		SWF/LF
FAIRBANKS	S105246679	ADOTPF - MONTANA CREEK MAINTENANCE FACILITY	80 MI. STEESE HWY.;		LUST

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

To maintain currency of the following federal and state databases, EDR contacts the appropriate governmental agency on a monthly or quarterly basis, as required.

Number of Days to Update: Provides confirmation that EDR is reporting records that have been updated within 90 days from the date the government agency made the information available to the public.

FEDERAL RECORDS

NPL: National Priority List

National Priorities List (Superfund). The NPL is a subset of CERCLIS and identifies over 1,200 sites for priority cleanup under the Superfund Program. NPL sites may encompass relatively large areas. As such, EDR provides polygon coverage for over 1,000 NPL site boundaries produced by EPA's Environmental Photographic Interpretation Center (EPIC) and regional EPA offices.

Date of Government Version: 09/29/2008	Source: EPA
Date Data Arrived at EDR: 10/10/2008	Telephone: N/A
Date Made Active in Reports: 11/19/2008	Last EDR Contact: 09/29/2008
Number of Days to Update: 40	Next Scheduled EDR Contact: 01/26/2009
	Data Release Frequency: Quarterly

NPL Site Boundaries

Sources:

EPA's Environmental Photographic Interpretation Center (EPIC)
Telephone: 202-564-7333

EPA Region 1
Telephone 617-918-1143

EPA Region 6
Telephone: 214-655-6659

EPA Region 3
Telephone 215-814-5418

EPA Region 7
Telephone: 913-551-7247

EPA Region 4
Telephone 404-562-8033

EPA Region 8
Telephone: 303-312-6774

EPA Region 5
Telephone 312-886-6686

EPA Region 9
Telephone: 415-947-4246

EPA Region 10
Telephone 206-553-8665

Proposed NPL: Proposed National Priority List Sites

A site that has been proposed for listing on the National Priorities List through the issuance of a proposed rule in the Federal Register. EPA then accepts public comments on the site, responds to the comments, and places on the NPL those sites that continue to meet the requirements for listing.

Date of Government Version: 09/29/2008	Source: EPA
Date Data Arrived at EDR: 10/10/2008	Telephone: N/A
Date Made Active in Reports: 11/19/2008	Last EDR Contact: 09/29/2008
Number of Days to Update: 40	Next Scheduled EDR Contact: 01/26/2009
	Data Release Frequency: Quarterly

DELISTED NPL: National Priority List Deletions

The National Oil and Hazardous Substances Pollution Contingency Plan (NCP) establishes the criteria that the EPA uses to delete sites from the NPL. In accordance with 40 CFR 300.425.(e), sites may be deleted from the NPL where no further response is appropriate.

Date of Government Version: 09/29/2008	Source: EPA
Date Data Arrived at EDR: 10/10/2008	Telephone: N/A
Date Made Active in Reports: 11/19/2008	Last EDR Contact: 09/29/2008
Number of Days to Update: 40	Next Scheduled EDR Contact: 01/26/2009
	Data Release Frequency: Quarterly

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

NPL LIENS: Federal Superfund Liens

Federal Superfund Liens. Under the authority granted the USEPA by CERCLA of 1980, the USEPA has the authority to file liens against real property in order to recover remedial action expenditures or when the property owner received notification of potential liability. USEPA compiles a listing of filed notices of Superfund Liens.

Date of Government Version: 10/15/1991	Source: EPA
Date Data Arrived at EDR: 02/02/1994	Telephone: 202-564-4267
Date Made Active in Reports: 03/30/1994	Last EDR Contact: 11/17/2008
Number of Days to Update: 56	Next Scheduled EDR Contact: 02/16/2009
	Data Release Frequency: No Update Planned

CERCLIS: Comprehensive Environmental Response, Compensation, and Liability Information System

CERCLIS contains data on potentially hazardous waste sites that have been reported to the USEPA by states, municipalities, private companies and private persons, pursuant to Section 103 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). CERCLIS contains sites which are either proposed to or on the National Priorities List (NPL) and sites which are in the screening and assessment phase for possible inclusion on the NPL.

Date of Government Version: 10/07/2008	Source: EPA
Date Data Arrived at EDR: 10/16/2008	Telephone: 703-412-9810
Date Made Active in Reports: 12/08/2008	Last EDR Contact: 10/16/2008
Number of Days to Update: 53	Next Scheduled EDR Contact: 01/12/2009
	Data Release Frequency: Quarterly

CERCLIS-NFRAP: CERCLIS No Further Remedial Action Planned

Archived sites are sites that have been removed and archived from the inventory of CERCLIS sites. Archived status indicates that, to the best of EPA's knowledge, assessment at a site has been completed and that EPA has determined no further steps will be taken to list this site on the National Priorities List (NPL), unless information indicates this decision was not appropriate or other considerations require a recommendation for listing at a later time. This decision does not necessarily mean that there is no hazard associated with a given site; it only means that, based upon available information, the location is not judged to be a potential NPL site.

Date of Government Version: 12/03/2007	Source: EPA
Date Data Arrived at EDR: 12/06/2007	Telephone: 703-412-9810
Date Made Active in Reports: 02/20/2008	Last EDR Contact: 09/15/2008
Number of Days to Update: 76	Next Scheduled EDR Contact: 12/15/2008
	Data Release Frequency: Quarterly

LIENS 2: CERCLA Lien Information

A Federal CERCLA ('Superfund') lien can exist by operation of law at any site or property at which EPA has spent Superfund monies. These monies are spent to investigate and address releases and threatened releases of contamination. CERCLIS provides information as to the identity of these sites and properties.

Date of Government Version: 08/19/2008	Source: Environmental Protection Agency
Date Data Arrived at EDR: 08/29/2008	Telephone: 202-564-6023
Date Made Active in Reports: 09/09/2008	Last EDR Contact: 11/17/2008
Number of Days to Update: 11	Next Scheduled EDR Contact: 02/16/2009
	Data Release Frequency: Varies

CORRACTS: Corrective Action Report

CORRACTS identifies hazardous waste handlers with RCRA corrective action activity.

Date of Government Version: 09/11/2008	Source: EPA
Date Data Arrived at EDR: 09/19/2008	Telephone: 800-424-9346
Date Made Active in Reports: 10/16/2008	Last EDR Contact: 12/01/2008
Number of Days to Update: 27	Next Scheduled EDR Contact: 03/02/2009
	Data Release Frequency: Quarterly

RCRA-TSDF: RCRA - Transporters, Storage and Disposal

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Transporters are individuals or entities that move hazardous waste from the generator offsite to a facility that can recycle, treat, store, or dispose of the waste. TSDFs treat, store, or dispose of the waste.

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 09/10/2008
Date Data Arrived at EDR: 09/23/2008
Date Made Active in Reports: 10/16/2008
Number of Days to Update: 23

Source: Environmental Protection Agency
Telephone: (206) 553-1200
Last EDR Contact: 11/18/2008
Next Scheduled EDR Contact: 02/16/2009
Data Release Frequency: Quarterly

RCRA-LQG: RCRA - Large Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Large quantity generators (LQGs) generate over 1,000 kilograms (kg) of hazardous waste, or over 1 kg of acutely hazardous waste per month.

Date of Government Version: 09/10/2008
Date Data Arrived at EDR: 09/23/2008
Date Made Active in Reports: 10/16/2008
Number of Days to Update: 23

Source: Environmental Protection Agency
Telephone: (206) 553-1200
Last EDR Contact: 11/18/2008
Next Scheduled EDR Contact: 02/16/2009
Data Release Frequency: Quarterly

RCRA-SQG: RCRA - Small Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Small quantity generators (SQGs) generate between 100 kg and 1,000 kg of hazardous waste per month.

Date of Government Version: 09/10/2008
Date Data Arrived at EDR: 09/23/2008
Date Made Active in Reports: 10/16/2008
Number of Days to Update: 23

Source: Environmental Protection Agency
Telephone: (206) 553-1200
Last EDR Contact: 11/18/2008
Next Scheduled EDR Contact: 02/16/2009
Data Release Frequency: Quarterly

RCRA-CESQG: RCRA - Conditionally Exempt Small Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Conditionally exempt small quantity generators (CESQGs) generate less than 100 kg of hazardous waste, or less than 1 kg of acutely hazardous waste per month.

Date of Government Version: 09/10/2008
Date Data Arrived at EDR: 09/23/2008
Date Made Active in Reports: 10/16/2008
Number of Days to Update: 23

Source: Environmental Protection Agency
Telephone: (206) 553-1200
Last EDR Contact: 11/18/2008
Next Scheduled EDR Contact: 02/16/2009
Data Release Frequency: Varies

RCRA-NonGen: RCRA - Non Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Non-Generators do not presently generate hazardous waste.

Date of Government Version: 09/10/2008
Date Data Arrived at EDR: 09/23/2008
Date Made Active in Reports: 10/16/2008
Number of Days to Update: 23

Source: Environmental Protection Agency
Telephone: (206) 553-1200
Last EDR Contact: 11/18/2008
Next Scheduled EDR Contact: 02/16/2009
Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

US ENG CONTROLS: Engineering Controls Sites List

A listing of sites with engineering controls in place. Engineering controls include various forms of caps, building foundations, liners, and treatment methods to create pathway elimination for regulated substances to enter environmental media or effect human health.

Date of Government Version: 10/06/2008	Source: Environmental Protection Agency
Date Data Arrived at EDR: 10/17/2008	Telephone: 703-603-0695
Date Made Active in Reports: 12/08/2008	Last EDR Contact: 09/29/2008
Number of Days to Update: 52	Next Scheduled EDR Contact: 12/29/2008
	Data Release Frequency: Varies

US INST CONTROL: Sites with Institutional Controls

A listing of sites with institutional controls in place. Institutional controls include administrative measures, such as groundwater use restrictions, construction restrictions, property use restrictions, and post remediation care requirements intended to prevent exposure to contaminants remaining on site. Deed restrictions are generally required as part of the institutional controls.

Date of Government Version: 10/06/2008	Source: Environmental Protection Agency
Date Data Arrived at EDR: 10/17/2008	Telephone: 703-603-0695
Date Made Active in Reports: 12/08/2008	Last EDR Contact: 06/30/2008
Number of Days to Update: 52	Next Scheduled EDR Contact: 09/29/2008
	Data Release Frequency: Varies

ERNS: Emergency Response Notification System

Emergency Response Notification System. ERNS records and stores information on reported releases of oil and hazardous substances.

Date of Government Version: 12/31/2007	Source: National Response Center, United States Coast Guard
Date Data Arrived at EDR: 01/23/2008	Telephone: 202-267-2180
Date Made Active in Reports: 03/17/2008	Last EDR Contact: 10/21/2008
Number of Days to Update: 54	Next Scheduled EDR Contact: 01/19/2009
	Data Release Frequency: Annually

HMIRS: Hazardous Materials Information Reporting System

Hazardous Materials Incident Report System. HMIRS contains hazardous material spill incidents reported to DOT.

Date of Government Version: 09/30/2008	Source: U.S. Department of Transportation
Date Data Arrived at EDR: 10/16/2008	Telephone: 202-366-4555
Date Made Active in Reports: 11/19/2008	Last EDR Contact: 10/16/2008
Number of Days to Update: 34	Next Scheduled EDR Contact: 01/12/2009
	Data Release Frequency: Annually

DOT OPS: Incident and Accident Data

Department of Transportation, Office of Pipeline Safety Incident and Accident data.

Date of Government Version: 05/14/2008	Source: Department of Transportation, Office of Pipeline Safety
Date Data Arrived at EDR: 05/28/2008	Telephone: 202-366-4595
Date Made Active in Reports: 08/08/2008	Last EDR Contact: 11/26/2008
Number of Days to Update: 72	Next Scheduled EDR Contact: 02/23/2009
	Data Release Frequency: Varies

CDL: Clandestine Drug Labs

A listing of clandestine drug lab locations. The U.S. Department of Justice ("the Department") provides this web site as a public service. It contains addresses of some locations where law enforcement agencies reported they found chemicals or other items that indicated the presence of either clandestine drug laboratories or dumpsites. In most cases, the source of the entries is not the Department, and the Department has not verified the entry and does not guarantee its accuracy. Members of the public must verify the accuracy of all entries by, for example, contacting local law enforcement and local health departments.

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 09/01/2007
Date Data Arrived at EDR: 12/03/2007
Date Made Active in Reports: 12/28/2007
Number of Days to Update: 25

Source: Drug Enforcement Administration
Telephone: 202-307-1000
Last EDR Contact: 10/31/2008
Next Scheduled EDR Contact: 12/22/2008
Data Release Frequency: Quarterly

US BROWNFIELDS: A Listing of Brownfields Sites

Included in the listing are brownfields properties addresses by Cooperative Agreement Recipients and brownfields properties addressed by Targeted Brownfields Assessments. Targeted Brownfields Assessments-EPA's Targeted Brownfields Assessments (TBA) program is designed to help states, tribes, and municipalities--especially those without EPA Brownfields Assessment Demonstration Pilots--minimize the uncertainties of contamination often associated with brownfields. Under the TBA program, EPA provides funding and/or technical assistance for environmental assessments at brownfields sites throughout the country. Targeted Brownfields Assessments supplement and work with other efforts under EPA's Brownfields Initiative to promote cleanup and redevelopment of brownfields. Cooperative Agreement Recipients-States, political subdivisions, territories, and Indian tribes become Brownfields Cleanup Revolving Loan Fund (BCRLF) cooperative agreement recipients when they enter into BCRLF cooperative agreements with the U.S. EPA. EPA selects BCRLF cooperative agreement recipients based on a proposal and application process. BCRLF cooperative agreement recipients must use EPA funds provided through BCRLF cooperative agreement for specified brownfields-related cleanup activities.

Date of Government Version: 07/01/2008
Date Data Arrived at EDR: 08/25/2008
Date Made Active in Reports: 09/09/2008
Number of Days to Update: 15

Source: Environmental Protection Agency
Telephone: 202-566-2777
Last EDR Contact: 10/16/2008
Next Scheduled EDR Contact: 01/12/2009
Data Release Frequency: Semi-Annually

DOD: Department of Defense Sites

This data set consists of federally owned or administered lands, administered by the Department of Defense, that have any area equal to or greater than 640 acres of the United States, Puerto Rico, and the U.S. Virgin Islands.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 11/10/2006
Date Made Active in Reports: 01/11/2007
Number of Days to Update: 62

Source: USGS
Telephone: 703-692-8801
Last EDR Contact: 11/07/2008
Next Scheduled EDR Contact: 02/02/2009
Data Release Frequency: Semi-Annually

FUDS: Formerly Used Defense Sites

The listing includes locations of Formerly Used Defense Sites properties where the US Army Corps of Engineers is actively working or will take necessary cleanup actions.

Date of Government Version: 12/31/2007
Date Data Arrived at EDR: 09/05/2008
Date Made Active in Reports: 09/23/2008
Number of Days to Update: 18

Source: U.S. Army Corps of Engineers
Telephone: 202-528-4285
Last EDR Contact: 09/05/2008
Next Scheduled EDR Contact: 12/29/2008
Data Release Frequency: Varies

LUCIS: Land Use Control Information System

LUCIS contains records of land use control information pertaining to the former Navy Base Realignment and Closure properties.

Date of Government Version: 12/09/2005
Date Data Arrived at EDR: 12/11/2006
Date Made Active in Reports: 01/11/2007
Number of Days to Update: 31

Source: Department of the Navy
Telephone: 843-820-7326
Last EDR Contact: 12/08/2008
Next Scheduled EDR Contact: 03/09/2009
Data Release Frequency: Varies

CONSENT: Superfund (CERCLA) Consent Decrees

Major legal settlements that establish responsibility and standards for cleanup at NPL (Superfund) sites. Released periodically by United States District Courts after settlement by parties to litigation matters.

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 04/25/2008
Date Data Arrived at EDR: 06/12/2008
Date Made Active in Reports: 08/25/2008
Number of Days to Update: 74

Source: Department of Justice, Consent Decree Library
Telephone: Varies
Last EDR Contact: 10/20/2008
Next Scheduled EDR Contact: 01/19/2009
Data Release Frequency: Varies

ROD: Records Of Decision

Record of Decision. ROD documents mandate a permanent remedy at an NPL (Superfund) site containing technical and health information to aid in the cleanup.

Date of Government Version: 06/18/2008
Date Data Arrived at EDR: 07/11/2008
Date Made Active in Reports: 08/25/2008
Number of Days to Update: 45

Source: EPA
Telephone: 703-416-0223
Last EDR Contact: 09/29/2008
Next Scheduled EDR Contact: 12/29/2008
Data Release Frequency: Annually

UMTRA: Uranium Mill Tailings Sites

Uranium ore was mined by private companies for federal government use in national defense programs. When the mills shut down, large piles of the sand-like material (mill tailings) remain after uranium has been extracted from the ore. Levels of human exposure to radioactive materials from the piles are low; however, in some cases tailings were used as construction materials before the potential health hazards of the tailings were recognized.

Date of Government Version: 07/13/2007
Date Data Arrived at EDR: 12/03/2007
Date Made Active in Reports: 01/24/2008
Number of Days to Update: 52

Source: Department of Energy
Telephone: 505-845-0011
Last EDR Contact: 09/15/2008
Next Scheduled EDR Contact: 12/15/2008
Data Release Frequency: Varies

ODI: Open Dump Inventory

An open dump is defined as a disposal facility that does not comply with one or more of the Part 257 or Part 258 Subtitle D Criteria.

Date of Government Version: 06/30/1985
Date Data Arrived at EDR: 08/09/2004
Date Made Active in Reports: 09/17/2004
Number of Days to Update: 39

Source: Environmental Protection Agency
Telephone: 800-424-9346
Last EDR Contact: 06/09/2004
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

DEBRIS REGION 9: Torres Martinez Reservation Illegal Dump Site Locations

A listing of illegal dump sites location on the Torres Martinez Indian Reservation located in eastern Riverside County and northern Imperial County, California.

Date of Government Version: 03/25/2008
Date Data Arrived at EDR: 04/17/2008
Date Made Active in Reports: 05/15/2008
Number of Days to Update: 28

Source: EPA, Region 9
Telephone: 415-972-3336
Last EDR Contact: 09/22/2008
Next Scheduled EDR Contact: 12/22/2008
Data Release Frequency: Varies

MINES: Mines Master Index File

Contains all mine identification numbers issued for mines active or opened since 1971. The data also includes violation information.

Date of Government Version: 08/07/2008
Date Data Arrived at EDR: 09/23/2008
Date Made Active in Reports: 10/16/2008
Number of Days to Update: 23

Source: Department of Labor, Mine Safety and Health Administration
Telephone: 303-231-5959
Last EDR Contact: 09/23/2008
Next Scheduled EDR Contact: 12/22/2008
Data Release Frequency: Semi-Annually

TRIS: Toxic Chemical Release Inventory System

Toxic Release Inventory System. TRIS identifies facilities which release toxic chemicals to the air, water and land in reportable quantities under SARA Title III Section 313.

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 12/31/2006
Date Data Arrived at EDR: 02/29/2008
Date Made Active in Reports: 04/18/2008
Number of Days to Update: 49

Source: EPA
Telephone: 202-566-0250
Last EDR Contact: 09/19/2008
Next Scheduled EDR Contact: 12/15/2008
Data Release Frequency: Annually

TSCA: Toxic Substances Control Act

Toxic Substances Control Act. TSCA identifies manufacturers and importers of chemical substances included on the TSCA Chemical Substance Inventory list. It includes data on the production volume of these substances by plant site.

Date of Government Version: 12/31/2002
Date Data Arrived at EDR: 04/14/2006
Date Made Active in Reports: 05/30/2006
Number of Days to Update: 46

Source: EPA
Telephone: 202-260-5521
Last EDR Contact: 10/14/2008
Next Scheduled EDR Contact: 01/12/2009
Data Release Frequency: Every 4 Years

FTTS: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
FTTS tracks administrative cases and pesticide enforcement actions and compliance activities related to FIFRA, TSCA and EPCRA (Emergency Planning and Community Right-to-Know Act). To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 10/08/2008
Date Data Arrived at EDR: 10/17/2008
Date Made Active in Reports: 12/08/2008
Number of Days to Update: 52

Source: EPA/Office of Prevention, Pesticides and Toxic Substances
Telephone: 202-566-1667
Last EDR Contact: 09/15/2008
Next Scheduled EDR Contact: 12/15/2008
Data Release Frequency: Quarterly

FTTS INSP: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
A listing of FIFRA/TSCA Tracking System (FTTS) inspections and enforcements.

Date of Government Version: 10/08/2008
Date Data Arrived at EDR: 10/17/2008
Date Made Active in Reports: 12/08/2008
Number of Days to Update: 52

Source: EPA
Telephone: 202-566-1667
Last EDR Contact: 09/15/2008
Next Scheduled EDR Contact: 12/15/2008
Data Release Frequency: Quarterly

HIST FTTS: FIFRA/TSCA Tracking System Administrative Case Listing

A complete administrative case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006
Date Data Arrived at EDR: 03/01/2007
Date Made Active in Reports: 04/10/2007
Number of Days to Update: 40

Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 12/17/2007
Next Scheduled EDR Contact: 03/17/2008
Data Release Frequency: No Update Planned

HIST FTTS INSP: FIFRA/TSCA Tracking System Inspection & Enforcement Case Listing

A complete inspection and enforcement case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 10/19/2006
Date Data Arrived at EDR: 03/01/2007
Date Made Active in Reports: 04/10/2007
Number of Days to Update: 40

Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 12/17/2008
Next Scheduled EDR Contact: 03/17/2008
Data Release Frequency: No Update Planned

SSTS: Section 7 Tracking Systems

Section 7 of the Federal Insecticide, Fungicide and Rodenticide Act, as amended (92 Stat. 829) requires all registered pesticide-producing establishments to submit a report to the Environmental Protection Agency by March 1st each year. Each establishment must report the types and amounts of pesticides, active ingredients and devices being produced, and those having been produced and sold or distributed in the past year.

Date of Government Version: 12/31/2006
Date Data Arrived at EDR: 03/14/2008
Date Made Active in Reports: 04/18/2008
Number of Days to Update: 35

Source: EPA
Telephone: 202-564-4203
Last EDR Contact: 12/04/2008
Next Scheduled EDR Contact: 01/12/2009
Data Release Frequency: Annually

ICIS: Integrated Compliance Information System

The Integrated Compliance Information System (ICIS) supports the information needs of the national enforcement and compliance program as well as the unique needs of the National Pollutant Discharge Elimination System (NPDES) program.

Date of Government Version: 07/31/2008
Date Data Arrived at EDR: 08/13/2008
Date Made Active in Reports: 09/09/2008
Number of Days to Update: 27

Source: Environmental Protection Agency
Telephone: 202-564-5088
Last EDR Contact: 10/14/2008
Next Scheduled EDR Contact: 01/12/2009
Data Release Frequency: Quarterly

PADS: PCB Activity Database System

PCB Activity Database. PADS Identifies generators, transporters, commercial storers and/or brokers and disposers of PCB's who are required to notify the EPA of such activities.

Date of Government Version: 12/04/2007
Date Data Arrived at EDR: 02/07/2008
Date Made Active in Reports: 03/17/2008
Number of Days to Update: 39

Source: EPA
Telephone: 202-566-0500
Last EDR Contact: 09/18/2008
Next Scheduled EDR Contact: 11/03/2008
Data Release Frequency: Annually

MLTS: Material Licensing Tracking System

MLTS is maintained by the Nuclear Regulatory Commission and contains a list of approximately 8,100 sites which possess or use radioactive materials and which are subject to NRC licensing requirements. To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 10/03/2008
Date Data Arrived at EDR: 10/15/2008
Date Made Active in Reports: 11/19/2008
Number of Days to Update: 35

Source: Nuclear Regulatory Commission
Telephone: 301-415-7169
Last EDR Contact: 09/29/2008
Next Scheduled EDR Contact: 12/29/2008
Data Release Frequency: Quarterly

RADINFO: Radiation Information Database

The Radiation Information Database (RADINFO) contains information about facilities that are regulated by U.S. Environmental Protection Agency (EPA) regulations for radiation and radioactivity.

Date of Government Version: 10/28/2008
Date Data Arrived at EDR: 10/29/2008
Date Made Active in Reports: 12/08/2008
Number of Days to Update: 40

Source: Environmental Protection Agency
Telephone: 202-343-9775
Last EDR Contact: 10/29/2008
Next Scheduled EDR Contact: 01/26/2009
Data Release Frequency: Quarterly

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

FINDS: Facility Index System/Facility Registry System

Facility Index System. FINDS contains both facility information and 'pointers' to other sources that contain more detail. EDR includes the following FINDS databases in this report: PCS (Permit Compliance System), AIRS (Aerometric Information Retrieval System), DOCKET (Enforcement Docket used to manage and track information on civil judicial enforcement cases for all environmental statutes), FURS (Federal Underground Injection Control), C-DOCKET (Criminal Docket System used to track criminal enforcement actions for all environmental statutes), FFIS (Federal Facilities Information System), STATE (State Environmental Laws and Statutes), and PADS (PCB Activity Data System).

Date of Government Version: 07/01/2008	Source: EPA
Date Data Arrived at EDR: 07/09/2008	Telephone: (206) 553-1200
Date Made Active in Reports: 08/25/2008	Last EDR Contact: 09/29/2008
Number of Days to Update: 47	Next Scheduled EDR Contact: 12/29/2008
	Data Release Frequency: Quarterly

RAATS: RCRA Administrative Action Tracking System

RCRA Administration Action Tracking System. RAATS contains records based on enforcement actions issued under RCRA pertaining to major violators and includes administrative and civil actions brought by the EPA. For administration actions after September 30, 1995, data entry in the RAATS database was discontinued. EPA will retain a copy of the database for historical records. It was necessary to terminate RAATS because a decrease in agency resources made it impossible to continue to update the information contained in the database.

Date of Government Version: 04/17/1995	Source: EPA
Date Data Arrived at EDR: 07/03/1995	Telephone: 202-564-4104
Date Made Active in Reports: 08/07/1995	Last EDR Contact: 06/02/2008
Number of Days to Update: 35	Next Scheduled EDR Contact: 09/01/2008
	Data Release Frequency: No Update Planned

BRS: Biennial Reporting System

The Biennial Reporting System is a national system administered by the EPA that collects data on the generation and management of hazardous waste. BRS captures detailed data from two groups: Large Quantity Generators (LQG) and Treatment, Storage, and Disposal Facilities.

Date of Government Version: 12/31/2005	Source: EPA/NTIS
Date Data Arrived at EDR: 03/06/2007	Telephone: 800-424-9346
Date Made Active in Reports: 04/13/2007	Last EDR Contact: 09/12/2008
Number of Days to Update: 38	Next Scheduled EDR Contact: 12/08/2008
	Data Release Frequency: Biennially

SCRD DRYCLEANERS: State Coalition for Remediation of Drycleaners Listing

The State Coalition for Remediation of Drycleaners was established in 1998, with support from the U.S. EPA Office of Superfund Remediation and Technology Innovation. It is comprised of representatives of states with established drycleaner remediation programs. Currently the member states are Alabama, Connecticut, Florida, Illinois, Kansas, Minnesota, Missouri, North Carolina, Oregon, South Carolina, Tennessee, Texas, and Wisconsin.

Date of Government Version: 09/08/2008	Source: Environmental Protection Agency
Date Data Arrived at EDR: 09/10/2008	Telephone: 615-532-8599
Date Made Active in Reports: 09/23/2008	Last EDR Contact: 12/08/2008
Number of Days to Update: 13	Next Scheduled EDR Contact: 02/09/2009
	Data Release Frequency: Varies

STATE AND LOCAL RECORDS

SHWS: Contaminated Sites Database

State Hazardous Waste Sites. State hazardous waste site records are the states' equivalent to CERCLIS. These sites may or may not already be listed on the federal CERCLIS list. Priority sites planned for cleanup using state funds (state equivalent of Superfund) are identified along with sites where cleanup will be paid for by potentially responsible parties. Available information varies by state.

Date of Government Version: 09/29/2008	Source: Department of Environmental Conservation
Date Data Arrived at EDR: 09/30/2008	Telephone: 907-451-2143
Date Made Active in Reports: 10/21/2008	Last EDR Contact: 12/08/2008
Number of Days to Update: 21	Next Scheduled EDR Contact: 03/09/2009
	Data Release Frequency: Semi-Annually

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

SWF/LF: Solid Waste Facilities

Solid Waste Facilities/Landfill Sites. SWF/LF type records typically contain an inventory of solid waste disposal facilities or landfills in a particular state. Depending on the state, these may be active or inactive facilities or open dumps that failed to meet RCRA Subtitle D Section 4004 criteria for solid waste landfills or disposal sites.

Date of Government Version: 07/18/2008	Source: Department of Environmental Conservation
Date Data Arrived at EDR: 07/22/2008	Telephone: 907-269-7632
Date Made Active in Reports: 08/15/2008	Last EDR Contact: 10/22/2008
Number of Days to Update: 24	Next Scheduled EDR Contact: 01/19/2009
	Data Release Frequency: Semi-Annually

LUST: Leaking Underground Storage Tank Database

Leaking Underground Storage Tank Incident Reports. LUST records contain an inventory of reported leaking underground storage tank incidents. Not all states maintain these records, and the information stored varies by state.

Date of Government Version: 09/30/2008	Source: Department of Environmental Conservation
Date Data Arrived at EDR: 09/30/2008	Telephone: 907-465-5301
Date Made Active in Reports: 10/21/2008	Last EDR Contact: 09/30/2008
Number of Days to Update: 21	Next Scheduled EDR Contact: 12/08/2008
	Data Release Frequency: Semi-Annually

UST: Underground Storage Tank Database

Registered Underground Storage Tanks. UST's are regulated under Subtitle I of the Resource Conservation and Recovery Act (RCRA) and must be registered with the state department responsible for administering the UST program. Available information varies by state program.

Date of Government Version: 09/08/2008	Source: Department of Environmental Conservation
Date Data Arrived at EDR: 09/09/2008	Telephone: 907-269-7504
Date Made Active in Reports: 09/26/2008	Last EDR Contact: 09/09/2008
Number of Days to Update: 17	Next Scheduled EDR Contact: 12/08/2008
	Data Release Frequency: Semi-Annually

AST: Regulated Aboveground Storage Tanks

The list covers "regulated" facilities with storage capacities above 10,000 barrels (or 5,000 barrels of crude).

Date of Government Version: 01/05/2005	Source: Department of Environmental Conservation
Date Data Arrived at EDR: 01/06/2005	Telephone: 907-465-5231
Date Made Active in Reports: 02/02/2005	Last EDR Contact: 10/06/2008
Number of Days to Update: 27	Next Scheduled EDR Contact: 12/22/2008
	Data Release Frequency: Varies

SPILLS: Spills Database

Oil and hazardous substance releases to be reported to the Department of Environmental Conservation.

Date of Government Version: 08/20/2008	Source: Department of Environmental Conservation
Date Data Arrived at EDR: 08/21/2008	Telephone: 907-465-5242
Date Made Active in Reports: 08/29/2008	Last EDR Contact: 10/27/2008
Number of Days to Update: 8	Next Scheduled EDR Contact: 01/26/2009
	Data Release Frequency: Semi-Annually

ENG CONTROLS: Engineering Controls Site Listing

A listing of sites with engineering controls in place included in the Contaminated Sites.

Date of Government Version: 09/29/2008	Source: Department of Environmental Conservation
Date Data Arrived at EDR: 09/30/2008	Telephone: 907-451-2143
Date Made Active in Reports: 10/21/2008	Last EDR Contact: 12/08/2008
Number of Days to Update: 21	Next Scheduled EDR Contact: 03/09/2009
	Data Release Frequency: Quarterly

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Inst Control: Contaminated Sites with Institutional Controls
Contaminated sites that have institutional controls.

Date of Government Version: 09/29/2008	Source: Department of Environmental Conservation
Date Data Arrived at EDR: 09/30/2008	Telephone: 907-451-2143
Date Made Active in Reports: 10/21/2008	Last EDR Contact: 12/08/2008
Number of Days to Update: 21	Next Scheduled EDR Contact: 03/09/2009
	Data Release Frequency: Semi-Annually

VCP: Voluntary Cleanup Program sites
Sites involved in the Voluntary Cleanup Program.

Date of Government Version: 09/22/2008	Source: Department of Environmental Conservation
Date Data Arrived at EDR: 09/23/2008	Telephone: 907-451-2143
Date Made Active in Reports: 09/29/2008	Last EDR Contact: 09/23/2008
Number of Days to Update: 6	Next Scheduled EDR Contact: 12/22/2008
	Data Release Frequency: Varies

DRYCLEANERS: Drycleaner Facility Listing
A listing of drycleaning facilities in Alaska.

Date of Government Version: 02/15/2006	Source: Department of Environmental Conservation
Date Data Arrived at EDR: 02/16/2006	Telephone: 907-269-7577
Date Made Active in Reports: 03/15/2006	Last EDR Contact: 10/20/2008
Number of Days to Update: 27	Next Scheduled EDR Contact: 01/19/2009
	Data Release Frequency: No Update Planned

BROWNFIELDS: Identified and/or Proposed Brownfields Sites

Brownfield properties are defined by U.S Environmental Protection Agency (EPA) as "real property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contamination." DEC is developing resources to assist eligible entities in Alaska in applying for EPA brownfields grants. The program also will provide technical assistance and perform some site assessments. The purpose of these assessments is to assist local redevelopment efforts on previously contaminated properties that are vacant or underused.

Date of Government Version: 09/29/2008	Source: Department of Environmental Conservation
Date Data Arrived at EDR: 09/30/2008	Telephone: 907-451-2166
Date Made Active in Reports: 10/21/2008	Last EDR Contact: 12/08/2008
Number of Days to Update: 21	Next Scheduled EDR Contact: 03/09/2009
	Data Release Frequency: Varies

CDL: Illegal Drug Manufacturing Sites

A list of properties that have been determined to be illegal drug manufacturing sites.

Date of Government Version: 05/29/2008	Source: Department of Environmental Conservation
Date Data Arrived at EDR: 09/09/2008	Telephone: 907-269-7543
Date Made Active in Reports: 09/24/2008	Last EDR Contact: 09/09/2008
Number of Days to Update: 15	Next Scheduled EDR Contact: 12/08/2008
	Data Release Frequency: Varies

NPDES: Wastwater Discharge Permit Listing
A listing of permitted wastewater facilities.

Date of Government Version: 11/24/2006	Source: Department of Environmental Conservation
Date Data Arrived at EDR: 11/27/2006	Telephone: 907-465-5480
Date Made Active in Reports: 12/21/2006	Last EDR Contact: 10/17/2008
Number of Days to Update: 24	Next Scheduled EDR Contact: 01/12/2009
	Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

AIRS: AIRS Facility Listing

A listing of permitted airs facilities.

Date of Government Version: 08/12/2008
Date Data Arrived at EDR: 08/13/2008
Date Made Active in Reports: 08/15/2008
Number of Days to Update: 2

Source: Department of Environmental Conservation
Telephone: 907-451-2103
Last EDR Contact: 11/03/2008
Next Scheduled EDR Contact: 02/02/2009
Data Release Frequency: Varies

TRIBAL RECORDS

INDIAN RESERV: Indian Reservations

This map layer portrays Indian administered lands of the United States that have any area equal to or greater than 640 acres.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 12/08/2006
Date Made Active in Reports: 01/11/2007
Number of Days to Update: 34

Source: USGS
Telephone: 202-208-3710
Last EDR Contact: 11/07/2008
Next Scheduled EDR Contact: 02/02/2009
Data Release Frequency: Semi-Annually

INDIAN ODI: Report on the Status of Open Dumps on Indian Lands

Location of open dumps on Indian land.

Date of Government Version: 12/31/1998
Date Data Arrived at EDR: 12/03/2007
Date Made Active in Reports: 01/24/2008
Number of Days to Update: 52

Source: Environmental Protection Agency
Telephone: 703-308-8245
Last EDR Contact: 11/24/2008
Next Scheduled EDR Contact: 02/23/2009
Data Release Frequency: Varies

INDIAN LUST R10: Leaking Underground Storage Tanks on Indian Land

LUSTs on Indian land in Alaska, Idaho, Oregon and Washington.

Date of Government Version: 08/22/2008
Date Data Arrived at EDR: 08/22/2008
Date Made Active in Reports: 09/09/2008
Number of Days to Update: 18

Source: EPA Region 10
Telephone: 206-553-2857
Last EDR Contact: 11/17/2008
Next Scheduled EDR Contact: 02/16/2009
Data Release Frequency: Quarterly

INDIAN LUST R9: Leaking Underground Storage Tanks on Indian Land

LUSTs on Indian land in Arizona, California, New Mexico and Nevada

Date of Government Version: 10/10/2008
Date Data Arrived at EDR: 10/10/2008
Date Made Active in Reports: 10/16/2008
Number of Days to Update: 6

Source: Environmental Protection Agency
Telephone: 415-972-3372
Last EDR Contact: 11/17/2008
Next Scheduled EDR Contact: 02/16/2009
Data Release Frequency: Quarterly

INDIAN LUST R8: Leaking Underground Storage Tanks on Indian Land

LUSTs on Indian land in Colorado, Montana, North Dakota, South Dakota, Utah and Wyoming.

Date of Government Version: 08/21/2008
Date Data Arrived at EDR: 09/04/2008
Date Made Active in Reports: 09/09/2008
Number of Days to Update: 5

Source: EPA Region 8
Telephone: 303-312-6271
Last EDR Contact: 11/17/2008
Next Scheduled EDR Contact: 02/16/2009
Data Release Frequency: Quarterly

INDIAN LUST R7: Leaking Underground Storage Tanks on Indian Land

LUSTs on Indian land in Iowa, Kansas, and Nebraska

Date of Government Version: 03/17/2008
Date Data Arrived at EDR: 03/27/2008
Date Made Active in Reports: 05/06/2008
Number of Days to Update: 40

Source: EPA Region 7
Telephone: 913-551-7003
Last EDR Contact: 11/19/2008
Next Scheduled EDR Contact: 02/16/2009
Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

INDIAN LUST R4: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Florida, Mississippi and North Carolina.

Date of Government Version: 06/06/2008	Source: EPA Region 4
Date Data Arrived at EDR: 10/09/2008	Telephone: 404-562-8677
Date Made Active in Reports: 11/19/2008	Last EDR Contact: 11/17/2008
Number of Days to Update: 41	Next Scheduled EDR Contact: 02/16/2009
	Data Release Frequency: Semi-Annually

INDIAN LUST R1: Leaking Underground Storage Tanks on Indian Land
A listing of leaking underground storage tank locations on Indian Land.

Date of Government Version: 03/12/2008	Source: EPA Region 1
Date Data Arrived at EDR: 03/14/2008	Telephone: 617-918-1313
Date Made Active in Reports: 03/20/2008	Last EDR Contact: 11/17/2008
Number of Days to Update: 6	Next Scheduled EDR Contact: 02/16/2009
	Data Release Frequency: Varies

INDIAN LUST R6: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in New Mexico and Oklahoma.

Date of Government Version: 09/05/2008	Source: EPA Region 6
Date Data Arrived at EDR: 09/05/2008	Telephone: 214-665-6597
Date Made Active in Reports: 09/23/2008	Last EDR Contact: 11/17/2008
Number of Days to Update: 18	Next Scheduled EDR Contact: 02/16/2009
	Data Release Frequency: Varies

INDIAN UST R1: Underground Storage Tanks on Indian Land
A listing of underground storage tank locations on Indian Land.

Date of Government Version: 03/12/2008	Source: EPA, Region 1
Date Data Arrived at EDR: 03/14/2008	Telephone: 617-918-1313
Date Made Active in Reports: 03/20/2008	Last EDR Contact: 11/17/2008
Number of Days to Update: 6	Next Scheduled EDR Contact: 02/16/2009
	Data Release Frequency: Varies

INDIAN UST R4: Underground Storage Tanks on Indian Land
No description is available for this data

Date of Government Version: 06/06/2008	Source: EPA Region 4
Date Data Arrived at EDR: 10/09/2008	Telephone: 404-562-9424
Date Made Active in Reports: 11/19/2008	Last EDR Contact: 11/17/2008
Number of Days to Update: 41	Next Scheduled EDR Contact: 02/16/2009
	Data Release Frequency: Semi-Annually

INDIAN UST R5: Underground Storage Tanks on Indian Land
No description is available for this data

Date of Government Version: 09/08/2008	Source: EPA Region 5
Date Data Arrived at EDR: 09/19/2008	Telephone: 312-886-6136
Date Made Active in Reports: 10/16/2008	Last EDR Contact: 11/17/2008
Number of Days to Update: 27	Next Scheduled EDR Contact: 02/16/2009
	Data Release Frequency: Varies

INDIAN UST R6: Underground Storage Tanks on Indian Land
No description is available for this data

Date of Government Version: 09/05/2008	Source: EPA Region 6
Date Data Arrived at EDR: 09/05/2008	Telephone: 214-665-7591
Date Made Active in Reports: 09/23/2008	Last EDR Contact: 11/17/2008
Number of Days to Update: 18	Next Scheduled EDR Contact: 02/16/2009
	Data Release Frequency: Semi-Annually

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

INDIAN UST R7: Underground Storage Tanks on Indian Land

No description is available for this data

Date of Government Version: 06/01/2007
Date Data Arrived at EDR: 06/14/2007
Date Made Active in Reports: 07/05/2007
Number of Days to Update: 21

Source: EPA Region 7
Telephone: 913-551-7003
Last EDR Contact: 11/19/2008
Next Scheduled EDR Contact: 02/16/2009
Data Release Frequency: Varies

INDIAN UST R8: Underground Storage Tanks on Indian Land

No description is available for this data

Date of Government Version: 08/21/2008
Date Data Arrived at EDR: 09/04/2008
Date Made Active in Reports: 09/09/2008
Number of Days to Update: 5

Source: EPA Region 8
Telephone: 303-312-6137
Last EDR Contact: 11/17/2008
Next Scheduled EDR Contact: 02/16/2009
Data Release Frequency: Quarterly

INDIAN UST R9: Underground Storage Tanks on Indian Land

No description is available for this data

Date of Government Version: 09/05/2008
Date Data Arrived at EDR: 09/19/2008
Date Made Active in Reports: 10/16/2008
Number of Days to Update: 27

Source: EPA Region 9
Telephone: 415-972-3368
Last EDR Contact: 11/17/2008
Next Scheduled EDR Contact: 02/16/2009
Data Release Frequency: Quarterly

INDIAN UST R10: Underground Storage Tanks on Indian Land

No description is available for this data

Date of Government Version: 08/22/2008
Date Data Arrived at EDR: 08/22/2008
Date Made Active in Reports: 09/09/2008
Number of Days to Update: 18

Source: EPA Region 10
Telephone: 206-553-2857
Last EDR Contact: 11/17/2008
Next Scheduled EDR Contact: 02/16/2009
Data Release Frequency: Quarterly

INDIAN VCP R1: Voluntary Cleanup Priority Listing

A listing of voluntary cleanup priority sites located on Indian Land located in Region 1.

Date of Government Version: 04/02/2008
Date Data Arrived at EDR: 04/22/2008
Date Made Active in Reports: 05/19/2008
Number of Days to Update: 27

Source: EPA, Region 1
Telephone: 617-918-1102
Last EDR Contact: 10/20/2008
Next Scheduled EDR Contact: 01/19/2009
Data Release Frequency: Varies

INDIAN VCP R7: Voluntary Cleanup Priority Listing

A listing of voluntary cleanup priority sites located on Indian Land located in Region 7.

Date of Government Version: 03/20/2008
Date Data Arrived at EDR: 04/22/2008
Date Made Active in Reports: 05/19/2008
Number of Days to Update: 27

Source: EPA, Region 7
Telephone: 913-551-7365
Last EDR Contact: 10/20/2008
Next Scheduled EDR Contact: 01/19/2009
Data Release Frequency: Varies

EDR PROPRIETARY RECORDS

Manufactured Gas Plants: EDR Proprietary Manufactured Gas Plants

The EDR Proprietary Manufactured Gas Plant Database includes records of coal gas plants (manufactured gas plants) compiled by EDR's researchers. Manufactured gas sites were used in the United States from the 1800's to 1950's to produce a gas that could be distributed and used as fuel. These plants used whale oil, rosin, coal, or a mixture of coal, oil, and water that also produced a significant amount of waste. Many of the byproducts of the gas production, such as coal tar (oily waste containing volatile and non-volatile chemicals), sludges, oils and other compounds are potentially hazardous to human health and the environment. The byproduct from this process was frequently disposed of directly at the plant site and can remain or spread slowly, serving as a continuous source of soil and groundwater contamination.

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

OTHER DATABASE(S)

Depending on the geographic area covered by this report, the data provided in these specialty databases may or may not be complete. For example, the existence of wetlands information data in a specific report does not mean that all wetlands in the area covered by the report are included. Moreover, the absence of any reported wetlands information does not necessarily mean that wetlands do not exist in the area covered by the report.

NY MANIFEST: Facility and Manifest Data

Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a TSD facility.

Date of Government Version: 07/23/2008
Date Data Arrived at EDR: 08/28/2008
Date Made Active in Reports: 09/11/2008
Number of Days to Update: 14

Source: Department of Environmental Conservation
Telephone: 518-402-8651
Last EDR Contact: 11/26/2008
Next Scheduled EDR Contact: 02/23/2009
Data Release Frequency: Annually

Oil/Gas Pipelines: This data was obtained by EDR from the USGS in 1994. It is referred to by USGS as GeoData Digital Line Graphs from 1:100,000-Scale Maps. It was extracted from the transportation category including some oil, but primarily gas pipelines.

Electric Power Transmission Line Data

Source: PennWell Corporation
Telephone: (800) 823-6277

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Sensitive Receptors: There are individuals deemed sensitive receptors due to their fragile immune systems and special sensitivity to environmental discharges. These sensitive receptors typically include the elderly, the sick, and children. While the location of all sensitive receptors cannot be determined, EDR indicates those buildings and facilities - schools, daycares, hospitals, medical centers, and nursing homes - where individuals who are sensitive receptors are likely to be located.

AHA Hospitals:

Source: American Hospital Association, Inc.
Telephone: 312-280-5991

The database includes a listing of hospitals based on the American Hospital Association's annual survey of hospitals.

Medical Centers: Provider of Services Listing

Source: Centers for Medicare & Medicaid Services
Telephone: 410-786-3000

A listing of hospitals with Medicare provider number, produced by Centers of Medicare & Medicaid Services, a federal agency within the U.S. Department of Health and Human Services.

Nursing Homes

Source: National Institutes of Health
Telephone: 301-594-6248

Information on Medicare and Medicaid certified nursing homes in the United States.

Public Schools

Source: National Center for Education Statistics
Telephone: 202-502-7300

The National Center for Education Statistics' primary database on elementary and secondary public education in the United States. It is a comprehensive, annual, national statistical database of all public elementary and secondary schools and school districts, which contains data that are comparable across all states.

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Private Schools

Source: National Center for Education Statistics

Telephone: 202-502-7300

The National Center for Education Statistics' primary database on private school locations in the United States.

Daycare Centers: Child Care Facilities Database

Source: Department of Education & Early Development

Telephone: 907-465-2800

Flood Zone Data: This data, available in select counties across the country, was obtained by EDR in 1999 from the Federal Emergency Management Agency (FEMA). Data depicts 100-year and 500-year flood zones as defined by FEMA.

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002 and 2005 from the U.S. Fish and Wildlife Service.

State Wetlands Data: Wetlands Inventory Data

Source: Department of Fish & Game

Telephone: 907-465-4100

STREET AND ADDRESS INFORMATION

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Appendix 4



GEOPHYSICAL INSTITUTE - TECHNICA

CHENA RADIO FACILITY 25 MILE CHENA HOT SPRINGS RD
FAIRBANKS, AK 99701

Inquiry Number:
January 2, 2009



EDR Site Report™

TABLE OF CONTENTS

The EDR-Site Report™ is a comprehensive presentation of government filings on a facility identified in a search of federal, state and local environmental databases. The report is divided into three sections:

Section 1: Facility Summary Page 3

Summary of facility filings including a review of the following areas: waste management, waste disposal, multi-media issues, and Superfund liability.

Section 2: Facility Detail Reports Page 4

All available detailed information from databases where sites are identified.

Section 3: Databases and Update Information. Page 5

Name, source, update dates, contact phone number and description of each of the databases for this report.

Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

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SECTION 1: FACILITY SUMMARY

FACILITY	FACILITY 1 GEOPHYSICAL INSTITUTE - TECHNICAL CHENA RADIO FACILITY 25 MILE CHENA HOT SPRIN FAIRBANKS, AK 99701 EDR ID #U003952006
AREA	
WASTE MANAGEMENT Facility generates hazardous waste (RCRA)	NO
Facility treats, stores, or disposes of hazardous waste on-site (RCRA/TSD)	NO
Facility has received Notices of Violations (RCRA/VIOL)	NO
Facility has been subject to RCRA administrative actions (RAATS)	NO
Facility has been subject to corrective actions (CORRACTS)	NO
Facility handles PCBs (PADS)	NO
Facility uses radioactive materials (MLTS)	NO
Facility manages registered aboveground storage tanks (AST)	NO
Facility manages registered underground storage tanks (UST)	YES - p4
Facility has reported leaking underground storage tank incidents (LUST)	NO
Facility has reported emergency releases to the soil (ERNS)	NO
Facility has reported hazardous material incidents to DOT (HMIRS)	NO
WASTE DISPOSAL Facility is a Superfund Site (NPL)	NO
Facility has a known or suspect abandoned, inactive or uncontrolled hazardous waste site (CERCLIS)	NO
Facility has a reported Superfund Lien on it (LIENS)	NO
Facility is listed as a state hazardous waste site (SHWS)	NO
Facility has disposed of solid waste on-site (SWF/LF)	NO
MULTIMEDIA Facility uses toxic chemicals and has notified EPA under SARA Title III, Section 313 (TRIS)	NO
Facility produces pesticides and has notified EPA under Section 7 of FIFRA (SSTS)	NO
Facility manufactures or imports toxic chemicals on the TSCA list (TSCA)	NO
Facility has inspections under FIFRA, TSCA or EPCRA (FTTS)	NO
Facility is listed in EPA's index system (FINDS)	NO
Facility is listed in a county/local unique database (LOCAL)	NO
POTENTIAL SUPERFUND LIABILITY Facility has a list of potentially responsible parties PRP	NO
TOTAL (YES)	1

SECTION 2: FACILITY DETAIL REPORTS

WASTE MANAGEMENT

Facility manages registered underground storage tanks

DATABASE: Petroleum Storage Tank Database (UST)

GEOPHYSICAL INSTITUTE - TECHNICAL
CHENA RADIO FACILITY 25 MILE CHENA HOT SPRINGS RD
FAIRBANKS, AK 99701
EDR ID #U003952006

UST:

Facility ID:	2900
Facility Type:	State Government
Owner ID:	1183
Owner Name:	University of Alaska - Fairbanks
Owner Address:	Risk Management PO Box 756640
Owner City,St,Zip:	Fairbanks, AK 99775

Tank ID:	1
Tank Status:	Permanently Out of Use
Tack Capacity:	Not reported
Tank Product:	Diesel
Installed Date:	1/1/1966
Regulated Tank:	No

Rec'd 7-12-91

ALASKA DEPARTMENT OF ENVIRONMENTAL CONSERVATION
1991 REGISTRATION FOR UNDERGROUND STORAGE TANKS

Fact # 2900

This registration and fee payment are required by statute for tanks in use on or after September 5, 1990. Registration is due no later than March 5, 1991. After April 5, 1991, a \$10/day late fee will be assessed. Please do not submit to DEC before December 1, 1990.

Tank Owner:

Name: University of Alaska - FBKs
Address: 90 Risk Management OWN # 1183
Tambank, AK 99775-1605
City, State, Zip

Tank Operator:

Name: Bill Hasko
Address: 25 mi Chena Hot Sp Rd
Tambank, AK 99775
City, State, Zip

Location and Type of Facility:

Facility Name: Geophysical Inst - Technical Soc
Type of Facility (Gas Station, etc.): Chena Vg Radio Facility
Physical Address, including city: 25 mi Chena Hot Spring Rd
Tambank, AK

Number of Tanks at Facility:

1

Size of Each Tank:

Large

Registration Fee Required

(Fees for 1991 are reduced by 25% to reflect shorter registration period of March 5-December 5, 1991)

Size of Tank	Fee per tank	1991 Tank Fee
less than 1000 gallons	\$150.00	\$112.50
1000-5000 gallons	300.00	225.00
more than 5000 gallons	500.00	375.00
New and Upgraded Tanks (All sizes)	50.00	37.50

State law requires that the owner or operator of a regulated underground storage tank installed before 12-22-88 submit at the time of registration either proof of satisfactory performance of a tank tightness test or site assessment that were conducted within the twelve months preceding registration, or if performance was not satisfactory, a plan for dealing with the problem and an application for state cleanup assistance. Owners/operators who have not had either testing or assessment done are required to tell the department the approximate date when this work will be performed and may apply for reimbursement of eligible costs. The department is proposing to reimburse only those owners who have had both testing and assessment done. For more information, refer to UST Form FA-2.

- Satisfactory performance of tank tightness test site assessment attached.
- Clean up plan and application for clean up assistance attached.
- Site assessment tank tightness test will be performed approximately _____ (date)
- I intend to apply for reimbursement of the eligible costs for the test and assessment.

Return completed form and registration fee to:
ADEC, Underground Storage Tank Program,
P.O. Box 0, Juneau, AK 99811 465-2612

State Use Only
Tank ID # 2249
Fee Amount \$ _____
Date Rec'd _____
By _____
(Rev: 11/90-2)

II. DESCRIPTION OF UNDERGROUND STORAGE TANKS (Complete for each tank at this location.)

Tank Identification Number	Tank No. <u>1</u>	Tank No. <u> </u>	Tank No. <u> </u>	Tank No. <u> </u>	Tank No. <u> </u>
1. Status of Tank (mark only one)	Currently in Use	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Temporarily Out of Use	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Permanently Out of Use	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Amendment of Information	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Date of Installation (mo./year)	<i>25+ yrs</i>				
3. Estimated Total Capacity (gallons)	<i>unk</i>				
4. Material of Construction (Mark all that apply)	Asphalt Coated or Bare Steel	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Cathodically Protected Steel	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Epoxy Coated Steel	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Composite (Steel with Fiberglass)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Fiberglass Reinforced Plastic	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Lined Interior	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Double Walled	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Polyethylene Tank Jacket	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Concrete	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Excavation Liner	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Unknown	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Other, Please specify	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Has tank been repaired?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. Piping (Material) (Mark all that apply)	Bare Steel	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Galvanized Steel	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Fiberglass Reinforced Plastic	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Copper	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Cathodically Protected	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Double Walled	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Secondary Containment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Unknown	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other, Please specify	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
6. Piping (Type) (Mark all that apply)	Suction: no valve at tank	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Suction: valve at tank	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Pressure	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Gravity Feed	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Has piping been repaired?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Tank Identification Number	Tank No. <u>1</u>	Tank No. _____	Tank No. _____	Tank No. _____	Tank No. _____
7. Substance Currently or Last Stored In Greatest Quantity by Volume					
Gasoline	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Diesel	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Gasohol	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Kerosene	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Heating Oil	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Used Oil	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Other, Please specify	<u>unknown</u>				
Hazardous Substance CERCLA name and/or, CAS number	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Mixture of Substances Please specify	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

III. FINANCIAL RESPONSIBILITY

I have met the financial responsibility requirements in accordance with 40 CFR Subpart H



Check All that Apply

- Self Insurance
- Commercial Insurance
- Risk Retention Group

- Guarantee
- Surety Bond
- Letter of Credit

- State Funds
- Trust Fund
- Other Method Allowed Specify

WHAT'S FINANCIAL RESPONSIBILITY ?

Federal regulations require owners and operators to demonstrate financial responsibility for cleanup of releases from underground storage tanks (UST). Financial responsibility means an owner or operator must ensure, either through insurance or other means, that money will be available to help pay for the costs of third-party liability and corrective action caused by a leak from an UST.

- (a) A Petroleum Marketer must demonstrate financial responsibility of at least \$1,000,000.
- (b) Other owners and operators must demonstrate financial responsibility of up to \$1,000,000.

Depending upon their compliance category, owners and operators must meet these requirements on:

- (a) January 24, 1989 for petroleum marketing firms that own 1,000 or more USTs and any other UST owners that report a tangible net worth of \$20 million or more to the SEC, Dun and Bradstreet, the Energy Information Administration, or the Rural Electrification Administration.
- (b) October 26, 1989 for petroleum marketing firms owning 100 to 999 USTs.
- (c) April 26, 1991 for petroleum marketing firms owning 13 to 99 USTs at more than one site.
- (d) October 26, 1991 for:
 - (1) Petroleum marketing firms owning 1 to 12 USTs or having fewer than 100 USTs at one site.
 - (2) All other UST owners with a tangible net worth of less than \$20 million.
 - (3) Local governments.

V. CERTIFICATION (Read and sign after completing all sections)

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete.

SAFETY OFFICER

Marie M. Scholle

SIGNATURE

2/15/91

DATE

(Specify if owner, operator, or authorized representative).

UNIVERSITY RISK MGT
1000 UNIVERSITY AVENUE
ADDRESS

MARIE M. SCHOLLE
PRINT OF TYPE NAME

474-5496

CONTACT PHONE (DAY)

FAIRBANKS, ALASKA 99775-1605

CITY, STATE, ZIP

CONTACT PHONE (NIGHT)

Underground Storage Tank System Registration

All existing systems must be registered with the Department using the State UST registration form. Within thirty (30) days of bringing a new system into use, or modifying/upgrading an existing system, the owner shall notify the Department using the State UST registration form. The registration form will become a part of the installation records and will be available for review by appropriate State and Federal personnel. House Bill 220, effective September 5, 1990, authorizes grants for tank upgrading, closure, and cleanup programs. The Department has developed Interim Requirements providing guidance to tank owners and operators for the design, construction, installation, registration, closure and abandonment of regulated underground storage tanks (AS 46.03.450). The Interim Requirements will also provide guidance for the reporting, site assessment, and corrective action activities associated with releases from regulated underground storage tanks (USTs). The Interim Requirements will be in effect until regulations replacing them are promulgated and individual eligibility for the grant programs is determined under AS 46.03.410 (Storage Tank Assistance Fund). The interim corrective action requirements focus on release reporting, stabilization, investigation, and cleanup activities necessary for the immediate identification and mitigation of risks to human health and the environment. Please contact the Alaska Department of Environmental Conservation for a current copy of the Interim Requirements for Regulated Underground Storage Tanks.

WHAT'S A REGULATED UST ?

"Underground storage tank" or "UST" means any one or combination of tanks (including underground pipes connected thereto) that is used to contain an accumulation of regulated substances, and the volume of which (including the volume of underground pipes connected thereto) is 10 percent or more beneath the surface of the ground. This term does not include any:

- (a) Farm or residential tank of 1,100 gallons or less capacity used for storing motor fuel for noncommercial purposes;
- (b) Tank used for storing heating oil for consumptive use on the premises where stored;
- (c) Septic tank;
- (d) Pipeline facility (including gathering lines) regulated under:
 - (1) The Natural Gas Pipeline Safety Act of 1968 (49 U.S.C. App. 1671, et seq.), or
 - (2) The Hazardous Liquid Pipeline Safety Act of 1979 (49 U.S.C. App. 2001, et seq.), or
 - (3) Which is an intrastate pipeline facility regulated under state laws comparable to the provisions of the law referred to in paragraph (d)(1) or (d)(2) of this definition;
- (e) Surface impoundment, pit, pond, or lagoon;
- (f) Storm-water or wastewater collection system;
- (g) Flow-through process tank;
- (h) Liquid trap or associated gathering lines directly related to oil or gas production and gathering operations;
- (i) Storage tank situated in an underground area (such as a basement, cellar, mineworking, drift, shaft, or tunnel) if the storage tank is situated upon or above the surface of the floor;
- (j) Tank with a capacity of 110 gallons or less;
- (k) Tank containing hazardous wastes regulated under 42 U.S.C. 6921 - 6939b; or
- (l) Tank systems specifically exempted by ADEC.

The term "underground storage tank" or "UST" does not include any pipes connected to any tank which is described in paragraphs (a) through (l) of this definition.

SECTION 3: DATABASES AND UPDATE DATES

To maintain currency of the following federal, state and local databases, EDR contacts the appropriate government agency on a monthly or quarterly basis as required.

Elapsed ASTM days: Provides confirmation that this report meets or exceeds the 90-day updating requirement of the ASTM standard.

DATABASES FOUND IN THIS REPORT

AK UST: Underground Storage Tank Database

Source: Department of Environmental Conservation

Telephone: 907-269-7504

Registered Underground Storage Tanks. UST's are regulated under Subtitle I of the Resource Conservation and Recovery Act (RCRA) and must be registered with the state department responsible for administering the UST program. Available information varies by state program.

Date of Government Version: 09/08/2008
Database Release Frequency: Semi-Annually

Date of Last EDR Contact: 12/09/2008
Date of Next Scheduled Update: 03/09/2009