LEVEL I
ENVIRONMENTAL SITE ASSESSMENT
FOR CLOSEOUT OF LEASED PROPERTY
FORMERLY KNOWN AS THE SERVS DOCK FACILITY
VALDEZ, ALASKA

Prepared for

Alyeska Pipeline Service Company
1835 South Bragaw Street
Anchorage, Alaska 99518

June 1995

Prepared by

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Anchorage, Alaska 99518-1241

Project 5103-030.S5

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EMCON Alaska, Inc.

Karen Cougan
Project Manager

for Lance Raymore
Project Geologist

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1 INTRODUCTION

EMCON Alaska, Inc. (EMCON) was contracted by Alyeska Pipeline Service Company (Alyeska) to conduct a limited Level I Environmental Site Assessment at the Spill Escort Response Vessel Service (SERVS) Dock Facility property, Valdez, Alaska. SERVS leased the property from Tesoro Alaska (Tesoro) from June 1989 to January 1995.

1.1 Objective

The purpose of this Environmental Site Assessment is to evaluate potential environmental liabilities associated with Alyeska's operation of the subject property as the SERVS Dock Facility site.

1.2 Scope of Work

The environmental assessment consisted of the following tasks:

Task 1: Records Search

- Historical Aerial Photograph Review
- Regulatory File Review

Task 2: Site Inspection

- Walking Inspection of the Site - January 24, 1995
- Walking Inspection of the Site - May 8, 1995
- Interviews with Knowledgeable Parties

Task 3: Report Preparation

- Documentation of Findings
- Photograph Log
- Assessment of Findings
- Summary

Based on the information gathered from the environmental site assessment, recommendations are presented in Section 4.

2 ON-SITE REVIEW

2.1 Site Location and Description

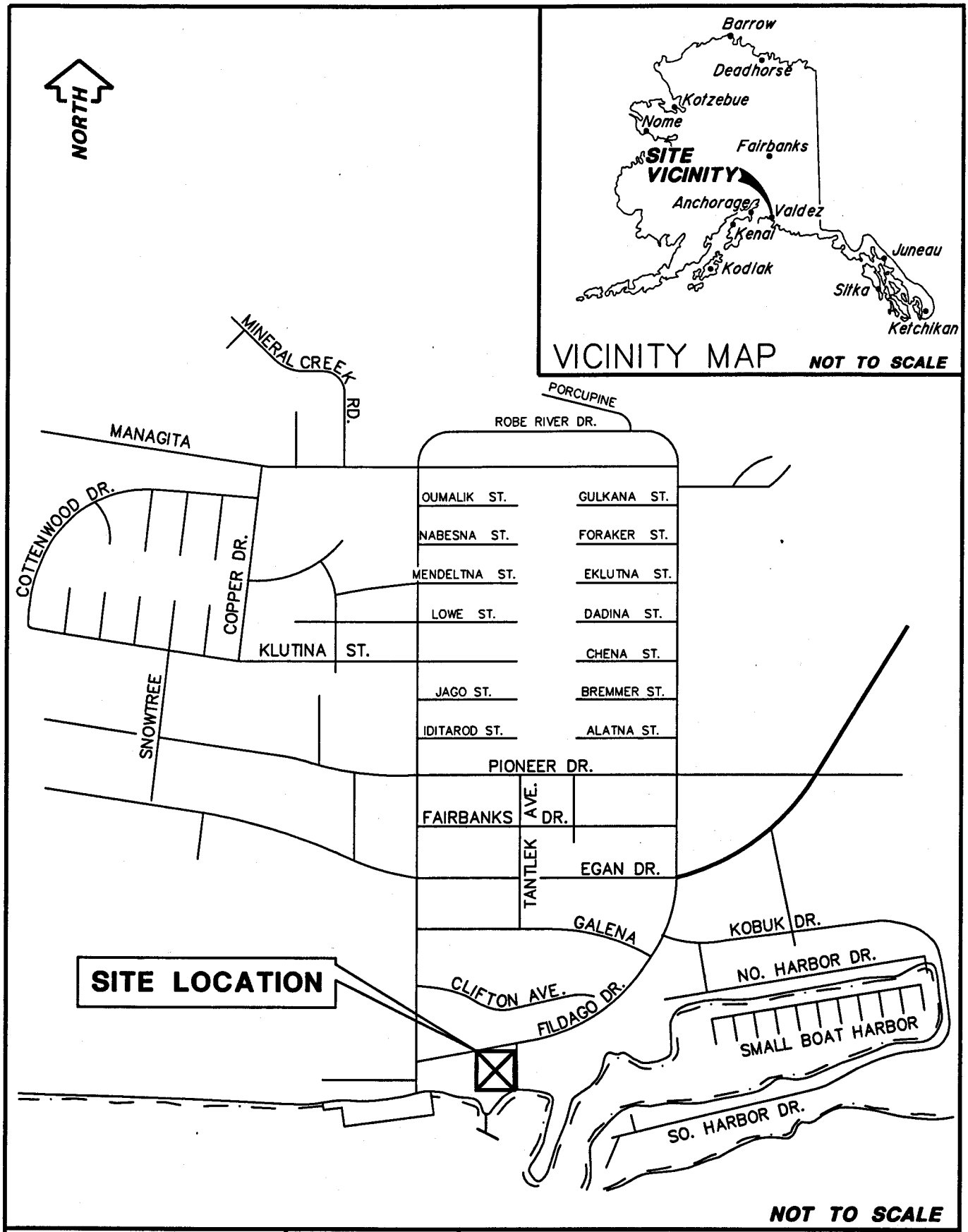
The site is located at the corner of Fidalgo Drive and Breakwater Avenue in Valdez, Alaska (see Figure 1). The legal description for the property is Mineral Creek Subdivision, Block 37, portions of lots 1 through 4. Other businesses in the vicinity include the City of Valdez Roads and Grounds Warehouse, Stan Stephen's Charters, Haltness Equipment Rental, Petrostar, Inc., and the City of Valdez dock. The site consists of a gravel covered lot with three improvements (two warehouse/shop buildings and a guard shack), an antenna array, and an aboveground storage tank (AST).

2.2 Site Inspection - January 24, 1995

EMCON conducted a walking inspection of the site on January 24, 1995. Erin Hanson of SERVS accompanied EMCON personnel on the site inspection. The focus of the inspection was to observe site conditions and relate them to past activities at the site. Diagram of the site is presented in Figure 2. At the time of this visit, SERVS had ceased all operations at the site. However, they were allowing a subcontractor, Bell Enterprises, Inc., to use the facility as a work area for installing electrical control systems in CONNEXES.

The perimeter of the site is surrounded by a security fence. This fence also separates a large aboveground field constructed storage tank which is part of the fuel dock system operated by Petrostar, owner of the property. The dock and related facilities are not part of the leased property, and therefore assessment of them was not within the scope of this project.

The buildings at the site consist of two (blue and silver) shop buildings, each containing office and storage space. The "blue" building has offices located along its south side. A fuel-oil fired furnace is located at the west end of the office space next to the main entrance. There is a cage along the north wall which houses electrical control panels and "dry" type transformers. Located on the floor, in the northeast corner of the blue building, is an area outlined in paint, which represents the facility's former location for the



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DATE	MAY 1995
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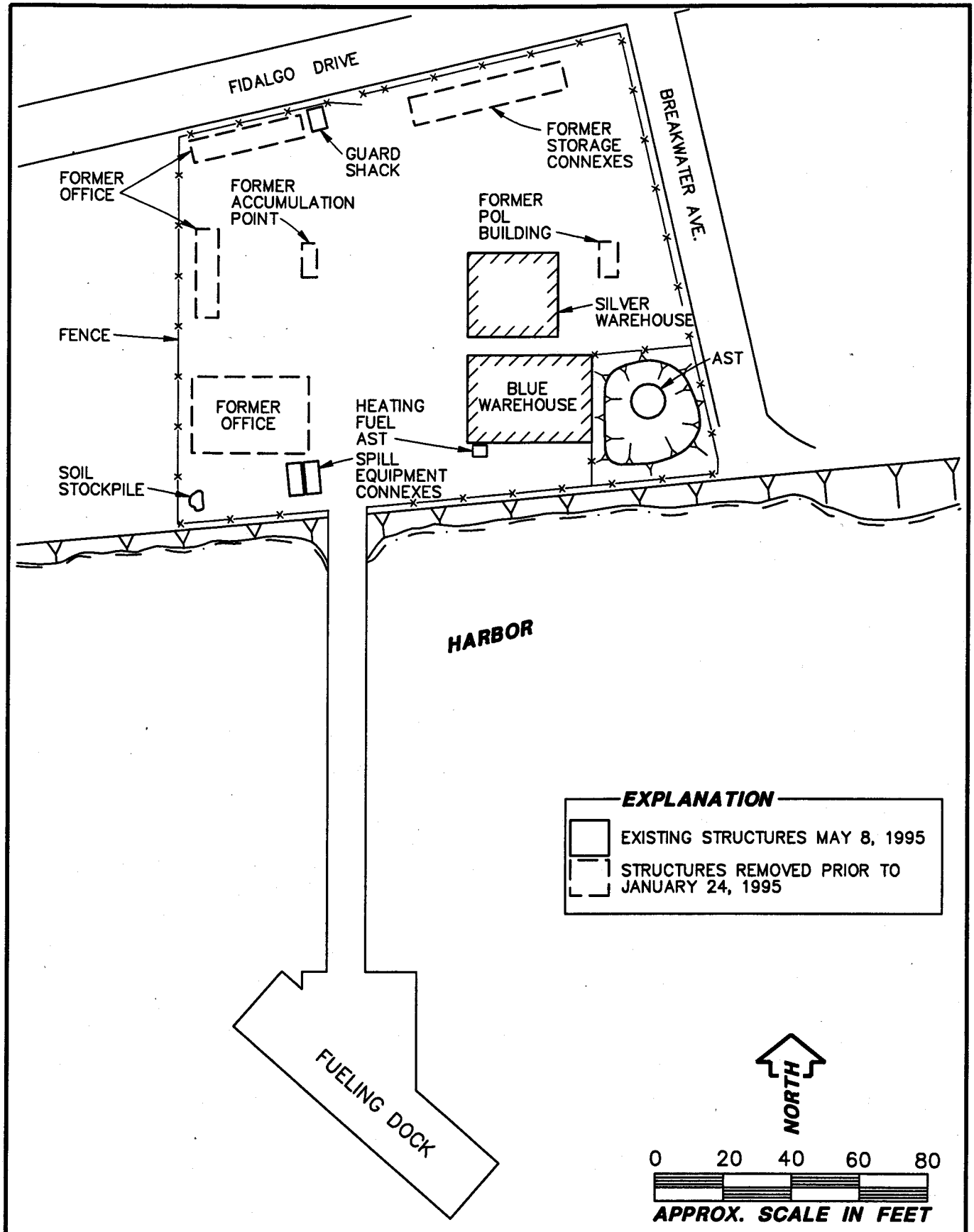
PROJECT No.	5103-030.S5

SERVS DOCK FACILITY
Valdez, Alaska

SITE LOCATION MAP

FIGURE 1



EMCON Alaska, Inc. 201 E. 56th Ave. Suite 300 Anchorage, Ak. 99518 (907) 562-3452 Fax (907) 563-2814	DATE MAY 1995 DWN. CDS95024SD CKD. L.R. REV. PROJECT No. 5103.030.S5	SERVS DOCK FACILITY Valdez, Alaska **SITE DIAGRAM**	FIGURE **2**

hazardous waste satellite accumulation point. South of the painted outline is a section of floor which appears to have the only noticeable staining in the building. Floor drains were not observed within the building.

The "silver" building also has offices located along its south side. Two fuel-oil fired unit heaters are hung from the ceiling at each end of the building. Fuel lines for these unit heaters originate in the blue building, and receive fuel from the same source as the furnace in the blue building. The floor of the silver building had no noticeable staining. No floor drains are located within the building.

Fuel-oil for the furnace and unit heaters is stored in a 500- to 600-gallon capacity double-walled AST staged outside the blue building on its south side (see Figure 2 for location.) The lines extending from the tank are wrapped with white absorbent material at the point where it is attached to the blue building. According to information found in the Alyeska Spill Report database, a release of approximately 0.5 cups of diesel fuel occurred from these pipes on October 16, 1994 (Spill No. 1994555). Immediate action was taken and the pipes were wrapped with absorbent material to prevent further releases. The impacted gravels in the area were removed. Due to the snow and ice cover around the AST, a more thorough assessment of this area was planned for after snow melt.

At the time of the site visit, approximately 5 feet of snow on unplowed areas of the site had been accumulated. Under the plowed sections, a 5 to 6 inch layer of ice prevented inspection of the site surface. The facilities at the site are serviced by city water and sewer.

2.3 Site Inspection - May 8, 1995

At this time, the site had been in use by Petrostar since February 1995. Erin Hanson accompanied EMCON personnel during this visit as well. At the time of this visit, no area on the site was observed to have any noticeable amount of surface impact from operations associated with SERVS' previous use of the site. In the areas where the former offices and their heating fuel ASTs were located, there also was no noticeable amount of surface impact. In the southwest corner of the facility, a small material stockpile had been placed on a sheet of reinforced Visqueen®. The material consists mostly of large coarse, angular sand mixed with some small, well-rounded gravel. The material had no apparent sheen or hydrocarbon smell.

2.4 Interviews with Knowledgeable Parties

Sharon Hillman, stated that the site had been under the operational control of SERVS from June 1989 through January 1995. Ms. Hillman stated that a preliminary assessment had been conducted just after SERVS had occupied the property. A copy of that report is attached as Appendix A. Ms. Hillman stated that the site served as a staging area for spill cleanup debris, and as a hazardous waste accumulation point for all of SERVS maintenance operations. Ms. Hillman and Jack Rasmusen provided information on the handling of wastes at the site during its time of operation.

Initially, drummed wastes were stored in a covered area between two CONNEXES on the north side of the site. Periodically, more waste was accumulated than this storage point could manage and these drummed wastes were stored in an open area just to the south of the CONNEXES, next to the silver building. All drummed wastes staged in these areas were stored inside secondary containment on wooden pallets (Figure 2).

The site accumulated waste as a small quantity generator (EPA I.D. No. AKD983068867) during its period of operation. As a small quantity generator, the majority of the hazardous wastes generated were nickel-cadmium batteries, mercury batteries and potassium hydroxide solutions. Other non RCRA wastes generated and accumulated at the site were antifreeze, used oil, waste fuels, spill debris, and unusable consumer products. Once these wastes were accumulated, they were transported by a licensed subcontractor to a permitted treatment, storage and disposal facility (TSDF) and treated or disposed of in accordance with RCRA regulations.

Ms. Hillman stated that prior to 1993, SERVS maintained their offices in mobile buildings on the western portion of the site. In 1993, the offices were moved to another facility off-site and the mobile buildings were dismantled and removed. After the offices were removed, the CONNEXES to the north were also removed and a single CONNEX was staged in the center of the site for the storage of drummed wastes. Mr. Rasmusen stated that the two on-site office facilities were heated with fuel-oil furnaces which were fueled by individual 300-gallon ASTs. (See Section 2.3 for observations of these locations.) These ASTs were removed along with the offices (Figure 2).

Ms. Hillman and Mr. Rasmusen both stated that waste batteries were stored separately from the other waste streams in a heated mobile building (petroleum, oil and lubricants [POL] building) formerly staged behind the silver building. The POL building has been moved to SERVS' current operational facility and is still in use as a product storage and waste battery accumulation point. Ms. Hillman and Mr. Rasmusen both stated that the rear (east end) of the blue building had a petroleum-products distribution rack which resulted in the staining of the floor in that area.

Mr. Rasmusen also stated that prior to SERVS occupying the site in June 1989, approximately 400 truck loads (4,000 cubic yards) of gravel fill were spread over the site to level the surface and improve drainage of surface waters, directing flow away from Valdez Arm. Mr. Rasmusen further stated that after SERVS occupied the site in 1989, the original silver building, which was metal-sided with a wooden floor, was replaced with a "new" silver building with a concrete floor and metal sides and roof.

During the site visit conducted in May, Stan Jepson was able to provide background information about the small material stockpile located in the southwest corner of the site. He indicated it was material left over from the construction of the antenna array which is still on the site. This material was used as a bedding material in the trenches excavated for the installation of the electrical system associated with the array.

3 OFF-SITE REVIEW

3.1 Geology and Hydrogeology

No borings or test wells are located on the site to provide subsurface information. All subsurface information for the site is based on agency documentation review, interpretation of historic sources, previous reports compiled on the site, and recent interviews with knowledgeable parties.

Based on information obtained during the site visits and the interpretation of aerial photographs, the subsurface of the site consists of various fill materials placed over an existing beach deposit. The beach deposit likely consists of glacial till material which has been redeposited as a gravel and cobble beach. Riprap was placed over the gravel/cobble deposit to create a sea wall; then fill material, consisting of large to small gravels with fines, was used to bring the area up-to-grade with the surrounding land areas behind the beachhead. Due to the proximity of the site to Valdez Arm and the porosity of the beach and fill material underlying the site, the groundwater beneath the site is probably tidally influenced.

3.2 Agency Document Review

The following state (Alaska Department of Environmental Conservation [ADEC]) and federal (U.S. Environmental Protection Agency [USEPA]) databases were reviewed to identify potential contaminant sources on-site or within the recommended search distance as outlined in American Society for Testing and Materials (ASTM) E1527-94.

- **ADEC Contaminated Sites List** (Run Date: March 7, 1995)

  The ADEC Contaminated Sites List is a compilation of properties or facilities with confirmed contamination that have been reported to ADEC. The ASTM recommended search distance is a 1.0 mile radius. The property which comprises the SERVS site under this assessment is listed in association with the bulk fuel farm and the fueling dock adjacent to this property. The information provided in the listing describes only the impact associated with the inland bulk fuel facility. Additionally, it states that there is contamination associated with the dock facilities which is the site covered by this assessment. The listing states that

historical diesel and gasoline spills are associated with the operation of the bulk plant with the amounts spilled unknown. Since the spills are noted to be historic and only associated with the operation of the bulk plant and its facilities (the dock), they do not appear to present an environmental liability of concern related to SERVS operations at the site.

- **USEPA CERCLIS List** (Run Date: April 14, 1994)

  The USEPA's Comprehensive Environmental Response Compensation and Liability Information System (CERCLIS) List is a compilation by USEPA of the properties or facilities which USEPA had investigated or is currently investigating for a release or threatened release of hazardous substances pursuant to the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA or Superfund). The recommended search distance is a 0.5 mile radius. The site is not listed on the CERCLIS list. No sites on the list are within the search area around the site.

- **USEPA RCRA List** (Run Date: 1995)

  The USEPA's Resource Conservation and Recovery Act (RCRA) program identifies and tracks hazardous waste from the point of generation to the point of disposal. The RCRA "Facilities List" is a compilation by USEPA of reporting facilities that generate, store, transport, treat or dispose of hazardous waste. The recommended search distance is limited to the property in question and those adjoining it. While in operation on the site, SERVS was classified as a "Small Quantity Generator" and was issued an USEPA identification number (AKD 983068867). None of the adjoining properties are listed as RCRA generators.

- **Registered UST Database** (Run Date: March 23, 1995)

  ADEC's Registered underground storage tank (UST) Database identifies USTs which are currently in use and those which are currently out of use but are still registered with ADEC. The recommended search distance is limited to the property in question and those adjoining it. EMCON reviewed the ADEC Registered UST Database and determined that there were no registered USTs on the property nor were any located on those properties adjoining the site.

3.3 Alyeska Spill Report Database

Alyeska maintains a Spill Report Database to document all releases of hazardous materials to the environment. Table 1 represents the information gathered from the database for the site. Hazardous materials reported to have been spilled onto the site consisted of diesel fuels and hydraulic oils in limited quantities.

During Alyeska's period of operation at the site, there were four reported spills to the land and two reported spills to the water (see Table 1).

Table 1

Reported Spills

Date Spill Reported	Location of Spill	Substance Spilled	Amount Spilled
11/03/94	SERVS base on land	Unknown	1 teaspoon
10/16/94	SERVS base on land	Fuel oil/diesel fuel from AST	0.5 cups
7/2/94	SERVS base on land	Hydraulic oil from equipment	4 ounces
5/30/93	SERVS base on land	Diesel fuel from truck	1 cup
2/12/91	SERVS base on water	Hydraulic oil from vessel	96 teaspoons
1/30/91	SERVS base on water	Hydraulic oil from vessel	4 cups

3.4 Historical Aerial Photograph Review

A limited aerial photograph review was conducted by EMCON on February 6, 1995 at AeroMap U.S., Inc., in Anchorage, Alaska. Aerial photographic coverage of this site prior to 1969 was non-existent at AeroMap. Observations related to selected aerial photographs are presented below.

September 24, 1969 - At this time there is no fence around the site. The site is visibly divided by a road leading from the fuels dock to Fidalgo Drive. The original silver building with the metal siding and wooden floor exists on the eastern half of the site. On the western half of the site, there appears to be two distinct piles of drums. Numerous drums are also staged on the south and east sides of the original silver building.

June 17, 1989 - At this time the covered CONNEXES on the north side of the site are in place and the fence has been installed around the perimeter of the site. The original silver building still exists and the blue building has been built to the south of the original silver building.

October 5, 1992 - This photo shows the SERVS offices in place on the western half of the site. The covered CONNEXES to the north have been removed by this time. The POL building is in place to the east of the "new" silver building. A fence now exists around the large AST to the east of the blue building. Two small structures are located to the north of the POL building that cannot be identified. Adjacent to the southwest corner of the blue building a small structure can be seen which also can not be identified.

August 18, 1994 - This photo shows the centrally located CONNEX for waste accumulation on the western half of the site. The POL building still exists behind the "new" silver building. To the north of the POL building is a single CONNEX and further north is a small shed. Neither of these appeared in the previous photo. The small structure to the southwest of the blue building still exists. The lean-to which covers the fuel-oil AST next to the blue building is now apparent.

Evidence of impacted soils, or improper waste management practices, is not apparent in any of the more recent aerial photographs. Some historical problems associated with the operation of the site, prior to SERVS period of operation from June 1989 to January 1995, is suggested by the photograph from 1969.

3.5 Review of Previous Environmental Audit Report

In July 1989, America North, Inc. (now EMCON Alaska, Inc.) produced an Environmental Audit report for the site. The report was based on information obtained during two site visits: in May and July 1989. The report summary states that petroleum-impacted soils were observed under the original silver building on-site which is now the location of the existing (new) silver building. Petroleum-impacted soils adjacent to the southwest corner of the blue building were discovered during excavation activities in the area. The report also concluded that this area is the suspected location of a historic UST, but that no removal or closure information was available at the time of the report. The report is attached as Appendix A.

4 SUMMARY

EMCON conducted a limited Level I Environmental Site Assessment for the property located at the corner of Fidalgo Drive and Breakwater Avenue in Valdez, Alaska. Tasks completed to accomplish the assessment included a records review (aerial photographic review, federal and state database reviews, operational record review), two site inspections, and interviews with knowledgeable parties. Based on these research and investigative efforts, EMCON concludes that SERVS' operations at the site between the period of time from June 1989 to January 1995, did not present significant liability concerns, for reasons summarized below:

- Based on observation of existing conditions, no evidence of impact from petroleum hydrocarbons or hazardous substances was noted.
- Based on review of current and past operations, no area of concern was identifiable.
- Based on review of various regulatory databases, no areas of concern with SERVS' past operations at the site was noted.

5 LIMITATIONS

The services described in this document were performed consistent with generally accepted professional consulting principles and practices, and with our agreement with our client. This report is solely for the use and information of our client unless otherwise noted. Any reliance on this document by a third party is at such party's sole risk.

Opinions and recommendations contained in this report apply to conditions existing when services were performed and are intended only for the client, purposes, locations, time frames, and project parameters indicated. We are not responsible for the impacts of any changes in environmental standards, practices, or regulations subsequent to performance of services. We do not warrant the accuracy of information supplied by others, nor the use of segregated portions of this document.

APPENDIX A

PREVIOUS ENVIRONMENTAL AUDIT REPORT

7.06.03

ENVIRONMENTAL AUDIT
TESORO DOCK FACILITY
(presently SERVS Facility)
VALDEZ, ALASKA

Prepared By:
America North Inc.
201 E. 56th, Suite 200
Anchorage, Alaska 99518

July 24, 1989

EXECUTIVE SUMMARY

- America North Inc. (ANI) was retained by Alyeska to document environmental conditions at the Tesoro Dock Property in Valdez, Alaska, as Alyeska entered into a lease to occupy the site. ANI conducted site visits on May 28, 1989, and July 5, 1989. The site is presently referred to as the SERVS Facility.

- Several areas associated with the above-ground storage tank farm indicate releases of petroleum product to surrounding soils. A soil sample from the base of the berm surrounding the tanks was analytically detected for petroleum hydrocarbons.

- An Alyeska shallow excavation (two feet deep) encountered an area of soils exhibiting strong petroleum odor. Further investigation is taking place by the ADEC and Tesoro.

- The older, wooden-structure warehouse located on site has indications of past releases of product to the warehouse floor. A soil sample from beneath the warehouse floor was analytically detected for petroleum hydrocarbons.

- One 55-gallon drum labeled "calcium carbide" is abandoned near the above-ground tanks. Calcium carbide is a highly reactive chemical when mixed with water and is classified as a hazardous waste. On-site personnel should be notified as to the possible health & safety hazards. ANI recommends the contents of this drum be sampled and that the drum be disposed of in a proper manner upon receipt of analytical results.

- Further subsurface soil sampling will be required to fully define soil and possible ground water contamination from the sources and operations described in this report.

BACKGROUND

ANI was retained by Alyeska to perform an initial environmental audit of property located in Valdez, Alaska. The purpose of the audit is to document past or present

uses of the property that may indicate environmental impairment. The subject property is the SERVS Facility located on Fidalgo Drive, Valdez, Alaska (see Figure 1).

The SERVS Facility is presently being leased from Tesoro by Alyeska. The site was formerly used as a warehouse storage area and ocean vessel refueling facility (see Appendix A, Photograph 1).

SITE DESCRIPTION

The SERVS Facility is harbor-front property located in downtown Valdez, Alaska. An approximate 450-foot long dock extends out into the harbor, connected by numerous refueling product lines to shore (see Figure 1). Established structures at the time of Alyeska's lease include a large, metal-structure warehouse, a smaller, wooden-structure warehouse, two large above-ground storage tanks, and a bermed containment area surrounding the tanks (see Figure 1).

At the time of this report, Alyeska has constructed temporary offices and is in the process of constructing a permanent office complex. Various equipment utilized by SERVS is stored in the yard, on the dock, and in the wooden-structure warehouse. The perimeter of the property is currently fenced with a guarded entrance on Fidalgo Drive (see Figure 1).

VISUAL SITE WALK

ANI personnel conducted a visual site walk on May 28, 1989, and again on July 5, 1989. The entire property was visually surveyed to identify areas of visual soil staining and former uses which characteristically result in environmental impact. Based on the site visits, the following areas were identified as possible environmental impairments:

Above-Ground Storage Tank Area

A large above-ground "slop" tank (Tank 22) and a smaller above-ground "slop" tank (Tank 24) are located on the SERVS site (see Figure 1). Personal communication with maintenance workers on-site indicate that these tanks apparently stored vessel

bilge/ballast discharge at one time, but have stored petroleum product in the recent past. A berm comprised of a heterogeneous mixture of fine- to coarse-grained sediments is constructed surrounding the above-ground tanks. The containment berm does not appear to be lined.

The initial site visit on May 28, 1989, indicated the two above-ground tanks were not being used. Further investigation of the tanks indicated at least the larger tank (Tank 22), still contained significant amounts of product. The smaller tank (Tank 24) was not accessible to observe or sample its contents. On July 5, 1989, both tanks were observed to have been steam-cleaned and all product had been removed.

Stopcocks and product-line fittings around both tanks had obvious leakage over time as evidenced by dark soil staining and strong petroleum odor (see Appendix A, Photo 2). In addition, soils surrounding product lines extending through the containment dike exhibited dark staining and strong petroleum odor (see Appendix A, Photograph 3).

One half-full 55-gallon drum is located inside the containment berm and is labeled as calcium carbide. Calcium carbide is highly reactive when coming in contact with water and is classified as a hazardous waste. The drum is closed and appears in good condition and does not appear to have discharged to surrounding soils (see Appendix A, Photograph 4).

South West Corner of Large Warehouse

An oil furnace was formerly operating inside the southwest corner of the large warehouse (See Appendix A, Photograph 5). Oil residue and staining is apparent on the concrete surface surrounding the furnace area. It is possible this oil may contain polychlorinated biphenyls (PCBs) and/or dioxins.

During the site visit on July 5, 1989, the Alyeska on-site safety supervisor, Mr. Bob Dynhart, directed ANI personnel to an area outside of the new warehouse where recent excavation encountered soils with a strong petroleum odor. Orientation of nearby metal pipes indicated the area might be a previously unidentified underground storage tank (UST) location (see Figure 1). Strong petroleum odor and black soil staining was noted by ANI personnel at the base of the two-foot deep

excavation. Mr. Dynhart indicated that the ADEC and Tesoro were aware of the problem and were planning to meet the following morning at the SERVS site.

A phone conversation with Mr. Dynhart on July 10, 1989, indicated that further excavation of the suspect area had taken place under the direction of the ADEC and Tesoro. No UST was encountered and soil contamination appeared to extend approximately five to six feet below grade. Soil samples were taken by ADEC, Tesoro, and Mr. Dynhart for submittal to a laboratory for analysis. Soil analysis data is not available to ANI at the time of this report.

Former UST Site

Alyeska on-site personnel indicated a UST of unknown size, age, and construction was formerly located on-site, and has since been removed by Tesoro prior to Alyeska taking control of the property (see Figure 1). It is unknown if the former UST impacted soil or ground water beneath the SERV Facility prior to being removed.

Old Warehouse

The older, wooden-structure warehouse was reported to have formerly been used for oil drum storage (see Figure 1). The wooden floors inside the warehouse are heavily oil-stained, indicating releases of liquid product (see Appendix A, Photograph 6). Soil beneath the wooden floors appeared relatively clean with no apparent staining or odors.

Alyeska personnel indicated that the roof of the warehouse had heavy leaks prior to Alyeska taking over the property and making subsequent repairs. Water entering through the leaky roof and exiting through the floors is a significant concern for contaminant transport to subsurface soils and ground water.

SOIL AND PRODUCT SAMPLING

Two samples were collected from surface soils during the initial site visit on May 28, 1989. Soils were sampled from outside the tank farm containment berm near the product lines and from beneath the older, wooden-structure warehouse. The samples were submitted for U.S. EPA Method 418.1 analysis for total petroleum

hydrocarbons (TPH) and U.S. EPA Method 8020 for benzene, toluene, xylenes, and ethylbenzene (BTXE). Copies of certified analytical results including Chain-of-Custody documentation are included in Appendix B.

Analytical results of soil from the containment berm around the product lines indicate concentrations of 5.7 mg/kg (ppm) for TPH and non-detectable for BTXE compounds (detection limit: 0.005 ppm). Analytical results of soil from beneath the old warehouse are 13 ppm for TPH and non-detected for BTXE compounds.

One sample was collected from the large above-ground tank (Tank 22) to characterize its contents. The sample was submitted for U.S. EPA Method 418.1, U.S. EPA Method 8020, and total sulfide analysis. Analytical results indicated the product was comprised of large concentrations of TPH, BTXE compounds, and total sulfides (see Appendix B).

CONCLUSIONS

Based on visual observations of the SERVS site, analytical results of soil and product samples obtained, and discussions with on-site personnel, ANI concludes the following:

- The above-ground storage tanks appear in good physical condition and are presently empty. Product has been released to soils in the bermed containment area through loose fittings and leaking stopcocks, as evidenced by soil staining and strong petroleum odor. The extent of subsurface soil and possible groundwater contamination is unknown.

- Soil staining, strong petroleum odor, and analytical results of soil near product lines in the containment berm indicate product has been released outside of the bermed containment area. The extent of subsurface contamination is unknown but is likely centered around product lines which provide a transportation path.

- The exposed soils (due to the Alyeska excavation) encountered during the site visit on July 5, 1989, appeared to be heavily contaminated with petroleum hydrocarbons. Conversations with Mr. Dynhart indicate that the ADEC and Tesoro found contamination to extend approximately five to six feet below grade.

Unfortunately, no documentation regarding the extent of soil and possible groundwater contamination is available at this time.

- Analytical results of the soil sample obtained beneath the older, wooden-structure warehouse indicate that past storage of petroleum hydrocarbon materials has impacted the environment. The extent of soil or possible ground water contamination beneath the older warehouse is unknown.

- It is reported that a UST of unknown size, age, and construction was located on the SERVS Site. Phone conversations with ADEC personnel in Valdez, Alaska, indicate no report of closure is available.

RECOMMENDATIONS

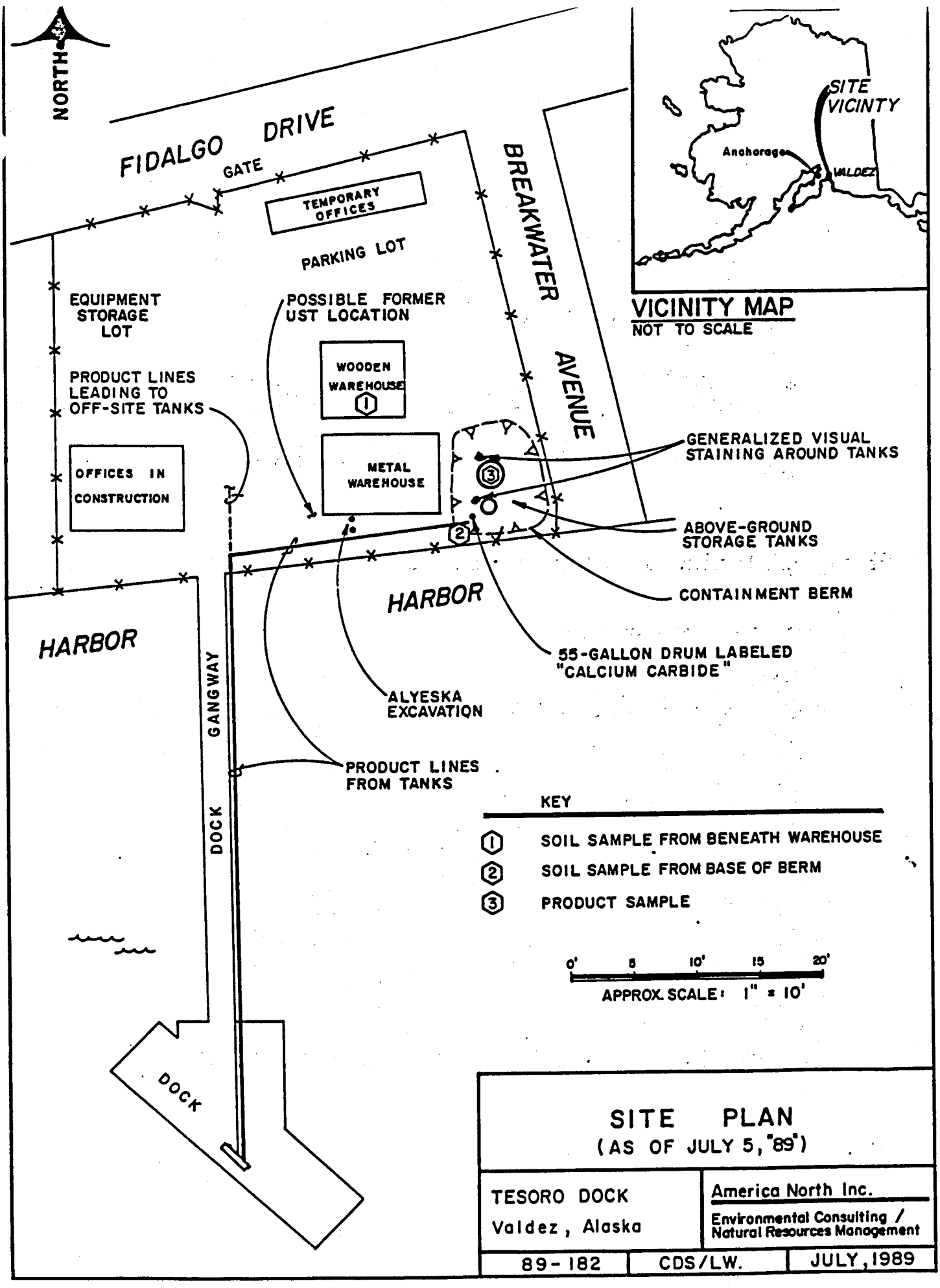
Based on the findings of this report, ANI recommends the following:

- The 55-gallon drum labeled as calcium carbide should be containerized in an overpack and sampled. After analytical results are obtained, the container and its contents should be disposed of in a proper manner in accordance with State and Federal Regulations. If the drum's contents are found to be calcium carbide, the drum and its contents should be disposed of as a hazardous waste.

- Further work is required to characterize the environmental condition of the SERVS site. Preliminary work includes the following:

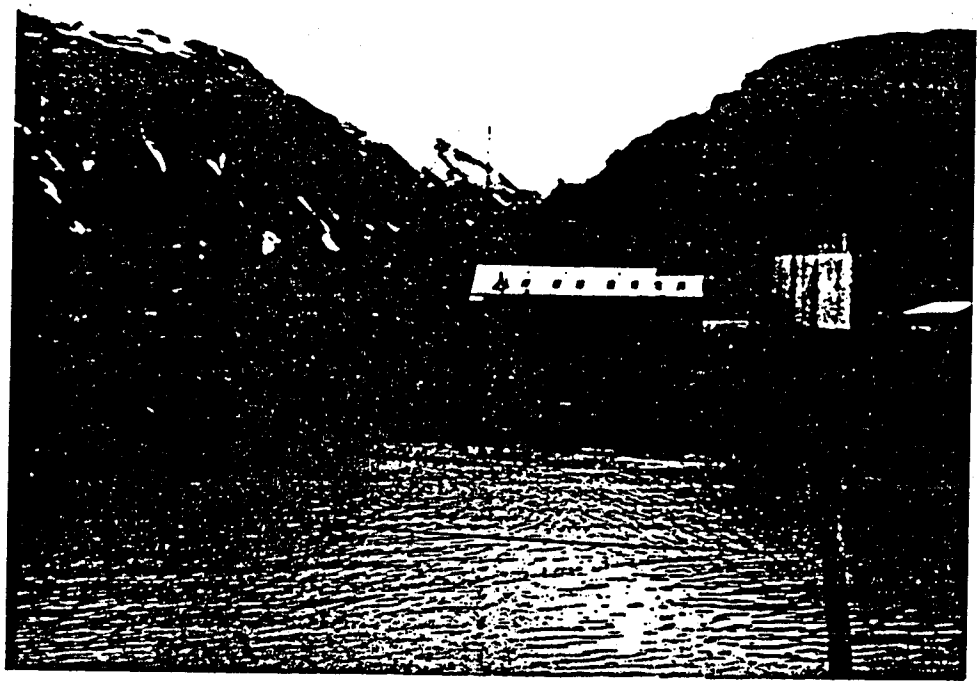
  - Soil sampling near the furnace area and beneath the old warehouse and submittal for PCB analysis.
  - Research on local ground water conditions.
  - Historical aerial photograph research to document past site activities.
  - Further research into the activities currently under way by Tesoro and the ADEC concerning the contaminated soils next to the old warehouse.
  - Installation of at least three ground water monitoring wells and associated development and sampling to document current ground water conditions beneath the site.

- Additional sampling of surface and subsurface soils, and ground water may be necessary at a later date.

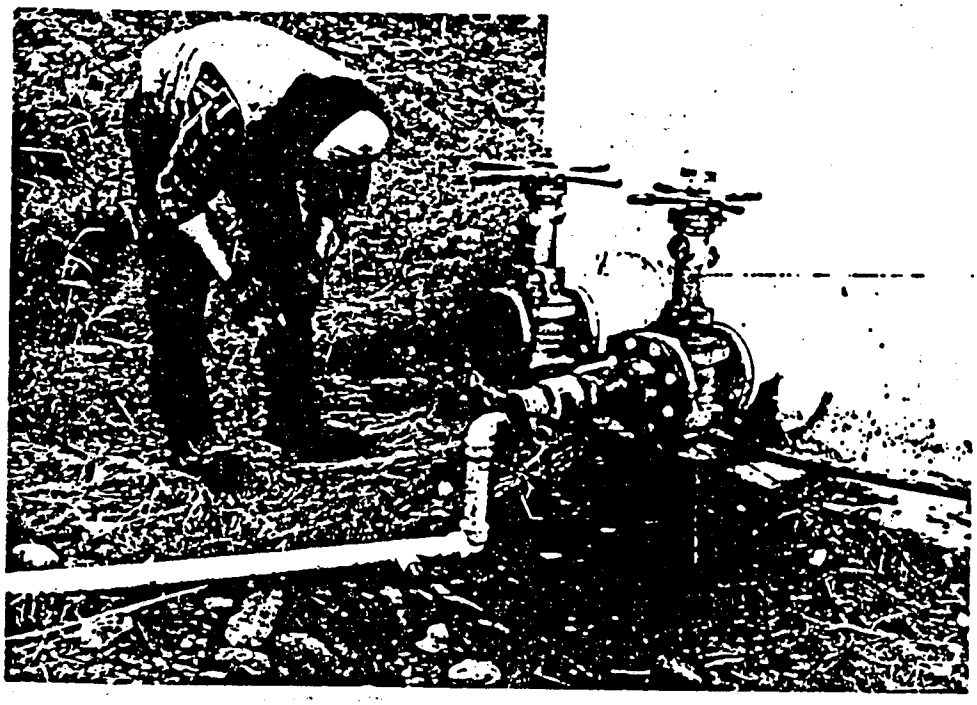


SITE PLAN
(AS OF JULY 5, "89")

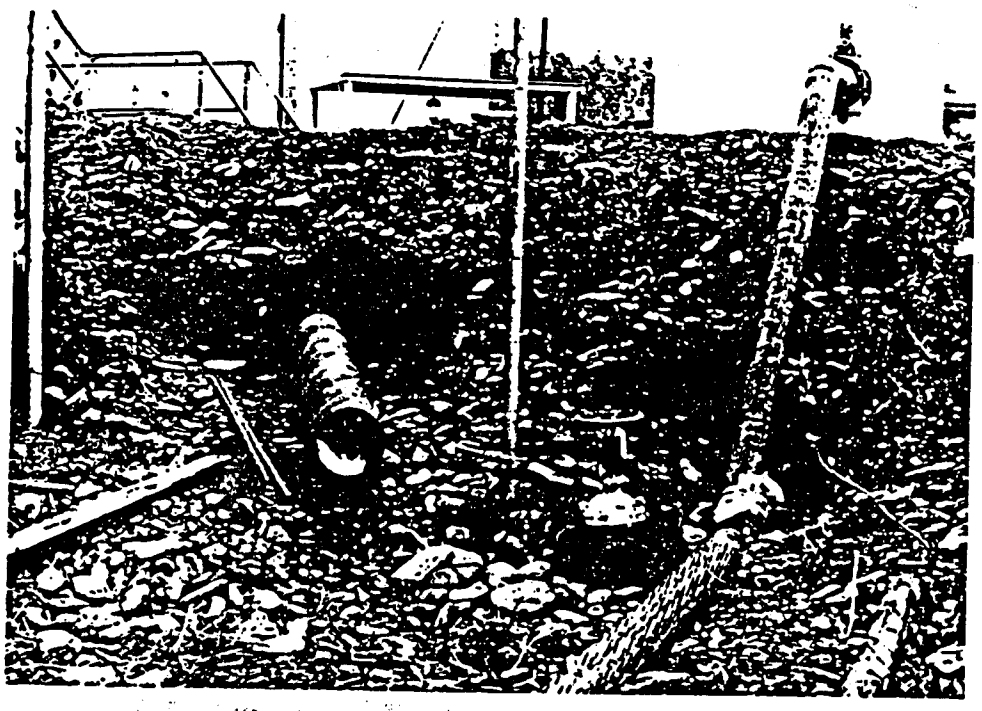
TESORO DOCK Valdez, Alaska	America North Inc. Environmental Consulting / Natural Resources Management	
89-182	CDS/LW.	JULY, 1989



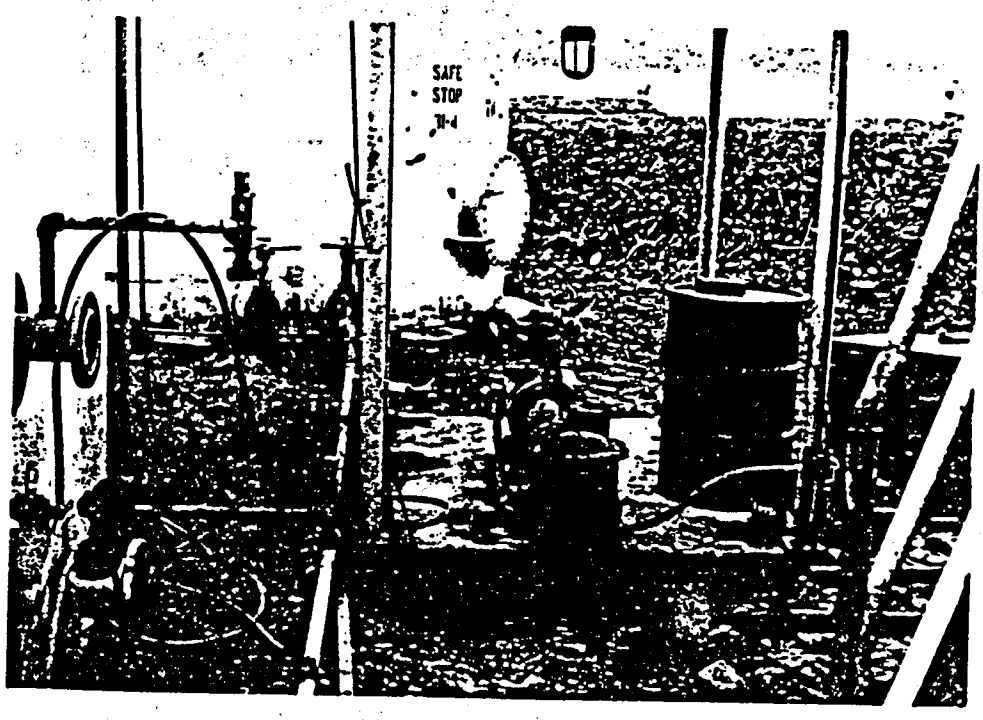
Photograph 1: SERVS Facility looking North.



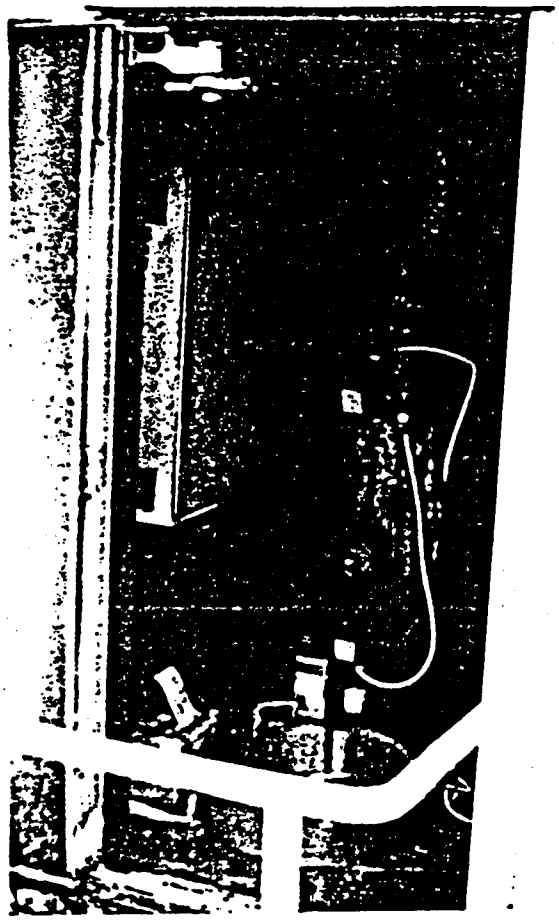
Photograph 2: Soil staining near above-ground tanks.



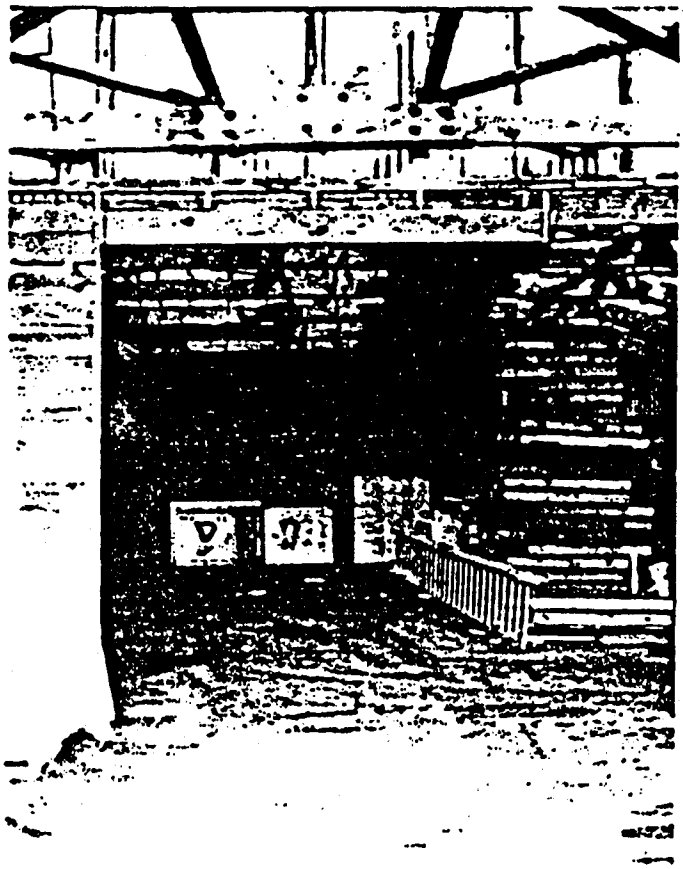
Photograph 3: Product lines exiting through containment berm.



Photograph 4: Location of 55-gallon drum labeled "calcium carbide."



Photograph 5: Furnace in Southwest corner of the metal warehouse.



Photograph 6: Older, wooden warehouse interior.

Environmental Consulting/Natural Resources Management

CHAIN OF CUSTODY RECORD

SURVEY: ...SORO Dock /Valdez

SAMPLERS: (Signature) [signature]

STATION NUMBER	STATION LOCATION	DATE	TIME	SAMPLE TYPE Soil Comp.	SAMPLE TYPE Soil Grab.	Air	SEQ. NO.	NO. OF CONTAINERS	ANALYSIS REQUIRED
#1	Large Slop Tank	5/29/	14:30		X			1	418.1 HAL Aromatics 8020 Sulfides
#2	Soil/Tank Farm Berm	5/29	14:45		X			1	418.1 HAL aromatics 8020
#3	Soil Beneath Wood Floored Warehouse	5/29	15:00		X			1	418.1 HAL aromatics 8020

Relinquished by: (Signature)	Received by: (Signature)	Date/Time
[signature]	[signature] 29 May 1545	3:35pm 5/29
[signature] 29 May 1550		
AIRBILL # 6110035 4?10		

Relinquished by: (Signature)	Received by Mobile Laboratory for field analysis: (Signature)	Date/Time

Dispatched by: (Signature)	Date/Time	Received for Laboratory by:	Date/Time

Method of Shipment:

CHEMICAL & GEOLOGICAL LABORATORIES OF ALASKA, INC.

5633 B STREET ANCHORAGE, ALASKA 99518 TELEPHONE (907) 562-2343
FEDERAL TAX ID # 92-0040440

ANALYSIS REPORT BY SAMPLE for Work Order # 13669
Date Report Printed: JUN 19 89 @ 13:11

Client Sample ID:LARGE SLOP TANK SLUDGE
PWSID :UA
Collected MAY 29 89 @ hrs.
Received MAY 29 89 @ 10:00 hrs.
Preserved with :NONE

Analysis Completed :JUN 16 89
Laboratory Supervisor :STEPHEN C. EDE
Released By : Stephen C. Ede

Client Name : AMERICA NORTH INC
Client Acct : AMERICP
P.O.# NONE REC'D
Req #
Ordered By : JIM AKINS

Send Reports to:
1)AMERICA NORTH INC
2)

Special Instruct: TESORO PACK/VALDEZ.

Chemlab Ref #: 5507 Lab Smpl ID: 1 Matrix: SOILS

Parameter Tested	Result/Units	Method	Allowable Limits
PETROLEUM HYDROCARBONS	187,000 mg/kg	EPA 418.1	
SULFIDES TOTAL	1620 mg/kg	EPSW846	
AROMATIC VOLATILE ORGANICS	n/a n/a	EPA 8020	NA
BENZENE	126 ppm	8020	
TOLUENE	485 ppm	8020	
ETHYLBENZENE	251 ppm	8020	
CHLOROBENZENE	ND(0.005) ppm	8020	
p & m XYLENES	548 ppm	8020	
o-XYLENE	421 ppm	8020	
1,4 DICHLOROBENZENE	ND(0.005) ppm	8020	
1,3 DICHLOROBENZENE	ND(0.005) ppm	8020	
1,2 DICHLOROBENZENE	ND(0.005) ppm	8020	

Sample Remarks: SAMPLE COLLECTED BY G.J.A.

12 Tests Performed
ND- None Detected
NA- Not Analyzed
* See Special Instructions Above
** See Sample Remarks Above
LT-Less Than, GT-Greater Than
UA-Unavailable

CHEMICAL & GEOLOGICAL LABORATORIES OF ALASKA, INC.

5633 B STREET ANCHORAGE, ALASKA 99518 TELEPHONE (907) 562-2343
FEDERAL TAX ID # 92-0040440

ANALYSIS REPORT BY SAMPLE for Work Order # 13669
Date Report Printed: JUN 19 89 @ 13:11

Client Sample ID:SOIL TANK FARM BERM
PWSID :UA
Collected MAY 29 89 @ 14:45 hrs.
Received MAY 29 89 @ 10:00 hrs.
Preserved with :NONE

Client Name : AMERICA NORTH INC
Client Acct : AMERICP
P.O.# NONE REC'D
Req #
Ordered By : JIM AKINS

Analysis Completed :JUN 16 89
Laboratory Supervisor :STEPHEN C. EDE
Released By : Steph C. Ede

Send Reports to:
1)AMERICA NORTH INC
2)

Special Instruct: TESORO PACK/VALDEZ.

Chemlab Ref #: 5507 Lab Smpl ID: 2 Matrix: SOILS

Parameter Tested	Result/Units	Method	Allowable Limits
PETROLEUM HYDROCARBONS	5.7 mg/kg	EPA 418.1	
AROMATIC VOLATILE ORGANICS	n/a n/a	EPA 8020	NA
BENZENE	ND(0.005) ppm	8020	
TOLUENE	ND(0.005) ppm	8020	
ETHYLBENZENE	ND(0.005) ppm	8020	
CHLOROBENZENE	ND(0.005) ppm	8020	
p & m XYLENES	ND(0.005) ppm	8020	
o-XYLENE	ND(0.005) ppm	8020	
1,4 DICHLOROBENZENE	ND(0.005) ppm	8020	
1,3 DICHLOROBENZENE	ND(0.005) ppm	8020	
1,2 DICHLOROBENZENE	ND(0.005) ppm	8020	

Sample Remarks: SAMPLE COLLECTED BY G.J.A.

11 Tests Performed
ND- None Detected
NA- Not Analyzed

* See Special Instructions Above
** See Sample Remarks Above
LT-Less Than, GT-Greater Than

UA-Unavailable

CHEMICAL & GEOLOGICAL LABORATORIES OF ALASKA, INC.

5633 B STREET ANCHORAGE, ALASKA 99518 TELEPHONE (907) 562-2343
FEDERAL TAX ID # 92-0040440

ANALYSIS REPORT BY SAMPLE for Work Order # 13669
Date Report Printed: JUN 19 89 @ 13:12

Client Sample ID:SOIL BENEATH WOOD FLOORED WAREHOUSE
PWSID :UA
Collected MAY 29 89 @ 15:00 hrs.
Received MAY 29 89 @ 10:00 hrs.
Preserved with :NONE

Analysis Completed :JUN 16 89
Laboratory Supervisor :STEPHEN C. EDE
Released By : Steph C. Ede

Client Name : AMERICA NORTH INC
Client Acct : AMERICP
P.O.# NONE REC'D
Req #
Ordered By : JIM AKINS

Send Reports to:
1)AMERICA NORTH INC
2)

Special Instruct: TESORO PACK/VALDEZ.

Chemlab Ref #: 5507 Lab Smpl ID: 3 Matrix: SOILS

Parameter Tested	Result/Units	Method	Allowable Limits
PETROLEUM HYDROCARBONS	13 mg/kg	EPA 418.1	
AROMATIC VOLATILE ORGANICS	n/a n/a	EPA 8020	NA
BENZENE	ND(0.005) ppm	8020	
TOLUENE	ND(0.005) ppm	8020	
ETHYLBENZENE	ND(0.005) ppm	8020	
CHLOROBENZENE	ND(0.005) ppm	8020	
p & m XYLENES	ND(0.005) ppm	8020	
o-XYLENE	ND(0.005) ppm	8020	
1,4 DICHLOROBENZENE	ND(0.005) ppm	8020	
1,3 DICHLOROBENZENE	ND(0.005) ppm	8020	
1,2 DICHLOROBENZENE	ND(0.005) ppm	8020	

Sample Remarks: SAMPLE COLLECTED BY G.J.A.

11 Tests Performed
ND- None Detected
NA- Not Analyzed

* See Special Instructions Above
** See Sample Remarks Above
LT-Less Than, GT-Greater Than

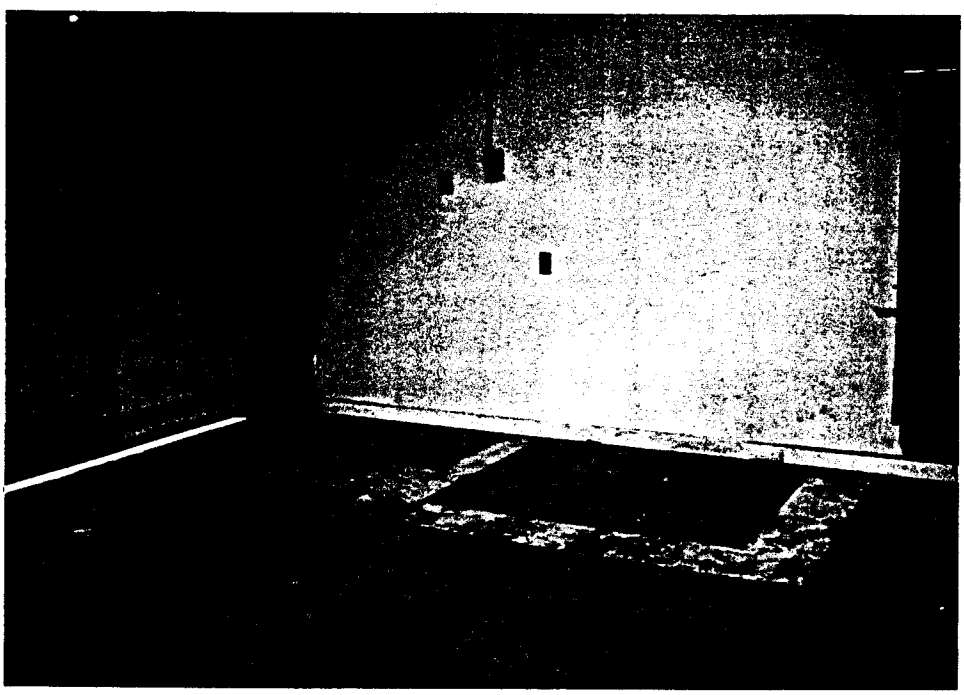
UA-Unavailable

APPENDIX B

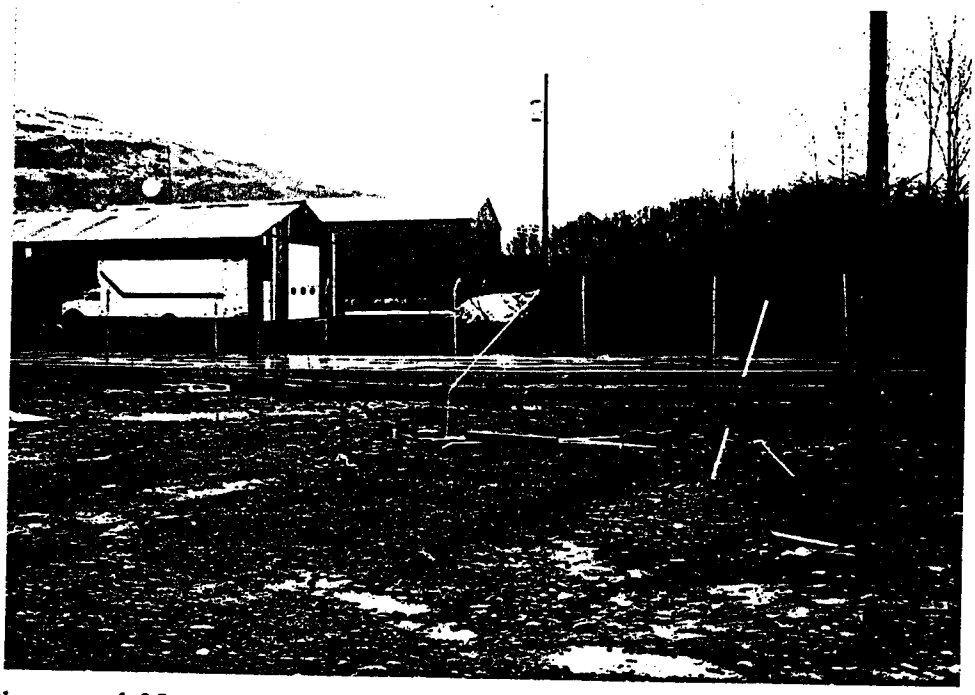
PHOTOGRAPHS OF THE SITE

Photograph No. 1: May 8, 1995; Heating oil AST next to Blue Building

Photograph No. 2: May 8, 1995; Surface soils in vicinity of AST with wrapped pipes next to Blue Building



Photograph No. 3: January 24, 1995; Former satellite accumulation point inside Blue Building



Photograph No. 4: May 8, 1995; Former POL Building Location

Photograph No. 5: May 8, 1995; Silver and Blue Buildings

Photograph No. 6: May 8, 1995; Small material stockpile with open parking area behind