KLEINFELDER
An employee owned company

July 11, 2005
File No.: 56130

Mr. Don Mellott
Director of Civil Engineering
BCRA
2106 Pacific Avenue, Suite 300
Tacoma, WA 98402

SUBJECT: Reliance Letter
Phase I Environmental Site Assessment Report
Proposed Retail Site (No. 4265-00)
2119 Mildred Street West
Fircrest, Washington

Dear Mr. Mellott:

Per your request, Kleinfelder, Inc. (Kleinfelder) is pleased to provide this reliance letter to Wal-Mart Stores, Inc. (Wal-Mart) for the May 25, 2005 Phase I Environmental Site Assessment (ESA) report prepared by Kleinfelder, Inc. for the above-referenced project. The report was prepared under contract between BCRA and Kleinfelder.

The following report may be relied upon by Wal-Mart, however, by accepting, Wal-Mart agrees that any use or reliance it places on the report shall be limited to the qualifications and limitations stated within the report and to the Terms and Conditions of the applicable project specific subconsultant agreement between Kleinfelder and BCRA:

- Phase I Environmental Site Assessment, Proposed Retail Site (No. 4265-00), 2119 Mildred Street West, Fircrest, Washington. Kleinfelder Project No. 56130, dated May 25, 2005.

Wal-Mart shall also acknowledge that actual site conditions may change with time; that hidden conditions, not discoverable within the scope of the project, may exist at the site; and that the scope of the investigation was limited by time, budget and other constraints outlined in the report. Regardless of the findings of Kleinfelder's assessment, Kleinfelder makes no warranty that the site is free from existing or threatened pollution and Kleinfelder is not responsible for consequences or conditions arising from facts that were concealed, withheld or not fully disclosed at the time the project was conducted.

KLEINFELDER 2405 140th Avenue NE, Suite A101, Bellevue, WA 98005 (425) 562-4200 (425) 562-4201 fax

In the preparation of the report and in the assembling of data and information related thereto, Kleinfelder represents to Wal-Mart that it has used the degree of care and skill ordinarily exercised by geotechnical and environmental consultants. No other warranties, expressed or implied, are made.

Kleinfelder appreciates the opportunity to be of service to you in this matter. Please do not hesitate to contact us at (425) 562-4200 or John Mancini, Kleinfelder's Client Service Manager for BCRA at (801) 261-3336, if you have any questions or require further information.

Sincerely,

KLEINFELDER, INC.

for Joel Carson, Senior Associate
Washington Area Manager

cc: John Mancini, Kleinfelder, Salt Lake City, UT

KLEINFELDER 2405 140th Avenue NE, Suite A101, Bellevue, WA 98005 (425) 562-4200 (425) 562-4201 fax

KLEINFELDER
An employee owned company

May 25, 2005
Kleinfelder Project No: 56130

Mr. Don Mellott, P.E.
Director of Civil Engineering
BCRA
2106 Pacific Avenue, Suite 300
Tacoma, WA 98402

Subject: **Phase I Environmental Site Assessment**
Proposed Retail Site (No. 4265-00)
2119 Mildred Street West
Fircrest, Washington

Dear Mr. Mellott:

Kleinfelder, Inc. is pleased to present the attached report of findings and conclusions resulting from our Phase I Environmental Site Assessment (ESA) performed for the above-referenced site located in Fircrest, Washington. This ESA was performed in accordance with our February 16, 2005 Phase I ESA proposal (No. 54199).

This assessment has revealed evidence of a recognized environmental condition in connection with the subject property. In summary, there exists the possibility that soil and groundwater at the property may have been impacted with hazardous materials associated with the site's past industrial use by Metal Marine Pilot, Inc. Details and recommendations concerning the identified environmental issues at the site are summarized in the body of the report.

We appreciate this opportunity to provide our services to you. Should you require additional information or have any questions regarding this report, please feel free to contact us at (425) 562-4200, or John Mancini (Kleinfelder's Senior Client Service Manager to BCRA) at (801) 261-3336.

Sincerely,
KLEINFELDER, INC.

Ted W. Sykes
Project Manager

Kevin G. Lakey, PE, LHG
Environmental Services Manager

Attachment: May 2005 Phase I Environmental Site Assessment Report

KLEINFELDER 2405 140th Avenue NE, Suite A101, Bellevue, WA 98005 (425) 562-4200 (425) 562-4201 fax

Prepared for:
BCRA
2106 Pacific Avenue, Suite 300
Tacoma, Washington 98402

Phase I Environmental Site Assessment
Proposed Retail Site (No. 4265-00)
2119 Mildred Street West
Fircrest, Washington

Prepared by:

Ted W. Sykes
Project Manager

Reviewed by:

Kevin G. Lakey, PE, LHG
Environmental Services Manager

Kleinfelder, Inc.
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Kleinfelder Project No.: 56130

May 25, 2005

TABLE OF CONTENTS

TABLES

FIGURES

APPENDICES

APPENDICES (CONT'D)

1.0 INTRODUCTION

1.1 PURPOSE

Kleinfelder conducted a Phase I Environmental Site Assessment (ESA) of the *Proposed Retail Site (No. 4265-00)* located at 2119 Mildred Street West in Fircrest, Washington (as shown in Figure 1). In this report, this property will be referred to as "the site", "subject site", "subject property", or "proposed retail site".

Kleinfelder understands the information contained in this report will be used by BCRA and its client (The Client) to better understand environmental conditions associated with the site's past and current use. Kleinfelder performed this ESA in general accordance with The Client's October 1, 2004 *Phase I Environmental Site Assessment and Report Requirements* and May 22, 2000 *Supplement to Phase I Guidelines (When Buildings Are Present)*. Additionally, this ESA was performed in accordance with our February 16, 2005 Phase I ESA proposal (No. 54199), and in general accordance with the scope and limitations of the ASTM Standard Practice for *Phase I Environmental Site Assessments: Environmental Site Assessment Process* E 1527-00.

The purpose of this assessment is to assist BCRA and The Client in recognizing "environmental conditions" at the site. A recognized environmental condition is defined by the ASTM standard as "the presence or likely presence of *hazardous substances or petroleum products* on a *property* under conditions that indicate an existing release, a past release, or a material threat of a release of *hazardous substances or petroleum products* into structures on the *property* or into the ground, groundwater or surface water of the *property*. The term includes *hazardous substances or petroleum products* even under conditions in compliance with laws. The term is not intended to include *de minimis* conditions that generally do not present a material risk of harm to public health or the environment and that generally would not be the subject of an enforcement action if brought to the attention of appropriate governmental agencies. Conditions determined to be *de minimis* are not *recognized environmental conditions*."

This Phase I Environmental Site Assessment was conducted by Ted W. Sykes of Kleinfelder, a professional experienced with environmental site assessments. Mr. Sykes' resume is presented in Appendix A of this report.

A reconnaissance of the subject site and surrounding properties was performed by Kleinfelder on April 11th and April 13th, 2005. Information obtained during the site reconnaissance, as well as information obtained at public agencies reviewed by Kleinfelder, was used to complete the Phase I ESA investigation.

1.2 SCOPE-OF-SERVICES

The following sections describe Kleinfelder's scope of services:

- Section 1, **Introduction**, includes a discussion of the purpose/reason for performing the Phase I ESA; additional services requested by the client (e.g. an evaluation of business environmental risk factors associated with the property); significant assumptions (e.g. property boundaries if not marked in the field); limitations, exceptions, and special terms and conditions (e.g. contractual); and user reliance parameters.

- Section 2, **Site Setting**, is a compilation of information concerning the site's location, legal description (if available), current and proposed use of the site, a description of structures and improvements on site at the time of Kleinfelder's assessment, and current uses of adjoining properties.

- Section 3, **Records Review**, is a compilation of Kleinfelder's review of several databases available from federal, state, and local regulatory agencies regarding hazardous substance use, storage, or disposal at the site; and for off-site facilities up to a mile radius from the site. Environmental liens or activity and use limitations are included in this chapter. A copy of the regulatory agency database report is included as Appendix B.

- Section 4, **History of the Site**, summarizes the history of the site and adjoining properties. This history is based on various sources which may include a review of: aerial photographs, Sanborn Fire Insurance Maps, city or suburban directories, historical topographic maps, Metsker's Atlas maps, previous assessments, and a chain-of-title/a preliminary title report (if provided by the client).

- Section 5, **Business Environmental Risk Considerations**, includes the results of Kleinfelder's limited evaluation of asbestos-containing materials, lead-based paints, wetlands, polychlorinated biphenyls (PCBs), mercury vapor containing equipment, radon, industrial hygiene issues, high voltage power lines, health and safety, lead in drinking water, regulatory compliance, ecological resources, wildlife sanctuaries, endangered species, and cultural, historical and archeological resources.

- Section 6, **Evaluation**, is a presentation of our findings and opinions regarding the information in Sections 2 through 5; and presents our conclusion regarding the presence of environmental conditions of concern at the site.

- Section 7, **References**, is a summary of the resources used to compile this report.

1.3 ADDITIONAL SERVICES

In accordance with the Client's October 1, 2004 *Phase I Environmental Site Assessment and Report Requirements* and May 22, 2000 *Supplement to Phase I Guidelines (When Buildings Are Present)*, a limited evaluation of the following select Business Environmental Risk Considerations (BERCs) associated with the site were included in Kleinfelder's scope of services:

- Asbestos-containing materials (ACMs)
- Lead-based paints (LBPs)
- Wetlands
- Cultural, historical and archeological resources
- Ecological Resources, wildlife sanctuaries, and endangered species
- Polychlorinated biphenyls (PCBs)
- Mercury vapor containing equipment (MCEs)
- Radon
- Industrial hygiene
- High voltage power lines
- Regulatory compliance
- Health and safety
- Lead in drinking water

Kleinfelder's scope of services included evaluating the presence, location, and condition of suspect ACMs and LBPs by collecting samples from building materials and paint applications at the site for laboratory analysis. Additionally, the presence and location of PCB-containing equipment (e.g. electrical transformers) and mercury-containing equipment (e.g. fluorescent light fixture bulbs) was determined by visually inspecting external labels indicating either PCB or mercury content. Collecting samples for PCB or mercury content analysis was not part of the scope of services during this assessment.

Kleinfelder's evaluation for the presence of wetlands, cultural, historical and archeological resources, ecological resources, wildlife sanctuaries, endangered species, radon, industrial

hygiene issues, high voltage power lines, health and safety, regulatory compliance, and lead in drinking water at the subject site was limited to reviewing information on-file with the City of Fircrest Planning and Building Department, Pierce County Planning and Land Services Department, and reviewing maps obtained from public databases such as Environmental Data Resources.

This assessment did not incorporate any other BERCs not mentioned above.

1.4 LIMITATIONS AND EXCEPTIONS

Phase I ESAs are non-comprehensive by nature and are unlikely to identify all environmental problems or eliminate all risk. The attached report is a qualitative assessment. Kleinfelder offers a range of investigative and engineering services to suit the needs of our clients, including more quantitative investigations. Although risk can never be eliminated, more detailed and extensive investigations yield more information, which may help you understand and better manage your risks. Since such detailed services involve greater expense, we ask our clients to participate in identifying the level of service, which will provide them with an acceptable level of risk. Please contact the signatories of this report if you would like to discuss this issue of risk further.

Kleinfelder performed this ESA in general accordance with the Client's October 1, 2004 *Phase I Environmental Site Assessment and Report Requirements* and May 22, 2000 *Supplement to Phase I Guidelines (When Buildings Are Present).* Additionally, this ESA was performed in general accordance with the scope and limitations of the ASTM Standard Practice for *Phase I Environmental Site Assessments: Environmental Site Assessment Process* E 1527-00. No warranty, either express or implied is made. Environmental issues not specifically addressed in the report were beyond the scope of our work and not included in our evaluation.

Land use, site conditions (both on-site and off-site) and other factors will change over time. Since site activities and regulations beyond our control could change at any time after the completion of this report, our observations, findings and opinions can be considered valid only as of the date of the site visit. This report should not be relied upon after 180 days from the date of its issuance (ASTM Standard E-1527, Section 4.6).

1.5 USER RELIANCE

Provided Kleinfelder's report is still reliable (as determined by Kleinfelder), Kleinfelder may issue a third-party reliance letter to a party, other than BCRA and its client (The Client), identifying in writing under the following conditions: that the third party, including BCRA and The Client's successors and assigns, by such reliance, agree in writing to be bound by Terms and

Conditions of the contract between BCRA and Kleinfelder, Inc. Please see the "Third Party Reliance Letter" form in Appendix P.

Based on the intended use of the report, Kleinfelder may require that additional work be performed and that an updated report be issued. Non-compliance with any of these requirements by BCRA, The Client, or anyone else will release Kleinfelder from any liability resulting from the use of this report by any unauthorized party.

2.0 SITE SETTING

The site setting was evaluated for the potential of on- and off-site contaminant migration, if present. The site location is shown on Figure 1. The site plan is presented on Figure 2. The proposed site development plan is presented on Figure 3. Tables 1 through 3 provide the physical characteristics of the site and bordering properties. Selected photographs of the site area are presented in Appendix C.

2.1 LOCATION AND LEGAL DESCRIPTION

The information presented in Table 1 describes the physical location and legal description of the site. This information was obtained from observations made during the site reconnaissance and information obtained from maps, public agency records, and interviews.

TABLE 1
LOCATION AND LEGAL DESCRIPTION

SITE NAME	Metal Marine Pilot, Inc.
SITE ADDRESS	2119 Mildred Street West, Fircrest, Washington 98466.
LOCATION	Approximately 300 feet north of the intersection between Mildred Street West and Regents Boulevard, in the City of Fircrest, Pierce County, State of Washington.
NUMBER OF SITE PARCELS	One.
ASSESSOR'S PARCEL NUMBER (APN)	0220112005.
TOWNSHIP & RANGE	Township 20 North, Range 2 East, Section 11.
ACREAGE	Approximately 9.49 acres of land total.
ZONING USE	Community Commercial (CC).

2.2 GENERAL SITE SETTING

The subject site is located along the northwest end of Fircrest City limits, approximately 300 feet north of the intersection between Mildred Street West and Regents Boulevard (Figure 1). The subject site consists of one square shaped parcel comprising a total of approximately 9.49-acres of land area (Figure 2). The site's approximate elevation ranges between 311 to 342 feet above mean sea level. The terrain appeared to relatively level and contains a steep sloped area along the eastern boundary. A stormwater drainage ditch and two small sedimentation ponds were observed along the sloped area to convey stormwater runoff into a nearby municipal stormwater system. The site's topography generally appeared to slope towards the east and southeast.

The central and eastern portions of the site are currently undeveloped and contain an unknown quantity of imported fill material that was deposited throughout the central and eastern portions of the site on several occasions between 1972 and 2000. Reportedly, the fill was obtained to bury a low-lying flooded area formerly existing along the east end of the site. Mr. Michael Freeman, a site owner representative, stated that the fill originated from several nearby commercial development and roadway construction projects and there were no visual signs indicating that the fill may have been potentially impacted by hazardous materials. According to Mr. Freeman, the fill material was not tested for contaminants prior to being deposited on the property.

Developments at the site consist of a large industrial building and two smaller detached structures (a spray painting shed and a paint storage shed) located along the northwest end of the property. Concrete foundations associated with two former sheds that were removed from the site (approximately four years ago) are also present along the northwest end of the property. The industrial building and sheds are currently unoccupied and were observed storing the site owner's personal property, as well as an assortment of equipment, tools, machinery, and supplies that were formerly used in conjunction with past industrial activities at the site.

Hazardous materials noted within the industrial building included several 55-gallon drums storing motor and hydraulic oils and several smaller containers storing alcohol, paint thinner, kerosene, and an assortment of cleaning solvents (e.g. methyl ethyl ketone). Hydraulic oil residue and a large stained area were noted on the concrete floor within the "Hydraulic Room" of the industrial building. Metal shavings and minor floor staining was also noted on concrete floor areas around some of the equipment within the machine shop and lathe room areas of the industrial building.

Several empty containers that once stored oils, lacquers, thinners, paints, solvents, and other chemicals were observed stacked in a pile along the east side of the industrial building's exterior. Additionally, an empty perchloroethylene aboveground storage tank, several used appliances, wood boxes, drums storing scrap metal, two flat-bed trailers, and other miscellaneous materials were staged in areas between the industrial building and the detached sheds. No visible signs of leaks or stains were noted around the bases of the aboveground storage tank and empty hazardous materials containers.

Other improvements at the site consist of asphalt paved and gravel paved driveways, parking lots, and areas dedicated for landscaping. The industrial building was constructed during 1959 and

the detached sheds were constructed at unknown dates following 1959. Prior to 1959, the subject site was undeveloped/vacant land.

Historical records and information obtained while interviewing Mr. Freeman indicate that Metal Marine Pilot, Inc. occupied the site from 1959 until it ceased operations sometime during 2000. Metal Marine Pilot used the site to design, manufacture, clean, test, and repair marine automatic pilots and other marine navigational aids, such as compasses. Hazardous materials reportedly used by Metal Marine Pilot in conjunction with their site operations included reportable quantities of detergents, kerosene, paints, thinners, varnishes, stains, acids, glues, alcohols, aluminum coatings, hydraulic oil, and an assortment of cleaning solvents (trichloroethylene, perchloroethylene, methyl ethyl ketone, etc.).

Hazardous wastes formerly generated at the site included used solvents, scrap metal, and sludge mixtures derived from washing and cleaning marine automatic pilot parts.

During the course of Metal Marine Pilot's use of the site (1959 to 2000), there have been several reported instances where hazardous materials were discharged or buried along the central and eastern portions of the site. There were also records indicating that four underground storage tanks (USTs) were removed and tetrachloroethene (PCE) impacted soil located in the central portion of the site (adjacent to the loading dock) had been remediated during the late 1990s. These environmental issues are summarized in seven environmental investigation and remediation reports previously completed for the site (see Section 4.8 for details). Mr. Freeman's recollection of these issues is also summarized in Section 4.7.

Site area groundwater information is presented in Table 2 (see next page).

TABLE 2
REGIONAL GROUNDWATER INFORMATION

DEPTH TO REGIONAL GROUNDWATER AND DIRECTION OF ANTICIPATED FLOW (Source: Kleinfelder, Inc. and Mr. Brad Harp, Hydrogeologist with the Pierce County Environmental Health Department)	According to information obtained from Kleinfelder's Geotechnical Investigation of the site (performed simultaneously with this assessment), depth to intermittent perched groundwater at the site ranges between 6 to 23 feet below the ground surface (bgs). Groundwater depth may be influenced by local pumping, rainfall, and irrigation patterns. The estimated shallow groundwater flow direction at the site area is towards the east and southeast. According to Mr. Harp (Hydrogeologist with Pierce County Environmental Health Department), depth to the regional groundwater aquifer in the site area ranges between 100 to 120 feet bgs. The estimated direction of groundwater flow within the aquifer is towards the west.
REGIONAL GROUNDWATER QUALITY PROBLEMS (Source: Mr. Brad Harp (Pierce County Environmental Health Department), Washington Department of Ecology, and City of Fircrest Planning and Building Department)	Regional groundwater quality problems were not revealed during Kleinfelder's assessment. According to Mr. Harp, the subject site is located within the Clover-Chambers Hydrogeologic Creek Basin, an area designated as a groundwater aquifer recharge protection zone.

2.3 CURRENT/PROPOSED USE OF THE PROPERTY

According to the Pierce County Assessor – Treasurer's Department, Robert & Ethel Freeman LLC (C/o Janet E. Freeman-Daily), 3512 S.W. 310th Court, Federal Way, Washington 98023-2119 is on record as the current site owner. An environmental questionnaire prepared by Ms. Freeman-Daily (see Appendix F) indicated that Mr. & Mrs. Robert Freeman purchased the site during 1953. The site was reportedly undeveloped prior to 1953.

The proposed development of the site will consist of a commercial building and associated parking lot areas. Current and proposed uses are described in Table 3 below.

TABLE 3
CURRENT/PROPOSED USES

CURRENT USE	Undeveloped/vacant land and a large industrial building (with two detached sheds) used to store the site owner's family property and equipment, machinery, tools, and supplies that were formerly used by Metal Marine Pilot when they occupied the site.
PROPOSED USE	Commercial building and associated parking lot areas.

2.4 DESCRIPTION OF STRUCTURES/IMPROVEMENTS

Structures and/or improvements observed on site at the time of Kleinfelder's site reconnaissance are described in Table 4 (see below).

TABLE 4
STRUCTURES/IMPROVEMENTS

	GENERAL OBSERVATIONS
STRUCTURES	The industrial building is a one-story, steel framed structure constructed on a slab-on-grade concrete foundation. The interior finishes of the building include vinyl floor tiles, sheet vinyl flooring material, acoustic ceiling tiles, sheetrock, and carpeting. The building's roof and most of the building's exterior walls are covered with corrugated metal panels. The building provides approximately 20,000 square feet of usable space and was constructed in 1959. The detached spray painting and paint storage sheds (located immediately east of the industrial building) are both one-story, metal frame structures which were formerly used to support operations within the industrial building. Both sheds contain corrugated metal siding and roofs. No building finish materials were noted within the sheds.
IMPROVEMENTS	An asphalt paved driveway and parking lot is located along the west end of the industrial building, abutting Mildred Street West. A gravel road and asphalt paved areas abut the industrial building along its east side. Chainlink fencing nearly surrounds the site. A stormwater conveyance and two small sedimentation ponds are located along the eastern boundary of the site.

2.5 CURRENT USES OF ADJOINING PROPERTIES

Kleinfelder conducted a drive-by survey of the parcels adjoining the site on the same day as the site reconnaissance. A summary of the surrounding properties is presented on Table 5 (see below).

TABLE 5
SURROUNDING PROPERTIES

North	Several retail establishments, commercial offices, and light industrial buildings.
South	Two office buildings and a Columbia Bank facility.
East	Multi-family apartment buildings.
West	Across Mildred Street West: Several commercial/retail establishments (Wendy's, Dairy Queen, Ale House Pub & Eatery, The Keg Steakhouse & Bar, and a Jiffy Lube).

The surrounding land use north of the subject property consists of a building occupied by an assortment of retail tenants, as well as two light-industrial and commercial office buildings.

According to historical records, the neighboring property located immediately north of the subject site (formerly occupied by Pace Industries (Pace)) had impacted the subject site with an unknown quantity of paraffin based lubricating oil. Reportedly the paraffin oil was discharged from a broken PVC pipe along the south end of Pace's property on April 26, 1999 and migrated onto the north and east ends of the subject site. The oil release and associated impacted soil was reportedly cleaned up at the subject site by Pace. However, according to a November 2000 Phase II Environmental Site Assessment Addendum report completed by Creative Environmental Technologies, elevated concentrations of heavy oil range hydrocarbons (attributed to the paraffin oil release) remain along the northern property boundary. See Sections 3.1.2 and 4.8 for details.

The surrounding land use south and west of the subject property are currently developed with commercial office and retail establishments. There were no available records on-file with the public agencies reviewed indicating that the neighboring properties south and west of the site had impacted soil and/or groundwater with hazardous materials.

The surrounding land use east of the subject property consists of a multi-family apartment complex. There were no available records on-file with the public agencies reviewed indicating that the neighboring apartment complex property had impacted soil and/or groundwater with hazardous materials.

3.0 RECORDS REVIEW

3.1 STANDARD ENVIRONMENTAL RECORD SOURCES

The purpose of the records review is to identify recognized environmental conditions of potential concern in connection with the subject site and surrounding properties.

Federal, state, and local regulatory agencies publish databases or "lists" of businesses and properties that handle hazardous materials or hazardous waste, or are the known location of a release of hazardous substances to soil and/or groundwater. These databases are available for review and/or purchase at the regulatory agencies, or the information may be obtained through a commercial database service. Kleinfelder retained a commercial database service, Environmental Data Resources, Inc. (EDR), to review the regulatory agency lists for references to the subject site and other off-site listings within the appropriate ASTM minimum search distances. The EDR database search results for the subject site and for other nearby facilities are contained in the EDR Radius Map with Geo-Check Report included in Appendix B, Regulatory Agency Database Report. The federal and state databases reviewed along with the number of sites plotted in each database category are summarized in Table 6 (see next page).

The EDR report identified several unmappable sites in the site area that are listed as "orphan sites" and are not plotted on EDR maps. Wherever possible, Kleinfelder attempted to identify locations of orphan sites and include them in the discussion, as appropriate.

TABLE 6
RECORDS REVIEW-SEARCH DISTANCE-FINDINGS

FEDERAL		Total Number of Facilities Listed	Number of Upgradient or Adjacent Facilities Listed	Site Listed
NPL (National Priority List)	Site & 1 Mile	0	0	No
CERCLIS (Comprehensive Environmental Response, Compensation, and Liability Act Information System)	Site & 0.5 Mile	0	0	No
CERCLIS NFRAP (No Further Remedial Action Planned)	Site & 0.25 Mile	0	0	No
RCRA (Resource Conservation and Recovery Act) **CORRACTS** (Corrective Actions Sites)	Site & 1 Mile	0	0	No
RCRA non-CORRACTS TSD (Transfer Storage and Disposal Sites)	Site & 0.5 Mile	0	0	No
RCRA GENERATORS	Site & 0.25 Mile	8	3	Yes
ERNS (Emergency Response Notification System Listings)	Subject Site	0	0	No
STATE				
CSCSL (Confirmed and Suspected Contaminated Sites List)	Site & 1 Mile	5	1	Yes
SPILLS (Hazardous Materials Spills Database)	Subject Site	1	0	Yes
VCP (Voluntary Cleanup Program Sites)	Site & 0.5 Mile	3	1	Yes
LUST (Leaking Underground Storage Tank Sites)	Site & 0.5 Mile	5	1	No
WA ICR (Washington State Independent Cleanup Reports)	Site & 0.5 Mile	5	1	No
UST (Registered Underground Storage Tank Sites)	Site & 0.25 Mile	7	1	Yes

3.1.1 Subject Site

According to the EDR database report, the subject site is recorded on the SPILLS, RCRA Generators, CSCSL (no further action planned), UST, and VCP lists. Available records on-file with Ecology and information contained in previous environmental investigation and remediation

reports concerning the subject site, indicated that the subject property had been impacted by hazardous materials from the site's former use by Metal Marine Pilot, Inc. See Sections 4.7 and 4.8 for details.

3.1.2 Off-Site Facilities

According to the "Orphan Summary" Section of EDR's database report, the neighboring property north of the site (former Pace Industries site) is a recorded CSCSL and VCP site. Pace Industries operated as a die-cast manufacturing facility until they ceased operations sometime during the late 1990s. Ecology records indicated that the die-casting activities resulted in releases of PCBs, diesel and heavy oil range hydrocarbons into the soil at the Pace Industries property. During the mid 1990s, approximately 30 cubic yards of impacted soil was excavated underneath used oil collection sumps located along the southern portion of Pace's property. Reportedly, soil was excavated to a depth of approximately 11 feet bgs and confirmatory soil samples were collected from the bases and sidewalls of the excavations. Petroleum hydrocarbons and PCBs that were detected in soil samples at concentrations greater than MTCA Method A cleanup levels were left in place underneath some sections of Pace's building and adjacent to the underground collection sumps due to building-related structural concerns. Groundwater was reportedly not encountered during excavation activities.

During subsequent environmental investigation activities within Pace's building, impacted soil was encountered from depths ranging between nine to eighteen feet below the ground surface. Subsequently, Pace Industries was granted a "No Further Action" status from Ecology, along with a restrictive covenant. The restrictive covenant permitted the continued use of the Pace Industries property without removing the remaining impacted soil underneath the building. However, the restrictive covenant indicated that additional soil remediation would be required should there be any future redevelopment of the Pace Industries property.

There were no records on-file with Ecology regarding the April 1999 paraffin oil release at the Pace Industries site that impacted the subject property. According to Mr. Freeman, Pace Industries has not excavated the remaining area of paraffin oil impacted soil identified along the northern property boundary during Creative Environmental Technologies' November 2000 Phase II ESA (Addendum) investigation. See Section 4.8 for details.

Excluding the subject site and the neighboring Pace Industries property, three CSCSL sites, one VCP site, five LUST sites, five WA ICR sites, six UST sites, and six RCRA Small Quantity Waste Generator sites were identified on the EDR database report within the specified search distance. One of these sites, Minit-Lube No. 1112 (2218 Mildred Street West) appeared to be

upgradient with respect to the subject property. Nevertheless, the potential for the Minit-Lube site, as well as the other sites listed on the EDR database, to impact the subject property is considered low, since none of them are on record as having impacted groundwater with hazardous materials.

Excluding the neighboring Pace Industries site, there were no facilities listed on EDR's Orphan Summary of unplottable facilities located within the corresponding ASTM search distances from the subject property.

3.2 ADDITIONAL AGENCY ENVIRONMENTAL RECORDS

Local regulatory agencies were contacted for reasonably ascertainable and practically reviewable documentation regarding recognized environmental conditions present at the site and surrounding properties. Table 7 (see below) summarizes the agencies contacted for documentation:

TABLE 7
AGENCY RECORDS SUMMARY

	AGENCY	DATE	CONTACT NAME	PHONE	TYPE OF INFORMATION
City	City of Fircrest Planning & Building Department	April 13, 2005	Lisa Keely	(253) 238-4135	Permit and Parcel Map Information, Zoning Codes, Hazardous Materials Records, Critical Areas Records, and Historical Site Use Information.
City	City of Fircrest Public Works Department	April 13, 2005	Mark Burlingame	(253) 564-8900	Historical Site Use Information, Well Records, Septic Tank Records, and Critical Areas Records.
City	City of Fircrest Fire Department	April 13, 2005	Linda Bowen	(253) 591-5737	UST and Hazardous Materials Records.
County	Pierce County Planning and Land Services Department	April 14, 2005	Michelle Smith	(253) 798-3728	Building and Parcel Information, and Critical Areas Records.
County	Pierce County Environmental Health Department	April 14, 2005	Brad Harp	(253) 798-2891	Regional Groundwater Information
State	Washington State Department of Ecology	April 26, 2005	Leslie Koziara	(360) 407-6305	Groundwater Well Records, Hazardous Materials Records, Off-Site Release Records, & Underground Storage Tank Records.

City of Fircrest Planning & Building Department (CFPBD):

Records on-file with the CFPBD indicated that the subject site consists of one parcel comprising a total of approximately 9.5 acres of land area. The site's parcel number is recorded as 0220112005 and is zoned for commercial use ("Community Commercial"). A copy of the site's parcel map and a 1999 aerial photo displaying the property is included in Appendix D.

The CFPBD had permit records pertaining to the installation of stormwater and erosion control facilities at the site, as well as a permit to grade approximately 25,000 cubic yards of fill imported on-site during 1998. According to CFPBD records, most of the fill was moved on-site under an emergency request by the City of Fircrest to eradicate a colony of rats that were feeding in garbage bins located at the neighboring apartment buildings east of the property. The stormwater drainage culverts and catch basins are still present along the east end of the site and are used to collect and drain stormwater runoff into the municipal stormwater system. A December 14, 2000 Environmental Checklist prepared by Ms. Janet Freeman-Daily for the City of Fircrest (regarding the placement and grading of the fill material at the site) did not indicate any environmental issues to be associated with the subject property. A copy of the December 14, 2000 Environmental Checklist is included in Appendix D.

The CFPBD also has several documents concerning the re-zoning of the site from light industrial to commercial use, along with an elimination of restrictions pertaining to non-retail development at the site.

The CFPBD did not have records pertaining to the installation of groundwater wells at the site, environmental related liens, or hazardous materials use/storage records for the subject site. Additionally, the CFPBD did not have records pertaining to wetlands, endangered plant and animal species, culturally sensitive areas, or other critical areas issues that may be associated with the subject property.

City of Fircrest Public Works Department (FPWD):

A parcel map reviewed at the FPWD indicated that the site is located within Township 20 North, Range 2 East, Section 11. No other records pertaining to the subject site were on-file with the FPWD.

City of Fircrest Fire Department (FFP):

The FFP was contacted regarding records pertaining to current/former aboveground and underground storage tanks, hazardous materials, and recorded violations involving the subject site. Ms. Linda Bowen (FFD) stated that the FFD does not have records pertaining to these issues for the subject site.

Pierce County Planning and Land Services Department (PCPLSD):

Records reviewed at the PCPLSD included a February 22, 1994 permit to remove a 1,000-gallon diesel UST and a 1,000-gallon kerosene UST from the site. The permit was issued to Don Golden Company, Inc. and referenced the site's identity as "Metal Marine Pilot, Inc." Other permit records on-file with the PCPLSD included an August 1992 permit to install a new gas water heater at the site and three permits (dated January 22, 1993) to operate an instrument store and spray finishing operations, as well as to use/handle combustible liquids at the site. There was no additional information regarding these permits and there were no records on-file with the PCPLSD indicating that the site's soil and/or groundwater had been impacted with hazardous materials. Copies of permit records obtained from PCPLSD are included in Appendix E.

The PCPLSD did not have historical site development records, critical areas information (i.e. endangered/threatened species), or environmental related liens associated with the subject site.

Pierce County Environmental Health Department (PCEHD):

According to Mr. Brad Harp (Hydrogeologist with the PCEHD), the subject site is located within a designated groundwater aquifer recharge area called "Clover-Chambers Hydrogeologic Creek Basin". Mr. Harp also stated that (based on his knowledge) there are no known groundwater quality issues associated with the subject site.

The PCEHD did not have sewage system records concerning the subject site. Additionally, the PCEHD did not have records pertaining to the possibility that domestic water wells may have existed on the property.

Washington State Department of Ecology (Ecology):

Information on-file with Ecology indicated that a 1,000-gallon kerosene UST and a 1,000-gallon diesel UST were removed from the site during February 1994. A tank closure report concerning the USTs indicated that all of confirmatory soil samples collected within the UST excavation did not reveal detectable levels of gasoline, diesel, and heavy oil range petroleum hydrocarbons, or benzene, toluene, ethylbenzene, or xylenes exceeding laboratory detection limits. Groundwater was reportedly not encountered within the excavation. The tank closure report (dated May 7,

1994) concluded that the USTs were successfully removed and no additional work was recommended. A copy of the May 7, 1994 tank closure report and Ecology's UST removal permit are included in Appendix E.

Other records on-file with Ecology included copies of previous environmental investigation and remediation reports completed for the site. Copies of these reports were also provided to Kleinfelder by Mr. Freeman and are summarized in Section 4.8.

Ecology has several domestic water well installation records for the City of Fircrest area, however, none of these records indicate that a well was installed at the subject property.

3.3 PHYSICAL SETTING SOURCE(S)

Table 8 (see next page) presents information about the physical setting of the site. This information was obtained from published maps and public records.

TABLE 8
PHYSICAL SETTING

USGS TOPOGRAPHIC QUADRANGLE	Steilacoom Quadrangle, USGS 7.5-minute series, dated 1959 (Photorevised 1981).	The site is located at an approximate surface elevation ranging between 311 to 342 feet above mean sea level. The terrain appeared to be flat to rolling and slopes downward towards the east and southeast.
NEAREST SURFACE WATER	Steilacoom Quadrangle, USGS 7.5-minute series, dated 1959 (photorevised 1981).	Snake Lake and the Puget Sound are located approximately 1.5 miles east and west of the subject site, respectively.
FLOOD ZONE (FEMA)	EDR Site Overview Map Report (dated April 7, 2005) and Information Obtained from the City of Fircrest Planning & Building Department.	According to the EDR Site Overview Map report, The site is located outside the designated 100-year and 500-year flood plain areas, as defined by FEMA. Records reviewed at the City of Fircrest Planning & Building Department indicated that the site is located outside a designated flood zone area.
REGIONAL GEOLOGY	Kleinfelder's Geotechnical Investigation performed at the site and information obtained from Previous Environmental Investigation and Remediation Reports Completed for the Site.	Kleinfelder's geotechnical investigation of the site (performed simultaneously with this Phase I ESA investigation), revealed a large quantity of fill material consisting of very loose to medium dense silty sand, concrete rubble, and vegetation debris existing throughout the central and eastern portions of the site. The depth of the fill material reportedly ranges between 1 to 25 feet below the ground surface (bgs). No hazardous materials or chemical/petroleum odors were encountered in the fill material. Glacial till deposits underlie the fill material and consists of medium dense to very dense silty sand to a depth of at least 40 feet bgs (the maximum depth explored by Kleinfelder during the geotechnical assessment). Perched areas of groundwater were encountered at depths ranging between 6 to 23 feet bgs during Kleinfelder's geotechnical investigation of the property.

4.0 HISTORICAL USE OF THE PROPERTY AND ADJOINING PROPERTIES

The history of the site was researched to identify obvious uses of the site from the present to first developed use, or back to 1940; whichever is earlier. Kleinfelder, Inc. retrieved the historical information of the subject property from readily available resources. The earliest historical record available covering the site area was a Metsker's Atlas map, dated 1924. Other historical records provided site coverage following 1924. Historical records covering the site area prior to 1924 were unavailable. Table 9 (below) summarizes the availability of information reviewed during this assessment.

TABLE 9
HISTORICAL SOURCES

	Year(s) Available	Source
AERIAL PHOTOGRAPHS	1946, 1971, 1979, 1985, 1992, 1996, 2000, and 2003.	Walker & Associates Photogrammetric & GIS Services
SANBORN FIRE INSURANCE MAPS	No coverage available for site area.	EDR – Sanborn Map Report
CITY DIRECTORIES	1940-2003.	City of Tacoma Main Library
TOPOGRAPHIC MAPS	1948 1959 (Photorevised 1981).	City of Tacoma Main Library Kleinfelder Library
METSKER'S ATLAS MAPS	1924, 1930, 1941, 1951, and 1965.	City of Tacoma Main Library
CHAIN-OF-TITLE REPORT		Not provided
INTERVIEW WITH SITE OWNER REPRESENTATIVE		Mr. Michael Freeman
PREVIOUS ENVIRONMENTAL ASSESSMENTS	May 1999 to May 2002.	See Section 4.8 for a description of the previous environmental investigation reports completed for the subject site.

4.1 AERIAL PHOTOGRAPHY

Historical aerial photographs were reviewed to evaluate past land use at the site and in the surrounding area. Aerial photographs providing coverage from 1946 to 2003 were available for review at Walker & Associates in Seattle, Washington. Aerial photographs providing coverage of the site area prior to 1946 were unavailable for review. The aerial photographs reviewed for this assessment are listed in Table 10 (see next page).

TABLE 10
AERIAL PHOTOGRAPHS REVIEWED

Year	Scale	Type	Quality
1946	Unknown	Black and White	Good
1971	Unknown	Black and White	Good
1979	Unknown	Black and White	Good
1985	Unknown	Black and White	Good
1992	1 inch = 2,000 feet	Color	Good
1996	1 inch = 2,000 feet	Color	Good
2000	1 inch = 2,000 feet	Color	Good
2003	1 inch = 1,680 feet	Color	Good

A summary of the aerial photograph review is presented, as follows:

4.1.1 Project Site

- An Aerial photograph reviewed from 1946 depicted the site as being undeveloped and covered with grass and shrubs.

- An Aerial photograph reviewed from 1971 depicted the present-day Metal Marine Pilot industrial building located along the northwest end of the site. One detached shed structure was also observed immediately east of the industrial building. No other structures were depicted. The eastern and southern portions of the site appeared undeveloped and thickly vegetated.

- An aerial photograph reviewed from 1979 depicted the present-day Metal Marine Pilot industrial building as well as three small detached shed structures occupying the northwest end of the site. Visual evidence of fill being imported and spread across the central and eastern portions of the site was also observed in the 1979 aerial photograph. Similar observations were noted in aerial photographs reviewed from 1985 through 2000. A fourth detached shed appeared to have been constructed along the east side of the Metal Marine Pilot industrial building between 1996 and 2000.

- An aerial photograph reviewed from 2003 depicted the site in its current configuration. Two of the detached shed structures observed in earlier photographs appeared to have been removed from the site, leaving the concrete floor slabs behind. The central, eastern, and southern ends of the site appeared undeveloped. The Metal Marine Pilot industrial building appears to be vacant since no automobiles were observed in the adjoining parking lot.

4.1.2 Surrounding Areas

- The surrounding properties north, south, and east of the site were observed to be undeveloped and covered with grass and shrubs in an aerial photograph reviewed from 1946. The surrounding property west of the site (across Mildred Street West) appeared to have been developed with a small airport. A building was also depicted along the east side of the airport and contained the words "Tacoma Airport" and "350 Ft" across the roof of the building.

- An aerial photograph reviewed from 1971 depicted the adjacent property south of the site as being developed with a small commercial structure, apparently resembling a restaurant. The adjacent properties north and northeast of the site appeared undeveloped, while an apartment complex is observed occupying an area immediately southeast of the site. The small airport and associated building observed west of the site in the 1946 aerial photograph are still visible. Small planes were observed using the airport's runway. Similar observations were noted in an aerial photograph reviewed from 1979, except the building associated with the airport appeared to have been demolished and apartment buildings appeared to occupy the entire area east of the site.

- Gradual commercial and industrial development of the adjacent properties north, west, and south of the site appeared to have started after 1979 and were observed in their current configurations in aerial photographs reviewed between 1996 and 2003. The adjacent property east of the site continued to be used as apartment buildings.

Note: Aerial photographs only provide information on indications of land use and no conclusions can be drawn from photographs alone. However, Kleinfelder's review of available aerial photographs did not reveal obvious signs of dumping, spilling, leaking, storage or disposal of hazardous materials or wastes on-site.

4.2 SANBORN FIRE INSURANCE MAPS

Sanborn Fire Insurance Maps provide historical land use information for some metropolitan and small, established towns. Kleinfelder, Inc. retained EDR-Sanborn, Inc. to perform a search of the nation's largest and most complete collection of Sanborn maps. According to EDR, there were no Sanborn maps identified that included the site area (see Appendix B).

4.3 CITY DIRECTORIES

City directories from 1940 through 2003 covering the site area were available at the City of Tacoma Main Library. The site's street address was not listed in city directories reviewed from 1940 through 1958.

The 1960 through 2003 city directories listed "Metal Marine Pilot, Inc." as occupying the site. Two other site occupant names ("Freeman Wd. Auto Plt" and "Wood Freeman Pilot") were also listed alongside Metal Marine Pilot, Inc. in a city directory reviewed from 1995. The 2000 and 2003 city directories only listed Metal Marine Pilot, Inc. as occupying the site.

4.4 HISTORICAL TOPOGRAPHIC MAP REVIEW

A 1948 historical topographic map covering the site area was available for review at the City of Tacoma Main Library. Additionally, a 1959 (photorevised 1981) topographic map from Kleinfelder's in-house collection was also reviewed. The 1948 topographic map depicted the subject site as being undeveloped. No on-site structures or other improvements were noted.

The 1959 (photorevised 1981) topographic map depicted the present-day Metal Marine Pilot industrial building occupying the northwest end of the site. None of the detached shed structures were depicted on the map. The remaining areas of the site appeared to be undeveloped. No site usage was specified on the map.

4.5 METSKER'S ATLAS MAP REVIEW

Historic Metsker's Atlas maps published in 1924, 1930, 1941, 1951, and 1965 covering the site area were available for review at the City of Tacoma Main Library. The 1924 map depicted the subject site as part of a larger parcel owned by "Narrow's Land Company". The 1930 through 1965 maps depicted the site's parcel in its current configuration. The site owners listed on the 1930 through 1965 Metsker's Atlas maps are as follows:

Map Year	Site Owner
1930	Pierce County
1941	O.C. Oas
1951	O.C. Oas
1965	R. Freeman (current site owner)

None of the Metsker's Atlas maps displayed any site usage or building structures occupying the site.

4.6 CHAIN-OF-TITLE REPORT

A Chain-of-Title report was not provided to Kleinfelder for review prior to production of this report. These documents may provide information about land use, including ownership and other interests in the site, easements, and liens. Not all liens, defects, and encumbrances affecting title to the site may be included on the title report.

4.7 INTERVIEW WITH SITE OWNER REPRESENTATIVE

As part of the site assessment process, Kleinfelder interviewed Mr. Michael Freeman in order to obtain further information about the site's current and historical use. Additionally, Ms. Janet Freeman-Daily (Michael Freeman's sister) completed an environmental questionnaire forwarded by Kleinfelder during the onset of this assessment (see copy of the completed questionnaire in Appendix F). Information obtained from the completed questionnaire and interviewing Mr. Freeman is summarized below:

- The subject site was undeveloped during the time when Mr. and Mrs. Robert Freeman purchased the property (1953). The present-day industrial building was constructed during 1959 and four detached sheds were constructed following 1959. Between 1959 and 2000, the Freeman family (doing business as Metal Marine Pilot, Inc.) used the site to design, manufacture, clean, paint, test, and repair marine automatic pilots and other navigational aids (e.g. compasses) for marine vessels. Hazardous materials used and hazardous wastes generated during Metal Marine's on-site activities are summarized in previous environmental investigation reports completed for the subject site (see Section 4.8).

- Between 1960 and 1992 waste water mixed with machine oil, kerosene residues, and degreasers generated from parts washing within the former material preparation shed was routinely discharged through a concrete drain onto the undeveloped portion of the site. Reportedly, this practice stopped after 1992 when Metal Marine Pilot began transferring the waste water into an evaporator.

- Between 1969 and 1975, waste acids and metal residues derived from circuit board etching activities at the site were periodically discharged into three or four lime-lined pits excavated along the central-eastern portion of the site. The pits were approximately three feet wide by three feet deep and are currently buried underneath fifteen feet of fill. None

of the previous environmental investigations conducted at the site were able to locate these pits.

- Two 5,000-gallon concrete vaults (referred to as the "sealed recovery USTs") currently located along the central portion of the site were installed by Metal Marine Pilot to recover spilled liquids within the painting and material preparation sheds. Reportedly, spilled liquids were transferred to the sealed recovery USTs from underground pipes originating at floor drains within the painting and material preparation sheds. According to Mr. Freeman, there was one incident during 1996 when an unknown quantity of paint was spilled within the spray painting shed and was washed (using water) into one of the sealed recovery USTs. Mr. Freeman stated that the spilled liquid was immediately cleaned out of the UST and there have been no other instances where paints or other hazardous materials were transferred to the sealed recovery USTs. Currently, both sealed recovery USTs contain stormwater from rainfall and surface runoff.

- Between 1963 and 1972, an unknown quantity of used mercury vapor fluorescent light bulbs removed from the industrial building were disposed on the eastern end of the site. The exact location(s) where the bulbs were disposed (typically thrown from the loading dock area) at the site is currently unknown. Mr. Freeman stated that the fluorescent light bulb debris is now buried under roughly 15 to 25 feet of fill.

- Mr. Freeman stated that a buried asbestos-containing transite water pipe traverses the site from southeast to north. The transite pipe is currently inactive and sections of this pipe may have been crushed during the time fill was being spread over the central and eastern portions of the site. The approximate location of the transite pipe is displayed on Figure 2 (see "Figures").

- On several occasions between 1972 and 2000, a large quantity of soil fill containing vegetation debris, concrete rubble, and other construction debris was deposited throughout the central and eastern portions of the site to cover a flooded area. Mr. Freeman stated that the east end of the site formerly contained a large recessed area that was almost always flooded with stormwater. Mr. Freeman also stated that the flooded area was not considered to be a designated wetland area.

- The imported fill was reportedly obtained from several commercial development and roadway construction projects, as well as from the former airport property located west of the site. Chemical testing of the fill material before it was delivered to the site was not

conducted. According to Mr. Michael Freeman, there was no visible evidence indicating that the fill material originated from contaminated sources.

- During 1994, two 1,000-gallon USTs (one storing diesel, the other kerosene) were removed from an undeveloped area located immediately south of the former cardboard box shed. No soil contamination was encountered following the removal of the USTs. Mr. Freeman stated that a UST closure report is on-file with Ecology (see Section 3.2 for details).

- A series of environmental investigation and remediation activities occurred at the site between 1999 and 2002. Copies of the environmental investigation and remediation reports were provided by Mr. Freeman and are summarized in Section 4.8.

- Excluding the environmental issues identified in the previous environmental investigation and remediation reports completed for the site, Mr. Freeman was unaware of any other environmental issues associated with the site.

- The industrial building is equipped with two buried septic tanks. Mr. Freeman stated that (to his knowledge) no hazardous materials were ever discharged into the septic tanks.

4.8 PREVIOUS ENVIRONMENTAL ASSESSMENTS

Mr. Freeman provided Architects BCRA with copies of seven previous environmental investigation and remediation reports concerning the subject property. The reports (itemized below) were completed between May 1999 and May 2002 by Creative Environmental Technologies, Inc. (CET) and Sound Environmental Strategies Corporation (formerly CET) for the Freeman family. A summary of the previous reports is presented in Section 4.8.1. Kleinfelder's comments regarding our review of the previous environmental reports are presented in Section 4.8.2.

- *Level I Environmental Site Assessment report for the Property located at 2119 Mildred Street West, Fircrest, Washington. Completed by CET, dated May 7, 1999.*

- *Site Characterization and Contaminated Soil Remediation report concerning the April 26, 1999 Pace Industries Oil Release onto the Metal Marine Pilot property located at 2119 Mildred Street West, Fircrest, Washington. Completed by CET, dated May 5, 1999.*

- *Phase II Site Assessment report for the Property located at 2119 Mildred Street West, Fircrest, Washington. Completed by CET, dated March 28, 2000.*

- *Addendum to the Phase II Site Assessment report for the Property located at 2119 Mildred Street West, Fircrest, Washington. Completed by CET, dated November 2000.*
- *PCE Contaminated Soil Remediation report for the Property located at 2119 Mildred Street West, Fircrest, Washington. Completed by CET, dated January 2000.*
- *Testing of Surface Soils near Eastern Swale of the Property at 2119 Mildred Street, Fircrest, Washington. Completed by Sound Environmental Strategies Corp. (SES), dated October 8, 2001.*
- *Underground Storage Tank Decommissioning & Soil Remediation Project report for 2119 Mildred Street West, Fircrest, Washington. Completed by SES, dated May 24, 2002.*

4.8.1 Summary Of Previous Environmental Assessment Reports

May 7, 1999 Level I Environmental Site Assessment Report

According to CET's Level I ESA report, improvements along the western end of the site consisted of a large industrial building and four smaller detached structures, including a spray painting shed, material preparation shed, paint storage shed, and a cardboard box storage shed. A site vicinity map and a site plan displaying the locations of the structures were included as an appendix to CET's Level I ESA report (see Appendix G).

The central and eastern portions of the site were reported as being undeveloped and contained an unknown quantity of imported fill material that was deposited along the central and eastern portions of the site on several occasions during the past decade. There was no indication as to where the fill material may have originated.

Other improvements at the site consisted of asphalt and gravel paved driveways, parking lots, and areas dedicated for landscaping. The large industrial building was constructed during 1959 and the four detached sheds were constructed at unknown dates following 1959. Prior to 1959, the subject site was undeveloped/vacant land.

CET's report indicated that Metal Marine Pilot, Inc. (Metal Marine) has occupied the site since it was developed. Metal Marine engages in design, assembly, cleaning, painting, testing, and repair of marine automatic pilots. Hazardous materials stored and used by Metal Marine in conjunction with their site operations included reportable quantities of detergents, kerosene, paints, thinners,

varnishes, stains, acids, glues, alcohols, aluminum coatings, hydraulic oil, and an assortment of cleaning solvents (i.e. trichloroethylene, methyl ethyl ketone, etc.). Hazardous materials were stored within several 55-gallon drums and a variety of smaller containers staged within the on-site buildings. Minor floor staining around the some of the containers and drums was noted within the painting shed. The concrete floors within the large industrial building and the other sheds were reportedly free of staining.

CET's report noted a 60-gallon kerosene underground storage tank (UST) located along the southwest end of the present-day industrial building (adjacent to the "Compass Room"), a 300-gallon plastic aboveground storage tank containing waste water from parts washing, and two "sealed recovery USTs" located in the undeveloped portion of the site which were used to store liquids spilled within the painting and material preparation sheds. Reportedly, spilled liquids are transferred to the sealed recovery USTs from underground pipes originating at floor drains within the painting and materials preparation sheds. However, according to CET's report, Metal Marine stated that the sealed recovery USTs have never stored any liquids, except rainwater.

Hazardous wastes generated at the site included used solvents, scrap metal, and sludge mixtures derived from washing and cleaning marine automatic pilot parts. The hazardous wastes were stored within 55-gallon drums staged along the east side of the large industrial building. No traces of spills or stains were noted around or underneath the drums.

Waste water generated from parts washing within the material preparation shed was routinely discharged through pipes onto the undeveloped portion of the site prior to 1992. There was no indication in CET's report as to how long this practice occurred or if the waste water contained hazardous materials. CET's report did indicate, however, that "potential contamination from this [waste water] dumping is currently buried under the imported fill material" previously deposited at the site. CET's report also indicated that a 2,000-gallon kerosene UST and a 2,000-gallon diesel UST were formerly located south of the detached sheds. Reportedly, the USTs were decommissioned sometime prior to 1999; however, there was no information in CET's report indicating whether (or not) there were records of confirmatory soil samples and/or groundwater samples collected following the removal of the USTs.

During the course of this assessment, Kleinfelder obtained more information concerning the kerosene and diesel USTs removed from the site. Information on-file with Ecology indicated that during February 1994 a 1,000-gallon kerosene UST and a 1,000-gallon diesel UST were removed an area at the site which matched the location noted in CET's Level I ESA report where

a 2,000-gallon kerosene UST and a 2,000-gallon diesel UST were removed prior to 1999. Details concerning the removal of these USTs is presented in Section 3.2.

Interviews with Mr. Freeman by CET during the course of their Level I investigation identified areas along the central and eastern portions of the site where "chemical wastes" were reportedly buried. Reportedly, Mr. Freeman informed CET of the approximate locations where "several holes were excavated, lined with lime, and filed with chemical wastes" generated at the site. There was no indication in CET's report as to the quantity and/or type of "chemical wastes" buried within excavated holes. Additionally, Mr. Freeman also pointed out several areas at the site where mercury vapor light bulbs were apparently "dumped". Mr. Freeman also informed CET of a loading dock area along the east site of the industrial building where waste solvents were poured out onto the ground. Mr. Freeman apparently indicated that this area warranted further investigation to delineate the extent of soil and possible groundwater contamination.

CET's report revealed that a neighboring property located immediately located north of the subject site (Pace Industries (Pace)) had impacted the Metal Marine site with an unknown quantity of paraffin based lubricating oil. Reportedly, the paraffin oil was discharged from a PVC pipe along the south end of Pace's property on April 26, 1999 and migrated onto the north and east ends of the subject site. The oil release and associated impacted soil was reportedly cleaned up at the subject site by Pace. However, cleanup activities at the Pace Industrial property (where the oil release originated) had not occurred as of the date their report. Further details concerning the paraffin oil release was summarized in a separate report completed by CET on May 5, 1999 (see below).

CET's Level I ESA report concluded that there exists the possibility that the subject site may have been impacted by Metal Marine's activities surrounding the handling, use, and storage of hazardous materials including a potential that releases from the former kerosene and diesel USTs may have impacted the site.

Recommendations contained in CET's report included cleaning up leaks from hazardous material containers and performing a Phase II ESA at the site to delineate the extent of soil and possible groundwater contamination.

May 5, 1999 Site Characterization and Contaminated Soil Remediation Report

According to CET's May 1999 Site Characterization and Contaminated Soil Remediation (SCCSR) report, a neighboring property owned and operated by Pace Industries (located immediately north of the subject site) used a paraffin based lubricating oil as part of their tool

machining process. The paraffin oil (after each use) was reportedly collected at several points throughout their building. One of the collection areas discharged used paraffin oil along the southern end of Pace's building into an underground four inch diameter PVC piping system. The PVC piping system transferred the oil from the building to a holding system along the south end of their property for treatment prior to disposal.

On the morning of April 26, 1999, the PVC piping system had backed up and the accumulating pressure blew a cap off of a pipe cleanout located adjacent to a fence which separates Pace's property from the subject site. Reportedly, an unknown quantity of paraffin oil/water mixture was released through the cleanout onto the ground surface. The oil release was large enough that it had pooled in an area along the north end of the subject site and then flowed eastward over the subject site until its migration stopped when it entered a stormwater trench excavated by Metal Marine Pilot along the eastern site boundary. Pace reportedly recovered the released product from the site and soil samples collected from areas where the oil pooled revealed elevated levels of total petroleum hydrocarbons (TPH as heavy oil) exceeding Department of Ecology's (Ecology) Model Toxics Cleanup Act (MTCA) Method A soil cleanup level. Subsequently, Pace retained an environmental remediation contractor (Clean Service, Inc.) to excavate the impacted soil at the site. Approximately 80 cubic yards of impacted soil were reportedly excavated and removed from the subject site between April 27th and April 29th, 1999. The excavated areas followed the path of the surface release and ranged in depths between twelve to thirty six inches below the ground surface. The deeper excavations occurred in areas along the north and east ends of the site where the released paraffin oil/water mixture had pooled. Confirmatory soil samples collected along the perimeter and base of the excavated areas by CET were submitted to a laboratory for heavy oil range hydrocarbon analysis. CET's SCCSR report indicated that analytical results of the post excavation soil samples did not exceed the MTCA Method A soil cleanup level for heavy oil. CET's SCCSR report concluded that the oil spill and impacted soil had been effectively cleaned up at the subject site. However, the neighboring Pace Industries property, where the release had occurred, remained to be cleaned up. CET concluded that "there is a strong possibility that the contaminate [at the neighboring Pace property] will migrate across property lines and re-contaminate Metal Marines property". Sub-surface soil samples apparently collected at Pace's property by CET revealed heavy oil range hydrocarbons exceeding 5,000 milligrams per kilogram.

CET's SCCSR report recommended that "Metal Marine adamantly pursue the removal of all contaminated soil by Pace Industries, that is posing an immediate threat to Metal Marine's property". A copy of CET's May 5, 1999 SCCR report is included in Appendix H.

A subsequent soil investigation to assess the potential presence of paraffin oil impacted soil along the north end of the subject site was conducted by CET as part of a Phase II ESA investigation performed at the Metal Marines site during 2000. The results of the investigation are summarized in a November 2000 Phase II ESA Addendum report. See details below.

March 28, 2000 Phase II Environmental Site Assessment Report

A Phase II ESA was completed by CET in order to assess the potential presence of soil contamination from Metal Marine's historical use of hazardous materials the site. Twenty-four soil borings were advanced near the detached sheds and at selected areas along the undeveloped eastern portion of the site where soil contamination was suspected to be present. CET indicated that their Phase II ESA investigation did not address the entire property and that their investigation only involved collecting soil samples. Groundwater at the site was not investigated as recommended in CET's May 7, 1999 Level I ESA report.

Four areas at the site were identified by CET for the Phase II ESA investigation. The first location (referred to by CET as "Area A") included a portion of the site immediately east of the painting shed, paint storage shed, and material preparation shed where waste solvents were suspected to have been "tossed off" a loading dock and may have potentially impacted the soil in that area. Area B included a large section east of the paint storage shed (within the undeveloped section of the site) where semi-volatile organic compounds (SVOCs) and metals may have drained to and may have originated from discharges through a floor drain located within the material preparation shed. Area C included a location east of the rear gravel driveway (within the undeveloped section of the site) where "chemical wastes" were reported by Mr. Freeman to be buried within several lime-lined holes previously excavated at the site. Area D included a small location south of the cardboard box storage shed where a diesel UST (capacity not reported) formerly existed. A figure displaying the locations of Areas A, B, C, and D was included as an attachment to CET's report (see Appendix I).

CET's report indicated that six soil samples were collected within Area A at depths ranging between 1 to 8 feet below the ground surface (bgs), one soil sample was collected from Area B at a depth of 4 to 6 feet bgs, and two soil samples were collected from Area C at depths ranging between 4 to 10 feet bgs. Additionally, one soil boring was advanced within Area D, however, no soil samples were collected for laboratory analysis. Instead, CET visually inspected the soil cuttings from the boring (within Area D) and indicated in their Phase II ESA report that there was no visual evidence (or odors) which would suggest the potential presence of petroleum hydrocarbons. CET also apparently did not collect soil samples beneath the fill material where CET's Level I ESA indicated that waste water generated from parts washing within the material

preparation shed prior to 1992 was routinely discharged through pipes onto the undeveloped portion of the site (prior to the imported fill material being deposited on-site).

Out of the nine total soil samples collected at the site during CET's Phase II ESA, seven were submitted to Spectra Laboratories in Tacoma, Washington to be analyzed for the presence of VOCs, total metals (antimony, arsenic, beryllium, cadmium, chromium, copper, lead, mercury, nickel, selenium, silver, thallium, and zinc), and/or SVOCs.

Analytical results of the soil samples indicated concentrations of tetrachloroethene (PCE) in three soil samples collected from Area A as ranging between 0.64 to 2.22 milligrams per kilogram (mg/kg); all of which exceed the MTCA Method A soil cleanup level for PCE (0.05 mg/kg). Other VOC constituents (e.g. benzene, toluene, etc.) were reportedly below the corresponding MTCA Method A soil cleanup levels in all three of the soil samples selected for analysis from Area A.

VOC concentrations were not reported at or above MTCA Method A soil cleanup levels in soil samples selected for analysis from Areas B and C. Additionally, total metals and SVOCs were not detected at concentrations exceeding MTCA Method A soil cleanup levels in any of the soil samples selected for analysis.

In reference to Area C, CET's Phase II ESA report noted that they did not locate any of the lime-lined pits where "chemical wastes" were reportedly buried by Metal Marine. Based on the analytical results, CET's Phase II ESA report concluded that the PCE impacted soil discovered within Area A extends approximately 3.5 to 4.5 feet bgs and covers an area of approximately 800 square feet. CET recommended excavating and removing the PCE impacted soil from the site.

CET's Phase II ESA apparently did not include collecting soil samples at or adjacent to the "sealed recovery USTs", hazardous materials/wastes storage areas located at the site, and mercury vapor light bulb dumping areas pointed out by Mr. Freeman. Additionally, CET's report did not include recommending further investigation activities within Area C where the lime lined pits were reportedly located.

November 2000 Phase II Environmental Site Assessment Addendum Report

On February 15, 2000, CET collected three surface (top 3 inches) soil samples along the northern site boundary abutting the neighboring Pace Industrial property. CET indicated that the purpose of this investigation was to assess residual levels of paraffin oil potentially present along the extreme north end of the subject property following the April 26, 1999 paraffin oil release at the Pace facility and subsequent soil remedial activity at the subject site (previously discussed

above). The three soil samples collected by CET during this investigation reportedly contained an oily appearance and odor. The samples were submitted by CET to Spectra Laboratories and analyzed for the presence of TPH (as diesel and heavy oil), pH, SVOCs, and/or total metals (antimony, arsenic, beryllium, cadmium, chromium, copper, lead, mercury, nickel, selenium, silver, thallium, and zinc).

One of the soil samples collected at the site (Sample No. S1-21500) reportedly contained 35,000 mg/kg of TPH (as heavy oil), which exceeds the MTCA Method A soil cleanup level for heavy oil range hydrocarbons (2,000 mg/kg). The other two soil samples collected by CET at the site were not analyzed for diesel and heavy oil range hydrocarbons.

PH levels in a soil sample, Sample No. S1-21500, was reported to be 4.16. CET attributed this pH level to be associated with the paraffin oil contamination apparently still present in soil located along the northern site boundary. The other two soil samples collected at the site were not analyzed for pH.

The concentrations of total metals in two of the samples collected at the site were reported to be below MTCA Method A soil cleanup levels. The third soil sample was not analyzed for total metal concentrations.

Based on the laboratory analytical results, CET concluded in their Phase II ESA Addendum report that "oil range hydrocarbons are present in high [concentrations] in soil along the Pace property boundary". CET's Phase II ESA Addendum report did not include recommendations concerning additional soil sampling/analysis at the site, nor did they recommend the removal of paraffin oil impacted soil located along the site's northern property boundary. A copy of CET's Phase II ESA Addendum report is included in Appendix J.

During our assessment, Mr. Freeman informed Kleinfelder that the paraffin impacted soil identified in CET's Phase II ESA Addendum report is still present along the north end of the property. Mr. Freeman stated that Pace may have buried the impacted soil area with up to five feet of soil and no further activities concerning this issue were attempted.

January 2000 PCE Contaminated Soil Remediation Report

According to CET's January 2000 PCE Contaminated Soil Remediation (CSR) report, PCE impacted soil identified in CET's March 28, 2000 Phase II Environmental Site Assessment Report (discussed previously) was excavated and removed from the site during September 11th and 12th, 2000. The dimensions of the excavation were noted to be approximately 25 feet wide by 40 feet long and 6 to 11 feet bgs. A solvent odor was reportedly present in the soil during

excavation activities. CET's CSR report indicated that excavation continued until no solvent odor was present. Groundwater was reportedly not encountered.

Following excavation activities, nine confirmatory soil samples were collected along the sidewalls and base of the excavation. All nine of the confirmatory soil samples were submitted by CET to Spectra Laboratories to be analyzed for PCE concentrations. Analytical results indicated that none of the confirmatory soil samples contained PCE concentrations exceeding MTCA Method A soil cleanup levels. Based on the analytical results, CET concluded that removal of the PCE impacted soil was successful and the January 2000 CSR report (see Appendix K) did not include recommendations regarding additional investigation at the site.

According to Ecology's records, copies of CET's January 2000 CSR report, as well as copies of CET's May 7, 1999 Level I ESA report and March 28, 2000 Phase II ESA report were submitted to Ecology for review under the Voluntary Cleanup Program (VCP). A March 6, 2001 letter prepared by Ecology indicated that the PCE soil contamination issue at the site "no longer poses a threat to human health or the environment". The PCE issue at subject site was given a "no further remedial action" status by Ecology. Ecology's March 6th letter, however, did not extend the "no further remedial action" status to other areas at the site where identified soil contamination (i.e. paraffin oil impacted soil) or suspected soil contamination (i.e. lime-lined pits) reportedly existed. A copy of Ecology's March 6th letter is included in Appendix K.

October 8, 2001 Testing of Surface Soils Near Eastern Swale of the Property Report

On August 29, 2000, Sound Environmental Strategies Corporation (SES) collected a surface soil sample along the east end of the property where a red colored soil staining was observed by Mr. Freeman. Reportedly, the soil sample was collected from the top one-inch layer of soil over a 10-inch by 10-inch area along the steep sloped area of the site. The soil sample was submitted to Spectra Laboratories, Inc. in Tacoma, Washington to be analyzed for tetrachloroethene and total metals (arsenic, barium, cadmium, chromium, lead, mercury, selenium, and silver). Analytical results of the soil sample revealed arsenic (160 mg/kg) and cadmium (30 mg/kg) concentrations exceeding MTCA Method A soil cleanup levels (20 mg/kg for arsenic, and 2 mg/kg for cadmium). Concentrations of tetrachloroethene, barium, chromium, lead, mercury, selenium, and silver were reportedly below the respective MTCA Method A and B soil cleanup levels.

Based on the results of the soil sample, SES collected eight more shallow soil samples in areas surrounding where the initial soil sample was collected to assess whether (or not) the arsenic and cadmium soil contamination was a wide spread issue. Following collection, the soil samples were analyzed for tetrachloroethene, petroleum hydrocarbons (as gasoline, diesel, and heavy oil)

and/or total metals (antimony, arsenic, beryllium, cadmium, chromium, copper, lead, mercury, nickel, selenium, silver, thallium, and/or zinc). Analytical results of one of the eight soil samples collected at the site (No. S4-91500) contained arsenic at 29 mg/kg, which slightly exceeds the MTCA Method A soil cleanup level for arsenic (20 mg/kg). None of the other metal constituents, tetrachloroethene, and petroleum hydrocarbons were reported in soil sample No. S4-91500 as exceeding MTCA Method A and B soil cleanup levels. Additionally, analytical results of the remaining seven soil samples collected at the site did not contain tetrachlorethene, petroleum hydrocarbons, and/or total metals (including arsenic and cadmium) at levels exceeding MTCA Method A and B soil cleanup limits. Based on these analytical results, SES indicated in their October 8, 2001 Testing of Surface Soils report (see copy in Appendix L) that "there did not appear to be a direct relationship between the red staining and arsenic and cadmium [soil] concentrations" identified at the site. SES concluded that the presence of arsenic and cadmium in the site's soil did not represent a large area of contamination and that the occurrence of these metals did not appear to represent a release that was a threat to human health of the environment. SES' report did not include recommendations for further activities regarding this issue.

May 24, 2002 Underground Storage Tank Decommissioning & Soil Remediation Report

SES was retained by Mr. and Mrs. Freeman to decommission two 80-gallon kerosene USTs reportedly located adjacent to each other along the western side of the large industrial building, within a landscaped area next to the building's "Compass Room".

Both of the 80-gallon USTs were formerly used to supply kerosene in a circulating system for parts cleaning and had been installed between the late 1960s and early 1970s. Reportedly, during excavation activities, no visual signs of holes or corrosion was noted along the sidewalls of the tanks and no solvent odors were detected in the excavations following removal of the USTs. SES also indicated that groundwater was not encountered during excavation activities.

After the kerosene USTs were removed from the site, SES collected confirmatory soil samples from each of the sidewalls and base of the UST excavation. SES submitted the confirmatory soil samples to ESN Northwest Laboratory in Lacey, Washington to be analyzed for kerosene using the diesel extended range hydrocarbons analysis method (NWTPH-Dx). Five of the confirmatory soil samples were also analyzed for VOCs. SES's report indicated that none of the confirmatory soil samples contained kerosene, diesel, or VOCs at concentrations exceeding MTCA Method A soil cleanup levels. SES's report (see Appendix M) concluded that both kerosene USTs were effectively decommissioned and there were no recommendations concerning further activities at the site.

An October 24, 2001 Memorandum issued by Tacoma-Pierce County Health Department (see Appendix M) indicated that the two kerosene USTs were removed and a small amount of impacted soil had been excavated and transported off-site for disposal. A recommendation contained in the October 24, 2001 Memorandum stated that this issue was eligible for a "No Further Action (NFA)" determination. However, no NFA letter concerning the removal of the two kerosene USTs was on-file with Ecology.

4.8.2 Kleinfelder's Comments

Based on our review of the above reports, the following issues were identified at the site:

1. The Level I ESA interview with Mr. Freeman revealed that several lime-lined holes were used to bury "chemical wastes" along the undeveloped portion of the site. However, during the course of CET's Phase II ESA investigation, none of the lime-lined holes were found and there was no further attempt to locate them.

2. The Level I ESA report also indicated that waste water generated at the site from parts washing was routinely discharged by Metal Marine Pilot onto the undeveloped portion of the site prior to the present-day fill material being placed there. CET indicated that this practice occurred prior to 1992 and suggested that the waste water may have been impacted with solvents.

3. CET's Phase II ESA investigation did not include collecting soil samples at or near the "sealed recovery USTs", the hazardous materials/waste storage areas, at areas where mercury vapor light bulbs were reportedly dumped at the site, or from beneath the fill material. Potential contamination at these areas could still be present at the site.

4. The origin of the fill material deposited at the subject property could have potentially originated from a contaminated source. According to Mr. Freeman, none of the fill material was tested for contaminants prior to being deposited at the site.

5. Groundwater samples were not collected at the site during CET's Phase II ESA investigation. The potential exists, as noted in CET's Level I ESA report, that perched groundwater may potentially have been impacted by Metal Marine's use of the site.

6. The north and east portions of the subject property were reportedly impacted by a paraffin oil release which originated from the neighboring Pace Industries property during April 1999. Although CET indicated that soil impacted with paraffin oil was cleaned up during April 1999, CET's subsequent Phase II ESA Addendum report indicated that an

unknown quantity of impacted soil still remains along the north end of the site. Apparently, there was no information regarding further investigation to delineate the extent of the remaining soil contamination or to remove what was identified during the Phase II ESA Addendum investigation.

7. The source of the elevated levels of arsenic and cadmium in one soil sample collected along the east end of the site (as referenced in SES' October 2001 Surface Soils Testing report) was not identified.

8. CET appears to have successfully removed the PCE impacted soil identified during their Phase II ESA investigation of the site. However, Ecology's "no further remedial action" determination for the PCE impacted soil issue does not include other areas at the site where identified contamination and suspected contamination apparently remains.

5.0 BUSINESS ENVIRONMENTAL RISK CONSIDERATIONS

5.1 ASBESTOS-CONTAINING MATERIALS

As part of the environmental site assessment process, Kleinfelder completed an asbestos survey of the existing Metal Marine Pilot buildings at the site. The asbestos survey was performed to facilitate re-development of the site. Other than the Metal Marine Pilot industrial building and two detached sheds, no other structures were observed during our May 11th and May 13th, 2004 site reconnaissance. A complete listing of all building materials tested for asbestos content and their corresponding laboratory analysis results, friability, and condition are presented in Table A (see Appendix N). Copies of the asbestos laboratory analysis reports and chain-of-custody documentation are also presented in Appendix O. The bulk sample and asbestos building material locations are depicted on Figure 4 (see "Figures" section of the report).

5.1.1 Identified ACMs – Existing Metal Marine Pilot Buildings

Based upon the laboratory analysis results, the following building materials were reported by the laboratory as containing asbestos fibers in concentrations exceeding one-percent (> 1%):

1. 9" x 9" light brown with dark brown and white streaks colored vinyl floor tiles as associated mastic located within the front offices, display room, engineering room and photocopy room of the industrial building.
   (Vinyl Floor Tiles: Contain 2% Chrysotile Asbestos)
   (Mastic: Contains 3% Chrysotile Asbestos)

2. Blue colored sheet vinyl flooring material and associated backing/adhesive over beige colored sheet vinyl flooring material and associated backing/adhesive located within the lunch room and southwest end women's restroom of the industrial building.
   (Blue Colored Sheet Vinyl Flooring Material: Reported Not to Contain Asbestos)
   (Backing/Adhesive: Reported Not to Contain Asbestos)
   (Beige Colored Sheet Vinyl Flooring Material: Reported Not to Contain Asbestos)
   (Backing/Adhesive: Contains 35% Chrysotile Asbestos)

3. Tan, yellow, and white colored with mosaic pattern sheet vinyl flooring material and associated backing/adhesive located within the northeast end men's and women's restrooms and locker rooms of the industrial building.
   (Sheet Vinyl Flooring Material: Reported Not to Contain Asbestos)
   (Backing/Adhesive: Contains 45% Chrysotile Asbestos)

4. Window caulking applied around perimeter windows located along the southwest end of the industrial building's exterior (compass room, front offices, display room, and engineering room windows).
   (Contains 3% Chrysotile Asbestos)

5. Sealant applied around seams in HVAC ducts located outside the industrial building (immediately north of the compass Room).
(Contains 5% Chrysotile Asbestos)

6. Firedoor insulation located within the two metal sliding doors separating the north end warehouse and electronics assembly area within the industrial building.
(Assumed to Contain Asbestos[1])

The following building material, sampled by Kleinfelder within the industrial building was reported by the laboratory as containing asbestos fibers in concentrations of less than one-percent (< 1%) as a composite:

1. Sheetrock with joint compound materials located throughout the industrial building.
(Sheetrock Reported Not to Contain Asbestos)
(Joint Compound Contains 2% Chrysotile Asbestos)
(Sheetrock/Joint Compound Composite Contains < 1% Chrysotile Asbestos)

Since laboratory analysis results of the composite bulk samples collected from sheetrock/joint compound materials revealed asbestos concentrations of less than one-percent, this material is not considered to be an "asbestos-containing building material" by the Environmental Protection Agency (EPA), Puget Sound Clean Air Agency (PSCAA), or Washington Department of Labor and Industry (L&I).

Sheetrock/joint compound materials containing less than one-percent asbestos are not expected to present a health hazard during building demolition work as long as the contractor adheres to L&I's work practices and training requirements listed in WAC 296-62-07712(2) and in L&I's December 28, 2000 Regional Directive (WRD No. 23.30). Based upon L&I's December 28, 2000 Regional Directive (see copy in Appendix N), removal of building materials containing less than one-percent asbestos are not considered "asbestos abatement projects" and the contractor selected to demolish the sheetrock/joint compound materials does not have to be a registered asbestos abatement contractor. Therefore, removal of the sheetrock/joint compound materials identified in the industrial building may be performed concurrently with building demolition activities.

Based upon the laboratory analytical results, asbestos was not detected in any of the other building materials sampled within the industrial building by Kleinfelder during the survey. No asbestos-containing materials were identified within the detached sheds.

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[1] *Note: The firedoor insulation is "Assumed to Contain Asbestos" since sampling of this material could not be accomplished without cutting open the metal doors and since Mr. Michael Freeman plans to sell the firedoors prior to the property sale being finalized.*

The ACMs identified within the industrial building were observed to be in good condition during the survey. If these materials are left in their present state and undisturbed, they are not expected to present a health hazard. However, prior to demolishing the building, all friable ACMs as well as all non-friable ACMs (which may become friable during building demolition activities) must be removed by a State Certified asbestos abatement contractor.

5.2 LEAD-BASED PAINTS

As part of the environmental site assessment process, Kleinfelder completed a lead-based paint (LBP) survey of the existing Metal Marine Pilot Buildings at the site. The purpose of the LBP survey was to facilitate the proposed development of the subject property. Other than the industrial building and the two detached sheds, no other buildings were observed on-site during our May 11th and May 13th, 2005 site reconnaissance.

5.2.1 Identified LBPs – Existing Metal Marine Pilot Buildings

Kleinfelder collected a total of twelve (12) bulk paint chip samples from 12 applications of paint suspected to contain lead throughout the structures occupying the site. The paint chip samples were then delivered to NVL Laboratories, Inc. in Seattle, Washington for lead content analysis via Atomic Absorption Spectroscopy (AA). Table B (see Appendix N) summarizes the paint applications sampled for lead content during the survey, locations, and the corresponding laboratory analysis results. A copy of the lead paint laboratory analysis report and chain-of-custody form is also presented in Appendix O. The lead paint sample locations are depicted on Figure 4.

Laboratory analytical results identified detectable levels of lead (detected above the laboratory's corresponding analysis detection limits) in eleven of the twelve total paint coatings sampled at the industrial building and detached shed structures. The lead analysis concentrations ranged from a low of 55 milligrams per kilogram (mg/kg), to a high of 5,100 mg/kg. According to the EPA and the Department of Housing and Urban Development (HUD) regulations, "lead-based paint" is defined as a paint which contains lead in concentrations that are greater than (or equal to) 5,000 mg/kg. Out of the 12 total paint applications sampled by Kleinfelder, one paint application (see below) was reported by the laboratory to contain lead in concentrations greater than 5,000 mg/kg; and is therefore considered a "lead-based paint".

1. Light grey colored paint applied to metal wall panels located throughout the spray painting shed interior.
   (Contains 5,100 mg/kg of Lead)

The light grey colored paint was observed to be intact and in good condition during the survey and should not present a lead exposure hazard if left in its present state and undisturbed. No lead-based paints were identified within the industrial building.

EPA and HUD regulate lead-based paint if it contains lead concentrations greater than (or equal to) 5,000 mg/kg. Washington Department of Labor and Industry (L&I) does not define "lead-based paint", so detectable amount of lead (above the corresponding analytical laboratory's analytical detection limit) is regulated by L&I. Therefore, building demolition or renovation work that will disturb paints containing lead (any reportable quantity of lead) will be subject to L&I's Lead Construction Standard (WAC 296-155 and WAC 296-62).

According to L&I's Lead Construction Standard, an employer is required to assess worker exposure to airborne lead particles during disturbance of paints containing reportable quantity of lead. The purpose of the worker exposure monitoring is to assess whether (or not) employee exposures to airborne lead are at concentrations greater than the Permissible Exposure Limit (PEL) of 50 micrograms per cubic meter of air (50 $\mu g/m^3$ for 8-hour time-weighted average). The Lead Construction Standard also lists a lead airborne Action Level of 30 $\mu g/m^3$, 8-hour time-weighted average. Should L&I's Action Level or PEL be exceeded during disturbance of paints containing lead, additional requirements such as respiratory protection, medical surveillance, etc., are emphasized.

Prior to demolishing the on-site structures, all flaking/peeling/delaminating sections of lead-based paint (if present) should be removed by lead trained personnel using proper engineering controls and work practices (i.e. wet removal techniques and usage of HEPA vacuums). Additionally, paint chip debris which may have delaminated from the structures during demolition activities (where present) should be removed.

Removing loose paint should reduce worker exposure to airborne lead dust particles and reduce the possibility of paint chips and lead dust from mixing-in with the soil on-site and from migrating onto neighboring properties during demolition activities. Based upon laboratory analysis results of the paint applications, loose paint debris and associated dust must be handled and disposed of as hazardous waste.

The disposal facility receiving building demolition debris coated with lead paint(s) that are not flaking or peeling may request a Toxicity Characteristic Leaching Procedure (TCLP) test on a representative sample of the debris material to evaluate whether the debris must be handled and disposed of as hazardous waste under Ecology's regulations. An alternative to disposing the

LBP coated metal wall panels is to transport the panels to a recycling facility permitted to receive such materials.

5.3 WETLANDS

Kleinfelder contacted the City of Fircrest Planning & Building Department and the Pierce County Planning and Land Services Department regarding the possibility of designated wetland areas being identified on-site. None of these agencies had records pertaining to wetland areas being on-site. A search of wetland maps on the U.S. Fish and Wildlife's website (www.wetlands.fws.gov) also did not reveal the presence of wetland areas on-site.

5.4 CULTURAL, HISTORICAL AND ARCHEOLOGICAL RESOURCES

Records reviewed at the City of Fircrest Planning & Building Department and the Pierce County Planning and Land Services Department did not indicate the presence of cultural, historical, and/or archeological resources at the subject property.

5.5 ECOLOGICAL RESOURCES, WILDLIFE SANCTUARIES, AND ENDANGERED SPECIES

Records reviewed at the City of Fircrest Planning & Building Department and the Pierce County Planning and Land Services Department did not reveal the presence of endangered/threatened species or wildlife sanctuaries associated with the subject site.

5.6 POLYCHLORINATED BIPHENYLS (PCBS)

Five electrical transformers were observed mounted near the top of three utility poles located along the northwest end of the subject property. The transformers are suspected to contain PCB dielectric fluids since they did not contain markings/labels indicating that they do not contain PCBs. The transformers appeared intact and there were no signs of dielectric fluid leakage from the transformer's casings.

Several fluorescent light fixtures suspected to contain PCB ballasts were noted throughout the industrial building at the site. However, since Mr. Freeman stated that he will remove all fluorescent light fixtures from the site prior to finalizing the sale of the property, Kleinfelder did not disassemble the light fixtures to assess whether (or not) the ballasts may potentially contain PCB dielectric fluids.

No other suspect PCB-containing equipment was observed at the site. There were no records of PCB-containing equipment or PCB use on-site at the agencies reviewed.

5.7 MERCURY CONTAINING EQUIPMENT

Several fluorescent light fixtures suspected to contain mercury vapor light bulbs were noted throughout the industrial building. As previously noted in Section 5.6 (above), Mr. Freeman stated that he will remove all fluorescent light fixtures (including the light bulbs) from the site prior to finalizing the sale of the property.

No other suspect mercury containing equipment was observed at the site. There were no records of mercury containing equipment or mercury use on-site at the agencies reviewed.

5.8 RADON

Radon-222 (radon) is a naturally occurring radioactive gas formed by the decay of Uranium-238 which can be found in small concentrations in nearly all geologic materials. The primary human health effect associated with exposure to elevated levels of radon is an increase risk of lung cancer. The EPA and the U.S. Center for Disease Control are concerned about the increased risk of lung cancer for individuals exposed to above-average levels of radon in their homes or offices. In order to address that concern, the EPA conducted a national radon survey in 1990.

EPA's map of Radon Zones assigns each of the 3,141 counties in the United States to one of three zones. The zone designations were developed by assessing the following five factors believed to be important indicators of adverse radon potential: Indoor radon measurements, local geologic conditions, aerial radioactivity surveys, local soil characteristics, and the type of structure foundation.

This region of Washington, and the subject site, are underlain by glacial material which contain very low concentrations of radon-forming minerals. In 1993, the Washington Department of Health published a listing of radon measurements indicating a state-wide average of 1.0 pico-curies per liter (pCi/l). Based on this information, it is considered unlikely that radon levels on the site exceed EPA's 4.0 pCi/l action level.

5.9 INDOOR AIR QUALITY AND INDUSTRIAL HYGIENE

Records reviewed at the City of Fircrest Planning & Building Department and the Pierce County Planning and Land Services Department did not indicate indoor air quality and/or industrial hygiene issues to be associated with the subject site.

5.10 HIGH VOLTAGE POWERLINES

High voltage electrical power lines were not observed at the property during our site reconnaissance. Pole-mounted local power transmission lines were observed traversing the site from north to south, and along the west end. As noted in Section 5.6 (above), none of the

electrical transformers mounted near the top of the power line poles appeared to be leaking dielectric fluids.

5.11 REGULATORY COMPLIANCE

Records reviewed at Ecology, City of Fircrest Planning & Building Department, and at the Pierce County Planning and Land Services Department did not indicate the presence of regulatory compliance issues to be associated with the subject site.

5.12 HEALTH AND SAFETY

Records reviewed at the City of Fircrest Planning & Building Department and the Pierce County Planning and Land Services Department did not indicate the presence of environmentally related health and safety issues to be associated with the subject site.

5.13 LEAD IN DRINKING WATER

According to Mr. Mark Burlingame (Public Works Director with the City of Fircrest), there are not elevated levels of lead in the City of Fircrest municipal drinking water source. The latest drinking water quality report on-file with the Fircrest Public Works Department (dated September 2003) indicated that lead concentrations in the municipal drinking water source were less than the federal lead drinking water standard of 15 micrograms per liter (µg/l). Based on this information, the site's current domestic water supply meets federal regulatory drinking water standards as they pertain to lead. According to Mr. Burlingame, the next drinking water quality testing is scheduled to take place sometime during 2007.

6.0 EVALUATION

Kleinfelder performed this Phase I ESA in general accordance with the Client's October 1, 2004 *Phase I Environmental Site Assessment and Report Requirements* and May 22, 2000 *Supplement to Phase I Guidelines (When Buildings Are Present)*. Additionally, this ESA was performed in accordance with our February 16, 2005 Phase I ESA proposal (No. 54199), and in general accordance with the scope and limitations of the ASTM Practice E 1527-00.

In summary, Kleinfelder's assessment revealed the following information about the site.

6.1 FINDINGS AND OPINIONS

The following sections describe Kleinfelder's findings and provide a general background information about the site. Findings include recognized environmental conditions and historically recognized environmental conditions, as applicable to the site.

6.1.1 Background Information

Kleinfelder's historical review and information obtained from interviewing Mr. Michael Freeman, has provided information on site usage back to 1924. According to historic sources, Marine Pilot had occupied the site from 1959 until it ceased operations sometime during 2000. Metal Marine Pilot used the site to design, manufacture, clean, test, and repair marine automatic pilots and other marine navigational aids, such as boat compasses. Hazardous materials reportedly used by Metal Marine Pilot in conjunction with their site operations included detergents, kerosene, paints, thinners, varnishes, stains, acids, glues, alcohols, aluminum coatings, hydraulic oil, and an assortment of cleaning solvents (trichloroethylene, methyl ethyl ketone, etc.).

Hazardous wastes generated at the site included used solvents, scrap metal, and sludge mixtures derived from washing and cleaning marine automatic pilot parts.

During the course of Metal Marine Pilot's use of the site (1959 to 2000), there have been several reported instances where hazardous materials were discharged or buried along the central and eastern portions of the site. There were also records indicating that four USTs were removed and tetrachloroethene (PCE) impacted soil located in the central portion of the site had been remediated. These environmental issues are summarized in seven environmental investigation and remediation reports previously completed for the site (see Section 4.8). Mr. Freeman's recollection of these issues is also summarized in Section 4.7.

Historical records indicate that a large quantity of imported fill material was deposited throughout the eastern half of the site on several occasions between 1972 and 2000. Reportedly, the fill was obtained to burry a low-lying flooded area formerly existing along the east end of the site. Mr. Freeman stated that the fill originated from several nearby commercial development and roadway construction projects and there were no visual signs indicating that the fill may have been potentially impacted by hazardous materials. According to Mr. Freeman, the fill material was not tested prior to being deposited on the property.

6.1.2 Onsite Findings

The subject site consists of one square shaped parcel comprising a total of approximately 9.49-acres of land area (Figure 2). The site's approximate elevation ranges between 311 to 342 feet above mean sea level. The terrain appeared to relatively level and contains a steep sloped area along the eastern boundary. A stormwater drainage ditch and two small sedimentation ponds were observed along the sloped area to convey stormwater runoff into a nearby municipal stormwater system. The site's topography generally appeared to slope towards the east and southeast.

The central, eastern, and southern portions of the site are currently undeveloped and covered with grass and weeds. Developments at the site consist of a large industrial building and two smaller detached structures (a spray painting shed and a paint storage shed) located along the northwest end of the property. Concrete foundations associated with two former sheds that were removed from the site (approximately four years ago) are also present along the northwest end of the property. The industrial building and sheds are currently unoccupied and were observed storing the site owner's personal property, as well as an assortment of equipment, tools, machinery, and supplies that were formerly used in conjunction with the manufacturing of marine automatic pilots when the site was occupied by Metal Marine Pilot, Inc.

Hazardous materials noted within the industrial building included several 55-gallon drums storing motor and hydraulic oils and several smaller containers storing alcohol, paint thinner, kerosene, and an assortment of cleaning solvents (e.g. methyl ethyl ketone). Hydraulic oil residue and a large stained area were noted on the concrete floor within the "hydraulic room" of the industrial building. Metal shavings and minor floor staining was noted around some of the equipment located within the machine shop and lathe room areas of the industrial building.

Several empty containers that once stored oils, lacquers, thinners, paints, trichloroethane, and other chemicals were observed stacked in a pile along the east side of the industrial building's exterior. Additionally, an empty perchloroethylene aboveground storage tank, several used

appliances, wood boxes, drums storing scrap metal, flat-bed trailers and other miscellaneous materials were staged in areas between the industrial building and the detached sheds. No visible signs of leaks or stains were noted around the bases of the aboveground storage tank and empty hazardous materials containers.

Other improvements at the site consist of asphalt paved and gravel paved driveways, parking lots, and areas dedicated for landscaping. The industrial building was constructed during 1959 and the detached sheds were constructed at unknown dates following 1959. Prior to 1959, the subject site was undeveloped/vacant land.

Five electrical transformers were observed mounted near the top of three utility poles located along the northwest end of the subject property. The transformers are suspected to contain PCB dielectric fluids since they did not contain markings/labels indicating that they do not contain PCBs. The transformers appeared intact and there were no signs of dielectric fluid leakage from the transformer's casings.

One lead-based paint application and several asbestos-containing materials, including 9" x 9" vinyl floor tiles/mastic, two types of sheet vinyl flooring materials, window caulking, HVAC duct sealant, sheetrock/joint compound materials, and two large metal firedoors (assumed ACM) were identified within the industrial building at the site. The ACMs and LBP identified at the site were observed to be in good condition during the survey. If these materials are left in their present state and undisturbed, they are not expected to present a health hazard.

In regards to critical areas, there were no records on-file with the agencies reviewed by Kleinfelder indicating the presence of wetlands, endangered or threatened species, wildlife sanctuaries, regulatory compliance, radon, industrial hygiene, health and safety issues, lead in drinking water, and cultural, historical and archeological resources at the subject site.

6.1.3 Off-Site Findings

The surrounding land use north of the subject property consists of a building occupied by an assortment of retail tenants, as well as two light-industrial and commercial office buildings. According to historical records, a neighboring property located immediately north of the subject site (formerly occupied by Pace Industries (Pace)) had impacted the site with an unknown quantity of paraffin based lubricating oil. Reportedly the paraffin oil was discharged from a broken PVC pipe along the south end of Pace's property on April 26, 1999 and migrated onto the north and east ends of the subject site. The oil release and associated impacted soil was reportedly cleaned up at the subject site by Pace. However, according to a November 2000 Phase

II Environmental Site Assessment Addendum report completed by Creative Environmental Technologies, Inc. elevated concentrations of heavy oil range hydrocarbons (attributed to the paraffin oil release) remain along the northern property boundary. See Sections 3.1.2 and 4.8.1 for details.

The surrounding land use south and west of the subject property are currently developed with commercial office and retail establishments. There were no available records on-file with the public agencies reviewed indicating that the neighboring properties south and west of the site had impacted soil and/or groundwater with hazardous materials.

The surrounding land use east of the subject property consists of a multi-family apartment complex. There were no available records on-file with the public agencies reviewed indicating that the neighboring apartment complex property had impacted soil and/or groundwater with hazardous materials.

6.2 CONCLUSION AND RECOMMENDATIONS

This assessment has revealed evidence of a recognized environmental condition (as defined by ASTM in Section 1.1 of this report) in connection with the subject property. In summary, the site has a long history of industrial use, which included the use and reported disposal of hazardous materials on the property. Previous environmental investigation and remediation reports completed for the site indicated that some of the environmental issues were successfully addressed at the site. However, as noted in Sections 4.7 and 4.8.2, the following areas at the site were not successfully addressed and may have impacted soil and/or groundwater:

- Areas along the northern property boundary where paraffin oil was released by the neighboring Pace Industries site and where elevated levels of heavy oil reportedly remain in the soil.
- Indoor and outdoor hazardous materials/waste storage areas located at the industrial building.
- Stained floor areas located within the industrial building.
- Areas where two "sealed recovery" USTs are located (east of the spray painting and paint storage sheds).

- Areas along the east portion of the site where 3 or 4 lime-lined hazardous waste disposal pits were installed, imported fill material was deposited, and where mercury vapor fluorescent light bulbs were reportedly thrown from the site's loading dock.

- The area in the central portion of the site where waste water mixed with oil and cleaning solvents was discharged onto the property through a concrete drain pipe located immediately south of the paint storage shed.

Based on the results of this assessment, further investigation at the site is warranted. Kleinfelder recommends that a limited subsurface investigation be performed in the areas addressed above to screen the site for the potential presence of shallow soil and groundwater contamination from past site operations. Analytical results generated during this limited assessment should be evaluated as to whether (or not) a more extensive subsurface investigation (i.e. the collection of additional soil and/or groundwater samples) should be performed at the site.

Additional recommendations concerning the subject site (prior to redevelopment) are as follows:

1. All drums, aboveground storage tanks, and other smaller containers storing oil, cleaning solvents, and other hazardous materials should be removed and properly disposed or recycled.

2. All hydraulic oil residues, hazardous materials stained areas, and metal shavings located on the concrete floor within the industrial building should be cleaned up and properly disposed or recycled.

3. The two 5,000-gallon "sealed recovery" USTs located at the center of the site should be cleaned out and decommissioned by a State Certified tank removal contractor in accordance with Federal, State, and local regulations. Additionally, impacted soil located within the UST excavation pits (if present) should be removed and confirmatory soil sampling along the sidewalls and at the base of the pits should be performed by qualified individuals.

4. The existing septic tanks at the site should be cleaned out by a septic tank service contractor and removed.

5. Sections of the buried inactive transite water pipe that become exposed or disturbed during site development should be removed and disposed of by a State Certified asbestos abatement contractor.

6. The identified asbestos-containing materials located within the industrial building occupying the site should be removed by a State licensed and registered asbestos abatement contractor prior to demolishing the building.

7. Disturbance of lead-based paints at the site should be performed as outlined in Section 5.2 of this report. Removing loose paint from the on-site structures prior to demolition activities (if present) should reduce worker exposure to airborne lead dust particles and reduce the possibility of paint chips and lead dust from mixing-in with the soil on-site and from migrating onto neighboring properties during demolition activities. Based upon laboratory analysis results of the paint applications, loose paint debris and associated dust must be handled and disposed of as hazardous waste.

   The disposal facility receiving building demolition debris coated with lead paint(s) that are not flaking or peeling may request a Toxicity Characteristic Leaching Procedure (TCLP) test on a representative sample of the debris material to evaluate whether the debris must be handled and disposed of as hazardous waste under Ecology's regulations.

8. Should underground storage tanks and/or groundwater wells be encountered on the property during site development, they should be decommissioned in accordance with Federal, State, and local requirements. Additionally, if any buried hazardous materials, visibly impacted soil areas, and/or septic tanks are encountered at the site during development activities, they should be removed and properly disposed of.

7.0 REFERENCES

1. American Society for testing and materials, 2000, *Standard practice for environmental site assessments: Phase I Environmental Site Assessment Process.*
2. *Phase I Environmental Site Assessment and Report Requirements*, dated October 1, 2004.
3. *Supplement to Phase I Guidelines (When Buildings Are Present)*, dated May 22, 2000.
4. *EDR Radius Map with GeoCheck*, Environmental Data Resources, Proposed Retail Site (No. 95984), 2119 Mildred Street West, Fircest, Washington. Report ID: 01395917.1r, dated April 7, 2005.
5. *Sanborn Map Report*, Environmental Data Resources, Proposed Retail Site (No. 95984), 2119 Mildred Street West, Fircest, Washington. Report ID: 1395917.2, dated April 7, 2005.

Additional sources are referenced separately in the report text.

N

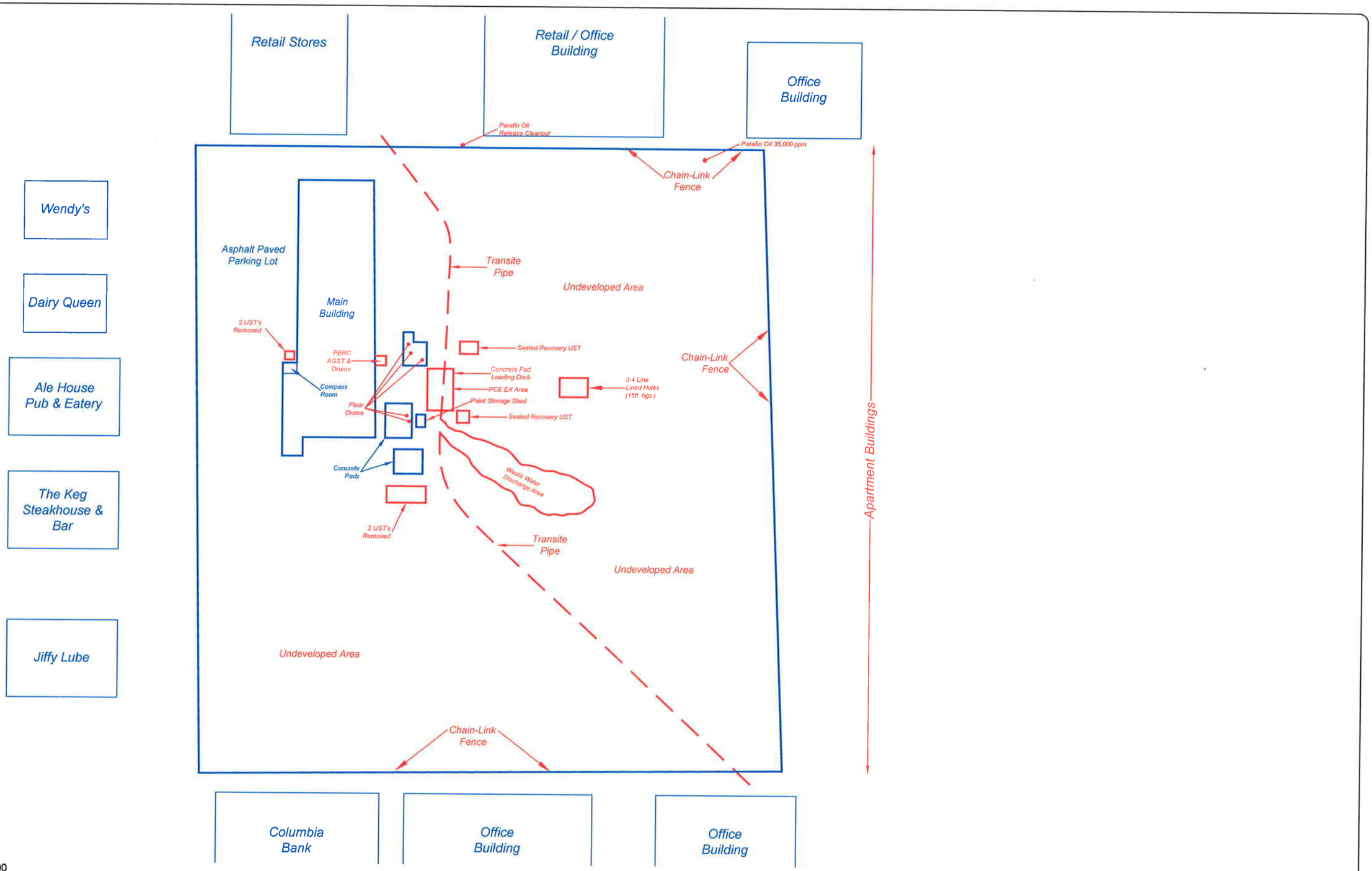
Not to Scale

KLEINFELDER

PROJECT NO. 556130 April 2005

Vicinity Map
Proposed Retail Site (No.95984)
2119 Mildred Street West
Fircrest, Washington

FIGURE 1



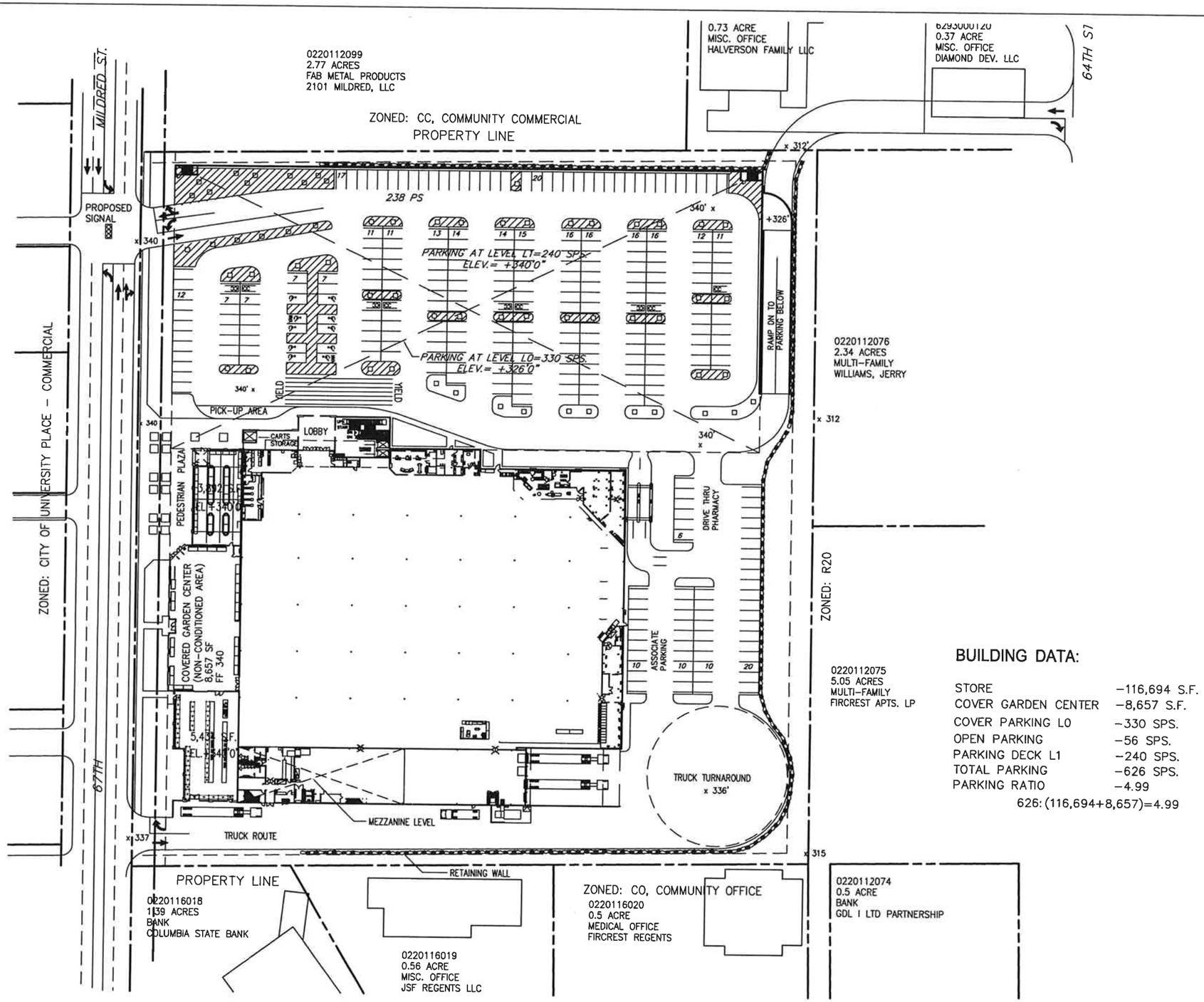
KLEINFELDER

Proposed Retail Site (No.95984)
2119 Mildred Street West
Fircrest, Washington

Project: 56130 April 2005

Existing Site Plan

FIGURE 2



BUILDING DATA:

STORE	−116,694 S.F.
COVER GARDEN CENTER	−8,657 S.F.
COVER PARKING L0	−330 SPS.
OPEN PARKING	−56 SPS.
PARKING DECK L1	−240 SPS.
TOTAL PARKING	−626 SPS.
PARKING RATIO	−4.99

626: (116,694+8,657)=4.99

N

0 100

Scale: 1" = 100'

Reference: Conceptual Site Plan prepared by BCRA, 6/25/04

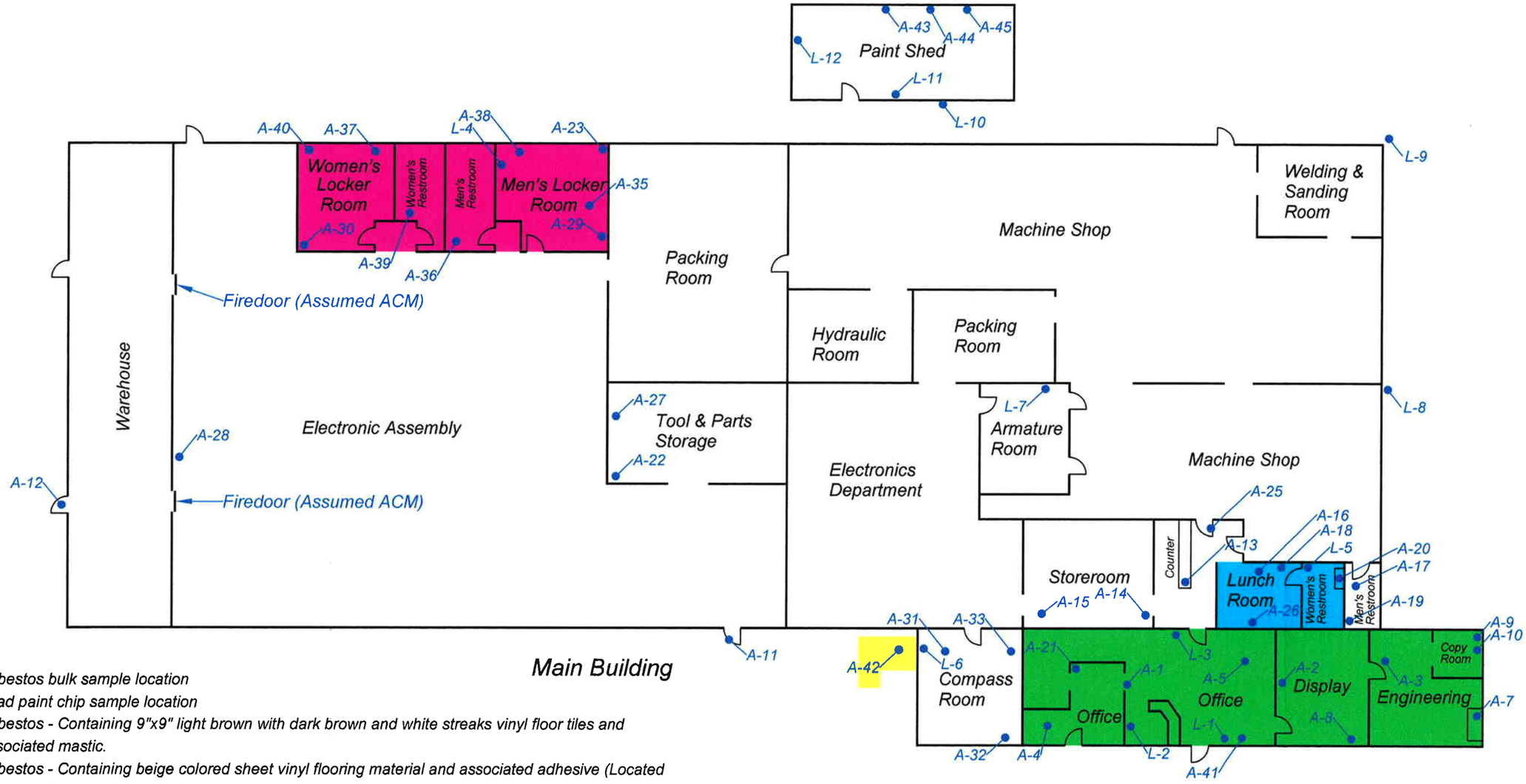
KLEINFELDER

Proposed Retail Site (No.95984)
2119 Mildred Street West
Fircrest, Washington

Project: 56130 April 2005

Proposed Site Development Plan

FIGURE 3



Main Building

Legend

A-1 = Asbestos bulk sample location

L-1 = Lead paint chip sample location

Asbestos - Containing 9"x9" light brown with dark brown and white streaks vinyl floor tiles and associated mastic.

Asbestos - Containing beige colored sheet vinyl flooring material and associated adhesive (Located underneath Non Asbestos - Containing blue colored sheet vinyl flooring material).

Asbestos - Containing tan, yellow, and white colored with mosaic pattern sheet vinyl flooring material and associated adhesive.

Asbestos - Containing HVAC duct sealant.

Note: Asbestos - Containing sheetrock with joint compound material exists throughout the building interior.

Note: Asbestos - Containing window caulking is applied around perimeter windows located along the southwest end of the building (front offices, display room, engineering room, and compass room).

KLEINFELDER

Proposed Retail Site (No.95984)
2119 Mildred Street West
Fircrest, Washington

Project: 56130 April 2005

Asbestos & Lead Paint Sample Location Plan

FIGURE 4

TED W. SYKES, REA

Environmental Scientist

Summary of Experience

Mr. Sykes has more than 15 years of experience with Phase I Environmental Site Assessments and Environmental Transaction Screens for financial institutions involving agricultural, commercial, industrial, and residential properties. During the course of Phase I Environmental Site Assessments, Mr. Sykes conducts site inspections for evidence of hazardous materials and waste handling, disposal, or site contamination, as well as historical document and regulatory agency research in order to determine potential impacts to properties as a result of recent or historical activities.

He has been directly responsible for over 300 Phase I Environmental Site Assessments conducted at agricultural, residential, industrial, and commercial properties. In addition, Mr. Sykes has performed over 300 asbestos and lead-based paint surveys of commercial, industrial, and residential buildings for purposes of building renovation, demolition, tenant and employee notification, and property transfers.

Mr. Sykes' project experience also includes asbestos management as an environmental assessor and accredited asbestos/lead paint consultant. Mr. Sykes is responsible for project management of asbestos and lead-based paint surveys, abatement oversight and consulting projects throughout Washington. Asbestos and lead-based paint consulting projects managed by Mr. Sykes typically are initiated by conducting a comprehensive asbestos and/or lead-based paint survey for a facility or building, to be followed by one or more of the following activities: preparing an Operations and Management Plan; preparing abatement designs and specifications; conducting removal oversight, preparing abatement cost estimates, and clearance monitoring.

Mr. Sykes has over eleven years of professional experience as a regulatory specialist, environmental scientist, and project manager. He has completed and had project management responsibility for numerous Phase I and II environmental site assessments (ESAs), asbestos/lead paint surveys, asbestos/lead paint construction monitoring, and monitoring well closure projects. Typical duties include coordination and supervision of field staff for environmental and engineering due diligence projects such as property condition assessments, seismic risk assessment and construction loan field audits, preparation of plans, specifications and bid documents, and technical report preparation.

Education

BS Physical Science, California State University, Chico, 1989

Registration / Certification
Certified AHERA Asbestos Contractor/Supervisor
Certified AHERA Asbestos Abatement Project Designer
Certified AHERA Asbestos Inspector / Management Planner
NIOSH 582 Accredited
Registered Environmental Assessor, California No. 06847
California DOSH-Certified Asbestos Consultant (CAC), No. 94-1365
California DHS-Certified Lead Inspector/Risk Assessor (CLP), No. 1-3356
California DHS-Certified Lead Project Monitor (CLP), No. M-3356
OSHA 40-hour Hazardous Waste Operations and Emergency Response

Professional Affiliations
International Facilities Management Association
ASFE / The Association of Engineering Firms Practicing in the Geosciences

Select Project Experience
A representative selection of Mr. Sykes' project experience is included below.

Phase I Environmental Site Assessment and Asbestos Survey, Commercial Buildings, Albertsons Inc., Federal Way, Washington. Project Manager. Performed and managed Phase I ESA and asbestos survey of several commercial building slated for demolition and site re-redevelopment.

Phase I Environmental Site Assessments and Asbestos Surveys, Toys 'R' Us, Inc., California and New Mexico. Project Manager. Performed and managed several Phase I ESA's and asbestos surveys for Toys 'R' Us during their retail outlet expansion program throughout California and New Mexico.

Phase I and II Environmental Site Assessment, Cappozzoli Advisory for Pensions, Inc., Dublin, California. Team Leader for Phase I and subsequent Phase II ESA for a retail property acquisition. Projects were completed on schedule and under budget.

Phase I Environmental Site Assessment and Asbestos Surveys, Various Commercial Properties, Capital and Counties U.S.A., Inc., Various Locations in California. Project Manager. Completed Phase I ESAs and asbestos surveys for several commercial property acquisitions throughout Northern and Southern California for a foreign-owned development company.

Asbestos and Lead Paint Survey and Abatement Design Specifications and Construction Oversight, Commercial Building, Snohomish County Facilities Management, City of Everett, Washington. Project Manager. Recently managed and coordinated an asbestos building survey and preparation of written asbestos and lead paint survey reports, abatement plans and bid specifications. Also prepared Bid

Specifications for handling lead paint during building demolition, UST Closure and Site Restoration. Engineering cost estimates were developed for UST removal, building demolition; asbestos and lead paint abatement and site restoration.

Asbestos Survey, Bid Specifications and Abatement Construction Monitoring, Three Commercial Warehouses. Snohomish County Department of Public Works, Washington. Project Coordinator. Recently conducted an asbestos survey of three warehouse structures that identified asbestos-containing building materials (ACBM). Prepared Bid Specifications, Engineering Cost Estimates and assisted in selection of abatement contractor. Provided asbestos abatement construction and air monitoring.

Asbestos Building Surveys and O&M Programs, Ventana Property Services, Menlo Park, California. Project Coordinator. Recently managed and coordinated asbestos building surveys and preparation of written asbestos Operation and Maintenance Programs for fourteen apartment complex sites located throughout the San Francisco Bay Area.

Asbestos and Lead Paint Abatement Oversight, San Francisco Unified School District. Project Manager responsible for air; wipe sample monitoring and abatement oversight during renovation projects at elementary schools throughout the City and County of San Francisco.

Asbestos Abatement Project Management, Cisco Systems, San Jose, California. Developed abatement specifications, hosted pre-bid walkthrough with abatement contractors, coordinated staff conducting abatement to ensure compliance with specifications.

Publications / Presentations

"Effectively Managing Asbestos-Containing Materials and Lead-Based Paint in Your Facility," presented for Bay Area Property Management Firms, Santa Clara, California, March 1998.

EDR™ Environmental Data Resources Inc

"Linking Technology with Tradition"®

Sanborn® Map Report

Ship To: Ted W. Sykes
Kleinfelder, Inc.
2405 140th Ave. NE
Bellevue, WA 98005

Order Date: 4/7/2005 **Completion Date:** 4/7/2005
Inquiry #: 1395917.2
P.O. #: NA
Site Name: Proposed Retail Site (No. 95984)
Address: 2119 Mildred Street West
City/State: Fircrest, WA 98466
Cross Streets:

Customer Project: NA
1053791KRA 425-562-4200

This document reports that the largest and most complete collection of Sanborn fire insurance maps has been reviewed based on client supplied information, and fire insurance maps depicting the target property at the specified address were not identified.

NO COVERAGE

The EDR Radius Map
with GeoCheck®

Proposed Retail Site (No. 95984)
2119 Mildred Street West
Fircrest, WA 98466

Inquiry Number: 01395917.1r

April 07, 2005

The Standard in Environmental Risk Management Information

440 Wheelers Farms Road
Milford, Connecticut 06460

Nationwide Customer Service

Telephone: 1-800-352-0050
Fax: 1-800-231-6802
Internet: www.edrnet.com

FORM-KRA

TABLE OF CONTENTS

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

EXECUTIVE SUMMARY

A search of available environmental records was conducted by Environmental Data Resources, Inc. (EDR). The report meets the government records search requirements of ASTM Standard Practice for Environmental Site Assessments, E 1527-00. Search distances are per ASTM standard or custom distances requested by the user.

TARGET PROPERTY INFORMATION

ADDRESS

2119 MILDRED STREET WEST
FIRCREST, WA 98466

COORDINATES

Latitude (North):	47.240000 - 47° 14' 24.0"
Longitude (West):	122.525200 - 122° 31' 30.7"
Universal Tranverse Mercator:	Zone 10
UTM X (Meters):	535936.1
UTM Y (Meters):	5231725.5
Elevation:	323 ft. above sea level

USGS TOPOGRAPHIC MAP ASSOCIATED WITH TARGET PROPERTY

Target Property:	47122-B5 STEILACOOM, WA
Source:	USGS 7.5 min quad index

TARGET PROPERTY SEARCH RESULTS

The target property was identified in the following government records. For more information on this property see page 6 of the attached EDR Radius Map report:

Site	Database(s)	EPA ID
2119 MILDRED STREET WEST 2119 MILDRED STREET WEST FIRCREST, WA	SPILLS	N/A
METAL MARINE PILOT INC 2119 MILDRED ST W FIRCREST, WA 98466	RCRA-SQG FINDS UST CSCSL NFA VCP	WAD009242173

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 ASTM E 1527-00 search radius around the target property for the following databases:

FEDERAL ASTM STANDARD

NPL..... National Priority List

EXECUTIVE SUMMARY

Proposed NPL	Proposed National Priority List Sites
CERCLIS	Comprehensive Environmental Response, Compensation, and Liability Information System
CERC-NFRAP	CERCLIS No Further Remedial Action Planned
CORRACTS	Corrective Action Report
RCRA-TSDF	Resource Conservation and Recovery Act Information
RCRA-LQG	Resource Conservation and Recovery Act Information
ERNS	Emergency Response Notification System

STATE ASTM STANDARD

HSL	Hazardous Sites List
INDIAN LUST	Leaking Underground Storage Tanks on Indian Land
INDIAN UST	Underground Storage Tanks on Indian Land

FEDERAL ASTM SUPPLEMENTAL

CONSENT	Superfund (CERCLA) Consent Decrees
ROD	Records Of Decision
Delisted NPL	National Priority List Deletions
HMIRS	Hazardous Materials Information Reporting System
MLTS	Material Licensing Tracking System
MINES	Mines Master Index File
NPL Liens	Federal Superfund Liens
PADS	PCB Activity Database System
INDIAN RESERV	Indian Reservations
FUDS	Formerly Used Defense Sites
UMTRA	Uranium Mill Tailings Sites
ODI	Open Dump Inventory
DOD	Department of Defense Sites
RAATS	RCRA Administrative Action Tracking System
TRIS	Toxic Chemical Release Inventory System
TSCA	Toxic Substances Control Act
SSTS	Section 7 Tracking Systems
FTTS INSP	FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)

STATE OR LOCAL ASTM SUPPLEMENTAL

CDL	Clandestine Drug Lab Contaminated Site List
DRYCLEANERS	Drycleaner List
AST	Aboveground Storage Tank Locations
EMI	Washington Emissions Data System

EDR PROPRIETARY HISTORICAL DATABASES

Coal Gas	Former Manufactured Gas (Coal Gas) Sites

BROWNFIELDS DATABASES

US BROWNFIELDS	A Listing of Brownfields Sites
US INST CONTROL	Sites with Institutional Controls
INST CONTROL	Institutional Control Site List

EXECUTIVE SUMMARY

SURROUNDING SITES: SEARCH RESULTS

Surrounding sites were identified.

Elevations have been determined from the USGS Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified. Sites with an elevation equal to or higher than the target property have been differentiated below from sites with an elevation lower than the target property.
Page numbers and map identification numbers refer to the EDR Radius Map report where detailed data on individual sites can be reviewed.

Sites listed in ***bold italics*** are in multiple databases.

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

FEDERAL ASTM STANDARD

RCRAInfo: 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. RCRAInfo replaces the data recording and reporting abilities of the Resource Conservation and Recovery Information System(RCRIS). 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. Small quantity generators (SQGs) generate between 100 kg and 1,000 kg of hazardous waste per month Large quantity generators generate over 1,000 kilograms (kg) of hazardous waste, or over 1 kg of acutely hazardous waste per month. 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.

A review of the RCRA-SQG list, as provided by EDR, and dated 01/10/2005 has revealed that there are 7 RCRA-SQG sites within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Dist / Dir	Map ID	Page
QUAKER STATE MINIT LUBE INC 11	***2218 MILDRED ST W***	***0 - 1/8 W***	***B5***	***9***
Y PAY MOR CLEANERS TACOMA	***2310 MILDRED ST W***	***0 - 1/8 SW***	***C8***	***10***
PUGET CORP OF WASHINGTON	***2101 MILDRED ST W***	***0 - 1/8 NW***	***9***	***10***
TACOMA DRAPERY TOWNE CLEANER	***1921 W MILDRED***	***1/8 - 1/4 NNW***	***D12***	***13***
PRO TECH	***2205 70TH AVE W***	***1/8 - 1/4 W***	***F15***	***17***
AUTO TECH 2213 70TH	***2213 70TH AVE W 21***	***1/8 - 1/4 W***	***F16***	***17***

Lower Elevation	Address	Dist / Dir	Map ID	Page
TOSCO 1107730143	***6622 19TH ST W***	***1/8 - 1/4 N***	***E13***	***14***

STATE ASTM STANDARD

CSCSL: The State Hazardous Waste Sites 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. The data come from the Department of Ecology's Confirmed & Suspected Contaminated Sites List.

A review of the CSCSL list, as provided by EDR, has revealed that there are 3 CSCSL sites within approximately 1 mile of the target property.

Equal/Higher Elevation	Address	Dist / Dir	Map ID	Page
PUGET CORP OF WASHINGTON	***2101 MILDRED ST W***	***0 - 1/8 NW***	***9***	***10***
ARCO 4335	***2623 BRIDGEPORT WAY W***	***1/2 - 1 WSW***	***21***	***22***
HIDDEN HILLS APARTMENTS	3313 72ND AVE CT W	1/2 - 1 SSW	22	23

SWF/LF: The Solid Waste Facilities/Landfill Sites records typically contain an inventory of solid waste disposal facilities or landfills in a particular state. The data come from the Department of Ecology's Solid Waste Facilities Handbook.

A review of the SWF/LF list, as provided by EDR, has revealed that there is 1 SWF/LF site within approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Dist / Dir	Map ID	Page
UNIVERSITY PLACE REFUSE SERVIC	***2809 ROCHESTER W***	***1/4 - 1/2 SW***	***20***	***20***

LUST: The Leaking Underground Storage Tank Incident Reports contain an inventory of reported leaking underground storage tank incidents. The data come from the Department of Ecology's Leaking Underground Storage Tanks Site List.

A review of the LUST list, as provided by EDR, and dated 01/03/2005 has revealed that there are 5 LUST sites within approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Dist / Dir	Map ID	Page
MINIT-LUBE #1112	***2218 MILDRED W***	***0 - 1/8 W***	***B3***	***7***
TOWNE CLEANERS	***1923 MILDRED WEST***	***1/8 - 1/4 NNW***	***D10***	***12***
WESTMARK CONSTRUCTION	***7010 WEST 27TH STREET***	***1/4 - 1/2 SW***	***19***	***18***
UNIVERSITY PLACE REFUSE SERVIC	***2809 ROCHESTER W***	***1/4 - 1/2 SW***	***20***	***20***

Lower Elevation	Address	Dist / Dir	Map ID	Page
TOSCO 1107730143	***6622 19TH ST W***	***1/8 - 1/4 N***	***E13***	***14***

UST: The Underground Storage Tank database contains registered USTs. USTs are regulated under Subtitle I of the Resource Conservation and Recovery Act (RCRA). The data come from the Department of Ecology's Statewide UST Site/Tank Report.

A review of the UST list, as provided by EDR, and dated 01/03/2005 has revealed that there are 6 UST sites within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Dist / Dir	Map ID	Page
MINIT-LUBE #1112	***2218 MILDRED W***	***0 - 1/8 W***	***B3***	***7***
LELAND M MCARTHUR	2305 MILDRED STREET W	0 - 1/8 SW	C7	9
TOWNE CLEANERS	***1923 MILDRED WEST***	***1/8 - 1/4 NNW***	***D10***	***12***
FIRCREST GOLF CLUB	6520 REGENTS BLVD	1/8 - 1/4 SSW	11	13

Lower Elevation	Address	Dist / Dir	Map ID	Page
PUGET CORP. OF WASHINGTON	2101 SO. MILDRED	0 - 1/8 NNE	6	9

EXECUTIVE SUMMARY

Lower Elevation	Address	Dist / Dir	Map ID	Page
TOSCO 1107730143	*6622 19TH ST W*	*1/8 - 1/4 N*	*E13*	*14*

VCP: Sites that have entered either the Voluntary Cleanup Program or its predecessor Independent Remedial Action Program.

A review of the VCP list, as provided by EDR, and dated 01/03/2005 has revealed that there is 1 VCP site within approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Dist / Dir	Map ID	Page
PUGET CORP OF WASHINGTON	*2101 MILDRED ST W*	*0 - 1/8 NW*	*9*	*10*

STATE OR LOCAL ASTM SUPPLEMENTAL

CSCSL NFA: The data set contains information about sites previously on the Confirmed and Suspected Contaminated Sites list that have received a No Further Action (NFA) determination. Because it is necessary to maintain historical records of sites that have been investigated and cleaned up, sites are not deleted from the database when cleanup activities are completed. Instead a No Further Action code is entered based upon the type of NFA determination the site received.

A review of the CSCSL NFA list, as provided by EDR, and dated 01/03/2005 has revealed that there is 1 CSCSL NFA site within approximately 0.5 miles of the target property.

Lower Elevation	Address	Dist / Dir	Map ID	Page
BP EXPLORATION OIL INC 03116	1033 REGENTS BLVD	1/4 - 1/2 ESE	G18	18

ICR: These are remedial action reports Ecology has received from either the owner or operator of the site. These actions have been conducted without department oversight or approval and are not under an order or decree.

A review of the WA ICR list, as provided by EDR, has revealed that there are 5 WA ICR sites within approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Dist / Dir	Map ID	Page
Q LUBE	2218 MILDRED	0 - 1/8 W	B4	8
WESTMARK CONSTRUCTION	*7010 WEST 27TH STREET*	*1/4 - 1/2 SW*	*19*	*18*
UNIVERSITY PLACE REFUSE SERVIC	*2809 ROCHESTER W*	*1/4 - 1/2 SW*	*20*	*20*

Lower Elevation	Address	Dist / Dir	Map ID	Page
BP #11077	6622 S. 19TH ST.	1/8 - 1/4 N	E14	16
EXXON #7 7017	1033 REGENTS BLVD.	1/4 - 1/2 ESE	G17	17

BROWNFIELDS DATABASES

EXECUTIVE SUMMARY

VCP: Sites that have entered either the Voluntary Cleanup Program or its predecessor Independent Remedial Action Program.

A review of the VCP list, as provided by EDR, and dated 01/03/2005 has revealed that there is 1 VCP site within approximately 0.5 miles of the target property.

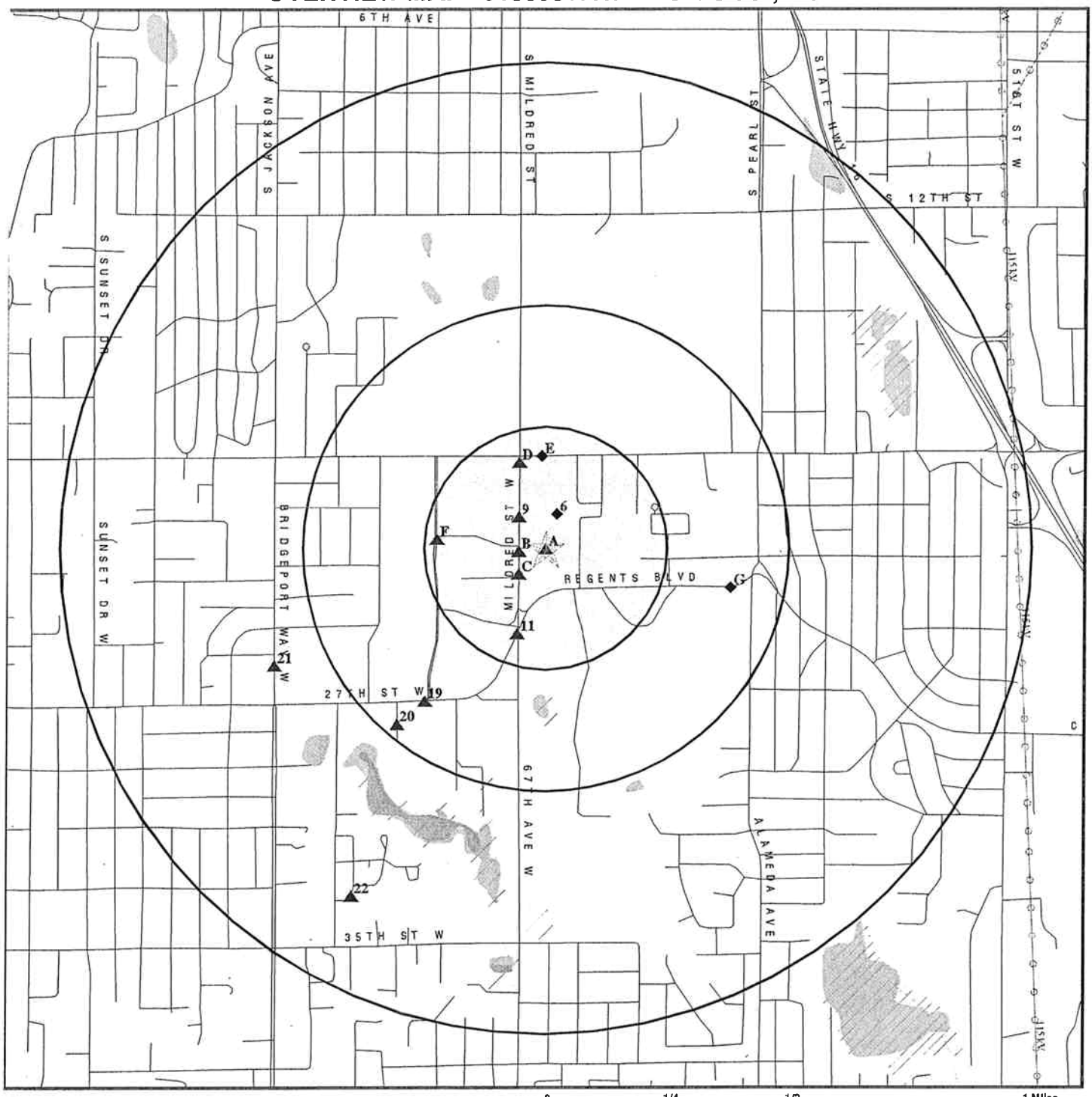
Equal/Higher Elevation	Address	Dist / Dir	Map ID	Page
PUGET CORP OF WASHINGTON	*2101 MILDRED ST W*	*0 - 1/8 NW*	*9*	*10*

EXECUTIVE SUMMARY

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

Site Name	Database(s)
PACE INDUSTRIES PUGET DIVISION	CSCSL NFA, VCP, INST CONTROL

OVERVIEW MAP - 01395917.1r - Kleinfelder, Inc.

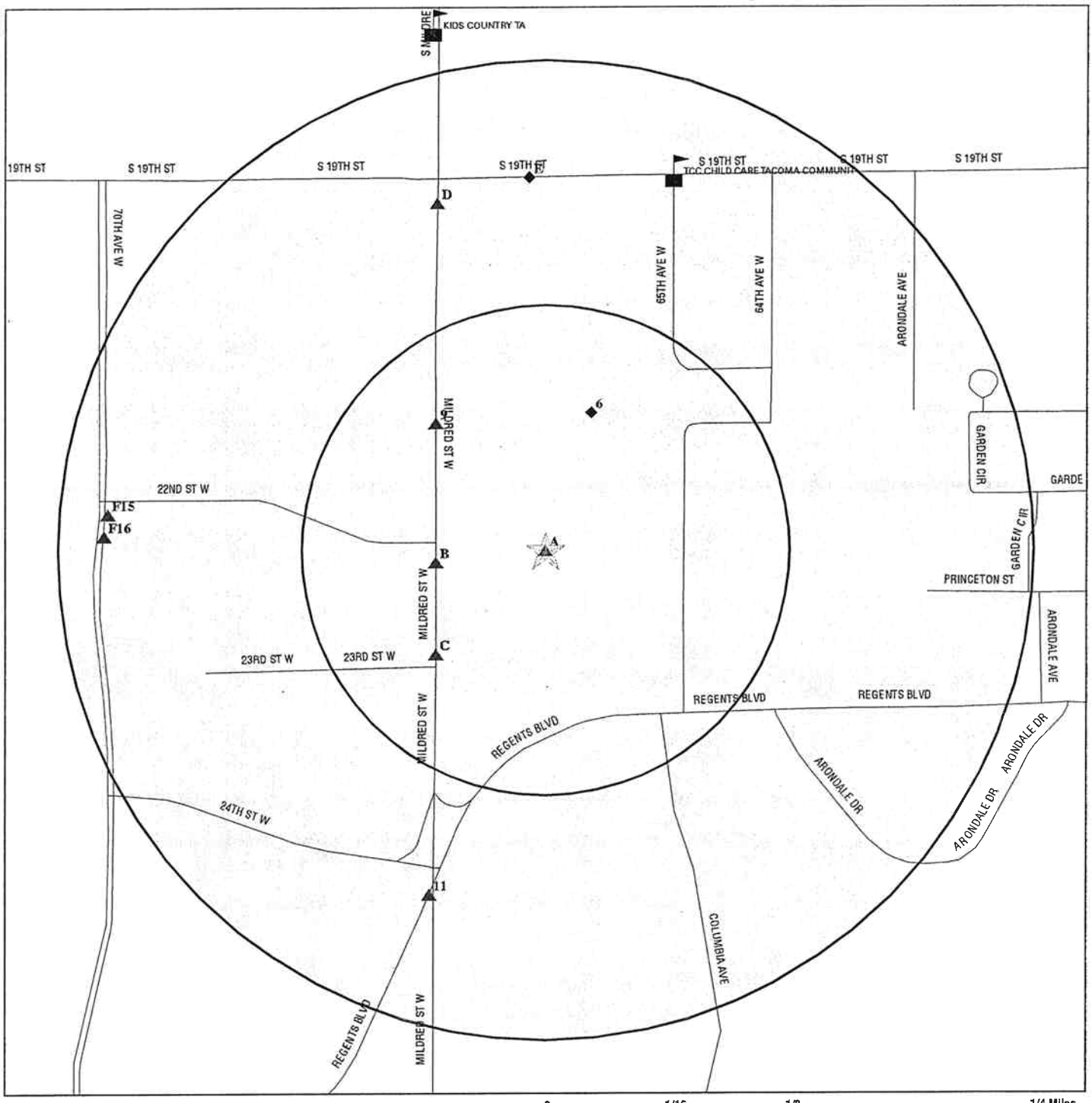


0 1/4 1/2 1 Miles

- Target Property
- Sites at elevations higher than or equal to the target property
- Sites at elevations lower than the target property
- Coal Gasification Sites
- National Priority List Sites
- Landfill Sites
- Dept. Defense Sites
- Indian Reservations BIA
- Power transmission lines
- Oil & Gas pipelines
- 100-year flood zone
- 500-year flood zone
- Federal Wetlands

TARGET PROPERTY:	Proposed Retail Site (No. 95984)	CUSTOMER:	Kleinfelder, Inc.
ADDRESS:	2119 Mildred Street West	CONTACT:	Ted W. Sykes
CITY/STATE/ZIP:	Fircrest WA 98466	INQUIRY #:	01395917.1r
LAT/LONG:	47.2400 / 122.5252	DATE:	April 07, 2005 8:01 pm

DETAIL MAP - 01395917.1r - Kleinfelder, Inc.



- Target Property
- Sites at elevations higher than or equal to the target property
- Sites at elevations lower than the target property
- Coal Gasification Sites
- Sensitive Receptors
- National Priority List Sites
- Landfill Sites
- Dept. Defense Sites
- Indian Reservations BIA
- Oil & Gas pipelines
- 100-year flood zone
- 500-year flood zone

TARGET PROPERTY:	Proposed Retail Site (No. 95984)	CUSTOMER:	Kleinfelder, Inc.
ADDRESS:	2119 Mildred Street West	CONTACT:	Ted W. Sykes
CITY/STATE/ZIP:	Fircrest WA 98466	INQUIRY #:	01395917.1r
LAT/LONG:	47.2400 / 122.5252	DATE:	April 07, 2005 8:01 pm

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
FEDERAL ASTM STANDARD								
NPL		1.000	0	0	0	0	NR	0
Proposed NPL		1.000	0	0	0	0	NR	0
CERCLIS		0.500	0	0	0	NR	NR	0
CERC-NFRAP		0.250	0	0	NR	NR	NR	0
CORRACTS		1.000	0	0	0	0	NR	0
RCRA TSD		0.500	0	0	0	NR	NR	0
RCRA Lg. Quan. Gen.		0.250	0	0	NR	NR	NR	0
RCRA Sm. Quan. Gen.	X	0.250	3	4	NR	NR	NR	7
ERNS		TP	NR	NR	NR	NR	NR	0
STATE ASTM STANDARD								
CSCSL		1.000	1	0	0	2	NR	3
HSL		1.000	0	0	0	0	NR	0
State Landfill		0.500	0	0	1	NR	NR	1
LUST		0.500	1	2	2	NR	NR	5
UST	X	0.250	3	3	NR	NR	NR	6
VCP	X	0.500	1	0	0	NR	NR	1
INDIAN LUST		0.500	0	0	0	NR	NR	0
INDIAN UST		0.250	0	0	NR	NR	NR	0
FEDERAL ASTM SUPPLEMENTAL								
CONSENT		1.000	0	0	0	0	NR	0
ROD		1.000	0	0	0	0	NR	0
Delisted NPL		1.000	0	0	0	0	NR	0
FINDS	X	TP	NR	NR	NR	NR	NR	0
HMIRS		TP	NR	NR	NR	NR	NR	0
MLTS		TP	NR	NR	NR	NR	NR	0
MINES		0.250	0	0	NR	NR	NR	0
NPL Liens		TP	NR	NR	NR	NR	NR	0
PADS		TP	NR	NR	NR	NR	NR	0
INDIAN RESERV		1.000	0	0	0	0	NR	0
FUDS		1.000	0	0	0	0	NR	0
UMTRA		0.500	0	0	0	NR	NR	0
ODI		0.500	0	0	0	NR	NR	0
DOD		1.000	0	0	0	0	NR	0
RAATS		TP	NR	NR	NR	NR	NR	0
TRIS		TP	NR	NR	NR	NR	NR	0
TSCA		TP	NR	NR	NR	NR	NR	0
SSTS		TP	NR	NR	NR	NR	NR	0
FTTS		TP	NR	NR	NR	NR	NR	0
STATE OR LOCAL ASTM SUPPLEMENTAL								
CSCSL NFA	X	0.500	0	0	1	NR	NR	1

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
WA ICR		0.500	1	1	3	NR	NR	5
SPILLS	X	TP	NR	NR	NR	NR	NR	0
CDL		TP	NR	NR	NR	NR	NR	0
DRYCLEANERS		0.250	0	0	NR	NR	NR	0
AST		TP	NR	NR	NR	NR	NR	0
WA Emissions		TP	NR	NR	NR	NR	NR	0
EDR PROPRIETARY HISTORICAL DATABASES								
Coal Gas		1.000	0	0	0	0	NR	0
BROWNFIELDS DATABASES								
US BROWNFIELDS		0.500	0	0	0	NR	NR	0
US INST CONTROL		0.500	0	0	0	NR	NR	0
VCP	X	0.500	1	0	0	NR	NR	1
INST CONTROL		0.500	0	0	0	NR	NR	0

NOTES:

AQUIFLOW - see EDR Physical Setting Source Addendum

TP = Target Property

NR = Not Requested at this Search Distance

Sites may be listed in more than one database

Coal Gas Site Search: No site was found in a search of Real Property Scan's ENVIROHAZ database.

A1
Target Property
2119 MILDRED STREET WEST
FIRCREST, WA

SPILLS **S105399154**
N/A

Site 1 of 2 in cluster A

Actual: 323 ft.

WA SPILL:

Facility ID:	521646
Material Desc :	CHEMICAL
Medium:	OTHER
Material Qty:	50
Material Units:	GALLON
IPRP Business Name:	METAL MARINE PILOT
IPRP Last Name:	Not reported
Date Received:	Not reported

A2
Target Property
METAL MARINE PILOT INC
2119 MILDRED ST W
FIRCREST, WA 98466

RCRA-SQG **1004793347**
FINDS **WAD009242173**
UST
CSCSL NFA
VCP

Site 2 of 2 in cluster A

Actual: 323 ft.

RCRAInfo:

Owner:	METAL MARINE PILOT INC (253)606-2173
EPA ID:	WAD009242173
Contact:	Not reported
Classification:	Small Quantity Generator
TSDF Activities:	Not reported

Violation Status: No violations found

FINDS:
Other Pertinent Environmental Activity Identified at Site:
Resource Conservation and Recovery Act Information system
Wasington Department of Ecology Facility/Site Identification System

WA NFA:

Facility/Site Id :	84252573
Ecology Status :	Independent Remedial Action
Independent Status Code :	Independant Site Assesment or Interim RA recvd
WARM Bin Number :	Not reported
NFA Code :	NFA after Assesment IRAP or VCP
NFA Date :	36956
Program Plan Code :	4
NFA Desc :	NFA after assessment, IRAP, or VCP

VCP:

Facility ID :	84252573
WARM BIN # :	Not reported
Ecology Status :	Independent Remedial Action
NFA Code :	NFA after assessment, IRAP, or VCP

METAL MARINE PILOT INC (Continued) **1004793347**

UST:

Facility ID:	84252573
Site ID:	5902
Install Date:	12/31/64
Capacity:	111 to 1,100 Gallons
Status:	Exempt
Tank Name:	3
Substance:	Not reported
Compartment #:	1
Ecology Region:	South Western

Facility ID:	84252573
Site ID:	5902
Install Date:	06/01/74
Capacity:	111 to 1,100 Gallons
Status:	Removed
Tank Name:	2
Substance:	Not reported
Compartment #:	1
Ecology Region:	South Western

Facility ID:	84252573
Site ID:	5902
Install Date:	06/01/74
Capacity:	111 to 1,100 Gallons
Status:	Removed
Tank Name:	1
Substance:	KEROSENE
Compartment #:	1
Ecology Region:	South Western

Facility ID:	84252573
Site ID:	5902
Install Date:	12/31/64
Capacity:	111 to 1,100 Gallons
Status:	Closed in Place
Tank Name:	4
Substance:	Not reported
Compartment #:	1
Ecology Region:	South Western

B3 **MINIT-LUBE #1112** **LUST U003355163**
West **2218 MILDRED W** **UST N/A**
< 1/8 **TACOMA, WA 98466**
298 ft.

Site 1 of 3 in cluster B

Relative:
Higher

Actual:
336 ft.

LUST:

Facility ID:	6792
Ecology Region:	SWRO
Facility Status:	Cleanup Started
Release ID:	5692
Release Notification Date:	04/04/95
Release Status Date:	04/04/95
Alternate Name:	MINIT-LUBE #1112
Lat/Lon:	47.239440000 / 122.52688000
Affected Media:	Soil
FS ID:	75845594

MINIT-LUBE #1112 (Continued) **U003355163**

Facility ID: 6792
Ecology Region: SWRO
Facility Status: Reported Cleaned Up
Release ID: 5692
Release Notification Date: 04/04/95
Release Status Date: 05/04/95
Alternate Name: MINIT-LUBE #1112
Lat/Lon: 47.239440000 / 122.52688000
Affected Media: Soil
FS ID: 75845594

UST:
Facility ID: 75845594
Site ID: 6792
Install Date: 06/01/82
Capacity: 1,101 TO 2,000 GALLONS
Status: Removed
Tank Name: 2
Substance: MOTOR OIL
Compartment #: 1
Ecology Region: South Western

Facility ID: 75845594
Site ID: 6792
Install Date: 06/01/82
Capacity: 1,101 TO 2,000 GALLONS
Status: Removed
Tank Name: 1
Substance: MOTOR OIL
Compartment #: 1
Ecology Region: South Western

Facility ID: 75845594
Site ID: 6792
Install Date: 06/01/82
Capacity: 111 to 1,100 Gallons
Status: Removed
Tank Name: 3
Substance: USED OIL/WASTE OIL
Compartment #: 1
Ecology Region: South Western

B4 **Q LUBE** **WA ICR** **S103508769**
West **2218 MILDRED** **N/A**
< 1/8 **TACOMA, WA 98466**
298 ft.

Site 2 of 3 in cluster B

Relative:
Higher

Actual:
336 ft.

WA ICR:
Date Ecology Received Report: 05/04/1995
Contaminants Found at Site: Petroleum products
Media Contaminated: Soil
Cause of Contamination: Tank
Region: South Western
Type of Report Ecology Received: Final cleanup report
Site Register Issue: 93-50
County Code: 27.00000
Contact: Not reported

Q LUBE (Continued) S103508769

Report Title: Not reported

B5
West
< 1/8
298 ft.

Relative:
Higher

Actual:
336 ft.

QUAKER STATE MINIT LUBE INC 11 TACOMA RCRA-SQG 1000838645
2218 MILDRED ST W FINDS WAD988514360
TACOMA, WA 98466

Site 3 of 3 in cluster B

RCRAInfo:
Owner: QUAKER STATE MINIT LUBE INC
EPA ID: WAD988514360
Contact: LEE LAWRENCE
(206) 527-5200
Classification: Small Quantity Generator
TSDF Activities: Not reported

Violation Status: No violations found

FINDS:
Other Pertinent Environmental Activity Identified at Site:
Resource Conservation and Recovery Act Information system
Wasington Department of Ecology Facility/Site Identification System

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6
NNE
< 1/8
391 ft.

Relative:
Lower

Actual:
316 ft.

PUGET CORP. OF WASHINGTON UST U003354313
2101 SO. MILDRED N/A
TACOMA, WA 98406

UST:
Facility ID: 86715242
Site ID: 3944
Install Date: 12/31/64
Capacity: 111 to 1,100 Gallons
Status: Closed in Place
Tank Name: 1
Substance: KEROSENE
Compartment #: 1
Ecology Region: South Western

C7
SW
< 1/8
407 ft.

Relative:
Higher

Actual:
337 ft.

LELAND M MCARTHUR UST U003352666
2305 MILDRED STREET W N/A
TACOMA, WA 98466

Site 1 of 2 in cluster C

UST:
Facility ID: 61187916
Site ID: 101518
Install Date: 12/31/64
Capacity: Not reported
Status: Removed
Tank Name: 3-8000
Substance: LEADED GASOLINE
Compartment #: 1
Ecology Region: South Western

LELAND M MCARTHUR (Continued) **U003352666**

Facility ID: 61187916
Site ID: 101518
Install Date: 12/31/64
Capacity: Not reported
Status: Removed
Tank Name: 2-4000
Substance: LEADED GASOLINE
Compartment #: 1
Ecology Region: South Western

Facility ID: 61187916
Site ID: 101518
Install Date: 12/31/64
Capacity: Not reported
Status: Removed
Tank Name: 1-8000
Substance: LEADED GASOLINE
Compartment #: 1
Ecology Region: South Western

C8 **Y PAY MOR CLEANERS TACOMA** **RCRA-SQG 1000160956**
SW **2310 MILDRED ST W** **FINDS WAD981764004**
< 1/8 **TACOMA, WA 98466**
418 ft.

Site 2 of 2 in cluster C

Relative: Higher

Actual: 337 ft.

RCRAInfo:
Owner: Y PAY MOR CLEANERS
EPA ID: WAD981764004
Contact: LOU PARENT
(253) 564-6000
Classification: Small Quantity Generator
TSDF Activities: Not reported

Violation Status: No violations found

FINDS:
Other Pertinent Environmental Activity Identified at Site:
Resource Conservation and Recovery Act Information system
Wasington Department of Ecology Facility/Site Identification System

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9 **PUGET CORP OF WASHINGTON** **RCRA-SQG 1000223435**
NW **2101 MILDRED ST W** **CSCSL WAD009242090**
< 1/8 **TACOMA, WA 98466** **FINDS**
453 ft. **VCP**

Relative: Higher

Actual: 335 ft.

PUGET CORP OF WASHINGTON (Continued) **1000223435**

RCRAInfo:
Owner: LEGGETT & PLATT INC
(417)358-8131
EPA ID: WAD009242090

Contact: Not reported

Classification: Small Quantity Generator
TSDF Activities: Not reported

BIENNIAL REPORTS:
Last Biennial Reporting Year: 2001

Waste	Quantity (Lbs)	Waste	Quantity (Lbs)
D001	1014.00	D002	1251.00
D004	4400.00	D007	4562.00
D008	989.00	D035	989.00
F003	989.00	F005	989.00

Violation Status: No violations found

FINDS:
Other Pertinent Environmental Activity Identified at Site:
National Emissions Inventory
Resource Conservation and Recovery Act Information system
Toxics Release Inventory
Wasington Department of Ecology Facility/Site Identification System

SHWS:
Facility ID: 86715242
MTBE Code: Not reported
Responsible Unit: Southwest Region
Latitude: 47 14 27.1999999999999
Longitude: 122 31 33.8100000000000
Ecology Site Status relative to the MTCA cleanup process:
Independent Remedial Action
Independent Site Status - those sites undergoing an independent cleanup:
Independent Site Assessment of Interim Remedial Action Report received
WARM Bin Number indicates the outcome of the Washington Ranking Model (WARM):
Affected Media Status: C (Confirmed) - The presence of hazardous substances above MTCA cleanup levels has been confirmed by laboratory analysis (or field determination in the case of petroleum contamination)
Affected Media : Soil
Arsenic Code: Not reported

Base/Neutral/Acid Organics:	Not reported
Halogenated Organic Compounds:	Not reported
Horizontal Collection Method:	Unknown
EPA Priority Pollutants - Metals and Cyanide:	Not reported
Metals - Other non-priority pollutant medals:	Not reported
Polychlorinated biPhenyls (PCBs):	Confirmed above MTCA cleanup levels
Pesticides:	Not reported
Petroleum Products:	Confirmed above MTCA cleanup levels
Phenolic Compounds:	Not reported
Non-Halogenated Solvents:	Not reported
Dioxin:	Not reported
Polynuclear Aromatic Hydrocarbons (PAH):	Not reported
Reactive Wastes:	Not reported
Corrosive Wastes:	Not reported
Radioactive Wastes:	Not reported

PUGET CORP OF WASHINGTON (Continued) **1000223435**

Asbestos: Not reported
Conventional Contaminants, Organic: Not reported
Conventional Contaminants, Inorganic: Not reported

VCP:
Facility ID : 86715242
WARM BIN # : Not reported
Ecology Status : Independent Remedial Action
NFA Code : Not reported

D10 TOWNE CLEANERS **LUST U003353560**
NNW 1923 MILDRED WEST **UST N/A**
1/8-1/4 TACOMA, WA 98466
974 ft.

Site 1 of 2 in cluster D

Relative: Higher

Actual: 328 ft.

LUST:
Facility ID: 1292
Ecology Region: SWRO
Facility Status: Awaiting Cleanup
Release ID: 393018
Release Notification Date: 04/05/93
Release Status Date: 04/05/93
Alternate Name: TOWNE CLEANERS/SEE ALSO: PACE INDUSTRIES
Lat/Lon: 47.241980000 / 122.52612000
Affected Media: Soil
FS ID: 93333137

UST:
Facility ID: 93333137
Site ID: 1292
Install Date: 12/31/64
Capacity: Not reported
Status: Closed in Place
Tank Name: 3
Substance: Not reported
Compartment #: 1
Ecology Region: South Western

Facility ID: 93333137
Site ID: 1292
Install Date: 12/31/64
Capacity: Not reported
Status: Closed in Place
Tank Name: 1
Substance: Not reported
Compartment #: 1
Ecology Region: South Western

Facility ID: 93333137
Site ID: 1292
Install Date: 12/31/64
Capacity: Not reported
Status: Closed in Place
Tank Name: 2
Substance: Not reported
Compartment #: 1
Ecology Region: South Western

11
SSW
1/8-1/4
977 ft.

Relative:
Higher

Actual:
331 ft.

FIRCREST GOLF CLUB
6520 REGENTS BLVD
TACOMA, WA 98466

UST **U003353880**
N/A

UST:

Facility ID:	16989283
Site ID:	2475
Install Date:	12/31/64
Capacity:	111 to 1,100 Gallons
Status:	Removed
Tank Name:	1
Substance:	UNLEADED GASOLINE
Compartment #:	1
Ecology Region:	South Western

Facility ID:	16989283
Site ID:	2475
Install Date:	06/15/89
Capacity:	111 to 1,100 Gallons
Status:	Removed
Tank Name:	1R
Substance:	UNLEADED GASOLINE
Compartment #:	1
Ecology Region:	South Western

Facility ID:	16989283
Site ID:	2475
Install Date:	06/15/89
Capacity:	111 to 1,100 Gallons
Status:	Removed
Tank Name:	2
Substance:	Not reported
Compartment #:	1
Ecology Region:	South Western

Facility ID:	16989283
Site ID:	2475
Install Date:	01/02/00
Capacity:	Not reported
Status:	Removed
Tank Name:	3
Substance:	ALCOHOL BLEND GASOLINE
Compartment #:	1
Ecology Region:	South Western

D12
NNW
1/8-1/4
981 ft.

Site 2 of 2 in cluster D

Relative:
Higher

Actual:
328 ft.

TACOMA DRAPERY TOWNE CLEANER
1921 W MILDRED
TACOMA, WA 98466

RCRA-SQG **1000334209**
FINDS **WAD027537984**

TACOMA DRAPERY TOWNE CLEANER (Continued) **1000334209**

RCRAInfo:
Owner: DRAPERY & TOWNE CLEANERS INC
EPA ID: WAD027537984

Contact: Not reported

Classification: Conditionally Exempt Small Quantity Generator
TSDF Activities: Not reported

Violation Status: No violations found

FINDS:
Other Pertinent Environmental Activity Identified at Site:
Resource Conservation and Recovery Act Information system
Wasington Department of Ecology Facility/Site Identification System

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E13 **TOSCO 1107730143** **RCRA-SQG 1000659068**
North **6622 19TH ST W** **FINDS WAD988487336**
1/8-1/4 **TACOMA, WA 98466** **LUST**
1006 ft. **UST**

Site 1 of 2 in cluster E

Relative:
Lower

Actual:
303 ft.

RCRAInfo:
Owner: GUY STANDARD
(206) 442-7378
EPA ID: WAD988487336

Contact: Not reported

Classification: Conditionally Exempt Small Quantity Generator
TSDF Activities: Not reported

Violation Status: No violations found

FINDS:
Other Pertinent Environmental Activity Identified at Site:
Resource Conservation and Recovery Act Information system
Wasington Department of Ecology Facility/Site Identification System

LUST:
Facility ID: 8683
Ecology Region: SWRO
Facility Status: Cleanup Started
Release ID: 1369
Release Notification Date: 02/12/90
Release Status Date: 10/24/95
Alternate Name: BP 11077
Lat/Lon: 47.242100000 / 122.52611000
Affected Media: Soil
FS ID: 22346877

UST:
Facility ID: 22346877
Site ID: 8683
Install Date: 01/01/77
Capacity: 10,000 TO 19,999 GALLONS
Status: Operational
Tank Name: 1
Substance: UNLEADED GASOLINE
Compartment #: 1
Ecology Region: South Western

TOSCO 1107730143 (Continued) **1000659068**

Facility ID: 22346877
Site ID: 8683
Install Date: 01/01/77
Capacity: 10,000 TO 19,999 GALLONS
Status: Operational
Tank Name: 2
Substance: LEADED GASOLINE
Compartment #: 1
Ecology Region: South Western

Facility ID: 22346877
Site ID: 8683
Install Date: 01/01/77
Capacity: 10,000 TO 19,999 GALLONS
Status: Operational
Tank Name: 3
Substance: UNLEADED GASOLINE
Compartment #: 1
Ecology Region: South Western

Facility ID: 22346877
Site ID: 8683
Install Date: 12/31/64
Capacity: Not reported
Status: Removed
Tank Name: REG-1
Substance: LEADED GASOLINE
Compartment #: 1
Ecology Region: South Western

Facility ID: 22346877
Site ID: 8683
Install Date: 12/31/64
Capacity: Not reported
Status: Removed
Tank Name: REG-2
Substance: LEADED GASOLINE
Compartment #: 1
Ecology Region: South Western

Facility ID: 22346877
Site ID: 8683
Install Date: 12/31/64
Capacity: Not reported
Status: Removed
Tank Name: DSL
Substance: Not reported
Compartment #: 1
Ecology Region: South Western

TOSCO 1107730143 (Continued) **1000659068**

Facility ID: 22346877
Site ID: 8683
Install Date: 12/31/64
Capacity: Not reported
Status: Removed
Tank Name: SNL
Substance: UNLEADED GASOLINE
Compartment #: 1
Ecology Region: South Western

Facility ID: 22346877
Site ID: 8683
Install Date: 12/31/64
Capacity: Not reported
Status: Removed
Tank Name: NOL
Substance: UNLEADED GASOLINE
Compartment #: 1
Ecology Region: South Western

E14 **BP #11077** **WA ICR** **S102512914**
North **6622 S. 19TH ST.** **N/A**
1/8-1/4 **TACOMA, WA 98466**
1006 ft.

Site 2 of 2 in cluster E

Relative:
Lower

Actual:
303 ft.

WA ICR:

Date Ecology Received Report: 05/13/1993
Contaminants Found at Site: Petroleum products
Media Contaminated: Soil
Cause of Contamination: Tank
Region: South Western
Type of Report Ecology Received: Interim cleanup report
Site Register Issue: 92-52
County Code: 27.00000
Contact: Not reported
Report Title: Not reported

Date Ecology Received Report: 08/09/1993
Contaminants Found at Site: Petroleum products
Media Contaminated: Soil
Cause of Contamination: Tank
Region: South Western
Type of Report Ecology Received: Interim cleanup report
Site Register Issue: 93-04
County Code: 27.00000
Contact: Not reported
Report Title: Not reported

Date Ecology Received Report: 04/02/1997
Contaminants Found at Site: Petroleum products
Media Contaminated: Soil
Cause of Contamination: Tank
Region: South Western
Type of Report Ecology Received: Interim cleanup report
Site Register Issue: 94-50
County Code: 27.00000
Contact: Not reported

BP #11077 (Continued) S102512914

Report Title: Not reported

F15 **PRO TECH** RCRA-SQG 1000659775
West **2205 70TH AVE W** FINDS WAD988494514
1/8-1/4 **TACOMA, WA 98466**
1188 ft.

Site 1 of 2 in cluster F

Relative:
Higher

Actual:
362 ft.

RCRAInfo:
Owner: PRO TECH
EPA ID: WAD988494514

Contact: Not reported

Classification: Small Quantity Generator
TSDF Activities: Not reported

Violation Status: No violations found

FINDS:
Other Pertinent Environmental Activity Identified at Site:
Resource Conservation and Recovery Act Information system
Wasington Department of Ecology Facility/Site Identification System

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F16 **AUTO TECH 2213 70TH** RCRA-SQG 1001491351
West **2213 70TH AVE W 21** FINDS WA0000001255
1/8-1/4 **TACOMA, WA 98466**
1194 ft.

Site 2 of 2 in cluster F

Relative:
Higher

Actual:
362 ft.

RCRAInfo:
Owner: AUTO TECH
EPA ID: WA0000001255

Contact: MARC LAFOND
(253) 565-3268

Classification: Conditionally Exempt Small Quantity Generator
TSDF Activities: Not reported

Violation Status: No violations found

FINDS:
Other Pertinent Environmental Activity Identified at Site:
Resource Conservation and Recovery Act Information system
Wasington Department of Ecology Facility/Site Identification System

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G17 **EXXON #7 7017** WA ICR S103505477
ESE **1033 REGENTS BLVD.** N/A
1/4-1/2 **TACOMA, WA 98466**
2055 ft.

Site 1 of 2 in cluster G

Relative:
Lower

Actual:
275 ft.

WA ICR:
Date Ecology Received Report: 03/14/1994
Contaminants Found at Site: Petroleum products
Media Contaminated: Soil
Cause of Contamination: Tank
Region: South Western
Type of Report Ecology Received: Final cleanup report

EXXON #7 7017 (Continued) **S103505477**

Site Register Issue:	93-21
County Code:	27.00000
Contact:	Not reported
Report Title:	Not reported
Date Ecology Received Report:	01/10/1994
Contaminants Found at Site:	Petroleum products
Media Contaminated:	Soil
Cause of Contamination:	Tank
Region:	South Western
Type of Report Ecology Received:	Final cleanup report
Site Register Issue:	93-17
County Code:	27.00000
Contact:	Not reported
Report Title:	Not reported
Date Ecology Received Report:	09/08/1994
Contaminants Found at Site:	Petroleum products
Media Contaminated:	Soil
Cause of Contamination:	Tank
Region:	South Western
Type of Report Ecology Received:	Final cleanup report
Site Register Issue:	93-33
County Code:	27.00000
Contact:	Not reported
Report Title:	Not reported

G18 **BP EXPLORATION OIL INC 03116** **CSCSL NFA** **S104971948**
ESE **1033 REGENTS BLVD** **N/A**
1/4-1/2 **FIRCREST, WA 98499**
2055 ft.

Site 2 of 2 in cluster G

Relative:
Lower

Actual:
275 ft.

WA NFA:

Facility/Site Id :	1364
Ecology Status :	Independent Remedial Action
Independent Status Code :	Final Independant RA Report received
WARM Bin Number :	Not reported
NFA Code :	NFA after Assesment IRAP or VCP
NFA Date :	34879
Program Plan Code :	3
NFA Desc :	NFA after assessment, IRAP, or VCP

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19 **WESTMARK CONSTRUCTION** **LUST** **U003355804**
SW **7010 WEST 27TH STREET** **UST** **N/A**
1/4-1/2 **TACOMA, WA 98466** **WA ICR**
2110 ft.

Relative:
Higher

Actual:
358 ft.

LUST:

Facility ID:	9182
Ecology Region:	SWRO
Facility Status:	Cleanup Started
Release ID:	4234
Release Notification Date:	02/01/93
Release Status Date:	11/25/92
Alternate Name:	MERRIT NELSON COMPANY
Lat/Lon:	47.235270000 / 122.53061000
Affected Media:	Soil

WESTMARK CONSTRUCTION (Continued) **U003355804**

FS ID: 75388371

Facility ID: 9182
Ecology Region: SWRO
Facility Status: Reported Cleaned Up
Release ID: 4234
Release Notification Date: 02/01/93
Release Status Date: 02/01/93
Alternate Name: MERRIT NELSON COMPANY
Lat/Lon: 47.235270000 / 122.53061000
Affected Media: Soil
FS ID: 75388371

WA ICR:
Date Ecology Received Report: 02/01/1993
Contaminants Found at Site: Petroleum products
Media Contaminated: Soil
Cause of Contamination: Tank
Region: South Western
Type of Report Ecology Received: Final cleanup report
Site Register Issue: 92-44
County Code: 27.00000
Contact: Not reported
Report Title: Not reported

UST:
Facility ID: 75388371
Site ID: 9182
Install Date: 12/31/64
Capacity: 111 to 1,100 Gallons
Status: Removed
Tank Name: D-202
Substance: Not reported
Compartment #: 1
Ecology Region: South Western

Facility ID: 75388371
Site ID: 9182
Install Date: 12/31/64
Capacity: Not reported
Status: Removed
Tank Name: D-201
Substance: Not reported
Compartment #: 1
Ecology Region: South Western

Facility ID: 75388371
Site ID: 9182
Install Date: 12/31/64
Capacity: 111 to 1,100 Gallons
Status: Removed
Tank Name: G-101
Substance: LEADED GASOLINE
Compartment #: 1
Ecology Region: South Western

WESTMARK CONSTRUCTION (Continued) **U003355804**

Facility ID: 75388371
Site ID: 9182
Install Date: 12/31/64
Capacity: 111 to 1,100 Gallons
Status: Removed
Tank Name: G-102
Substance: LEADED GASOLINE
Compartment #: 1
Ecology Region: South Western

Facility ID: 75388371
Site ID: 9182
Install Date: 12/31/64
Capacity: Not reported
Status: Removed
Tank Name: G-103
Substance: LEADED GASOLINE
Compartment #: 1
Ecology Region: South Western

Facility ID: 75388371
Site ID: 9182
Install Date: 01/01/74
Capacity: Not reported
Status: Removed
Tank Name: 1ASPHALT
Substance: Not reported
Compartment #: 1
Ecology Region: South Western

Facility ID: 75388371
Site ID: 9182
Install Date: 12/31/64
Capacity: 111 to 1,100 Gallons
Status: Removed
Tank Name: D-203
Substance: Not reported
Compartment #: 1
Ecology Region: South Western

20
SW
1/4-1/2
2494 ft.

UNIVERSITY PLACE REFUSE SERVICE INC
2809 ROCHESTER W
TACOMA, WA 98466

LUST **U003353018**
SWF/LF **N/A**
UST
WA ICR

Relative:
Higher

Actual:
356 ft.

LUST:
Facility ID: 10531
Ecology Region: SWRO
Facility Status: Cleanup Started
Release ID: 3140
Release Notification Date: 12/24/90
Release Status Date: 12/24/90
Alternate Name: UNIVERSITY PLACE REFUSE
Lat/Lon: 47.233900000 / 122.53165000
Affected Media: Soil
FS ID: 43933488

Facility ID: 10531

UNIVERSITY PLACE REFUSE SERVICE INC (Continued) **U003353018**

Ecology Region:	SWRO
Facility Status:	Reported Cleaned Up
Release ID:	3140
Release Notification Date:	12/24/90
Release Status Date:	08/24/00
Alternate Name:	UNIVERSITY PLACE REFUSE
Lat/Lon:	47.233900000 / 122.53165000
Affected Media:	Soil
FS ID:	43933488

LF:

Facility ID:	SPU
Contact:	Rodger Gruener
Name Change:	False
Ownership:	Private
Type:	Transfer Station
Company:	University Place Refuse
Contact Title:	Not reported
Facility Phone:	(206) 564-3212
Facility Fax:	Not reported
Class Code:	T
Class:	Intermediate
Class Type:	False
Sec/Twn/Rng:	Not reported
Class Comment:	Not reported
Region:	STATE
Status:	Compost not transfer station. See Compost Database.

WA ICR:

Date Ecology Received Report:	08/24/2000
Contaminants Found at Site:	Petroleum products
Media Contaminated:	Soil
Cause of Contamination:	Tank
Region:	South Western
Type of Report Ecology Received:	Final cleanup report
Site Register Issue:	98-28
County Code:	27.00000
Contact:	Not reported
Report Title:	Underground Storage Tank Removal

UST:

Facility ID:	43933488
Site ID:	10531
Install Date:	12/31/64
Capacity:	Not reported
Status:	Removed
Tank Name:	1
Substance:	Not reported
Compartment #:	1
Ecology Region:	South Western

UNIVERSITY PLACE REFUSE SERVICE INC (Continued) **U003353018**

Facility ID: 43933488
Site ID: 10531
Install Date: 12/31/64
Capacity: Not reported
Status: Removed
Tank Name: 2
Substance: UNLEADED GASOLINE
Compartment #: 1
Ecology Region: South Western

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21 WSW 1/2-1 3211 ft. **ARCO 4335** **2623 BRIDGEPORT WAY W** **TACOMA, WA 98466** **RCRA-SQG CSCSL FINDS VCP** **1004794441 WAD988514642**

Relative: Higher

Actual: 328 ft.

RCRAInfo:
Owner: ARCO
(714)670-5423
EPA ID: WAD988514642
Contact: Not reported
Classification: Small Quantity Generator
TSDF Activities: Not reported
Violation Status: No violations found

FINDS:
Other Pertinent Environmental Activity Identified at Site:
Resource Conservation and Recovery Act Information system
Wasington Department of Ecology Facility/Site Identification System

SHWS:
Facility ID: 97283829
MTBE Code: Not reported
Responsible Unit: Southwest Region
Latitude: 47 14 8
Longitude: 122 32 10
Ecology Site Status relative to the MTCA cleanup process:
Independent Remedial Action
Independent Site Status - those sites undergoing an independent cleanup:
Final Independent Remedial Action Report received
WARM Bin Number indicates the outcome of the Washington Ranking Model (WARM):
Affected Media Status: C (Confirmed) - The presence of hazardous substances above MTCA cleanup levels has been confirmed by laboratory analysis (or field determination in the case of petroleum contamination)
Affected Media : Soil
Arsenic Code: Not reported

Base/Neutral/Acid Organics:	Not reported
Halogenated Organic Compounds:	Not reported
Horizontal Collection Method:	GPS (Code/Differential)
EPA Priority Pollutants - Metals and Cyanide:	Not reported
Metals - Other non-priority pollutant medals:	Not reported
Polychlorinated biPhenyls (PCBs):	Not reported
Pesticides:	Not reported
Petroleum Products:	Confirmed above MTCA cleanup levels
Phenolic Compounds:	Not reported
Non-Halogenated Solvents:	Not reported
Dioxin:	Not reported

ARCO 4335 (Continued) **1004794441**

Polynuclear Aromatic Hydrocarbons (PAH):	Not reported
Reactive Wastes:	Not reported
Corrosive Wastes:	Not reported
Radioactive Wastes:	Not reported
Asbestos:	Not reported
Conventional Contaminants, Organic:	Not reported
Conventional Contaminants, Inorganic:	Not reported

VCP:

Facility ID :	97283829
WARM BIN # :	Not reported
Ecology Status :	Independent Remedial Action
NFA Code :	Not reported

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22 SSW 1/2-1 4319 ft. **HIDDEN HILLS APARTMENTS** **CSCSL S104320438**
3313 72ND AVE CT W **N/A**
UNIVERSITY PLACE, WA 98466

Relative: Higher

Actual: 363 ft.

SHWS:

Facility ID:	6959438
MTBE Code:	Not reported
Responsible Unit:	Southwest Region
Latitude:	47 13 49
Longitude:	122 31 54

Ecology Site Status relative to the MTCA cleanup process:
Independent Remedial Action

Independent Site Status - those sites undergoing an independent cleanup:
Independent Site Assessment of Interim Remedial Action Report received

WARM Bin Number indicates the outcome of the Washington Ranking Model (WARM):

Affected Media Status: C (Confirmed) - The presence of hazardous substances above MTCA cleanup levels has been confirmed by laboratory analysis (or field determination in the case of petroleum contamination)

Affected Media :	Soil
Arsenic Code:	Not reported
Base/Neutral/Acid Organics:	Not reported
Halogenated Organic Compounds:	Not reported
Horizontal Collection Method:	GPS (Code/Differential)
EPA Priority Pollutants - Metals and Cyanide:	Confirmed above MTCA cleanup levels
Metals - Other non-priority pollutant medals:	Not reported
Polychlorinated biPhenyls (PCBs):	Not reported
Pesticides:	Not reported
Petroleum Products:	Not reported
Phenolic Compounds:	Not reported
Non-Halogenated Solvents:	Not reported
Dioxin:	Not reported
Polynuclear Aromatic Hydrocarbons (PAH):	Not reported
Reactive Wastes:	Not reported
Corrosive Wastes:	Not reported
Radioactive Wastes:	Not reported
Asbestos:	Not reported
Conventional Contaminants, Organic:	Not reported
Conventional Contaminants, Inorganic:	Not reported

ORPHAN SUMMARY

City	EDR ID	Site Name	Site Address	Zip	Database(s)
TACOMA	S104320442	PACE INDUSTRIES PUGET DIVISION	2011 MILDRED ST W / 2101 MILDRED ST W	98466	CSCSL NFA, VCP, INST CONTROL

EPA Waste Codes Addendum

Code	Description
D001	IGNITABLE HAZARDOUS WASTES ARE THOSE WASTES WHICH HAVE A FLASHPOINT OF LESS THAN 140 DEGREES FAHRENHEIT AS DETERMINED BY A PENSKY-MARTENS CLOSED CUP FLASH POINT TESTER. ANOTHER METHOD OF DETERMINING THE FLASH POINT OF A WASTE IS TO REVIEW THE MATERIAL SAFETY DATA SHEET, WHICH CAN BE OBTAINED FROM THE MANUFACTURER OR DISTRIBUTOR OF THE MATERIAL. LACQUER THINNER IS AN EXAMPLE OF A COMMONLY USED SOLVENT WHICH WOULD BE CONSIDERED AS IGNITABLE HAZARDOUS WASTE.
D002	A WASTE WHICH HAS A PH OF LESS THAN 2 OR GREATER THAN 12.5 IS CONSIDERED TO BE A CORROSIVE HAZARDOUS WASTE. SODIUM HYDROXIDE, A CAUSTIC SOLUTION WITH A HIGH PH, IS OFTEN USED BY INDUSTRIES TO CLEAN OR DEGREASE PARTS. HYDROCHLORIC ACID, A SOLUTION WITH A LOW PH, IS USED BY MANY INDUSTRIES TO CLEAN METAL PARTS PRIOR TO PAINTING. WHEN THESE CAUSTIC OR ACID SOLUTIONS BECOME CONTAMINATED AND MUST BE DISPOSED, THE WASTE WOULD BE A CORROSIVE HAZARDOUS WASTE.
D004	ARSENIC
D007	CHROMIUM
D008	LEAD
D035	METHYL ETHYL KETONE
F003	THE FOLLOWING SPENT NON-HALOGENATED SOLVENTS: XYLENE, ACETONE, ETHYL ACETATE, ETHYL BENZENE, ETHYL ETHER, METHYL ISOBUTYL KETONE, N-BUTYL ALCOHOL, CYCLOHEXANONE, AND METHANOL; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONLY THE ABOVE SPENT NON-HALOGENATED SOLVENTS; AND ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONE OR MORE OF THE ABOVE NON-HALOGENATED SOLVENTS, AND, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THOSE SOLVENTS LISTED IN F001, F002, F004, AND F005, AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.
F005	THE FOLLOWING SPENT NON-HALOGENATED SOLVENTS: TOLUENE, METHYL ETHYL KETONE, CARBON DISULFIDE, ISOBUTANOL, PYRIDINE, BENZENE, 2-ETHOXYETHANOL, AND 2-NITROPROPANE; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE NON-HALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F001, F002, OR F004; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

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.

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

FEDERAL ASTM STANDARD RECORDS

NPL: National Priority List
Source: EPA
Telephone: N/A
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: 12/14/04
Date Made Active at EDR: 02/03/05
Database Release Frequency: Quarterly

Date of Data Arrival at EDR: 02/01/05
Elapsed ASTM days: 2
Date of Last EDR Contact: 02/01/05

NPL Site Boundaries

Sources:

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

EPA Region 1
Telephone 617-918-1143

EPA Region 3
Telephone 215-814-5418

EPA Region 4
Telephone 404-562-8033

EPA Region 6
Telephone: 214-655-6659

EPA Region 8
Telephone: 303-312-6774

Proposed NPL: Proposed National Priority List Sites
Source: EPA
Telephone: N/A

Date of Government Version: 12/14/04
Date Made Active at EDR: 02/03/05
Database Release Frequency: Quarterly

Date of Data Arrival at EDR: 02/01/05
Elapsed ASTM days: 2
Date of Last EDR Contact: 02/01/05

CERCLIS: Comprehensive Environmental Response, Compensation, and Liability Information System
Source: EPA
Telephone: 703-413-0223
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: 02/15/05
Date Made Active at EDR: 04/06/05
Database Release Frequency: Quarterly

Date of Data Arrival at EDR: 03/22/05
Elapsed ASTM days: 15
Date of Last EDR Contact: 03/22/05

CERCLIS-NFRAP: CERCLIS No Further Remedial Action Planned
Source: EPA
Telephone: 703-413-0223
As of February 1995, CERCLIS sites designated "No Further Remedial Action Planned" (NFRAP) have been removed from CERCLIS. NFRAP sites may be sites where, following an initial investigation, no contamination was found, contamination was removed quickly without the need for the site to be placed on the NPL, or the contamination was not serious enough to require Federal Superfund action or NPL consideration. EPA has removed approximately 25,000 NFRAP sites to lift the unintended barriers to the redevelopment of these properties and has archived them as historical records so EPA does not needlessly repeat the investigations in the future. This policy change is part of the EPA's Brownfields Redevelopment Program to help cities, states, private investors and affected citizens to promote economic redevelopment of unproductive urban sites.

Date of Government Version: 03/22/05
Date Made Active at EDR: 04/06/05
Database Release Frequency: Quarterly

Date of Data Arrival at EDR: 04/01/05
Elapsed ASTM days: 5
Date of Last EDR Contact: 04/01/05

CORRACTS: Corrective Action Report
Source: EPA
Telephone: 800-424-9346
CORRACTS identifies hazardous waste handlers with RCRA corrective action activity.

Date of Government Version: 12/15/04
Date Made Active at EDR: 02/25/05
Database Release Frequency: Quarterly

Date of Data Arrival at EDR: 01/07/05
Elapsed ASTM days: 49
Date of Last EDR Contact: 12/07/04

RCRA: Resource Conservation and Recovery Act Information
Source: EPA
Telephone: 800-424-9346
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. RCRAInfo replaces the data recording and reporting abilities of the Resource Conservation and Recovery Information System (RCRIS). 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. Small quantity generators (SQGs) generate between 100 kg and 1,000 kg of hazardous waste per month. Large quantity generators (LQGs) generate over 1,000 kilograms (kg) of hazardous waste, or over 1 kg of acutely hazardous waste per month. Transporters are individuals or entities that move hazardous waste from the generator off-site to a facility that can recycle, treat, store, or dispose of the waste. TSDFs treat, store, or dispose of the waste.

Date of Government Version: 01/10/05
Date Made Active at EDR: 04/01/05
Database Release Frequency: Quarterly

Date of Data Arrival at EDR: 01/25/05
Elapsed ASTM days: 66
Date of Last EDR Contact: 03/23/05

ERNS: Emergency Response Notification System
Source: National Response Center, United States Coast Guard
Telephone: 202-260-2342
Emergency Response Notification System. ERNS records and stores information on reported releases of oil and hazardous substances.

Date of Government Version: 12/31/04
Date Made Active at EDR: 03/24/05
Database Release Frequency: Annually

Date of Data Arrival at EDR: 01/27/05
Elapsed ASTM days: 56
Date of Last EDR Contact: 01/27/05

FEDERAL ASTM SUPPLEMENTAL RECORDS

BRS: Biennial Reporting System
Source: EPA/NTIS
Telephone: 800-424-9346
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: 12/01/01
Database Release Frequency: Biennially

Date of Last EDR Contact: 12/13/04
Date of Next Scheduled EDR Contact: 03/14/05

CONSENT: Superfund (CERCLA) Consent Decrees
Source: Department of Justice, Consent Decree Library
Telephone: Varies
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.

Date of Government Version: 03/05/04
Database Release Frequency: Varies

Date of Last EDR Contact: 10/25/04
Date of Next Scheduled EDR Contact: 01/24/05

ROD: Records Of Decision
Source: EPA
Telephone: 703-416-0223
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: 01/10/05
Database Release Frequency: Annually

Date of Last EDR Contact: 01/05/05
Date of Next Scheduled EDR Contact: 04/04/05

DELISTED NPL: National Priority List Deletions
Source: EPA
Telephone: N/A
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: 12/14/04
Database Release Frequency: Quarterly

Date of Last EDR Contact: 02/01/05
Date of Next Scheduled EDR Contact: 05/02/05

FINDS: Facility Index System/Facility Identification Initiative Program Summary Report
Source: EPA
Telephone: N/A
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: 01/12/05
Database Release Frequency: Quarterly

Date of Last EDR Contact: 01/03/05
Date of Next Scheduled EDR Contact: 04/04/05

HMIRS: Hazardous Materials Information Reporting System
Source: U.S. Department of Transportation
Telephone: 202-366-4555
Hazardous Materials Incident Report System. HMIRS contains hazardous material spill incidents reported to DOT.

Date of Government Version: 11/16/04
Database Release Frequency: Annually

Date of Last EDR Contact: 01/19/05
Date of Next Scheduled EDR Contact: 04/18/05

MLTS: Material Licensing Tracking System
Source: Nuclear Regulatory Commission
Telephone: 301-415-7169
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: 01/12/05
Database Release Frequency: Quarterly

Date of Last EDR Contact: 04/04/05
Date of Next Scheduled EDR Contact: 07/04/05

MINES: Mines Master Index File
Source: Department of Labor, Mine Safety and Health Administration
Telephone: 303-231-5959
Contains all mine identification numbers issued for mines active or opened since 1971. The data also includes violation information.

Date of Government Version: 11/15/04
Database Release Frequency: Semi-Annually

Date of Last EDR Contact: 12/28/04
Date of Next Scheduled EDR Contact: 03/28/05

NPL LIENS: Federal Superfund Liens
Source: EPA
Telephone: 202-564-4267
Federal Superfund Liens. Under the authority granted the USEPA by the Comprehensive Environmental Response, Compensation and Liability Act (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 receives notification of potential liability. USEPA compiles a listing of filed notices of Superfund Liens.

Date of Government Version: 10/15/91
Database Release Frequency: No Update Planned

Date of Last EDR Contact: 02/22/05
Date of Next Scheduled EDR Contact: 05/23/05

PADS: PCB Activity Database System
Source: EPA
Telephone: 202-564-3887
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: 12/21/04
Database Release Frequency: Annually

Date of Last EDR Contact: 02/23/05
Date of Next Scheduled EDR Contact: 05/09/05

DOD: Department of Defense Sites
Source: USGS
Telephone: 703-692-8801
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: 10/01/03
Database Release Frequency: Semi-Annually

Date of Last EDR Contact: 02/08/05
Date of Next Scheduled EDR Contact: 05/09/05

UMTRA: Uranium Mill Tailings Sites
Source: Department of Energy
Telephone: 505-845-0011
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. In 1978, 24 inactive uranium mill tailings sites in Oregon, Idaho, Wyoming, Utah, Colorado, New Mexico, Texas, North Dakota, South Dakota, Pennsylvania, and on Navajo and Hopi tribal lands, were targeted for cleanup by the Department of Energy.

Date of Government Version: 12/29/04
Database Release Frequency: Varies

Date of Last EDR Contact: 12/21/04
Date of Next Scheduled EDR Contact: 03/21/05

ODI: Open Dump Inventory
Source: Environmental Protection Agency
Telephone: 800-424-9346
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: 06/30/85
Database Release Frequency: No Update Planned

Date of Last EDR Contact: 05/23/95
Date of Next Scheduled EDR Contact: N/A

FUDS: Formerly Used Defense Sites
Source: U.S. Army Corps of Engineers
Telephone: 202-528-4285
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: 12/31/03
Database Release Frequency: Varies

Date of Last EDR Contact: 01/03/05
Date of Next Scheduled EDR Contact: 04/04/05

INDIAN RESERV: Indian Reservations
Source: USGS
Telephone: 202-208-3710
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: 10/01/03
Database Release Frequency: Semi-Annually

Date of Last EDR Contact: 02/08/05
Date of Next Scheduled EDR Contact: 05/09/05

RAATS: RCRA Administrative Action Tracking System
Source: EPA
Telephone: 202-564-4104
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: 04/17/95
Database Release Frequency: No Update Planned

Date of Last EDR Contact: 12/06/04
Date of Next Scheduled EDR Contact: 03/07/05

TRIS: Toxic Chemical Release Inventory System
Source: EPA
Telephone: 202-566-0250
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.

Date of Government Version: 12/31/02
Database Release Frequency: Annually

Date of Last EDR Contact: 12/20/04
Date of Next Scheduled EDR Contact: 03/21/05

TSCA: Toxic Substances Control Act
Source: EPA
Telephone: 202-260-5521
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: 12/31/02
Database Release Frequency: Every 4 Years

Date of Last EDR Contact: 12/06/04
Date of Next Scheduled EDR Contact: 03/07/05

FTTS INSP: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
Source: EPA
Telephone: 202-564-2501

Date of Government Version: 04/13/04
Database Release Frequency: Quarterly

Date of Last EDR Contact: 12/01/04
Date of Next Scheduled EDR Contact: 03/21/05

SSTS: Section 7 Tracking Systems
Source: EPA
Telephone: 202-564-5008
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: 12/31/03
Database Release Frequency: Annually

Date of Last EDR Contact: 11/29/04
Date of Next Scheduled EDR Contact: 04/18/05

FTTS: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
Source: EPA/Office of Prevention, Pesticides and Toxic Substances
Telephone: 202-564-2501
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: 09/13/04
Database Release Frequency: Quarterly

Date of Last EDR Contact: 12/01/04
Date of Next Scheduled EDR Contact: 03/21/05

STATE OF WASHINGTON ASTM STANDARD RECORDS

CSCSL: Confirmed & Suspected Contaminated Sites List
Source: Department of Ecology
Telephone: 360-407-7200
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: 01/03/05
Date Made Active at EDR: 03/16/05
Database Release Frequency: Semi-Annually

Date of Data Arrival at EDR: 02/17/05
Elapsed ASTM days: 27
Date of Last EDR Contact: 02/17/05

HSL: Hazardous Sites List
Source: Department of Ecology
Telephone: 360-407-7200
The Hazardous Sites List is a subset of the CSCSL Report. It includes sites which have been assessed and ranked using the Washington Ranking Method (WARM).

Date of Government Version: 08/17/04
Date Made Active at EDR: 10/22/04
Database Release Frequency: Semi-Annually

Date of Data Arrival at EDR: 10/04/04
Elapsed ASTM days: 18
Date of Last EDR Contact: 12/08/04

SWF/LF: Solid Waste Facility Database
Source: Department of Ecology
Telephone: 360-407-6132
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: 10/01/04
Date Made Active at EDR: 02/02/05
Database Release Frequency: Annually

Date of Data Arrival at EDR: 01/06/05
Elapsed ASTM days: 27
Date of Last EDR Contact: 01/05/05

LUST: Leaking Underground Storage Tanks Site List
Source: Department of Ecology
Telephone: 360-407-7200
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: 01/03/05
Date Made Active at EDR: 03/03/05
Database Release Frequency: Quarterly

Date of Data Arrival at EDR: 01/25/05
Elapsed ASTM days: 37
Date of Last EDR Contact: 01/25/05

UST: Underground Storage Tank Database
Source: Department of Ecology
Telephone: 360-407-7170
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: 01/03/05
Date Made Active at EDR: 03/03/05
Database Release Frequency: Quarterly

Date of Data Arrival at EDR: 01/25/05
Elapsed ASTM days: 37
Date of Last EDR Contact: 01/25/05

VCP: Voluntary Cleanup Program Sites
Source: Department of Ecology
Telephone: 360-407-7200
Sites that have entered either the Voluntary Cleanup Program or its predecessor Independent Remedial Action Program.

Date of Government Version: 01/03/05
Date Made Active at EDR: 03/16/05
Database Release Frequency: Varies

Date of Data Arrival at EDR: 02/17/05
Elapsed ASTM days: 27
Date of Last EDR Contact: 02/14/05

INDIAN UST: Underground Storage Tanks on Indian Land
Source: EPA Region 10
Telephone: 206-553-2857

Date of Government Version: 02/02/05
Date Made Active at EDR: 03/16/05
Database Release Frequency: Varies

Date of Data Arrival at EDR: 02/02/05
Elapsed ASTM days: 42
Date of Last EDR Contact: 01/31/05

INDIAN LUST: Leaking Underground Storage Tanks on Indian Land
Source: EPA Region 10
Telephone: 206-553-2857
LUSTs on Indian land in Alaska, Idaho, Oregon and Washington.

Date of Government Version: 02/02/05
Date Made Active at EDR: 03/24/05
Database Release Frequency: Varies

Date of Data Arrival at EDR: 02/02/05
Elapsed ASTM days: 50
Date of Last EDR Contact: 01/31/05

STATE OF WASHINGTON ASTM SUPPLEMENTAL RECORDS

CSCSL NFA: Confirmed & Contaminated Sites - No Further Action
Source: Department of Ecology
Telephone: 360-407-7170
The data set contains information about sites previously on the Confirmed and Suspected Contaminated Sites list that have received a No Further Action (NFA) determination. Because it is necessary to maintain historical records of sites that have been investigated and cleaned up, sites are not deleted from the database when cleanup activities are completed. Instead, a No Further Action code is entered based upon the type of NFA determination the site received.

Date of Government Version: 01/03/05
Database Release Frequency: Semi-Annually

Date of Last EDR Contact: 02/17/05
Date of Next Scheduled EDR Contact: 05/16/05

ICR: Independent Cleanup Reports
Source: Department of Ecology
Telephone: 360-407-7200
These are remedial action reports Ecology has received from either the owner or operator of the sites. These actions have been conducted without department oversight or approval and are not under an order or decree. This database is no longer updated by the Department of Ecology.

Date of Government Version: 12/01/02
Database Release Frequency: No Update Planned

Date of Last EDR Contact: 02/14/05
Date of Next Scheduled EDR Contact: 05/16/05

SPILLS: Reported Spills
Source: Department of Ecology
Telephone: 360-407-7450
Spills reported to the Spill Prevention, Preparedness and Response Division.

Date of Government Version: 12/31/04
Database Release Frequency: Semi-Annually

Date of Last EDR Contact: 01/03/05
Date of Next Scheduled EDR Contact: 04/04/05

AST: Aboveground Storage Tank Locations
Source: Department of Ecology
Telephone: 360-407-7562
A listing of aboveground storage tank locations regulated by the Department of Ecology's Spill Prevention, Preparedness and Response Program.

Date of Government Version: 10/01/04
Database Release Frequency: Varies

Date of Last EDR Contact: 02/28/05
Date of Next Scheduled EDR Contact: 05/30/05

DRYCLEANERS: Drycleaner List
Source: Department of Ecology
Telephone: 360-407-6732
A listing of registered drycleaners who registered with the Department of Ecology (using the SIC code of 7215 and 7216) as hazardous waste generators.

Date of Government Version: 02/17/05
Database Release Frequency: Varies

Date of Last EDR Contact: 02/14/05
Date of Next Scheduled EDR Contact: 05/16/05

CDL: Clandestine Drug Lab Contaminated Site List
Source: Department of Health
Telephone: 360-236-3380
Illegal methamphetamine labs use hazardous chemicals that create public health hazards. Chemicals and residues can cause burns, respiratory and neurological damage, and death. Biological hazards associated with intravenous needles, feces, and blood also pose health risks.

Date of Government Version: 01/28/05
Database Release Frequency: Varies

Date of Last EDR Contact: 03/10/05
Date of Next Scheduled EDR Contact: 06/06/05

EMI: Washington Emissions Data System
Source: Department of Ecology
Telephone: 360-407-6040

Date of Government Version: 12/31/03
Database Release Frequency: Annually

Date of Last EDR Contact: 01/18/05
Date of Next Scheduled EDR Contact: 04/18/05

LOCAL RECORDS

KING COUNTY:

Abandoned Landfill Study in King County
Source: Seattle-King County Department of Public Health
Telephone: 206-296-4785
The King County Abandoned Landfill Survey was conducted from October through December 1984 by the Health Department's Environmental Health Division at the request of the King County Council. The primary objective of the survey was to determine if any public health problems existed at the predetermined 24 sites.

Date of Government Version: 04/30/85
Database Release Frequency: No Update Planned

Date of Last EDR Contact: 10/21/94
Date of Next Scheduled EDR Contact: N/A

SEATTLE COUNTY:

Abandoned Landfill Study in the City of Seattle
Source: Seattle - King County Department of Public Health
Telephone: 206-296-4785
The Seattle Abandoned Landfill Survey was conducted in June and July of 1984 by the Health Department's Environmental Health Division at the request of the Mayor's Office. The primary objective of the survey was to determine if any public health problems existed at the predetermined 12 sites.

Date of Government Version: 07/30/84
Database Release Frequency: No Update Planned

Date of Last EDR Contact: 10/21/94
Date of Next Scheduled EDR Contact: N/A

SEATTLE/KING COUNTY:

Seattle - King County Abandoned Landfill Toxicity / Hazard Assessment Project
Source: Department of Public Health
Telephone: 206-296-4785
This report presents the Seattle-King County Health Department's follow-up investigation of two city owned and four county owned abandoned landfills which was conducted from February to December 1986.

Date of Government Version: 12/31/86
Database Release Frequency: No Update Planned

Date of Last EDR Contact: 08/14/95
Date of Next Scheduled EDR Contact: N/A

SNOHOMISH COUNTY:

Solid Waste Sites of Record at Snohomish Health District
Source: Snohomish Health District
Telephone: 206-339-5250

Date of Government Version: 11/02/04
Database Release Frequency: Semi-Annually

Date of Last EDR Contact: 01/19/05
Date of Next Scheduled EDR Contact: 04/18/05

TACOMA/PIERCE COUNTY:

Closed Landfill Survey
Source: Tacoma-Pierce County Health Department
Telephone: 206-591-6500
Following numerous requests for information about closed dumpsites and landfills in Pierce County, the Tacoma-Pierce County Health Department decided to conduct a study on the matter. The aim of the study was to evaluate public health risks associated with the closed dumpsites and landfills, and to determine the need, if any, for further investigations of a more detailed nature. The sites represent all of the known dumpsites and landfills closed after 1950.

Date of Government Version: 09/01/02
Database Release Frequency: No Update Planned

Date of Last EDR Contact: 03/19/03
Date of Next Scheduled EDR Contact: N/A

EDR PROPRIETARY HISTORICAL DATABASES

Former Manufactured Gas (Coal Gas) Sites: The existence and location of Coal Gas sites is provided exclusively to EDR by Real Property Scan, Inc. For a technical description of the types of hazards which may be found at such sites, contact your EDR customer service representative.

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

BROWNFIELDS DATABASES

VCP: Voluntary Cleanup Program Sites
Source: Department of Ecology
Telephone: 360-407-7200
Sites that have entered either the Voluntary Cleanup Program or its predecessor Independent Remedial Action Program.

Date of Government Version: 01/03/05
Database Release Frequency: Varies

Date of Last EDR Contact: 02/14/05
Date of Next Scheduled EDR Contact: 05/16/05

US BROWNFIELDS: A Listing of Brownfields Sites
Source: Environmental Protection Agency
Telephone: 202-566-2777
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: N/A
Database Release Frequency: Semi-Annually

Date of Last EDR Contact: N/A
Date of Next Scheduled EDR Contact: N/A

INST CONTROL: Institutional Control Site List
Source: Department of Ecology
Telephone: 360-407-7170
Sites that have institutional controls.

Date of Government Version: 12/14/04
Database Release Frequency: Varies

Date of Last EDR Contact: 12/06/04
Date of Next Scheduled EDR Contact: 03/07/05

US INST CONTROL: Sites with Institutional Controls
Source: Environmental Protection Agency
Telephone: 703-603-8867
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: N/A
Database Release Frequency: Varies

Date of Last EDR Contact: N/A
Date of Next Scheduled EDR Contact: N/A

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.

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
This map includes information copyrighted by PennWell Corporation. This information is provided on a best effort basis and PennWell Corporation does not guarantee its accuracy nor warrant its fitness for any particular purpose. Such information has been reprinted with the permission of PennWell.

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

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.

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: Daycare Center Listing
Source: Department of Social & Health Services
Telephone: 253-383-1735

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 from the U.S. Fish and Wildlife Service.

STREET AND ADDRESS INFORMATION

GEOCHECK®- PHYSICAL SETTING SOURCE ADDENDUM

TARGET PROPERTY ADDRESS

PROPOSED RETAIL SITE (NO. 95984)
2119 MILDRED STREET WEST
FIRCREST, WA 98466

TARGET PROPERTY COORDINATES

Latitude (North):	47.240002 - 47° 14' 24.0"
Longitude (West):	122.525200 - 122° 31' 30.7"
Universal Tranverse Mercator:	Zone 10
UTM X (Meters):	535936.1
UTM Y (Meters):	5231725.5
Elevation:	323 ft. above sea level

EDR's GeoCheck Physical Setting Source Addendum has been developed to assist the environmental professional with the collection of physical setting source information in accordance with ASTM 1527-00, Section 7.2.3. Section 7.2.3 requires that a current USGS 7.5 Minute Topographic Map (or equivalent, such as the USGS Digital Elevation Model) be reviewed. It also requires that one or more additional physical setting sources be sought when (1) conditions have been identified in which hazardous substances or petroleum products are likely to migrate to or from the property, and (2) more information than is provided in the current USGS 7.5 Minute Topographic Map (or equivalent) is generally obtained, pursuant to local good commercial or customary practice, to assess the impact of migration of recognized environmental conditions in connection with the property. Such additional physical setting sources generally include information about the topographic, hydrologic, hydrogeologic, and geologic characteristics of a site, and wells in the area.

Assessment of the impact of contaminant migration generally has two principle investigative components:

1. Groundwater flow direction, and
2. Groundwater flow velocity.

Groundwater flow direction may be impacted by surface topography, hydrology, hydrogeology, characteristics of the soil, and nearby wells. Groundwater flow velocity is generally impacted by the nature of the geologic strata. EDR's GeoCheck Physical Setting Source Addendum is provided to assist the environmental professional in forming an opinion about the impact of potential contaminant migration.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

GROUNDWATER FLOW DIRECTION INFORMATION

Groundwater flow direction for a particular site is best determined by a qualified environmental professional using site-specific well data. If such data is not reasonably ascertainable, it may be necessary to rely on other sources of information, such as surface topographic information, hydrologic information, hydrogeologic data collected on nearby properties, and regional groundwater flow information (from deep aquifers).

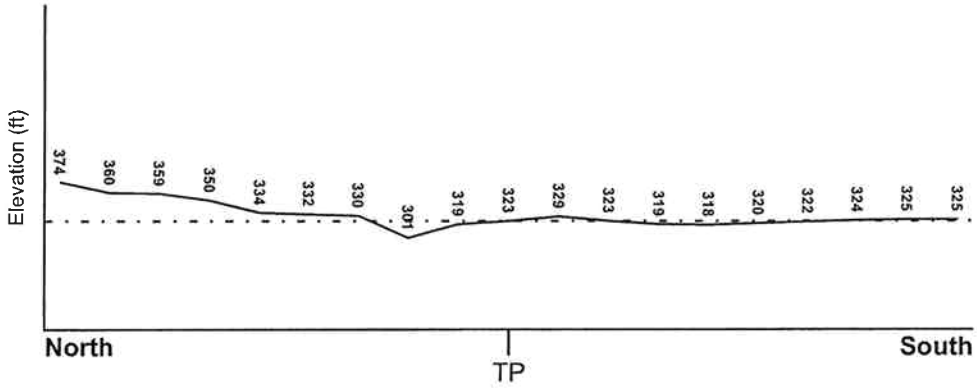
TOPOGRAPHIC INFORMATION

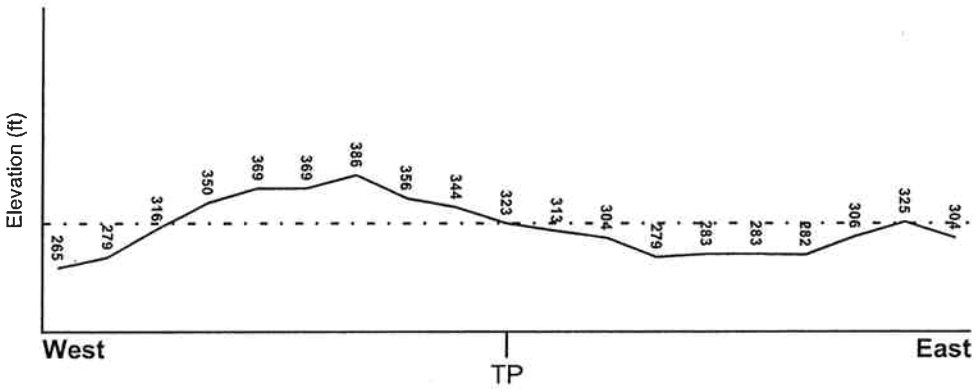
Surface topography may be indicative of the direction of surficial groundwater flow. This information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

TARGET PROPERTY TOPOGRAPHY

USGS Topographic Map:	47122-B5 STEILACOOM, WA
General Topographic Gradient:	General ENE
Source:	USGS 7.5 min quad index

SURROUNDING TOPOGRAPHY: ELEVATION PROFILES





Target Property Elevation: 323 ft.

Source: Topography has been determined from the USGS 7.5' Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

HYDROLOGIC INFORMATION

Surface water can act as a hydrologic barrier to groundwater flow. Such hydrologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

Refer to the Physical Setting Source Map following this summary for hydrologic information (major waterways and bodies of water).

FEMA FLOOD ZONE

Target Property County	FEMA Flood Electronic Data
PIERCE, WA	YES - refer to the Overview Map and Detail Map

Flood Plain Panel at Target Property: 5301380282C

Additional Panels in search area: 5301480020B
5301410001B
5301380281C

NATIONAL WETLAND INVENTORY

NWI Quad at Target Property	NWI Electronic Data Coverage
STEILACOOM	YES - refer to the Overview Map and Detail Map

HYDROGEOLOGIC INFORMATION

Hydrogeologic information obtained by installation of wells on a specific site can often be an indicator of groundwater flow direction in the immediate area. Such hydrogeologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

Site-Specific Hydrogeological Data*:

Search Radius:	1.25 miles
Status:	Not found

AQUIFLOW®

Search Radius: 1.000 Mile.

EDR has developed the AQUIFLOW Information System to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted by environmental professionals to regulatory authorities at select sites and has extracted the date of the report, groundwater flow direction as determined hydrogeologically, and the depth to water table.

MAP ID	LOCATION FROM TP	GENERAL DIRECTION GROUNDWATER FLOW
Not Reported		

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

GROUNDWATER FLOW VELOCITY INFORMATION

Groundwater flow velocity information for a particular site is best determined by a qualified environmental professional using site specific geologic and soil strata data. If such data are not reasonably ascertainable, it may be necessary to rely on other sources of information, including geologic age identification, rock stratigraphic unit and soil characteristics data collected on nearby properties and regional soil information. In general, contaminant plumes move more quickly through sandy-gravelly types of soils than silty-clayey types of soils.

GEOLOGIC INFORMATION IN GENERAL AREA OF TARGET PROPERTY

Geologic information can be used by the environmental professional in forming an opinion about the relative speed at which contaminant migration may be occurring.

ROCK STRATIGRAPHIC UNIT

Era:	Cenozoic
System:	Quaternary
Series:	Quaternary
Code:	Q *(decoded above as Era, System & Series)*

GEOLOGIC AGE IDENTIFICATION

Category: Stratifed Sequence

Geologic Age and Rock Stratigraphic Unit Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - a digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

DOMINANT SOIL COMPOSITION IN GENERAL AREA OF TARGET PROPERTY

The U.S. Department of Agriculture's (USDA) Soil Conservation Service (SCS) leads the National Cooperative Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. Soil maps for STATSGO are compiled by generalizing more detailed (SSURGO) soil survey maps. The following information is based on Soil Conservation Service STATSGO data.

Soil Component Name:	ALDERWOOD
Soil Surface Texture:	gravelly - sandy loam
Hydrologic Group:	Class C - Slow infiltration rates. Soils with layers impeding downward movement of water, or soils with moderately fine or fine textures.
Soil Drainage Class:	Moderately well drained. Soils have a layer of low hydraulic conductivity, wet state high in the profile. Depth to water table is 3 to 6 feet.

Hydric Status: Soil does not meet the requirements for a hydric soil.

Corrosion Potential - Uncoated Steel:	MODERATE
Depth to Bedrock Min:	> 60 inches
Depth to Bedrock Max:	> 60 inches

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Soil Layer Information							
	Boundary			Classification			
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil	Permeability Rate (in/hr)	Soil Reaction (pH)
1	0 inches	7 inches	gravelly - sandy loam	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	COARSE-GRAINED SOILS, Gravels, Gravels with fines, Silty Gravel	Max: 6.00 Min: 2.00	Max: 6.50 Min: 5.10
2	7 inches	35 inches	very gravelly - loam	Granular materials (35 pct. or less passing No. 200), Stone Fragments, Gravel and Sand.	COARSE-GRAINED SOILS, Gravels, Gravels with fines, Silty Gravel	Max: 6.00 Min: 2.00	Max: 6.50 Min: 5.10
3	35 inches	39 inches	cemented	Not reported	Not reported	Max: 0.00 Min: 0.00	Max: 0.00 Min: 0.00

OTHER SOIL TYPES IN AREA

Based on Soil Conservation Service STATSGO data, the following additional subordinant soil types may appear within the general area of target property.

Soil Surface Textures: silt loam
very gravelly - sandy loam

Surficial Soil Types: silt loam
very gravelly - sandy loam

Shallow Soil Types: silt loam

Deeper Soil Types: very gravelly - coarse sand
stratified
very gravelly - sand
very gravelly - loamy sand

ADDITIONAL ENVIRONMENTAL RECORD SOURCES

According to ASTM E 1527-00, Section 7.2.2, "one or more additional state or local sources of environmental records may be checked, in the discretion of the environmental professional, to enhance and supplement federal and state sources... Factors to consider in determining which local or additional state records, if any, should be checked include (1) whether they are reasonably ascertainable, (2) whether they are sufficiently useful, accurate, and complete in light of the objective of the records review (see 7.1.1), and (3) whether they are obtained, pursuant to local, good commercial or customary practice." One of the record sources listed in Section 7.2.2 is water well information. Water well information can be used to assist the environmental professional in assessing sources that may impact groundwater flow direction, and in forming an opinion about the impact of contaminant migration on nearby drinking water wells.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

WELL SEARCH DISTANCE INFORMATION

DATABASE	SEARCH DISTANCE (miles)
Federal USGS	1.000
Federal FRDS PWS	Nearest PWS within 1 mile
State Database	1.000

FEDERAL USGS WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
1	USGS3271602	1/4 - 1/2 Mile ENE
A3	USGS3272130	1/4 - 1/2 Mile North
A4	USGS3272127	1/4 - 1/2 Mile NNE
5	USGS3271418	1/4 - 1/2 Mile SE
6	USGS3271350	1/2 - 1 Mile South
7	USGS3271585	1/2 - 1 Mile West
8	USGS3271539	1/2 - 1 Mile East
9	USGS3271355	1/2 - 1 Mile SW
10	USGS3271451	1/2 - 1 Mile WSW
11	USGS3271390	1/2 - 1 Mile SE
12	USGS3271271	1/2 - 1 Mile South
15	USGS3271551	1/2 - 1 Mile West
17	USGS3271360	1/2 - 1 Mile ESE

FEDERAL FRDS PUBLIC WATER SUPPLY SYSTEM INFORMATION

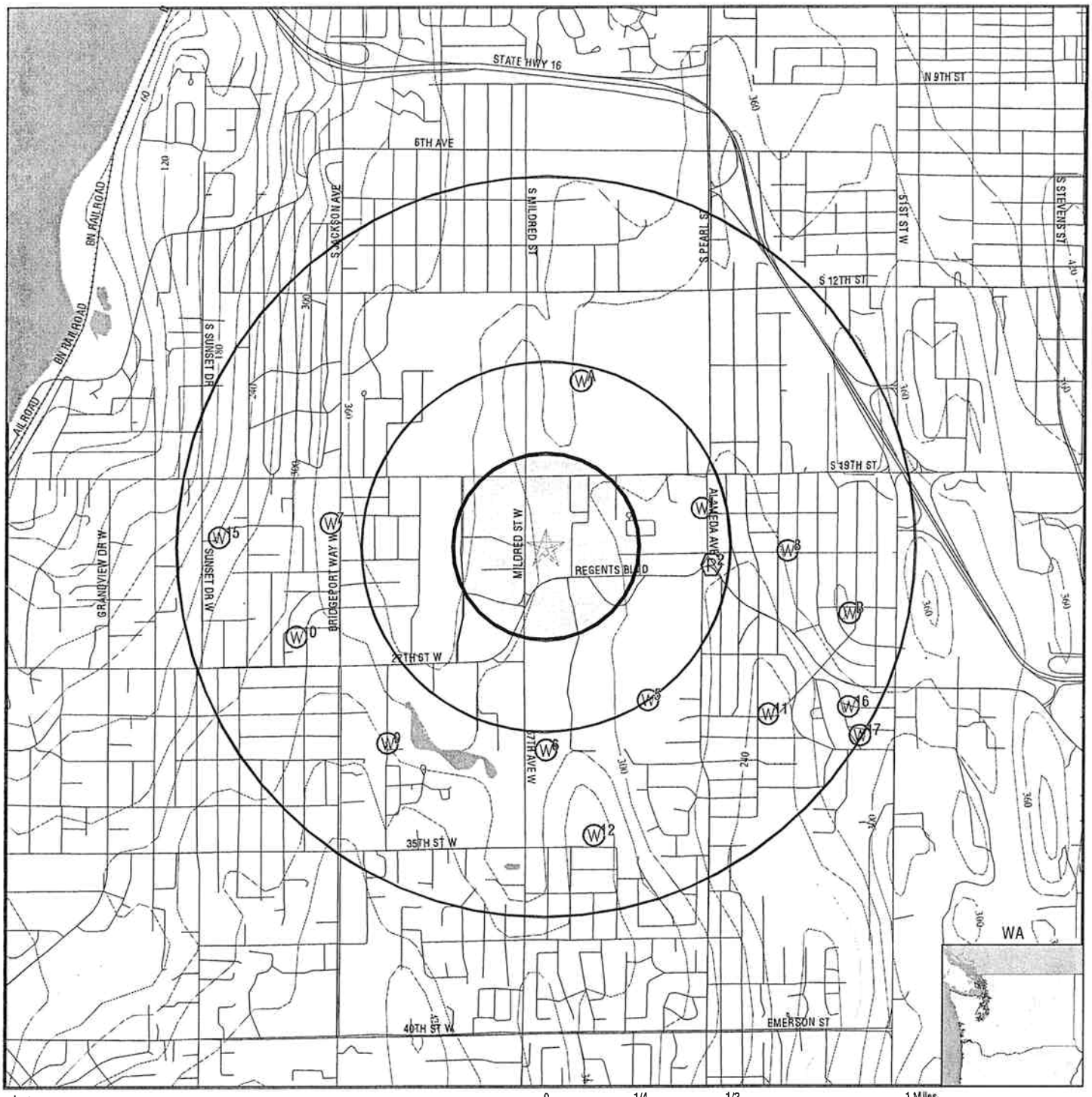
MAP ID	WELL ID	LOCATION FROM TP
2	WA5302412	1/4 - 1/2 Mile East

Note: PWS System location is not always the same as well location.

STATE DATABASE WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
B13	WAGRP0000000865	1/2 - 1 Mile ESE
B14	WAGRP0000000860	1/2 - 1 Mile ESE
16	WAGRP0000004670	1/2 - 1 Mile ESE

PHYSICAL SETTING SOURCE MAP - 01395917.1r



- County Boundary
- Major Roads
- Contour Lines
- Earthquake epicenter, Richter 5 or greater
- Water Wells
- Public Water Supply Wells
- Cluster of Multiple Icons

- Groundwater Flow Direction
- GI Indeterminate Groundwater Flow at Location
- GV Groundwater Flow Varies at Location
- HD Closest Hydrogeological Data

TARGET PROPERTY:	Proposed Retail Site (No. 95984)	CUSTOMER:	Kleinfelder, Inc.
ADDRESS:	2119 Mildred Street West	CONTACT:	Ted W. Sykes
CITY/STATE/ZIP:	Fircrest WA 98466	INQUIRY #:	01395917.1r
LAT/LONG:	47.2400 / 122.5252	DATE:	April 07, 2005 8:01 pm

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation

Database | EDR ID Number

1
ENE
1/4 - 1/2 Mile
Lower

FED USGS **USGS3271602**

Agency cd:	USGS	Site no:	471430122305401
Site name:	20N/02E-02C01	Latitude:	471430
Longitude:	1223054	Dec lat:	47.24148732
Dec lon:	-122.51623645	Coor meth:	M
Coor accr:	T	Latlong datum:	NAD27
Dec latlong datum:	NAD83	District:	53
State:	53	County:	053
Country:	US	Land net:	NE NW S02 T20N R02E W
Location map:	STEILACOOM	Map scale:	24000
Altitude:	270	Altitude method:	M
Altitude accuracy:	50	Altitude datum:	NGVD29
Hydrologic:	Puget Sound. Washington. Area = 2550 sq.mi.		
Topographic:	Flat surface		
Site type:	Ground-water other than Spring	Date construction:	19711115
Date inventoried:	19721017	Mean greenwich time offset:	PST
Local standard time flag:	Y	Type of ground water site:	Single well, other than collector or Ranney type
Aquifer Type:	Not Reported	Aquifer:	Not Reported
Well depth:	224	Hole depth:	Not Reported
Source of depth data:	reporting agency (generally USGS)	Project number:	Not Reported
Real time data flag:	0	Daily flow data begin date:	0000-00-00
Daily flow data end date:	0000-00-00	Daily flow data count:	0
Peak flow data begin date:	0000-00-00	Peak flow data end date:	0000-00-00
Peak flow data count:	0	Water quality data begin date:	0000-00-00
Water quality data end date:	0000-00-00	Water quality data count:	0
Ground water data begin date:	1972-10-01	Ground water data end date:	1972-10-01
Ground water data count:	1		

Ground-water levels, Number of Measurements: 1

Date	Feet below Surface	Feet to Sealevel
1972-10-01	62.00	

2
East
1/4 - 1/2 Mile
Lower

FRDS PWS **WA5302412**

PWS ID:	WA5302412	PWS Status:	Active
Date Initiated:	7706	Date Deactivated:	Not Reported
PWS Name:	SOIL FACTORY 800 37TH CT. WEST TACOMA, WA 98466		
Addressee / Facility:	Not Reported		
Facility Latitude:	47 14 22	Facility Longitude:	122 30 52
City Served:	Not Reported		
Treatment Class:	Untreated	Population:	00000025

PWS currently has or had major violation(s) or enforcement: No

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation

Database | EDR ID Number

A3
North
1/4 - 1/2 Mile
Higher

FED USGS **USGS3272130**

Agency cd:	USGS	Site no:	471551122311001
Site name:	20N/02E-02M02	Latitude:	471448
Longitude:	1223120	Dec lat:	47.24648726
Dec lon:	-122.52345894	Coor meth:	M
Coor accr:	F	Latlong datum:	NAD27
Dec latlong datum:	NAD83	District:	53
State:	53	County:	053
Country:	US	Land net:	NW SW S02 T20N R02E W
Location map:	STEILACOOM	Map scale:	24000
Altitude:	323	Altitude method:	M
Altitude accuracy:	10	Altitude datum:	NGVD29
Hydrologic:	Puget Sound. Washington. Area = 2550 sq.mi.		
Topographic:	Not Reported		
Site type:	Ground-water other than Spring	Date construction:	19830419
Date inventoried:	19950614	Mean greenwich time offset:	PST
Local standard time flag:	Y	Type of ground water site:	Single well, other than collector or Ranney type
Aquifer Type:	Not Reported	Aquifer:	Not Reported
Well depth:	195	Hole depth:	468
Source of depth data:	driller	Project number:	WA39400
Real time data flag:	0	Daily flow data begin date:	0000-00-00
Daily flow data end date:	0000-00-00	Daily flow data count:	0
Peak flow data begin date:	0000-00-00	Peak flow data end date:	0000-00-00
Peak flow data count:	0	Water quality data begin date:	0000-00-00
Water quality data end date:	0000-00-00	Water quality data count:	0
Ground water data begin date:	1983-12-07	Ground water data end date:	1995-06-14
Ground water data count:	2		

Ground-water levels, Number of Measurements: 2

Date	Feet below Surface	Feet to Sealevel	Date	Feet below Surface	Feet to Sealevel
1995-06-14	115.10		1983-12-07	110	

A4
NNE
1/4 - 1/2 Mile
Lower

FED USGS **USGS3272127**

Agency cd:	USGS	Site no:	471550122311001
Site name:	20N/02E-02M01	Latitude:	471448
Longitude:	1223118	Dec lat:	47.24648727
Dec lon:	-122.52290337	Coor meth:	M
Coor accr:	F	Latlong datum:	NAD27
Dec latlong datum:	NAD83	District:	53
State:	53	County:	053
Country:	US	Land net:	NW SW S02 T20N R02E W
Location map:	STEILACOOM	Map scale:	24000
Altitude:	310	Altitude method:	M
Altitude accuracy:	15	Altitude datum:	NGVD29
Hydrologic:	Puget Sound. Washington. Area = 2550 sq.mi.		
Topographic:	Not Reported		
Site type:	Ground-water other than Spring	Date construction:	19821228
Date inventoried:	19950614	Mean greenwich time offset:	PST

Local standard time flag:	Y	Type of ground water site:	Single well, other than collector or Ranney type
Aquifer Type:	Not Reported	Aquifer:	Not Reported
Well depth:	304	Hole depth:	316
Source of depth data:	driller	Project number:	WA39400
Real time data flag:	0	Daily flow data begin date:	0000-00-00
Daily flow data end date:	0000-00-00	Daily flow data count:	0
Peak flow data begin date:	0000-00-00	Peak flow data end date:	0000-00-00
Peak flow data count:	0	Water quality data begin date:	0000-00-00
Water quality data end date:	0000-00-00	Water quality data count:	0
Ground water data begin date:	1983-02-23	Ground water data end date:	1995-05-14
Ground water data count:	2		

Ground-water levels, Number of Measurements: 2

Date	Feet below Surface	Feet to Sealevel	Date	Feet below Surface	Feet to Sealevel
1995-05-14	141.42		1983-02-23	118	

5
SE
1/4 - 1/2 Mile
Lower

FED USGS USGS3271418

Agency cd:	USGS	Site no:	471403122310501
Site name:	20N/02E-11L01	Latitude:	471403
Longitude:	1223105	Dec lat:	47.23398727
Dec lon:	-122.51929202	Coor meth:	M
Coor accr:	S	Latlong datum:	NAD27
Dec latlong datum:	NAD83	District:	53
State:	53	County:	053
Country:	US	Land net:	NE SW S11 T20N R02E W
Location map:	STEILACOOM	Map scale:	24000
Altitude:	280	Altitude method:	M
Altitude accuracy:	10	Altitude datum:	NGVD29
Hydrologic:	Puget Sound. Washington. Area = 2550 sq.mi.		
Topographic:	Not Reported		
Site type:	Ground-water other than Spring	Date construction:	19510325
Date inventoried:	19600226	Mean greenwich time offset:	PST
Local standard time flag:	Y	Type of ground water site:	Single well, other than collector or Ranney type
Aquifer Type:	Not Reported	Aquifer:	Not Reported
Well depth:	120	Hole depth:	Not Reported
Source of depth data:	driller	Project number:	Not Reported
Real time data flag:	0	Daily flow data begin date:	0000-00-00
Daily flow data end date:	0000-00-00	Daily flow data count:	0
Peak flow data begin date:	0000-00-00	Peak flow data end date:	0000-00-00
Peak flow data count:	0	Water quality data begin date:	0000-00-00
Water quality data end date:	0000-00-00	Water quality data count:	0
Ground water data begin date:	1951-03-25	Ground water data end date:	1951-03-25
Ground water data count:	1		

Ground-water levels, Number of Measurements: 1

Date	Feet below Surface	Feet to Sealevel
1951-03-25	50	

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation

Database	EDR ID Number
FED USGS	**USGS3271350**

6
South
1/2 - 1 Mile
Lower

Agency cd:	USGS	Site no:	471356122312601
Site name:	20N/02E-11M01	Latitude:	471356
Longitude:	1223126	Dec lat:	47.23204277
Dec lon:	-122.52512551	Coor meth:	M
Coor accr:	S	Latlong datum:	NAD27
Dec latlong datum:	NAD83	District:	53
State:	53	County:	053
Country:	US	Land net:	NW SW S11 T20N R02E W
Location map:	STEILACOOM	Map scale:	24000
Altitude:	318	Altitude method:	L
Altitude accuracy:	1	Altitude datum:	NGVD29
Hydrologic:	Puget Sound. Washington. Area = 2550 sq.mi.		
Topographic:	Undulating		
Site type:	Ground-water other than Spring	Date construction:	19520119
Date inventoried:	19600226	Mean greenwich time offset:	PST
Local standard time flag:	Y	Type of ground water site:	Single well, other than collector or Ranney type
Aquifer Type:	Not Reported	Aquifer:	Not Reported
Well depth:	257	Hole depth:	Not Reported
Source of depth data:	other	Project number:	Not Reported
Real time data flag:	0	Daily flow data begin date:	0000-00-00
Daily flow data end date:	0000-00-00	Daily flow data count:	0
Peak flow data begin date:	0000-00-00	Peak flow data end date:	0000-00-00
Peak flow data count:	0	Water quality data begin date:	1970-12-14
Water quality data end date:	1971-06-25	Water quality data count:	2
Ground water data begin date:	1961-06-28	Ground water data end date:	1972-12-20
Ground water data count:	74		

Ground-water levels, Number of Measurements: 74

Date	Feet below Surface	Feet to Sealevel	Date	Feet below Surface	Feet to Sealevel
1972-12-20	98.58		1972-10-18	99.65	
1972-08-11	129.85		1972-04-24	95.75	
1972-02-17	97.69		1971-10-22	98.42	
1971-09-13	99.77		1971-07-13	102.30	
1971-05-27	100.67		1971-04-16	102.52	
1971-03-09	98.04		1971-01-11	99.40	
1970-12-14	112.94				
Note: The site was being pumped.					
1970-10-13	102.19		1970-09-22	102.76	
1970-06-30	172.82				
Note: The site was being pumped.					
1970-05-05	102.52		1970-03-16	107.10	
1970-02-05	100.50		1969-12-09	100.65	
1969-10-06	102.62		1969-09-04	131.02	
1969-07-25	177.12				
Note: The site was being pumped.					
1969-07-01	114.45		1969-04-18	97.24	
1969-02-18	112.17		1969-01-13	107.15	
1968-11-15	107.63		1968-10-09	104.04	
1968-08-27	100.68		1968-07-15	114.11	
1968-05-14	123.65		1968-04-11	109.17	

Ground-water levels, continued.

Date	Feet below Surface	Feet to Sealevel	Date	Feet below Surface	Feet to Sealevel
1968-02-27	102.87		1968-01-18	105.15	
1967-12-07	103.27		1967-10-18	104.13	
1967-08-08	133.65				
Note: The site was being pumped.					
1967-06-01	114.83		1966-11-04	102.39	
1966-09-28	102.23				
1966-07-13	157				
Note: The site was being pumped.					
1966-06-14	135				
Note: The site was being pumped.					
1966-04-13	103.23		1966-03-08	102.25	
1966-01-21	102.32		1965-12-16	103.18	
1965-11-02	102.90		1965-10-05	107.81	
1965-08-31	106.43		1964-07-24	105.63	
1964-05-11	96.89		1964-02-05	97.68	
1963-12-24	98.25		1963-12-10	98.59	
1963-05-28	118.66				
Note: The site was being pumped.					
1963-04-26	98.87		1963-02-26	98.87	
1963-01-25	99.11		1962-12-26	100.38	
1962-11-27	100.70		1962-10-23	100.51	
1962-09-25	100.34		1962-08-28	116.59	
1962-07-06	117.95				
1962-05-31	110.07				
Note: The site had been pumped recently.					
1962-04-26	99.37		1962-03-30	98.12	
1962-03-04	96.93		1962-02-01	97.20	
1962-01-03	98.52		1961-11-30	97.22	
1961-10-04	97.11		1961-06-28	117.77	

7
West
1/2 - 1 Mile
Higher

FED USGS **USGS3271585**

Agency cd:	USGS	Site no:	471428122321101
Site name:	20N/02E-10C01	Latitude:	471428
Longitude:	1223211	Dec lat:	47.24093155
Dec lon:	-122.53762596	Coor meth:	M
Coor accr:	S	Latlong datum:	NAD27
Dec latlong datum:	NAD83	District:	53
State:	53	County:	053
Country:	US	Land net:	NE NW S10 T20N R02E W
Location map:	STEILACOOM	Map scale:	24000
Altitude:	330	Altitude method:	M
Altitude accuracy:	10	Altitude datum:	NGVD29
Hydrologic:	Puget Sound. Washington. Area = 2550 sq.mi.		
Topographic:	Not Reported		
Site type:	Ground-water other than Spring	Date construction:	19380101
Date inventoried:	19660301	Mean greenwich time offset:	PST
Local standard time flag:	Y	Type of ground water site:	Single well, other than collector or Ranney type
Aquifer Type:	Not Reported	Aquifer:	Not Reported
Well depth:	175	Hole depth:	Not Reported
Source of depth data:	driller	Project number:	Not Reported
Real time data flag:	0	Daily flow data begin date:	0000-00-00
Daily flow data end date:	0000-00-00	Daily flow data count:	0
Peak flow data begin date:	0000-00-00	Peak flow data end date:	0000-00-00

Peak flow data count: 0
Water quality data end date:0000-00-00
Ground water data begin date: 1938-01-01
Ground water data count: 1
Water quality data begin date: 0000-00-00
Water quality data count: 0
Ground water data end date: 1938-01-01

Ground-water levels, Number of Measurements: 1

Date	Feet below Surface	Feet to Sealevel
1938-01-01	87	

8
East
1/2 - 1 Mile
Lower

FED USGS USGS3271539

Agency cd: USGS
Site name: 20N/02E-09C01
Longitude: 1223036
Dec lon: -122.51123629
Coor accr: F
Dec latlong datum: NAD83
State: 53
Country: US
Location map: STEILACOOM
Altitude: 10
Altitude accuracy: 5
Hydrologic: Puget Sound. Washington. Area = 2550 sq.mi.
Topographic: Not Reported
Site type: Ground-water other than Spring
Date inventoried: 19790509
Local standard time flag: Y
Aquifer Type: Not Reported
Well depth: 481
Source of depth data: other
Real time data flag: 0
Daily flow data end date: 0000-00-00
Peak flow data begin date: 0000-00-00
Peak flow data count: 0
Water quality data end date:1966-09-13
Ground water data begin date: 1923-05-01
Ground water data count: 1

Site no: 471424122333101
Latitude: 471424
Dec lat: 47.2398207
Coor meth: M
Latlong datum: NAD27
District: 53
County: 053
Land net: NE NW S09 T20N R02E W
Map scale: 24000
Altitude method: M
Altitude datum: NGVD29
Date construction: 19230501
Mean greenwich time offset: PST
Type of ground water site: Single well, other than collector or Ranney type
Aquifer: Not Reported
Hole depth: 481
Project number: Not Reported
Daily flow data begin date: 0000-00-00
Daily flow data count: 0
Peak flow data end date: 0000-00-00
Water quality data begin date: 1938-11-04
Water quality data count: 3
Ground water data end date: 1923-05-01

Ground-water levels, Number of Measurements: 1

Date	Feet below Surface	Feet to Sealevel
1923-05-01	-8	

9
SW
1/2 - 1 Mile
Higher

FED USGS USGS3271355

Agency cd:	USGS	Site no:	471357122315901
Site name:	20N/02E-10K01	Latitude:	471357
Longitude:	1223159	Dec lat:	47.23232045
Dec lon:	-122.53429245	Coor meth:	M
Coor accr:	S	Latlong datum:	NAD27
Dec latlong datum:	NAD83	District:	53
State:	53	County:	053
Country:	US	Land net:	NW SE S10 T20N R02E W
Location map:	STEILACOOM	Map scale:	24000
Altitude:	313	Altitude method:	M
Altitude accuracy:	10	Altitude datum:	NGVD29
Hydrologic:	Puget Sound. Washington. Area = 2550 sq.mi.		
Topographic:	Not Reported		
Site type:	Ground-water other than Spring	Date construction:	19050101
Date inventoried:	19600226	Mean greenwich time offset:	PST
Local standard time flag:	Y	Type of ground water site:	Single well, other than collector or Ranney type
Aquifer Type:	Not Reported	Aquifer:	Not Reported
Well depth:	61.3	Hole depth:	Not Reported
Source of depth data:	driller	Project number:	Not Reported
Real time data flag:	0	Daily flow data begin date:	0000-00-00
Daily flow data end date:	0000-00-00	Daily flow data count:	0
Peak flow data begin date:	0000-00-00	Peak flow data end date:	0000-00-00
Peak flow data count:	0	Water quality data begin date:	0000-00-00
Water quality data end date:	0000-00-00	Water quality data count:	0
Ground water data begin date:	1905-01-01	Ground water data end date:	1905-01-01
Ground water data count:	1		

Ground-water levels, Number of Measurements: 1

Date	Feet below Surface	Feet to Sealevel
1905-01-01		

Note: The site was dry (no water level recorded).

10
WSW
1/2 - 1 Mile
Lower

FED USGS USGS3271451

Agency cd:	USGS	Site no:	471412122321801
Site name:	20N/02E-10F01	Latitude:	471412
Longitude:	1223218	Dec lat:	47.23648707
Dec lon:	-122.53957042	Coor meth:	M
Coor accr:	S	Latlong datum:	NAD27
Dec latlong datum:	NAD83	District:	53
State:	53	County:	053
Country:	US	Land net:	SE NW S10 T20N R02E W
Location map:	STEILACOOM	Map scale:	24000
Altitude:	317	Altitude method:	M
Altitude accuracy:	10	Altitude datum:	NGVD29
Hydrologic:	Puget Sound. Washington. Area = 2550 sq.mi.		
Topographic:	Not Reported		
Site type:	Ground-water other than Spring	Date construction:	19400101
Date inventoried:	19580718	Mean greenwich time offset:	PST
Local standard time flag:	Y	Type of ground water site:	Single well, other than collector or Ranney type
Aquifer Type:	Not Reported	Aquifer:	Not Reported
Well depth:	Not Reported	Hole depth:	Not Reported
Source of depth data:	driller	Project number:	Not Reported
Real time data flag:	0	Daily flow data begin date:	0000-00-00
Daily flow data end date:	0000-00-00	Daily flow data count:	0
Peak flow data begin date:	0000-00-00	Peak flow data end date:	0000-00-00

Peak flow data count: 0
Water quality data end date:0000-00-00
Ground water data begin date: 1941-10-01
Ground water data count: 1
Water quality data begin date: 0000-00-00
Water quality data count: 0
Ground water data end date: 1941-10-01

Ground-water levels, Number of Measurements: 1

Date	Feet below Surface	Feet to Sealevel
1941-10-01	102	

11
SE
1/2 - 1 Mile
Lower

FED USGS USGS3271390

Agency cd:	USGS	Site no:	471401122304001
Site name:	20N/02E-11K01	Latitude:	471401
Longitude:	1223040	Dec lat:	47.23343179
Dec lon:	-122.51234736	Coor meth:	M
Coor accr:	S	Latlong datum:	NAD27
Dec latlong datum:	NAD83	District:	53
State:	53	County:	053
Country:	US	Land net:	NW SE S11 T20N R02E W
Location map:	STEILACOOM	Map scale:	24000
Altitude:	228	Altitude method:	M
Altitude accuracy:	10	Altitude datum:	NGVD29
Hydrologic:	Puget Sound. Washington. Area = 2550 sq.mi.		
Topographic:	Not Reported		
Site type:	Ground-water other than Spring	Date construction:	19010101
Date inventoried:	19600229	Mean greenwich time offset:	PST
Local standard time flag:	Y	Type of ground water site:	Single well, other than collector or Ranney type
Aquifer Type:	Not Reported	Aquifer:	Not Reported
Well depth:	200	Hole depth:	397
Source of depth data:	driller	Project number:	Not Reported
Real time data flag:	0	Daily flow data begin date:	0000-00-00
Daily flow data end date:	0000-00-00	Daily flow data count:	0
Peak flow data begin date:	0000-00-00	Peak flow data end date:	0000-00-00
Peak flow data count:	0	Water quality data begin date:	0000-00-00
Water quality data end date:	0000-00-00	Water quality data count:	0
Ground water data begin date:	1901-01-01	Ground water data end date:	1901-01-01
Ground water data count:	1		

Ground-water levels, Number of Measurements: 1

Date	Feet below Surface	Feet to Sealevel
1901-01-01		

Note: The site was flowing, but the head could not be measured without additional equipment.

12
South
1/2 - 1 Mile
Higher

FED USGS USGS3271271

Agency cd:	USGS	Site no:	471344122311601
Site name:	20N/02E-11N01	Latitude:	471344
Longitude:	1223116	Dec lat:	47.22870945
Dec lon:	-122.52234761	Coor meth:	M
Coor accr:	S	Latlong datum:	NAD27
Dec latlong datum:	NAD83	District:	53
State:	53	County:	053
Country:	US	Land net:	SW SW S11 T20N R02E W
Location map:	STEILACOOM	Map scale:	24000
Altitude:	315	Altitude method:	M
Altitude accuracy:	10	Altitude datum:	NGVD29
Hydrologic:	Puget Sound. Washington. Area = 2550 sq.mi.		
Topographic:	Not Reported		
Site type:	Ground-water other than Spring	Date construction:	19230926
Date inventoried:	19600226	Mean greenwich time offset:	PST
Local standard time flag:	Y	Type of ground water site:	Single well, other than collector or Ranney type
Aquifer Type:	Not Reported	Aquifer:	Not Reported
Well depth:	270	Hole depth:	Not Reported
Source of depth data:	driller	Project number:	Not Reported
Real time data flag:	0	Daily flow data begin date:	0000-00-00
Daily flow data end date:	0000-00-00	Daily flow data count:	0
Peak flow data begin date:	0000-00-00	Peak flow data end date:	0000-00-00
Peak flow data count:	0	Water quality data begin date:	0000-00-00
Water quality data end date:	0000-00-00	Water quality data count:	0
Ground water data begin date:	1930-01-01	Ground water data end date:	1930-01-01
Ground water data count:	1		

Ground-water levels, Number of Measurements: 1

Date	Feet below Surface	Feet to Sealevel
1930-01-01	90	

B13
ESE
1/2 - 1 Mile
Higher

WA WELLS **WAGRP0000000865**

Source Name:	WELL #9	Range:	02E
Township:	20	Section:	11
QTR Section:	NESE	Source Type:	WW
Source Use:	P	SP X:	1501610
SP Y:	700761	PWS Name:	FIRCREST, TOWN OF
PWS ID:	25150	Source:	09
Key ID:	2515009		

B14
ESE
1/2 - 1 Mile
Higher

WA WELLS **WAGRP0000000860**

Source Name:	WELL #2	Range:	02E
Township:	20	Section:	11
QTR Section:	NESE	Source Type:	WW
Source Use:	P	SP X:	1501610
SP Y:	700761	PWS Name:	FIRCREST, TOWN OF
PWS ID:	25150	Source:	04
Key ID:	2515004		

15
West
1/2 - 1 Mile
Lower

FED USGS **USGS3271551**

Agency cd:	USGS	Site no:	471426122323401
Site name:	20N/02E-10D01	Latitude:	471426
Longitude:	1223234	Dec lat:	47.24037592
Dec lon:	-122.54401504	Coor meth:	M
Coor accr:	S	Latlong datum:	NAD27
Dec latlong datum:	NAD83	District:	53
State:	53	County:	053
Country:	US	Land net:	NW NW S10 T20N R02E W
Location map:	STEILACOOM	Map scale:	24000
Altitude:	250	Altitude method:	M
Altitude accuracy:	10	Altitude datum:	NGVD29
Hydrologic:	Puget Sound. Washington. Area = 2550 sq.mi.		
Topographic:	Not Reported		
Site type:	Ground-water other than Spring	Date construction:	19390525
Date inventoried:	19600301	Mean greenwich time offset:	PST
Local standard time flag:	Y	Type of ground water site:	Single well, other than collector or Ranney type
Aquifer Type:	Not Reported	Aquifer:	Not Reported
Well depth:	26	Hole depth:	Not Reported
Source of depth data:	driller	Project number:	Not Reported
Real time data flag:	Not Reported	Daily flow data begin date:	Not Reported
Daily flow data end date:	Not Reported	Daily flow data count:	Not Reported
Peak flow data begin date:	Not Reported	Peak flow data end date:	Not Reported
Peak flow data count:	Not Reported	Water quality data begin date:	Not Reported
Water quality data end date:	Not Reported	Water quality data count:	Not Reported
Ground water data begin date:	Not Reported	Ground water data end date:	Not Reported
Ground water data count:	Not Reported		

Ground-water levels, Number of Measurements: 0

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation

Database	EDR ID Number
WA WELLS	WAGRP0000004670

16
ESE
1/2 - 1 Mile
Lower

Source Name:	WELL#'S 2,4,5,USGS	Range:	02E
Township:	20	Section:	11
QTR Section:	NESE	Source Type:	WF
Source Use:	P	SP X:	1501560
SP Y:	699429	PWS Name:	FIRCREST, TOWN OF
PWS ID:	25150	Source:	01
Key ID:	2515001		

17
ESE
1/2 - 1 Mile
Lower

FED USGS **USGS3271360**

Agency cd:	USGS	Site no:	471358122302201
Site name:	20N/02E-11J02	Latitude:	471358
Longitude:	1223021	Dec lat:	47.2325985
Dec lon:	-122.50706942	Coor meth:	M
Coor accr:	S	Latlong datum:	NAD27
Dec latlong datum:	NAD83	District:	53
State:	53	County:	053
Country:	US	Land net:	NE SE S11 T20N R02E W
Location map:	STEILACOOM	Map scale:	24000
Altitude:	280.1	Altitude method:	L
Altitude accuracy:	.1	Altitude datum:	NGVD29
Hydrologic:	Puget Sound. Washington. Area = 2550 sq.mi.		
Topographic:	Undulating		
Site type:	Ground-water other than Spring	Date construction:	19500501
Date inventoried:	19600229	Mean greenwich time offset:	PST
Local standard time flag:	Y	Type of ground water site:	Single well, other than collector or Ranney type
Aquifer Type:	Not Reported	Aquifer:	Not Reported
Well depth:	131	Hole depth:	312
Source of depth data:	reporting agency (generally USGS)	Project number:	WA29733
Real time data flag:	0	Daily flow data begin date:	0000-00-00
Daily flow data end date:	0000-00-00	Daily flow data count:	0
Peak flow data begin date:	0000-00-00	Peak flow data end date:	0000-00-00
Peak flow data count:	0	Water quality data begin date:	0000-00-00
Water quality data end date:	0000-00-00	Water quality data count:	0
Ground water data begin date:	1953-03-26	Ground water data end date:	1990-09-13
Ground water data count:	214		

Ground-water levels, Number of Measurements: 214

Date	Feet below Surface	Feet to Sealevel	Date	Feet below Surface	Feet to Sealevel
1990-09-13	61.75		1990-08-08	60.73	
1990-06-27	58.93		1990-04-16	60.14	
1990-01-24	61.17		1989-10-19	92.9	
1989-09-12	62.0		1989-08-22	61.4	
1989-06-20	59.68		1989-01-24	60.97	
1988-10-28	60.87				
1980-05-05	62.34				

Note: A nearby site that taps the same aquifer was being pumped.

Ground-water levels, continued.

Date	Feet below Surface	Feet to Sealevel
1980-05-02	62.76	
Note: A nearby site that taps the same aquifer was being pumped.		
1980-03-05	63.36	
Note: A nearby site that taps the same aquifer was being pumped.		
1980-01-14	64.08	
Note: A nearby site that taps the same aquifer was being pumped.		
1979-11-07	65.25	
Note: A nearby site that taps the same aquifer was being pumped.		
1979-09-10	65.66	
Note: The site was being pumped.		
1979-07-09	64.35	
Note: The site was being pumped.		
1979-05-09	62.13	
Note: The site was being pumped.		
1979-03-07	62.7	
1978-11-03	63.46	
1978-07-05	64.7	
1978-03-01	65.24	
1977-11-03	65.81	
1977-08-09	66.24	
1977-05-03	63.87	
1977-01-03	64.38	
1976-09-01	65.27	
1976-05-06	64.51	
1975-12-30	65.09	
1975-07-25	66.88	
1975-01-13	65.90	
1974-09-16	66.78	
1974-05-15	64.15	
1974-01-31	66.18	
1973-10-01	68.21	
1973-06-09	67.78	
1973-02-07	66.97	
1972-12-10	66.58	
1972-11-30	66.38	
1972-11-20	66.59	
1972-11-10	66.45	
1972-10-10	67.03	
1972-09-30	67.10	
1972-09-20	67.21	
1972-09-10	67.58	
1972-08-31	67.76	
1972-08-20	67.52	
1972-08-10	67.54	
1972-07-31	67.07	
1972-07-20	66.63	
1972-07-10	66.55	
1972-06-30	66.61	
1972-06-20	66.57	
1972-06-10	66.49	
1972-05-31	66.14	
1972-05-20	65.40	
1972-05-10	65.40	
1972-04-30	65.58	
1972-04-20	65.75	
1979-01-09	62.94	
1978-09-06	64.52	
1978-05-01	64.11	
1978-01-04	66.23	
1977-09-12	65.96	
1977-07-05	64.57	
1977-03-03	64.25	
1976-11-08	64.56	
1976-07-06	67.23	
1976-03-02	65.53	
1975-10-15	64.31	
1975-06-17	65.75	
1974-11-13	66.19	
1974-07-22	64.91	
1974-03-26	65.15	
1973-11-30	67.30	
1973-08-13	67.74	
1973-03-30	64.98	
1972-12-15	66.41	
1972-12-05	66.39	
1972-11-25	66.38	
1972-11-15	66.54	
1972-10-15	66.95	
1972-10-05	67.18	
1972-09-25	67.22	
1972-09-15	67.50	
1972-09-05	67.72	
1972-08-25	67.56	
1972-08-15	67.59	
1972-08-05	67.29	
1972-07-25	66.86	
1972-07-15	66.40	
1972-07-05	66.76	
1972-06-25	66.41	
1972-06-15	66.26	
1972-06-05	66.32	
1972-05-25	65.69	
1972-05-15	65.44	
1972-05-05	65.38	
1972-04-25	65.85	
1972-03-25	66.31	

Ground-water levels, continued.

Date	Feet below Surface	Feet to Sealevel
1972-03-20	66.17	
1972-03-10	65.98	
1972-02-29	65.96	
1972-02-20	66.13	
1972-02-10	65.97	
1972-01-31	66.02	
1972-01-20	66.01	
1972-01-10	66.04	
1971-12-31	66.58	
1971-12-20	66.43	
1971-12-10	66.60	
1971-11-30	66.82	
1971-11-20	66.70	
1971-11-10	66.79	
1971-10-31	66.32	
1971-10-20	66.72	
1971-10-10	66.77	
1971-09-30	67.04	
1971-08-31	67.39	
1971-08-20	67.28	
1971-08-10	67.06	
1971-07-31	66.64	
1971-07-20	66.30	
1971-07-10	65.87	
1971-06-30	65.77	
1971-06-20	65.84	
1971-06-10	65.72	
1971-05-31	65.63	
1971-05-20	65.22	
1971-05-10	65.12	
1971-04-30	64.92	
1971-04-20	65.08	
1971-04-10	65.48	
1971-03-31	65.93	
1971-03-20	66.00	
1971-03-11	65.93	
1971-02-15	66.43	
1971-02-05	66.37	
1971-01-25	66.09	
1971-01-15	65.84	
1971-01-05	66.11	
1970-12-25	66.18	
1970-12-15	65.84	
1970-12-08	66.53	
1964-02-05	60.79	
1964-01-21	61.01	
1964-01-07	61.61	
1963-12-24	61.43	
1963-12-10	62.06	
1963-11-26	61.80	
1963-11-12	62.09	
1963-10-28	61.94	
1963-10-11	61.5	
1963-09-26	61.38	
1963-09-10	62.58	
1972-03-15	66.27	
1972-03-05	65.96	
1972-02-25	66.15	
1972-02-15	65.83	
1972-02-05	66.05	
1972-01-25	66.02	
1972-01-15	66.08	
1972-01-05	66.43	
1971-12-25	66.53	
1971-12-15	66.84	
1971-12-05	66.53	
1971-11-26	67.06	
1971-11-15	66.95	
1971-11-05	66.61	
1971-10-25	66.34	
1971-10-15	66.60	
1971-10-05	66.82	
1971-09-05	67.18	
1971-08-25	67.35	
1971-08-15	67.15	
1971-08-05	66.77	
1971-07-25	66.33	
1971-07-15	65.88	
1971-07-05	65.82	
1971-06-25	65.70	
1971-06-15	65.86	
1971-06-05	65.73	
1971-05-25	65.28	
1971-05-15	64.93	
1971-05-05	64.88	
1971-04-25	64.95	
1971-04-15	65.26	
1971-04-05	65.38	
1971-03-25	65.48	
1971-03-15	66.55	
1971-02-20	66.63	
1971-02-10	66.27	
1971-01-31	66.11	
1971-01-20	66.02	
1971-01-10	65.76	
1970-12-31	66.28	
1970-12-20	65.97	
1970-12-10	66.14	
1964-02-14	60.31	
1964-01-28	60.98	
1964-01-14	61.40	
1963-12-31	61.50	
1963-12-18	61.63	
1963-12-03	61.97	
1963-11-19	61.88	
1963-11-04	62.24	
1963-10-21	61.7	
1963-10-04	61.3	
1963-09-17	61.69	
1963-08-27	61.77	

Ground-water levels, continued.

Date	Feet below Surface	Feet to Sealevel
1963-08-20	61.87	
1953-03-26	51	

Date	Feet below Surface	Feet to Sealevel
1963-08-16	62.1	

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS
RADON

AREA RADON INFORMATION

Federal EPA Radon Zone for PIERCE County: 3

Note: Zone 1 indoor average level > 4 pCi/L.
: Zone 2 indoor average level >= 2 pCi/L and <= 4 pCi/L.
: Zone 3 indoor average level < 2 pCi/L.

Federal Area Radon Information for Zip Code: 98466

Number of sites tested: 4

Area	Average Activity	% <4 pCi/L	% 4-20 pCi/L	% >20 pCi/L
Living Area - 1st Floor	0.150 pCi/L	100%	0%	0%
Living Area - 2nd Floor	Not Reported	Not Reported	Not Reported	Not Reported
Basement	0.600 pCi/L	100%	0%	0%

PHYSICAL SETTING SOURCE RECORDS SEARCHED

TOPOGRAPHIC INFORMATION

USGS 7.5' Digital Elevation Model (DEM)
Source: United States Geologic Survey
EDR acquired the USGS 7.5' Digital Elevation Model in 2002. 7.5-Minute DEMs correspond to the USGS 1:24,000- and 1:25,000-scale topographic quadrangle maps.

HYDROLOGIC INFORMATION

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 from the U.S. Fish and Wildlife Service.

HYDROGEOLOGIC INFORMATION

AQUIFLOW^R Information System
Source: EDR proprietary database of groundwater flow information
EDR has developed the AQUIFLOW Information System (AIS) to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted to regulatory authorities at select sites and has extracted the date of the report, hydrogeologically determined groundwater flow direction and depth to water table information.

GEOLOGIC INFORMATION

Geologic Age and Rock Stratigraphic Unit
Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - A digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

STATSGO: State Soil Geographic Database
Source: Department of Agriculture, Natural Resources Conservation Services
The U.S. Department of Agriculture's (USDA) Natural Resources Conservation Service (NRCS) leads the national Conservation Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. Soil maps for STATSGO are compiled by generalizing more detailed (SSURGO) soil survey maps.

ADDITIONAL ENVIRONMENTAL RECORD SOURCES

FEDERAL WATER WELLS

PWS: Public Water Systems
Source: EPA/Office of Drinking Water
Telephone: 202-564-3750
Public Water System data from the Federal Reporting Data System. A PWS is any water system which provides water to at least 25 people for at least 60 days annually. PWSs provide water from wells, rivers and other sources.

PWS ENF: Public Water Systems Violation and Enforcement Data
Source: EPA/Office of Drinking Water
Telephone: 202-564-3750
Violation and Enforcement data for Public Water Systems from the Safe Drinking Water Information System (SDWIS) after August 1995. Prior to August 1995, the data came from the Federal Reporting Data System (FRDS).

USGS Water Wells: USGS National Water Inventory System (NWIS)
This database contains descriptive information on sites where the USGS collects or has collected data on surface water and/or groundwater. The groundwater data includes information on wells, springs, and other sources of groundwater.

PHYSICAL SETTING SOURCE RECORDS SEARCHED

STATE RECORDS

Water Wells
Source: Department of Transportation
Telephone: 360-705-7444
Group A well location points in Washington State.

Kitsap County Water Wells in Washington
Source: Public Utility District No. 1 of Kitsap County
Telephone: 206-779-7656

RADON

Area Radon Information
Source: USGS
Telephone: 703-356-4020
The National Radon Database has been developed by the U.S. Environmental Protection Agency (USEPA) and is a compilation of the EPA/State Residential Radon Survey and the National Residential Radon Survey. The study covers the years 1986 - 1992. Where necessary data has been supplemented by information collected at private sources such as universities and research institutions.

EPA Radon Zones
Source: EPA
Telephone: 703-356-4020
Sections 307 & 309 of IRAA directed EPA to list and identify areas of U.S. with the potential for elevated indoor radon levels.

OTHER

Airport Landing Facilities: Private and public use landing facilities
Source: Federal Aviation Administration, 800-457-6656

Epicenters: World earthquake epicenters, Richter 5 or greater
Source: Department of Commerce, National Oceanic and Atmospheric Administration

EDR™ Environmental Data Resources Inc

"Linking Technology with Tradition"®

Sanborn® Map Report

Ship To: Ted W. Sykes
Kleinfelder, Inc.
2405 140th Ave. NE
Bellevue, WA 98005

Order Date: 4/7/2005 **Completion Date:** 4/7/2005
Inquiry #: 1395917.2
P.O. #: NA
Site Name: Proposed Retail Site (No. 95984)
Address: 2119 Mildred Street West
City/State: Fircrest, WA 98466
Cross Streets:

Customer Project: NA
1053791KRA 425-562-4200

This document reports that the largest and most complete collection of Sanborn fire insurance maps has been reviewed based on client supplied information, and fire insurance maps depicting the target property at the specified address were not identified.

NO COVERAGE

The EDR Radius Map
with GeoCheck®

Proposed Retail Site (No. 95984)
2119 Mildred Street West
Fircrest, WA 98466

Inquiry Number: 01395917.1r

April 07, 2005

The Standard in Environmental Risk Management Information

440 Wheelers Farms Road
Milford, Connecticut 06460

Nationwide Customer Service

Telephone: 1-800-352-0050
Fax: 1-800-231-6802
Internet: www.edrnet.com

FORM-KRA

TABLE OF CONTENTS

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

EXECUTIVE SUMMARY

A search of available environmental records was conducted by Environmental Data Resources, Inc. (EDR). The report meets the government records search requirements of ASTM Standard Practice for Environmental Site Assessments, E 1527-00. Search distances are per ASTM standard or custom distances requested by the user.

TARGET PROPERTY INFORMATION

ADDRESS

2119 MILDRED STREET WEST
FIRCREST, WA 98466

COORDINATES

Latitude (North):	47.240000 - 47° 14' 24.0"
Longitude (West):	122.525200 - 122° 31' 30.7"
Universal Tranverse Mercator:	Zone 10
UTM X (Meters):	535936.1
UTM Y (Meters):	5231725.5
Elevation:	323 ft. above sea level

USGS TOPOGRAPHIC MAP ASSOCIATED WITH TARGET PROPERTY

Target Property:	47122-B5 STEILACOOM, WA
Source:	USGS 7.5 min quad index

TARGET PROPERTY SEARCH RESULTS

The target property was identified in the following government records. For more information on this property see page 6 of the attached EDR Radius Map report:

Site	Database(s)	EPA ID
2119 MILDRED STREET WEST 2119 MILDRED STREET WEST FIRCREST, WA	SPILLS	N/A
METAL MARINE PILOT INC 2119 MILDRED ST W FIRCREST, WA 98466	RCRA-SQG FINDS UST CSCSL NFA VCP	WAD009242173

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 ASTM E 1527-00 search radius around the target property for the following databases:

FEDERAL ASTM STANDARD

NPL..... National Priority List

EXECUTIVE SUMMARY

Proposed NPL	Proposed National Priority List Sites
CERCLIS	Comprehensive Environmental Response, Compensation, and Liability Information System
CERC-NFRAP	CERCLIS No Further Remedial Action Planned
CORRACTS	Corrective Action Report
RCRA-TSDF	Resource Conservation and Recovery Act Information
RCRA-LQG	Resource Conservation and Recovery Act Information
ERNS	Emergency Response Notification System

STATE ASTM STANDARD

HSL	Hazardous Sites List
INDIAN LUST	Leaking Underground Storage Tanks on Indian Land
INDIAN UST	Underground Storage Tanks on Indian Land

FEDERAL ASTM SUPPLEMENTAL

CONSENT	Superfund (CERCLA) Consent Decrees
ROD	Records Of Decision
Delisted NPL	National Priority List Deletions
HMIRS	Hazardous Materials Information Reporting System
MLTS	Material Licensing Tracking System
MINES	Mines Master Index File
NPL Liens	Federal Superfund Liens
PADS	PCB Activity Database System
INDIAN RESERV	Indian Reservations
FUDS	Formerly Used Defense Sites
UMTRA	Uranium Mill Tailings Sites
ODI	Open Dump Inventory
DOD	Department of Defense Sites
RAATS	RCRA Administrative Action Tracking System
TRIS	Toxic Chemical Release Inventory System
TSCA	Toxic Substances Control Act
SSTS	Section 7 Tracking Systems
FTTS INSP	FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)

STATE OR LOCAL ASTM SUPPLEMENTAL

CDL	Clandestine Drug Lab Contaminated Site List
DRYCLEANERS	Drycleaner List
AST	Aboveground Storage Tank Locations
EMI	Washington Emissions Data System

EDR PROPRIETARY HISTORICAL DATABASES

Coal Gas	Former Manufactured Gas (Coal Gas) Sites

BROWNFIELDS DATABASES

US BROWNFIELDS	A Listing of Brownfields Sites
US INST CONTROL	Sites with Institutional Controls
INST CONTROL	Institutional Control Site List

EXECUTIVE SUMMARY

SURROUNDING SITES: SEARCH RESULTS

Surrounding sites were identified.

Elevations have been determined from the USGS Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified. Sites with an elevation equal to or higher than the target property have been differentiated below from sites with an elevation lower than the target property.
Page numbers and map identification numbers refer to the EDR Radius Map report where detailed data on individual sites can be reviewed.

Sites listed in ***bold italics*** are in multiple databases.

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

FEDERAL ASTM STANDARD

RCRAInfo: 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. RCRAInfo replaces the data recording and reporting abilities of the Resource Conservation and Recovery Information System(RCRIS). 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. Small quantity generators (SQGs) generate between 100 kg and 1,000 kg of hazardous waste per month Large quantity generators generate over 1,000 kilograms (kg) of hazardous waste, or over 1 kg of acutely hazardous waste per month. 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.

A review of the RCRA-SQG list, as provided by EDR, and dated 01/10/2005 has revealed that there are 7 RCRA-SQG sites within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Dist / Dir	Map ID	Page
QUAKER STATE MINIT LUBE INC 11	***2218 MILDRED ST W***	***0 - 1/8 W***	***B5***	***9***
Y PAY MOR CLEANERS TACOMA	***2310 MILDRED ST W***	***0 - 1/8 SW***	***C8***	***10***
PUGET CORP OF WASHINGTON	***2101 MILDRED ST W***	***0 - 1/8 NW***	***9***	***10***
TACOMA DRAPERY TOWNE CLEANER	***1921 W MILDRED***	***1/8 - 1/4 NNW***	***D12***	***13***
PRO TECH	***2205 70TH AVE W***	***1/8 - 1/4 W***	***F15***	***17***
AUTO TECH 2213 70TH	***2213 70TH AVE W 21***	***1/8 - 1/4 W***	***F16***	***17***

Lower Elevation	Address	Dist / Dir	Map ID	Page
TOSCO 1107730143	***6622 19TH ST W***	***1/8 - 1/4 N***	***E13***	***14***

STATE ASTM STANDARD

CSCSL: The State Hazardous Waste Sites 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. The data come from the Department of Ecology's Confirmed & Suspected Contaminated Sites List.

A review of the CSCSL list, as provided by EDR, has revealed that there are 3 CSCSL sites within approximately 1 mile of the target property.

Equal/Higher Elevation	Address	Dist / Dir	Map ID	Page
PUGET CORP OF WASHINGTON	***2101 MILDRED ST W***	***0 - 1/8 NW***	***9***	***10***
ARCO 4335	***2623 BRIDGEPORT WAY W***	***1/2 - 1 WSW***	***21***	***22***
HIDDEN HILLS APARTMENTS	3313 72ND AVE CT W	1/2 - 1 SSW	22	23

SWF/LF: The Solid Waste Facilities/Landfill Sites records typically contain an inventory of solid waste disposal facilities or landfills in a particular state. The data come from the Department of Ecology's Solid Waste Facilities Handbook.

A review of the SWF/LF list, as provided by EDR, has revealed that there is 1 SWF/LF site within approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Dist / Dir	Map ID	Page
UNIVERSITY PLACE REFUSE SERVIC	***2809 ROCHESTER W***	***1/4 - 1/2 SW***	***20***	***20***

LUST: The Leaking Underground Storage Tank Incident Reports contain an inventory of reported leaking underground storage tank incidents. The data come from the Department of Ecology's Leaking Underground Storage Tanks Site List.

A review of the LUST list, as provided by EDR, and dated 01/03/2005 has revealed that there are 5 LUST sites within approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Dist / Dir	Map ID	Page
MINIT-LUBE #1112	***2218 MILDRED W***	***0 - 1/8 W***	***B3***	***7***
TOWNE CLEANERS	***1923 MILDRED WEST***	***1/8 - 1/4 NNW***	***D10***	***12***
WESTMARK CONSTRUCTION	***7010 WEST 27TH STREET***	***1/4 - 1/2 SW***	***19***	***18***
UNIVERSITY PLACE REFUSE SERVIC	***2809 ROCHESTER W***	***1/4 - 1/2 SW***	***20***	***20***

Lower Elevation	Address	Dist / Dir	Map ID	Page
TOSCO 1107730143	***6622 19TH ST W***	***1/8 - 1/4 N***	***E13***	***14***

UST: The Underground Storage Tank database contains registered USTs. USTs are regulated under Subtitle I of the Resource Conservation and Recovery Act (RCRA). The data come from the Department of Ecology's Statewide UST Site/Tank Report.

A review of the UST list, as provided by EDR, and dated 01/03/2005 has revealed that there are 6 UST sites within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Dist / Dir	Map ID	Page
MINIT-LUBE #1112	***2218 MILDRED W***	***0 - 1/8 W***	***B3***	***7***
LELAND M MCARTHUR	2305 MILDRED STREET W	0 - 1/8 SW	C7	9
TOWNE CLEANERS	***1923 MILDRED WEST***	***1/8 - 1/4 NNW***	***D10***	***12***
FIRCREST GOLF CLUB	6520 REGENTS BLVD	1/8 - 1/4 SSW	11	13

Lower Elevation	Address	Dist / Dir	Map ID	Page
PUGET CORP. OF WASHINGTON	2101 SO. MILDRED	0 - 1/8 NNE	6	9

EXECUTIVE SUMMARY

Lower Elevation	Address	Dist / Dir	Map ID	Page
TOSCO 1107730143	*6622 19TH ST W*	*1/8 - 1/4 N*	*E13*	*14*

VCP: Sites that have entered either the Voluntary Cleanup Program or its predecessor Independent Remedial Action Program.

A review of the VCP list, as provided by EDR, and dated 01/03/2005 has revealed that there is 1 VCP site within approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Dist / Dir	Map ID	Page
PUGET CORP OF WASHINGTON	*2101 MILDRED ST W*	*0 - 1/8 NW*	*9*	*10*

STATE OR LOCAL ASTM SUPPLEMENTAL

CSCSL NFA: The data set contains information about sites previously on the Confirmed and Suspected Contaminated Sites list that have received a No Further Action (NFA) determination. Because it is necessary to maintain historical records of sites that have been investigated and cleaned up, sites are not deleted from the database when cleanup activities are completed. Instead a No Further Action code is entered based upon the type of NFA determination the site received.

A review of the CSCSL NFA list, as provided by EDR, and dated 01/03/2005 has revealed that there is 1 CSCSL NFA site within approximately 0.5 miles of the target property.

Lower Elevation	Address	Dist / Dir	Map ID	Page
BP EXPLORATION OIL INC 03116	1033 REGENTS BLVD	1/4 - 1/2 ESE	G18	18

ICR: These are remedial action reports Ecology has received from either the owner or operator of the site. These actions have been conducted without department oversight or approval and are not under an order or decree.

A review of the WA ICR list, as provided by EDR, has revealed that there are 5 WA ICR sites within approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Dist / Dir	Map ID	Page
Q LUBE	2218 MILDRED	0 - 1/8 W	B4	8
WESTMARK CONSTRUCTION	*7010 WEST 27TH STREET*	*1/4 - 1/2 SW*	*19*	*18*
UNIVERSITY PLACE REFUSE SERVIC	*2809 ROCHESTER W*	*1/4 - 1/2 SW*	*20*	*20*

Lower Elevation	Address	Dist / Dir	Map ID	Page
BP #11077	6622 S. 19TH ST.	1/8 - 1/4 N	E14	16
EXXON #7 7017	1033 REGENTS BLVD.	1/4 - 1/2 ESE	G17	17

BROWNFIELDS DATABASES

EXECUTIVE SUMMARY

VCP: Sites that have entered either the Voluntary Cleanup Program or its predecessor Independent Remedial Action Program.

A review of the VCP list, as provided by EDR, and dated 01/03/2005 has revealed that there is 1 VCP site within approximately 0.5 miles of the target property.

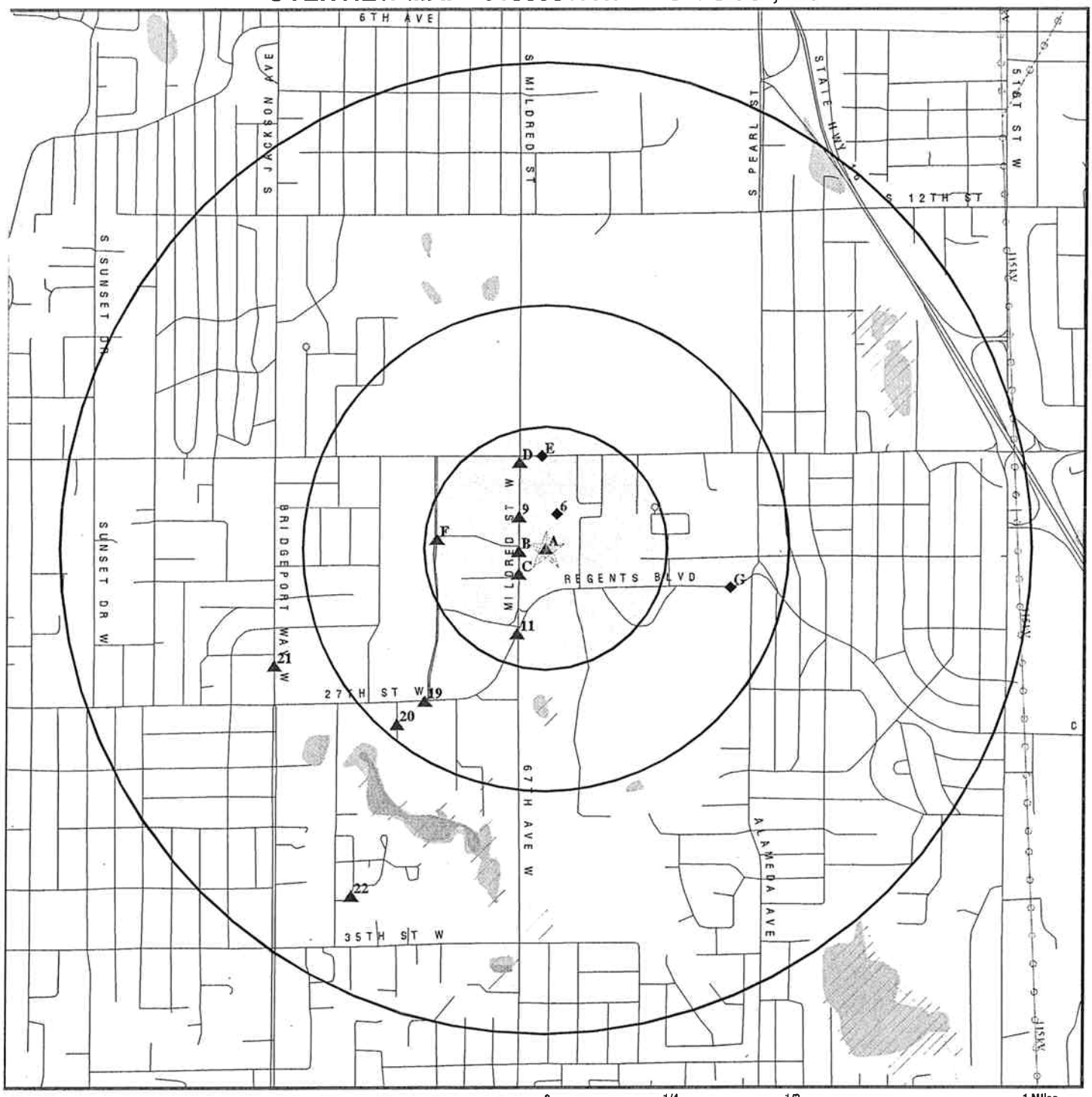
Equal/Higher Elevation	Address	Dist / Dir	Map ID	Page
PUGET CORP OF WASHINGTON	*2101 MILDRED ST W*	*0 - 1/8 NW*	*9*	*10*

EXECUTIVE SUMMARY

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

Site Name	Database(s)
PACE INDUSTRIES PUGET DIVISION	CSCSL NFA, VCP, INST CONTROL

OVERVIEW MAP - 01395917.1r - Kleinfelder, Inc.

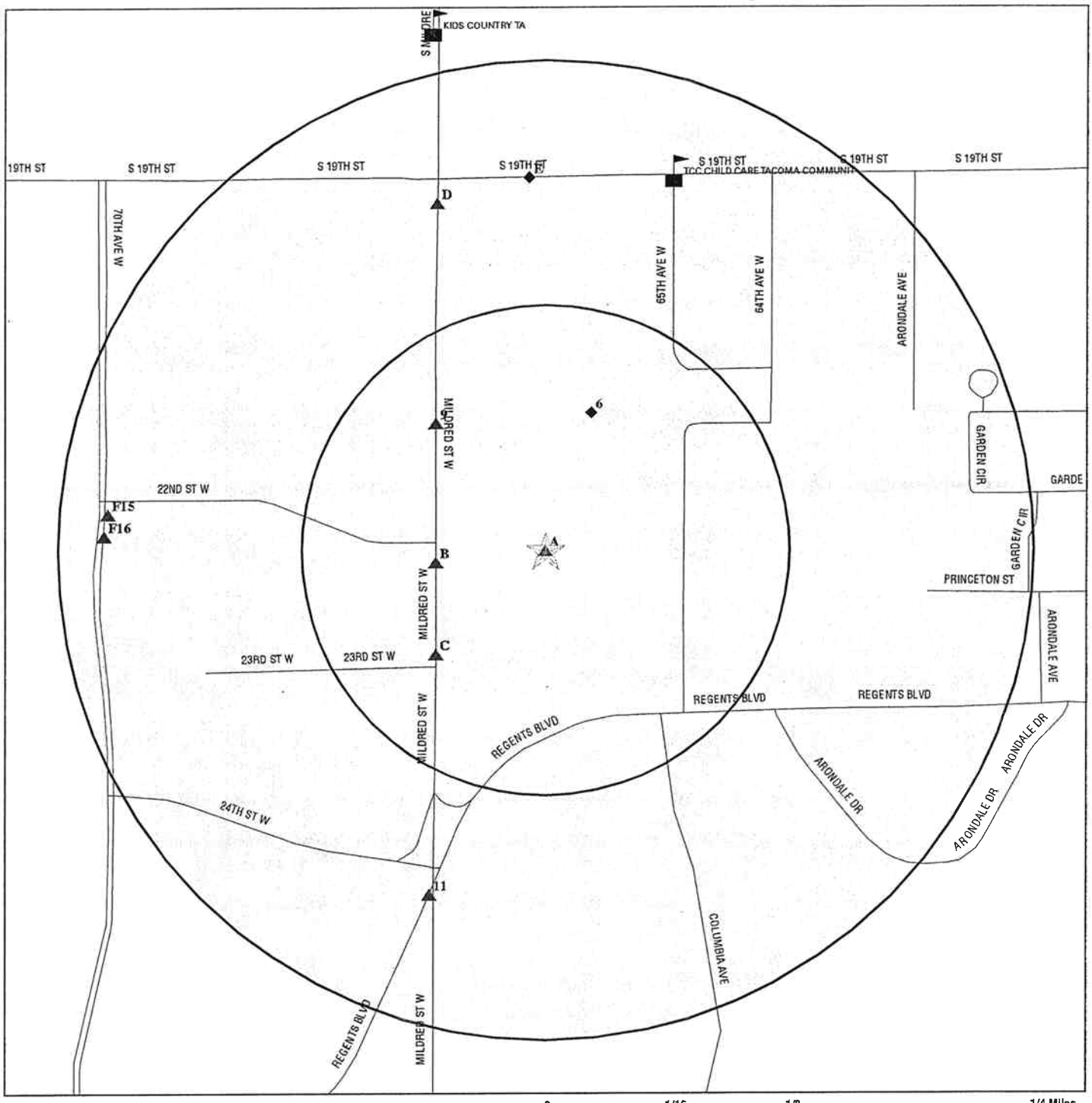


0 1/4 1/2 1 Miles

- Target Property
- Sites at elevations higher than or equal to the target property
- Sites at elevations lower than the target property
- Coal Gasification Sites
- National Priority List Sites
- Landfill Sites
- Dept. Defense Sites
- Indian Reservations BIA
- Power transmission lines
- Oil & Gas pipelines
- 100-year flood zone
- 500-year flood zone
- Federal Wetlands

TARGET PROPERTY:	Proposed Retail Site (No. 95984)	CUSTOMER:	Kleinfelder, Inc.
ADDRESS:	2119 Mildred Street West	CONTACT:	Ted W. Sykes
CITY/STATE/ZIP:	Fircrest WA 98466	INQUIRY #:	01395917.1r
LAT/LONG:	47.2400 / 122.5252	DATE:	April 07, 2005 8:01 pm

DETAIL MAP - 01395917.1r - Kleinfelder, Inc.



- Target Property
- Sites at elevations higher than or equal to the target property
- Sites at elevations lower than the target property
- Coal Gasification Sites
- Sensitive Receptors
- National Priority List Sites
- Landfill Sites
- Dept. Defense Sites
- Indian Reservations BIA
- Oil & Gas pipelines
- 100-year flood zone
- 500-year flood zone

TARGET PROPERTY:	Proposed Retail Site (No. 95984)	CUSTOMER:	Kleinfelder, Inc.
ADDRESS:	2119 Mildred Street West	CONTACT:	Ted W. Sykes
CITY/STATE/ZIP:	Fircrest WA 98466	INQUIRY #:	01395917.1r
LAT/LONG:	47.2400 / 122.5252	DATE:	April 07, 2005 8:01 pm

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
FEDERAL ASTM STANDARD								
NPL		1.000	0	0	0	0	NR	0
Proposed NPL		1.000	0	0	0	0	NR	0
CERCLIS		0.500	0	0	0	NR	NR	0
CERC-NFRAP		0.250	0	0	NR	NR	NR	0
CORRACTS		1.000	0	0	0	0	NR	0
RCRA TSD		0.500	0	0	0	NR	NR	0
RCRA Lg. Quan. Gen.		0.250	0	0	NR	NR	NR	0
RCRA Sm. Quan. Gen.	X	0.250	3	4	NR	NR	NR	7
ERNS		TP	NR	NR	NR	NR	NR	0
STATE ASTM STANDARD								
CSCSL		1.000	1	0	0	2	NR	3
HSL		1.000	0	0	0	0	NR	0
State Landfill		0.500	0	0	1	NR	NR	1
LUST		0.500	1	2	2	NR	NR	5
UST	X	0.250	3	3	NR	NR	NR	6
VCP	X	0.500	1	0	0	NR	NR	1
INDIAN LUST		0.500	0	0	0	NR	NR	0
INDIAN UST		0.250	0	0	NR	NR	NR	0
FEDERAL ASTM SUPPLEMENTAL								
CONSENT		1.000	0	0	0	0	NR	0
ROD		1.000	0	0	0	0	NR	0
Delisted NPL		1.000	0	0	0	0	NR	0
FINDS	X	TP	NR	NR	NR	NR	NR	0
HMIRS		TP	NR	NR	NR	NR	NR	0
MLTS		TP	NR	NR	NR	NR	NR	0
MINES		0.250	0	0	NR	NR	NR	0
NPL Liens		TP	NR	NR	NR	NR	NR	0
PADS		TP	NR	NR	NR	NR	NR	0
INDIAN RESERV		1.000	0	0	0	0	NR	0
FUDS		1.000	0	0	0	0	NR	0
UMTRA		0.500	0	0	0	NR	NR	0
ODI		0.500	0	0	0	NR	NR	0
DOD		1.000	0	0	0	0	NR	0
RAATS		TP	NR	NR	NR	NR	NR	0
TRIS		TP	NR	NR	NR	NR	NR	0
TSCA		TP	NR	NR	NR	NR	NR	0
SSTS		TP	NR	NR	NR	NR	NR	0
FTTS		TP	NR	NR	NR	NR	NR	0
STATE OR LOCAL ASTM SUPPLEMENTAL								
CSCSL NFA	X	0.500	0	0	1	NR	NR	1

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
WA ICR		0.500	1	1	3	NR	NR	5
SPILLS	X	TP	NR	NR	NR	NR	NR	0
CDL		TP	NR	NR	NR	NR	NR	0
DRYCLEANERS		0.250	0	0	NR	NR	NR	0
AST		TP	NR	NR	NR	NR	NR	0
WA Emissions		TP	NR	NR	NR	NR	NR	0
EDR PROPRIETARY HISTORICAL DATABASES								
Coal Gas		1.000	0	0	0	0	NR	0
BROWNFIELDS DATABASES								
US BROWNFIELDS		0.500	0	0	0	NR	NR	0
US INST CONTROL		0.500	0	0	0	NR	NR	0
VCP	X	0.500	1	0	0	NR	NR	1
INST CONTROL		0.500	0	0	0	NR	NR	0

NOTES:

AQUIFLOW - see EDR Physical Setting Source Addendum

TP = Target Property

NR = Not Requested at this Search Distance

Sites may be listed in more than one database

Coal Gas Site Search: No site was found in a search of Real Property Scan's ENVIROHAZ database.

A1
Target Property
2119 MILDRED STREET WEST
FIRCREST, WA

SPILLS **S105399154**
N/A

Site 1 of 2 in cluster A

Actual: 323 ft.

WA SPILL:

Facility ID:	521646
Material Desc :	CHEMICAL
Medium:	OTHER
Material Qty:	50
Material Units:	GALLON
IPRP Business Name:	METAL MARINE PILOT
IPRP Last Name:	Not reported
Date Received:	Not reported

A2
Target Property
METAL MARINE PILOT INC
2119 MILDRED ST W
FIRCREST, WA 98466

RCRA-SQG **1004793347**
FINDS **WAD009242173**
UST
CSCSL NFA
VCP

Site 2 of 2 in cluster A

Actual: 323 ft.

RCRAInfo:

Owner:	METAL MARINE PILOT INC (253)606-2173
EPA ID:	WAD009242173
Contact:	Not reported
Classification:	Small Quantity Generator
TSDF Activities:	Not reported

Violation Status: No violations found

FINDS:
Other Pertinent Environmental Activity Identified at Site:
Resource Conservation and Recovery Act Information system
Wasington Department of Ecology Facility/Site Identification System

WA NFA:

Facility/Site Id :	84252573
Ecology Status :	Independent Remedial Action
Independent Status Code :	Independant Site Assesment or Interim RA recvd
WARM Bin Number :	Not reported
NFA Code :	NFA after Assesment IRAP or VCP
NFA Date :	36956
Program Plan Code :	4
NFA Desc :	NFA after assessment, IRAP, or VCP

VCP:

Facility ID :	84252573
WARM BIN # :	Not reported
Ecology Status :	Independent Remedial Action
NFA Code :	NFA after assessment, IRAP, or VCP

METAL MARINE PILOT INC (Continued) **1004793347**

UST:

Facility ID:	84252573
Site ID:	5902
Install Date:	12/31/64
Capacity:	111 to 1,100 Gallons
Status:	Exempt
Tank Name:	3
Substance:	Not reported
Compartment #:	1
Ecology Region:	South Western

Facility ID:	84252573
Site ID:	5902
Install Date:	06/01/74
Capacity:	111 to 1,100 Gallons
Status:	Removed
Tank Name:	2
Substance:	Not reported
Compartment #:	1
Ecology Region:	South Western

Facility ID:	84252573
Site ID:	5902
Install Date:	06/01/74
Capacity:	111 to 1,100 Gallons
Status:	Removed
Tank Name:	1
Substance:	KEROSENE
Compartment #:	1
Ecology Region:	South Western

Facility ID:	84252573
Site ID:	5902
Install Date:	12/31/64
Capacity:	111 to 1,100 Gallons
Status:	Closed in Place
Tank Name:	4
Substance:	Not reported
Compartment #:	1
Ecology Region:	South Western

B3 **MINIT-LUBE #1112** **LUST U003355163**
West **2218 MILDRED W** **UST N/A**
< 1/8 **TACOMA, WA 98466**
298 ft.

Site 1 of 3 in cluster B

Relative:
Higher

Actual:
336 ft.

LUST:

Facility ID:	6792
Ecology Region:	SWRO
Facility Status:	Cleanup Started
Release ID:	5692
Release Notification Date:	04/04/95
Release Status Date:	04/04/95
Alternate Name:	MINIT-LUBE #1112
Lat/Lon:	47.239440000 / 122.52688000
Affected Media:	Soil
FS ID:	75845594

MINIT-LUBE #1112 (Continued) **U003355163**

Facility ID: 6792
Ecology Region: SWRO
Facility Status: Reported Cleaned Up
Release ID: 5692
Release Notification Date: 04/04/95
Release Status Date: 05/04/95
Alternate Name: MINIT-LUBE #1112
Lat/Lon: 47.239440000 / 122.52688000
Affected Media: Soil
FS ID: 75845594

UST:
Facility ID: 75845594
Site ID: 6792
Install Date: 06/01/82
Capacity: 1,101 TO 2,000 GALLONS
Status: Removed
Tank Name: 2
Substance: MOTOR OIL
Compartment #: 1
Ecology Region: South Western

Facility ID: 75845594
Site ID: 6792
Install Date: 06/01/82
Capacity: 1,101 TO 2,000 GALLONS
Status: Removed
Tank Name: 1
Substance: MOTOR OIL
Compartment #: 1
Ecology Region: South Western

Facility ID: 75845594
Site ID: 6792
Install Date: 06/01/82
Capacity: 111 to 1,100 Gallons
Status: Removed
Tank Name: 3
Substance: USED OIL/WASTE OIL
Compartment #: 1
Ecology Region: South Western

B4 **Q LUBE** **WA ICR** **S103508769**
West **2218 MILDRED** **N/A**
< 1/8 **TACOMA, WA 98466**
298 ft.

Site 2 of 3 in cluster B

Relative:
Higher

Actual:
336 ft.

WA ICR:
Date Ecology Received Report: 05/04/1995
Contaminants Found at Site: Petroleum products
Media Contaminated: Soil
Cause of Contamination: Tank
Region: South Western
Type of Report Ecology Received: Final cleanup report
Site Register Issue: 93-50
County Code: 27.00000
Contact: Not reported

Q LUBE (Continued) S103508769

Report Title: Not reported

B5
West
< 1/8
298 ft.

Relative:
Higher

Actual:
336 ft.

QUAKER STATE MINIT LUBE INC 11 TACOMA RCRA-SQG 1000838645
2218 MILDRED ST W FINDS WAD988514360
TACOMA, WA 98466

Site 3 of 3 in cluster B

RCRAInfo:
Owner: QUAKER STATE MINIT LUBE INC
EPA ID: WAD988514360
Contact: LEE LAWRENCE
(206) 527-5200
Classification: Small Quantity Generator
TSDF Activities: Not reported

Violation Status: No violations found

FINDS:
Other Pertinent Environmental Activity Identified at Site:
Resource Conservation and Recovery Act Information system
Wasington Department of Ecology Facility/Site Identification System

---

6
NNE
< 1/8
391 ft.

Relative:
Lower

Actual:
316 ft.

PUGET CORP. OF WASHINGTON UST U003354313
2101 SO. MILDRED N/A
TACOMA, WA 98406

UST:
Facility ID: 86715242
Site ID: 3944
Install Date: 12/31/64
Capacity: 111 to 1,100 Gallons
Status: Closed in Place
Tank Name: 1
Substance: KEROSENE
Compartment #: 1
Ecology Region: South Western

C7
SW
< 1/8
407 ft.

Relative:
Higher

Actual:
337 ft.

LELAND M MCARTHUR UST U003352666
2305 MILDRED STREET W N/A
TACOMA, WA 98466

Site 1 of 2 in cluster C

UST:
Facility ID: 61187916
Site ID: 101518
Install Date: 12/31/64
Capacity: Not reported
Status: Removed
Tank Name: 3-8000
Substance: LEADED GASOLINE
Compartment #: 1
Ecology Region: South Western

LELAND M MCARTHUR (Continued) **U003352666**

Facility ID: 61187916
Site ID: 101518
Install Date: 12/31/64
Capacity: Not reported
Status: Removed
Tank Name: 2-4000
Substance: LEADED GASOLINE
Compartment #: 1
Ecology Region: South Western

Facility ID: 61187916
Site ID: 101518
Install Date: 12/31/64
Capacity: Not reported
Status: Removed
Tank Name: 1-8000
Substance: LEADED GASOLINE
Compartment #: 1
Ecology Region: South Western

C8 **Y PAY MOR CLEANERS TACOMA** **RCRA-SQG 1000160956**
SW **2310 MILDRED ST W** **FINDS WAD981764004**
< 1/8 **TACOMA, WA 98466**
418 ft.

Site 2 of 2 in cluster C

Relative: Higher

Actual: 337 ft.

RCRAInfo:
Owner: Y PAY MOR CLEANERS
EPA ID: WAD981764004
Contact: LOU PARENT
(253) 564-6000
Classification: Small Quantity Generator
TSDF Activities: Not reported

Violation Status: No violations found

FINDS:
Other Pertinent Environmental Activity Identified at Site:
Resource Conservation and Recovery Act Information system
Wasington Department of Ecology Facility/Site Identification System

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9 **PUGET CORP OF WASHINGTON** **RCRA-SQG 1000223435**
NW **2101 MILDRED ST W** **CSCSL WAD009242090**
< 1/8 **TACOMA, WA 98466** **FINDS**
453 ft. **VCP**

Relative: Higher

Actual: 335 ft.

PUGET CORP OF WASHINGTON (Continued) **1000223435**

RCRAInfo:
Owner: LEGGETT & PLATT INC
(417)358-8131
EPA ID: WAD009242090

Contact: Not reported

Classification: Small Quantity Generator
TSDF Activities: Not reported

BIENNIAL REPORTS:
Last Biennial Reporting Year: 2001

Waste	Quantity (Lbs)	Waste	Quantity (Lbs)
D001	1014.00	D002	1251.00
D004	4400.00	D007	4562.00
D008	989.00	D035	989.00
F003	989.00	F005	989.00

Violation Status: No violations found

FINDS:
Other Pertinent Environmental Activity Identified at Site:
National Emissions Inventory
Resource Conservation and Recovery Act Information system
Toxics Release Inventory
Wasington Department of Ecology Facility/Site Identification System

SHWS:
Facility ID: 86715242
MTBE Code: Not reported
Responsible Unit: Southwest Region
Latitude: 47 14 27.1999999999999
Longitude: 122 31 33.8100000000000
Ecology Site Status relative to the MTCA cleanup process:
Independent Remedial Action
Independent Site Status - those sites undergoing an independent cleanup:
Independent Site Assessment of Interim Remedial Action Report received
WARM Bin Number indicates the outcome of the Washington Ranking Model (WARM):
Affected Media Status: C (Confirmed) - The presence of hazardous substances above MTCA cleanup levels has been confirmed by laboratory analysis (or field determination in the case of petroleum contamination)
Affected Media : Soil
Arsenic Code: Not reported

Base/Neutral/Acid Organics:	Not reported
Halogenated Organic Compounds:	Not reported
Horizontal Collection Method:	Unknown
EPA Priority Pollutants - Metals and Cyanide:	Not reported
Metals - Other non-priority pollutant medals:	Not reported
Polychlorinated biPhenyls (PCBs):	Confirmed above MTCA cleanup levels
Pesticides:	Not reported
Petroleum Products:	Confirmed above MTCA cleanup levels
Phenolic Compounds:	Not reported
Non-Halogenated Solvents:	Not reported
Dioxin:	Not reported
Polynuclear Aromatic Hydrocarbons (PAH):	Not reported
Reactive Wastes:	Not reported
Corrosive Wastes:	Not reported
Radioactive Wastes:	Not reported

PUGET CORP OF WASHINGTON (Continued) **1000223435**

Asbestos: Not reported
Conventional Contaminants, Organic: Not reported
Conventional Contaminants, Inorganic: Not reported

VCP:
Facility ID : 86715242
WARM BIN # : Not reported
Ecology Status : Independent Remedial Action
NFA Code : Not reported

D10 TOWNE CLEANERS **LUST U003353560**
NNW 1923 MILDRED WEST **UST N/A**
1/8-1/4 TACOMA, WA 98466
974 ft.

Site 1 of 2 in cluster D

Relative: Higher

Actual: 328 ft.

LUST:
Facility ID: 1292
Ecology Region: SWRO
Facility Status: Awaiting Cleanup
Release ID: 393018
Release Notification Date: 04/05/93
Release Status Date: 04/05/93
Alternate Name: TOWNE CLEANERS/SEE ALSO: PACE INDUSTRIES
Lat/Lon: 47.241980000 / 122.52612000
Affected Media: Soil
FS ID: 93333137

UST:
Facility ID: 93333137
Site ID: 1292
Install Date: 12/31/64
Capacity: Not reported
Status: Closed in Place
Tank Name: 3
Substance: Not reported
Compartment #: 1
Ecology Region: South Western

Facility ID: 93333137
Site ID: 1292
Install Date: 12/31/64
Capacity: Not reported
Status: Closed in Place
Tank Name: 1
Substance: Not reported
Compartment #: 1
Ecology Region: South Western

Facility ID: 93333137
Site ID: 1292
Install Date: 12/31/64
Capacity: Not reported
Status: Closed in Place
Tank Name: 2
Substance: Not reported
Compartment #: 1
Ecology Region: South Western

11
SSW
1/8-1/4
977 ft.

Relative:
Higher

Actual:
331 ft.

FIRCREST GOLF CLUB
6520 REGENTS BLVD
TACOMA, WA 98466

UST **U003353880**
N/A

UST:

Facility ID:	16989283
Site ID:	2475
Install Date:	12/31/64
Capacity:	111 to 1,100 Gallons
Status:	Removed
Tank Name:	1
Substance:	UNLEADED GASOLINE
Compartment #:	1
Ecology Region:	South Western

Facility ID:	16989283
Site ID:	2475
Install Date:	06/15/89
Capacity:	111 to 1,100 Gallons
Status:	Removed
Tank Name:	1R
Substance:	UNLEADED GASOLINE
Compartment #:	1
Ecology Region:	South Western

Facility ID:	16989283
Site ID:	2475
Install Date:	06/15/89
Capacity:	111 to 1,100 Gallons
Status:	Removed
Tank Name:	2
Substance:	Not reported
Compartment #:	1
Ecology Region:	South Western

Facility ID:	16989283
Site ID:	2475
Install Date:	01/02/00
Capacity:	Not reported
Status:	Removed
Tank Name:	3
Substance:	ALCOHOL BLEND GASOLINE
Compartment #:	1
Ecology Region:	South Western

D12
NNW
1/8-1/4
981 ft.

Site 2 of 2 in cluster D

Relative:
Higher

Actual:
328 ft.

TACOMA DRAPERY TOWNE CLEANER
1921 W MILDRED
TACOMA, WA 98466

RCRA-SQG **1000334209**
FINDS **WAD027537984**

TACOMA DRAPERY TOWNE CLEANER (Continued) **1000334209**

RCRAInfo:
Owner: DRAPERY & TOWNE CLEANERS INC
EPA ID: WAD027537984

Contact: Not reported

Classification: Conditionally Exempt Small Quantity Generator
TSDF Activities: Not reported

Violation Status: No violations found

FINDS:
Other Pertinent Environmental Activity Identified at Site:
Resource Conservation and Recovery Act Information system
Wasington Department of Ecology Facility/Site Identification System

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E13 **TOSCO 1107730143** **RCRA-SQG 1000659068**
North **6622 19TH ST W** **FINDS WAD988487336**
1/8-1/4 **TACOMA, WA 98466** **LUST**
1006 ft. **UST**

Site 1 of 2 in cluster E

Relative:
Lower

Actual:
303 ft.

RCRAInfo:
Owner: GUY STANDARD
(206) 442-7378
EPA ID: WAD988487336

Contact: Not reported

Classification: Conditionally Exempt Small Quantity Generator
TSDF Activities: Not reported

Violation Status: No violations found

FINDS:
Other Pertinent Environmental Activity Identified at Site:
Resource Conservation and Recovery Act Information system
Wasington Department of Ecology Facility/Site Identification System

LUST:
Facility ID: 8683
Ecology Region: SWRO
Facility Status: Cleanup Started
Release ID: 1369
Release Notification Date: 02/12/90
Release Status Date: 10/24/95
Alternate Name: BP 11077
Lat/Lon: 47.242100000 / 122.52611000
Affected Media: Soil
FS ID: 22346877

UST:
Facility ID: 22346877
Site ID: 8683
Install Date: 01/01/77
Capacity: 10,000 TO 19,999 GALLONS
Status: Operational
Tank Name: 1
Substance: UNLEADED GASOLINE
Compartment #: 1
Ecology Region: South Western

TOSCO 1107730143 (Continued) **1000659068**

Facility ID: 22346877
Site ID: 8683
Install Date: 01/01/77
Capacity: 10,000 TO 19,999 GALLONS
Status: Operational
Tank Name: 2
Substance: LEADED GASOLINE
Compartment #: 1
Ecology Region: South Western

Facility ID: 22346877
Site ID: 8683
Install Date: 01/01/77
Capacity: 10,000 TO 19,999 GALLONS
Status: Operational
Tank Name: 3
Substance: UNLEADED GASOLINE
Compartment #: 1
Ecology Region: South Western

Facility ID: 22346877
Site ID: 8683
Install Date: 12/31/64
Capacity: Not reported
Status: Removed
Tank Name: REG-1
Substance: LEADED GASOLINE
Compartment #: 1
Ecology Region: South Western

Facility ID: 22346877
Site ID: 8683
Install Date: 12/31/64
Capacity: Not reported
Status: Removed
Tank Name: REG-2
Substance: LEADED GASOLINE
Compartment #: 1
Ecology Region: South Western

Facility ID: 22346877
Site ID: 8683
Install Date: 12/31/64
Capacity: Not reported
Status: Removed
Tank Name: DSL
Substance: Not reported
Compartment #: 1
Ecology Region: South Western

TOSCO 1107730143 (Continued) **1000659068**

Facility ID: 22346877
Site ID: 8683
Install Date: 12/31/64
Capacity: Not reported
Status: Removed
Tank Name: SNL
Substance: UNLEADED GASOLINE
Compartment #: 1
Ecology Region: South Western

Facility ID: 22346877
Site ID: 8683
Install Date: 12/31/64
Capacity: Not reported
Status: Removed
Tank Name: NOL
Substance: UNLEADED GASOLINE
Compartment #: 1
Ecology Region: South Western

E14 **BP #11077** **WA ICR** **S102512914**
North **6622 S. 19TH ST.** **N/A**
1/8-1/4 **TACOMA, WA 98466**
1006 ft.

Site 2 of 2 in cluster E

Relative:
Lower

Actual:
303 ft.

WA ICR:

Date Ecology Received Report: 05/13/1993
Contaminants Found at Site: Petroleum products
Media Contaminated: Soil
Cause of Contamination: Tank
Region: South Western
Type of Report Ecology Received: Interim cleanup report
Site Register Issue: 92-52
County Code: 27.00000
Contact: Not reported
Report Title: Not reported

Date Ecology Received Report: 08/09/1993
Contaminants Found at Site: Petroleum products
Media Contaminated: Soil
Cause of Contamination: Tank
Region: South Western
Type of Report Ecology Received: Interim cleanup report
Site Register Issue: 93-04
County Code: 27.00000
Contact: Not reported
Report Title: Not reported

Date Ecology Received Report: 04/02/1997
Contaminants Found at Site: Petroleum products
Media Contaminated: Soil
Cause of Contamination: Tank
Region: South Western
Type of Report Ecology Received: Interim cleanup report
Site Register Issue: 94-50
County Code: 27.00000
Contact: Not reported

BP #11077 (Continued) S102512914

Report Title: Not reported

F15 **PRO TECH** RCRA-SQG 1000659775
West **2205 70TH AVE W** FINDS WAD988494514
1/8-1/4 **TACOMA, WA 98466**
1188 ft.

Site 1 of 2 in cluster F

Relative:
Higher

Actual:
362 ft.

RCRAInfo:
Owner: PRO TECH
EPA ID: WAD988494514

Contact: Not reported

Classification: Small Quantity Generator
TSDF Activities: Not reported

Violation Status: No violations found

FINDS:
Other Pertinent Environmental Activity Identified at Site:
Resource Conservation and Recovery Act Information system
Wasington Department of Ecology Facility/Site Identification System

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F16 **AUTO TECH 2213 70TH** RCRA-SQG 1001491351
West **2213 70TH AVE W 21** FINDS WA0000001255
1/8-1/4 **TACOMA, WA 98466**
1194 ft.

Site 2 of 2 in cluster F

Relative:
Higher

Actual:
362 ft.

RCRAInfo:
Owner: AUTO TECH
EPA ID: WA0000001255

Contact: MARC LAFOND
(253) 565-3268

Classification: Conditionally Exempt Small Quantity Generator
TSDF Activities: Not reported

Violation Status: No violations found

FINDS:
Other Pertinent Environmental Activity Identified at Site:
Resource Conservation and Recovery Act Information system
Wasington Department of Ecology Facility/Site Identification System

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G17 **EXXON #7 7017** WA ICR S103505477
ESE **1033 REGENTS BLVD.** N/A
1/4-1/2 **TACOMA, WA 98466**
2055 ft.

Site 1 of 2 in cluster G

Relative:
Lower

Actual:
275 ft.

WA ICR:
Date Ecology Received Report: 03/14/1994
Contaminants Found at Site: Petroleum products
Media Contaminated: Soil
Cause of Contamination: Tank
Region: South Western
Type of Report Ecology Received: Final cleanup report

EXXON #7 7017 (Continued) **S103505477**

Site Register Issue:	93-21
County Code:	27.00000
Contact:	Not reported
Report Title:	Not reported
Date Ecology Received Report:	01/10/1994
Contaminants Found at Site:	Petroleum products
Media Contaminated:	Soil
Cause of Contamination:	Tank
Region:	South Western
Type of Report Ecology Received:	Final cleanup report
Site Register Issue:	93-17
County Code:	27.00000
Contact:	Not reported
Report Title:	Not reported
Date Ecology Received Report:	09/08/1994
Contaminants Found at Site:	Petroleum products
Media Contaminated:	Soil
Cause of Contamination:	Tank
Region:	South Western
Type of Report Ecology Received:	Final cleanup report
Site Register Issue:	93-33
County Code:	27.00000
Contact:	Not reported
Report Title:	Not reported

G18 **BP EXPLORATION OIL INC 03116** **CSCSL NFA** **S104971948**
ESE **1033 REGENTS BLVD** **N/A**
1/4-1/2 **FIRCREST, WA 98499**
2055 ft.

Site 2 of 2 in cluster G

Relative:
Lower

Actual:
275 ft.

WA NFA:

Facility/Site Id :	1364
Ecology Status :	Independent Remedial Action
Independent Status Code :	Final Independant RA Report received
WARM Bin Number :	Not reported
NFA Code :	NFA after Assesment IRAP or VCP
NFA Date :	34879
Program Plan Code :	3
NFA Desc :	NFA after assessment, IRAP, or VCP

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19 **WESTMARK CONSTRUCTION** **LUST** **U003355804**
SW **7010 WEST 27TH STREET** **UST** **N/A**
1/4-1/2 **TACOMA, WA 98466** **WA ICR**
2110 ft.

Relative:
Higher

Actual:
358 ft.

LUST:

Facility ID:	9182
Ecology Region:	SWRO
Facility Status:	Cleanup Started
Release ID:	4234
Release Notification Date:	02/01/93
Release Status Date:	11/25/92
Alternate Name:	MERRIT NELSON COMPANY
Lat/Lon:	47.235270000 / 122.53061000
Affected Media:	Soil

WESTMARK CONSTRUCTION (Continued) **U003355804**

FS ID: 75388371

Facility ID: 9182
Ecology Region: SWRO
Facility Status: Reported Cleaned Up
Release ID: 4234
Release Notification Date: 02/01/93
Release Status Date: 02/01/93
Alternate Name: MERRIT NELSON COMPANY
Lat/Lon: 47.235270000 / 122.53061000
Affected Media: Soil
FS ID: 75388371

WA ICR:
Date Ecology Received Report: 02/01/1993
Contaminants Found at Site: Petroleum products
Media Contaminated: Soil
Cause of Contamination: Tank
Region: South Western
Type of Report Ecology Received: Final cleanup report
Site Register Issue: 92-44
County Code: 27.00000
Contact: Not reported
Report Title: Not reported

UST:
Facility ID: 75388371
Site ID: 9182
Install Date: 12/31/64
Capacity: 111 to 1,100 Gallons
Status: Removed
Tank Name: D-202
Substance: Not reported
Compartment #: 1
Ecology Region: South Western

Facility ID: 75388371
Site ID: 9182
Install Date: 12/31/64
Capacity: Not reported
Status: Removed
Tank Name: D-201
Substance: Not reported
Compartment #: 1
Ecology Region: South Western

Facility ID: 75388371
Site ID: 9182
Install Date: 12/31/64
Capacity: 111 to 1,100 Gallons
Status: Removed
Tank Name: G-101
Substance: LEADED GASOLINE
Compartment #: 1
Ecology Region: South Western

WESTMARK CONSTRUCTION (Continued) **U003355804**

Facility ID: 75388371
Site ID: 9182
Install Date: 12/31/64
Capacity: 111 to 1,100 Gallons
Status: Removed
Tank Name: G-102
Substance: LEADED GASOLINE
Compartment #: 1
Ecology Region: South Western

Facility ID: 75388371
Site ID: 9182
Install Date: 12/31/64
Capacity: Not reported
Status: Removed
Tank Name: G-103
Substance: LEADED GASOLINE
Compartment #: 1
Ecology Region: South Western

Facility ID: 75388371
Site ID: 9182
Install Date: 01/01/74
Capacity: Not reported
Status: Removed
Tank Name: 1ASPHALT
Substance: Not reported
Compartment #: 1
Ecology Region: South Western

Facility ID: 75388371
Site ID: 9182
Install Date: 12/31/64
Capacity: 111 to 1,100 Gallons
Status: Removed
Tank Name: D-203
Substance: Not reported
Compartment #: 1
Ecology Region: South Western

20
SW
1/4-1/2
2494 ft.

UNIVERSITY PLACE REFUSE SERVICE INC
2809 ROCHESTER W
TACOMA, WA 98466

LUST **U003353018**
SWF/LF **N/A**
UST
WA ICR

Relative:
Higher

Actual:
356 ft.

LUST:
Facility ID: 10531
Ecology Region: SWRO
Facility Status: Cleanup Started
Release ID: 3140
Release Notification Date: 12/24/90
Release Status Date: 12/24/90
Alternate Name: UNIVERSITY PLACE REFUSE
Lat/Lon: 47.233900000 / 122.53165000
Affected Media: Soil
FS ID: 43933488

Facility ID: 10531

UNIVERSITY PLACE REFUSE SERVICE INC (Continued) **U003353018**

Ecology Region:	SWRO
Facility Status:	Reported Cleaned Up
Release ID:	3140
Release Notification Date:	12/24/90
Release Status Date:	08/24/00
Alternate Name:	UNIVERSITY PLACE REFUSE
Lat/Lon:	47.233900000 / 122.53165000
Affected Media:	Soil
FS ID:	43933488

LF:

Facility ID:	SPU
Contact:	Rodger Gruener
Name Change:	False
Ownership:	Private
Type:	Transfer Station
Company:	University Place Refuse
Contact Title:	Not reported
Facility Phone:	(206) 564-3212
Facility Fax:	Not reported
Class Code:	T
Class:	Intermediate
Class Type:	False
Sec/Twn/Rng:	Not reported
Class Comment:	Not reported
Region:	STATE
Status:	Compost not transfer station. See Compost Database.

WA ICR:

Date Ecology Received Report:	08/24/2000
Contaminants Found at Site:	Petroleum products
Media Contaminated:	Soil
Cause of Contamination:	Tank
Region:	South Western
Type of Report Ecology Received:	Final cleanup report
Site Register Issue:	98-28
County Code:	27.00000
Contact:	Not reported
Report Title:	Underground Storage Tank Removal

UST:

Facility ID:	43933488
Site ID:	10531
Install Date:	12/31/64
Capacity:	Not reported
Status:	Removed
Tank Name:	1
Substance:	Not reported
Compartment #:	1
Ecology Region:	South Western

UNIVERSITY PLACE REFUSE SERVICE INC (Continued) **U003353018**

Facility ID: 43933488
Site ID: 10531
Install Date: 12/31/64
Capacity: Not reported
Status: Removed
Tank Name: 2
Substance: UNLEADED GASOLINE
Compartment #: 1
Ecology Region: South Western

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21 WSW 1/2-1 3211 ft. **ARCO 4335** **2623 BRIDGEPORT WAY W** **TACOMA, WA 98466** **RCRA-SQG CSCSL FINDS VCP** **1004794441 WAD988514642**

Relative: Higher

Actual: 328 ft.

RCRAInfo:
Owner: ARCO
(714)670-5423
EPA ID: WAD988514642
Contact: Not reported
Classification: Small Quantity Generator
TSDF Activities: Not reported
Violation Status: No violations found

FINDS:
Other Pertinent Environmental Activity Identified at Site:
Resource Conservation and Recovery Act Information system
Wasington Department of Ecology Facility/Site Identification System

SHWS:
Facility ID: 97283829
MTBE Code: Not reported
Responsible Unit: Southwest Region
Latitude: 47 14 8
Longitude: 122 32 10
Ecology Site Status relative to the MTCA cleanup process:
Independent Remedial Action
Independent Site Status - those sites undergoing an independent cleanup:
Final Independent Remedial Action Report received
WARM Bin Number indicates the outcome of the Washington Ranking Model (WARM):
Affected Media Status: C (Confirmed) - The presence of hazardous substances above MTCA cleanup levels has been confirmed by laboratory analysis (or field determination in the case of petroleum contamination)
Affected Media : Soil
Arsenic Code: Not reported

Base/Neutral/Acid Organics:	Not reported
Halogenated Organic Compounds:	Not reported
Horizontal Collection Method:	GPS (Code/Differential)
EPA Priority Pollutants - Metals and Cyanide:	Not reported
Metals - Other non-priority pollutant medals:	Not reported
Polychlorinated biPhenyls (PCBs):	Not reported
Pesticides:	Not reported
Petroleum Products:	Confirmed above MTCA cleanup levels
Phenolic Compounds:	Not reported
Non-Halogenated Solvents:	Not reported
Dioxin:	Not reported

ARCO 4335 (Continued) **1004794441**

Polynuclear Aromatic Hydrocarbons (PAH):	Not reported
Reactive Wastes:	Not reported
Corrosive Wastes:	Not reported
Radioactive Wastes:	Not reported
Asbestos:	Not reported
Conventional Contaminants, Organic:	Not reported
Conventional Contaminants, Inorganic:	Not reported

VCP:

Facility ID :	97283829
WARM BIN # :	Not reported
Ecology Status :	Independent Remedial Action
NFA Code :	Not reported

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22 SSW 1/2-1 4319 ft. **HIDDEN HILLS APARTMENTS** **CSCSL S104320438**
3313 72ND AVE CT W **N/A**
UNIVERSITY PLACE, WA 98466

Relative: Higher

Actual: 363 ft.

SHWS:

Facility ID:	6959438
MTBE Code:	Not reported
Responsible Unit:	Southwest Region
Latitude:	47 13 49
Longitude:	122 31 54

Ecology Site Status relative to the MTCA cleanup process:
Independent Remedial Action

Independent Site Status - those sites undergoing an independent cleanup:
Independent Site Assessment of Interim Remedial Action Report received

WARM Bin Number indicates the outcome of the Washington Ranking Model (WARM):

Affected Media Status: C (Confirmed) - The presence of hazardous substances above MTCA cleanup levels has been confirmed by laboratory analysis (or field determination in the case of petroleum contamination)

Affected Media :	Soil
Arsenic Code:	Not reported
Base/Neutral/Acid Organics:	Not reported
Halogenated Organic Compounds:	Not reported
Horizontal Collection Method:	GPS (Code/Differential)
EPA Priority Pollutants - Metals and Cyanide:	Confirmed above MTCA cleanup levels
Metals - Other non-priority pollutant medals:	Not reported
Polychlorinated biPhenyls (PCBs):	Not reported
Pesticides:	Not reported
Petroleum Products:	Not reported
Phenolic Compounds:	Not reported
Non-Halogenated Solvents:	Not reported
Dioxin:	Not reported
Polynuclear Aromatic Hydrocarbons (PAH):	Not reported
Reactive Wastes:	Not reported
Corrosive Wastes:	Not reported
Radioactive Wastes:	Not reported
Asbestos:	Not reported
Conventional Contaminants, Organic:	Not reported
Conventional Contaminants, Inorganic:	Not reported

ORPHAN SUMMARY

City	EDR ID	Site Name	Site Address	Zip	Database(s)
TACOMA	S104320442	PACE INDUSTRIES PUGET DIVISION	2011 MILDRED ST W / 2101 MILDRED ST W	98466	CSCSL NFA, VCP, INST CONTROL

EPA Waste Codes Addendum

Code	Description
D001	IGNITABLE HAZARDOUS WASTES ARE THOSE WASTES WHICH HAVE A FLASHPOINT OF LESS THAN 140 DEGREES FAHRENHEIT AS DETERMINED BY A PENSKY-MARTENS CLOSED CUP FLASH POINT TESTER. ANOTHER METHOD OF DETERMINING THE FLASH POINT OF A WASTE IS TO REVIEW THE MATERIAL SAFETY DATA SHEET, WHICH CAN BE OBTAINED FROM THE MANUFACTURER OR DISTRIBUTOR OF THE MATERIAL. LACQUER THINNER IS AN EXAMPLE OF A COMMONLY USED SOLVENT WHICH WOULD BE CONSIDERED AS IGNITABLE HAZARDOUS WASTE.
D002	A WASTE WHICH HAS A PH OF LESS THAN 2 OR GREATER THAN 12.5 IS CONSIDERED TO BE A CORROSIVE HAZARDOUS WASTE. SODIUM HYDROXIDE, A CAUSTIC SOLUTION WITH A HIGH PH, IS OFTEN USED BY INDUSTRIES TO CLEAN OR DEGREASE PARTS. HYDROCHLORIC ACID, A SOLUTION WITH A LOW PH, IS USED BY MANY INDUSTRIES TO CLEAN METAL PARTS PRIOR TO PAINTING. WHEN THESE CAUSTIC OR ACID SOLUTIONS BECOME CONTAMINATED AND MUST BE DISPOSED, THE WASTE WOULD BE A CORROSIVE HAZARDOUS WASTE.
D004	ARSENIC
D007	CHROMIUM
D008	LEAD
D035	METHYL ETHYL KETONE
F003	THE FOLLOWING SPENT NON-HALOGENATED SOLVENTS: XYLENE, ACETONE, ETHYL ACETATE, ETHYL BENZENE, ETHYL ETHER, METHYL ISOBUTYL KETONE, N-BUTYL ALCOHOL, CYCLOHEXANONE, AND METHANOL; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONLY THE ABOVE SPENT NON-HALOGENATED SOLVENTS; AND ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONE OR MORE OF THE ABOVE NON-HALOGENATED SOLVENTS, AND, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THOSE SOLVENTS LISTED IN F001, F002, F004, AND F005, AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.
F005	THE FOLLOWING SPENT NON-HALOGENATED SOLVENTS: TOLUENE, METHYL ETHYL KETONE, CARBON DISULFIDE, ISOBUTANOL, PYRIDINE, BENZENE, 2-ETHOXYETHANOL, AND 2-NITROPROPANE; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE NON-HALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F001, F002, OR F004; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

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.

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

FEDERAL ASTM STANDARD RECORDS

NPL: National Priority List
Source: EPA
Telephone: N/A
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: 12/14/04
Date Made Active at EDR: 02/03/05
Database Release Frequency: Quarterly

Date of Data Arrival at EDR: 02/01/05
Elapsed ASTM days: 2
Date of Last EDR Contact: 02/01/05

NPL Site Boundaries

Sources:

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

EPA Region 1
Telephone 617-918-1143

EPA Region 3
Telephone 215-814-5418

EPA Region 4
Telephone 404-562-8033

EPA Region 6
Telephone: 214-655-6659

EPA Region 8
Telephone: 303-312-6774

Proposed NPL: Proposed National Priority List Sites
Source: EPA
Telephone: N/A

Date of Government Version: 12/14/04
Date Made Active at EDR: 02/03/05
Database Release Frequency: Quarterly

Date of Data Arrival at EDR: 02/01/05
Elapsed ASTM days: 2
Date of Last EDR Contact: 02/01/05

CERCLIS: Comprehensive Environmental Response, Compensation, and Liability Information System
Source: EPA
Telephone: 703-413-0223
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: 02/15/05
Date Made Active at EDR: 04/06/05
Database Release Frequency: Quarterly

Date of Data Arrival at EDR: 03/22/05
Elapsed ASTM days: 15
Date of Last EDR Contact: 03/22/05

CERCLIS-NFRAP: CERCLIS No Further Remedial Action Planned
Source: EPA
Telephone: 703-413-0223
As of February 1995, CERCLIS sites designated "No Further Remedial Action Planned" (NFRAP) have been removed from CERCLIS. NFRAP sites may be sites where, following an initial investigation, no contamination was found, contamination was removed quickly without the need for the site to be placed on the NPL, or the contamination was not serious enough to require Federal Superfund action or NPL consideration. EPA has removed approximately 25,000 NFRAP sites to lift the unintended barriers to the redevelopment of these properties and has archived them as historical records so EPA does not needlessly repeat the investigations in the future. This policy change is part of the EPA's Brownfields Redevelopment Program to help cities, states, private investors and affected citizens to promote economic redevelopment of unproductive urban sites.

Date of Government Version: 03/22/05
Date Made Active at EDR: 04/06/05
Database Release Frequency: Quarterly

Date of Data Arrival at EDR: 04/01/05
Elapsed ASTM days: 5
Date of Last EDR Contact: 04/01/05

CORRACTS: Corrective Action Report
Source: EPA
Telephone: 800-424-9346
CORRACTS identifies hazardous waste handlers with RCRA corrective action activity.

Date of Government Version: 12/15/04
Date Made Active at EDR: 02/25/05
Database Release Frequency: Quarterly

Date of Data Arrival at EDR: 01/07/05
Elapsed ASTM days: 49
Date of Last EDR Contact: 12/07/04

RCRA: Resource Conservation and Recovery Act Information
Source: EPA
Telephone: 800-424-9346
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. RCRAInfo replaces the data recording and reporting abilities of the Resource Conservation and Recovery Information System (RCRIS). 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. Small quantity generators (SQGs) generate between 100 kg and 1,000 kg of hazardous waste per month. Large quantity generators (LQGs) generate over 1,000 kilograms (kg) of hazardous waste, or over 1 kg of acutely hazardous waste per month. Transporters are individuals or entities that move hazardous waste from the generator off-site to a facility that can recycle, treat, store, or dispose of the waste. TSDFs treat, store, or dispose of the waste.

Date of Government Version: 01/10/05
Date Made Active at EDR: 04/01/05
Database Release Frequency: Quarterly

Date of Data Arrival at EDR: 01/25/05
Elapsed ASTM days: 66
Date of Last EDR Contact: 03/23/05

ERNS: Emergency Response Notification System
Source: National Response Center, United States Coast Guard
Telephone: 202-260-2342
Emergency Response Notification System. ERNS records and stores information on reported releases of oil and hazardous substances.

Date of Government Version: 12/31/04
Date Made Active at EDR: 03/24/05
Database Release Frequency: Annually

Date of Data Arrival at EDR: 01/27/05
Elapsed ASTM days: 56
Date of Last EDR Contact: 01/27/05

FEDERAL ASTM SUPPLEMENTAL RECORDS

BRS: Biennial Reporting System
Source: EPA/NTIS
Telephone: 800-424-9346
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: 12/01/01
Database Release Frequency: Biennially

Date of Last EDR Contact: 12/13/04
Date of Next Scheduled EDR Contact: 03/14/05

CONSENT: Superfund (CERCLA) Consent Decrees
Source: Department of Justice, Consent Decree Library
Telephone: Varies
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.

Date of Government Version: 03/05/04
Database Release Frequency: Varies

Date of Last EDR Contact: 10/25/04
Date of Next Scheduled EDR Contact: 01/24/05

ROD: Records Of Decision
Source: EPA
Telephone: 703-416-0223
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: 01/10/05
Database Release Frequency: Annually

Date of Last EDR Contact: 01/05/05
Date of Next Scheduled EDR Contact: 04/04/05

DELISTED NPL: National Priority List Deletions
Source: EPA
Telephone: N/A
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: 12/14/04
Database Release Frequency: Quarterly

Date of Last EDR Contact: 02/01/05
Date of Next Scheduled EDR Contact: 05/02/05

FINDS: Facility Index System/Facility Identification Initiative Program Summary Report
Source: EPA
Telephone: N/A
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: 01/12/05
Database Release Frequency: Quarterly

Date of Last EDR Contact: 01/03/05
Date of Next Scheduled EDR Contact: 04/04/05

HMIRS: Hazardous Materials Information Reporting System
Source: U.S. Department of Transportation
Telephone: 202-366-4555
Hazardous Materials Incident Report System. HMIRS contains hazardous material spill incidents reported to DOT.

Date of Government Version: 11/16/04
Database Release Frequency: Annually

Date of Last EDR Contact: 01/19/05
Date of Next Scheduled EDR Contact: 04/18/05

MLTS: Material Licensing Tracking System
Source: Nuclear Regulatory Commission
Telephone: 301-415-7169
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: 01/12/05
Database Release Frequency: Quarterly

Date of Last EDR Contact: 04/04/05
Date of Next Scheduled EDR Contact: 07/04/05

MINES: Mines Master Index File
Source: Department of Labor, Mine Safety and Health Administration
Telephone: 303-231-5959
Contains all mine identification numbers issued for mines active or opened since 1971. The data also includes violation information.

Date of Government Version: 11/15/04
Database Release Frequency: Semi-Annually

Date of Last EDR Contact: 12/28/04
Date of Next Scheduled EDR Contact: 03/28/05

NPL LIENS: Federal Superfund Liens
Source: EPA
Telephone: 202-564-4267
Federal Superfund Liens. Under the authority granted the USEPA by the Comprehensive Environmental Response, Compensation and Liability Act (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 receives notification of potential liability. USEPA compiles a listing of filed notices of Superfund Liens.

Date of Government Version: 10/15/91
Database Release Frequency: No Update Planned

Date of Last EDR Contact: 02/22/05
Date of Next Scheduled EDR Contact: 05/23/05

PADS: PCB Activity Database System
Source: EPA
Telephone: 202-564-3887
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: 12/21/04
Database Release Frequency: Annually

Date of Last EDR Contact: 02/23/05
Date of Next Scheduled EDR Contact: 05/09/05

DOD: Department of Defense Sites
Source: USGS
Telephone: 703-692-8801
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: 10/01/03
Database Release Frequency: Semi-Annually

Date of Last EDR Contact: 02/08/05
Date of Next Scheduled EDR Contact: 05/09/05

UMTRA: Uranium Mill Tailings Sites
Source: Department of Energy
Telephone: 505-845-0011
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. In 1978, 24 inactive uranium mill tailings sites in Oregon, Idaho, Wyoming, Utah, Colorado, New Mexico, Texas, North Dakota, South Dakota, Pennsylvania, and on Navajo and Hopi tribal lands, were targeted for cleanup by the Department of Energy.

Date of Government Version: 12/29/04
Database Release Frequency: Varies

Date of Last EDR Contact: 12/21/04
Date of Next Scheduled EDR Contact: 03/21/05

ODI: Open Dump Inventory
Source: Environmental Protection Agency
Telephone: 800-424-9346
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: 06/30/85
Database Release Frequency: No Update Planned

Date of Last EDR Contact: 05/23/95
Date of Next Scheduled EDR Contact: N/A

FUDS: Formerly Used Defense Sites
Source: U.S. Army Corps of Engineers
Telephone: 202-528-4285
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: 12/31/03
Database Release Frequency: Varies

Date of Last EDR Contact: 01/03/05
Date of Next Scheduled EDR Contact: 04/04/05

INDIAN RESERV: Indian Reservations
Source: USGS
Telephone: 202-208-3710
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: 10/01/03
Database Release Frequency: Semi-Annually

Date of Last EDR Contact: 02/08/05
Date of Next Scheduled EDR Contact: 05/09/05

RAATS: RCRA Administrative Action Tracking System
Source: EPA
Telephone: 202-564-4104
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: 04/17/95
Database Release Frequency: No Update Planned

Date of Last EDR Contact: 12/06/04
Date of Next Scheduled EDR Contact: 03/07/05

TRIS: Toxic Chemical Release Inventory System
Source: EPA
Telephone: 202-566-0250
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.

Date of Government Version: 12/31/02
Database Release Frequency: Annually

Date of Last EDR Contact: 12/20/04
Date of Next Scheduled EDR Contact: 03/21/05

TSCA: Toxic Substances Control Act
Source: EPA
Telephone: 202-260-5521
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: 12/31/02
Database Release Frequency: Every 4 Years

Date of Last EDR Contact: 12/06/04
Date of Next Scheduled EDR Contact: 03/07/05

FTTS INSP: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
Source: EPA
Telephone: 202-564-2501

Date of Government Version: 04/13/04
Database Release Frequency: Quarterly

Date of Last EDR Contact: 12/01/04
Date of Next Scheduled EDR Contact: 03/21/05

SSTS: Section 7 Tracking Systems
Source: EPA
Telephone: 202-564-5008
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: 12/31/03
Database Release Frequency: Annually

Date of Last EDR Contact: 11/29/04
Date of Next Scheduled EDR Contact: 04/18/05

FTTS: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
Source: EPA/Office of Prevention, Pesticides and Toxic Substances
Telephone: 202-564-2501
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: 09/13/04
Database Release Frequency: Quarterly

Date of Last EDR Contact: 12/01/04
Date of Next Scheduled EDR Contact: 03/21/05

STATE OF WASHINGTON ASTM STANDARD RECORDS

CSCSL: Confirmed & Suspected Contaminated Sites List
Source: Department of Ecology
Telephone: 360-407-7200
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: 01/03/05
Date Made Active at EDR: 03/16/05
Database Release Frequency: Semi-Annually

Date of Data Arrival at EDR: 02/17/05
Elapsed ASTM days: 27
Date of Last EDR Contact: 02/17/05

HSL: Hazardous Sites List
Source: Department of Ecology
Telephone: 360-407-7200
The Hazardous Sites List is a subset of the CSCSL Report. It includes sites which have been assessed and ranked using the Washington Ranking Method (WARM).

Date of Government Version: 08/17/04
Date Made Active at EDR: 10/22/04
Database Release Frequency: Semi-Annually

Date of Data Arrival at EDR: 10/04/04
Elapsed ASTM days: 18
Date of Last EDR Contact: 12/08/04

SWF/LF: Solid Waste Facility Database
Source: Department of Ecology
Telephone: 360-407-6132
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: 10/01/04
Date Made Active at EDR: 02/02/05
Database Release Frequency: Annually

Date of Data Arrival at EDR: 01/06/05
Elapsed ASTM days: 27
Date of Last EDR Contact: 01/05/05

LUST: Leaking Underground Storage Tanks Site List
Source: Department of Ecology
Telephone: 360-407-7200
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: 01/03/05
Date Made Active at EDR: 03/03/05
Database Release Frequency: Quarterly

Date of Data Arrival at EDR: 01/25/05
Elapsed ASTM days: 37
Date of Last EDR Contact: 01/25/05

UST: Underground Storage Tank Database
Source: Department of Ecology
Telephone: 360-407-7170
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: 01/03/05
Date Made Active at EDR: 03/03/05
Database Release Frequency: Quarterly

Date of Data Arrival at EDR: 01/25/05
Elapsed ASTM days: 37
Date of Last EDR Contact: 01/25/05

VCP: Voluntary Cleanup Program Sites
Source: Department of Ecology
Telephone: 360-407-7200
Sites that have entered either the Voluntary Cleanup Program or its predecessor Independent Remedial Action Program.

Date of Government Version: 01/03/05
Date Made Active at EDR: 03/16/05
Database Release Frequency: Varies

Date of Data Arrival at EDR: 02/17/05
Elapsed ASTM days: 27
Date of Last EDR Contact: 02/14/05

INDIAN UST: Underground Storage Tanks on Indian Land
Source: EPA Region 10
Telephone: 206-553-2857

Date of Government Version: 02/02/05
Date Made Active at EDR: 03/16/05
Database Release Frequency: Varies

Date of Data Arrival at EDR: 02/02/05
Elapsed ASTM days: 42
Date of Last EDR Contact: 01/31/05

INDIAN LUST: Leaking Underground Storage Tanks on Indian Land
Source: EPA Region 10
Telephone: 206-553-2857
LUSTs on Indian land in Alaska, Idaho, Oregon and Washington.

Date of Government Version: 02/02/05
Date Made Active at EDR: 03/24/05
Database Release Frequency: Varies

Date of Data Arrival at EDR: 02/02/05
Elapsed ASTM days: 50
Date of Last EDR Contact: 01/31/05

STATE OF WASHINGTON ASTM SUPPLEMENTAL RECORDS

CSCSL NFA: Confirmed & Contaminated Sites - No Further Action
Source: Department of Ecology
Telephone: 360-407-7170
The data set contains information about sites previously on the Confirmed and Suspected Contaminated Sites list that have received a No Further Action (NFA) determination. Because it is necessary to maintain historical records of sites that have been investigated and cleaned up, sites are not deleted from the database when cleanup activities are completed. Instead, a No Further Action code is entered based upon the type of NFA determination the site received.

Date of Government Version: 01/03/05
Database Release Frequency: Semi-Annually

Date of Last EDR Contact: 02/17/05
Date of Next Scheduled EDR Contact: 05/16/05

ICR: Independent Cleanup Reports
Source: Department of Ecology
Telephone: 360-407-7200
These are remedial action reports Ecology has received from either the owner or operator of the sites. These actions have been conducted without department oversight or approval and are not under an order or decree. This database is no longer updated by the Department of Ecology.

Date of Government Version: 12/01/02
Database Release Frequency: No Update Planned

Date of Last EDR Contact: 02/14/05
Date of Next Scheduled EDR Contact: 05/16/05

SPILLS: Reported Spills
Source: Department of Ecology
Telephone: 360-407-7450
Spills reported to the Spill Prevention, Preparedness and Response Division.

Date of Government Version: 12/31/04
Database Release Frequency: Semi-Annually

Date of Last EDR Contact: 01/03/05
Date of Next Scheduled EDR Contact: 04/04/05

AST: Aboveground Storage Tank Locations
Source: Department of Ecology
Telephone: 360-407-7562
A listing of aboveground storage tank locations regulated by the Department of Ecology's Spill Prevention, Preparedness and Response Program.

Date of Government Version: 10/01/04
Database Release Frequency: Varies

Date of Last EDR Contact: 02/28/05
Date of Next Scheduled EDR Contact: 05/30/05

DRYCLEANERS: Drycleaner List
Source: Department of Ecology
Telephone: 360-407-6732
A listing of registered drycleaners who registered with the Department of Ecology (using the SIC code of 7215 and 7216) as hazardous waste generators.

Date of Government Version: 02/17/05
Database Release Frequency: Varies

Date of Last EDR Contact: 02/14/05
Date of Next Scheduled EDR Contact: 05/16/05

CDL: Clandestine Drug Lab Contaminated Site List
Source: Department of Health
Telephone: 360-236-3380
Illegal methamphetamine labs use hazardous chemicals that create public health hazards. Chemicals and residues can cause burns, respiratory and neurological damage, and death. Biological hazards associated with intravenous needles, feces, and blood also pose health risks.

Date of Government Version: 01/28/05
Database Release Frequency: Varies

Date of Last EDR Contact: 03/10/05
Date of Next Scheduled EDR Contact: 06/06/05

EMI: Washington Emissions Data System
Source: Department of Ecology
Telephone: 360-407-6040

Date of Government Version: 12/31/03
Database Release Frequency: Annually

Date of Last EDR Contact: 01/18/05
Date of Next Scheduled EDR Contact: 04/18/05

LOCAL RECORDS

KING COUNTY:

Abandoned Landfill Study in King County
Source: Seattle-King County Department of Public Health
Telephone: 206-296-4785
The King County Abandoned Landfill Survey was conducted from October through December 1984 by the Health Department's Environmental Health Division at the request of the King County Council. The primary objective of the survey was to determine if any public health problems existed at the predetermined 24 sites.

Date of Government Version: 04/30/85
Database Release Frequency: No Update Planned

Date of Last EDR Contact: 10/21/94
Date of Next Scheduled EDR Contact: N/A

SEATTLE COUNTY:

Abandoned Landfill Study in the City of Seattle
Source: Seattle - King County Department of Public Health
Telephone: 206-296-4785
The Seattle Abandoned Landfill Survey was conducted in June and July of 1984 by the Health Department's Environmental Health Division at the request of the Mayor's Office. The primary objective of the survey was to determine if any public health problems existed at the predetermined 12 sites.

Date of Government Version: 07/30/84
Database Release Frequency: No Update Planned

Date of Last EDR Contact: 10/21/94
Date of Next Scheduled EDR Contact: N/A

SEATTLE/KING COUNTY:

Seattle - King County Abandoned Landfill Toxicity / Hazard Assessment Project
Source: Department of Public Health
Telephone: 206-296-4785
This report presents the Seattle-King County Health Department's follow-up investigation of two city owned and four county owned abandoned landfills which was conducted from February to December 1986.

Date of Government Version: 12/31/86
Database Release Frequency: No Update Planned

Date of Last EDR Contact: 08/14/95
Date of Next Scheduled EDR Contact: N/A

SNOHOMISH COUNTY:

Solid Waste Sites of Record at Snohomish Health District
Source: Snohomish Health District
Telephone: 206-339-5250

Date of Government Version: 11/02/04
Database Release Frequency: Semi-Annually

Date of Last EDR Contact: 01/19/05
Date of Next Scheduled EDR Contact: 04/18/05

TACOMA/PIERCE COUNTY:

Closed Landfill Survey
Source: Tacoma-Pierce County Health Department
Telephone: 206-591-6500
Following numerous requests for information about closed dumpsites and landfills in Pierce County, the Tacoma-Pierce County Health Department decided to conduct a study on the matter. The aim of the study was to evaluate public health risks associated with the closed dumpsites and landfills, and to determine the need, if any, for further investigations of a more detailed nature. The sites represent all of the known dumpsites and landfills closed after 1950.

Date of Government Version: 09/01/02
Database Release Frequency: No Update Planned

Date of Last EDR Contact: 03/19/03
Date of Next Scheduled EDR Contact: N/A

EDR PROPRIETARY HISTORICAL DATABASES

Former Manufactured Gas (Coal Gas) Sites: The existence and location of Coal Gas sites is provided exclusively to EDR by Real Property Scan, Inc. For a technical description of the types of hazards which may be found at such sites, contact your EDR customer service representative.

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

BROWNFIELDS DATABASES

VCP: Voluntary Cleanup Program Sites
Source: Department of Ecology
Telephone: 360-407-7200
Sites that have entered either the Voluntary Cleanup Program or its predecessor Independent Remedial Action Program.

Date of Government Version: 01/03/05
Database Release Frequency: Varies

Date of Last EDR Contact: 02/14/05
Date of Next Scheduled EDR Contact: 05/16/05

US BROWNFIELDS: A Listing of Brownfields Sites
Source: Environmental Protection Agency
Telephone: 202-566-2777
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: N/A
Database Release Frequency: Semi-Annually

Date of Last EDR Contact: N/A
Date of Next Scheduled EDR Contact: N/A

INST CONTROL: Institutional Control Site List
Source: Department of Ecology
Telephone: 360-407-7170
Sites that have institutional controls.

Date of Government Version: 12/14/04
Database Release Frequency: Varies

Date of Last EDR Contact: 12/06/04
Date of Next Scheduled EDR Contact: 03/07/05

US INST CONTROL: Sites with Institutional Controls
Source: Environmental Protection Agency
Telephone: 703-603-8867
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: N/A
Database Release Frequency: Varies

Date of Last EDR Contact: N/A
Date of Next Scheduled EDR Contact: N/A

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.

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
This map includes information copyrighted by PennWell Corporation. This information is provided on a best effort basis and PennWell Corporation does not guarantee its accuracy nor warrant its fitness for any particular purpose. Such information has been reprinted with the permission of PennWell.

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

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.

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: Daycare Center Listing
Source: Department of Social & Health Services
Telephone: 253-383-1735

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 from the U.S. Fish and Wildlife Service.

STREET AND ADDRESS INFORMATION

GEOCHECK®- PHYSICAL SETTING SOURCE ADDENDUM

TARGET PROPERTY ADDRESS

PROPOSED RETAIL SITE (NO. 95984)
2119 MILDRED STREET WEST
FIRCREST, WA 98466

TARGET PROPERTY COORDINATES

Latitude (North):	47.240002 - 47° 14' 24.0"
Longitude (West):	122.525200 - 122° 31' 30.7"
Universal Tranverse Mercator:	Zone 10
UTM X (Meters):	535936.1
UTM Y (Meters):	5231725.5
Elevation:	323 ft. above sea level

EDR's GeoCheck Physical Setting Source Addendum has been developed to assist the environmental professional with the collection of physical setting source information in accordance with ASTM 1527-00, Section 7.2.3. Section 7.2.3 requires that a current USGS 7.5 Minute Topographic Map (or equivalent, such as the USGS Digital Elevation Model) be reviewed. It also requires that one or more additional physical setting sources be sought when (1) conditions have been identified in which hazardous substances or petroleum products are likely to migrate to or from the property, and (2) more information than is provided in the current USGS 7.5 Minute Topographic Map (or equivalent) is generally obtained, pursuant to local good commercial or customary practice, to assess the impact of migration of recognized environmental conditions in connection with the property. Such additional physical setting sources generally include information about the topographic, hydrologic, hydrogeologic, and geologic characteristics of a site, and wells in the area.

Assessment of the impact of contaminant migration generally has two principle investigative components:

1. Groundwater flow direction, and
2. Groundwater flow velocity.

Groundwater flow direction may be impacted by surface topography, hydrology, hydrogeology, characteristics of the soil, and nearby wells. Groundwater flow velocity is generally impacted by the nature of the geologic strata. EDR's GeoCheck Physical Setting Source Addendum is provided to assist the environmental professional in forming an opinion about the impact of potential contaminant migration.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

GROUNDWATER FLOW DIRECTION INFORMATION

Groundwater flow direction for a particular site is best determined by a qualified environmental professional using site-specific well data. If such data is not reasonably ascertainable, it may be necessary to rely on other sources of information, such as surface topographic information, hydrologic information, hydrogeologic data collected on nearby properties, and regional groundwater flow information (from deep aquifers).

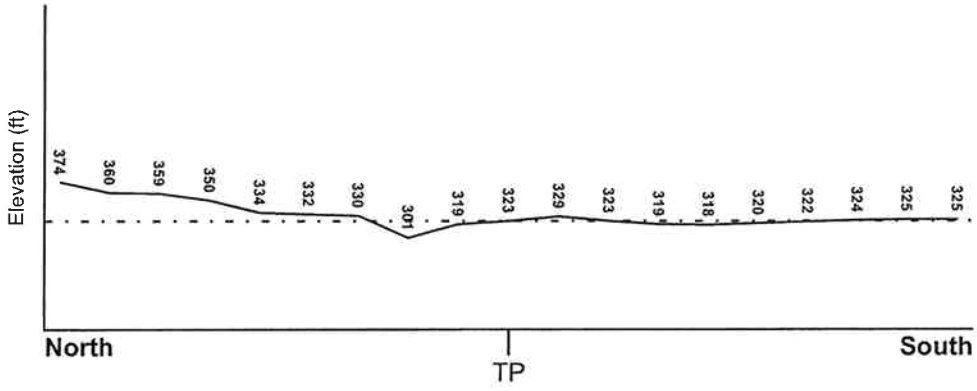
TOPOGRAPHIC INFORMATION

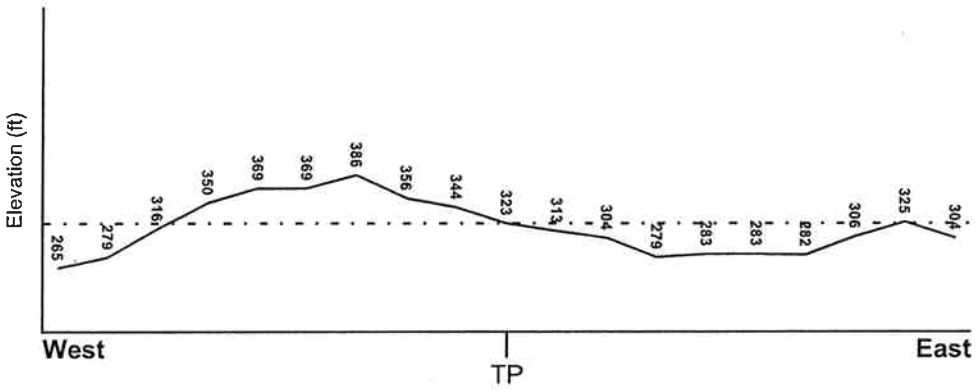
Surface topography may be indicative of the direction of surficial groundwater flow. This information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

TARGET PROPERTY TOPOGRAPHY

USGS Topographic Map:	47122-B5 STEILACOOM, WA
General Topographic Gradient:	General ENE
Source:	USGS 7.5 min quad index

SURROUNDING TOPOGRAPHY: ELEVATION PROFILES





Target Property Elevation: 323 ft.

Source: Topography has been determined from the USGS 7.5' Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

HYDROLOGIC INFORMATION

Surface water can act as a hydrologic barrier to groundwater flow. Such hydrologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

Refer to the Physical Setting Source Map following this summary for hydrologic information (major waterways and bodies of water).

FEMA FLOOD ZONE

Target Property County	FEMA Flood Electronic Data
PIERCE, WA	YES - refer to the Overview Map and Detail Map

Flood Plain Panel at Target Property: 5301380282C

Additional Panels in search area: 5301480020B
5301410001B
5301380281C

NATIONAL WETLAND INVENTORY

NWI Quad at Target Property	NWI Electronic Data Coverage
STEILACOOM	YES - refer to the Overview Map and Detail Map

HYDROGEOLOGIC INFORMATION

Hydrogeologic information obtained by installation of wells on a specific site can often be an indicator of groundwater flow direction in the immediate area. Such hydrogeologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

Site-Specific Hydrogeological Data*:

Search Radius:	1.25 miles
Status:	Not found

AQUIFLOW®

Search Radius: 1.000 Mile.

EDR has developed the AQUIFLOW Information System to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted by environmental professionals to regulatory authorities at select sites and has extracted the date of the report, groundwater flow direction as determined hydrogeologically, and the depth to water table.

MAP ID	LOCATION FROM TP	GENERAL DIRECTION GROUNDWATER FLOW
Not Reported		

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

GROUNDWATER FLOW VELOCITY INFORMATION

Groundwater flow velocity information for a particular site is best determined by a qualified environmental professional using site specific geologic and soil strata data. If such data are not reasonably ascertainable, it may be necessary to rely on other sources of information, including geologic age identification, rock stratigraphic unit and soil characteristics data collected on nearby properties and regional soil information. In general, contaminant plumes move more quickly through sandy-gravelly types of soils than silty-clayey types of soils.

GEOLOGIC INFORMATION IN GENERAL AREA OF TARGET PROPERTY

Geologic information can be used by the environmental professional in forming an opinion about the relative speed at which contaminant migration may be occurring.

ROCK STRATIGRAPHIC UNIT

Era:	Cenozoic
System:	Quaternary
Series:	Quaternary
Code:	Q *(decoded above as Era, System & Series)*

GEOLOGIC AGE IDENTIFICATION

Category: Stratifed Sequence

Geologic Age and Rock Stratigraphic Unit Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - a digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

DOMINANT SOIL COMPOSITION IN GENERAL AREA OF TARGET PROPERTY

The U.S. Department of Agriculture's (USDA) Soil Conservation Service (SCS) leads the National Cooperative Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. Soil maps for STATSGO are compiled by generalizing more detailed (SSURGO) soil survey maps. The following information is based on Soil Conservation Service STATSGO data.

Soil Component Name:	ALDERWOOD
Soil Surface Texture:	gravelly - sandy loam
Hydrologic Group:	Class C - Slow infiltration rates. Soils with layers impeding downward movement of water, or soils with moderately fine or fine textures.
Soil Drainage Class:	Moderately well drained. Soils have a layer of low hydraulic conductivity, wet state high in the profile. Depth to water table is 3 to 6 feet.

Hydric Status: Soil does not meet the requirements for a hydric soil.

Corrosion Potential - Uncoated Steel:	MODERATE
Depth to Bedrock Min:	> 60 inches
Depth to Bedrock Max:	> 60 inches

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Soil Layer Information							
	Boundary			Classification			
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil	Permeability Rate (in/hr)	Soil Reaction (pH)
1	0 inches	7 inches	gravelly - sandy loam	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	COARSE-GRAINED SOILS, Gravels, Gravels with fines, Silty Gravel	Max: 6.00 Min: 2.00	Max: 6.50 Min: 5.10
2	7 inches	35 inches	very gravelly - loam	Granular materials (35 pct. or less passing No. 200), Stone Fragments, Gravel and Sand.	COARSE-GRAINED SOILS, Gravels, Gravels with fines, Silty Gravel	Max: 6.00 Min: 2.00	Max: 6.50 Min: 5.10
3	35 inches	39 inches	cemented	Not reported	Not reported	Max: 0.00 Min: 0.00	Max: 0.00 Min: 0.00

OTHER SOIL TYPES IN AREA

Based on Soil Conservation Service STATSGO data, the following additional subordinant soil types may appear within the general area of target property.

Soil Surface Textures: silt loam
very gravelly - sandy loam

Surficial Soil Types: silt loam
very gravelly - sandy loam

Shallow Soil Types: silt loam

Deeper Soil Types: very gravelly - coarse sand
stratified
very gravelly - sand
very gravelly - loamy sand

ADDITIONAL ENVIRONMENTAL RECORD SOURCES

According to ASTM E 1527-00, Section 7.2.2, "one or more additional state or local sources of environmental records may be checked, in the discretion of the environmental professional, to enhance and supplement federal and state sources... Factors to consider in determining which local or additional state records, if any, should be checked include (1) whether they are reasonably ascertainable, (2) whether they are sufficiently useful, accurate, and complete in light of the objective of the records review (see 7.1.1), and (3) whether they are obtained, pursuant to local, good commercial or customary practice." One of the record sources listed in Section 7.2.2 is water well information. Water well information can be used to assist the environmental professional in assessing sources that may impact groundwater flow direction, and in forming an opinion about the impact of contaminant migration on nearby drinking water wells.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

WELL SEARCH DISTANCE INFORMATION

DATABASE	SEARCH DISTANCE (miles)
Federal USGS	1.000
Federal FRDS PWS	Nearest PWS within 1 mile
State Database	1.000

FEDERAL USGS WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
1	USGS3271602	1/4 - 1/2 Mile ENE
A3	USGS3272130	1/4 - 1/2 Mile North
A4	USGS3272127	1/4 - 1/2 Mile NNE
5	USGS3271418	1/4 - 1/2 Mile SE
6	USGS3271350	1/2 - 1 Mile South
7	USGS3271585	1/2 - 1 Mile West
8	USGS3271539	1/2 - 1 Mile East
9	USGS3271355	1/2 - 1 Mile SW
10	USGS3271451	1/2 - 1 Mile WSW
11	USGS3271390	1/2 - 1 Mile SE
12	USGS3271271	1/2 - 1 Mile South
15	USGS3271551	1/2 - 1 Mile West
17	USGS3271360	1/2 - 1 Mile ESE

FEDERAL FRDS PUBLIC WATER SUPPLY SYSTEM INFORMATION

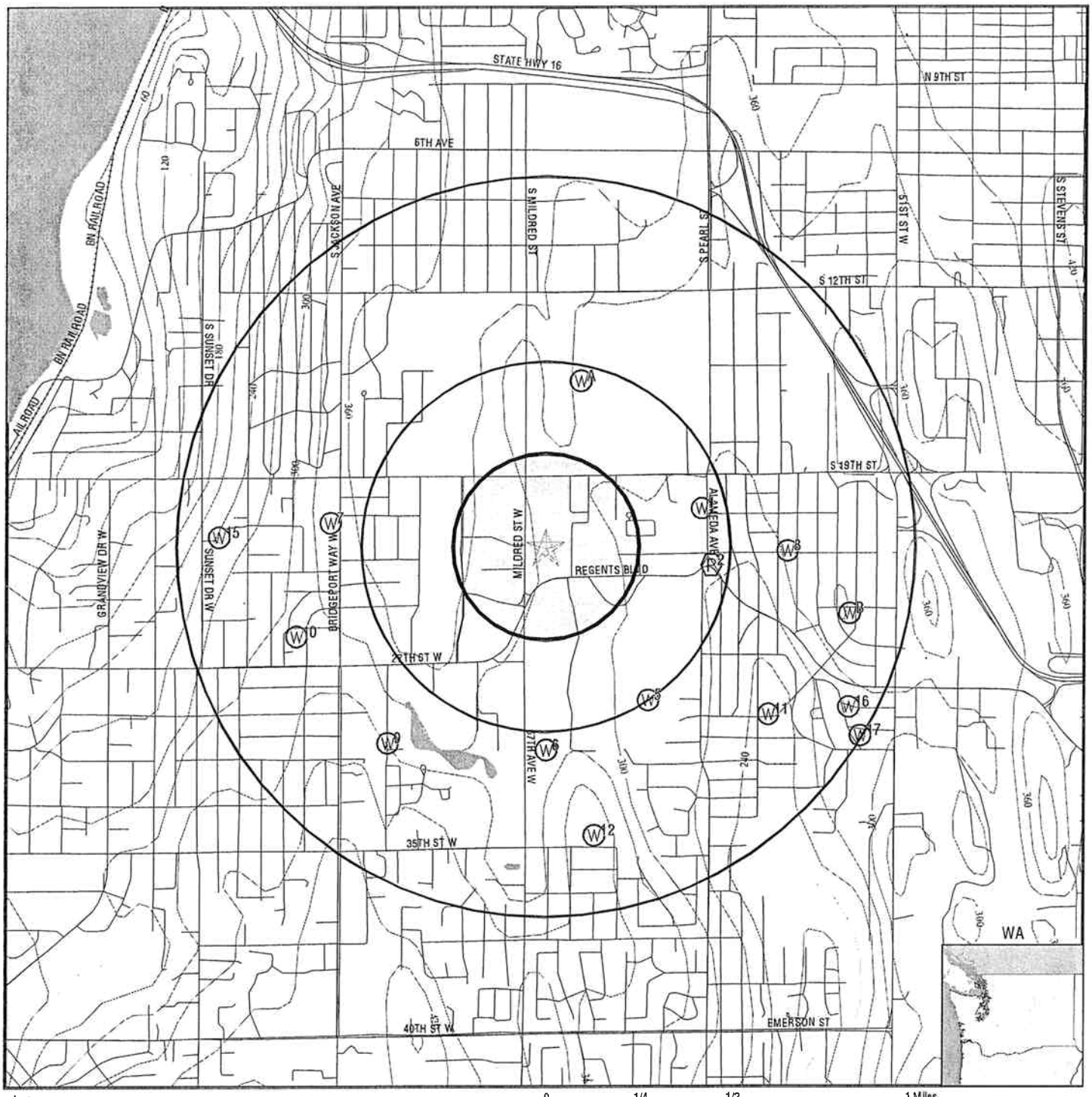
MAP ID	WELL ID	LOCATION FROM TP
2	WA5302412	1/4 - 1/2 Mile East

Note: PWS System location is not always the same as well location.

STATE DATABASE WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
B13	WAGRP0000000865	1/2 - 1 Mile ESE
B14	WAGRP0000000860	1/2 - 1 Mile ESE
16	WAGRP0000004670	1/2 - 1 Mile ESE

PHYSICAL SETTING SOURCE MAP - 01395917.1r



- County Boundary
- Major Roads
- Contour Lines
- Earthquake epicenter, Richter 5 or greater
- Water Wells
- Public Water Supply Wells
- Cluster of Multiple Icons

- Groundwater Flow Direction
- GI Indeterminate Groundwater Flow at Location
- GV Groundwater Flow Varies at Location
- HD Closest Hydrogeological Data

TARGET PROPERTY:	Proposed Retail Site (No. 95984)	CUSTOMER:	Kleinfelder, Inc.
ADDRESS:	2119 Mildred Street West	CONTACT:	Ted W. Sykes
CITY/STATE/ZIP:	Fircrest WA 98466	INQUIRY #:	01395917.1r
LAT/LONG:	47.2400 / 122.5252	DATE:	April 07, 2005 8:01 pm

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation

Database | EDR ID Number

1
ENE
1/4 - 1/2 Mile
Lower

FED USGS **USGS3271602**

Agency cd:	USGS	Site no:	471430122305401
Site name:	20N/02E-02C01	Latitude:	471430
Longitude:	1223054	Dec lat:	47.24148732
Dec lon:	-122.51623645	Coor meth:	M
Coor accr:	T	Latlong datum:	NAD27
Dec latlong datum:	NAD83	District:	53
State:	53	County:	053
Country:	US	Land net:	NE NW S02 T20N R02E W
Location map:	STEILACOOM	Map scale:	24000
Altitude:	270	Altitude method:	M
Altitude accuracy:	50	Altitude datum:	NGVD29
Hydrologic:	Puget Sound. Washington. Area = 2550 sq.mi.		
Topographic:	Flat surface		
Site type:	Ground-water other than Spring	Date construction:	19711115
Date inventoried:	19721017	Mean greenwich time offset:	PST
Local standard time flag:	Y	Type of ground water site:	Single well, other than collector or Ranney type
Aquifer Type:	Not Reported	Aquifer:	Not Reported
Well depth:	224	Hole depth:	Not Reported
Source of depth data:	reporting agency (generally USGS)	Project number:	Not Reported
Real time data flag:	0	Daily flow data begin date:	0000-00-00
Daily flow data end date:	0000-00-00	Daily flow data count:	0
Peak flow data begin date:	0000-00-00	Peak flow data end date:	0000-00-00
Peak flow data count:	0	Water quality data begin date:	0000-00-00
Water quality data end date:	0000-00-00	Water quality data count:	0
Ground water data begin date:	1972-10-01	Ground water data end date:	1972-10-01
Ground water data count:	1		

Ground-water levels, Number of Measurements: 1

Date	Feet below Surface	Feet to Sealevel
1972-10-01	62.00	

2
East
1/4 - 1/2 Mile
Lower

FRDS PWS **WA5302412**

PWS ID:	WA5302412	PWS Status:	Active
Date Initiated:	7706	Date Deactivated:	Not Reported
PWS Name:	SOIL FACTORY 800 37TH CT. WEST TACOMA, WA 98466		
Addressee / Facility:	Not Reported		
Facility Latitude:	47 14 22	Facility Longitude:	122 30 52
City Served:	Not Reported		
Treatment Class:	Untreated	Population:	00000025

PWS currently has or had major violation(s) or enforcement: No

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation

Database | EDR ID Number

A3
North
1/4 - 1/2 Mile
Higher

FED USGS **USGS3272130**

Agency cd:	USGS	Site no:	471551122311001
Site name:	20N/02E-02M02	Latitude:	471448
Longitude:	1223120	Dec lat:	47.24648726
Dec lon:	-122.52345894	Coor meth:	M
Coor accr:	F	Latlong datum:	NAD27
Dec latlong datum:	NAD83	District:	53
State:	53	County:	053
Country:	US	Land net:	NW SW S02 T20N R02E W
Location map:	STEILACOOM	Map scale:	24000
Altitude:	323	Altitude method:	M
Altitude accuracy:	10	Altitude datum:	NGVD29
Hydrologic:	Puget Sound. Washington. Area = 2550 sq.mi.		
Topographic:	Not Reported		
Site type:	Ground-water other than Spring	Date construction:	19830419
Date inventoried:	19950614	Mean greenwich time offset:	PST
Local standard time flag:	Y	Type of ground water site:	Single well, other than collector or Ranney type
Aquifer Type:	Not Reported	Aquifer:	Not Reported
Well depth:	195	Hole depth:	468
Source of depth data:	driller	Project number:	WA39400
Real time data flag:	0	Daily flow data begin date:	0000-00-00
Daily flow data end date:	0000-00-00	Daily flow data count:	0
Peak flow data begin date:	0000-00-00	Peak flow data end date:	0000-00-00
Peak flow data count:	0	Water quality data begin date:	0000-00-00
Water quality data end date:	0000-00-00	Water quality data count:	0
Ground water data begin date:	1983-12-07	Ground water data end date:	1995-06-14
Ground water data count:	2		

Ground-water levels, Number of Measurements: 2

Date	Feet below Surface	Feet to Sealevel	Date	Feet below Surface	Feet to Sealevel
1995-06-14	115.10		1983-12-07	110	

A4
NNE
1/4 - 1/2 Mile
Lower

FED USGS **USGS3272127**

Agency cd:	USGS	Site no:	471550122311001
Site name:	20N/02E-02M01	Latitude:	471448
Longitude:	1223118	Dec lat:	47.24648727
Dec lon:	-122.52290337	Coor meth:	M
Coor accr:	F	Latlong datum:	NAD27
Dec latlong datum:	NAD83	District:	53
State:	53	County:	053
Country:	US	Land net:	NW SW S02 T20N R02E W
Location map:	STEILACOOM	Map scale:	24000
Altitude:	310	Altitude method:	M
Altitude accuracy:	15	Altitude datum:	NGVD29
Hydrologic:	Puget Sound. Washington. Area = 2550 sq.mi.		
Topographic:	Not Reported		
Site type:	Ground-water other than Spring	Date construction:	19821228
Date inventoried:	19950614	Mean greenwich time offset:	PST

Local standard time flag:	Y	Type of ground water site:	Single well, other than collector or Ranney type
Aquifer Type:	Not Reported	Aquifer:	Not Reported
Well depth:	304	Hole depth:	316
Source of depth data:	driller	Project number:	WA39400
Real time data flag:	0	Daily flow data begin date:	0000-00-00
Daily flow data end date:	0000-00-00	Daily flow data count:	0
Peak flow data begin date:	0000-00-00	Peak flow data end date:	0000-00-00
Peak flow data count:	0	Water quality data begin date:	0000-00-00
Water quality data end date:	0000-00-00	Water quality data count:	0
Ground water data begin date:	1983-02-23	Ground water data end date:	1995-05-14
Ground water data count:	2		

Ground-water levels, Number of Measurements: 2

Date	Feet below Surface	Feet to Sealevel	Date	Feet below Surface	Feet to Sealevel
1995-05-14	141.42		1983-02-23	118	

5
SE
1/4 - 1/2 Mile
Lower

FED USGS USGS3271418

Agency cd:	USGS	Site no:	471403122310501
Site name:	20N/02E-11L01	Latitude:	471403
Longitude:	1223105	Dec lat:	47.23398727
Dec lon:	-122.51929202	Coor meth:	M
Coor accr:	S	Latlong datum:	NAD27
Dec latlong datum:	NAD83	District:	53
State:	53	County:	053
Country:	US	Land net:	NE SW S11 T20N R02E W
Location map:	STEILACOOM	Map scale:	24000
Altitude:	280	Altitude method:	M
Altitude accuracy:	10	Altitude datum:	NGVD29
Hydrologic:	Puget Sound. Washington. Area = 2550 sq.mi.		
Topographic:	Not Reported		
Site type:	Ground-water other than Spring	Date construction:	19510325
Date inventoried:	19600226	Mean greenwich time offset:	PST
Local standard time flag:	Y	Type of ground water site:	Single well, other than collector or Ranney type
Aquifer Type:	Not Reported	Aquifer:	Not Reported
Well depth:	120	Hole depth:	Not Reported
Source of depth data:	driller	Project number:	Not Reported
Real time data flag:	0	Daily flow data begin date:	0000-00-00
Daily flow data end date:	0000-00-00	Daily flow data count:	0
Peak flow data begin date:	0000-00-00	Peak flow data end date:	0000-00-00
Peak flow data count:	0	Water quality data begin date:	0000-00-00
Water quality data end date:	0000-00-00	Water quality data count:	0
Ground water data begin date:	1951-03-25	Ground water data end date:	1951-03-25
Ground water data count:	1		

Ground-water levels, Number of Measurements: 1

Date	Feet below Surface	Feet to Sealevel
1951-03-25	50	

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation

Database	EDR ID Number
FED USGS	**USGS3271350**

6
South
1/2 - 1 Mile
Lower

Agency cd:	USGS	Site no:	471356122312601
Site name:	20N/02E-11M01	Latitude:	471356
Longitude:	1223126	Dec lat:	47.23204277
Dec lon:	-122.52512551	Coor meth:	M
Coor accr:	S	Latlong datum:	NAD27
Dec latlong datum:	NAD83	District:	53
State:	53	County:	053
Country:	US	Land net:	NW SW S11 T20N R02E W
Location map:	STEILACOOM	Map scale:	24000
Altitude:	318	Altitude method:	L
Altitude accuracy:	1	Altitude datum:	NGVD29
Hydrologic:	Puget Sound. Washington. Area = 2550 sq.mi.		
Topographic:	Undulating		
Site type:	Ground-water other than Spring	Date construction:	19520119
Date inventoried:	19600226	Mean greenwich time offset:	PST
Local standard time flag:	Y	Type of ground water site:	Single well, other than collector or Ranney type
Aquifer Type:	Not Reported	Aquifer:	Not Reported
Well depth:	257	Hole depth:	Not Reported
Source of depth data:	other	Project number:	Not Reported
Real time data flag:	0	Daily flow data begin date:	0000-00-00
Daily flow data end date:	0000-00-00	Daily flow data count:	0
Peak flow data begin date:	0000-00-00	Peak flow data end date:	0000-00-00
Peak flow data count:	0	Water quality data begin date:	1970-12-14
Water quality data end date:	1971-06-25	Water quality data count:	2
Ground water data begin date:	1961-06-28	Ground water data end date:	1972-12-20
Ground water data count:	74		

Ground-water levels, Number of Measurements: 74

Date	Feet below Surface	Feet to Sealevel	Date	Feet below Surface	Feet to Sealevel
1972-12-20	98.58		1972-10-18	99.65	
1972-08-11	129.85		1972-04-24	95.75	
1972-02-17	97.69		1971-10-22	98.42	
1971-09-13	99.77		1971-07-13	102.30	
1971-05-27	100.67		1971-04-16	102.52	
1971-03-09	98.04		1971-01-11	99.40	
1970-12-14	112.94				
Note: The site was being pumped.					
1970-10-13	102.19		1970-09-22	102.76	
1970-06-30	172.82				
Note: The site was being pumped.					
1970-05-05	102.52		1970-03-16	107.10	
1970-02-05	100.50		1969-12-09	100.65	
1969-10-06	102.62		1969-09-04	131.02	
1969-07-25	177.12				
Note: The site was being pumped.					
1969-07-01	114.45		1969-04-18	97.24	
1969-02-18	112.17		1969-01-13	107.15	
1968-11-15	107.63		1968-10-09	104.04	
1968-08-27	100.68		1968-07-15	114.11	
1968-05-14	123.65		1968-04-11	109.17	

Ground-water levels, continued.

Date	Feet below Surface	Feet to Sealevel	Date	Feet below Surface	Feet to Sealevel
1968-02-27	102.87		1968-01-18	105.15	
1967-12-07	103.27		1967-10-18	104.13	
1967-08-08	133.65				
Note: The site was being pumped.					
1967-06-01	114.83		1966-11-04	102.39	
1966-09-28	102.23				
1966-07-13	157				
Note: The site was being pumped.					
1966-06-14	135				
Note: The site was being pumped.					
1966-04-13	103.23		1966-03-08	102.25	
1966-01-21	102.32		1965-12-16	103.18	
1965-11-02	102.90		1965-10-05	107.81	
1965-08-31	106.43		1964-07-24	105.63	
1964-05-11	96.89		1964-02-05	97.68	
1963-12-24	98.25		1963-12-10	98.59	
1963-05-28	118.66				
Note: The site was being pumped.					
1963-04-26	98.87		1963-02-26	98.87	
1963-01-25	99.11		1962-12-26	100.38	
1962-11-27	100.70		1962-10-23	100.51	
1962-09-25	100.34		1962-08-28	116.59	
1962-07-06	117.95				
1962-05-31	110.07				
Note: The site had been pumped recently.					
1962-04-26	99.37		1962-03-30	98.12	
1962-03-04	96.93		1962-02-01	97.20	
1962-01-03	98.52		1961-11-30	97.22	
1961-10-04	97.11		1961-06-28	117.77	

7
West
1/2 - 1 Mile
Higher

FED USGS **USGS3271585**

Agency cd:	USGS	Site no:	471428122321101
Site name:	20N/02E-10C01	Latitude:	471428
Longitude:	1223211	Dec lat:	47.24093155
Dec lon:	-122.53762596	Coor meth:	M
Coor accr:	S	Latlong datum:	NAD27
Dec latlong datum:	NAD83	District:	53
State:	53	County:	053
Country:	US	Land net:	NE NW S10 T20N R02E W
Location map:	STEILACOOM	Map scale:	24000
Altitude:	330	Altitude method:	M
Altitude accuracy:	10	Altitude datum:	NGVD29
Hydrologic:	Puget Sound. Washington. Area = 2550 sq.mi.		
Topographic:	Not Reported		
Site type:	Ground-water other than Spring	Date construction:	19380101
Date inventoried:	19660301	Mean greenwich time offset:	PST
Local standard time flag:	Y	Type of ground water site:	Single well, other than collector or Ranney type
Aquifer Type:	Not Reported	Aquifer:	Not Reported
Well depth:	175	Hole depth:	Not Reported
Source of depth data:	driller	Project number:	Not Reported
Real time data flag:	0	Daily flow data begin date:	0000-00-00
Daily flow data end date:	0000-00-00	Daily flow data count:	0
Peak flow data begin date:	0000-00-00	Peak flow data end date:	0000-00-00

Peak flow data count: 0
Water quality data end date:0000-00-00
Ground water data begin date: 1938-01-01
Ground water data count: 1
Water quality data begin date: 0000-00-00
Water quality data count: 0
Ground water data end date: 1938-01-01

Ground-water levels, Number of Measurements: 1

Date	Feet below Surface	Feet to Sealevel
1938-01-01	87	

8
East
1/2 - 1 Mile
Lower

FED USGS USGS3271539

Agency cd: USGS
Site name: 20N/02E-09C01
Longitude: 1223036
Dec lon: -122.51123629
Coor accr: F
Dec latlong datum: NAD83
State: 53
Country: US
Location map: STEILACOOM
Altitude: 10
Altitude accuracy: 5
Hydrologic: Puget Sound. Washington. Area = 2550 sq.mi.
Topographic: Not Reported
Site type: Ground-water other than Spring
Date inventoried: 19790509
Local standard time flag: Y
Aquifer Type: Not Reported
Well depth: 481
Source of depth data: other
Real time data flag: 0
Daily flow data end date: 0000-00-00
Peak flow data begin date: 0000-00-00
Peak flow data count: 0
Water quality data end date:1966-09-13
Ground water data begin date: 1923-05-01
Ground water data count: 1

Site no: 471424122333101
Latitude: 471424
Dec lat: 47.2398207
Coor meth: M
Latlong datum: NAD27
District: 53
County: 053
Land net: NE NW S09 T20N R02E W
Map scale: 24000
Altitude method: M
Altitude datum: NGVD29
Date construction: 19230501
Mean greenwich time offset: PST
Type of ground water site: Single well, other than collector or Ranney type
Aquifer: Not Reported
Hole depth: 481
Project number: Not Reported
Daily flow data begin date: 0000-00-00
Daily flow data count: 0
Peak flow data end date: 0000-00-00
Water quality data begin date: 1938-11-04
Water quality data count: 3
Ground water data end date: 1923-05-01

Ground-water levels, Number of Measurements: 1

Date	Feet below Surface	Feet to Sealevel
1923-05-01	-8	

9
SW
1/2 - 1 Mile
Higher

FED USGS USGS3271355

Agency cd:	USGS	Site no:	471357122315901
Site name:	20N/02E-10K01	Latitude:	471357
Longitude:	1223159	Dec lat:	47.23232045
Dec lon:	-122.53429245	Coor meth:	M
Coor accr:	S	Latlong datum:	NAD27
Dec latlong datum:	NAD83	District:	53
State:	53	County:	053
Country:	US	Land net:	NW SE S10 T20N R02E W
Location map:	STEILACOOM	Map scale:	24000
Altitude:	313	Altitude method:	M
Altitude accuracy:	10	Altitude datum:	NGVD29
Hydrologic:	Puget Sound. Washington. Area = 2550 sq.mi.		
Topographic:	Not Reported		
Site type:	Ground-water other than Spring	Date construction:	19050101
Date inventoried:	19600226	Mean greenwich time offset:	PST
Local standard time flag:	Y	Type of ground water site:	Single well, other than collector or Ranney type
Aquifer Type:	Not Reported	Aquifer:	Not Reported
Well depth:	61.3	Hole depth:	Not Reported
Source of depth data:	driller	Project number:	Not Reported
Real time data flag:	0	Daily flow data begin date:	0000-00-00
Daily flow data end date:	0000-00-00	Daily flow data count:	0
Peak flow data begin date:	0000-00-00	Peak flow data end date:	0000-00-00
Peak flow data count:	0	Water quality data begin date:	0000-00-00
Water quality data end date:	0000-00-00	Water quality data count:	0
Ground water data begin date:	1905-01-01	Ground water data end date:	1905-01-01
Ground water data count:	1		

Ground-water levels, Number of Measurements: 1

Date	Feet below Surface	Feet to Sealevel
1905-01-01		

Note: The site was dry (no water level recorded).

10
WSW
1/2 - 1 Mile
Lower

FED USGS USGS3271451

Agency cd:	USGS	Site no:	471412122321801
Site name:	20N/02E-10F01	Latitude:	471412
Longitude:	1223218	Dec lat:	47.23648707
Dec lon:	-122.53957042	Coor meth:	M
Coor accr:	S	Latlong datum:	NAD27
Dec latlong datum:	NAD83	District:	53
State:	53	County:	053
Country:	US	Land net:	SE NW S10 T20N R02E W
Location map:	STEILACOOM	Map scale:	24000
Altitude:	317	Altitude method:	M
Altitude accuracy:	10	Altitude datum:	NGVD29
Hydrologic:	Puget Sound. Washington. Area = 2550 sq.mi.		
Topographic:	Not Reported		
Site type:	Ground-water other than Spring	Date construction:	19400101
Date inventoried:	19580718	Mean greenwich time offset:	PST
Local standard time flag:	Y	Type of ground water site:	Single well, other than collector or Ranney type
Aquifer Type:	Not Reported	Aquifer:	Not Reported
Well depth:	Not Reported	Hole depth:	Not Reported
Source of depth data:	driller	Project number:	Not Reported
Real time data flag:	0	Daily flow data begin date:	0000-00-00
Daily flow data end date:	0000-00-00	Daily flow data count:	0
Peak flow data begin date:	0000-00-00	Peak flow data end date:	0000-00-00

Peak flow data count: 0
Water quality data end date:0000-00-00
Ground water data begin date: 1941-10-01
Ground water data count: 1
Water quality data begin date: 0000-00-00
Water quality data count: 0
Ground water data end date: 1941-10-01

Ground-water levels, Number of Measurements: 1

Date	Feet below Surface	Feet to Sealevel
1941-10-01	102	

11
SE
1/2 - 1 Mile
Lower

FED USGS USGS3271390

Agency cd:	USGS	Site no:	471401122304001
Site name:	20N/02E-11K01	Latitude:	471401
Longitude:	1223040	Dec lat:	47.23343179
Dec lon:	-122.51234736	Coor meth:	M
Coor accr:	S	Latlong datum:	NAD27
Dec latlong datum:	NAD83	District:	53
State:	53	County:	053
Country:	US	Land net:	NW SE S11 T20N R02E W
Location map:	STEILACOOM	Map scale:	24000
Altitude:	228	Altitude method:	M
Altitude accuracy:	10	Altitude datum:	NGVD29
Hydrologic:	Puget Sound. Washington. Area = 2550 sq.mi.		
Topographic:	Not Reported		
Site type:	Ground-water other than Spring	Date construction:	19010101
Date inventoried:	19600229	Mean greenwich time offset:	PST
Local standard time flag:	Y	Type of ground water site:	Single well, other than collector or Ranney type
Aquifer Type:	Not Reported	Aquifer:	Not Reported
Well depth:	200	Hole depth:	397
Source of depth data:	driller	Project number:	Not Reported
Real time data flag:	0	Daily flow data begin date:	0000-00-00
Daily flow data end date:	0000-00-00	Daily flow data count:	0
Peak flow data begin date:	0000-00-00	Peak flow data end date:	0000-00-00
Peak flow data count:	0	Water quality data begin date:	0000-00-00
Water quality data end date:	0000-00-00	Water quality data count:	0
Ground water data begin date:	1901-01-01	Ground water data end date:	1901-01-01
Ground water data count:	1		

Ground-water levels, Number of Measurements: 1

Date	Feet below Surface	Feet to Sealevel
1901-01-01		

Note: The site was flowing, but the head could not be measured without additional equipment.

12
South
1/2 - 1 Mile
Higher

FED USGS USGS3271271

Agency cd:	USGS	Site no:	471344122311601
Site name:	20N/02E-11N01	Latitude:	471344
Longitude:	1223116	Dec lat:	47.22870945
Dec lon:	-122.52234761	Coor meth:	M
Coor accr:	S	Latlong datum:	NAD27
Dec latlong datum:	NAD83	District:	53
State:	53	County:	053
Country:	US	Land net:	SW SW S11 T20N R02E W
Location map:	STEILACOOM	Map scale:	24000
Altitude:	315	Altitude method:	M
Altitude accuracy:	10	Altitude datum:	NGVD29
Hydrologic:	Puget Sound. Washington. Area = 2550 sq.mi.		
Topographic:	Not Reported		
Site type:	Ground-water other than Spring	Date construction:	19230926
Date inventoried:	19600226	Mean greenwich time offset:	PST
Local standard time flag:	Y	Type of ground water site:	Single well, other than collector or Ranney type
Aquifer Type:	Not Reported	Aquifer:	Not Reported
Well depth:	270	Hole depth:	Not Reported
Source of depth data:	driller	Project number:	Not Reported
Real time data flag:	0	Daily flow data begin date:	0000-00-00
Daily flow data end date:	0000-00-00	Daily flow data count:	0
Peak flow data begin date:	0000-00-00	Peak flow data end date:	0000-00-00
Peak flow data count:	0	Water quality data begin date:	0000-00-00
Water quality data end date:	0000-00-00	Water quality data count:	0
Ground water data begin date:	1930-01-01	Ground water data end date:	1930-01-01
Ground water data count:	1		

Ground-water levels, Number of Measurements: 1

Date	Feet below Surface	Feet to Sealevel
1930-01-01	90	

B13
ESE
1/2 - 1 Mile
Higher

WA WELLS **WAGRP0000000865**

Source Name:	WELL #9	Range:	02E
Township:	20	Section:	11
QTR Section:	NESE	Source Type:	WW
Source Use:	P	SP X:	1501610
SP Y:	700761	PWS Name:	FIRCREST, TOWN OF
PWS ID:	25150	Source:	09
Key ID:	2515009		

B14
ESE
1/2 - 1 Mile
Higher

WA WELLS **WAGRP0000000860**

Source Name:	WELL #2	Range:	02E
Township:	20	Section:	11
QTR Section:	NESE	Source Type:	WW
Source Use:	P	SP X:	1501610
SP Y:	700761	PWS Name:	FIRCREST, TOWN OF
PWS ID:	25150	Source:	04
Key ID:	2515004		

15
West
1/2 - 1 Mile
Lower

FED USGS **USGS3271551**

Agency cd:	USGS	Site no:	471426122323401
Site name:	20N/02E-10D01	Latitude:	471426
Longitude:	1223234	Dec lat:	47.24037592
Dec lon:	-122.54401504	Coor meth:	M
Coor accr:	S	Latlong datum:	NAD27
Dec latlong datum:	NAD83	District:	53
State:	53	County:	053
Country:	US	Land net:	NW NW S10 T20N R02E W
Location map:	STEILACOOM	Map scale:	24000
Altitude:	250	Altitude method:	M
Altitude accuracy:	10	Altitude datum:	NGVD29
Hydrologic:	Puget Sound. Washington. Area = 2550 sq.mi.		
Topographic:	Not Reported		
Site type:	Ground-water other than Spring	Date construction:	19390525
Date inventoried:	19600301	Mean greenwich time offset:	PST
Local standard time flag:	Y	Type of ground water site:	Single well, other than collector or Ranney type
Aquifer Type:	Not Reported	Aquifer:	Not Reported
Well depth:	26	Hole depth:	Not Reported
Source of depth data:	driller	Project number:	Not Reported
Real time data flag:	Not Reported	Daily flow data begin date:	Not Reported
Daily flow data end date:	Not Reported	Daily flow data count:	Not Reported
Peak flow data begin date:	Not Reported	Peak flow data end date:	Not Reported
Peak flow data count:	Not Reported	Water quality data begin date:	Not Reported
Water quality data end date:	Not Reported	Water quality data count:	Not Reported
Ground water data begin date:	Not Reported	Ground water data end date:	Not Reported
Ground water data count:	Not Reported		

Ground-water levels, Number of Measurements: 0

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation

Database	EDR ID Number
WA WELLS	WAGRP0000004670

16
ESE
1/2 - 1 Mile
Lower

Source Name:	WELL#'S 2,4,5,USGS	Range:	02E
Township:	20	Section:	11
QTR Section:	NESE	Source Type:	WF
Source Use:	P	SP X:	1501560
SP Y:	699429	PWS Name:	FIRCREST, TOWN OF
PWS ID:	25150	Source:	01
Key ID:	2515001		

17
ESE
1/2 - 1 Mile
Lower

FED USGS **USGS3271360**

Agency cd:	USGS	Site no:	471358122302201
Site name:	20N/02E-11J02	Latitude:	471358
Longitude:	1223021	Dec lat:	47.2325985
Dec lon:	-122.50706942	Coor meth:	M
Coor accr:	S	Latlong datum:	NAD27
Dec latlong datum:	NAD83	District:	53
State:	53	County:	053
Country:	US	Land net:	NE SE S11 T20N R02E W
Location map:	STEILACOOM	Map scale:	24000
Altitude:	280.1	Altitude method:	L
Altitude accuracy:	.1	Altitude datum:	NGVD29
Hydrologic:	Puget Sound. Washington. Area = 2550 sq.mi.		
Topographic:	Undulating		
Site type:	Ground-water other than Spring	Date construction:	19500501
Date inventoried:	19600229	Mean greenwich time offset:	PST
Local standard time flag:	Y	Type of ground water site:	Single well, other than collector or Ranney type
Aquifer Type:	Not Reported	Aquifer:	Not Reported
Well depth:	131	Hole depth:	312
Source of depth data:	reporting agency (generally USGS)	Project number:	WA29733
Real time data flag:	0	Daily flow data begin date:	0000-00-00
Daily flow data end date:	0000-00-00	Daily flow data count:	0
Peak flow data begin date:	0000-00-00	Peak flow data end date:	0000-00-00
Peak flow data count:	0	Water quality data begin date:	0000-00-00
Water quality data end date:	0000-00-00	Water quality data count:	0
Ground water data begin date:	1953-03-26	Ground water data end date:	1990-09-13
Ground water data count:	214		

Ground-water levels, Number of Measurements: 214

Date	Feet below Surface	Feet to Sealevel	Date	Feet below Surface	Feet to Sealevel
1990-09-13	61.75		1990-08-08	60.73	
1990-06-27	58.93		1990-04-16	60.14	
1990-01-24	61.17		1989-10-19	92.9	
1989-09-12	62.0		1989-08-22	61.4	
1989-06-20	59.68		1989-01-24	60.97	
1988-10-28	60.87				
1980-05-05	62.34				

Note: A nearby site that taps the same aquifer was being pumped.

Ground-water levels, continued.

Date	Feet below Surface	Feet to Sealevel
1980-05-02	62.76	
Note: A nearby site that taps the same aquifer was being pumped.		
1980-03-05	63.36	
Note: A nearby site that taps the same aquifer was being pumped.		
1980-01-14	64.08	
Note: A nearby site that taps the same aquifer was being pumped.		
1979-11-07	65.25	
Note: A nearby site that taps the same aquifer was being pumped.		
1979-09-10	65.66	
Note: The site was being pumped.		
1979-07-09	64.35	
Note: The site was being pumped.		
1979-05-09	62.13	
Note: The site was being pumped.		
1979-03-07	62.7	
1978-11-03	63.46	
1978-07-05	64.7	
1978-03-01	65.24	
1977-11-03	65.81	
1977-08-09	66.24	
1977-05-03	63.87	
1977-01-03	64.38	
1976-09-01	65.27	
1976-05-06	64.51	
1975-12-30	65.09	
1975-07-25	66.88	
1975-01-13	65.90	
1974-09-16	66.78	
1974-05-15	64.15	
1974-01-31	66.18	
1973-10-01	68.21	
1973-06-09	67.78	
1973-02-07	66.97	
1972-12-10	66.58	
1972-11-30	66.38	
1972-11-20	66.59	
1972-11-10	66.45	
1972-10-10	67.03	
1972-09-30	67.10	
1972-09-20	67.21	
1972-09-10	67.58	
1972-08-31	67.76	
1972-08-20	67.52	
1972-08-10	67.54	
1972-07-31	67.07	
1972-07-20	66.63	
1972-07-10	66.55	
1972-06-30	66.61	
1972-06-20	66.57	
1972-06-10	66.49	
1972-05-31	66.14	
1972-05-20	65.40	
1972-05-10	65.40	
1972-04-30	65.58	
1972-04-20	65.75	
1979-01-09	62.94	
1978-09-06	64.52	
1978-05-01	64.11	
1978-01-04	66.23	
1977-09-12	65.96	
1977-07-05	64.57	
1977-03-03	64.25	
1976-11-08	64.56	
1976-07-06	67.23	
1976-03-02	65.53	
1975-10-15	64.31	
1975-06-17	65.75	
1974-11-13	66.19	
1974-07-22	64.91	
1974-03-26	65.15	
1973-11-30	67.30	
1973-08-13	67.74	
1973-03-30	64.98	
1972-12-15	66.41	
1972-12-05	66.39	
1972-11-25	66.38	
1972-11-15	66.54	
1972-10-15	66.95	
1972-10-05	67.18	
1972-09-25	67.22	
1972-09-15	67.50	
1972-09-05	67.72	
1972-08-25	67.56	
1972-08-15	67.59	
1972-08-05	67.29	
1972-07-25	66.86	
1972-07-15	66.40	
1972-07-05	66.76	
1972-06-25	66.41	
1972-06-15	66.26	
1972-06-05	66.32	
1972-05-25	65.69	
1972-05-15	65.44	
1972-05-05	65.38	
1972-04-25	65.85	
1972-03-25	66.31	

Ground-water levels, continued.

Date	Feet below Surface	Feet to Sealevel
1972-03-20	66.17	
1972-03-10	65.98	
1972-02-29	65.96	
1972-02-20	66.13	
1972-02-10	65.97	
1972-01-31	66.02	
1972-01-20	66.01	
1972-01-10	66.04	
1971-12-31	66.58	
1971-12-20	66.43	
1971-12-10	66.60	
1971-11-30	66.82	
1971-11-20	66.70	
1971-11-10	66.79	
1971-10-31	66.32	
1971-10-20	66.72	
1971-10-10	66.77	
1971-09-30	67.04	
1971-08-31	67.39	
1971-08-20	67.28	
1971-08-10	67.06	
1971-07-31	66.64	
1971-07-20	66.30	
1971-07-10	65.87	
1971-06-30	65.77	
1971-06-20	65.84	
1971-06-10	65.72	
1971-05-31	65.63	
1971-05-20	65.22	
1971-05-10	65.12	
1971-04-30	64.92	
1971-04-20	65.08	
1971-04-10	65.48	
1971-03-31	65.93	
1971-03-20	66.00	
1971-03-11	65.93	
1971-02-15	66.43	
1971-02-05	66.37	
1971-01-25	66.09	
1971-01-15	65.84	
1971-01-05	66.11	
1970-12-25	66.18	
1970-12-15	65.84	
1970-12-08	66.53	
1964-02-05	60.79	
1964-01-21	61.01	
1964-01-07	61.61	
1963-12-24	61.43	
1963-12-10	62.06	
1963-11-26	61.80	
1963-11-12	62.09	
1963-10-28	61.94	
1963-10-11	61.5	
1963-09-26	61.38	
1963-09-10	62.58	
1972-03-15	66.27	
1972-03-05	65.96	
1972-02-25	66.15	
1972-02-15	65.83	
1972-02-05	66.05	
1972-01-25	66.02	
1972-01-15	66.08	
1972-01-05	66.43	
1971-12-25	66.53	
1971-12-15	66.84	
1971-12-05	66.53	
1971-11-26	67.06	
1971-11-15	66.95	
1971-11-05	66.61	
1971-10-25	66.34	
1971-10-15	66.60	
1971-10-05	66.82	
1971-09-05	67.18	
1971-08-25	67.35	
1971-08-15	67.15	
1971-08-05	66.77	
1971-07-25	66.33	
1971-07-15	65.88	
1971-07-05	65.82	
1971-06-25	65.70	
1971-06-15	65.86	
1971-06-05	65.73	
1971-05-25	65.28	
1971-05-15	64.93	
1971-05-05	64.88	
1971-04-25	64.95	
1971-04-15	65.26	
1971-04-05	65.38	
1971-03-25	65.48	
1971-03-15	66.55	
1971-02-20	66.63	
1971-02-10	66.27	
1971-01-31	66.11	
1971-01-20	66.02	
1971-01-10	65.76	
1970-12-31	66.28	
1970-12-20	65.97	
1970-12-10	66.14	
1964-02-14	60.31	
1964-01-28	60.98	
1964-01-14	61.40	
1963-12-31	61.50	
1963-12-18	61.63	
1963-12-03	61.97	
1963-11-19	61.88	
1963-11-04	62.24	
1963-10-21	61.7	
1963-10-04	61.3	
1963-09-17	61.69	
1963-08-27	61.77	

Ground-water levels, continued.

Date	Feet below Surface	Feet to Sealevel
1963-08-20	61.87	
1953-03-26	51	

Date	Feet below Surface	Feet to Sealevel
1963-08-16	62.1	

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS
RADON

AREA RADON INFORMATION

Federal EPA Radon Zone for PIERCE County: 3

Note: Zone 1 indoor average level > 4 pCi/L.
: Zone 2 indoor average level >= 2 pCi/L and <= 4 pCi/L.
: Zone 3 indoor average level < 2 pCi/L.

Federal Area Radon Information for Zip Code: 98466

Number of sites tested: 4

Area	Average Activity	% <4 pCi/L	% 4-20 pCi/L	% >20 pCi/L
Living Area - 1st Floor	0.150 pCi/L	100%	0%	0%
Living Area - 2nd Floor	Not Reported	Not Reported	Not Reported	Not Reported
Basement	0.600 pCi/L	100%	0%	0%

PHYSICAL SETTING SOURCE RECORDS SEARCHED

TOPOGRAPHIC INFORMATION

USGS 7.5' Digital Elevation Model (DEM)
Source: United States Geologic Survey
EDR acquired the USGS 7.5' Digital Elevation Model in 2002. 7.5-Minute DEMs correspond to the USGS 1:24,000- and 1:25,000-scale topographic quadrangle maps.

HYDROLOGIC INFORMATION

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 from the U.S. Fish and Wildlife Service.

HYDROGEOLOGIC INFORMATION

AQUIFLOW^R Information System
Source: EDR proprietary database of groundwater flow information
EDR has developed the AQUIFLOW Information System (AIS) to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted to regulatory authorities at select sites and has extracted the date of the report, hydrogeologically determined groundwater flow direction and depth to water table information.

GEOLOGIC INFORMATION

Geologic Age and Rock Stratigraphic Unit
Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - A digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

STATSGO: State Soil Geographic Database
Source: Department of Agriculture, Natural Resources Conservation Services
The U.S. Department of Agriculture's (USDA) Natural Resources Conservation Service (NRCS) leads the national Conservation Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. Soil maps for STATSGO are compiled by generalizing more detailed (SSURGO) soil survey maps.

ADDITIONAL ENVIRONMENTAL RECORD SOURCES

FEDERAL WATER WELLS

PWS: Public Water Systems
Source: EPA/Office of Drinking Water
Telephone: 202-564-3750
Public Water System data from the Federal Reporting Data System. A PWS is any water system which provides water to at least 25 people for at least 60 days annually. PWSs provide water from wells, rivers and other sources.

PWS ENF: Public Water Systems Violation and Enforcement Data
Source: EPA/Office of Drinking Water
Telephone: 202-564-3750
Violation and Enforcement data for Public Water Systems from the Safe Drinking Water Information System (SDWIS) after August 1995. Prior to August 1995, the data came from the Federal Reporting Data System (FRDS).

USGS Water Wells: USGS National Water Inventory System (NWIS)
This database contains descriptive information on sites where the USGS collects or has collected data on surface water and/or groundwater. The groundwater data includes information on wells, springs, and other sources of groundwater.

PHYSICAL SETTING SOURCE RECORDS SEARCHED

STATE RECORDS

Water Wells
Source: Department of Transportation
Telephone: 360-705-7444
Group A well location points in Washington State.

Kitsap County Water Wells in Washington
Source: Public Utility District No. 1 of Kitsap County
Telephone: 206-779-7656

RADON

Area Radon Information
Source: USGS
Telephone: 703-356-4020
The National Radon Database has been developed by the U.S. Environmental Protection Agency (USEPA) and is a compilation of the EPA/State Residential Radon Survey and the National Residential Radon Survey. The study covers the years 1986 - 1992. Where necessary data has been supplemented by information collected at private sources such as universities and research institutions.

EPA Radon Zones
Source: EPA
Telephone: 703-356-4020
Sections 307 & 309 of IRAA directed EPA to list and identify areas of U.S. with the potential for elevated indoor radon levels.

OTHER

Airport Landing Facilities: Private and public use landing facilities
Source: Federal Aviation Administration, 800-457-6656

Epicenters: World earthquake epicenters, Richter 5 or greater
Source: Department of Commerce, National Oceanic and Atmospheric Administration

The EDR-Radius Map
with GeoCheck®

Metal Marine Pilot, Inc.
2119 Mildred Street West
Fircrest, WA 98466

Inquiry Number: 369401.1s

May 13, 1999

Environmental Data Resources, Inc.
an edr company

The Source For Environmental Risk Management Data

3530 Post Road
Southport, Connecticut 06490

Nationwide Customer Service

Telephone: 1-800-352-0050
Fax: 1-800-231-6802
Internet: www.edrnet.com

TABLE OF CONTENTS

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

EXECUTIVE SUMMARY

A search of available environmental records was conducted by Environmental Data Resources, Inc. (EDR). The report meets the government records search requirements of ASTM Standard Practice for Environmental Site Assessments, E 1527-97. Search distances are per ASTM standard or custom distances requested by the user.

The address of the subject property for which the search was intended is:

2119 MILDRED STREET WEST
FIRCREST, WA 98466

No mapped sites were found in EDR's search of available ("reasonably ascertainable ") government records either on the subject property or within the ASTM E 1527-97 search radius around the subject property for the following Databases:

NPL:	National Priority List
Delisted NPL:	NPL Deletions
RCRIS-TSD:	Resource Conservation and Recovery Information System
CSCSL:	CSCSL
CERCLIS:	Comprehensive Environmental Response, Compensation, and Liability Information System
CERC-NFRAP:	Comprehensive Environmental Response, Compensation, and Liability Information System
CORRACTS:	Corrective Action Report
RAATS:	RCRA Administrative Action Tracking System
HMIRS:	Hazardous Materials Information Reporting System
PADS:	PCB Activity Database System
ERNS:	Emergency Response Notification System
FINDS:	Facility Index System/Facility Identification Initiative Program Summary Report
TRIS:	Toxic Chemical Release Inventory System
NPL Lien:	NPL Liens
TSCA:	Toxic Substances Control Act
MLTS:	Material Licensing Tracking System
ROD:	ROD
CONSENT:	Superfund (CERCLA) Consent Decrees
Air Emissions:	Wa Air Emissions (EMI)
Coal Gas:	Former Manufactured gas (Coal Gas) Sites.
MINES:	Mines Master Index File

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

Search Results:

Search results for the subject property and the search radius, are listed below:

Subject Property:

The subject property was identified in the following government records. For more information on this property see page 9 of the attached EDR Radius Map report:

Site	Database(s)	EPA ID
METAL MARINE PILOT, INC. 2119 MILDRED ST W TACOMA, WA 98466	UST	N/A

EXECUTIVE SUMMARY

Surrounding Properties:

Elevations have been determined from the USGS 1 degree Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified. EDR's definition of a site with an elevation equal to the subject property includes a tolerance of -10 feet. Sites with an elevation equal to or higher than the subject property have been differentiated below from sites with an elevation lower than the subject property (by more than 10 feet). Page numbers and map identification numbers refer to the EDR Radius Map report where detailed data on individual sites can be reviewed.

Sites listed in ***bold italics*** are in multiple databases.

SWF/LF: The Solid Waste Facilities/Landfill Sites records typically contain an inventory of solid waste disposal facilities or landfills in a particular state. The data come from the Department of Ecology's Solid Waste Facilities Handbook.

A review of the SWF/LF list, as provided by EDR, and dated 07/01/1998 has revealed that there is 1 SWF/LF site within approximately 0.5 miles of the subject property.

Lower Elevation	Address	Dist / Dir	Map ID	Page
UNIVERSITY PLACE REFUSE SERVIC	***2809 ROCHESTER ST W***	***1/4 - 1/2 SW***	***16***	***19***

LUST: The Leaking Underground Storage Tank Incident Reports contain an inventory of reported leaking underground storage tank incidents. The data come from the Department of Ecology's Leaking Underground Storage Tanks Site List.

A review of the LUST list, as provided by EDR, and dated 01/14/1999 has revealed that there are 5 LUST sites within approximately 0.5 miles of the subject property.

Equal/Higher Elevation	Address	Dist / Dir	Map ID	Page
MINIT-LUBE #1112	***2218 MILDRED ST W***	***0 - 1/8 WNW***	***B4***	***10***
TOWNE CLEANERS	***1923 MILDRED ST W***	***1/8 - 1/4 NNW***	***C10***	***14***
BP SERVICE STATION 11077	***6622 19TH ST W***	***1/8 - 1/4 NNW***	***C11***	***15***
WESTMARK CONSTRUCTION	***7010 27TH ST W***	***1/4 - 1/2 SW***	***12***	***16***

Lower Elevation	Address	Dist / Dir	Map ID	Page
UNIVERSITY PLACE REFUSE SERVIC	***2809 ROCHESTER ST W***	***1/4 - 1/2 SW***	***16***	***19***

UST: The Underground Storage Tank database contains registered USTs. USTs are regulated under Subtitle I of the Resource Conservation and Recovery Act (RCRA). The data come from the Department of Ecology's Statewide UST Site/Tank Report.

A review of the UST list, as provided by EDR, and dated 01/14/1999 has revealed that there are 5 UST sites within approximately 0.25 miles of the subject property.

Equal/Higher Elevation	Address	Dist / Dir	Map ID	Page
LELAND M MCARTHUR	2305 MILDRED ST W	0 - 1/8 WSW	A2	9
MINIT-LUBE #1112	***2218 MILDRED ST W***	***0 - 1/8 WNW***	***B4***	***10***
FIRCREST GOLF CLUB	6520 REGENTS BLVD	0 - 1/8 SSE	7	12
TOWNE CLEANERS	***1923 MILDRED ST W***	***1/8 - 1/4 NNW***	***C10***	***14***
BP SERVICE STATION 11077	***6622 19TH ST W***	***1/8 - 1/4 NNW***	***C11***	***15***

RCRIS: The Resource Conservation and Recovery Act database includes selected information on sites that generate, store, treat, or dispose of hazardous waste as defined by the Act. The source of this database is the U.S. EPA.

A review of the RCRIS-SQG list, as provided by EDR, and dated 03/01/1999 has revealed that there are 4 RCRIS-SQG sites within approximately 0.25 miles of the subject property.

Equal/Higher Elevation	Address	Dist / Dir	Map ID	Page
Y PAY MOR CLEANERS TACOMA	*2310 MILDRED ST W*	*0 - 1/8 WSW*	*A3*	*10*
QUAKER STATE MINIT LUBE INC 11	*2218 MILDRED ST W*	*0 - 1/8 WNW*	*B5*	*11*
TACOMA DRAPERY TOWNE CLEANER	*1923 MILDRED W*	*1/8 - 1/4 NNW*	*C9*	*13*
BP SERVICE STATION 11077	*6622 19TH ST W*	*1/8 - 1/4 NNW*	*C11*	*15*

RCRIS: The Resource Conservation and Recovery Act database includes selected information on sites that generate, store, treat, or dispose of hazardous waste as defined by the Act. The source of this database is the U.S. EPA.

A review of the RCRIS-LQG list, as provided by EDR, and dated 03/01/1999 has revealed that there is 1 RCRIS-LQG site within approximately 0.25 miles of the subject property.

Equal/Higher Elevation	Address	Dist / Dir	Map ID	Page
PUGET CORP	*2101 MILDRED ST W*	*0 - 1/8 NNW*	*8*	*13*

ICR: These are remedial action reports Ecology has received from either the owner or operator of the site. These actions have been conducted without department oversight or approval and are not under an order or decree.

A review of the WA ICR list, as provided by EDR, has revealed that there are 5 WA ICR sites within approximately 0.5 miles of the subject property.

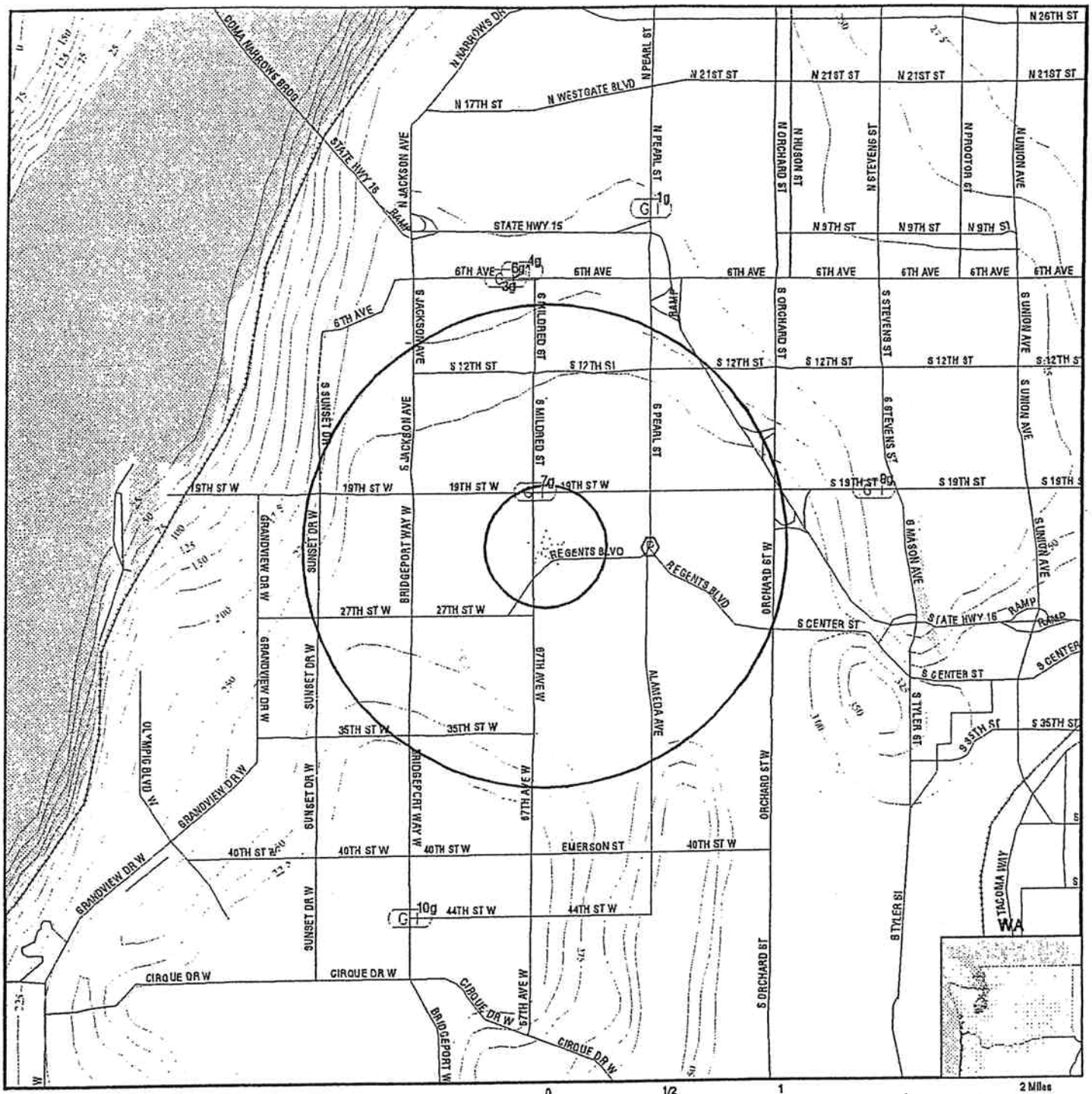
Equal/Higher Elevation	Address	Dist / Dir	Map ID	Page
Q LUBE	2218 MILDRED ST W	0 - 1/8 WNW	B6	12
WESTMARK CONSTRUCTION	*7010 27TH ST W*	*1/4 - 1/2 SW*	*12*	*16*
EXXON #7 7017	1033 REGENTS BLVD	1/4 - 1/2 E	D13	18
EXXON #7 7017	1033 REGENTS BLVD	1/4 - 1/2 E	D14	19
EXXON #7 7017	1033 REGENTS BLVD	1/4 - 1/2 E	D15	19

EXECUTIVE SUMMARY

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

Site Name	Database(s)
NARROWS TACKLE AND MARINE, INC.	UST,LUST
BP #11077	WA ICR
SOUTHLAND STORE #24520	WA ICR
CHEVRON #9 4369	WA ICR
CHEVRON #9 4369	WA ICR
WSDOT - TACOMA NARROWS MAINTENANCE YARD	WA ICR

TOPOGRAPHIC MAP - 369401.1s - Creative Environmental



- Major Roads
- Contour Lines
- Waterways
- Earthquake epicenter, Richter 5 or greater
- (F) Closest Federal Well in quadrant
- [S] Closest State Well in quadrant
- (P) Closest Public Water Supply Well
- (HD) Closest Hydrogeological Data
- Groundwater Flow Direction
- (GI) Indeterminate Groundwater Flow at Location
- (GV) Groundwater Flow Varies at Location

TARGET PROPERTY:	Metal Marine Pilot, Inc.	CUSTOMER:	Creative Environmental
ADDRESS:	2119 Mildred Street West	CONTACT:	Stephen Spencer
CITY/STATE/ZIP:	Fircrest WA 98466	INQUIRY #:	369401.1s
LAT/LONG:	47.2395 / 122.5237	DATE:	May 13, 1999 7:31 pm

GEOCHECK VERSION 2.1
SUMMARY

TARGET PROPERTY COORDINATES

Latitude (North):	47.239498 - 47° 14' 22.2"
Longitude (West):	122.523697 - 122° 31' 25.3"
Universal Transverse Mercator:	Zone 10
UTM X (Meters):	536049.9
UTM Y (Meters):	5231671.0

USGS TOPOGRAPHIC MAP ASSOCIATED WITH THIS SITE

Target Property:	2447122-B5 STEILACOOM, WA

GEOLOGIC AGE IDENTIFICATION†

Geologic Code:	Q
Era:	Cenozoic
System:	Quaternary
Series:	Quaternary

ROCK STRATIGRAPHIC UNIT†

Category:	Stratifed Sequence

GROUNDWATER FLOW INFORMATION

Groundwater flow direction for a particular site is best determined by a qualified environmental professional using site-specific well data. If such data is not reasonably ascertainable, it may be necessary to rely on other sources of information, including well data collected on nearby properties, regional groundwater flow information (from deep aquifers), or surface topography.‡

AQUIFLOW™** Search Radius: 2.000 Miles

MAP ID	DISTANCE FROM TP	DIRECTION FROM TP	GENERAL DIRECTION GROUNDWATER FLOW
2g	1 - 2 Miles	North	SW
3g	1 - 2 Miles	North	SW
4g	1 - 2 Miles	North	Not Reported

For additional site information, refer to GeoCheck Appendix.

General Topographic Gradient at Target Property: General WSW
General Hydrogeologic Gradient at Target Property: No hydrogeologic data available.

† Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - A digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).
‡ U.S. EPA Ground Water Handbook, Vol I: Ground Water and Contamination, Office of Research and development EPA/625/6-90/016a,Chapter 4, page 78, September 1990.
** EDR AQUIFLOW™ Information System of hydrogeologicaly determined groundwater flow directions at specific locations. See the date pages at the end of this report for a complete description.

GEOCHECK VERSION 2.1
SUMMARY

Site-Specific Hydrogeological Data*:
Search Radius: 2.0 miles
Status: Not found

FEDERAL DATABASE WELL INFORMATION

WELL QUADRANT	DISTANCE FROM TP	LITHOLOGY	DEPTH TO WATER TABLE
NO WELLS FOUND			

STATE DATABASE WELL INFORMATION

WELL QUADRANT	DISTANCE FROM TP
Northern	>2 Miles

PUBLIC WATER SUPPLY SYSTEM INFORMATION

Searched by Nearest PWS.
NOTE: PWS System location is not always the same as well location.

PWS Name: VERA VISTA APT W S
TACOMA, WA 98466
Location Relative to TP: 1/4 - 1/2 Mile East
PWS currently has or has had major violation(s) or enforcement: No

AREA RADON INFORMATION

EPA Radon Zone for PIERCE County: 3

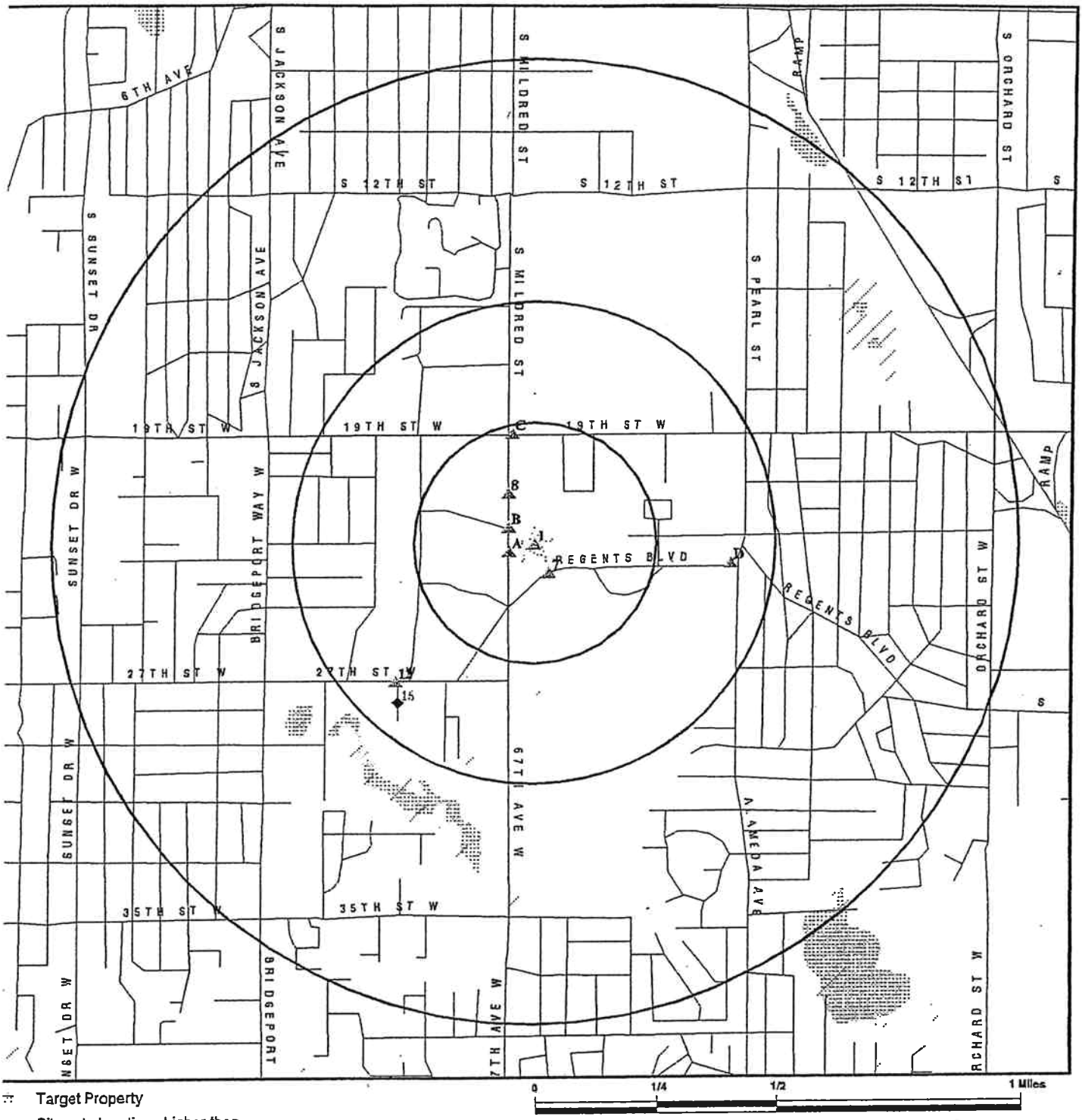
Note: Zone 1 indoor average level > 4 pCi/L.
: Zone 2 indoor average level >= 2 pCi/L and <= 4 pCi/L.
: Zone 3 indoor average level < 2 pCi/L.

Zip Code: 98466

Number of sites tested: 4

Area	Average Activity	% <4 pCi/L	% 4-20 pCi/L	% >20 pCi/L
Living Area - 1st Floor	0.150 pCi/L	100%	0%	0%
Living Area - 2nd Floor	Not Reported	Not Reported	Not Reported	Not Reported
Basement	0.600 pCi/L	100%	0%	0%

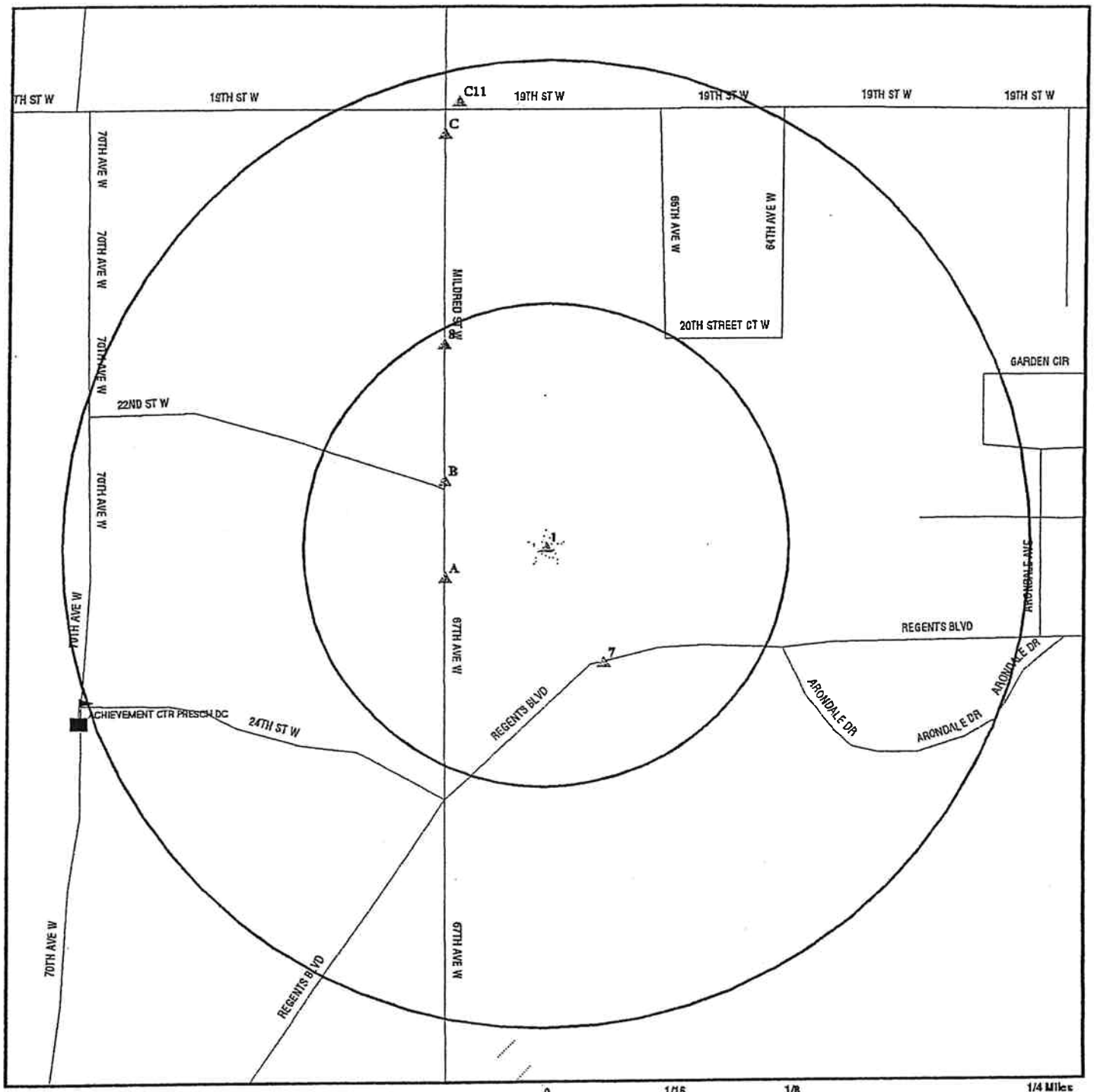
OVERVIEW MAP - 369401.1s - Creative Environmental



- Target Property
- Sites at elevations higher than or equal to the target property
- Sites at elevations lower than the target property
- Coal Gasification Sites (if requested)
- National Priority List Sites
- Landfill Sites
- Power transmission lines
- Oil & Gas pipelines
- 100-year flood zone
- 500-year flood zone
- Wetlands per National Wetlands Inventory (1994)

TARGET PROPERTY:	Metal Marine Pilot, Inc.	CUSTOMER:	Creative Environmental
ADDRESS:	2119 Mildred Street West	CONTACT:	Stephen Spencer
CITY/STATE/ZIP:	Fircrest WA 98466	INQUIRY #:	369401.1s
LAT/LONG:	47.2395 / 122.5237	DATE:	May 13, 1999 7:26 pm

DETAIL MAP - 369401.1s - Creative Environmental



- Target Property
- Sites at elevations higher than or equal to the target property
- Sites at elevations lower than the target property
- Coal Gasification Sites (if requested)
- Sensitive Receptors
- National Priority List Sites
- Landfill Sites
- Power transmission lines
- Oil & Gas pipelines
- 100-year flood zone
- 500-year flood zone

TARGET PROPERTY:	Metal Marine Pilot, Inc.	CUSTOMER:	Creative Environmental
ADDRESS:	2119 Mildred Street West	CONTACT:	Stephen Spencer
CITY/STATE/ZIP:	Fircrest WA 98466	INQUIRY #:	369401.1s
LAT/LONG:	47.2395 / 122.5237	DATE:	May 13, 1999 7:28 pm

MAP FINDINGS SUMMARY SHOWING ALL SITES

Database	Target Property	Search Distance (Miles)	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
NPL		1.000	0	0	0	0	NR	0
Delisted NPL		TP	NR	NR	NR	NR	NR	0
RCRIS-TSD		0.500	0	0	0	NR	NR	0
CSCSL		1.000	0	0	0	0	NR	0
CERCLIS		0.500	0	0	0	NR	NR	0
CERC-NFRAP		TP	NR	NR	NR	NR	NR	0
CORRACTS		1.000	0	0	0	0	NR	0
State Landfill		0.500	0	0	1	NR	NR	1
LUST		0.500	1	2	2	NR	NR	5
UST	X	0.250	3	2	NR	NR	NR	5
RAATS		TP	NR	NR	NR	NR	NR	0
RCRIS Sm. Quan. Gen.		0.250	2	2	NR	NR	NR	4
RCRIS Lg. Quan. Gen.		0.250	1	0	NR	NR	NR	1
HMIRS		TP	NR	NR	NR	NR	NR	0
PADS		TP	NR	NR	NR	NR	NR	0
ERNS		TP	NR	NR	NR	NR	NR	0
FINDS		TP	NR	NR	NR	NR	NR	0
TRIS		TP	NR	NR	NR	NR	NR	0
NPL Liens		TP	NR	NR	NR	NR	NR	0
TSCA		TP	NR	NR	NR	NR	NR	0
MLTS		TP	NR	NR	NR	NR	NR	0
ROD		1.000	0	0	0	0	NR	0
CONSENT		1.000	0	0	0	0	NR	0
Wa Air Emissions (EMI)		TP	NR	NR	NR	NR	NR	0
WA ICR		0.500	1	0	4	NR	NR	5
Coal Gas		1.000	0	0	0	0	NR	0
MINES		0.250	0	0	NR	NR	NR	0

TP = Target Property

NR = Not Requested at this Search Distance

* Sites may be listed in more than one database

MAP FINDINGS SUMMARY SHOWING ONLY SITES HIGHER THAN OR THE SAME ELEVATION AS TP

Database	Target Property	Search Distance (Miles)	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
NPL		1.000	0	0	0	0	NR	0
Delisted NPL		TP	NR	NR	NR	NR	NR	0
RCRIS-TSD		0.500	0	0	0	NR	NR	0
CSCSL		1.000	0	0	0	0	NR	0
CERCLIS		0.500	0	0	0	NR	NR	0
CERC-NFRAP		TP	NR	NR	NR	NR	NR	0
CORRACTS		1.000	0	0	0	0	NR	0
State Landfill		0.500	0	0	0	NR	NR	0
LUST		0.500	1	2	1	NR	NR	4
UST	X	0.250	3	2	NR	NR	NR	5
RAATS		TP	NR	NR	NR	NR	NR	0
RCRIS Sm. Quan. Gen.		0.250	2	2	NR	NR	NR	4
RCRIS Lg. Quan. Gen.		0.250	1	0	NR	NR	NR	1
HMIRS		TP	NR	NR	NR	NR	NR	0
PADS		TP	NR	NR	NR	NR	NR	0
ERNS		TP	NR	NR	NR	NR	NR	0
FINDS		TP	NR	NR	NR	NR	NR	0
TRIS		TP	NR	NR	NR	NR	NR	0
NPL Liens		TP	NR	NR	NR	NR	NR	0
TSCA		TP	NR	NR	NR	NR	NR	0
MLTS		TP	NR	NR	NR	NR	NR	0
ROD		1.000	0	0	0	0	NR	0
CONSENT		1.000	0	0	0	0	NR	0
Wa Air Emissions (EMI)		TP	NR	NR	NR	NR	NR	0
WA ICR		0.500	1	0	4	NR	NR	5
Coal Gas		1.000	0	0	0	0	NR	0
MINES		0.250	0	0	NR	NR	NR	0

TP = Target Property

NR = Not Requested at this Search Distance

* Sites may be listed in more than one database

Map ID / Direction / Distance / Distance (ft.) / Elevation	Site	Database(s)	EDR ID Number / EPA ID Number

Coal Gas Site Search: No site was found in a search of Real Property Scan's ENVIROHAZ database.

1
Target Property

METAL MARINE PILOT, INC.
2119 MILDRED ST W
TACOMA, WA 98466

UST | **U003354887** / **N/A**

UST:

Facility ID:	5902
Install Date:	12/31/64
Capacity:	111 to 1,100 Gallons
Status:	Closed in Place
Tank Name:	4
Tank Material:	Not reported
Substance:	Not reported
Compartment #:	1
Ecology Region:	South Western

Facility ID:	5902
Install Date:	6/1/74
Capacity:	111 to 1,100 Gallons
Status:	Removed
Tank Name:	1
Tank Material:	OTHER
Substance:	KEROSENE
Compartment #:	1
Ecology Region:	South Western

Facility ID:	5902
Install Date:	12/31/64
Capacity:	111 to 1,100 Gallons
Status:	Exempt
Tank Name:	3
Tank Material:	Steel-Unprotected
Substance:	Not reported
Compartment #:	1
Ecology Region:	South Western

Facility ID:	5902
Install Date:	6/1/74
Capacity:	111 to 1,100 Gallons
Status:	Removed
Tank Name:	2
Tank Material:	Steel-Unprotected
Substance:	Not reported
Compartment #:	1
Ecology Region:	South Western

A2
WSW
< 1/8
291
Higher

LELAND M MCARTHUR
2305 MILDRED ST W
TACOMA, WA 98466

UST | **U003352666** / **N/A**

LELAND M MCARTHUR (Continued) **U003352666**

UST:
Facility ID: 101518
Install Date: 12/31/64
Capacity: Not reported
Status: Removed
Tank Name: 1-8000
Tank Material: Not reported
Substance: LEADED GASOLINE
Compartment #: 1
Ecology Region: South Western

Facility ID: 101518
Install Date: 12/31/64
Capacity: Not reported
Status: Removed
Tank Name: 2-4000
Tank Material: Not reported
Substance: LEADED GASOLINE
Compartment #: 1
Ecology Region: South Western

Facility ID: 101518
Install Date: 12/31/64
Capacity: Not reported
Status: Removed
Tank Name: 3-8000
Tank Material: Not reported
Substance: LEADED GASOLINE
Compartment #: 1
Ecology Region: South Western

A3
WSW
< 1/8
297
Higher

Y PAY MOR CLEANERS TACOMA
2310 MILDRED ST W
TACOMA, WA 98466

RCRIS-SQG 1000160956
FINDS WAD981764004

RCRIS:
Owner: Y PAY MOR CLEANERS
(360) 555-1212
Contact: LOU PARENT
(253) 564-6000
Record Date: Not reported
Classification: Not reported
Used Oil Recyc: No
Violation Status: No violations found

B4
WNW
< 1/8
336
Higher

MINIT-LUBE #1112
2218 MILDRED ST W
TACOMA, WA 98466

UST U003355163
LUST N/A

MINIT-LUBE #1112 (Continued) **U003355163**

LUST:

Facility ID:	6792	Ecology Region:	South Western
Release ID:	5692	Release Date:	04/04/95
Release Status:	REPORTED CLEANED UP	Status Date:	05/04/95
Alternate Name:	MINIT-LUBE #1112		
Affected Media:	SOIL		

Facility ID:	6792	Ecology Region:	South Western
Release ID:	5692	Release Date:	04/04/95
Release Status:	CLEANUP STARTED	Status Date:	04/04/95
Alternate Name:	MINIT-LUBE #1112		
Affected Media:	SOIL		

UST:

Facility ID:	6792
Install Date:	6/1/82
Capacity:	1,101 TO 2,000 GALLONS
Status:	REMOVED
Tank Name:	1
Tank Material:	Steel-Unprotected
Substance:	MOTOR OIL
Compartment #:	1
Ecology Region:	South Western

Facility ID:	6792
Install Date:	6/1/82
Capacity:	1,101 TO 2,000 GALLONS
Status:	REMOVED
Tank Name:	2
Tank Material:	Steel-Unprotected
Substance:	MOTOR OIL
Compartment #:	1
Ecology Region:	South Western

Facility ID:	6792
Install Date:	6/1/82
Capacity:	111 to 1,100 Gallons
Status:	REMOVED
Tank Name:	3
Tank Material:	Steel-Unprotected
Substance:	USED OIL/WASTE OIL
Compartment #:	1
Ecology Region:	South Western

B5 **QUAKER STATE MINIT LUBE INC 11** **RCRIS-SQG 1000838645**
WNW **2218 MILDRED ST W** **FINDS WAD988514360**
< 1/8 **TACOMA, WA 98466**
336
Higher

QUAKER STATE MINIT LUBE INC 11 (Continued) **1000838645**

RCRIS:
Owner: QUAKER STATE MINIT LUBE INC
(360) 555-1212
Contact: LEE LAWRENCE
(206) 527-5200
Record Date: 08/06/1993
Classification: Not reported
Used Oil Recyc: No
Violation Status: No violations found

B6 **Q LUBE** **WA ICR** **S103508769**
WNW **2218 MILDRED ST W** **N/A**
< 1/8 **TACOMA, WA 98466**
336
Higher

WA ICR:

Date Ecology Received Report:	05/04/1995
Contaminants Found at Site:	Petroleum products
Media Contaminated:	Soil
Cause of Contamination:	Tank
Region:	South Western
Type of Report Ecology Received:	Final cleanup report
Site Register Issue:	93-50
County Code:	27

---

7 **FIRCREST GOLF CLUB** **UST** **U003353880**
SSE **6520 REGENTS BLVD** **N/A**
< 1/8 **TACOMA, WA 98466**
353
Higher

UST:

Facility ID:	2475
Install Date:	Not reported
Capacity:	Not reported
Status:	REMOVED
Tank Name:	3
Tank Material:	Not reported
Substance:	ALCOHOL BLEND GASOLINE
Compartment #:	1
Ecology Region:	South Western

Facility ID:	2475
Install Date:	6/15/89
Capacity:	111 to 1,100 Gallons
Status:	REMOVED
Tank Name:	2
Tank Material:	Coated Steel
Substance:	Not reported
Compartment #:	1
Ecology Region:	South Western

FIRCREST GOLF CLUB (Continued) **U003353880**

Facility ID: 2475
Install Date: 12/31/64
Capacity: 111 to 1,100 Gallons
Status: Removed
Tank Name: 1
Tank Material: Steel-Unprotected
Substance: UNLEADED GASOLINE
Compartment #: 1
Ecology Region: South Western

Facility ID: 2475
Install Date: 6/15/89
Capacity: 111 to 1,100 Gallons
Status: REMOVED
Tank Name: 1R
Tank Material: Steel-Unprotected
Substance: UNLEADED GASOLINE
Compartment #: 1
Ecology Region: South Western

8
NNW
< 1/8
624
Higher

PUGET CORP
2101 MILDRED ST W
TACOMA, WA 98466

RCRIS-LQG **1000223435**
TRIS **WAD009242090**

RCRIS:
Owner: LEGGETT & PLATT INC
(417) 358-8131

Contact: TOM DUNCAN
(253) 564-3632

Record Date: 12/31/1997

Classification: Large Quantity Generator

BIENNIAL REPORTS:
Last Biennial Reporting Year: 1995

Waste	Quantity (Lbs)	Waste	Quantity (Lbs)
D001	3491.40	D008	3491.40
D018	3491.40	D039	3491.40

Used Oil Recyc: No

Violation Status: No violations found

C9
NNW
1/8-1/4
1153
Higher

TACOMA DRAPERY TOWNE CLEANER
1923 MILDRED W
TACOMA, WA 98466

RCRIS-SQG **1000334209**
FINDS **WAD027537984**

TACOMA DRAPERY TOWNE CLEANER (Continued) **1000334209**

RCRIS:
Owner: TACOMA DRAPERY TOWNE CLEANER
(360) 555-1212
Contact: JUNG LEE
(253) 565-0777
Record Date: Not reported
Classification: Not reported
Used Oil Recyc: No
Violation Status: No violations found

C10 NNW 1/8-1/4 1161 Higher **TOWNE CLEANERS**
1923 MILDRED ST W
TACOMA, WA 98466

UST **U003353560**
LUST **N/A**

LUST:

Facility ID:	1292	Ecology Region:	South Western
Release ID:	393018	Release Date:	04/05/93
Release Status:	AWAITING CLEANUP	Status Date:	04/05/93
Alternate Name:	TOWNE CLEANERS/SEE ALSO: PACE INDUSTRIES		
Affected Media:	SOIL		

UST:
Facility ID: 1292
Install Date: 12/31/64
Capacity: Not reported
Status: Closed in Place
Tank Name: 1
Tank Material: Steel-Unprotected
Substance: Not reported
Compartment #: 1
Ecology Region: South Western

Facility ID: 1292
Install Date: 12/31/64
Capacity: Not reported
Status: Closed in Place
Tank Name: 2
Tank Material: Steel-Unprotected
Substance: Not reported
Compartment #: 1
Ecology Region: South Western

Facility ID: 1292
Install Date: 12/31/64
Capacity: Not reported
Status: Closed in Place
Tank Name: 3
Tank Material: Steel-Unprotected
Substance: Not reported
Compartment #: 1
Ecology Region: South Western

Map ID / Direction / Distance / Distance (ft.) / Elevation	Site	Database(s)	EDR ID Number / EPA ID Number
C11 NNW 1/8-1/4 1237 Higher	**BP SERVICE STATION 11077** **6622 19TH ST W** **TACOMA, WA 98466**	**RCRIS-SQG** **FINDS** **UST** **LUST**	**1000659068** **WAD988487336**

RCRIS:

Owner: TOSCO CORPORATION
(602) 497-0600

Contact: TOM DUMONT
(510) 277-2319

Record Date: 12/31/1997

Classification: Not reported

Used Oil Recyc: No

Violation Status: No violations found

LUST:

Facility ID: 8683
Release ID: 1369
Release Status: CLEANUP STARTED
Alternate Name: BP 11077
Affected Media: SOIL
Ecology Region: South Western
Release Date: 02/12/90
Status Date: 10/24/95

UST:

Facility ID: 8683
Install Date: 12/31/64
Capacity: Not reported
Status: Removed
Tank Name: DSL
Tank Material: Steel-Unprotected
Substance: Not reported
Compartment #: 1
Ecology Region: South Western

Facility ID: 8683
Install Date: 12/31/64
Capacity: Not reported
Status: Removed
Tank Name: NOL
Tank Material: Steel-Unprotected
Substance: UNLEADED GASOLINE
Compartment #: 1
Ecology Region: South Western

Facility ID: 8683
Install Date: 12/31/64
Capacity: Not reported
Status: Removed
Tank Name: REG-1
Tank Material: Steel-Unprotected
Substance: LEADED GASOLINE
Compartment #: 1
Ecology Region: South Western

BP SERVICE STATION 11077 (Continued) **1000659068**

Facility ID: 8683
Install Date: 12/31/64
Capacity: Not reported
Status: Removed
Tank Name: REG-2
Tank Material: Steel-Unprotected
Substance: LEADED GASOLINE
Compartment #: 1
Ecology Region: South Western

Facility ID: 8683
Install Date: 12/31/64
Capacity: Not reported
Status: Removed
Tank Name: SNL
Tank Material: Steel-Unprotected
Substance: UNLEADED GASOLINE
Compartment #: 1
Ecology Region: South Western

Facility ID: 8683
Install Date: 1/1/77
Capacity: 10,000 TO 19,999 GALLONS
Status: Operational
Tank Name: 2
Tank Material: Steel-Unprotected
Substance: LEADED GASOLINE
Compartment #: 1
Ecology Region: South Western

Facility ID: 8683
Install Date: 1/1/77
Capacity: 10,000 TO 19,999 GALLONS
Status: Operational
Tank Name: 3
Tank Material: Steel-Unprotected
Substance: UNLEADED GASOLINE
Compartment #: 1
Ecology Region: South Western

Facility ID: 8683
Install Date: 1/1/77
Capacity: 10,000 TO 19,999 GALLONS
Status: Operational
Tank Name: 1
Tank Material: Fiberglass Reinforced Plastic
Substance: UNLEADED GASOLINE
Compartment #: 1
Ecology Region: South Western

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12 **WESTMARK CONSTRUCTION** **UST** **U003355804**
SW **7010 27TH ST W** **LUST** **N/A**
1/4-1/2 **TACOMA, WA 98466** **WA ICR**
2143
Higher

WESTMARK CONSTRUCTION (Continued) **U003355804**

LUST:

Facility ID:	9182	Ecology Region:	South Western
Release ID:	4234	Release Date:	02/01/93
Release Status:	REPORTED CLEANED UP	Status Date:	02/01/93
Alternate Name:	MERRIT NELSON COMPANY		
Affected Media:	SOIL		

Facility ID:	9182	Ecology Region:	South Western
Release ID:	4234	Release Date:	02/01/93
Release Status:	CLEANUP STARTED	Status Date:	11/25/92
Alternate Name:	MERRIT NELSON COMPANY		
Affected Media:	SOIL		

WA ICR:

Date Ecology Received Report:	02/01/1993
Contaminants Found at Site:	Petroleum products
Media Contaminated:	Soil
Cause of Contamination:	Tank
Region:	South Western
Type of Report Ecology Received:	Final cleanup report
Site Register Issue:	92-44
County Code:	27

UST:

Facility ID:	9182
Install Date:	1/1/74
Capacity:	Not reported
Status:	Removed
Tank Name:	1ASPHALT
Tank Material:	Not reported
Substance:	Not reported
Compartment #:	1
Ecology Region:	South Western

Facility ID:	9182
Install Date:	12/31/64
Capacity:	Not reported
Status:	Removed
Tank Name:	D-201
Tank Material:	Steel-Unprotected
Substance:	Not reported
Compartment #:	1
Ecology Region:	South Western

Facility ID:	9182
Install Date:	12/31/64
Capacity:	Not reported
Status:	Removed
Tank Name:	G-103
Tank Material:	Steel-Unprotected
Substance:	LEADED GASOLINE
Compartment #:	1
Ecology Region:	South Western

WESTMARK CONSTRUCTION (Continued) **U003355804**

Facility ID: 9182
Install Date: 12/31/64
Capacity: 111 to 1,100 Gallons
Status: Removed
Tank Name: D-202
Tank Material: Steel-Unprotected
Substance: Not reported
Compartment #: 1
Ecology Region: South Western

Facility ID: 9182
Install Date: 12/31/64
Capacity: 111 to 1,100 Gallons
Status: Removed
Tank Name: D-203
Tank Material: Steel-Unprotected
Substance: Not reported
Compartment #: 1
Ecology Region: South Western

Facility ID: 9182
Install Date: 12/31/64
Capacity: 111 to 1,100 Gallons
Status: Removed
Tank Name: G-101
Tank Material: Steel-Unprotected
Substance: LEADED GASOLINE
Compartment #: 1
Ecology Region: South Western

Facility ID: 9182
Install Date: 12/31/64
Capacity: 111 to 1,100 Gallons
Status: Removed
Tank Name: G-102
Tank Material: Steel-Unprotected
Substance: LEADED GASOLINE
Compartment #: 1
Ecology Region: South Western

D13
East
1/4-1/2
2157
Higher

EXXON #7 7017
1033 REGENTS BLVD
TACOMA, WA 98466

WA ICR **S103507204**
N/A

EXXON #7 7017 (Continued) — **S103507204**

WA ICR:
- Date Ecology Received Report: 01/10/1994
- Contaminants Found at Site: Petroleum products
- Media Contaminated: Soil
- Cause of Contamination: Tank
- Region: South Western
- Type of Report Ecology Received: Final cleanup report
- Site Register Issue: 93-17
- County Code: 27

D14 — **EXXON #7 7017** — **1033 REGENTS BLVD** — **TACOMA, WA 98466** — **East** — **1/4-1/2** — **2157** — **Higher** — **WA ICR** — **S103505477** — **N/A**

WA ICR:
- Date Ecology Received Report: 03/14/1994
- Contaminants Found at Site: Petroleum products
- Media Contaminated: Soil
- Cause of Contamination: Tank
- Region: South Western
- Type of Report Ecology Received: Final cleanup report
- Site Register Issue: 93-21
- County Code: 27

D15 — **EXXON #7 7017** — **1033 REGENTS BLVD** — **TACOMA, WA 98466** — **East** — **1/4-1/2** — **2157** — **Higher** — **WA ICR** — **S103507205** — **N/A**

WA ICR:
- Date Ecology Received Report: 09/08/1994
- Contaminants Found at Site: Petroleum products
- Media Contaminated: Soil
- Cause of Contamination: Tank
- Region: South Western
- Type of Report Ecology Received: Final cleanup report
- Site Register Issue: 93-33
- County Code: 27

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16 — **UNIVERSITY PLACE REFUSE SERVICE INC** — **2809 ROCHESTER ST W** — **TACOMA, WA 98466** — **SW** — **1/4-1/2** — **2299** — **Lower** — **UST** **LUST** **SWF/LF** — **U003353018** — **N/A**

LUST:
- Facility ID: 10531
- Release ID: 3140
- Release Status: AWAITING CLEANUP
- Alternate Name: Not reported
- Affected Media: SOIL
- Ecology Region: South Western
- Release Date: 12/24/90
- Status Date: 12/24/90

LF:
- Facility ID: SPU
- Contact: Rodger Gruener

UNIVERSITY PLACE REFUSE SERVICE INC (Continued) **U003353018**

Name Change:	False	Ownership:	Private
Company:	University Place Refuse	Contact Title:	Not reported
Facility Fax:	Not reported	Facility Phone:	(206) 564-3212
Type:	Transfer Station		
Class Code:	T		
Class:	Intermediate		
Class Comment:	Not reported		
Sec/Twn/Rng:	Not reported		
Status:	Compost not transfer station		
Region:	SWRO		
Description:	Not reported		

UST:

Facility ID:	10531
Install Date:	12/31/64
Capacity:	Not reported
Status:	Removed
Tank Name:	1
Tank Material:	Steel-Unprotected
Substance:	Not reported
Compartment #:	1
Ecology Region:	South Western

Facility ID:	10531
Install Date:	12/31/64
Capacity:	Not reported
Status:	Removed
Tank Name:	2
Tank Material:	Steel-Unprotected
Substance:	UNLEADED GASOLINE
Compartment #:	1
Ecology Region:	South Western

ORPHAN SUMMARY

City	EDR ID	Site Name	Site Address	Zip	Database(s)	Facility ID
TACOMA	U003354630	NARROWS TACKLE AND MARINE, INC.	9007 S 19TH ST	98466	UST, LUST	4756
TACOMA	S102512914	BP #11077	6622 S. 19TH ST.	98466	WA ICR	
TACOMA	S103509643	SOUTHLAND STORE #24520	4720 BRIDGEPORT WAY W	98466	WA ICR	
TACOMA	S103506205	CHEVRON #9 4369	GRANDVIEW DR. AND 27TH ST. W.	98466	WA ICR	
TACOMA	S103506206	CHEVRON #9 4369	GRANDVIEW DR. AND 27TH ST. W.	98466	WA ICR	
TACOMA	S103511055	WSDOT - TACOMA NARROWS MAINTENANCE YARD	1518 OLYMPIC BLVD.	98466	WA ICR	

GEOCHECK VERSION 2.1 ADDENDUM
GROUNDWATER FLOW INFORMATION

Map ID Direction Distance Elevation	Site	
2g	Site ID:	8749
North	Groundwater Flow:	SW
1 - 2 Miles	Shallowest Water Table Depth:	16.14
Lower	Deepest Water Table Depth:	21.96
	Average Water Table Depth:	Not Reported
	Date:	09/24/1998
3g	Site ID:	8749
North	Groundwater Flow:	SW
1 - 2 Miles	Shallowest Water Table Depth:	23.15
Lower	Deepest Water Table Depth:	24.00
	Average Water Table Depth:	Not Reported
	Date:	09/24/1998
4g	Site ID:	8749
North	Groundwater Flow:	Not Reported
1 - 2 Miles	Shallowest Water Table Depth:	15.9
Lower	Deepest Water Table Depth:	20.4
	Average Water Table Depth:	Not Reported
	Date:	02/14/1995

The following regulatory files were reviewed by a member of EDR's professional field research team in an effort to identify groundwater flow direction and depth information. However, this information was not evident in the reports. This may be for a number of reasons, such as groundwater monitoring wells not being part of the field work or groundwater not having been encountered during drilling. This information is provided to save you time and money in the conduct of your hydrogeological research.

Map ID	Date	Type Of Report
1g	05/23/1997	Letter to Tacom - Pierce County Health Dept
5g	1998	Report 2:General Correspondence Operation and Maintenance Re
6g	1996	Report 1:General Correspondence Remediation System Installat
7g	03/1997	Review of Subsurface Petroleum Hydrocarbon Assessment Data
8g	01/16/1996	Report 1 Soil Vapor Extraction Quarterly Monitoring Report
9g	02/09/1995	Report 2 Soil Vapor Extraction Quarterly Monitoring Report
10g	12/05/1994	Independent Remedial Action Report

GEOCHECK VERSION 2.1
STATE DATABASE WELL INFORMATION

Water Well Information:

Well Within >2 Miles of Target Property (Northern Quadrant)

Site Information:

Site ID:	471626122301201	Start Card #:	Not Reported
Old Site ID:	Not Reported		
Agency:	Department of Ecology	Transaction Code:	Add
Project #:	Not Reported	Local #:	26N/02E-02G04
Latitude:	471626.	Longitude:	1223012.
Lat/Long Accuracy:	accurate to +1 minute	Owner ID:	3
Lambert Coordinate North:	104405.60	Lambert Coordinate East:	1585423.10
Field Checked:	Not Reported	Remarks:	DUG
Site State:	Washington	Site County:	Kitsap
Location Map:	Not Reported	Map Scale:	0
Altitude (in feet):	180.00	Alt. Measurement Method:	Not Reported
Altitude Accuracy:	Not Reported	Hydrologic Unit Code:	Not Reported
Use of Site:	Unused	Secondary use:	Not Reported
Tertiary use:	Not Reported	Use of Water:	Domestic
Second. Water use:	Not Reported	Tertiary Water Use:	Not Reported
Local Name:	PRIVATE OTTO (SO-3)		
Establishment Date:	Not Reported	Data Reliability:	Minimal data
Station Type:	Ground water other than Spring	Date of first construction:	Not Reported
Primary Aquifer:	Not Reported	Aquifer Type:	Not Reported
Inventory Water Level:	0.61	Date Inven. Water measured:	01/17/1992
Well Depth (in feet):	0.00	Hole Depth (in feet):	0.00
Depth Data Source:	Not Reported		
Site Type:	Well, for single wells other than wells of collector or Ranney type		
Site Status:	Not Reported		
Lead Agency Use of Site:	Inventory data site only (no data has been collected at this site)		
Source of water level data:	Reported by another government agency		
Transaction Date:	02/14/1994		

GEOCHECK VERSION 2.1
PUBLIC WATER SUPPLY SYSTEM INFORMATION

Searched by Nearest PWS.

PWS SUMMARY:

PWS ID:	WA5391460	PWS Status:	Active	Distance from TP:	1/4 - 1/2 Mile
Date Initiated:	Not Reported	Date Deactivated:	Not Reported	Dir relative to TP:	East
PWS Name:	VERA VISTA APT W S TACOMA, WA 98466				
Addressee / Facility:	Not Reported				
Facility Latitude:	47 14 22		Facility Longitude:	122 30 52	
City Served:	Not Reported				
Treatment Class:	Treated		Population Served:	Under 101 Persons	

PWS currently has or has had major violation(s) or enforcement: No

EPA Waste Codes Addendum

Code	Description
D001	IGNITABLE HAZARDOUS WASTES ARE THOSE WASTES WHICH HAVE A FLASHPOINT OF LESS THAN 140 DEGREES FAHRENHEIT AS DETERMINED BY A PENSKY-MARTENS CLOSED CUP FLASH POINT TESTER. ANOTHER METHOD OF DETERMINING THE FLASH POINT OF A WASTE IS TO REVIEW THE MATERIAL SAFETY DATA SHEET, WHICH CAN BE OBTAINED FROM THE MANUFACTURER OR DISTRIBUTOR OF THE MATERIAL. LACQUER THINNER IS AN EXAMPLE OF A COMMONLY USED SOLVENT WHICH WOULD BE CONSIDERED AS IGNITABLE HAZARDOUS WASTE.
D008	LEAD
D018	BENZENE
D039	TETRACHLOROETHYLENE

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.

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

FEDERAL ASTM RECORDS:

CERCLIS: Comprehensive Environmental Response, Compensation, and Liability Information System
Source: EPA
Telephone: 703-413-0223
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: 11/10/98
Date Made Active at EDR: 01/29/99
Database Release Frequency: Quarterly
Date of Data Arrival at EDR: 12/29/98
Elapsed ASTM days: 31
Date of Last EDR Contact: 03/03/99

ERNS: Emergency Response Notification System
Source: EPA/NTIS
Telephone: 202-260-2342
Emergency Response Notification System. ERNS records and stores information on reported releases of oil and hazardous substances.

Date of Government Version: 12/31/98
Date Made Active at EDR: 01/18/99
Database Release Frequency: Quarterly
Date of Data Arrival at EDR: 01/13/99
Elapsed ASTM days: 5
Date of Last EDR Contact: 01/04/99

NPL: National Priority List
Source: EPA
Telephone: N/A
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).

Date of Government Version: 01/19/99
Date Made Active at EDR: 02/19/99
Database Release Frequency: Semi-Annually
Date of Data Arrival at EDR: 02/08/99
Elapsed ASTM days: 11
Date of Last EDR Contact: 02/08/99

RCRIS: Resource Conservation and Recovery Information System
Source: EPA/NTIS
Telephone: 800-424-9346
Resource Conservation and Recovery Information System. RCRIS 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).

Date of Government Version: 03/01/99
Date Made Active at EDR: 05/07/99
Database Release Frequency: Semi-Annually
Date of Data Arrival at EDR: 04/08/99
Elapsed ASTM days: 29
Date of Last EDR Contact: 03/31/99

CORRACTS: Corrective Action Report
Source: EPA
Telephone: 800-424-9346
CORRACTS identifies hazardous waste handlers with RCRA corrective action activity.

Date of Government Version: 03/01/99
Date Made Active at EDR: 04/16/99
Database Release Frequency: Semi-Annually
Date of Data Arrival at EDR: 03/17/99
Elapsed ASTM days: 30
Date of Last EDR Contact: 03/16/99

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

FEDERAL NON-ASTM RECORDS:

BRS: Biennial Reporting System
Source: EPA/NTIS
Telephone: 800-424-9346
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: 12/31/95
Database Release Frequency: Biennially
Date of Last EDR Contact: 03/25/99
Date of Next Scheduled EDR Contact: 06/21/99

CONSENT: Superfund (CERCLA) Consent Decrees
Source: EPA Regional Offices
Telephone: Varies
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.

Date of Government Version: Varies
Database Release Frequency: Varies
Date of Last EDR Contact: Varies
Date of Next Scheduled EDR Contact: N/A

FINDS: Facility Index System/Facility Identification Initiative Program Summary Report
Source: EPA/NTIS
Telephone: N/A
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: 01/08/99
Database Release Frequency: Quarterly
Date of Last EDR Contact: 04/16/99
Date of Next Scheduled EDR Contact: 07/12/99

HMIRS: Hazardous Materials Information Reporting System
Source: U.S. Department of Transportation
Telephone: 202-366-4526
Hazardous Materials Incident Report System. HMIRS contains hazardous material spill incidents reported to DOT.

Date of Government Version: 12/31/97
Database Release Frequency: Annually
Date of Last EDR Contact: 03/24/99
Date of Next Scheduled EDR Contact: 04/26/99

MLTS: Material Licensing Tracking System
Source: Nuclear Regulatory Commission
Telephone: 301-415-7169
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: 12/08/98
Database Release Frequency: Quarterly
Date of Last EDR Contact: 03/02/99
Date of Next Scheduled EDR Contact: 05/31/99

NPL LIENS: Federal Superfund Liens
Source: EPA
Telephone: 205-564-4267
Federal Superfund Liens. Under the authority granted the USEPA by the Comprehensive Environmental Response, Compensation and Liability Act (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 receives notification of potential liability. USEPA compiles a listing of filed notices of Superfund Liens.

Date of Government Version: 10/15/91
Database Release Frequency: No Update Planned
Date of Last EDR Contact: 02/22/98
Date of Next Scheduled EDR Contact: 05/24/99

PADS: PCB Activity Database System
Source: EPA
Telephone: 202-260-3936
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: 09/22/97
Database Release Frequency: Semi-Annually

Date of Last EDR Contact: 03/05/99
Date of Next Scheduled EDR Contact: 05/17/99

RAATS: RCRA Administrative Action Tracking System
Source: EPA
Telephone: 202-564-4104
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: 04/17/95
Database Release Frequency: No Update Planned

Date of Last EDR Contact: 03/15/99
Date of Next Scheduled EDR Contact: 06/14/99

ROD: Records Of Decision
Source: NTIS
Telephone: 703-416-0223
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: 03/31/95
Database Release Frequency: Annually

Date of Last EDR Contact: 04/19/99
Date of Next Scheduled EDR Contact: 07/19/99

TRIS: Toxic Chemical Release Inventory System
Source: EPA/NTIS
Telephone: 202-260-1531
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.

Date of Government Version: 12/31/95
Database Release Frequency: Annually

Date of Last EDR Contact: 04/01/99
Date of Next Scheduled EDR Contact: 06/28/99

TSCA: Toxic Substances Control Act
Source: EPA
Telephone: 202-260-1444
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: 12/31/94
Database Release Frequency: Every 4 Years

Date of Last EDR Contact: 04/26/99
Date of Next Scheduled EDR Contact: 07/26/99

MINES: Mines Master Index File
Source: Department of Labor, Mine Safety and Health Administration
Telephone: 303-231-5959

Date of Government Version: 08/01/98
Database Release Frequency: N/A

Date of Last EDR Contact: 04/08/99
Date of Next Scheduled EDR Contact: 07/05/99

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

STATE OF WASHINGTON ASTM RECORDS:

HSL: Hazardous Sites List
Source: Department of Ecology
Telephone: 360-407-7200
The Hazardous Sites List is a subset of the CSCSL Report. It includes sites which have been assessed and ranked using the Washington Ranking Method (WARM).

Date of Government Version: 02/18/99
Date Made Active at EDR: 04/02/99
Database Release Frequency: Semi-Annually

Date of Data Arrival at EDR: 03/03/99
Elapsed ASTM days: 30
Date of Last EDR Contact: 03/30/99

LUST: Leaking Underground Storage Tanks Site List
Source: Department of Ecology
Telephone: 360-407-7200
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: 01/14/99
Date Made Active at EDR: 03/01/99
Database Release Frequency: Quarterly

Date of Data Arrival at EDR: 02/01/99
Elapsed ASTM days: 28
Date of Last EDR Contact: 02/01/99

CSCSL: Confirmed & Suspected Contaminated Sites List
Source: Department of Ecology
Telephone: 360-407-7200
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: 11/23/98
Date Made Active at EDR: 01/26/99
Database Release Frequency: Semi-Annually

Date of Data Arrival at EDR: 12/23/98
Elapsed ASTM days: 34
Date of Last EDR Contact: 02/26/99

LF: Solid Waste Facility Database
Source: Department of Ecology
Telephone: 360-407-6132
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: 07/01/98
Date Made Active at EDR: 12/31/98
Database Release Frequency: Annually

Date of Data Arrival at EDR: 10/14/98
Elapsed ASTM days: 78
Date of Last EDR Contact: 04/12/99

UST: Underground Storage Tank Database
Source: Department of Ecology
Telephone: 360-407-7170
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: 01/14/99
Date Made Active at EDR: 03/03/99
Database Release Frequency: Quarterly

Date of Data Arrival at EDR: 02/01/99
Elapsed ASTM days: 30
Date of Last EDR Contact: 02/01/99

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

STATE OF WASHINGTON NON-ASTM RECORDS:

AIR EMISSIONS: Washington Emissions Data System
Source: Department of Ecology
Telephone: 360-407-6040

Date of Government Version: 12/31/96
Database Release Frequency: Annually

Date of Last EDR Contact: 04/26/99
Date of Next Scheduled EDR Contact: 04/26/99

ICR: Independent Cleanup Reports
Source: Department of Ecology
Telephone: 360-407-7200
These are remedial action reports Ecology has received from either the owner or operator of the sites. These actions have been conducted without department oversight or approval and are not under an order or decree.

Date of Government Version: 02/19/99
Database Release Frequency: Quarterly

Date of Last EDR Contact: 04/26/99
Date of Next Scheduled EDR Contact: 07/26/99

WASHINGTON COUNTY RECORDS

SEATTLE/KING COUNTY:

Seattle - King County Abandoned Landfill Toxicity / Hazard Assessment Project
Source: Department of Public Health
Telephone: 206-296-4785
This report presents the Seattle-King County Health Department's follow-up investigation of two city owned and four county owned abandoned landfills which was conducted from February to December 1986.

Date of Government Version: 12/31/86
Database Release Frequency: No Update Planned

Date of Last EDR Contact: 08/14/95
Date of Next Scheduled EDR Contact: N/A

KING COUNTY:

Abandoned Landfill Study in King County
Source: Seattle-King County Department of Public Health
Telephone: 206-296-4785
The King County Abandoned Landfill Survey was conducted from October through December 1984 by the Health Department's Environmental Health Division at the request of the King County Council. The primary objective of the survey was to determine if any public health problems existed at the predetermined 24 sites.

Date of Government Version: 04/30/85
Database Release Frequency: No Update Planned

Date of Last EDR Contact: 10/21/94
Date of Next Scheduled EDR Contact: N/A

SEATTLE COUNTY:

Abandoned Landfill Study in the City of Seattle
Source: Seattle - King County Department of Public Health
Telephone: 206-296-4785
The Seattle Abandoned Landfill Survey was conducted in June and July of 1984 by the Health Department's Environmental Health Division at the request of the Mayor's Office. The primary objective of the survey was to determine if any public health problems existed at the predetermined 12 sites.

Date of Government Version: 07/30/84
Database Release Frequency: No Update Planned

Date of Last EDR Contact: 10/21/94
Date of Next Scheduled EDR Contact: N/A

SNOHOMISH COUNTY:

Solid Waste Sites of Record at Snohomish Health District
Source: Snohomish Health District
Telephone: 206-339-5250

Date of Government Version: 12/31/98
Database Release Frequency: No Update Planned

Date of Last EDR Contact: 04/26/99
Date of Next Scheduled EDR Contact: 07/26/99

TACOMA/PIERCE COUNTY:

Closed Landfill Survey
Source: Tacoma-Pierce County Health Department
Telephone: 206-591-6500
Following numerous requests for information about closed dumpsites and landfills in Pierce County, the Tacoma-Pierce County Health Department decided to conduct a study on the matter. The aim of the study was to evaluate public health risks associated with the closed dumpsites and landfills, and to determine the need, if any, for further investigations of a more detailed nature. The sites represent all of the known dumpsites and landfills closed after 1950.

Date of Government Version: 04/15/93
Database Release Frequency: No Update Planned

Date of Last EDR Contact: 01/11/95
Date of Next Scheduled EDR Contact: N/A

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Historical and 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.

Former Manufactured Gas (Coal Gas) Sites: The existence and location of Coal Gas sites is provided exclusively to EDR by Real Property Scan, Inc. For a technical description of the types of hazards which may be found at such sites, contact your EDR customer service representative.

Disclaimer Provided by Real Property Scan, Inc.

The information contained in this report has predominantly been obtained from publicly available sources produced by entities other than Real Property Scan. While reasonable steps have been taken to insure the accuracy of this report, Real Property Scan does not guarantee the accuracy of this report. Any liability on the part of Real Property Scan is strictly limited to a refund of the amount paid. No claim is made for the actual existence of toxins at any site. This report does not constitute a legal opinion.

DELISTED NPL: NPL Deletions
Source: EPA
Telephone: N/A
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: 01/19/99
Date Made Active at EDR: 02/19/99
Database Release Frequency: Semi-Annually
Date of Data Arrival at EDR: 02/08/99
Elapsed ASTM days: 11
Date of Last EDR Contact: 02/08/99

NFRAP: No Further Remedial Action Planned
Source: EPA
Telephone: 703-413-0223
As of February 1995, CERCLIS sites designated "No Further Remedial Action Planned" (NFRAP) have been removed from CERCLIS. NFRAP sites may be sites where, following an initial investigation, no contamination was found, contamination was removed quickly without the need for the site to be placed on the NPL, or the contamination was not serious enough to require Federal Superfund action or NPL consideration. EPA has removed approximately 25,000 NFRAP sites to lift the unintended barriers to the redevelopment of these properties and has archived them as historical records so EPA does not needlessly repeat the investigations in the future. This policy change is part of the EPA's Brownfields Redevelopment Program to help cities, states, private investors and affected citizens to promote economic redevelopment of unproductive urban sites.

Date of Government Version: 01/26/99
Date Made Active at EDR: 04/02/99
Database Release Frequency: Quarterly
Date of Data Arrival at EDR: 03/03/99
Elapsed ASTM days: 30
Date of Last EDR Contact: 03/03/99

PWS: Public Water Systems
Source: EPA/Office of Drinking Water
Telephone: 202-260-2805
Public Water System data from the Federal Reporting Data System. A PWS is any water system which provides water to at least 25 people for at least 60 days annually. PWSs provide water from wells, rivers and other sources.

PWS ENF: Public Water Systems Violation and Enforcement Data
Source: EPA/Office of Drinking Water
Telephone: 202-260-2805
Violation and Enforcement data for Public Water Systems from the Safe Drinking Water Information System (SWDIS) after August 1995. Prior to August 1995, the data came from the Federal Reporting Data System (FRDS).

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Area Radon Information: The National Radon Database has been developed by the U.S. Environmental Protection Agency (USEPA) and is a compilation of the EPA/State Residential Radon Survey and the National Residential Radon Survey. The study covers the years 1986 - 1992. Where necessary data has been supplemented by information collected at private sources such as universities and research institutions.

EPA Radon Zones: Sections 307 & 309 of IRAA directed EPA to list and identify areas of U.S. with the potential for elevated indoor radon levels.

Oil/Gas Pipelines/Electrical Transmission Lines: 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 and electrical transmission lines.

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.

USGS Water Wells: In November 1971 the United States Geological Survey (USGS) implemented a national water resource information tracking system. This database contains descriptive information on sites where the USGS collects or has collected data on surface water and/or groundwater. The groundwater data includes information on more than 900,000 wells, springs, and other sources of groundwater.

Flood Zone Data: This data, available in select counties across the country, was obtained by EDR in 1998 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 March 1997 from the U.S. Fish and Wildlife Service.

Epicenters: World earthquake epicenters, Richter 5 or greater
Source: Department of Commerce, National Oceanic and Atmospheric Administration

Water Dams: National Inventory of Dams
Source: Federal Emergency Management Agency
Telephone: 202-646-2801
National computer database of more than 74,000 dams maintained by the Federal Emergency Management Agency.

Kitsap County Water Wells in Washington
Source: Public Utility District No. 1 of Kitsap County
Telephone: 206-779-7656

PORTION OF THE NW 1/4 OF THE NW 1/4, SEC

CITY OF FIRCREST, PIERCE COUNTY,

WALL ENCROACHES 0.8'

WALL ENCROACHES 2.2'

EXISTING BUILDING

FENCE COR ENCROACHES 0.7'

FENCE COR ENCROACHES 1.1'

N89°14'31"E

623.24'

STORM DRAIN CHIMNEY
RIM = 336.19
IE = N/A

OIL TREATMENT PIPE W/VALVE

EXPOSED PVC PIPE

ROLLED CURB

VENT BLOWER MOTOR

ELEVATED TRUCK RAMP

ASPHALT

CB TYPE I
RIM = 338.85
IE = 337.35 4" CONC E)
IE = 337.45 4" CONC W)

IP STUB-OUT

SPLASH PAD

SOLVENT TANK LID

ANTENNA

A.C. DUCT

VERTICAL CURB

CONC. PATH

CB TYPE I
RIM = 334.4
IE = 335.45 (6" PVC W)
IE = 331.59 (6" PVC E)
IE = 332.02 (4" PVC S)

A.C.

GRAVEL

EXPOSED PVC PIPE

2119 ONE-STORY ALUMINUM FRAME BLDG.

CONCRETE

ASPHALT PAVING

1 STORY WOOD FRAME BLDG

BUILDING OVERHANG (TYP)

CONCRETE

MH (ACCESS TO WASTE CONTAINMENT)
RIM = 338.19
RIM = 338.22

MH (ACCESS TO WASTE CONTAINMENT)
RIM = 338.06
RIM = 338.03

1 STORY WOOD FRAME BLDG

SHED

GRAVEL

1 STORY WOOD FRAME BLDG

ASPHALT SWALE CONC. PAD

CINDER BLOCK WALL

ASPHALT

A.C.

GRASS

GRAVEL

GRASS

CB TYPE II 16"
RIM = 337.96
IE = N/A

CB TYPE I
RIM = 338.56
IE = 335.86 (6" ADS N/NW & E)

YD DRAIN
RIM = 338.27
IE = 336.47 (6" CONC SE)

CB TYPE I
RIM = 339.28
IE = 332.93

GRAVEL

O.H. POWER LINE (TYP)

660.31'

LEVEL 1 ENVIRONMENTAL SITE ASSESSMENT

Subject Property:
2119 Mildred St. West
Tacoma, Washington

May 7, 1999

Prepared For:

Janet Freeman-Daily, POA for Robert M. Freeman, MI

~~Michael Freeman~~
~~Metal Marine Pilot, Inc.~~
~~Wood Freeman Automatic Pilots~~
2119 Mildred St. West
Tacoma, WA 98466

Prepared By:

Creative Environmental Technologies, Inc.
PO Box 1803
Tacoma, Washington 98401-1803
(253) 627-3347

DATE

APPOINTMENTS

Notes on CETI
Level 1 Assessment

TO BE DONE TODAY, DIARY/WORK RECORD, EXPENSES

Title page, pp: 5,[x2] 8, 52

RMF: owns property
→ requested the Level 1 assessment
JEF POA
↳ should be recipient of report
CHECK OWNERSHIP INFO!

p. 8; sec 3.5, para 3 — airport cafe?
- CB constructed new building
- did MMP own property CB is now on? -

p. 14, para 4:
- use of perchloroethylene & tri-. in mat'l prep sh
- drum hauled to Western Processing

p. 19, MWF does not own MMP!

INTRODUCTION

The American Society for Testing and Materials (ASTM), as well as the National Association for Environmental Professionals (NREP), have established guidelines for the preparation of Level 1 property assessments. These guidelines are formulated within the scope of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA). They set forth customary practice for conducting environmental site assessments of commercial real estate with regard to environmental impact and liability. A Level 1 property assessment, performed within these guidelines, satisfies the "innocent landowner defense" by ensuring that all appropriate inquiry into the past and present ownership and uses of the property has been made in accordance with USC s. 9601 (35) (B).

USEFUL DEFINITIONS

Asbestos - A naturally occurring mineral compound which has been found to cause cancer and is often found in pipe insulation, roofing materials, flooring materials, siding and other construction materials. Its presence can be detected through laboratory analysis of materials.

Asbestos-containing materials (ACM) - Any material which contains more than one percent asbestos.

Contaminated public well - A water well which has been designated by a government entity as unsafe to drink because of toxic substance contamination.

Drum - A container usually approximately 55 gallons in size which may be used to store hazardous substances or petroleum.

Dry well - An underground area where soil has been removed and replaced with a porous substance such as gravel, which is used for receipt of storm water or other liquids for disposal by percolation.

Environmental lien - An encumbrance on the property as a result of environmental contamination in accordance with CERCLA 42 or similar state and local laws.

ERNS List - A list of hazardous substance releases issued by EPA's emergency response certification system.

Fire insurance map - Maps produced by private insurance companies sometimes found at local libraries, historical societies or from map companies specializing in this product.

Independent Cleanup Reports (ICR) - These are remedial action reports that the Washington

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Dept. of Ecology has received from either the owner or operator of a contaminated site. These actions have been conducted without department oversight and are not under an order of decree.

Landfill - A tract of land or area used for the disposal of solid wastes. Also known as a trash dump, waste disposal site or may be called by similar terms.

Local street directories - Published sources that show ownership, occupancy or similar uses of a site, often available at libraries, colleges or historical societies.

Leaking Underground Storage Tank (LUST) - Any tank with more than 10% of its volume beneath the surface of the earth which is used for the storage of hazardous or petroleum substances and has been identified as leaking into the surrounding medium.

MSDS - Material Safety Data Sheets are written descriptions of chemical properties provided by manufacturers of the chemicals in accordance with OSHA regulations.

National Contingency Plan (NCP) - An EPA document indicating the preferred method to clean up hazardous substance contamination.

National Priorities List (NPL) - An EPA generated list of the highest priority sites for clean-up according to a set ranking system.

Resource Conservation Recovery Act (RCRA) - A law which governs generators, storing facilities and disposal facilities dealing with hazardous wastes.

Resource Conservation Recovery Information System (RCRIS) - This database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by RCRA.

Underground Storage Tank (UST) - Any tank with more than 10% of its volume beneath the surface of the earth which is used for the storage of hazardous or petroleum substances.

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TABLE OF CONTENTS

1203 E. D Street, Suite 109 ⊛ P.O. Box 1803 ⊛ Tacoma, Washington 98401- 1803
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1.0 Summary

Creative Environmental Technologies, Inc., performed a Level I Environmental Site Assessment (ESA) on a property located at 2119 Mildred St. West, ~~Tacoma~~ Fircrest, Washington. The purpose of this investigation was to determine the potential for environmental liability. A field inspection on April 27, 1999 consisted of a walk-through of the subject property, magnetometer survey, and a visual inspection of surrounding areas.

The ESA will also access the possibility of contamination from past land use. Reviews of pertinent available records of local, state, and federal agencies were conducted, as well as a review of aerial photographs of the subject property. Sanborn Fire Insurance maps were not reviewed as no record was available for the subject property. Interviews with individuals associated with the subject property and adjoining properties were conducted during the walk-through in order to ascertain previous property uses.

CETI identified sources that could potentially impact the subject property. Based on interviews with ~~the property owner~~, Mr. Michael Freeman, son of the property owner and President of the current lessee Metal Marine Pilot, Inc., previous on-site activities (i.e. the improper disposal of certain chemical solvent wastes in the undeveloped area east of the manufacturing building) may have impacted the soil. These solvents were used in the production of Metal Marine's auto pilot systems.

Other wastes such as mercury vapor lights were disposed of in the undeveloped area as well. Several other areas throughout the property pose minor environmental threats and are discussed in section 5.0. CETI also identified off site sources that potentially pose an environmental threat to the subject property. These are discussed in section 5.0.

2.0 Introduction and Purpose

A Level I Environmental Site Assessment is intended to determine whether there is potential for environmental contamination or liability based on readily available information about the site and a walk-through inspection of the site. If a potential for environmental contamination or liability does exist, the Level I ESA will indicate what additional activity is necessary to confirm evidence of contamination.

This report was prepared at the request of ~~Michael Freeman~~ Janet Freeman-Daily, POA for property owner Dr. Robert Freeman. The purpose of the assessment is to provide reasonable inquiry into the prior history of the site in order to determine the likelihood of environmental contamination and potential liability. The reasonable inquiry level is determined in accordance with accepted standards for a Level I Environmental Site Assessment published by The American Society for Testing of Materials (ASTM), and The National Registry for Environmental Professionals (NREP). This report is not intended as a warranty of the site

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condition. In addition, evaluation of liabilities from past business practices that have not resulted in contamination of the subject property are specifically excluded from the scope of this report.

2.1 Methodology Used for Physical Examination.

The following site examination methods were used:

A. Walk-over and visual observation of subject site

B. Aerial photograph review

C. Magnetometric Survey

2.2 Site Access Restrictions Noted

The majority of the subject property is undeveloped. The south and east sections consist of an empty lot without vegetation, buildings or fencing. A large building and a paved parking lot cover the northwest corner of the property. Much of the undeveloped area of the property is recent fill material. If activities that impacted the soil had occurred on site prior to backfilling and grading, the native soil could not be observed without first excavating the fill material.

3.0 Site Description and Site Inspection Survey

The subject property is located at 2119 Mildred St. West. The property is bounded on the north by Pace Industries, on the west by Mildred Street West, on the south by two separate properties, and on the east by two apartment complexes and a mortgage firm. Refer to Site Map 2, Appendix A for an illustration of the subject property in relation to neighboring properties.

The subject property slopes at a moderate grade to the east such that the western boundary is approximately five feet higher than the eastern boundary. The property slopes steeply near the eastern property boundary along South 64th Street, which lies below the grade of the subject property. The properties on the south side also lie below the grade of the subject property.

There are several buildings that occupy the property. The largest is a one story building. The original building was built in 1959, and has been subsequently added on to in 1961 and 1965, and again in 1979. The four sheds to the east of the building were constructed and added on to over time as well, the newest being used for the storage of cardboard boxes. The main structure

is a metal building with a metal roof resting on cement supports, anchored on a concrete foundation. The office section is constructed of mason blocks, with a brick exterior. The entire building is heated by forced air electric heat pumps and has primarily fluorescent lighting, a potential source of PCBs.

Metal Marine Pilot, Inc., the Freeman family business, has ~~The Freeman family has owned and~~ used the building since its construction. The aerial photographs (circa 1946) indicate that no structures were present on the property before the present building was erected. An asphalt paved parking lot is located on the west side of the warehouse building, and extends to the north boundary of the property. A paved road extends to the east side of the building, linking Mildred Street to the storage sheds and the receiving department. The east section of the property has never been developed and is currently devoid of vegetation due to backfilling of the property. The eastern property boundary is a bioswale and small marshy pond. The runoff from the property and the north neighboring property runs into the settling pond, and ultimately into the storm sewer.

In 1961-1965 additions to the main building were made as the company expanded, and in 1979 a further addition was made to the north end of the building. The original office building, break room and what was then the entire machine and assembly operation was located in the southwest corner of the present building. The additions to the building are single story, with metal walls, frames, and roof supported by concrete pads. All floors are concrete.

3.2 Legal Description

The legal description for the 2119 property is as follows: SW OF NW OF NW SUBJ TO CY OF TAC EASE LESS R/W FOR RD

3.3 Current Uses of the Property

The subject property is used by Metal Marine Pilot, Inc. The facilities are used for the design, construction of components, assembly, painting, testing, service, and repair of marine automatic pilots.

The parking area is exclusively used by Metal Marine, the rear shipping area is also used to store miscellaneous equipment used in the construction of automatic pilots.

3.4 Past / Historical Uses of the Property

Polk business and residence directories indicate that the building was listed as occupied in

1961, however ~~an interview with the owner~~ Michael Freeman indicates the primary structure was in place in 1959. No other business has ever occupied the building or used the subject property.

3.5 Current and Past Usage of Adjoining Properties

The following discussion does not discuss neighboring properties that are comprised of surface streets (i.e the west adjoining area).

The west adjoining property is across Mildred Street West and is currently occupied by Wendy's, Dairy Queen, The Alehouse, the Keg, and a Quaker State oil change facility, from north to south respectively. The entire area is paved, excepting planter boxes and trees lining the parking lots. This area was used as an airport from prior to 1946 (the earliest available record) until 1979. Between 1961-1979 airport related businesses and restaurants operated in the area, the only adjoining property being Glass Tech Fibreglass Products at 2120 Mildred St. West. There are several other structures on the properties between 2000-2300 Mildred St. over 1946-79, including hangars for airplanes, repair facilities, and the Atlas foundry at 2404 Mildred St. CETI concludes that these businesses do not pose a threat to the subject property due to their distance from the property.

The south adjoining property is 2401 Mildred St West and is presently leased or owned by Columbia Bank. ~~The~~ A building ~~Columbia Bank occupies~~ on that property in appears on aerial photographs as early as 1971. ~~and interviews with the subject property owner indicate the land was sold by Metal Marine Pilot to the bank around that time.~~ The property was previously occupied by the Airport Cafe. Their building was demolished in ____ and ~~the~~ was replaced by the present structure ~~which~~ occupied by Columbia Bank.

The southeast adjoining properties are 1401 and 1501 Regents Blvd. and is presently owned or leased by Sterling Savings and a dental group, respectively. Aerial photographs indicate the buildings were constructed between 1992-1996.

The north adjoining property is 2101 Mildred St. West, and is presently ~~owned~~ leased by Pace Industries, an aluminum ~~casing~~ casting facility. The property was developed at the same time as the subject property, 1961, and has produced the same product under the name Puget Die Casting and Puget Cor prior to being bought out by Pace Industries.

The east adjoining properties are, south to north, 1300 Regents Blvd, Fircrest Park Apartments, 6486 64th Ave. West, Fircrest Family Townhouses, and 6412 64th Ave. West, Amera Mortgage. The Fircrest Park Apartments were constructed prior to 1971, and the Fircrest Family Townhouses were constructed by 1979. The building housing Amera Mortgage is not listed in the Polk Directory, however the structure is visible on aerial photographs circa 1979.

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3.7 Site Rendering, Map or Site Plan

Both a Site Location Map and a Site Map are included in this report in Appendix A. The Site Location Map shows the general location of the subject property. The Site Map was generated to show the location of the subject property and surrounding properties, and document the locations of items on the subject property described in this report.

4.0 Records Review

Environmental Databases Review

CETI retained the services of Environmental Data Resources, Inc. (EDR) to conduct a portion of the records research for this Level I Environmental Site Assessment. According to the data presented to CETI from EDR, there are eleven sites within a 1/4 mile radius of the subject property that are listed on various government and state databases, with some appearing on multiple lists. CETI has carefully reviewed the data compiled by EDR and determined that within a quarter mile radius of the subject property there are four from the Washington State Leaking Underground Storage Tank Database (LUST) list, six from the Federal Resource Conservation and Recovery Information System (RCRIS) list, five from the Washington State Underground Storage Tank Database (UST) list, and two from the Independent Cleanup Reports (ICR) list. These records are described in detail in the EDR report (Appendix C).

CETI views sites as a significant threat to the subject property if they meet the following criteria: 1) soil or groundwater was contaminated, and 2) the site lies upgradient of the subject property with respect to groundwater flow (such that contaminates might be transported onto the subject property). CETI also considers a site a threat if it lies immediately adjacent to the subject property. Groundwater flow direction in the general vicinity, as inferred from the regional topographic gradient, is northwest, however locally the gradient is southeast. Since the groundwater gradient is unknown all surrounding sites will be treated in this report as potentially upgradient of the subject property.

Numerous sites within a quarter mile radius of the subject property are listed on the Federal Resource Conservation and Recovery Information System (RCRIS) list. Discussed below are only those sites that are also listed on other databases or that have documented RCRIS violations. Please refer to the list of Useful Definitions at the beginning of this report for definitions of the acronyms used in the discussion below.

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Sites considered a significant threat to the subject property

Site 8 2101 Mildred St. West

This property is owned or leased by Pace Industries, Inc. Puget division and is listed on the RCRIS large quantity generator database. The site has no listed USTs, and no violations were reported. However, CETI remediated portions of the subject property contaminated by Pace Puget Industries, refer to the cleanup report.

Site C10 1923 Mildred St West

This property is owned or leased by Town Cleaners and is listed on the UST, LUST and RCRIS databases. EDR records do not provide any information regarding existing USTs but indicate three underground storage tanks were closed in place and another LUST is currently awaiting cleanup. The type of contamination affecting surrounding soil is unknown. No further information is provided regarding this property.

Although the potential exists for contaminants to have migrated onto the subject property from this site via groundwater flow it is unlikely. The site is located approximately four blocks to the north of the subject property and given the distance from the subject property, contaminants would likely not be able to migrate such a distance.

Site C11, 6622 19th St. W

This property is owned or leased by British Petroleum and is listed on the UST, LUST, and RCRIS databases. Five USTs were removed, one with unidentified contents, two containing leaded gasoline and two containing unleaded gasoline. One LUST site is currently undergoing remedial action for impacted soils. Three operational gasoline USTs are currently in use, one containing leaded gasoline, two containing unleaded gasoline.

Although the potential exists for contaminants to have migrated onto the subject property from this site via groundwater flow it is unlikely. The site is located approximately five blocks to the north of the subject property and given the distance from the subject property, contaminants would likely not be able to migrate such a distance.

Site B4, B5, B6 2118 Mildred St. West

This property is owned or leased by Quaker State Minit Lube and is listed on the UST,

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LUST, ICR and RCRIS databases. Three USTs were removed, two containing motor oil and one containing waste oil. Two LUSTs were reported on the site, one has been remediated, while the other is currently undergoing remedial action. The LUSTs apparently contained petroleum products, which contaminated the surrounding soil. .

Site 12 7010 27th St. West

This property is owned or leased by Westmark Construction and is listed on the RCRIS-SQG, UST, LUST, ICR databases. Seven USTs were removed, four with unidentified contents and three containing leaded gasoline. Two LUSTs were reported on the site, one has been remediated, while the other is currently undergoing remedial action. The LUSTs apparently contained petroleum products, which contaminated the surrounding soil. The site is located approximately .5 miles to the southwest of the subject property and given the distance from the subject property, contaminates would likely not be able to migrate such a distance.

Site 7 6520 Regents Blvd

This property is owned or leased by Fircrest Golf Club and is listed on the UST, database. Four USTs were removed, two with unidentified contents and two containing unleaded gasoline.

Although the potential exists for contaminates to have migrated onto the subject property from this site via groundwater flow it is unlikely. The site is located approximately 7 blocks to the south of the subject property and migrating contaminates would likely miss the subject property.

Site D13, D14, D15, 1033 Regents Blvd

This property is owned or leased by Exxon and is listed on the ICR database. Three USTs are listed as contaminating soil in the area with unidentified petroleum products.

Although the potential exists for contaminates to have migrated onto the subject property from this site via groundwater flow, it is unlikely. The site is located approximately .4 miles to the south of the subject property and given the distance from the subject property, contaminates would likely not be able to migrate such a distance.

Site 16, 2809 Rochester St. West

This property is owned or leased by University Place Refuse Service Inc. and is listed on

the UST and LUST and SWF/LF databases. Two USTs were removed from the site, one with unidentified contents, the second containing unleaded gasoline. One LUST is present on the property which is currently awaiting soil remediation, the contaminant is unidentified.

Although the potential exists for contaminates to have migrated onto the subject property from this site via groundwater flow, it is unlikely. The site is located approximately .4 miles to the east of the subject property and given the distance from the subject property, contaminates would likely not be able to migrate such a distance.

Site A2 2305 Mildred St. West

This property is owned or leased by Leland McArthur and is listed on the UST database. Three USTs were removed containing leaded gasoline. No spills or contamination were reported. The site is located to the southeast of the subject property and migrating contaminates would likely miss the subject property.

Aerial Review: (Aerial Photos provided by Walker and Associates)

Aerial photographs for the years 1996, 1992, 1985, 1979, 1971, 1946 were reviewed.

1996 The subject property contains one building, with three sheds, not four as there are currently.

1992 Same as above

1985 Same as above

1979 Same as above

1971 Same as above

1946 Same as above

Polk Business Directory, Tacoma Public Library

Polk Business directories were reviewed (1961-67) to determine the nature of the businesses that have occupied the subject property and adjoining properties in the past. The earliest record of a business present at this location is from 1961. There is a gap in the record from 1967-present for listings of Mildred St. West.

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Radon

The Washington Department of Health, Division of Radiation Protection's Radon study of Pierce County, classifies the area and region as a low Radon risk area. Consequently, the potential for raised levels of Radon at the subject site is considered low.

5.0 Information From Site Reconnaissance

CETI performed a physical site inspection on May 12, 1999. Weather conditions during the inspections were partly cloudy, and the temperature ranged from approximately 45-50 degrees F with scattered showers. The topography of the subject property slopes to the southeast.

The subject property contains a large building with a paved parking area on the west side of the building. The east side of the building is an empty lot which has been partially graded, raising ground surface approximately four feet on the west side of the lot (see Site Map, Appendix A). For the purposes of this discussion the property will be divided into the following areas: the original warehouse structure, the sections of the plant, the lot, and the bioswale pond (see the Site Map for a labeled illustration). For a discussion of the history the buildings on the subject property refer to Section 1.3.1, Site Description.

The building is divided into several sections, the southwest portion being the engineering, customer service and office section. The south portion contains the armature and machine shop areas. The center of the building houses the hydraulic room, a storage area, and the electric testing section. The north end of the building is used primarily for storage, although there are some assembly work benches. Next to the offices in the west section is the compass room. The premises appear very clean and well maintained. The floor of the entire building is concrete. In the office areas are finished floors (See Site Map, Appendix A).

The building contains fifteen drill presses, metal lathes, band saws, air compressors, air lines all around the building lubricated with oil, ten grinders, refrigerators, hydraulic door openers, hydraulic oil, laquer thinner, kerosene, silicone rubber, solder, and welding supplies. The hydraulic room contains a test facility for hydraulic rams, including a pump and various hoses. There was oil present on the work bench, the tools, and the floor. The floor is a solid pour, uncracked piece of concrete which appears well maintained. The compass room contains kerosene, which is put in the compasses. The kerosene is pumped from a tank in the lean to on the material preparation shed. The line runs under the eves from the east side of the building around the north end and down the west side to the compass room (See site map, Appendix A). There is a 60 gal UST on the north end of the compass room to catch and store any excess kerosene. The UST is a glass lined hot water heater tank buried in a round cement vault.

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Several drums containing metal scraps and filings are lined up along the east side of the building.

Two septic tanks are buried on the property, one near the restrooms at the southwest corner of the building and one midway down the west side of the structure. There are heat pumps located outside the building, one along the south wall, midway along the west side, and another approximately 2/3 the way north along the west wall of the building.

On the southeast corner of the warehouse are four small sheds. The southern shed is the painting shed, where the housings and parts are sprayed and dried. This facility is kept clean with air filters to remove paint from the air when ventilating the shop. The floor is concrete, which grades to a drain leading to a sealed recovery UST in the undeveloped lot on the east side of the building. There are two USTs in the undeveloped lot which are designed to catch any hazardous materials spilled in the painting facility or the material preparation shed. The USTs are monitored monthly and have never contained any materials in the past except rainwater. The small shed next to the material preparation shed is used for paint storage shed (See site map, Appendix A). It contains a variety of hazardous materials including approximately 10 gallons of enamel and acrylic paint, 5 gallons trichloroethylene, 6 gallons methyl ethyl ketone, 5 gallons percloroethyne, new & used laquer thinner, 12 cans of spray paint, 2 gallons stain, 5 gallons aeroshell 100, 1 gallon denatured alcohol, 5 gallons hydraulic oil, clear cote, 1 gallon contact cement, 1 gallon phosphoric acid, 1 gallon methanol, and alodyne, an aluminum coat. The shop has a concrete floor with minor stains.

The material preparation shed is used to clean parts and prepare them for painting and varnishing. Some brazing and varnish sealing is done in the shop as well. Along the east wall there is a sink for cleaning parts, the contaminated water being pumped into a 300 gallon plastic ground storage tank. The water is then pumped into an evaporator and released back into the atmosphere. There are varnish racks along the south wall of the shed, where items are varnished and left to air dry. Some hazardous materials are stored in the center of the shed, including 5 gal trichloroethylene, 20 gallons of varnish (air dry), 10 gallons of detergents, 1 medium sized acetylene bottle and welding supplies, a hot water heater and three ovens, used to harden varnish. The floor is clean and there do not appear to have been any spills. A lean to was built on the east side of the material preparation shed to house the contaminated water tank, the kerosene pump and tank, and various drums. The lean to was enclosed at the request of the EPA during a voluntary inspection. The lean-to contains 18 55-gallon drums, including drums of recycled sludge from parts washing, 8 empty drums, 1 drum of muselrex, 1 drum of used trichloroethylene, and 2 oil drums with hand pumps attached. One unlabeled drum is leaking what appears to be oil into a pan placed underneath it. There is a drain in the floor feeding into the sealed UST mentioned above to isolate and contain any spills. The concrete floor appears clean and shows no traces of spills.

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The wash water from the material preparation building prior to around 1992 was piped out into the empty lot and ran down gradient on concrete tiles. Potential contamination from this dumping is currently buried under fill material brought in during grading.

Two USTs were removed from the south side of the building, just beyond the fence. The USTs were decommissioned and removed by a local environmental company in compliance with state and federal regulations regarding tank removal. The tanks were oriented east-west. The tanks were 2000 gallon capacity, one was used for the storage of diesel, while the other was used to store kerosene. There is a possibility of contamination from the USTs, but further investigation and sampling would be necessary to make a determination.

There is a shed used to store cardboard boxes on the southeast corner of the fenced area.

Between the paint storage shed and the cardboard box storage shed are several empty, rusty drums and a section of concrete-asbestos pipe.

The asphalt parking lot and the west side of the roof drain into two storm drains on the west side of the building, one midway and one at the south corner. The northern roof section drains into the unpaved area along the building. The east side of the roof drains in a similar fashion, with the south section feeding into the patio drainage.

CETI used a magnetometer to survey the property in order to identify large buried metal objects such as underground storage tanks. Several small signals were encountered on the western portion of the property. These signals could have been caused by a multitude of small buried metal objects, such as construction debris.

5.1 Site Inspection Survey Questionnaire

1a. Is the property used for industrial use?

Response: ☒ Yes ☐ No ☐ Unknown
If yes, please explain: Yes, it is used to produce automatic pilots.

1b. Is any adjoining property used for an industrial use?

Response: ☒ Yes ☐ No ☐ Unknown
If yes, please explain: Yes, the property bordering to the north is occupied by an aluminum casting facility

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2a. Is there any evidence that the property might have had an industrial use in the past?

Response: ☒ Yes ☐ No ☐ Unknown
If yes, please explain: Yes, it has been used by Metal Marine since the property was developed.

2b. Is there any evidence that an adjoining property might have had an industrial use in the past?

Response: ☒ Yes ☐ No ☐ Unknown
If yes, please explain: Yes, the north adjoining property has been used as a casting facility since the property was developed.

3a. Is the property used as a gasoline station, motor repair facility, commercial printing facility, dry cleaners, photo developing laboratory, junkyard or landfill, or as a waste treatment, storage, disposal, processing, or recycling facility?

Response: ☐ Yes ☒ No ☐ Unknown
If yes, please explain:

3b. Is any adjoining property used as a gasoline station, motor repair facility, commercial printing facility, dry cleaners, photo developing laboratory, junkyard or landfill, or as a waste treatment, storage, disposal, processing or recycling facility?

Response: ☐ Yes ☒ No ☐ Unknown
If yes, please explain:

4. Are there any damaged or discarded automotive or industrial batteries, or pesticides, paints, or other chemicals in individual containers of greater than 5 gallons (19 L) in volume or 50-gallon (190 L) in the aggregate, stored on or used at the property or at the facility?

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Response: ☐ Yes ☒ No ☐ Unknown
If yes, please explain:

5. Are there any industrial drums, typically fifty five-gallon (208 L), or sacks of chemicals located on the property or at the facility?

Response: ☒ Yes ☐ No ☐ Unknown
If yes, please explain: Yes, drums of solvent and lubricating oil are stored on site.

6. Is there any evidence that fill dirt has been brought onto the property?

Response: ☒ Yes ☐ No ☐ Unknown
If yes, please explain: Yes, fill material was brought on site to bring the property to grade.

7. Are there any pits, ponds, or lagoons located on the property in connection with waste treatment or waste disposal?

Response: ☐ Yes ☒ No ☐ Unknown
If yes, please explain:

8. Is there any stained soil on the property?

Response: ☒ Yes ☐ No ☐ Unknown
If yes, please explain: Yes, as a result of a spill which was remediated and discussed in the Level II report.

9. Are there any registered or unregistered storage tanks (above or underground) located on the property?

Response: ☒ Yes ☐ No ☐ Unknown
If yes, please explain Yes, there are three USTs on the property, two are empty emergency tanks to contain spills, the third is used for the storage of a kerosene based solvent. On

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300 gallon aboveground tank is used to store contaminated water from parts rinsing.

10. Are there any vent pipes, fill pipes, or access ways indicating a fill pipe protruding from the ground on the property or adjacent to any structure located on the property?

Response: ☒ Yes ☐ No ☐ Unknown
If yes, please explain: Yes, they are conjugate to the USTs.

11. Is there any evidence that underground storage tanks existed on the property in the past?

Response: ☒ Yes ☐ No ☐ Unknown
If yes, please explain: Yes, two USTs were removed from the property.

12. Are there any flooring, drains, or walls located within the facility that are stained by substances other than water or are emitting foul odors?

Response: ☐ Yes ☒ No ☐ Unknown
If yes, please explain:

13. Is the property served by a private well?

Response: ☐ Yes ☒ No ☐ Unknown
If yes, please explain:

14. Does the property discharge waste water on or adjacent to the property, other than storm water into a sanitary sewer system?

Response: ☐ Yes ☒ No ☐ Unknown
If yes, please explain:

15. Is there any evidence of waste dumping on the property?

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Response: ☐ Yes ☒ No ☐ Unknown
If yes, please explain:

16. Is there a transformer, capacitor, or any hydraulic equipment for which there are any records indicating the presence of PCB's?

Response: ☐ Yes ☒ No ☐ Unknown
If yes, please explain:

5.2 Site Interviews

Michael Freeman, Metal Marine Pilot, Inc. ~~Owner~~ President

Michael Freeman provided information concerning the history of the structures on the subject property since approximately 1959. He also provided information regarding the business practices of Metal Marine Pilot, Inc. and Pace Inc..

Jeff Peterson Pace Ind. Inc.

Jeff Peterson provided information about previous dumping events by Pace Ind. Prior to the implementation of environmental laws, as well as information regarding a spill on the south side of the property which impacted the subject property (see Level II Site Assessment).

6.0 Property Ownership

A Metroscan is available in Appendix B and documents property ownership for this site.

7.0 Findings, Conclusions & Recommendations

CETI did discover evidence of contamination on the subject property and several properties near the subject property that could pose an environmental threat.

Interviews with Mr. Michael Freeman identified several areas where chemical wastes were buried in the properties open area east of the building. Mr. Freeman showed CETI technicians the approximate locations where several holes were had excavated, lined with lime and the chemical waste buried. Mr. Freeman also located several areas where used mercury vapor lights were dumped. Past practices in cleaning equipment and disposing of solvents were discussed with Mr.

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Freeman. CETI learned that one area in the rear of the building was used as a rinse area and waste solvents would run off the cleaning area and impact down gradient soils. These areas Mr. Freeman has identified warrant further investigation to delineate the extent of contamination and possible groundwater impact.

Empty drums that once contained petroleum products were observed at several locations. These locations are comprised of the lean-to shed on the east side of the property and the area between the paint storage shed and the cardboard storage shed. A drum leaking what appeared to be lubricating oil was observed in the lean-to shed. CETI recommends these materials be removed from the property and disposed of properly.

A hydraulic test facility, hydraulic doors, an air compression system, a solvent recovery system, and a kerosene solvent recycling system were all observed to be operating properly. CETI recommends that this equipment be monitored carefully should it remain on the property, to insure against leakage of any contaminants.

CETI was informed that residue which accumulates in the evaporator and stored in 55-Gallon drums still resides on the property. CETI recommends that this residue be disposed of properly.

CETI notes that the subject property is covered either by buildings or asphalt and concrete where hazardous materials are used. If any of the minor amounts of hazardous materials noted in this report (such as lubricating oils, kerosene, stove oil, paints, and solvents) were spilled in the past it is unlikely (although not impossible) that the spills impacted the underlying soils.

Pace Puget, the northern adjacent property, warrants further attention. 2101 Mildred St. West (Site 2) has had waste dumping events in the past, and recently spilled an unknown quantity of paraffin based lubricating oil. CETI supervised a remedial action by Pace Puget to remove all released contaminant from Metal Marine's property on April 14, 1999. A separate remedial action report was written by CETI. At the time of this report, only the Metal Marine property has been characterized and remediated. There still exists an unknown amount of contamination on the Pace side of the property line.

In conclusion, CETI did find evidence of current contamination on the subject property. Potential sources of contamination were identified, as outlined above, and the appropriate recommendations should be followed regarding them. Additional, undetected contamination or environmental liability may exist. Such contamination/liability could be found at localized portions of the site that are not readily observable through the commonly accepted methods of inspection that have been defined and discussed within this report.

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Creative Environmental Technologies, Inc. extends its appreciation for the opportunity to provide environmental services on this project. If there are any questions regarding this report please do not hesitate to contact us.

Respectfully Submitted,

By: _____

Fritz Carmine
Environmental Geologist
Creative Environmental Technologies, Inc.

Approved By: _____

Steven M. Spencer

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Appendix - A

Site Location Map, Site Maps 1 & 2, Site Photographs

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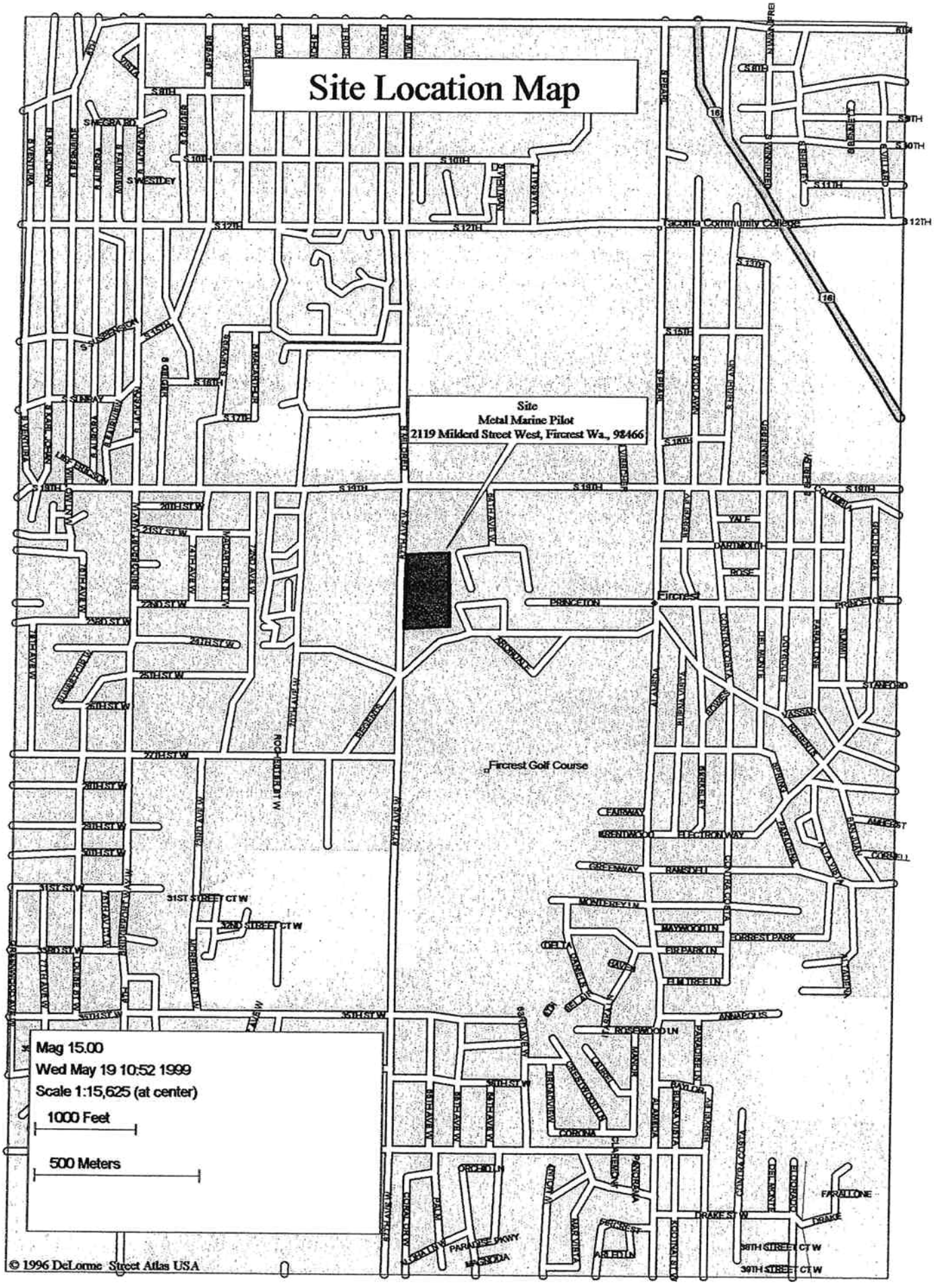

Site Location Map
Site
Metal Marine Pilot
2119 Milderd Street West, Fircrest Wa., 98466
Fircrest Golf Course
Fircrest
Tacoma Community College
Mag 15.00
Wed May 19 10:52 1999
Scale 1:15,625 (at center)
1000 Feet
500 Meters
© 1996 DeLorme Street Atlas USA

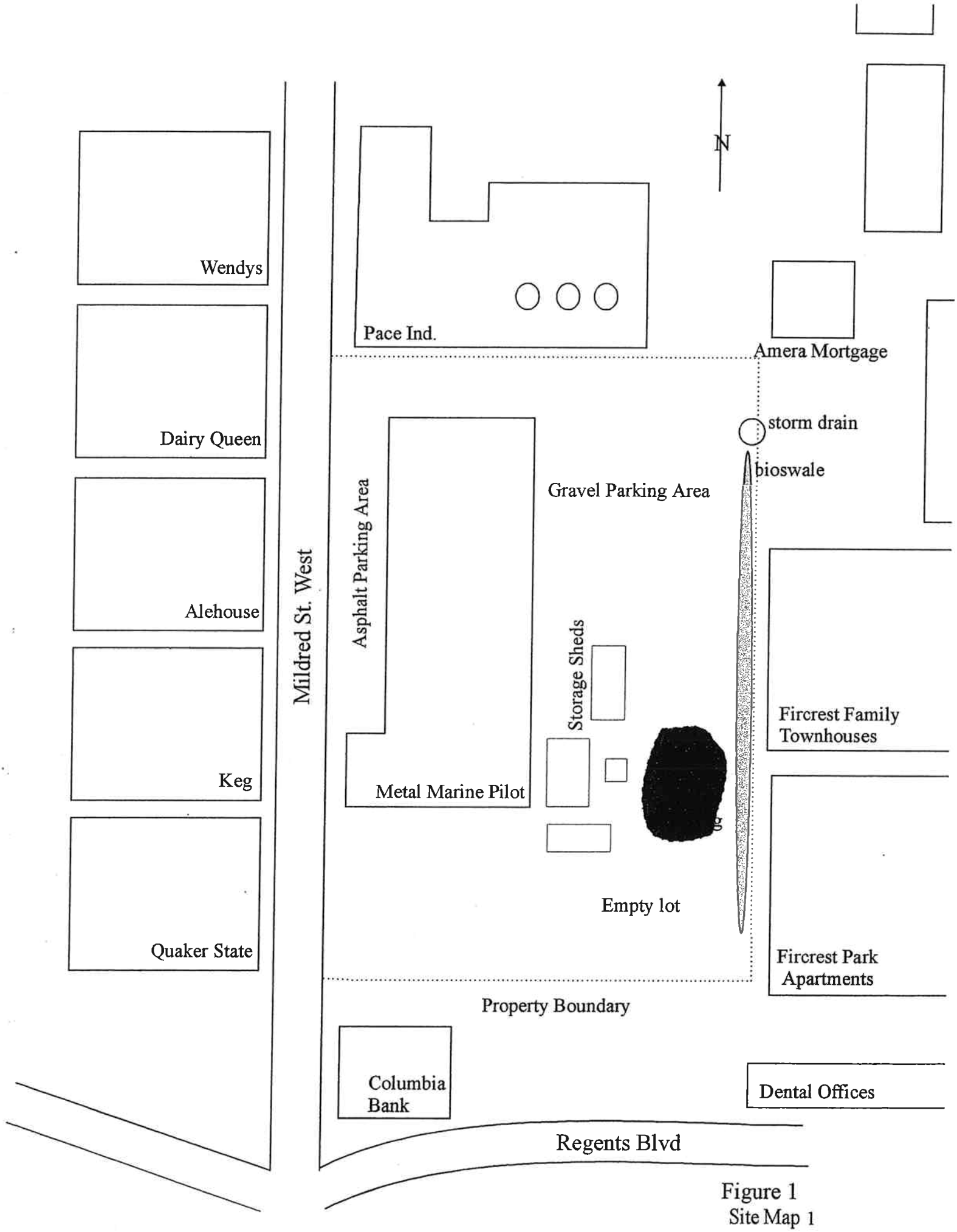
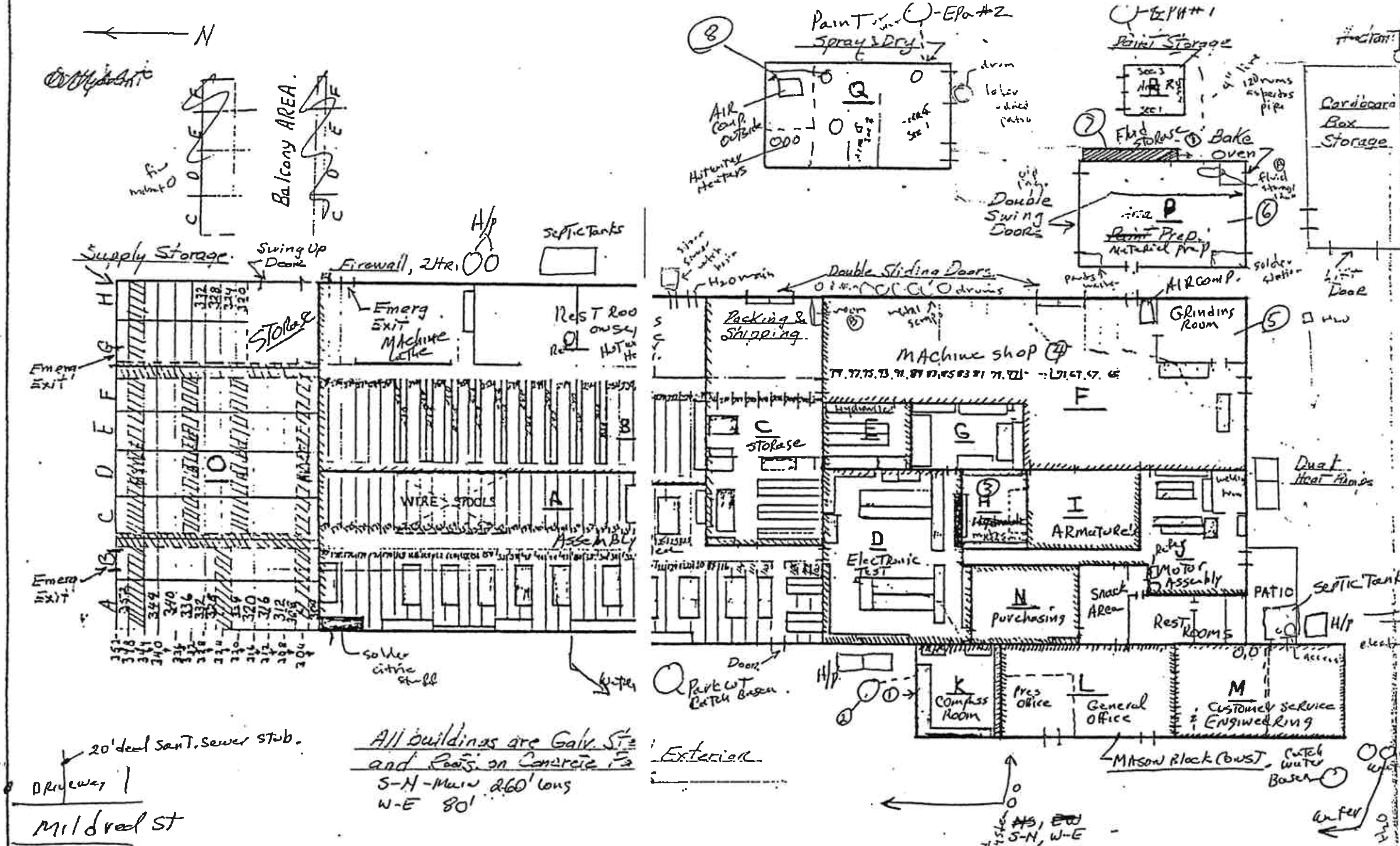


Figure 1
Site Map 1



① - 5/8" Copper Line - under Eves - carries clean Chevron 410-DSB -c Pas. Pres. Pump. 10min Timer.

② underground - water Heater 60gal - Glasslined - used as catch T k from Compass Room

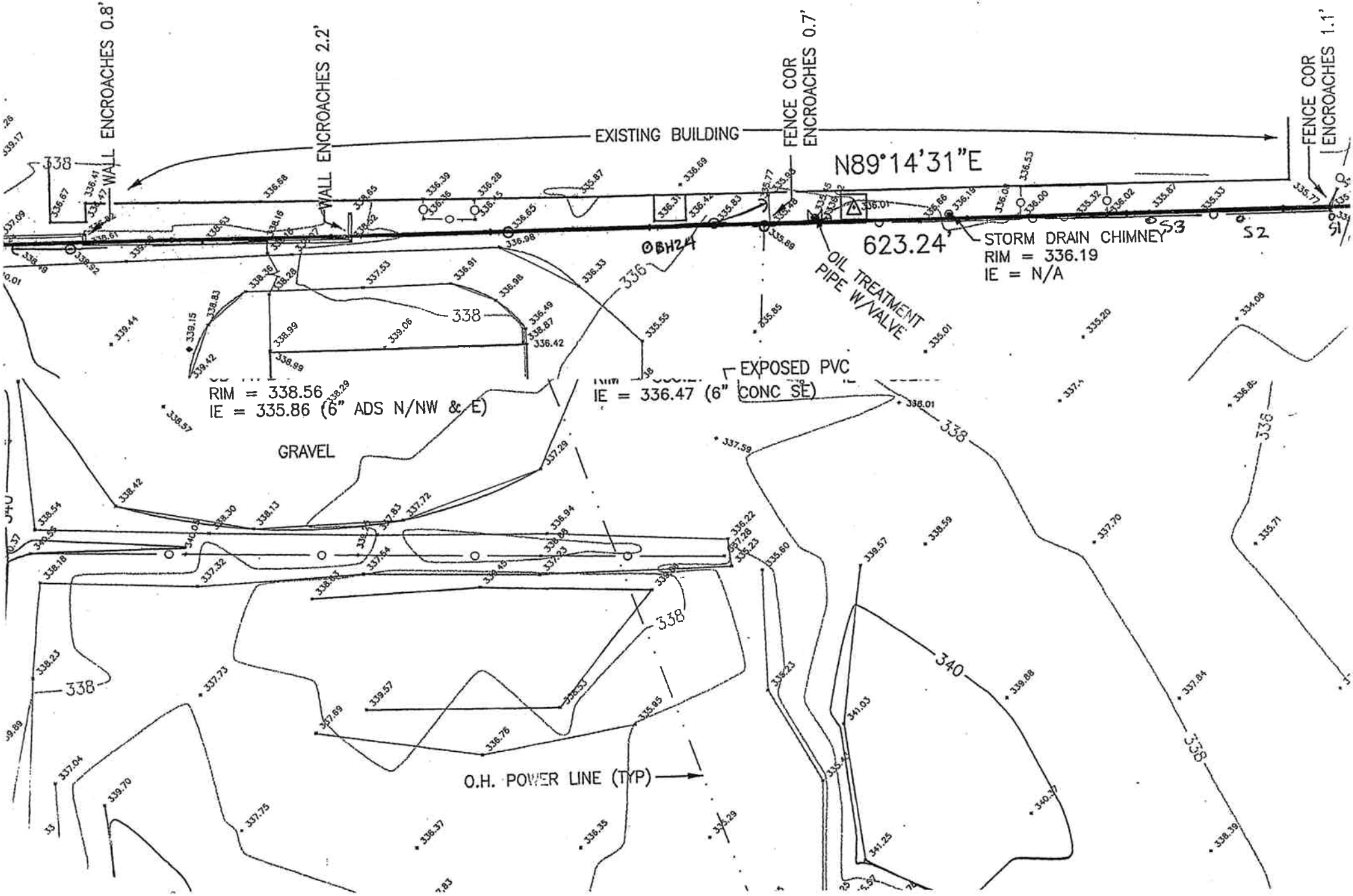
③ Hydraulic's Room - DexronII Fluid used - Floor cleaned w/che HODSD - No Floor Drains, Cracks or Joints

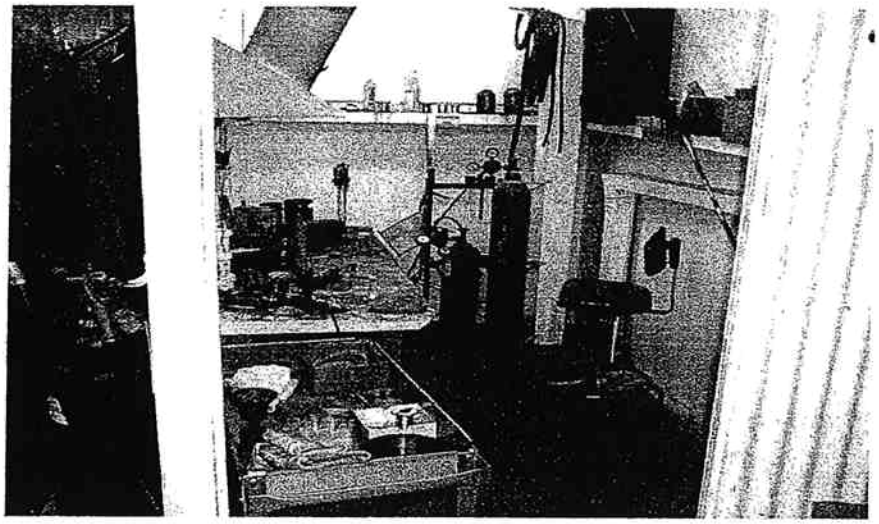
④ w/s Lube oil for cutting - Recycled at machines: or Portable Pu

METAL MARINE PILOT, INC. 2119 South Mildred Street Tacoma, Wash. 98466	FOR: INVENTORY
SCALE: — DATE: 5/17/93	MACHINE NO. AREAS
DRWN. MW/F CK.	TITLE
MATERIAL	
PREVIOUS	
REVISIONS	
ASSEMBLY	NO.

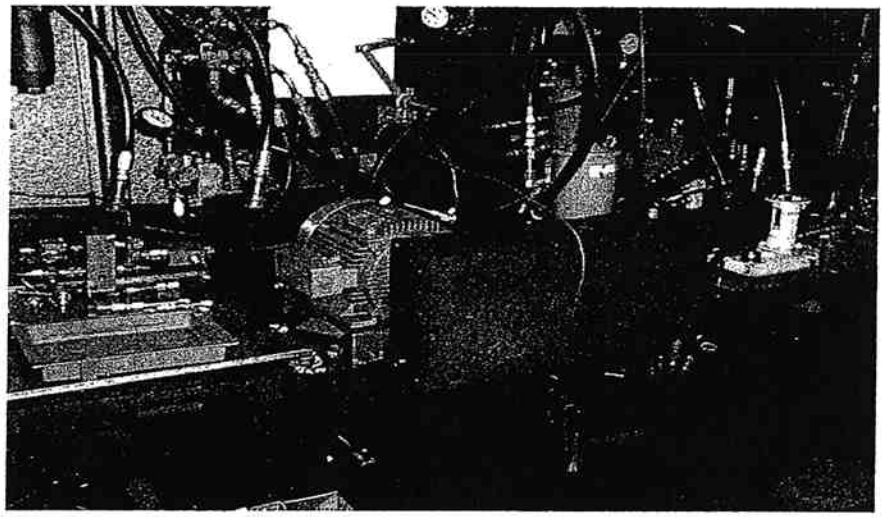
PORTION OF THE NW 1/4 OF THE NW 1/4, SEC

CITY OF FIRCREST, PIERCE COUNTY,

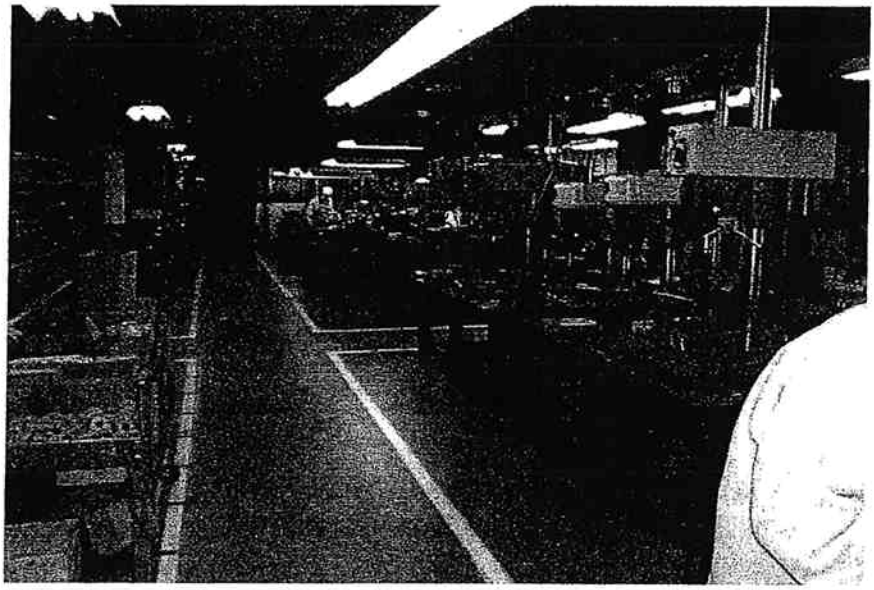




Welding and Soldering Room



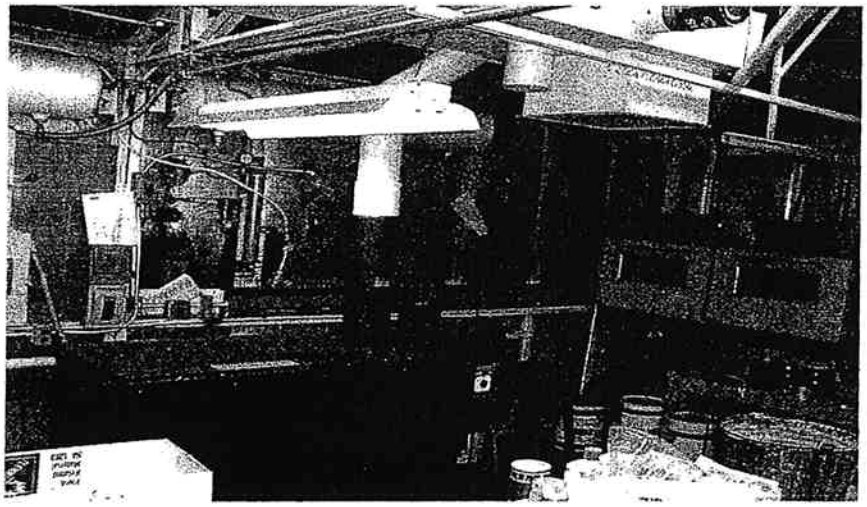
Hydraulic Systems Test Bench



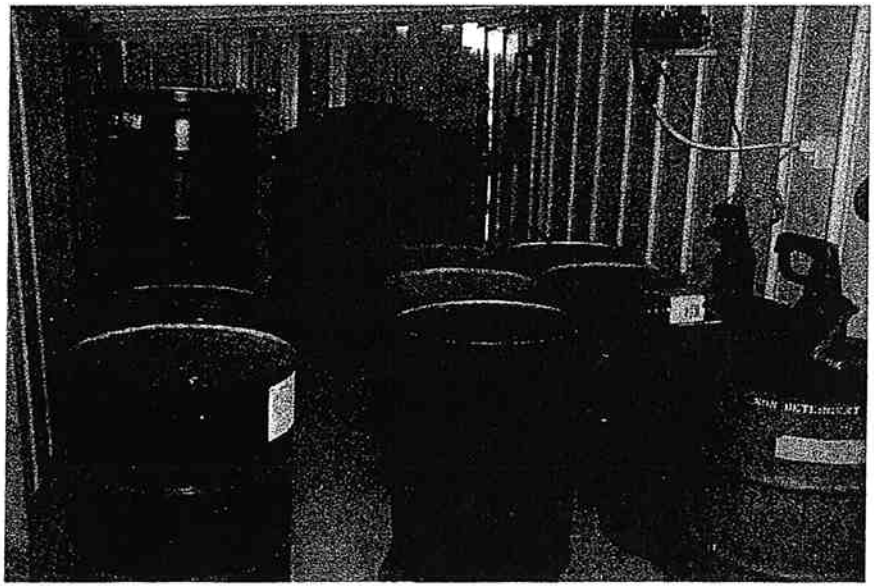
Machine Shop

Site Photographs
Level 1 Environmental Site Assessment
Metal Marine Pilot
2119 Mildred Street

Fluid Storage Lean -To

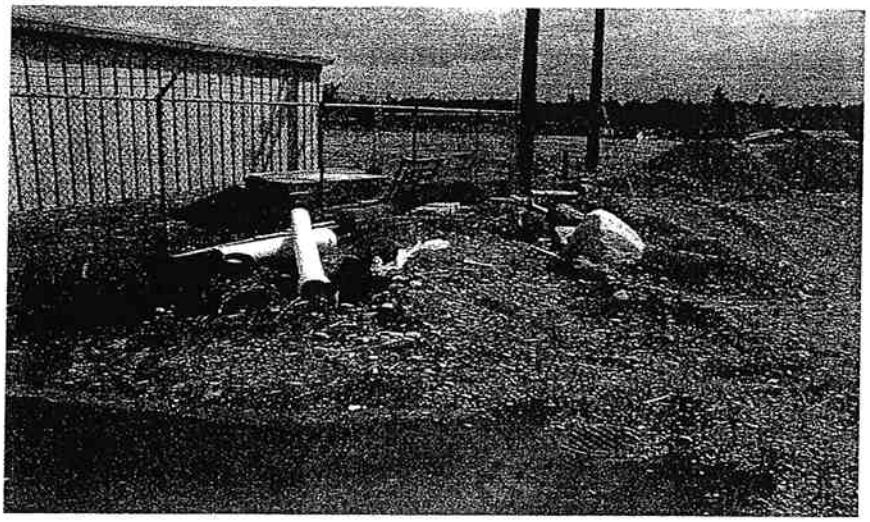


Evaporator and Recovery System

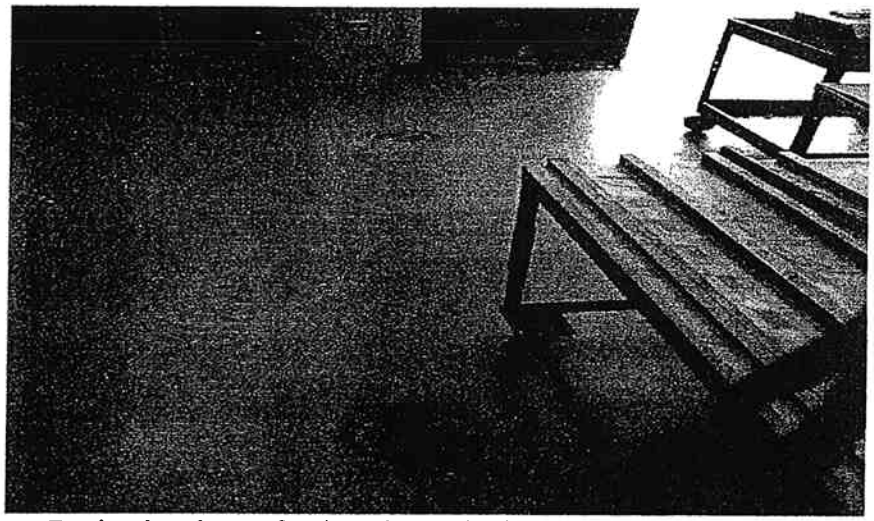


Evaporator Recovery Tank and Drum Storage in Lean-To

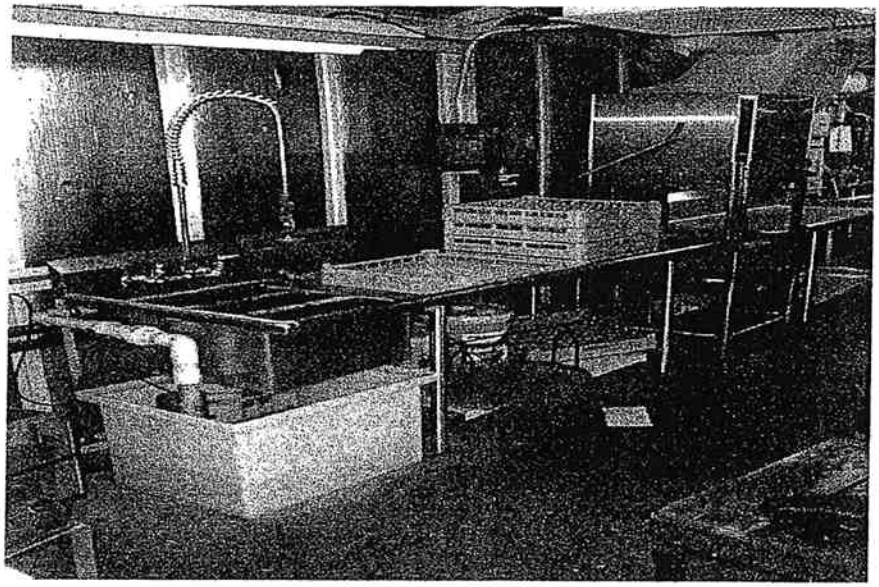
Site Photographs
Level 1 Environmental Site Assessment
Metal Marine Pilot
2119 Mildred Street



Storm Drain on South End of Building Site of Removed USTs



Drains in Floor of Paint Shop which Lead to Recovery Tank



Parts Washing Facility

Site Photographs
Level 1 Environmental Site Assessment
Metal Marine Pilot
2119 Mildred Street

Varnish Dip Facility

Appendix - B

Metroscan and Plat Maps

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=METROSCAN PROPERTY PROFILE=
Pierce (WA)

OWNERSHIP INFORMATION

Account Number :022011 200 5 R:02E T:20N S:11 Q:NW QQ:NW
Bldg Id Number :1 of 1
Record Type :Unplatted
Owner/Taxpayer :Freeman Robert M
CoOwner :
Site Address :2119 Mildred St W Fircrest 98466
Mail Address :2119 Mildred St W Fircrest Wa 98466
Telephone :Owner:253-564-5902 Tenant:

SALES AND LOAN INFORMATION

Recording Date	:01/01/53	Loan Amount	:
Auditors Fee #	:	Loan Type	:
Sale Price	:$3,950	Lender	:
Vesting Type	:	Interest Rate	:
Deed Type	:	% Owned	:

ASSESSMENT AND TAX INFORMATION

Land	:$1,039,000	1998 Taxes	:$20,565.46
Structure	:$189,600	Senior Tax	:
Timber	:	Excise Tax #	:
Total	:$1,228,600	Utility District	:
% Improved	:15	School District	:010
Levy Code	:063	Fire District	:03

PROPERTY DESCRIPTION

Map Page & Grid :772 H7
Census :Tract:723.05 Block:1
Neighborhood Cd :
Zoning Code :G
Land Use :3510 Mfg,Professional,Scientific
Auditor Number :
Building Name :Metal Marine Pilot
Sub/Plat :
Legal :SW OF NW OF NW SUBJ TO CY OF TAC
:EASE LESS R/W FOR RD
:

Vol: Page:

=METROSCAN PROPERTY PROFILE=
Pierce (WA)

Account Number:022011 200 5 Building Id Number:1

PROPERTY CHARACTERISTICS

Bedrooms	:	1st Floor SqFt	:	Lot Acres	:9.49
Bath Full	:	2nd Floor	:	Lot SqFt	:413,384
Bath 3/4	:	Attic SqFt	:	Year Built	:1968
Bath 1/2	:	AboveGround SF	:	EffYearBlt	:1968
Family Rm	:	Primary MezzSF	:	Roof Type	:
Floor Cvr	:	Second Mezz SF	:	Foundation	:
Fireplace	:	Bsmnt Fin SqFt	:	Constructn	:Concrete
Porch	:	Bsmnt Unfin SF	:	Quality	:Low Cost
Patio	:	Bsmnt Tot SqFt	:	Bldg Cond	:Avg
Pool	:	Building SqFt	:23,728	HeatMethod	:Space Htr
Stories	:1	Deck SqFt	:	ElectrcSvc	:Yes
Units	:	Porch SqFt	:	Water Srce	:Yes
GarageTyp	:	Patio SqFt	:	Sewer	:Yes
Bldg Type	:Ind Bldg	Garage SqFt	:	St Access	:Std
				StreetType	:Paved
				View Qlty	:
				Bsmnt Type	:
				OtherImprv	:Yes
				ImprvdType	:
				DevelopTyp	:Comm
				Wall Type	:

SECONDARY BUILDING STRUCTURE

Year Built	:1975	Bsmnt Fin SF	:
Construction	:Wood\Steel	BsmntUnFinSF	:
Bldg Condition	:Avg	Bldg SqFt	:837
Quality Class	:Avg	Stories	:
Heating Method	:	Unit Number	:
Cooling Method	:	BuildingType	:Warehouses

OTHER INFORMATION

Waterfront Type	:	Fence Type	:Chain
Lot Frontage	:	Fire Sprinklers	:No
Bsmnt ParkingSF	:	Elevator	:

RENTAL INFO

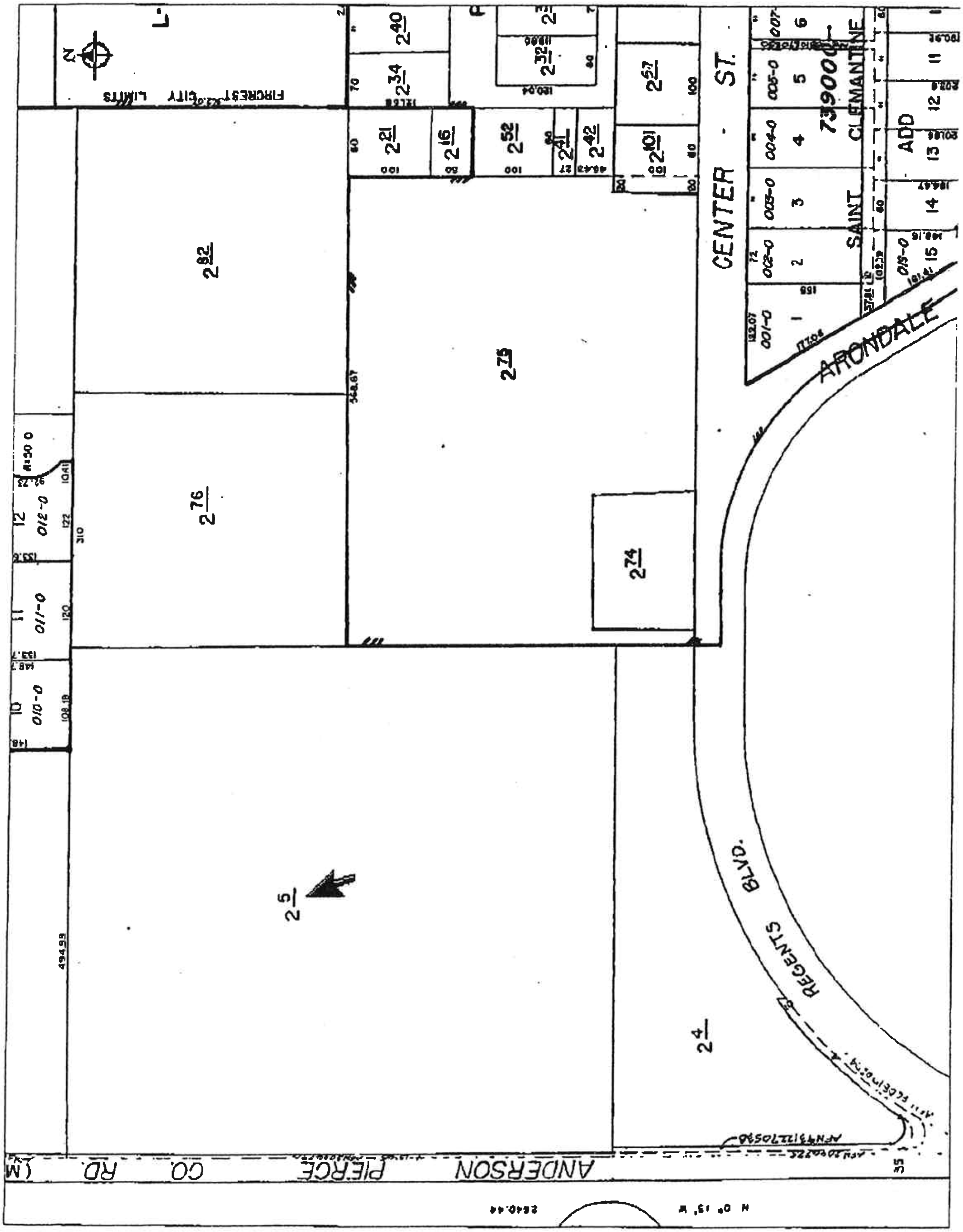
Kitchens	:
Rental SqFt	:24,565
Inspected	:11/12/1986
Vacuum	:

PERMIT INFO

Amount	:
Date	:
Dishwasher	:

BUILT-INS

Range/Oven	:
Hood/Fan	:


FIRCREST CITY LIMITS
CENTER ST.
ST. CLEMANTINE ADD
ARONDALE
REGENTS BLVD.
ANDERSON PIERCE CO. RD.
739000
2 82
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2 74
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2 34
2 40
2 32

Appendix - C

EDR Report

1203 E. D Street, Suite 109 ⊛ P.O. Box 1803 ⊛ Tacoma, Washington 98401- 1803
P: 253. 627.3347 ⊛ F: 253.572.4207 ⊛ E: ceti@cetinw.com ⊛ W: www.cetinw.com

425-562-4201
Fax To: Ted Sykes

ENVIRONMENTAL QUESTIONNAIRE

Site Address:

2119 Mildred Street West
Fircrest, Washington

ENGINUITY
CREATIVE COLLABORATIVE SOLUTIONS

Janet Freeman-Daily
MIT SB, Caltech MS & Engineer

3512 SW 310th Court
Federal Way, WA 98023-2199
janet.f-d@comcast.net

(253) 606-2173
Fax (253) 874-2302
Home (253) 838-6623

re: 2119 Mildred Street
Fircrest, WA

Question	Owner's Answer
1. What year did the current owner purchase the Property?	1953

2. Who was the previous site owner and what was the property's use during the time the current owner purchased the Property?

Previous owner unk - use open country undeveloped.

3. Did the previous owner of the Property disclose or inform the current owner of any environmental issues that had occurred on the Property?

Yes (No) Unk[1]

NO

4. What is the Property's current use?

Storage of personal Family Property including Equipment for Sale

5. What types of commercial or industrial activities have occurred on the property in since the current owner purchased the site?

Manufacturing of MARINE AUTO PILOTS & Navigation Aids And Related Activities

6. Has any adjoining property been used for an industrial use in the past?

(Yes) No Unk

Yes, Property to the North, "PACE" / PUGET CORP / PUGET DIECASTING

[1]Unk = Unknown or No Response

Question	Owner's Answer
7. To the best of your knowledge, has the Property or any Adjoining Property been used as a gasoline station, motor repair facility, commercial printing facility, dry cleaners, photo developing laboratory, junkyard or landfill, or as a waste treatment, storage, disposal, processing, or recycling facility?	Yes (No) Unk

NO (one diesel tank on property for personal use, was removed years ago)

8. Are there currently, or to the best of your knowledge have there been previously, any damaged or discarded automotive or industrial batteries, or pesticides, paints, or other chemicals in individual containers of greater than five gallons in volume or fifty gallons in the aggregate, stored on or used at the Property or at the facility? (Yes) No Unk

Yes, ~~AeroShell~~ motor oil, ~~Shell~~ Cheron 410B Solvent type A Dexrow III oil, perchloroethylene, trichloroethylene, various paints ~~(latex based)~~, mercury contactors (enclosed), diesel fuel

9. Are there currently, or to the best of your knowledge have there been previously, any industrial Drums (typically 55 gallon) or sacks of chemicals located on the Property or at the facility? (Yes) No Unk

yes, removed and disposed of by licensed hazmat handlers

10. Has Fill Dirt been brought onto the Property which originated from a contaminated site or which is of an unknown origin? (Yes) No Unk

Unknown origins

[1]Unk = Unknown or No Response

Question	Owner's Answer
11. Are there currently, or to the best of your knowledge have there been previously, any Pits, Ponds or Lagoons located on the Property in connection with waste treatment or waste disposal?	(Yes) No Unk

Yes - 3 or 4 pits - Lime

12. Is there currently, or to the best of your knowledge has there been previously, any stained soil on the Property?	Yes No (Unk)

unk - what is "stained"?
(some ~~create~~ contaminated soil was removed - see remediation report provided to buyer)
neighbor to North discharged hydrocarbon fluids, cleaned up ~1999

13. Are there currently, or to the best of your knowledge have there been previously, any registered or unregistered storage tanks (above or underground) located on the Property?	(Yes) No Unk

A Yes - Removed Diesel & 410B solvent
B yes - 2 "vaults" for closed water recovery still on site
yes! - removed empty tank (old hot water tank) - see remediation report provided to buyer

11. Are there currently, or to the best of your knowledge have there been previously, any vent pipes, fill pipes or access ways indicating a fill pipe protruding from the ground on the Property or adjacent to any structure located on the Property?	Yes No Unk

Yes - Removed see # #13A

[1]Unk = Unknown or No Response

Question	Owner's Answer
12. Are there currently, or to the best of your knowledge have there been previously, any flooring, drains, or walls located within the facility that are stained by substances other than water or are emitting foul odors?	(Yes) No Unk

A Yes - In Machine Shop Area - Milling Machine Bottoms Above "Cutting Oil" Spatter on them
Yes - Hydraulic Room - Dexron III oil on walls
No Odors from Any

13. If the Property is served by a private well or non-public water system, have contaminants been identified in the well or system that exceed guidelines applicable to the water system or has the well been designated as contaminated by any government environmental/health agency?	Yes No Unk

DNA - does not apply (on City Water)

14. Does the Owner or Occupant of the Property have any knowledge of Environmental Liens or governmental notification relating to past or current violations of environmental laws with respect to the Property or any facility located on the Property?	Yes (No) Unk

None

15. Has the Owner or Occupant of the Property been informed of the past or current existence of Hazardous Substances or Petroleum Products of environmental violations with respect to the Property or any facility located on the Property?	(Yes) No Unk

No, see Level 1 and Level 2 environmental assessments provided to buyer

[1]Unk = Unknown or No Response

Question	Owner's Answer
16. Does the Owner or Occupant of the Property have any knowledge of any Environmental Site Assessment of the Property of facility that indicated the presence of Hazardous Substances or Petroleum Products on, or contamination of, the Property or recommended further assessment of the property?	(Yes) No Unk

see answer to #15

17. Does the Owner or Occupant of the Property know of any past, threatened, or pending lawsuits or administrative proceedings concerning a release or threatened release of any Hazardous Substance or Petroleum Products involving the Property by any Owner or Occupant of the Property? — Yes (No) Unk

NO

18. Does the Property discharge waste water on or adjacent to the Property other than storm water or into a sanitary sewer system? — Yes (No) Unk

NO

19. To the best of your knowledge, have any Hazardous Substances or Petroleum Products, unidentified waste materials, tires, automotive or industrial batteries or any other waste materials been dumped above grade, buried and/or burned on the Property? — (Yes) No Unk

See # 11 - Clean fills, some asphalt

[1]Unk = Unknown or No Response

Question	Owner's Answer
20. Is there a transformer, capacitor or any hydraulic equipment for which there are any records indicating the presence of PCBs?	Yes No (Unk)

Possibly - Transformers on pole SE Corner of Building, Content unknown - One exploded several years ago - Ground cleaned by city, Light - approx 1970's Early.

The Preparer of the Environmental Questionnaire must complete and sign the following statement.

THIS QUESTIONNAIRE WAS COMPLETED BY

Name Janet Freeman-Daily
Title Manager
Firm Robert & Ethel Freeman Family LLC I
Address 3512 SW 310TH CT
Federal Way, WA 98023

Phone Number (253) 606-2173

PREPARER (LISTED ABOVE) REPRESENTS THAT TO THE BEST OF THE PREPARER'S KNOWLEDGE THE ABOVE STATEMENTS AND FACTS ARE TRUE AND CORRECT AND TO THE BEST OF THE PREPARER'S ACTUAL KNOWLEDGE NO MATERIAL FACTS HAVE BEEN SUPPRESSED OR MISSTATED.

Janet E. Freeman-Daily
Signature

18-Apr-2005
Date

[1]Unk = Unknown or No Response

-Permit Issue Date-
19940222

DATE: 2/22/94

PIERCE COUNTY
2401 S 35th ST
TACOMA, WA 98409

www.piercecountywa.org/pals

-Permit No-
175103

***** THIS IS A REFERENCE FILE COPY *****

Flam/Comb Lqd Rmv/Abandon Tank

Valid from dates: 02/22/1994 thru 05/22/1994

Issued by Pierce County giving: DON GOLDEN CO INC
permission according to approved plans, application, and restrictions
on record to: REMOVE (1) 1000 GAL UG DIESEL STORAGE TANK &
(1) 1000 GAL UG SOLVENT STORAGE TANK
* SEE ATTACHED REQUIREMENTS *
Shall comply with attached FPB's requirements &
Article 79 of 1991 Uniform Fire Code.
cc: Pierce Cty FPD #3
Dept of Ecology
Health Dept - M. Schreiner

Project Name: METAL MARINE PILOT INC

Site Address: 2119 MILDRED ST W RTSQQ: 02201122 IArea:03
Sch District: 010 Tacoma Parcel: 0220112005
Property
Owner: FREEMAN ROBERT M
2119 W MILDRED ST
TACOMA WA 98466

Applicant: DON GOLDEN CO INC Bus: (253) 474-0148
4704 S WASHINGTON
TACOMA WA 98409

Zone: Fire D/A: 03 A

***** THIS IS A REFERENCE FILE COPY *****

NOTE: Pierce County's approval (issuance) of this application / permit or decision pertains only to the County's regulatory jurisdiction and thus compliance with County regulations does not necessarily ensure compliance with other federal or state laws.

```
;;;;;;;;;;;;;;;;;;;;;;;;;W    PIERCE COUNTY   Q;;;;;;;;;;;;;;;;;;;;;;;;;W
    Form: APPLLIST3  dc331t: DEVELOPMENT CENTER :THU, APR 14, 2005,  3:09 PM :
Operator: MSMIT-C          A;;;;;;;;;;;;;;;;;;;SNumber of Appls:5            :
 Printer: RLP27        ***  List of Applications  ***                        :
Rec# Type St Start Dt Close Dt Project Work Description                Appl # :
                                                                              :
   1 PLUM PP 19920821 20050129 INSTALL NEW GAS WATER HEATER             136411 :
                                                                              :
   2 FCFI FN 19930122 19950906 OPERATE INSTRUMENT STORE                 146734 :
                                                                              :
   3 FBSO FN 19930122 19950906 SPRAY FINISHING OPERATION                146736 :
                          REQUIREMENTS:                                       :
   4 FBFU FN 19930122 19950906 USE/HANDLE COMBUSTIBLE LIQUIDS           146737 :
                          REQUIREMENTS:                                       :
   5 FBFR FN 19940222 19940307 REMOVE (1) 1000 GAL UG DIESEL STORAGE TA175103 :
                          (1) 1000 GAL UG SOLVENT STORAGE TANK                :
   0                                                                          :
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   0                                                                          :
                                                                              :
    Select Application to list: [0          ]                                 :
;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;S
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WASHINGTON STATE DEPARTMENT OF ECOLOGY

UNDERGR)ND STORAGE TANK TEMPORARY/PERMANENT CLOSURE and SITE ASSESSMENT NOTICE

See back of form for instructions
Please ☑ the appropriate box(es)
Please type or print information

For Office Use Only
Owner # U000474
Site # 005902

☐ Temporary Tank Closure ☑ Permanent Tank Closure ☐ Change-In-Service ☐ Site Assessment/ Site Check

SITE INFORMATION:

Site ID Number (on Invoice or available from Ecology if the tanks are registered): 005902

Site/Business Name: Metal Marine Pilot, Inc.

Site Address: 2119 Mildred Street West (Street) Telephone: (206) 564-5902

Tacoma (City), WA (State) 98466-6135 (ZIP-Code)

TANK INFORMATION:

Tank ID	Closure Date	Tank Capacity	Substance Stored
#1	3/4/94	1000	Solvent
#2	3/4/94	1000	Diesel

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MAY 12 1994
ECOLOGY

CONTAMINATION PRESENT AT THE TIME OF CLOSURE

☐ Yes ☑ No

☐ Unknown

Check unknown if no obvious contamination was observed and sample results have not yet been received from analytical lab.

UST SYSTEM OWNER/OPERATOR:

UST Owner/Operator: Metal Marine Pilot, Inc.

Owners Signature: Robert M. Freeman Telephone: (206) 564-5902

Address: 2119 Mildred St. W (Street) P.O. Box

Tacoma (City) WA (State) 98466-6135 (ZIP-Code)

TANK CLOSURE/CHANGE-IN-SERVICE PERFORMED BY:

Service Provider: Don Golden Company Inc. License Number: S000055

Licensed Supervisor: Don Golden Decommissioning License Number: W000688

Supervisors Signature:

Address: 4704 So Washington (Street) P.O. Box

Tacoma (City) Washington (State) 98409 (ZIP-Code)

Telephone: (206) 474 0148

SITE CHECK/SITE ASSESSMENT CONDUCTED BY:

Name of Registered Site Assessor: Don Golden

Telephone: (206) 474 0148

Address: 4704 So Washington (Street) P.O. Box

Tacoma (City) Washington (State) 98409 (ZIP-Code)

ECY 020-34

PLEASE READ CAREFUL

INSTRUCTIONS

Return this completed form to:

Underground Storage Tank Section
Department of Ecology
P. O. Box 47655
Olympia, WA 98504-7655

This form is to be completed by the Tank Owner and submitted to Ecology within 30 days of tank closure.

Mark the appropriate box(es) for temporary tank closure, permanent tank closure, change-in-service, or site assessment.

Permanent Closure and Change-in-Service require a site assessment be performed.

SITE INFORMATION:

Fill in the site information. Be sure to include the Ecology site ID number. This number may be found on the invoice or permit. Include a contact telephone number so any problems may be resolved quickly.

TANK INFORMATION:

List the tanks that were closed. Please use tank ID numbers and indicate the date of permanent closure. Be sure to attach your Underground Storage Tank Permits for any tanks that are now closed.

UST SYSTEM OWNER/OPERATOR:

Please fill in the owner's/operator's name, address, and telephone number. **Be sure to sign this form.**

TANK CLOSURE/CHANGE-IN-SERVICE PERFORMED BY:

List the closure company. Companies that provide UST services **MUST** be licensed by Ecology. Ask to see their supervisor's license. Make sure the licensed supervisor signs this form.

SITE CHECK/SITE ASSESSMENT CONDUCTED BY:

Fill in the site assessor information for permanent closure or change-in-service. Mark the appropriate box showing whether contamination from the underground tank(s) was or is present at the site. A site check/site assessment **MUST** be conducted by a site assessor who is registered with Ecology.

If contamination at the site is found or suspected, the appropriate Ecology Regional Office must be notified within 24 hours. If the contamination is confirmed, a site characterization report must be submitted to the regional office within 90 days. If contamination is not confirmed, a site assessment report must be submitted to the above address within 30 days.

Tanks exempt from notification requirements are:

Farm or residential tanks, 1100 gallons or less, used to store motor fuel for personal or farm use only. The fuel must not be for resale or used for business purposes.

Tanks used for storing heating oil that is used on the premises where the tank is located.

Tanks with a capacity of 110 gallons or less.

Equipment or machinery tanks such as hydraulic lifts or electrical equipment tanks.

Emergency overflow tanks, catch basins, or sumps.

For more information call toll free in the state of Washington 1-800-826-7716 or (206) 438-7137

PIERCE COUNT
PLANNING
& LAND
SERVICES

02-22-94 3:25PM

175103
FIRE ART IV 30.00
SUB TTL 30.00
TOTAL 30.00
CHECK 30.00
CHANGE 0.00
MICHELOIA 1R 36

-Permit Issue Date
940222

---Permit No.---
175103

For information call: 591-7179

Flam/Comb Tank Removal Permit

This permit is Valid from: 02/22/94 through 05/22/94

Issued by Pierce County giving: DON GOLDEN CO INC
permission according to approved plans, application, and restrictions
on record to: REMOVE (1) 1000 GAL UG DIESEL STORAGE TANK &
(1) 1000 GAL UG SOLVENT STORAGE TANK
* SEE ATTACHED REQUIREMENTS *
Shall comply with attached FPB's requirements &
Article 79 of 1991 Uniform Fire Code.
cc: Pierce Cty FPD #3
Dept of Ecology
Health Dept - M. Schreiner

Project Name: METAL MARINE PILOT INC

Site Address: 2119 MILDRED ST W

RTSQQ: 02201122
Parcel: 0220112005

Property
Owner: FREEMAN ROBERT M
2119 W MILDRED ST
TACOMA WA 98466

Applicant: DON GOLDEN CO INC
4704 S WASHINGTON
TACOMA WA 98409

Bus: (206) 474-0148

Business:
Occ group: Const type: SF: 901: Fire D/A: 03A

Not valid without authorized signature.

-------Fee Description-------	--Quantity--	-----Value-----
FLAM/COMB TANK REMOVAL	2	30.00
	Total fees =	30.00
	Base permit fee =	30.00
	Total Permit Amount =	30.00
	Total fees =	30.00
	Total paid =	30.00-

CONTINUED ON PAGE 2

U0004674
CC5103

UNDERGROUND STORAGE TANK
30 Day Notice of Intent to Close/Decommission Tanks

The purpose of this form is to provide the Department of Ecology with notice of intent to close/decommission an UST. It must be received 30 days prior to the closure activities. It must be signed and dated by either the owner/operator of the UST to be closed or his/her authorized representative. (This could be the firm contracted to do the work.) Ecology will notify the identified person of the earliest date closure/decommissioning activities may commence.

For questions on completing this form please call (206) 459-6293.

Please type or use ink.

The completed checklist should be mailed to:

Underground Storage Tank Section
Department of Ecology
Mail Stop PV-11
Olympia, WA 98504-8711

1. TANK OWNER AND LOCATION

UST Owner/Operator: Metal Marine Pilot, Inc. (U0004674)

Owners Mailing Address: 2119 Mildred Street West (Street) (P.O. Box)

Tacoma, (City) WA (State) 98466-6135 (ZIP Code)

Telephone: (206) 564-5902

Site ID Number (on invoice or available from Ecology if tank is registered): Please refer to attached for Site # Copy not legible

Site/Business Name: Metal Marine Pilot, Inc. (U0004674)

Site Address: 2119 Mildred Street West (Street) Pierce (County)

Tacoma, (City) WA (State) 98466-6135 (ZIP Code)

DEPARTMENT OF ECOLOGY UNDERGROUND STORAGE TANKS JAN 07 1994

2. TANK PERMANENT CLOSURE TO BE PERFORMED BY (If known)

Firm: Don Golden Company Inc.

Address: 4704 So Washington (Street) (P.O. Box)

Tacoma, (City) WA (State) 98409-2825 (ZIP Code)

Telephone: (206) 474- 0148 Contact Name: Don Golden

3. TANK INFORMATION

Tank Identification	Approx. Closure Date	Tank Capacity (gallons)	Tank Age (years)	Last Substance Stored
#2 See Attached	February 10, 1994	1000	12 years	Diesel
#1 See attached	February 10, 1994	1000	12 years	Solvent

4. SIGNATURE OF TANK OWNER/OPERATOR OR AUTHORIZED REPRESENTATIVE:

Signature: [signature] Don J. Golden (Name) President (Title) 12/23/93 (Date)

ECY 101 155 11/90

UNDERGROUND STORAGE TANK
Site Check/Site Assessment Checklist

SW

For Office Use Only
Owner # 60004174
Site # 005902

INSTRUCTIONS:

When a release has **not** been confirmed and reported, this Site Check/Site Assessment Checklist must be completed and signed by a person registered with the Department of Ecology. **The results of the site check or site assessment must be included with this checklist.** This form must be submitted to Ecology at the address shown below within 30 days after completion of the site check/site assessment.

SITE INFORMATION: Include the Ecology site ID number if the tanks are registered with Ecology. This number may be found on the tank owner's invoice or tank permit.

TANK INFORMATION: Please list all the tanks for which the site check and site assessment is being conducted. Use the tank ID number if available, and indicate tank capacity and substance stored.

REASON FOR CONDUCTING SITE CHECK/SITE ASSESSMENT: Please check the appropriate item.

CHECKLIST: Please initial each item in the appropriate box.

SITE ASSESSOR INFORMATION: This form must be signed by the registered site assessor who is responsible for conducting the site check/ site assessment.

Underground Storage Tank Section
Department of Ecology
P. O. Box 47655
Olympia, WA 98504-7655

SITE INFORMATION

Site ID Number (on invoice or available from Ecology if the tanks are registered): 005902

Site/Business Name: Metal Marine Pilot, Inc.

Site Address: 2119 Mildred Street West (Street) Telephone: (206) 564-5902

Tacoma (City) Washington (State) 98466-6135 (ZIP-Code)

TANK INFORMATION

Tank ID No.	Tank Capacity		Substance Stored
#1	1000		Solvent
#2	1000		Diesel

REASON FOR CONDUCTING SITE CHECK/SITE ASSESSMENT

Check one:

- ____ Investigate suspected release due to on-site environmental contamination.
- ____ Investigate suspected release due to off-site environmental contamination.
- ____ Extend temporary closure of UST system for more than 12 months.
- ____ UST system undergoing change-in-service.
- ____ UST system permanently closed-in-place.
- ✓ UST system permanently closed with tank removed.
- ____ Abandoned tank containing product.
- ____ Required by Ecology or delegated agency for UST system closed before 12/22/88.
- ____ Other (describe): ____

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JUN 22 1994
ECOLOGY

CHECKLIST

Each item of the following checklist shall be initialed by the person registered with the Department of Ecology whose signature appears below.

		YES	NO
1.	The location of the UST site is shown on the vicinity map.	✓	
2.	A brief summary of information obtained during the site inspection is provided. (see Section 3.2 in the Site Assessment Guidance)	✓	
3.	A summary of UST system data is provided. (see Section 3.1)	✓	
4.	The soils characteristics at the UST site are described. (see Section 5.2)	✓	
5.	Is there apparent groundwater in the tank excavation?		✓
6.	A brief description of the surrounding land is provided. (see Section 3.1)	✓	
7.	Information has been provided indicating the number and types of samples collected, methods used to collect and analyze the samples, and the name and address of the laboratory used to perform the analyses.	✓	
8.	A sketch or sketches showing the following items is provided:		
	- location and ID number for all field samples collected	✓	
	- groundwater samples distinguished from soil samples (if applicable)		✓
	- samples collected from stockpiled excavated soil	✓	
	- tank and piping locations and limits of excavation pit	✓	
	- adjacent structures and streets	✓	
	- approximate locations of any on-site and nearby utilities	✓	
9.	If sampling procedures different from those specified in the guidance were used, has justification for using these alternative sampling procedures been provided? (see Section 3.4)		
10.	A table is provided showing laboratory results for each sample collected including: sample ID number, constituents analyzed for and corresponding concentration, analytical method and detection limit for that method.	✓	
11.	Any factors that may have compromised the quality of the data or validity of the results are described.		
12.	*The results of this site check/site assessment indicate that a confirmed release of regulated substance has occured.*		✓

SITE ASSESSOR INFORMATION

DON GOLDEN
PERSON REGISTERED WITH ECOLOGY

DON GOLDEN CO., INC..
FIRM AFFILIATED WITH

BUSINESS ADDRESS: 4704 So Washington

TELEPHONE: (206) 474 0148

Tacoma — CITY
WA — STATE
98409-2825 — ZIP+CODE

I hereby certify that I have been in responsible charge of performing the site check/site assessment described above. Persons submitting false information are subject to penalties under Chapter 173-360 WAC.

5/7/94
Date

Signature of Person Registered with Ecology

400046074
005902

Pierce County Health Dept.
3629 South "D" Street
Tacoma, WA 98408

SW 1/2

REQUIREMENTS FOR UNDERGROUND STORAGE TANK SITEASSESSMENT/TANK CLOSURE REPORT

Owner and Site Address: Metal Marine Pilot
2119 Mildred Street West
Tacoma, WA 98466-6135

Site#005902 Tank ID#1 1000 Gallon Solvent Tank ID#2 1000 Gallon Diesel (this tank was 850 Gallon)

Location of UST's in relation to buildings, property lines and other structures posted on diagram enclosed in this file. (Tanks were located approximately 15' from small building at site S.E. Corner).

Was one pump island

The 1000 Gallon Tank was 48"X12', the 850 Gallon was 47"X10'
The 1000 Gallon Tank was stainless steel, the 850 Gallon was single wall steel
The condition of both tanks were excellent.
The age of tanks was 12 years old.

Piping for the stainless steel was copper and the piping for the single wall steel was Schedule 40 Galvanized.
The pumps had been removed years ago.

Geological information, the tanks had been placed on a bedding of crushed rock and backfilled with crushed rock.

The excavated pit bottom was dry-no water

Dimensions of UST'S excavation was 10'X26' and 8'deep.
Location of all soil samples, W floor, E floor, E wall, S wall, N wall, W wall, Comp. W small pile excavated soil, Comp. W large pile excavated soil, Comp. E large pile excavated soil. Wall samples taken approximately 3' from pit floor.
No odors detected.

Sampling method-backhoe & hand tool
Type of samples were grab on walls & floor, composite on excavated soil piles.

Sound Analytical Services Inc. of 4813 Pacific Highway East, Tacoma, WA 98424 was the Analytical Laboratory.

Results of analytical testing posted on diagram enclosed in this file

Waste Disposal, Inc. cleaned tanks

All results of soil analyses were within acceptable levels.

Excavated area was backfilled.

Conclusion - Site is clean - Job completed 4/8/94

Don Golden, Site Assessor

Enclosures:
Copy of Site Check/Site Assessment
Reporting Requirements data (DOE)
Vicinity map
Diagram of UST'S location and surrounding area
Diagram showing where soil samples were taken & results posted
Copy of laboratory results
Copy of tank cleaning

DEPARTMENT OF ECOLOGY

Reporting Requirements - Underground Storage Tanks Removal

Reference to: Owner - Metal Marine Pilot
2119 Mildred Street West
Tacoma, WA 98466-6135

Site Address - Same as above
Site #005902 Tank ID#1 1000 Gallon Solvent Tank ID#2 1000 Gallon Diesel

Location of the UST'S site shown on vicinity map enclosed in this file.

Summary - Site imspection, no signs of spillage, site was clean. Tanks were located approximately 15' from small building at site S.E. Corner. The pumps had been removed years ago.

Summary - UST system, There had been 2 pumps, one for solvent used for equipment and one for diesel used for vehicles.

Soil characteristics UST site - Tanks had been placed on crushed rock and backfilled with crushed rock.

The tanks pit was dry - no water

Description of surrounding land shown on diagram enclosed in this file

There were9 soil samples taken, method used to collect samples was backhoe and hand tool, method used to analyze samples were WTPH-HCID for Gasoline, Diesel and Heavy Oil and BTEX by EPA Method 8020 for Benzene, Toluene, Ethyl Benzene and Xylenes. Sound Analytical Services, 4813 Pacific Highway East, Tacoma, Washington 98424 performed soil analyses.

A sketch showing the following items are posted on diagram enclosed in this file.
Location and ID #'s for all field samples collected-posted on diagram
There was not any groundwater samples taken-pit was dry.
Samples collected from stockpile excavated-posted on diagram
Tank and piping locations and limits of excavation-posted on diagram
Adjacent structures and streets-posted on diagram
Approximate location of any on-site and nearby utilities-posted on diagram

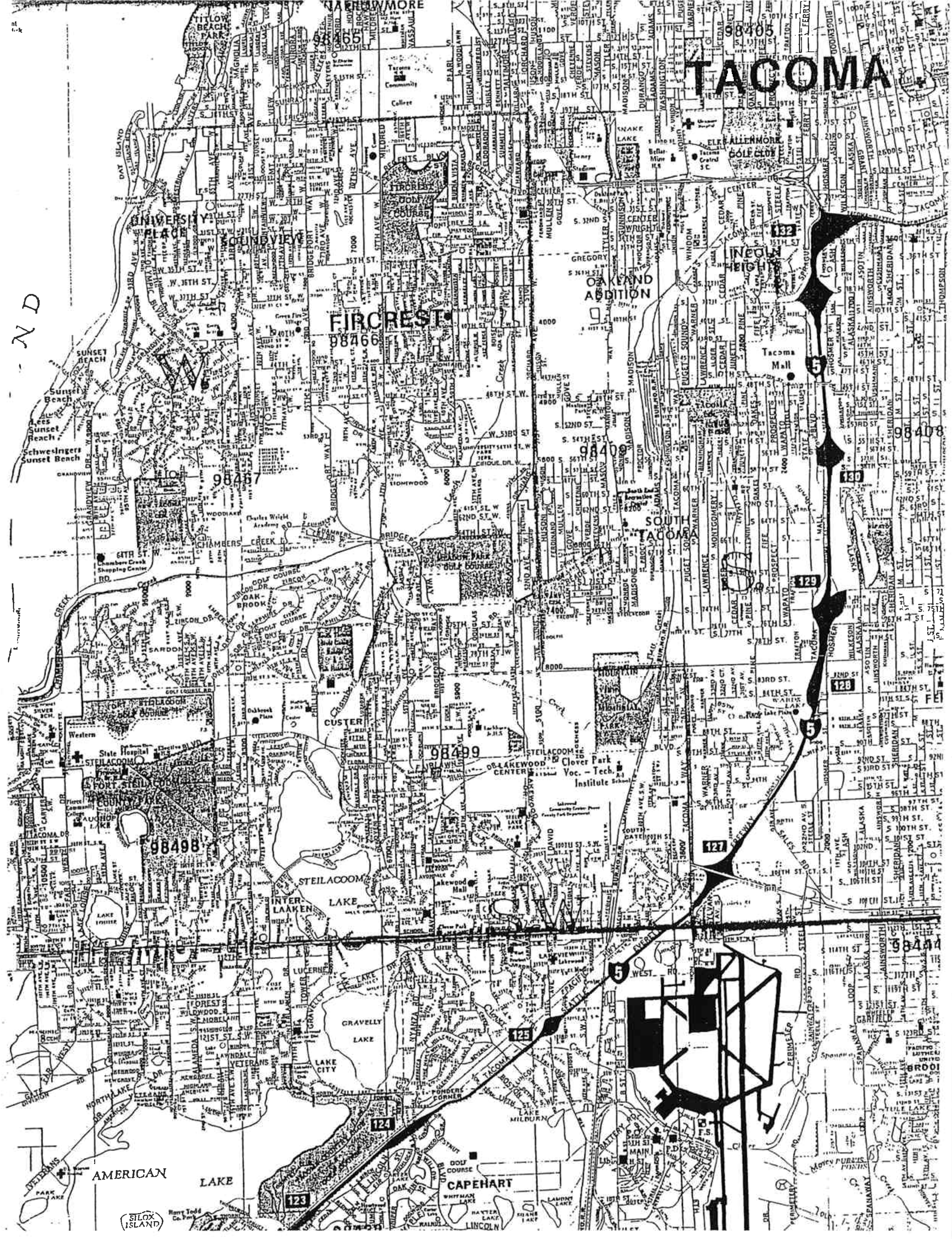
Copies of all laboratory results enclosed in this file.

All results of this site check/site assessment prove this site to be clean. All soil analyses were within acceptable levels.

4/8/94 Backfilled pit area. Job completed.

Don Golden

Enclosures: (2 complete files)
2 - copies of Site Check/Site Assessment Checklist
Reporting requirements (this page)
Vicinity map.
Diagram of UST location and surrounding area
Diagram showing where soil samples were taken & results posted.
Copies of laboratory results
Copy of tanks cleaning
Copy of permit-Pierce County Health Dept. #94-013
Copy of permit-Pierce County Fire Marshal #175103



TACOMA
NARROWMORE
98465
98405
98466
98467
98409
98408
98499
98498
98444
FIRCREST
UNIVERSITY PLACE
SOUNDVIEW
OAKLAND ADDITION
GREGORY
LINCOLN HEIGHTS
SOUTH TACOMA
Tacoma Mall
Tacoma Community College
SNAKE LAKE
ALLENMORE GOLF CLUB
FIRCREST GOLF COURSE
MEADOW PARK GOLF COURSE
SUNSET BEACH
Sunset Beach
Lees Sunset Beach
Schwesingers Sunset Beach
Chambers Creek Shopping Center
Charles Wright Academy
OAKBROOK
SARDON
CUSTER
Western State Hospital
FORT STEILACOOM COUNTY PARK
STEILACOOM LAKE
INTERLAAKEN
Lakewood Mall
LAKEWOOD CENTER
Clover Park Voc.-Tech. Institute
GRAVELLY LAKE
LAKE CITY
PONDERS CORNER
CAPEHART
AMERICAN
LAKE
SILOX ISLAND
132
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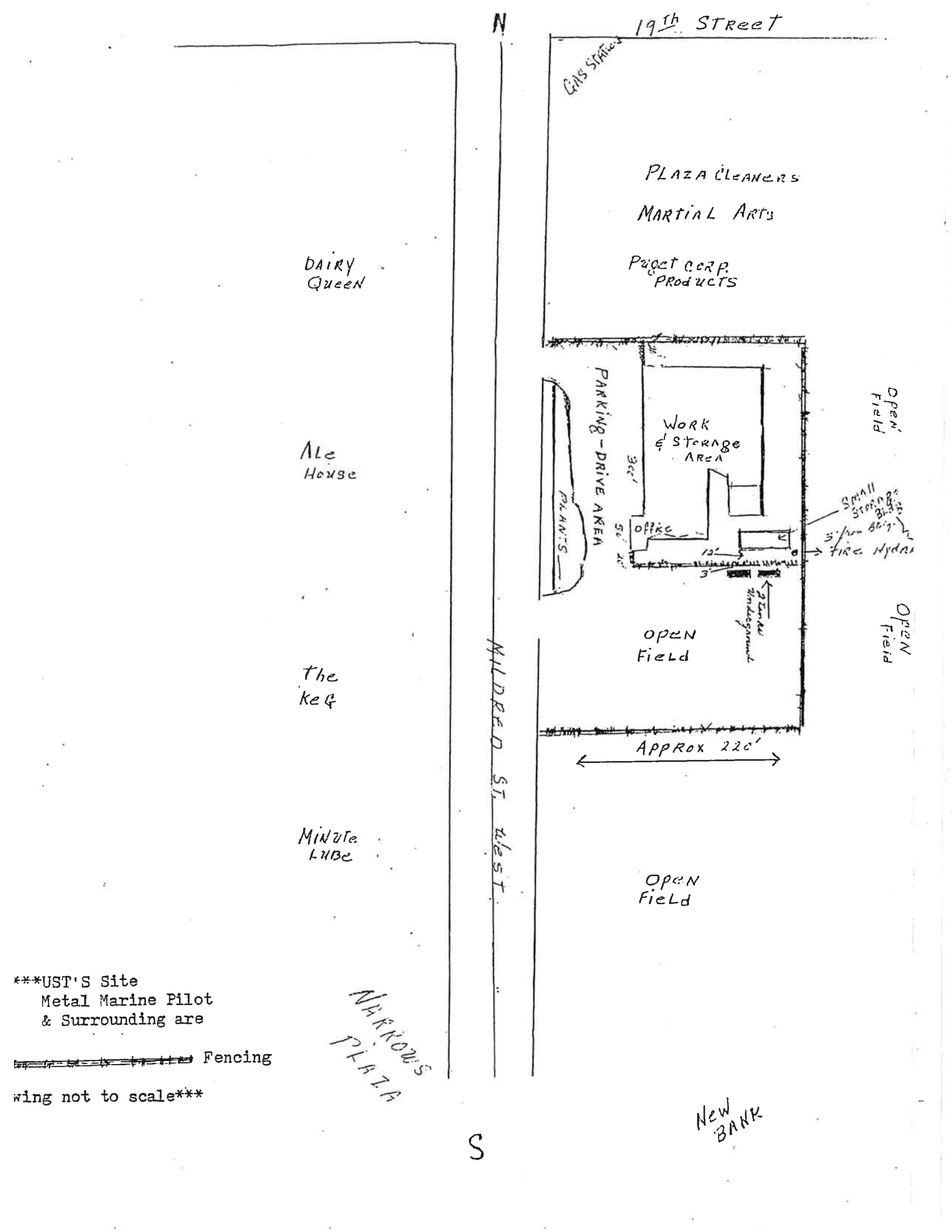
5



***UST'S Site
Metal Marine Pilot
& Surrounding are

Fencing

wing not to scale***

N.

Refer to surrounding area map for this small building location

SMALL STORAGE BLDG.

W.

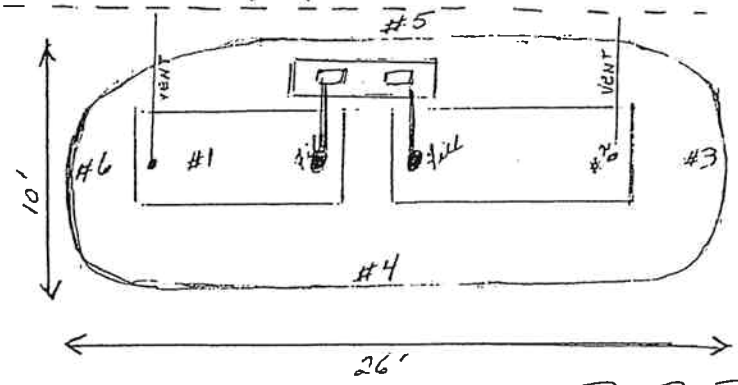
Pumps removed long ago
(Island and pumps shown)
The pump island was located above underground tanks
Vent lines to fence

10'X 26' Wide
8' deep
Excavation

Fence

approx. 12'

E.



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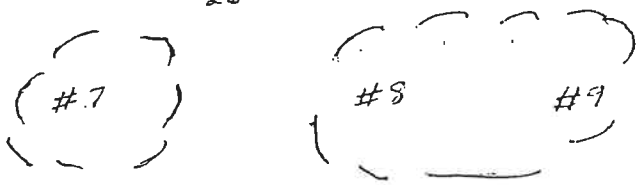

Sample ID# / Matrix / Location Collected	Gasoline	Diesel	Heavy Oil	Benzene	Tolulene	Ethyl Benzene	Xylenes
#1 Soil West Floor	<20	<50	<100				
#2 Soil East Floor	<20	<50	<100	ND	ND	ND	ND
#3 Soil East Wall	<20	<50	<100	ND	ND	ND	ND
#4 Soil South Wall	<20	<50	<100	ND	ND	ND	ND
#5 Soil North Wall	<20	<50	<100	ND	ND	ND	ND
#6 Soil West Wall	<20	<50	<100				
#7 Soil Comp. West small pile excav	>20	<50	<100	ND	ND	ND	ND
#8 Soil Comp. West large pile excav	<20	<50	<100				
#9 Soil Comp East large pile excav	<20	<50	<100				

Methods
WTPH-HCID

BTEX by EPA method 8020

Project: Metal Marine Pilot
2119 Mildred Street West
Tacoma, Washington

SOUND ANALYTICAL SERVICES, INC.

SPECIALIZING IN INDUSTRIAL & TOXIC WASTE ANALYSIS

4813 PACIFIC HIGHWAY EAST, TACOMA, WASHINGTON 98424 - TELEPHONE (206)922-2310 - FAX (206)922-5047

Report To: Don Golden

Date: March 18, 1994
Revised: March 28, 1994

Report On: Analysis of Soil

Lab No.: 38533

IDENTIFICATION:
Samples received on 03-07-94
Project: Metal Marine Pilot
Chevron Solvent 140 & 410 BW
P. O. No. 4-0273

ANALYSIS:

Lab Sample No. 38533-1

Client ID: 1

WTPH-HCID
Date Extracted: 3-8-94
Date Analyzed: 3-9-94
Units: mg/kg

Parameters	Result	Flag
Gasoline (C7 - C12)	< 20	
Diesel (> C12 - C24)	< 50	
Heavy Oil (C24+)	< 100	

SURROGATE RECOVERY, %

1-chlorooctane	67
o-terphenyl	78

SOUND ANALYTICAL SERVICES, INC.

Don Golden
Project: Metal Marine Pilot
Lab No. 38533
March 18, 1994
Revised: March 28, 1994

Lab Sample No. 38533-2 Client ID: 2

WTPH-HCID
Date Extracted: 3-8-94
Date Analyzed: 3-9-94
Units: mg/kg

Parameters	Result	Flag
Gasoline (C7 - C12)	< 20	
Diesel (> C12 - C24)	< 50	
Heavy Oil (C24+)	< 100	

SURROGATE RECOVERY, %

1-chlorooctane	60
o-terphenyl	69

SOUND ANALYTICAL SERVICES, INC.

Golden
ject: Metal Marine Pilot
No. 38533
ch 18, 1994
ised: March 28, 1994

Sample No. 38533-2 Client ID: 2

BTEX by EPA Method 8020
Date Extracted: 3-15-94
Date Analyzed: 3-16-94
Units: mg/kg

ımeter	Result	POL	Flag
;ene	ND	0.05	
ıene	ND	0.05	
·l Benzene	ND	0.05	
:nes	ND	0.05	

:OGATE RECOVERY, %

fluorotoluene	80

Not Detected
- Practical Quantitation Limit

SOUND ANALYTICAL SERVICES, INC.

Don Golden
Project: Metal Marine Pilot
Lab No. 38533
March 18, 1994
Revised: March 28, 1994

Lab Sample No. 38533-3 Client ID: 3

WTPH-HCID
Date Extracted: 3-8-94
Date Analyzed: 3-9-94
Units: mg/kg

Parameters	Result	Flag
Gasoline (C7 - C12)	< 20	
Diesel (> C12 - C24)	< 50	
Heavy Oil (C24+)	< 100	

SURROGATE RECOVERY, %

1-chlorooctane	67
o-terphenyl	74

SOUND ANALYTICAL SERVICES, INC.

Don Golden
Project: Metal Marine Pilot
Lab No. 38533
March 18, 1994
Revised: March 28, 1994

Lab Sample No. 38533-3 Client ID: 3

BTEX by EPA Method 8020
Date Extracted: 3-15-94
Date Analyzed: 3-16-94
Units: mg/kg

Parameter	Result	PQL	Flag
Benzene	ND	0.05	
Toluene	ND	0.05	
Ethyl Benzene	ND	0.05	
Xylenes	ND	0.05	

SURROGATE RECOVERY, %

Trifluorotoluene	84

ND - Not Detected
PQL - Practical Quantitation Limit

SOUND ANALYTICAL SERVICES, INC.

Don Golden
Project: Metal Marine Pilot
Lab No. 38533
March 18, 1994
Revised: March 28, 1994

Lab Sample No. 38533-4 Client ID: 4

WTPH-HCID
Date Extracted: 3-8-94
Date Analyzed: 3-9-94
Units: mg/kg

Parameters	Result	Flag
Gasoline (C7 - C12)	< 20	
Diesel (> C12 - C24)	< 50	
Heavy Oil (C24+)	< 100	

SURROGATE RECOVERY, %

1-chlorooctane	72
o-terphenyl	83

SOUND ANALYTICAL SERVICES, INC.

Don Golden
Project: Metal Marine Pilot
Lab No. 38533
March 18, 1994
Revised: March 28, 1994

Lab Sample No. 38533-4 Client ID: 4

BTEX by EPA Method 8020
Date Extracted: 3-15-94
Date Analyzed: 3-16-94
Units: mg/kg

Parameter	Result	PQL	Flag
Benzene	ND	0.05	
Toluene	ND	0.05	
Ethyl Benzene	ND	0.05	
Xylenes	ND	0.05	

SURROGATE RECOVERY, %

Trifluorotoluene	84

ND - Not Detected
PQL - Practical Quantitation Limit

8

SOUND ANALYTICAL SERVICES, INC.

Don Golden
Project: Metal Marine Pilot
Lab No. 38533
March 18, 1994
Revised: March 28, 1994

Lab Sample No. 38533-5 Client ID: 5

WTPH-HCID
Date Extracted: 3-8-94
Date Analyzed: 3-9-94
Units: mg/kg

Parameters	Result	Flag
Gasoline (C7 - C12)	< 20	
Diesel (> C12 - C24)	< 50	
Heavy Oil (C24+)	< 100	

SURROGATE RECOVERY, %

1-chlorooctane	54
o-terphenyl	65

SOUND ANALYTICAL SERVICES, INC.

Don Golden
Project: Metal Marine Pilot
Lab No. 38533
March 18, 1994
Revised: March 28, 1994

Lab Sample No. 38533-5 Client ID: 5

BTEX by EPA Method 8020
Date Extracted: 3-15-94
Date Analyzed: 3-16-94
Units: mg/kg

Parameter	Result	PQL	Flag
Benzene	ND	0.05	
Toluene	ND	0.05	
Ethyl Benzene	ND	0.05	
Xylenes	ND	0.05	

SURROGATE RECOVERY, %

Trifluorotoluene	81

ND - Not Detected
PQL - Practical Quantitation Limit

SOUND ANALYTICAL SERVICES, INC.

Don Golden
Project: Metal Marine Pilot
Lab No. 38533
March 18, 1994
Revised: March 28, 1994

Lab Sample No. 38533-6 Client ID: 6

WTPH-HCID
Date Extracted: 3-8-94
Date Analyzed: 3-9-94
Units: mg/kg

Parameters	Result	Flag
Gasoline (C7 - C12)	< 20	
Diesel (> C12 - C24)	< 50	
Heavy Oil (C24+)	< 100	

SURROGATE RECOVERY, %

1-chlorooctane	59
o-terphenyl	70

11

SOUND ANALYTICAL SERVICES, INC.

Don Golden
Project: Metal Marine Pilot
Lab No. 38533
March 18, 1994
Revised: March 28, 1994

Lab Sample No. 38533-7 Client ID: 7

WTPH-HCID
Date Extracted: 3-8-94
Date Analyzed: 3-9-94
Units: mg/kg

Parameters	Result	Flag
Gasoline (C7 - C12)	> 20	X2
Diesel (> C12 - C24)	< 50	
Heavy Oil (C24+)	< 100	

SURROGATE RECOVERY, %

1-chlorooctane	60
o-terphenyl	71

12

SOUND ANALYTICAL SERVICES, INC.

Don Golden
Project: Metal Marine Pilot
Lab No. 38533
March 18, 1994
Revised: March 28, 1994

Lab Sample No. 38533-7 Client ID: 7

BTEX by EPA Method 8020
Date Extracted: 3-15-94
Date Analyzed: 3-16-94
Units: mg/kg

Parameter	Result	PQL	Flag
Benzene	ND	0.05	
Toluene	ND	0.05	
Ethyl Benzene	ND	0.05	
Xylenes	ND	0.05	

SURROGATE RECOVERY, %

Trifluorotoluene	85

ND - Not Detected
PQL - Practical Quantitation Limit

SOUND ANALYTICAL SERVICES, INC.

Don Golden
Project: Metal Marine Pilot
Lab No. 38533
March 18, 1994
Revised: March 28, 1994

Lab Sample No. 38533-8 Client ID: 8

WTPH-HCID
Date Extracted: 3-8-94
Date Analyzed: 3-9-94
Units: mg/kg

Parameters	Result	Flag
Gasoline (C7 - C12)	< 20	
Diesel (> C12 - C24)	< 50	
Heavy Oil (C24+)	< 100	

SURROGATE RECOVERY, %

1-chlorooctane	57
o-terphenyl	70

SOUND ANALYTICAL SERVICES, INC.

Don Golden
Project: Metal Marine Pilot
Lab No. 38533
March 18, 1994
Revised: March 28, 1994

Lab Sample No. 38533-9 Client ID: 9

WTPH-HCID
Date Extracted: 3-8-94
Date Analyzed: 3-9-94
Units: mg/kg

Parameters	Result	Flag
Gasoline (C7 - C12)	< 20	
Diesel (> C12 - C24)	< 50	
Heavy Oil (C24+)	< 100	

SURROGATE RECOVERY, %

1-chlorooctane	66
o-terphenyl	79

SOUND ANALYTICAL SERVICES, INC.

Client Name	Don Golden
Client ID:	7
Lab ID:	38533-7
Date Received:	3/7/94
Date Extracted:	3/14/94
Date Analyzed:	3/15/94

Semivolatile Organics by USEPA Method 8270

Surrogate	% Recovery	Flags	Recovery Limits Low	High
Nitrobenzene - d5	90		23	120
2 - Fluorobiphenyl	89		30	115
p - Terphenyl - d14	125		18	137
Phenol - d5	78		24	113
2 - Fluorophenol	100		25	121
2,4,6 - Tribromophenol	77		19	122

Sample results are on a dry weight basis.

Analyte	Result (ug/kg)	PQL	Flags
Phenol	ND	720	
bis(2-Chloroethyl)ether	ND	720	
2-Chlorophenol	ND	720	
1,3-Dichlorobenzene	ND	720	
1,4-Dichlorobenzene	ND	720	
Benzyl Alcohol	ND	1400	
1,2-Dichlorobenzene	ND	720	
2-Methylphenol	ND	720	
bis(2-Chloroisopropyl)ether	ND	720	
4-Methylphenol	ND	720	
N-nitroso-di-N-propylamine	ND	720	
Hexachloroethane	ND	720	
Nitrobenzene	ND	720	
Isophorone	ND	720	
2-Nitrophenol	ND	720	
2,4-Dimethylphenol	ND	720	
Benzoic Acid	ND	3600	
bis(2-Chloroethoxy)methane	ND	720	
2,4-Dichlorophenol	ND	720	
1,2,4-Trichlorobenzene	ND	720	
Naphthalene	ND	720	
4-Chloroaniline	ND	1400	
Hexachlorobutadiene	ND	720	
4-Chloro-3-methylphenol	ND	1400	
2-Methylnaphthalene	ND	720	
Hexachlorocyclopentadiene	ND	720	
2,4,6-Trichlorophenol	ND	720	

SOUND ANALYTICAL SERVICES, INC.

Semivolatile Organics by USEPA Method 8270 data for 38533-7 continued...

Analyte	Result (ug/kg)	PQL	Flags
2,4,5-Trichlorophenol	ND	720	
2-Chloronaphthalene	ND	720	
2-Nitroaniline	ND	3600	
Dimethylphthalate	ND	720	
Acenaphthylene	ND	720	
2,6-Dinitrotoluene	ND	720	
3-Nitroaniline	ND	3600	
Acenaphthene	ND	720	
2,4-Dinitrophenol	ND	3600	
4-Nitrophenol	ND	3600	
Dibenzofuran	ND	720	
2,4-Dinitrotoluene	ND	720	
Diethylphthalate	ND	720	
4-Chlorophenyl phenyl ether	ND	720	
Fluorene	ND	720	
4-Nitroaniline	ND	3600	
4,6-Dinitro-2-methylphenol	ND	3600	
N-Nitrosodiphenylamine	ND	720	
4-Bromophenyl phenyl ether	ND	720	
Hexachlorobenzene	ND	720	
Pentachlorophenol	ND	3600	
Phenanthrene	ND	720	
Anthracene	ND	720	
Di-n-butylphthalate	420	720	J B1
Fluoranthene	ND	720	
Pyrene	ND	720	
Butylbenzylphthalate	ND	720	
3,3'-Dichlorobenzidine	ND	720	
Benzo(a)anthracene	ND	720	
Chrysene	ND	720	
bis(2-Ethylhexyl)phthalate	ND	720	
Di-n-octylphthalate	ND	720	
Benzo(b)fluoranthene	ND	720	
Benzo(k)fluoranthene	ND	720	
Benzo(a)pyrene	ND	720	
Indeno(1,2,3-cd)pyrene	ND	720	
Dibenz(a,h)anthracene	ND	720	
Benzo(g,h,i)perylene	ND	720	

THE CITY OF FIRCREST

115 Ramsdell St
Fircrest, WA 98466
(253) 564-8902

City of Fircrest
House addresses

Map Scale 1 inch = 9600 feet

N

Photo 1: Subject site. View looking west.

Photo 2: Subject site. View looking northwest.

KLEINFELDER	**Photo Log** Proposed Retail Stie (No. 95984) 2119 Mildred Street West Fircrest, Washington	**Page** **1**
PROJECT NO. 56130 April 2005		

Photo 3: Subject site. View looking southwest.

Photo 4: Location where a 2,000-gallon Kerosine UST and a 2,000-gallon diesel UST where removed.

Photo 5: One of two sealed recovery UST locations at the Site.

Photo 6: Location where two 80-gallon Kerosine USTs where removed

Photo 7: Spray painting shed.

Photo 8: Loading dock area located immediately south of the spray painting shed.

Photo 9: One of three floor drains located within the spray painting shed.

Photo 10: Empty solvent tank located along the east end of the main building.

Photo 11: Typical hazardous materials storage area within the main building.

Photo 12: Floor staining observed within the hydraulic oil room of the main building.

SITE CHARACTERIZATION AND CONTAMINATED SOIL REMEDIATION REPORT

Pace Industries Oil Release April 26, 1999

Located At:
2119 Mildred Street W.
Fircrest, Washington
May 5, 1999

Prepared For:

Metal Marine Pilot, Inc.
Wood Freeman Autopilot
2119 Mildred Street W.
Fircrest, Washington

Prepared By:

Creative Environmental Technologies, Inc.
PO Box 1803
Tacoma, Washington 98401-1803
(253) 627-3347

1203 E. D Street, Suite 109 ⊛ P.O. Box 1803 ⊛ Tacoma, Washington 98401- 1803
P: 253. 627.3347 ⊛ F: 253.572.4207 ⊛ E: ceti@cetinw.com ⊛ W: www.cetinw.com

Table Of Contents

1203 E. D Street, Suite 109 ⊛ P.O. Box 1803 ⊛ Tacoma, Washington 98401- 1803
P: 253. 627.3347 ⊛ F: 253.572.4207 ⊛ E: ceti@cetinw.com ⊛ W: www.cetinw.com

1.0 Introduction

Creative Environmental Technologies, Inc. (CETI) was retained by Metal Marine Pilot, Inc. and Mr. Michael Freeman to supervise the remedial activities for an oil / water waste product release on to the north end of Metal Marines property by Pace Industries, a local metal fabricator.

Pace Industries uses a special lubricating paraffin oil in their machining process (MSDS sheets attached). This oil is collected in several areas throughout their facility. One of these collection areas discharges from the rear of Pace's building in an underground four inch PVC piping system. This piping system runs along the southern end of Pace's building and discharges into a holding system for treatment prior to disposal into the City of Fircrest sanitary sewer system. Along this piping is a clean out that protrudes at a 45 degree angle out of the ground. This is the point of release. CETI was told by Jeff Bartunek, Pace's casting / maintenance manager & CPD Safety Director, that the system backed up and the pressure blew the cap of the clean out. At this time it is unclear the amount of oil / water released.

The release was noticed by Pace and Metal Marine employees Monday morning April 26, 1999. Pace immediately implemented a cleanup action by pumping all standing fluid from Paces's property and Metal Marines Property into 55 gallon drums. The exact amount of waste product versus standing water collected is unknown. The released material pooled in the general vicinity of the release point then flowed following the natural gradient to the east. Prior to the release, Metal Marine trenched an area along their eastern property boundary to collect surface storm water and channel it for storm water runoff control. The released material followed the storm water trench for approximately two hundred feet along Metal Marine's eastern property boundary. Pace recovered all the water and released product from the trench line. It is unclear if the trench line had standing water prior to the release.

CETI identified oil range hydrocarbon contamination in the surface and sub-surface soils at the site during a site walk approximately 24 hours following the release. Foss Environmental Services was initially contacted by Pace following the collection of the standing water. CETI technicians samples the soil prior to the remedial activity and following the remedial activity by Foss. The sample results from this first round of sampling indicated further remedial activity would be required. At CETI's request, Pace contacted a local environmental contracted, Clean Service, to complete the remedial activity. CETI supervised the remedial activity and collected samples following the removal of all soil impacted by the release on Metal Marine's property. There still exists contamination on Pace's property directly adjacent to Metal Marine's property. This area was fenced impeding remedial activities.

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P: 253. 627.3347 ⊛ F: 253.572.4207 ⊛ E: ceti@cetinw.com ⊛ W: www.cetinw.com

2.0 Site Description and Limits of the Contamination

Metal Marine's property is located in the City of Fircrest, in Pierce County, Washington at 2119 Mildred Street West. The property has been owned by the Freeman family for over fifty years. It covers approximately 10 acres fronting Mildred street. Pace Puget occupies the property directly adjacent to the north of Metal Marine. The piping system where the release occurred runs along the southern end of Pace's building approximately twenty four (24) inches from Metal Marines property line (Figure 2). The release point is inside a fenced area. The gradient of the immediate area adjacent to the release point slopes to the south onto Metal Marine's property then slopes to the east.

The released material pooled in a twenty by thirty (approximate) foot area before flowing down-slope to the east. The flow limited the horizontal extent of contamination to a path twenty to forty inches wide. The material released was a milky white, emulsified oil / water waste product. The color of the material helped in tracing the flow. There were several hay bails placed on the northeast corner of Metal Marines property prior to the release directly in the path of the flow. These hay bails acted at a barrier and significantly reduced the amount of contamination along the eastern storm water trench.

The horizontal extent of contamination was observed along Metal Marine's eastern storm water ditch line. On site sampling indicated clean up levels outlined by MTCA[1] (Model Toxic Control Act) were not exceeded in surface and sub-surface soils past two hundred feet from the northeast property corner of Metal Marine's property and the start of the eastern ditch line.

Generally, vertical extent of contamination was observed from the surface to twenty four inches below ground surface (BGS). Where the contamination pooled, the vertical extent of contamination was greater.

[1] The Model Toxic Control Act (MTCA) Cleanup Regulations sets requirements for allowable petroleum and other potentially harmful constituents and there clean up limits in surface and sub-surface soils and groundwater in the state of Washington. These limits are found in Washington Administrative Code (WAC) 173-340.

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3.0 Geologic Conditions

In the area where the released occurred, the soil consisted of light to medium gray silt and glacial till sand with few rounded coarse to fine gravels. According to Mr. Freeman, the majority of the surface soils have been imported over the past 15 years.

4.0 Contaminated Soil Removal

Remedial activities were started on April 27, 1999 and finished on April 29, 1999, on soil contaminated by the release from Pace Puget on April 19, 1990, and identified by CETI through on-site soil sampling. Soil was removed along Metal Marine's northern property line and along the eastern storm water ditch. Approximately eighty cubic tons of contaminated soil were excavated and removed from the property.

On April 27, 1999, Foss Environmental Services started excavating contaminated soils by hand but soon learned that the contamination was greater than first thought. CETI was on site sampling soils and recommended that Clean Service be hired to excavate the remaining contaminated soil. A track hoe was delivered on April 28, 1999 by Clean Service. Under CETI's supervision, soils that were screened by CETI and found to contain hydrocarbons exceeding MTCA limits were excavated and trucked off-site for disposal. The soil was disposed of at TPS, a local hydrocarbon contaminated soil disposal facility.

The area most significantly contaminated was near the release point where the contaminate had pooled. Soil was excavated in this area to a depth of twenty four to thirty six inches BGS. This excavated area was approximately twenty feet by thirty feet. The path the released material followed along the northern property boundary, approximately one hundred sixty feet to the hay bails on the northeast corner of the property was excavated to six inches BGS. Twelve to eighteen inches of soil was excavated in an area fifteen feet by twenty feet around the hay bail location. The storm water ditch following the eastern property line was the final area excavated. The ditch started on the northeast corner of the property and runs the entire eastern length of the property. CETI screened the ditch bottom and found oil contamination exceeding the MTCA limits for approximately 200 feet along the ditch line. Six to twelve inches of soil was removed from the bottom and side walls of the ditch, removing all contamination.

Confirmatory samples were collected from the excavated areas. These samples showed no levels of oil exceeding the MTCA limits.

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5.0 Soil Sampling

CETI collected soils samples from the excavation area along the perimeter and the bottom of the excavated areas. Soil collection depths followed the final excavation depth and varied through out the area (Figure 2 - Soil Sample Location Map)

Soil sampling procedures followed the Washington State Department Of Ecology Toxics Cleanup Program Guidance on Sampling and Data Analysis Methods, Publication Number 94-49. The soil samples were collected from the excavation using a stainless steel sampling spoon. Select soil was placed in a EPA approved 4 oz glass sample collection jar with a Teflon™ lined lid. All samples were stored in a cooler at 40° F. to maintain and preserve the integrity of the sample until delivered to the laboratory for analysis.

The soil samples were submitted to Spectra laboratories for analysis between April 27 and April 29, 1999. Analysis performed was for Total Petroleum Hydrocarbons- diesel extended (WTPH-D Extended).

6.0 Analytical Results

Washington administrative code (WAC) 173-340-745 Method A sets an action level (maximum allowable limit) of 200 ppm (mg/kg) petroleum hydrocarbon oils in soil.

Soil Analysis
Heavy Oil Release Excavation
Method: WTPH-418.1

Sample ID	Sample Location	Heavy Oils (ppm)	Action Level
S1-42799	Release Point	14,000	200 ppm
S2-42799	Trench Following Hay Bails	1,000	200 ppm
S3-42799	Release Path Before Hay Bails	81,000	200 ppm
S4-42799	30' Following Hay Bails	3,900	200 ppm
S5-42799	60' Following Hay Bails	1,800	200 ppm
S6-42799	Beginning Of Flow After Pooling	1,400	200 ppm
S7-42799	Release Path Before Hay Bails	1,100	200 ppm
S10-42899	Northeast Corner of Excavation	<100	200 ppm
S11-42899	East Wall of Excavation	<100	200 ppm
S12-42899	Southeast Corner of Excavation	<100	200 ppm

CURRENT MTCA METHOD 2,000

1203 E. D Street, Suite 109 ⊛ P.O. Box 1803 ⊛ Tacoma, Washington 98401- 1803
P: 253. 627.3347 ⊛ F: 253.572.4207 ⊛ E: ceti@cetinw.com ⊛ W: www.cetinw.com

Sample ID	Sample Location	Heavy Oils (ppm)	Action Level
S13-42899	Southwest Corner of Excavation	<100	200 ppm
S14-42899	South Wall of Excavation (West)	1,100	200 ppm
S15-42899	Bottom of Excavation (West)	<100	200 ppm
S16-42899	Bottom of Excavation (East)	<100	200 ppm
S17-42899	South Wall of Excavation (East)	<100	200 ppm
S23-42899	Release Path 90' Before Hay Bails	<100	200 ppm
S24-42899	Release Path 60' Before Hay Bails	<100	200 ppm
S25-42899	Release Path 30' Before Hay Bails	<100	200 ppm
S26-42899	Soil Beneath Hay Bales	<100	200 ppm
S27-42899	Northwest Corner of Excavation	<100	200 ppm
S28-42899	West Wall of Excavation	<100	200 ppm
S29-42899	Below Pipe Break at Release Point	5,800	200 ppm
S30-43099	Soil Beneath Hay Bales	<100	200 ppm
S31-43099	20' Following Hay Bales	<100	200 ppm
S32-43099	Blank	<100	200 ppm
S33-43099	50' Following Hay Bales	<100	200 ppm
S34-43099	80' Following Hay Bales	<100	200 ppm
S35-43099	110' Following Hay Bales	<100	200 ppm
S36-43099	140' Following Hay Bales	<100	200 ppm
S37-43099	170' Following Hay Bales	<100	200 ppm
S38-43099	20' Down Gradient East of S37	<100	200 ppm

Analytical results for samples taken in contaminated soil excavation August 5, 1998

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7.0 Conclusions

Based on the results of the laboratory soil analysis, on site soil screening and on site observations, it is CETI's opinion that the remaining subsurface soils located in the area identified during the site delineation on Metal Marine's property following the remedial activity, are free of petroleum hydrocarbons. Pace Industries property immediately adjacent to Metal Marines norther property boundary were the release originated, is still heavily contaminated. Sub-surface soil samples in this area (samples location S-29) revealed oil range hydrocarbon levels exceeding 5000 mg/Kg (parts per million). Current MTCA method A limits are 200 mg/Kg (ppm). If the contaminated soil is left, there is a strong possibility that the contaminate will migrate across property lines and re-contaminate Metal Marines Property. CETI has advised Metal Marine to adamantly pursue the removal of all contaminated soil by Pace Industries, that is posing an immediate threat to Metal Marine's property.

Creative Environmental Technologies, Inc. extends its appreciation for the opportunity to provide environmental services on this project. If there are any questions regarding this report please do not hesitate to contact us.

Respectfully Submitted,

By: _____

Stephen Spencer
Creative Environmental Technologies, Inc.

Approved By: _____

John R. Spencer, BBA, LLB
President
Creative Environmental Technologies, Inc.

1203 E. D Street, Suite 109 ⊛ P.O. Box 1803 ⊛ Tacoma, Washington 98401- 1803
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Appendix A - Site Location Map, Site Map, Sample Location Map, Plat Drawing, Photographs of Site

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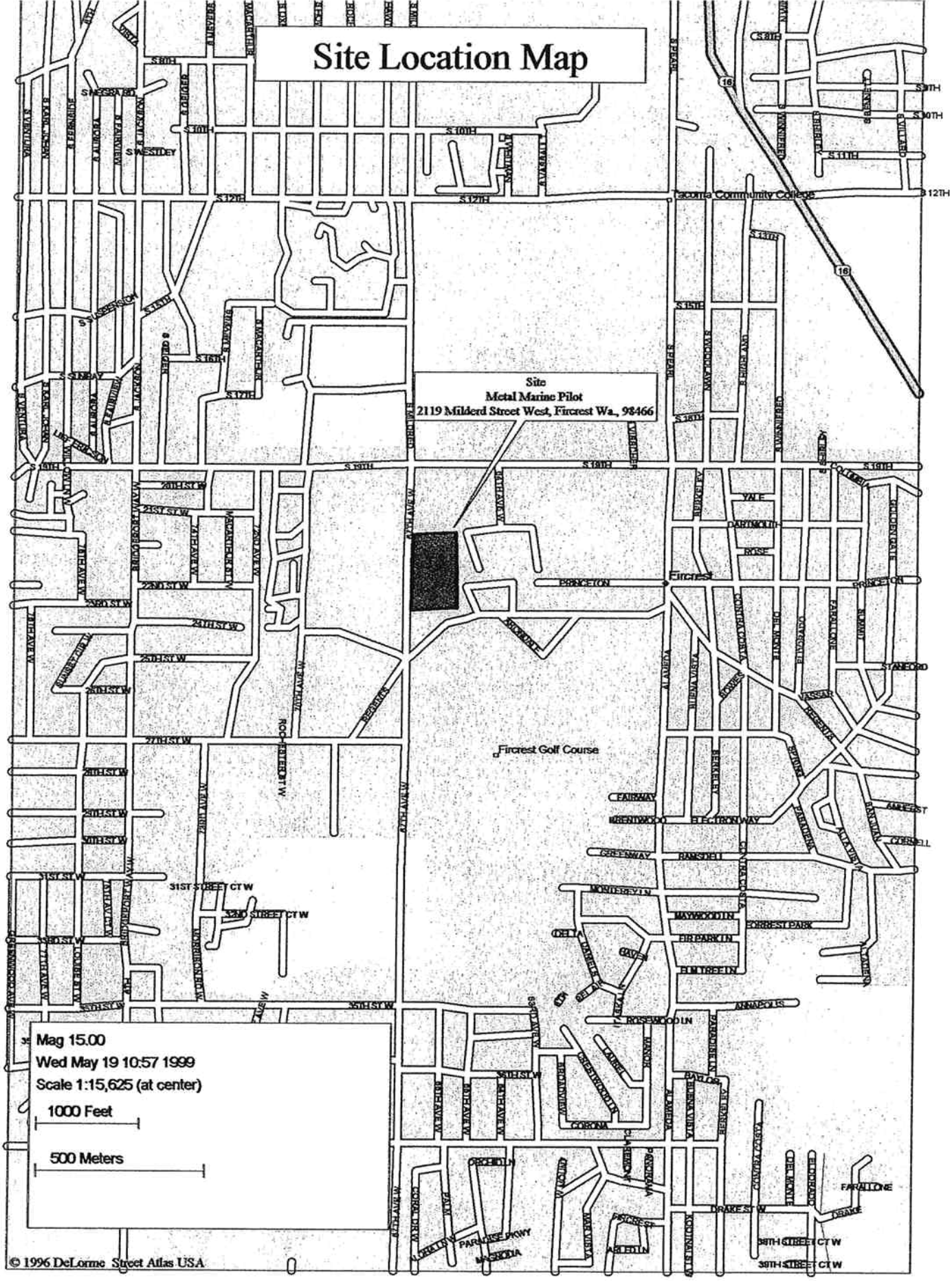
P: 253. 627.3347 ⊛ F: 253.572.4207 ⊛ E: ceti@cetinw.com ⊛ W: www.cetinw.com

Site Location Map



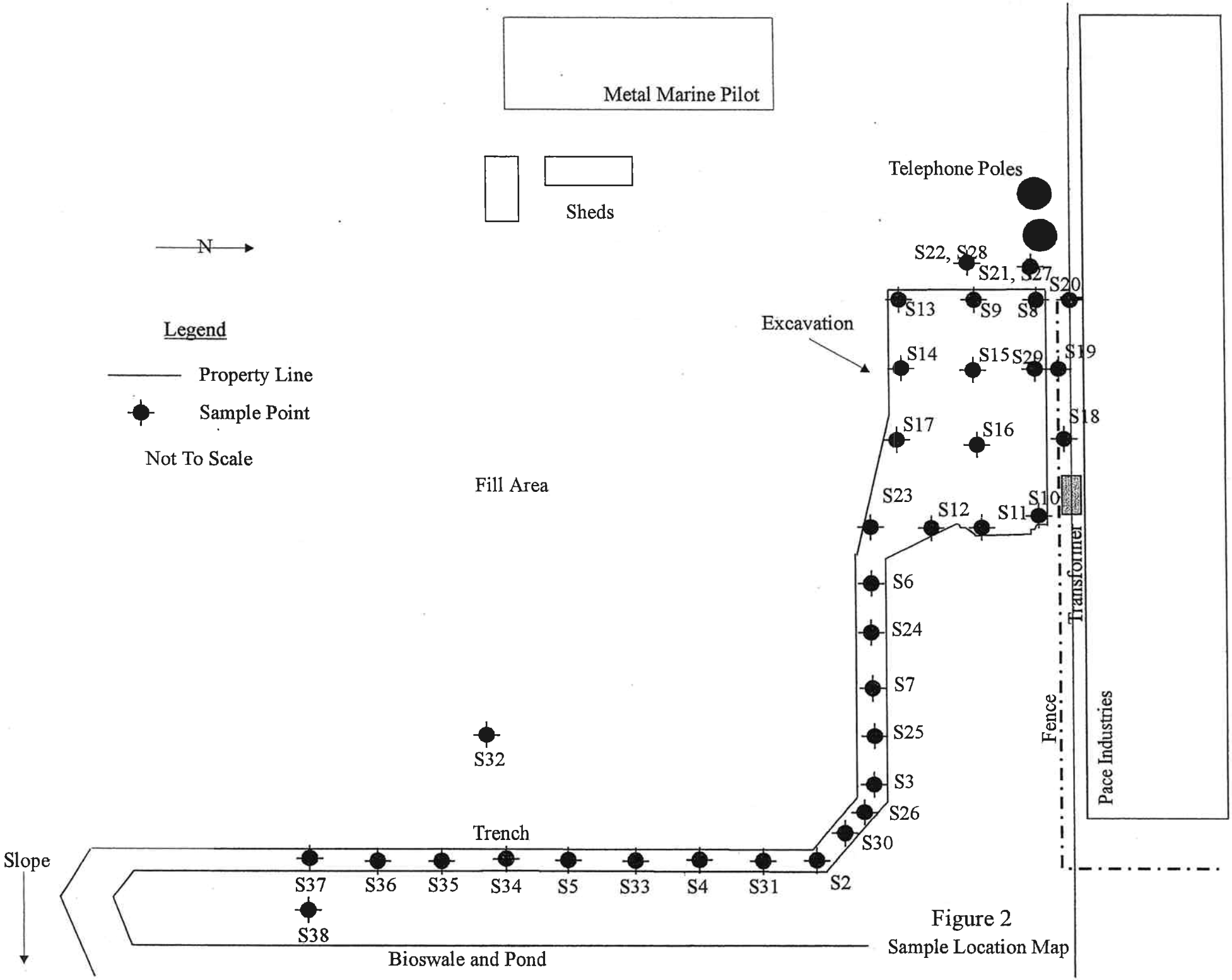
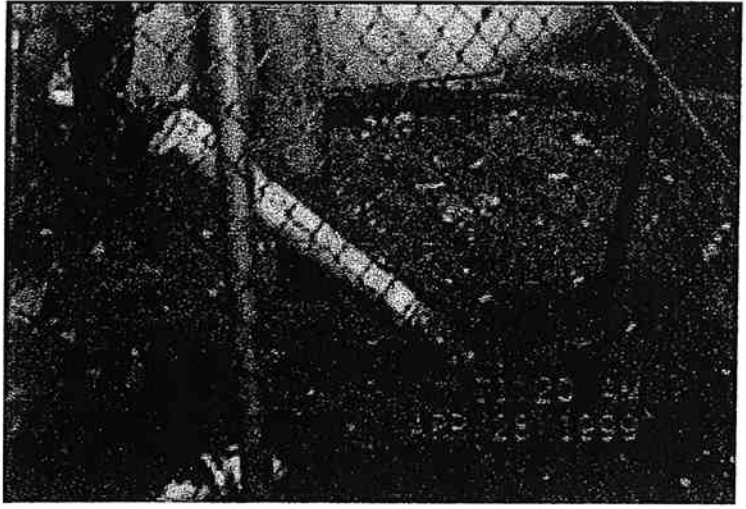
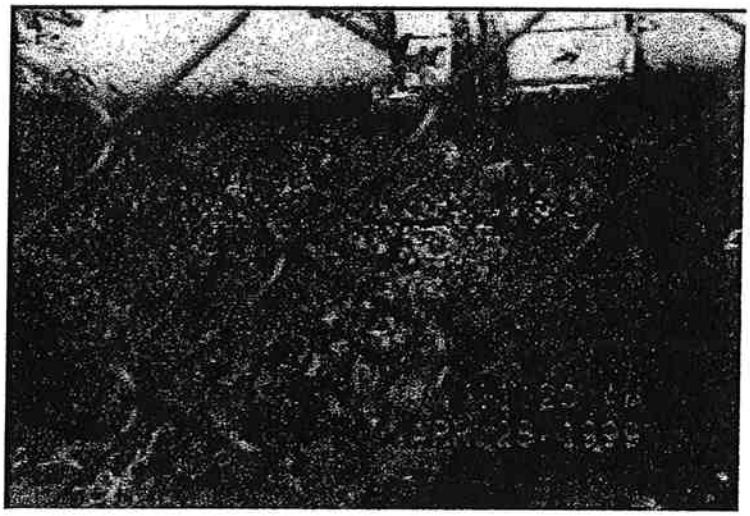


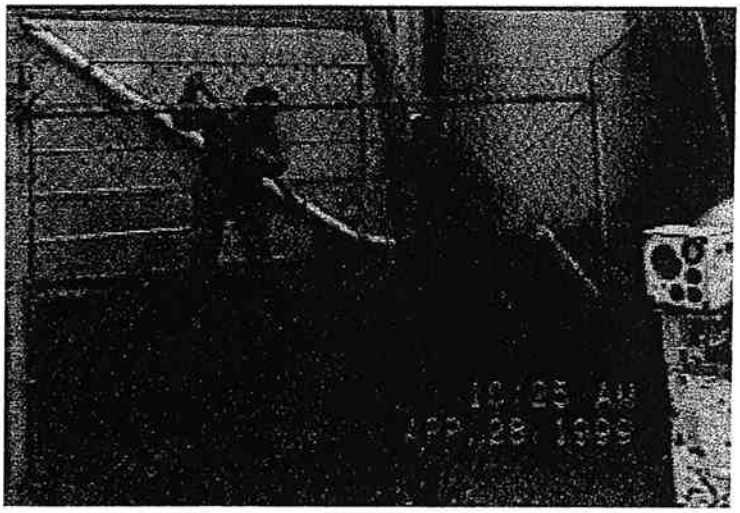
Figure 2
Sample Location Map



Clean Out - Source Of Contamination

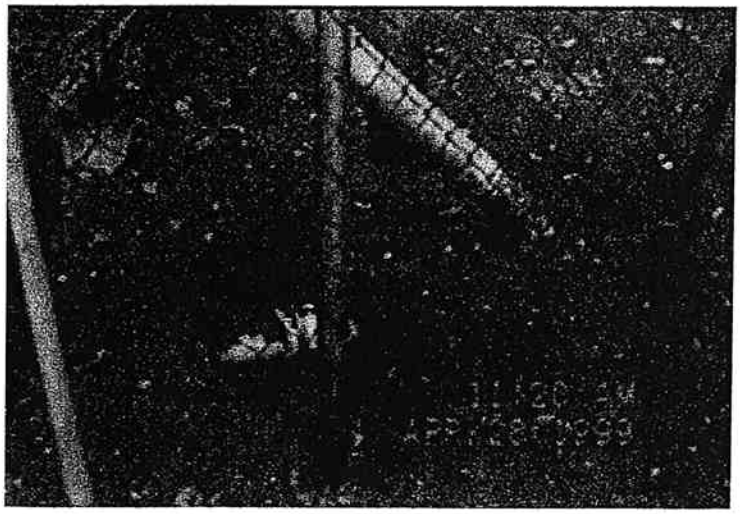


Below Clean Out - Leaking Piping Syste

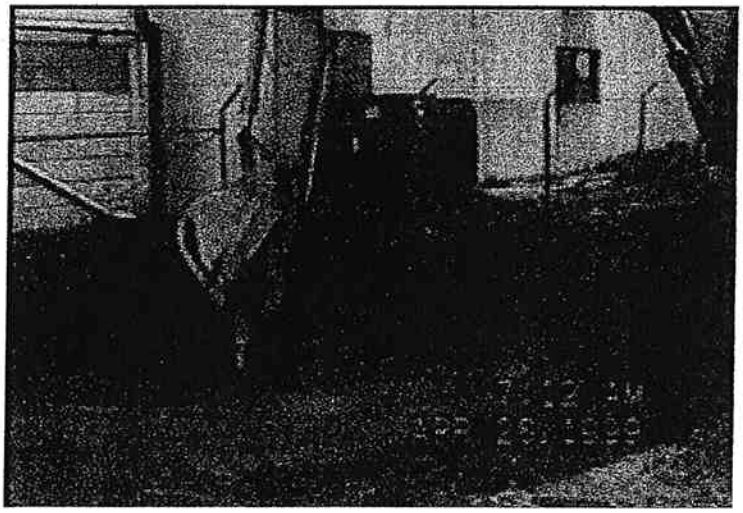


Removal of contaminated surface soil

Removal of surface water and contaminate

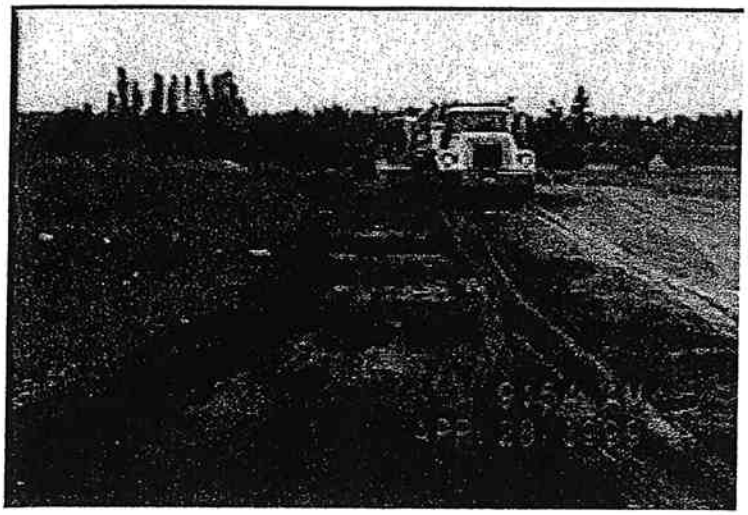


Clean out and sub-surface piping

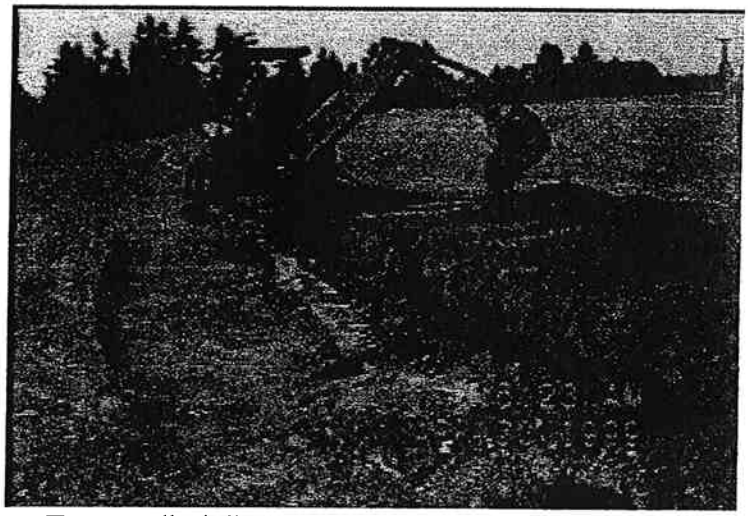


Excavation of contaminated soil

Site Photographs
Pace Industries Soil Clean up
Metal Marine Pilot, Inc Site
2119 Mildred Street W.



Norther area following contaminated soil removal



Eastern ditch line during contaminated soil removal

Eastern ditch line following contaminated soil removal

Site Photographs
Pace Industries Soil Clean up
Metal Marine Pilot, Inc Site
2119 Mildred Street W.

Appendix B - Analytical Results, Chromatographs, Chains of Custody

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SPECTRA Laboratories, Inc.

2221 Ross Way • Tacoma, WA 98421 • (253) 272-4850

April 29, 1999

Creative Environmental Technologies, Inc.
P.O. Box 1803
Tacoma, WA 98401

Attn: Steven Spencer

Project: Metal Marine 103-1
Sample Matrix: Soil
Date Sampled: 4-28-99
Date Received: 4-28-99
Date Analyzed: 4-28-99
Spectra Project: S904-210
RUSH

WTPH-D EXTENDED

Spectra #	Sample ID:	WTPH-D mg/Kg dry wt.	Heavy Oils mg/Kg dry wt.	Surrogate Recovery p-Terphenyl
1977	S1	<25	14,000	114%
1978	S2	<25	1,000	117%
1979	S3	74	81,000	109%
1980	S4	<25	3,900	118%
1981	S5	<25	1,800	112%
1982	S6	<25	1,400	117%
1983	S7	<25	1,100	115%
Method Blank		<25	<100	125%

SPECTRA LABORATORIES, INC.

Steven G. Hibbs, Laboratory Manager

SPECTRA Laboratories, Inc.

2221 Ross Way • Tacoma, WA 98421 • (253) 272-4850

April 30, 1999

Creative Environmental Technologies, Inc.
PO Box 1803
Tacoma, WA 98401

Attn: Steven Spencer

PO #103-1
Project: Marine Metal
Sample Matrix: Soil
Date Sampled: 4- 28-99
Date Received: 4-28-99
Date Analyzed: 4-29-99
Spectra Project: S904-225
RUSH

WTPH-D EXTENDED

Spectra #	Sample ID:	WTPH-D mg/Kg dry wt.	Heavy Oils mg/Kg dry wt.	Surrogate Recovery p-Terphenyl
2015	S10-42899	<25	<100	123%
2016	S11-42899	<25	<100	127%
2017	S12-42899	<25	<100	136%
2018	S13-42899	<25	<100	132%
2019	S14-42899	<25	1,100	132%
2020	S15-42899	<25	<100	132%
2021	S16-42899	<25	<100	132%
2022	S17-42899	<25	<100	127%
2023	S23-42899	<25	<100	129%
2024	S24 -42899	<25	<100	128%
2025	S25 -42899	<25	<100	129%
2026	S26-42899	<25	<100	131%
2027	S27-42899	<25	<100	130%
2028	S28-42899	<25	<100	128%
2029	S29-42899	<25	5,800	127%
Method Blank		<25	<100	139%

SPECTRA LABORATORIES, INC.

Michael Deckert

Michael Deckert, Chemist

SPECTRA Laboratories, Inc.

2221 Ross Way • Tacoma, WA 98421 • (253) 272-4850

May 4, 1999

Creative Environmental Technologies, Inc.
P.O. Box 1803
Tacoma, WA 98401

Attn: Steven Spencer

Project: Metal Marine
Sample Matrix: Soil
Date Sampled: 4-30-99
Date Received: 4-30-99
Date Analyzed: 4-30-99
Spectra Project: S904-248
RUSH

WTPH-D EXTENDED

Spectra #	Sample ID:	WTPH-D mg/Kg dry wt.	Heavy Oils mg/Kg dry wt.	Surrogate Recovery
2104	S30-43099	<25	<100	139%
2105	S31-43099	<25	<100	140%
2106	S32-43099	<25	<100	140%
2107	S33-43099	<25	<100	135%
2108	S34-43099	<25	<100	133%
2109	S35-43099	<25	<100	138%
2110	S36-43099	<25	<100	136%
2111	S37-43099	<25	<100	137%
2112	S38-43099	<25	<100	135%
Method Blank		<25	<100	99%

SPECTRA LABORATORIES, INC.

Steven G. Hibbs, Laboratory Manager

SPECTRA Laboratories, Inc.

2221 Ross Way • Tacoma, WA 98421 • (253) 272-4850

March 29, 1999

Pace Industries Puget Division
2101 Mildred St. W.
Tacoma, WA 98466

Attn: Jeff

Sample ID: Effluent Grab
Project: Wastewater Monitoring
Sample Matrix: Water
Date Sampled: 3-17-99
Date Received: 3-17-99
Spectra Project: S903-175
Spectra #1237

pH	5.58
Total Phenols, mg/L	<0.05
Total Petroleum Hydrocarbons, mg/L	1.3
Fats, Oil and Grease, mg/L	8

pH testing performed by EPA Method 150.1
Total Phenols testing performed by EPA Method 420.1
Total Petroleum Hydrocarbons testing performed by EPA Method 418.1
Fats, Oil and Grease testing performed by EPA Method 413.2

SPECTRA LABORATORIES, INC.

Steven G. Hibbs, Laboratory Manager

SPECTRA Laboratories, Inc.

2221 Ross Way • Tacoma, WA 98421 • (253) 272-4850

March 29, 1999

Pace Industries Puget Division
2101 Mildred St. W.
Tacoma, WA 98466

Attn: Jeff

Sample ID: Effluent Comp.
Project: Wastewater Monitoring
Sample Matrix: Water
Date Sampled: 3-17-99
Date Received: 3-17-99
Spectra Project: S903-175
Spectra #1238

Total Recoverable Metals, mg/L

Lead	(Pb)	<0.04
Copper	(Cu)	<0.01
Zinc	(Zn)	0.26

Total Recoverable Metals testing performed by EPA Method 200.7

SPECTRA LABORATORIES, INC.

Steven G. Hibbs, Laboratory Manager

SPECTRA Laboratories, Inc.

2221 Ross Way • Tacoma, WA 98421 • (253) 272-4850

March 29, 1999

Pace Industries Puget Division
2101 Mildred St. W.
Tacoma, WA 98466

Attn: Jeff

METHOD BLANK
Date Analyzed: 3-18-99
Spectra Project: S903-175
Applies to Spectra #1238

Total Recoverable Metals, mg/L

Lead	(Pb)	<0.04
Copper	(Cu)	<0.01
Zinc	(Zn)	<0.006

Total Recoverable Metals testing performed by EPA Method 200.7

SPECTRA LABORATORIES, INC.

Steven G. Hibbs, Laboratory Manager

SPECTRA Laboratories, Inc.

2221 Ross Way • Tacoma, WA 98421 • (253) 272-4850

March 29, 1999

Pace Industries Puget Division
2101 Mildred St. W.
Tacoma, WA 98466

Attn: Jeff

EPA Method: 418.1
Sample Matrix: Water
Spectra Project: S903-175
Applies to Spectra #1237

HYDROCARBON ANALYSIS
QUALITY CONTROL RESULTS

MS/MSD

Spiked Sample: Method Blank
Units: mg/L

Date Analyzed: 3-24-99

Compound	Sample Result	Spike Amount	Spike Result	% Recovery	Dup. Result	Dup. Recovery	% RPD
TPH	<0.5	5.92	4.90	83	5.15	87	5

METHOD BLANK

Date Extracted: 3-26-99

Date Analyzed: 3-26-99

Total Petroleum Hydrocarbons, mg/L

<0.5

SPECTRA LABORATORIES, INC.

Steven G. Hibbs, Laboratory Manager

SPECTRA Laboratories, Inc.

2221 Ross Way • Tacoma, WA 98421 • (253) 272-4850

March 29, 1999

Pace Industries Puget Division
2101 Mildred St. W.
Tacoma, WA 98466

Attn: Jeff

EPA Method 413.2
Sample Matrix: Water
Spectra Project: S903-175
Applies to Spectra #1237

OIL AND GREASE
QUALITY CONTROL RESULTS

MS/MSD

Spiked Sample: Method Blank
Units: mg/L

Date Analyzed: 3-24-99

Compound	Sample Result	Spike Amount	Spike Result	% Recovery	Dup. Result	Dup. Recovery	% RPD
Oil and Grease	<0.5	5.92	5.12	86.5	5.55	93.7	8

METHOD BLANK

Date Extracted: 3-26-99

Date Analyzed: 3-26-99

Oil and Grease, mg/L

<0.5

SPECTRA LABORATORIES, INC.

Steven G. Hibbs, Laboratory Manager

CHAIN OF CUSTODY

SPECTRA Laboratories, Inc.

PAGE 1 of 1

2221 Ross Way • Tacoma, WA 98421 • (253) 272-4850 • Fax (253) 572-9838

CLIENT:	PACE Industries
PROJECT:	Wastewater Monitoring
CONTACT:	Jeff
PHONE:	
PURCHASE ORDER #:	

RETURN

DISPOSAL

Fee appl…

SAMPLE ID	DATE	TIME	MATRIX	NUMBER OF CONTAINERS	HYDROCARBONS: WTPH-HCID	BTEX/WTPH-G	BTEX	WTPH-G	WTPH-D	TPH (H_2SO_4)	F.O.G. 413.1/413.2 (H_2SO_4)
Eff-grab	3-17	13:20	ww							X	X
			↓								
Eff comp	3-16/17	13:20	↓								

SAMPLE ID	ORGANICS: 8260 VOA	8260 CHLOR SOLVENTS	8270 SEMI-VOA	PAH/PNA-8270	8080 ORG. CHLOR PEST.	8082 PCB	TCLP D-LIST: TCLP METALS (8)	TCLP-VOA	TCLP 8270 SEMI-VOA	TCLP PEST.	TCLP HERB.
Eff-grab											
Eff comp											

SAMPLE ID	METALS: TOTAL METALS ICP/DCP	TOTAL METALS GFAA	TOTAL LEAD	OTHER: pH 9040/9045	TOX 9020/9076	TOC 9060/PSEP	FLASH POINT	SOLIDS (SPECIFY)	T. Phenols (H_2SO_4)				NORMAL / RUSH	LAB ID
Eff-grab				X					X					
Eff comp	X													

SPECIAL INSTRUCTIONS/COMMENTS:

T-metals: pb, cu, ZN
Samples were chilled
+/or preserved
on site

	SIGNATURE	PRINTED NAME	COMPANY	DATE	TIME
RELINQUISHED BY	[signature]	K E Kuester	Misquality Environmental	3-17	13:…
RECEIVED BY	[signature]	Barb Minner	Spectra	3/17/99	1…
RELINQUISHED BY					
RECEIVED BY					

Payment Terms: Net 30 days. Past due accounts subject to 18% per annum interest. Customer agrees to pay all costs of collection including reaso… attorney's fees and all other associated costs of collection regardless of whether suit is filed.

le ID : 1977 ceti

ction Date: 28-APR-99 12:49 PM Calculation Date: 28-APR-99 1:21 PM

ator : MD
station: MS-DOS_6
rument : Varian Star #2
nel : B = FID-B

Detector Type: ADCB (10 Volts)
Bus Address : 22
Sample Rate : 10.00 Hz
Run Time : 32.002 min

******* Star Chromatography Software ********** Version 4.0 **********

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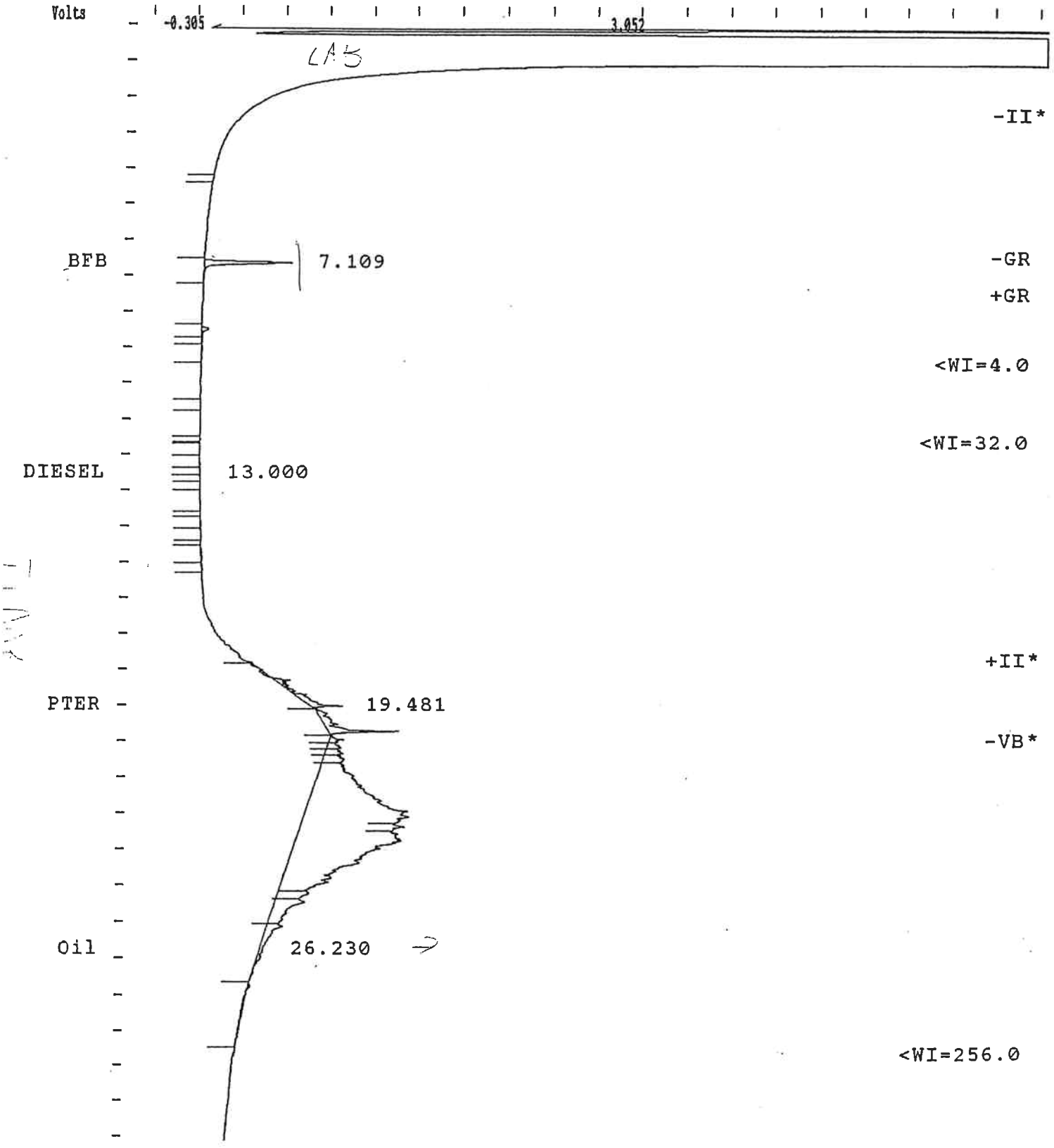
: Time = 0.500 min End Time = 32.002 min Min / Tick = 1.00



ıple ID : 1977ms ceti

jection Date: 28-APR-99 1:28 PM Calculation Date: 28-APR-99 2:00 PM

rator : MD
:kstation: MS-DOS_6
strument : Varian Star #2
nnel : B = FID-B

Detector Type: ADCB (10 Volts)
Bus Address : 22
Sample Rate : 10.00 Hz
Run Time : 32.002 min

******** Star Chromatography Software ********** Version 4.0 **********

rt Speed = 0.66 cm/min Attenuation = 2500 Zero Offset = 5%
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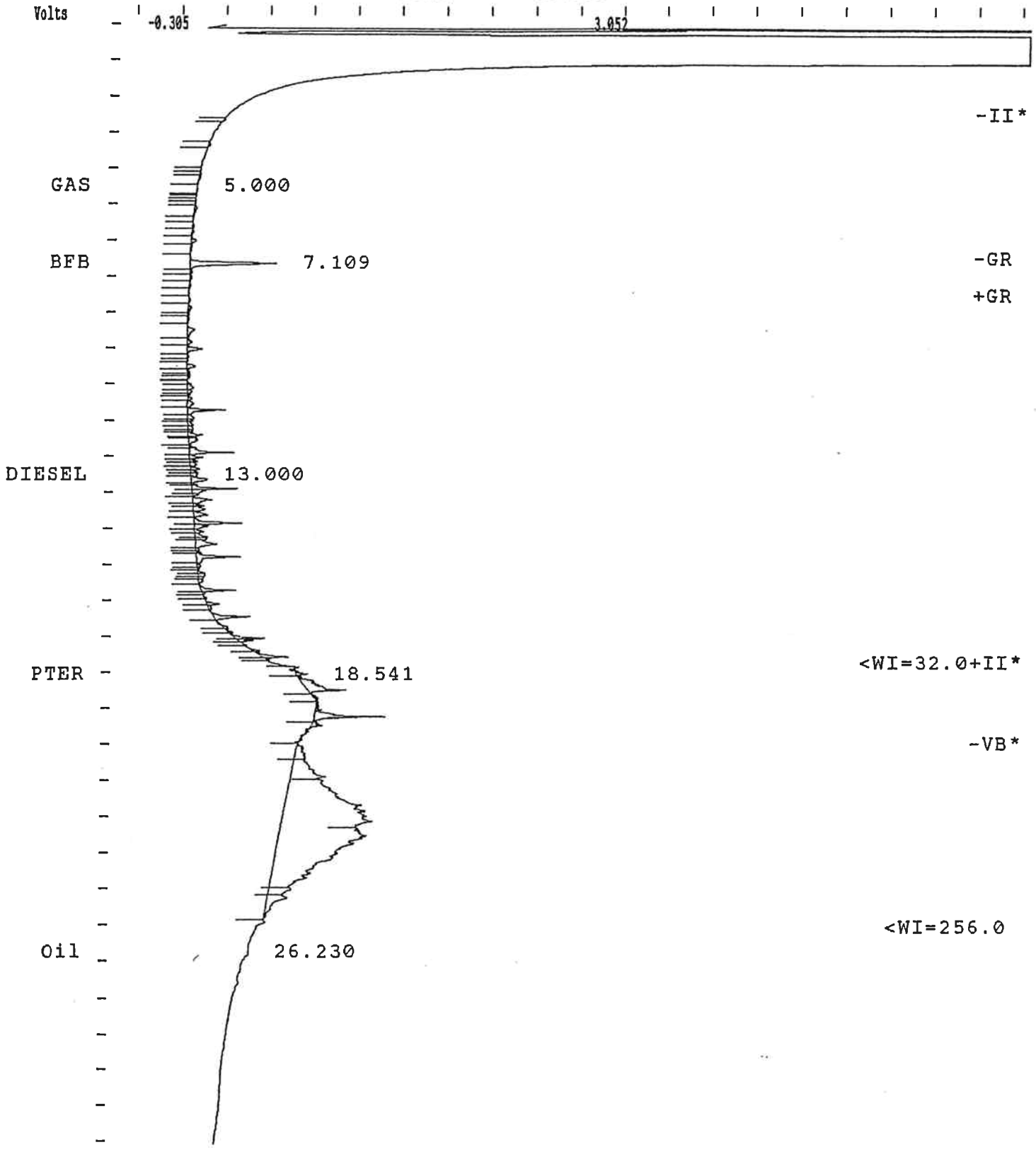

le ID : 1977msd ceti

ction Date: 28-APR-99 2:07 PM Calculation Date: 28-APR-99 2:39 PM

ator : MD
station: MS-DOS_6
rument : Varian Star #2
nel : B = FID-B

Detector Type: ADCB (10 Volts)
Bus Address : 22
Sample Rate : 10.00 Hz
Run Time : 32.002 min

******* Star Chromatography Software ********** Version 4.0 **********

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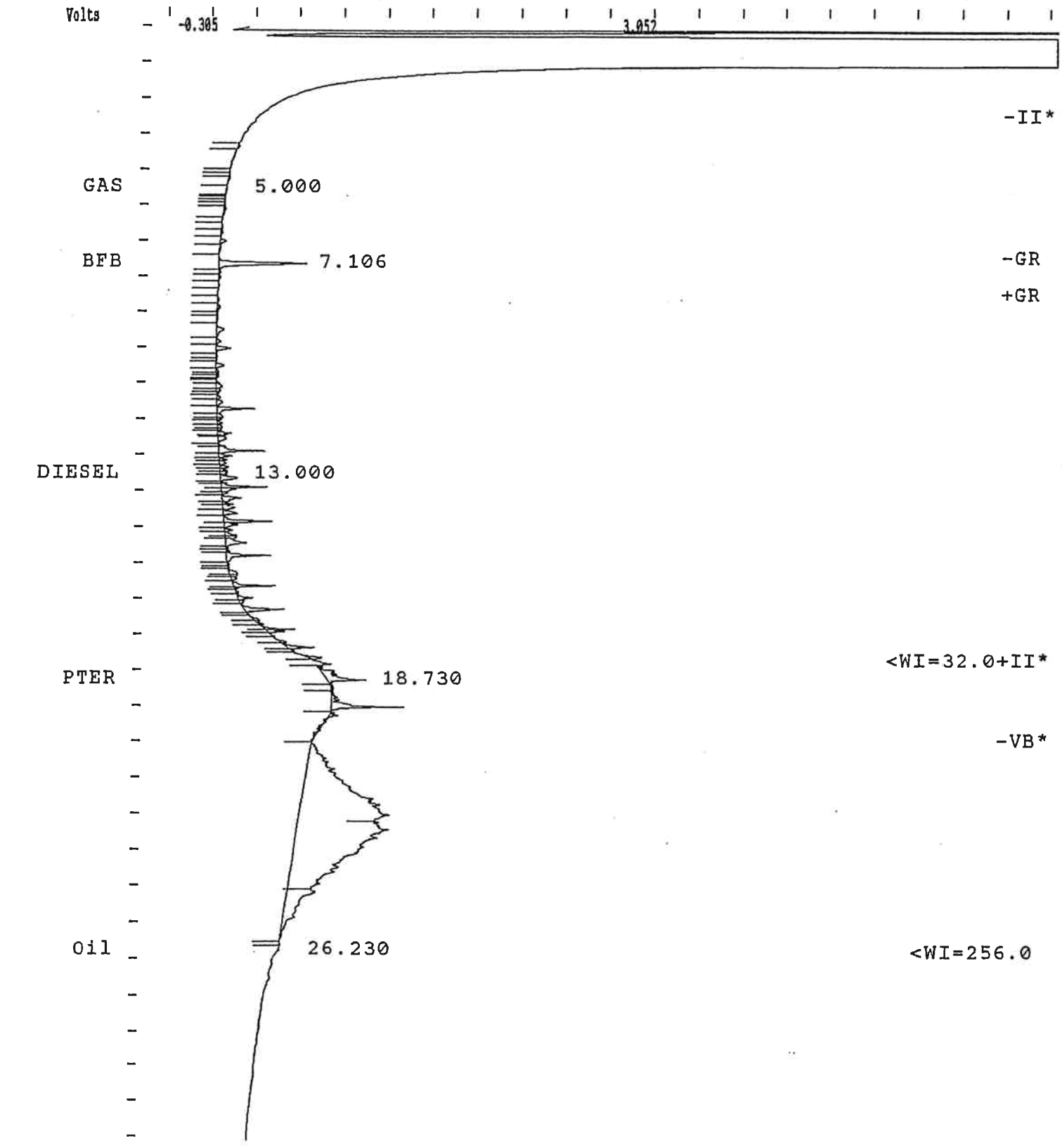
: Time = 0.500 min End Time = 32.002 min Min / Tick = 1.00



ıple ID : 1978 ceti

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ırator : MD
ıkstation: MS-DOS_6
ıstrument : Varian Star #2

Detector Type: ADCB (10 Volts)
Bus Address : 22
Sample Rate : 10.00 Hz
Run Time : 32.002 min

********** Star Chromatography Software ********** Version 4.0 ***************

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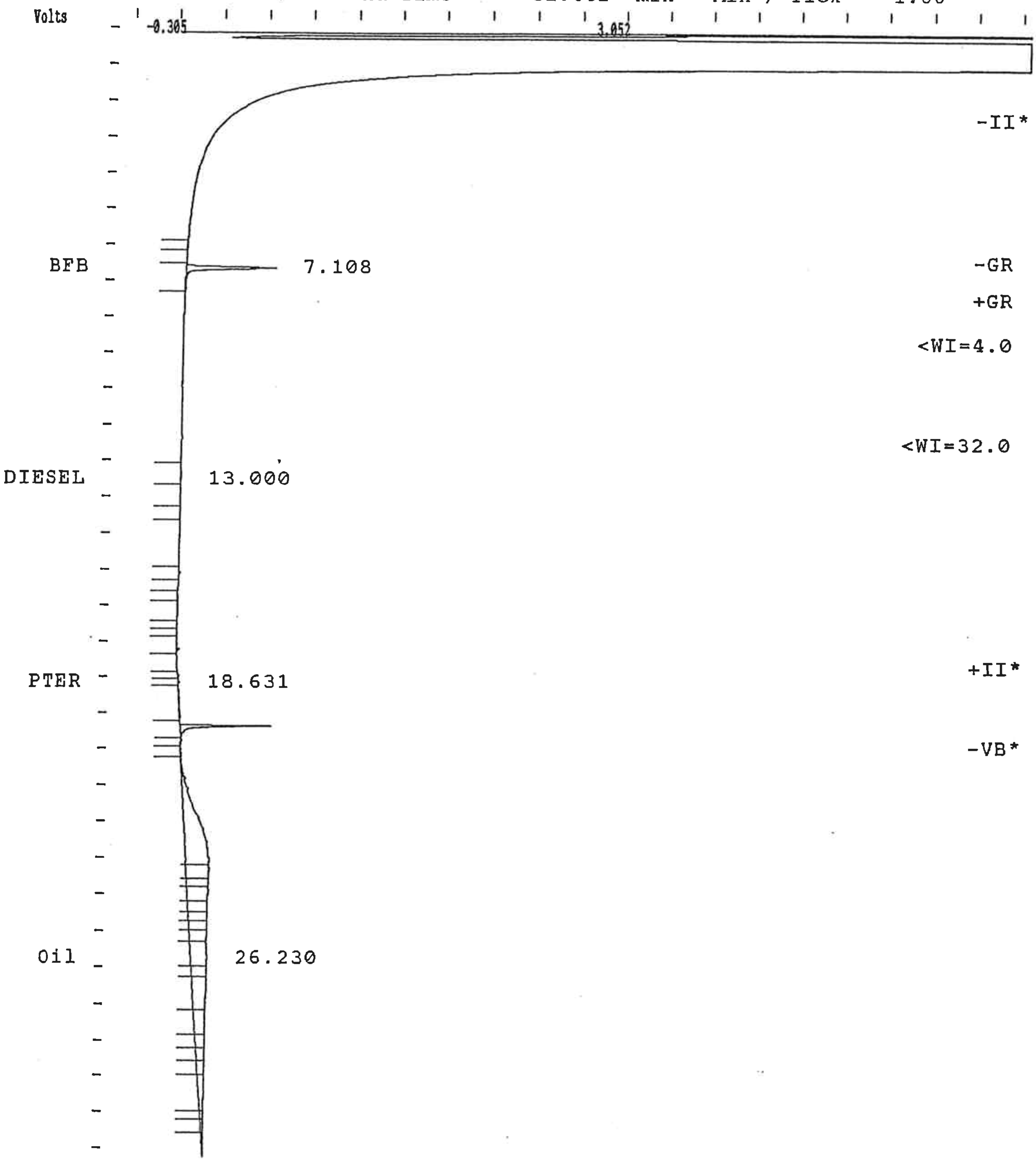


le ID : 1979 ceti

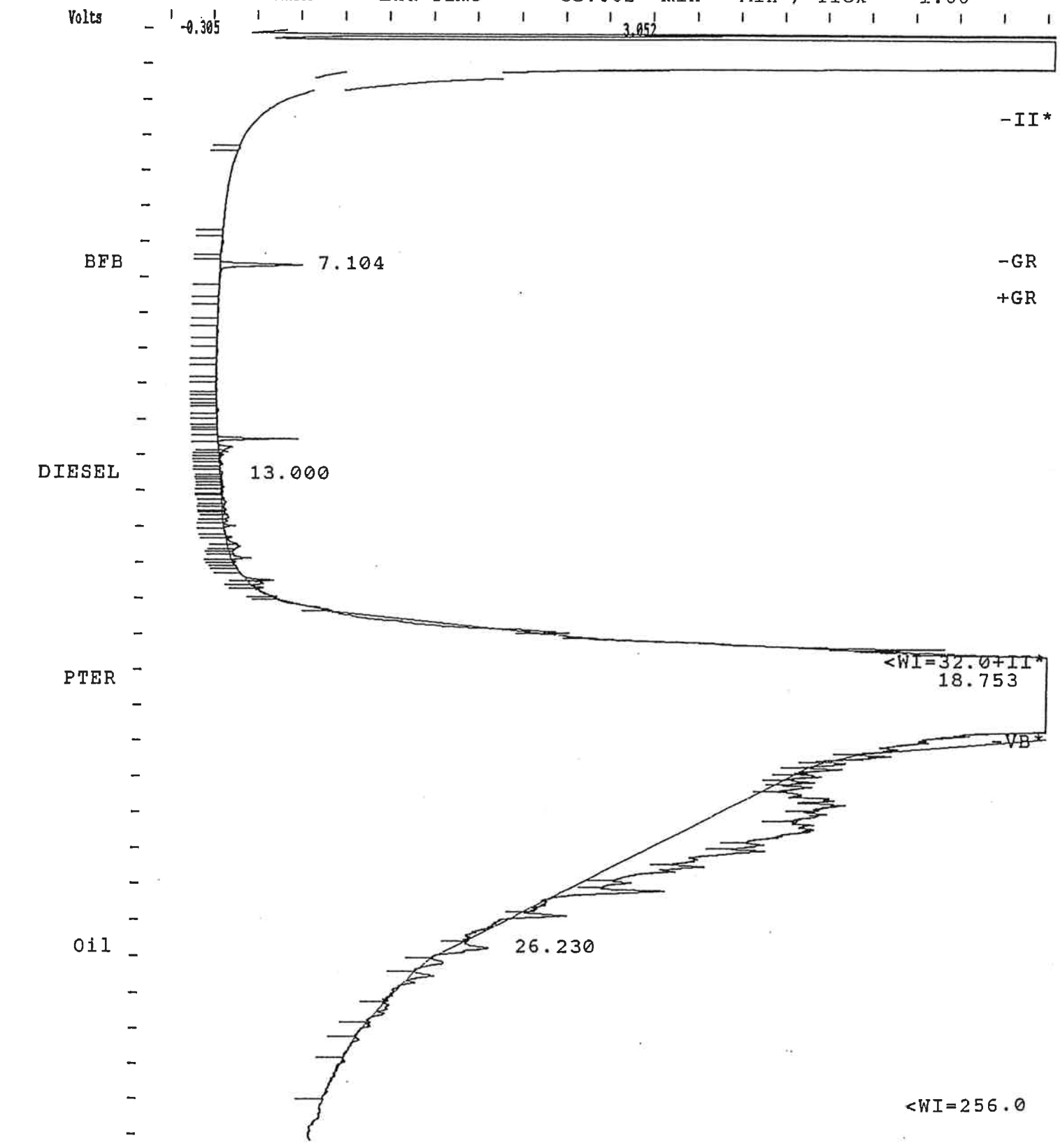
ction Date: 28-APR-99 3:26 PM Calculation Date: 28-APR-99 3:58 PM

ator : MD
station: MS-DOS_6
rument : Varian Star #2
nel : B = FID-B

Detector Type: ADCB (10 Volts)
Bus Address : 22
Sample Rate : 10.00 Hz
Run Time : 32.002 min

******* Star Chromatography Software ********** Version 4.0 **********

: Speed = 0.66 cm/min Attenuation = 2500 Zero Offset = 5%
: Time = 0.500 min End Time = 32.002 min Min / Tick = 1.00



aple ID : 1980 ceti

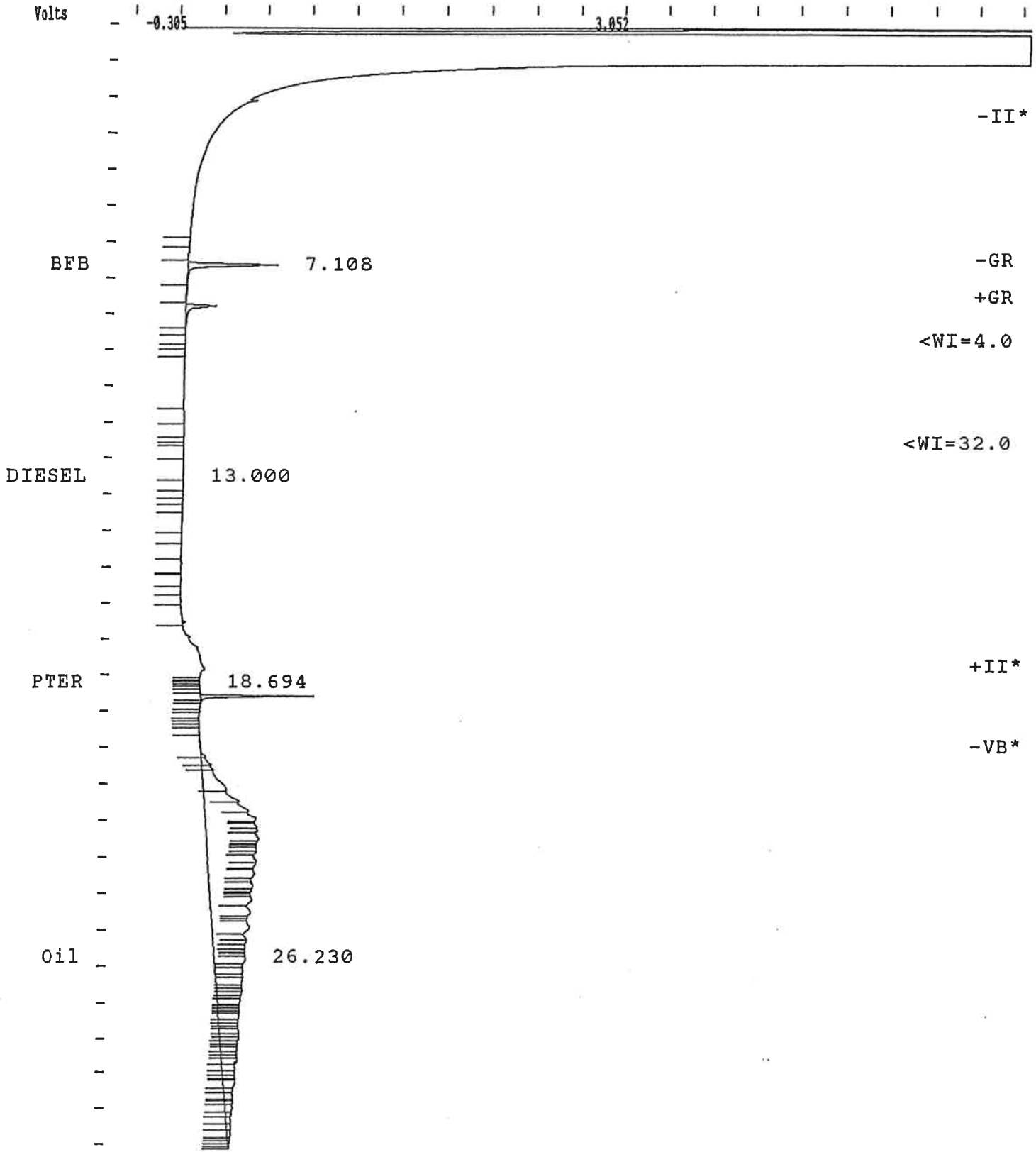
jection Date: 28-APR-99 4:05 PM Calculation Date: 28-APR-99 4:38 PM

erator : MD
rkstation: MS-DOS_6
strument : Varian Star #2
annel : B = FID-B

Detector Type: ADCB (10 Volts)
Bus Address : 22
Sample Rate : 10.00 Hz
Run Time : 32.002 min

********** Star Chromatography Software ********** Version 4.0 **********

art Speed = 0.66 cm/min Attenuation = 2500 Zero Offset = 5%
art Time = 0.500 min End Time = 32.002 min Min / Tick = 1.00



le ID : 1981 ceti

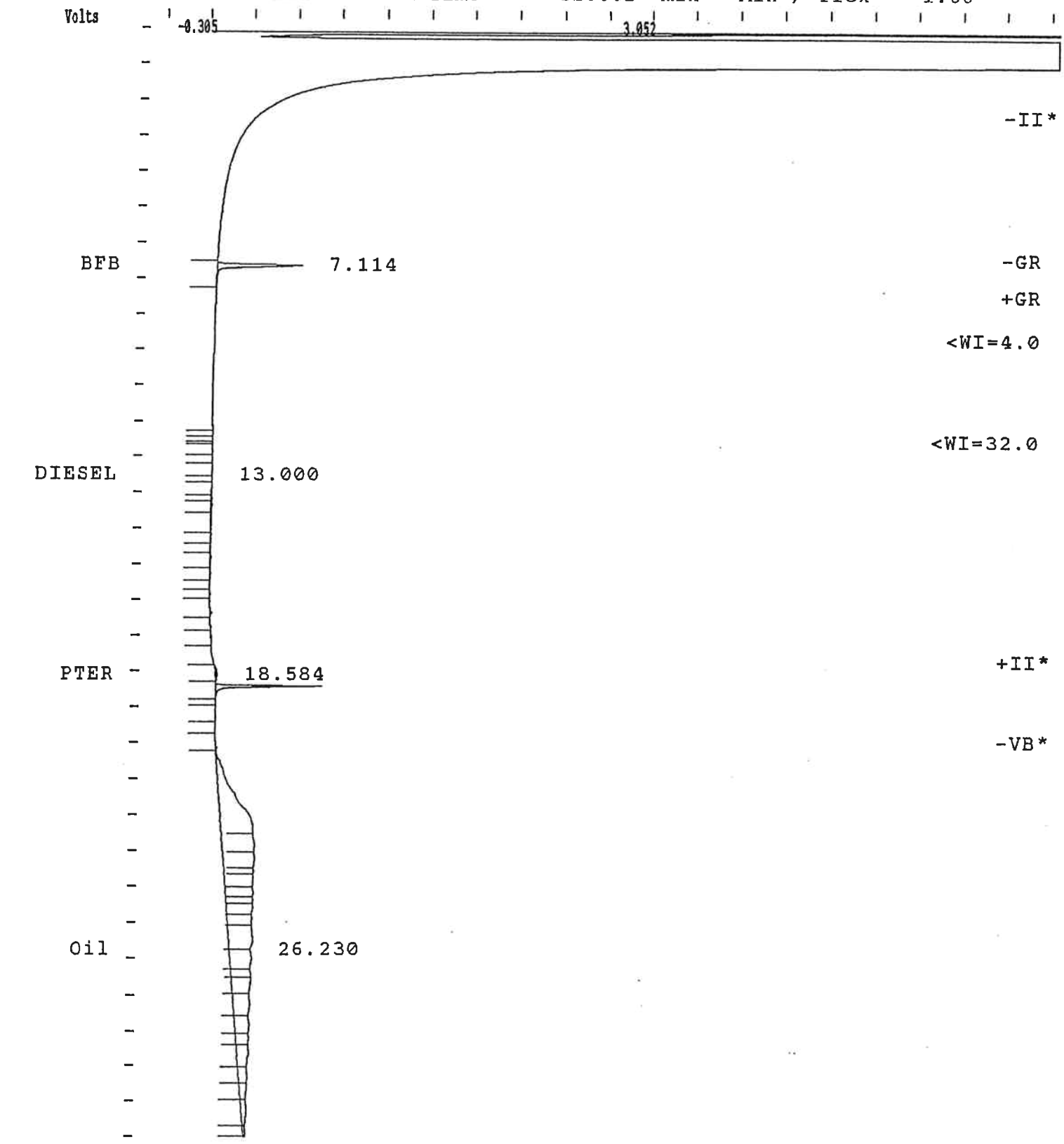
ction Date: 28-APR-99 4:45 PM Calculation Date: 28-APR-99 5:17 PM

ator : MD
station: MS-DOS_6
ument : Varian Star #2
nel : B = FID-B

Detector Type: ADCB (10 Volts)
Bus Address : 22
Sample Rate : 10.00 Hz
Run Time : 32.002 min

****** Star Chromatography Software ********** Version 4.0 **********

Speed = 0.66 cm/min Attenuation = 2500 Zero Offset = 5%
Time = 0.500 min End Time = 32.002 min Min / Tick = 1.00



ple ID : 1982 ceti

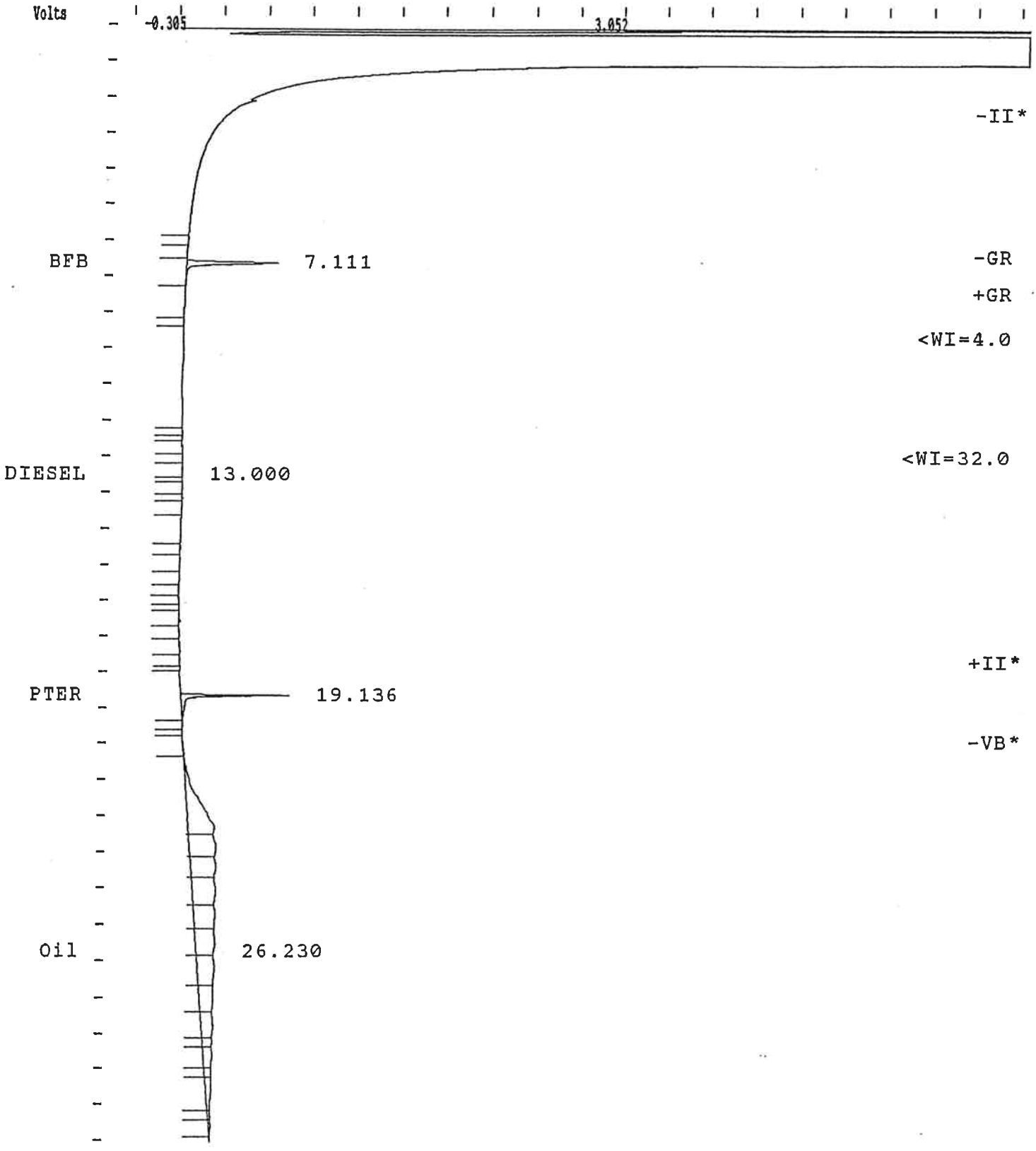
jection Date: 28-APR-99 5:24 PM Calculation Date: 28-APR-99 5:57 PM

rator : MD
:kstation: MS-DOS_6
strument : Varian Star #2
nnel : B = FID-B

Detector Type: ADCB (10 Volts)
Bus Address : 22
Sample Rate : 10.00 Hz
Run Time : 32.002 min

******** Star Chromatography Software ********** Version 4.0 **********

rt Speed = 0.66 cm/min Attenuation = 2500 Zero Offset = 5%
irt Time = 0.500 min End Time = 32.002 min Min / Tick = 1.00



le ID : 1983 ceti

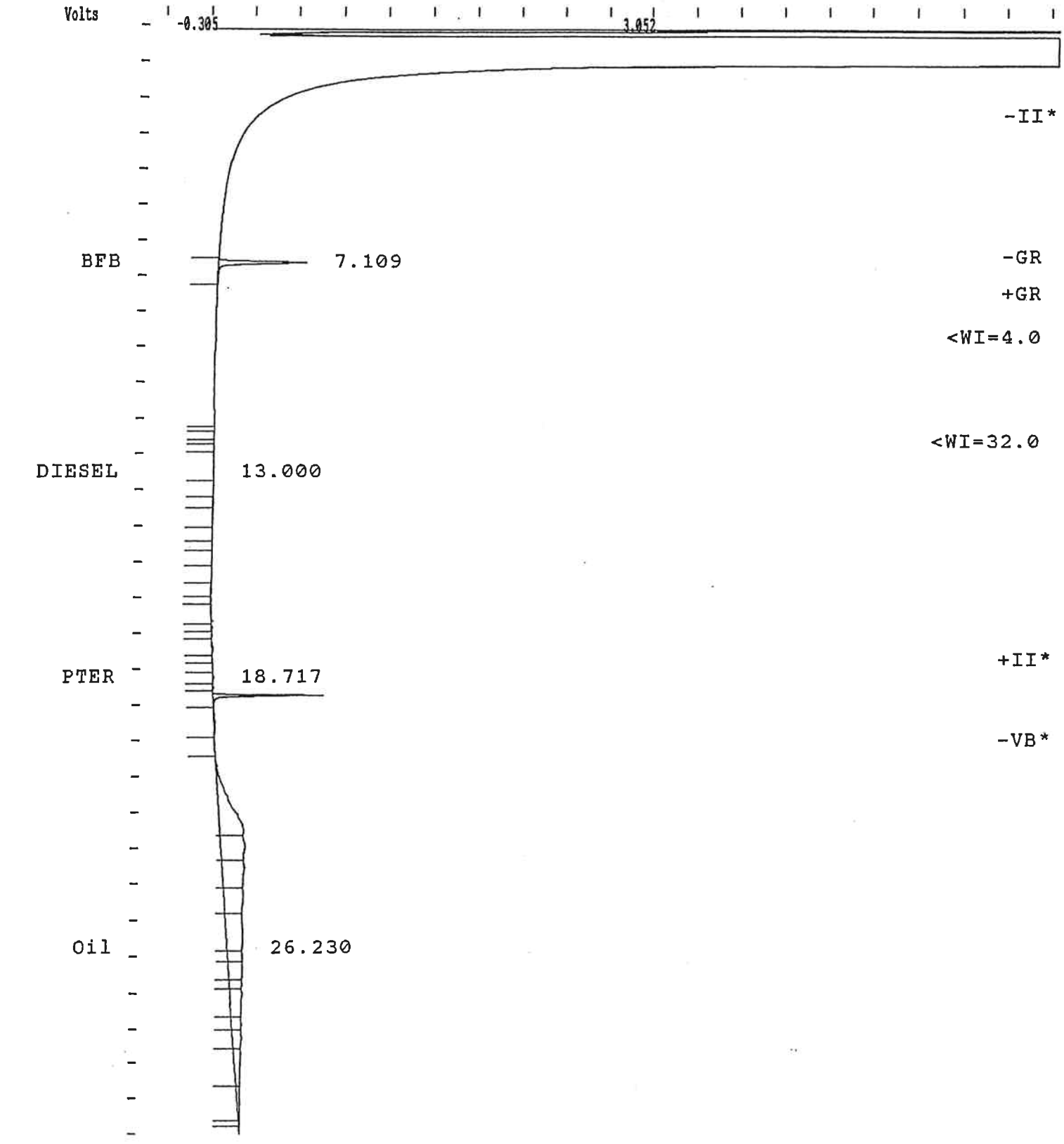
ction Date: 28-APR-99 6:04 PM Calculation Date: 28-APR-99 6:36 PM

ator : MD
station: MS-DOS_6
ument : Varian Star #2
nel : B = FID-B

Detector Type: ADCB (10 Volts)
Bus Address : 22
Sample Rate : 10.00 Hz
Run Time : 32.002 min

****** Star Chromatography Software ********** Version 4.0 **********

Speed = 0.66 cm/min Attenuation = 2500 Zero Offset = 5%
Time = 0.500 min End Time = 32.002 min Min / Tick = 1.00



:hod File : C:\STAR\WD4.MTH
ıple ID : mblk soil 4-29-99

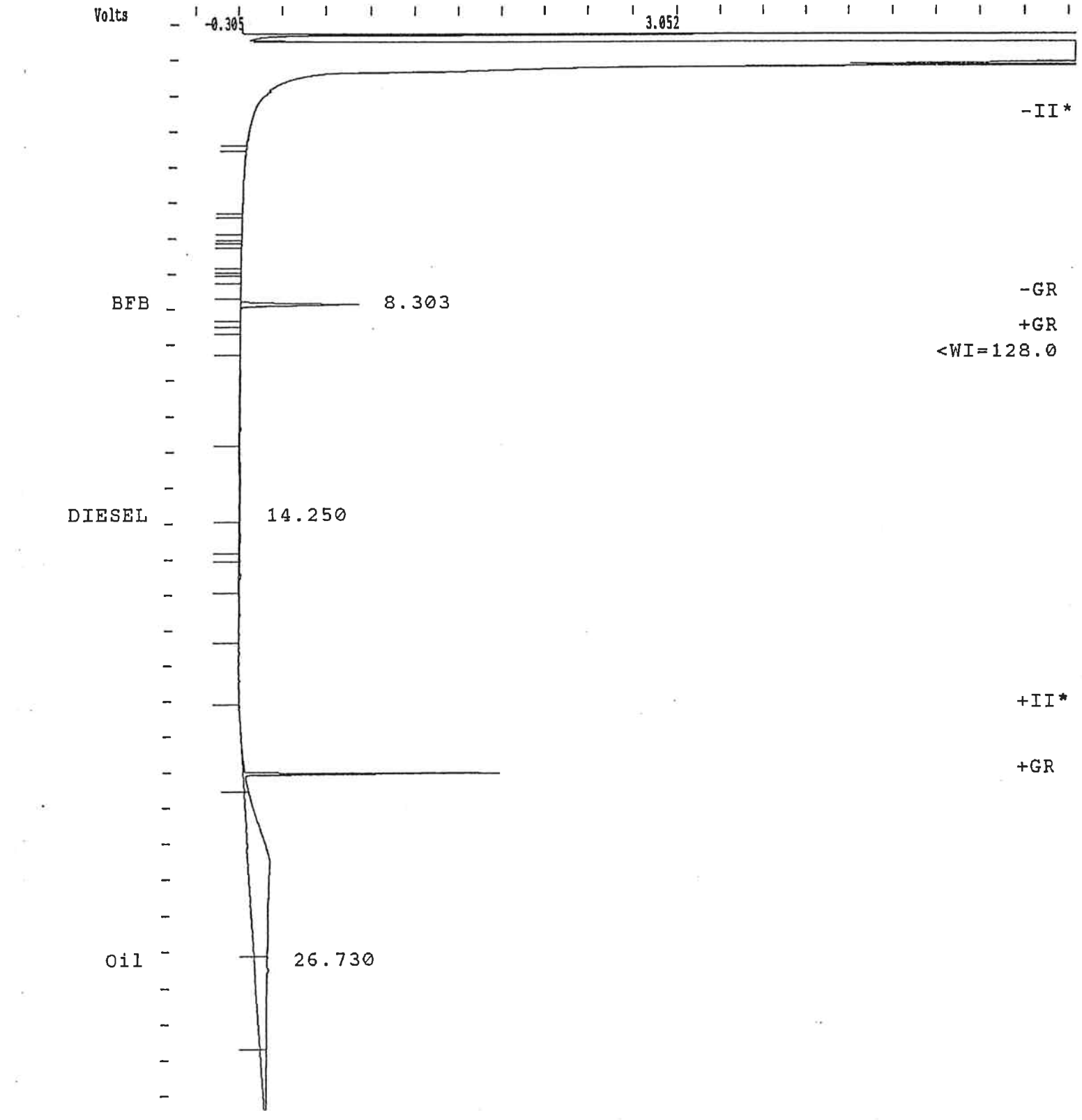
'ection Date: 29-APR-99 3:22 PM Calculation Date: 29-APR-99 3:54 PM

ɐrator : MD
ckstation: MS-DOS_6
trument : Varian Star #2
nnel : B = FID-B

Detector Type: ADCB (10 Volts)
Bus Address : 22
Sample Rate : 10.00 Hz
Run Time : 32.002 min

'******** Star Chromatography Software ********** Version 4.0 ***************

ɹrt Speed = 0.66 cm/min Attenuation = 2500 Zero Offset = 5%
ɹrt Time = 0.500 min End Time = 32.002 min Min / Tick = 1.00



un File : C:\STAR\MODULE22\wtphd027.RUN
ethod File : C:\STAR\WD4.MTH
ample ID : 2015 cet1

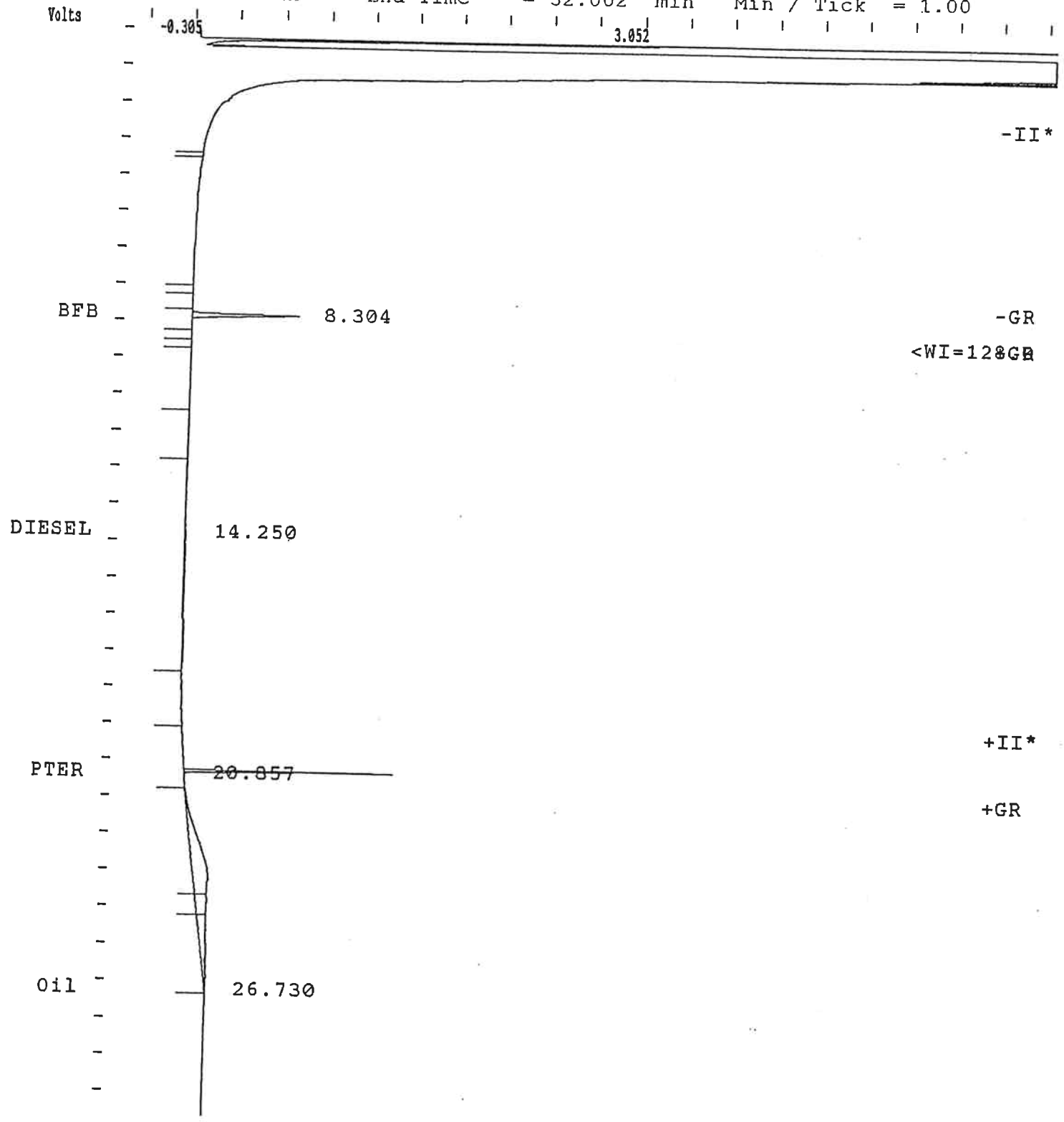
njection Date: 29-APR-99 4:01 PM Calculation Date: 29-APR-99 4:33 PM

perator : MD
orkstation: MS-DOS_6
nstrument : Varian Star #2
hannel : B = FID-B

Detector Type: ADCB (10 Volts)
Bus Address : 22
Sample Rate : 10.00 Hz
Run Time : 32.002 min

********** Star Chromatography Software ********** Version 4.0 **********

art Speed = 0.66 cm/min Attenuation = 2500 Zero Offset = 5%
art Time = 0.500 min End Time = 32.002 min Min / Tick = 1.00



ple ID : 2016ceti

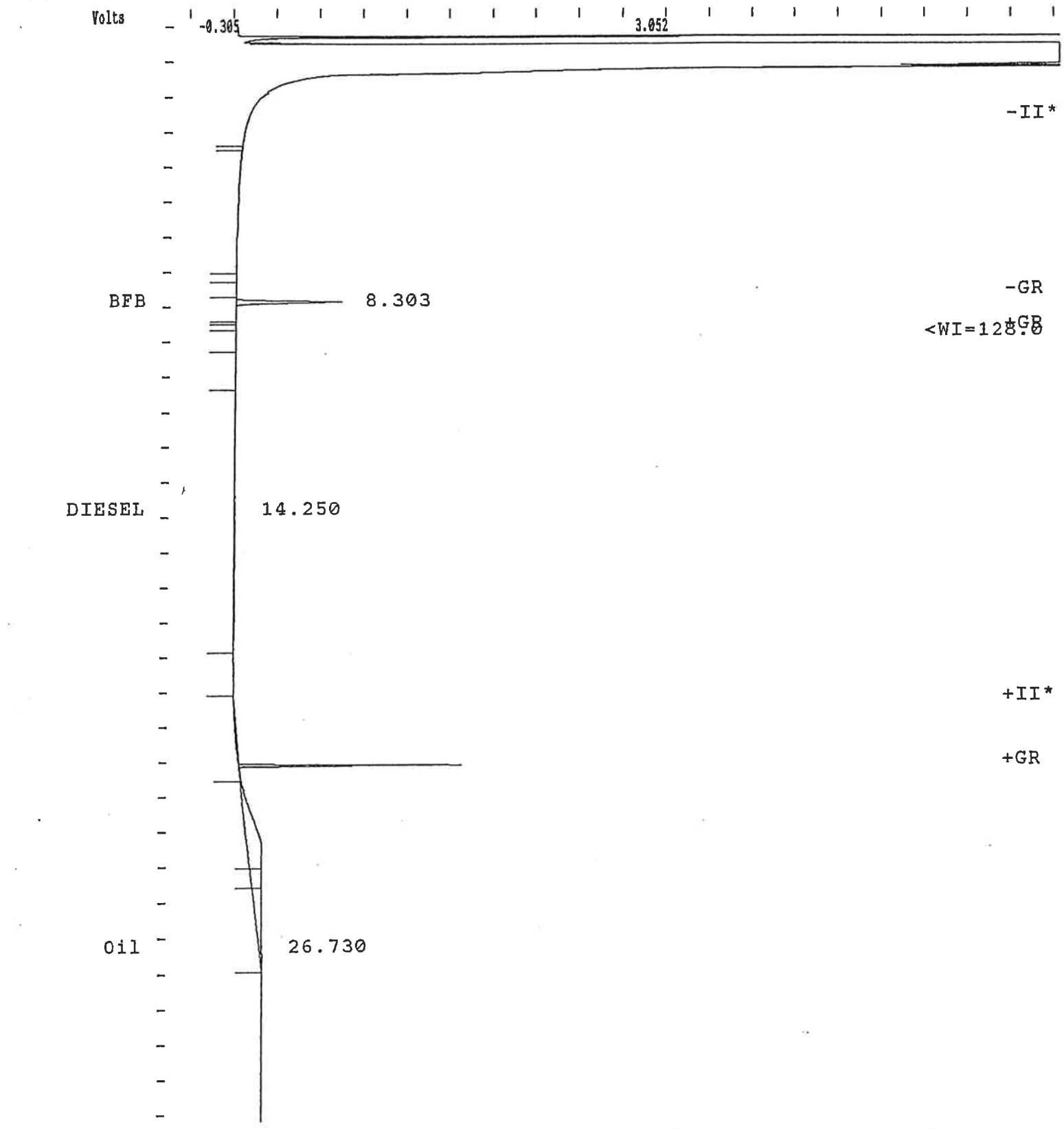
jection Date: 29-APR-99 4:41 PM Calculation Date: 29-APR-99 5:13 PM

rator : MD
kstation: MS-DOS_6
strument : Varian Star #2
nnel : B = FID-B

Detector Type: ADCB (10 Volts)
Bus Address : 22
Sample Rate : 10.00 Hz
Run Time : 32.002 min

********* Star Chromatography Software ********** Version 4.0 **********

rt Speed = 0.66 cm/min Attenuation = 2500 Zero Offset = 5%
art Time = 0.500 min End Time = 32.002 min Min / Tick = 1.00



le ID : 2017 ceti

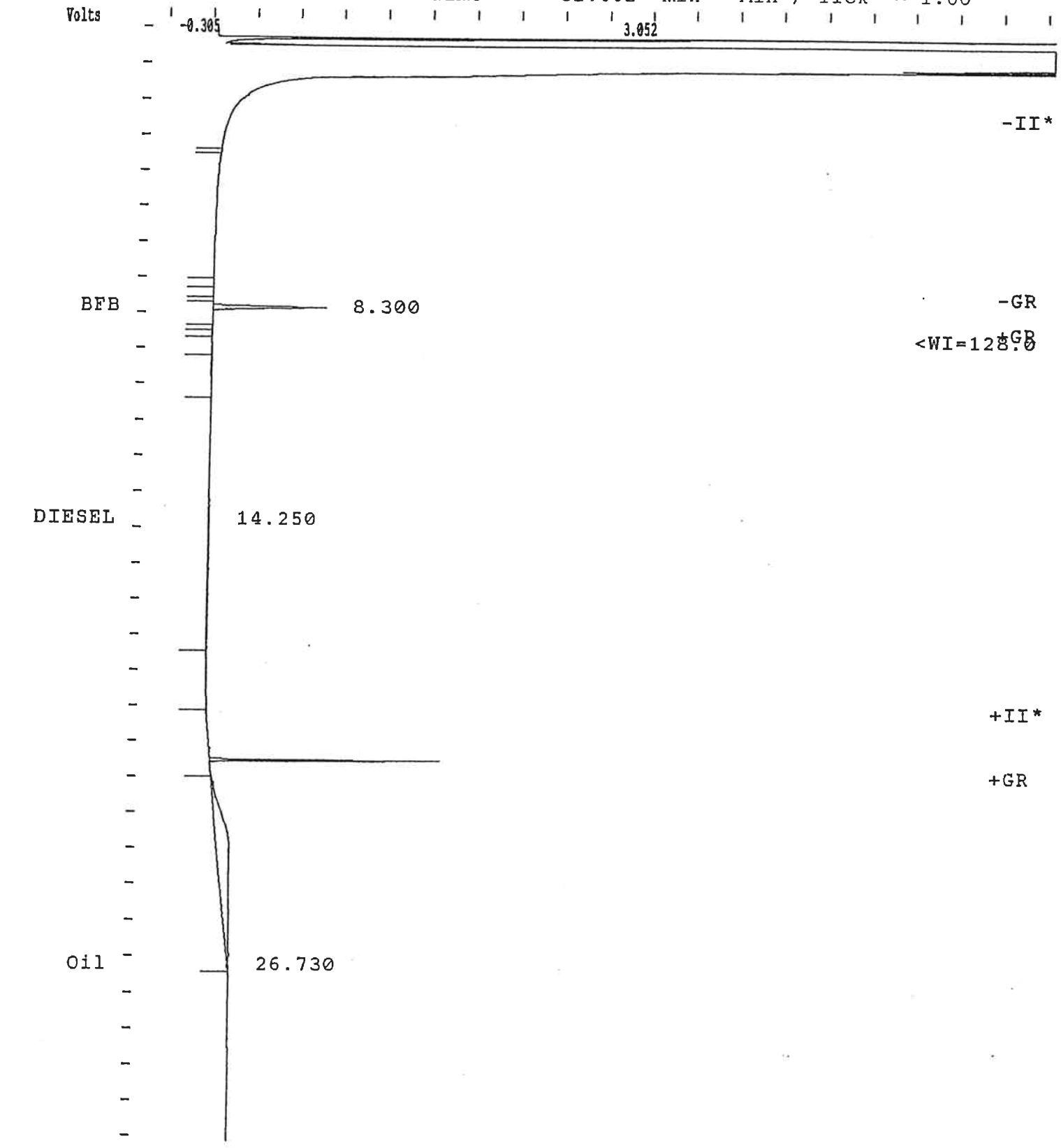
ction Date: 29-APR-99 5:20 PM Calculation Date: 29-APR-99 5:52 PM

ator : MD
station: MS-DOS_6
rument : Varian Star #2
nel : B = FID-B

Detector Type: ADCB (10 Volts)
Bus Address : 22
Sample Rate : 10.00 Hz
Run Time : 32.002 min

****** Star Chromatography Software ********** Version 4.0 **********

: Speed = 0.66 cm/min Attenuation = 2500 Zero Offset = 5%
: Time = 0.500 min End Time = 32.002 min Min / Tick = 1.00



ıple ID : 2018 ceti

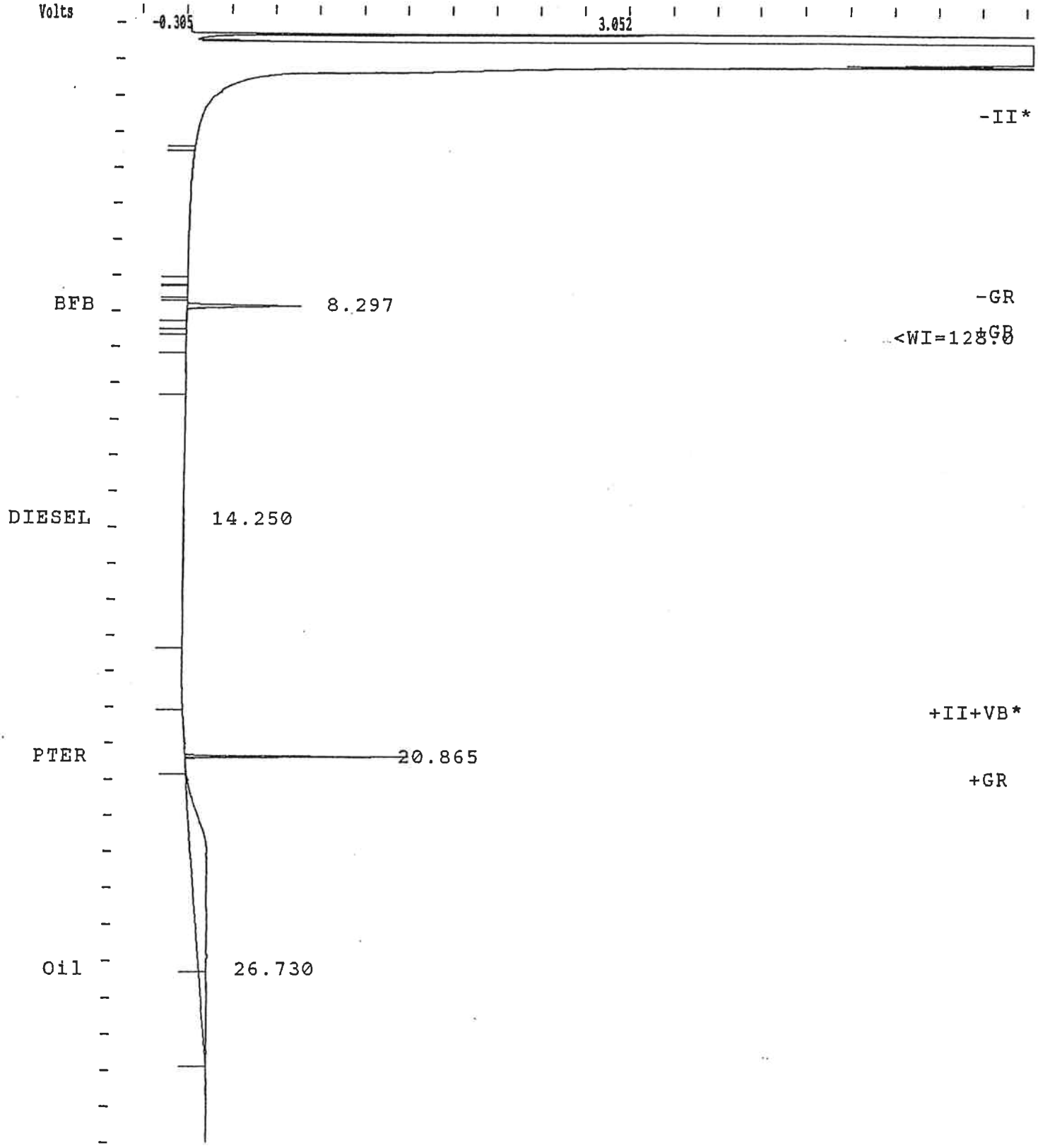
jection Date: 29-APR-99 6:00 PM Calculation Date: 29-APR-99 6:32 PM

ɜrator : MD
rkstation: MS-DOS_6
ɜtrument : Varian Star #2
.nnel : B = FID-B

Detector Type: ADCB (10 Volts)
Bus Address : 22
Sample Rate : 10.00 Hz
Run Time : 32.002 min

********* Star Chromatography Software ********** Version 4.0 ***************

rt Speed = 0.66 cm/min Attenuation = 2500 Zero Offset = 5%
art Time = 0.500 min End Time = 32.002 min Min / Tick = 1.00



le ID : 2019 ceti

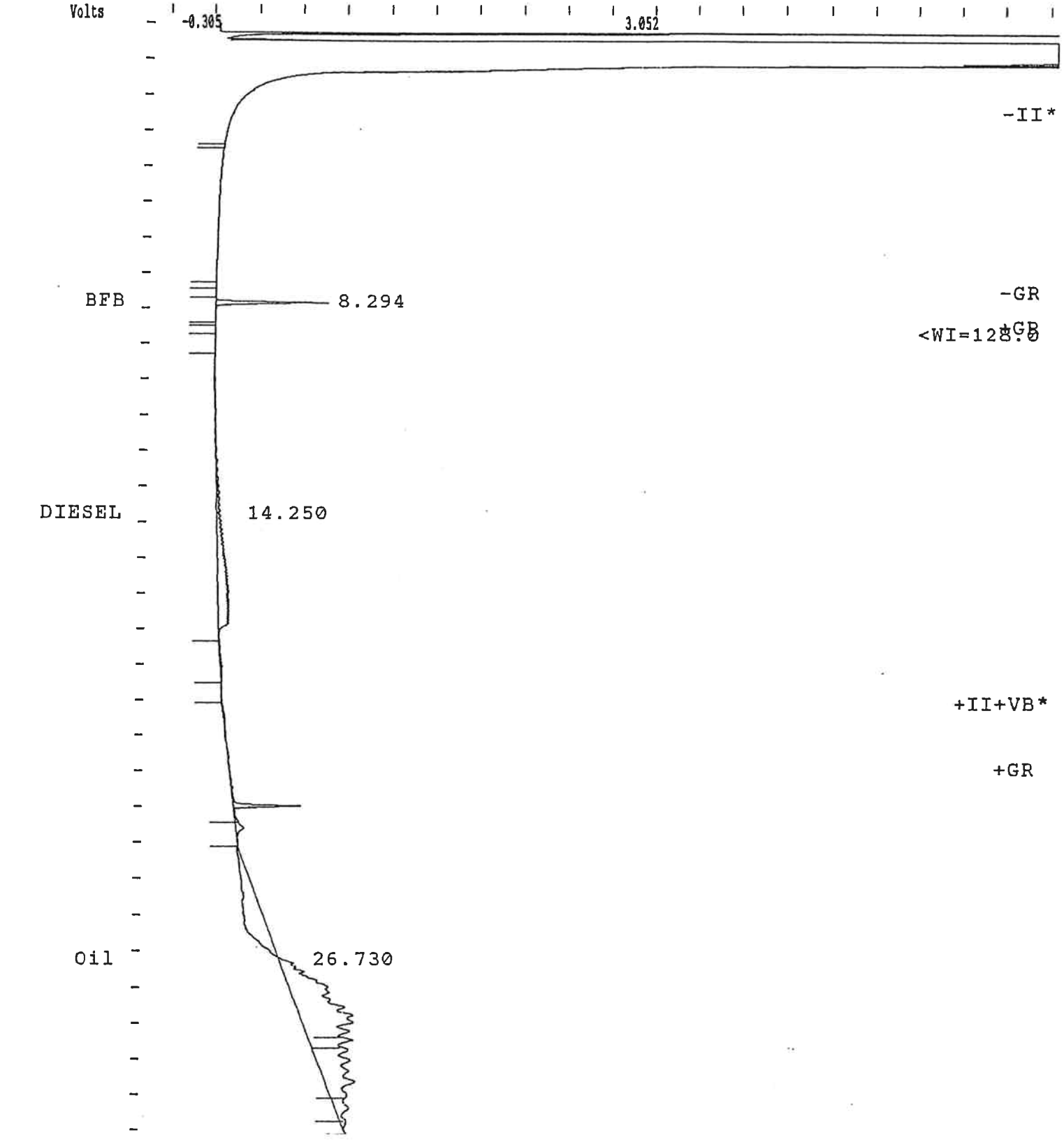
ction Date: 30-APR-99 1:09 AM Calculation Date: 30-APR-99 1:42 AM

ator : MD
station: MS-DOS_6
rument : Varian Star #2
nel : B = FID-B

Detector Type: ADCB (10 Volts)
Bus Address : 22
Sample Rate : 10.00 Hz
Run Time : 32.002 min

******* Star Chromatography Software ********** Version 4.0 **********

t Speed = 0.66 cm/min Attenuation = 2500 Zero Offset = 5%
t Time = 0.500 min End Time = 32.002 min Min / Tick = 1.00



ple ID : 2020 ceti

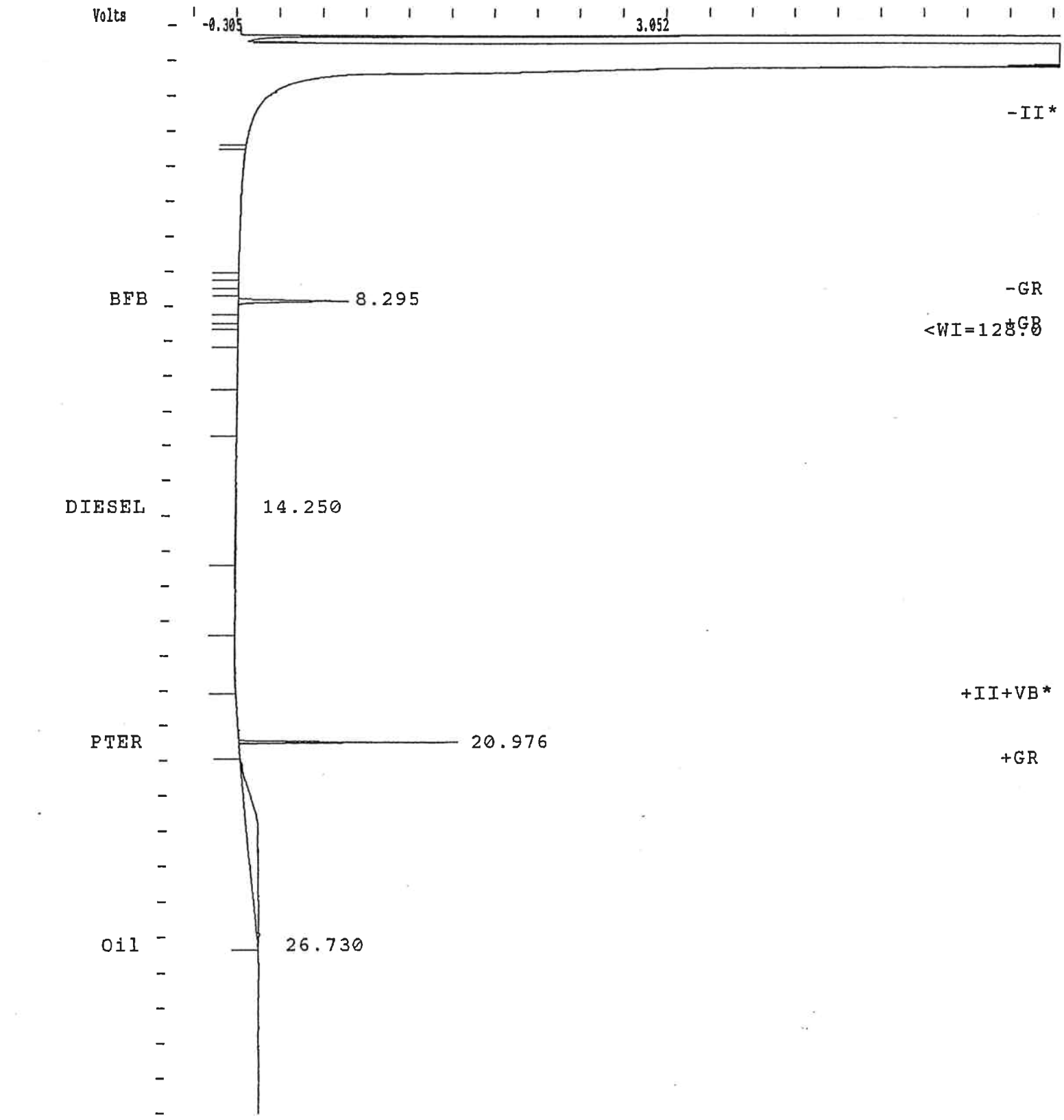
jection Date: 29-APR-99 6:39 PM Calculation Date: 29-APR-99 7:11 PM

rator : MD
kstation: MS-DOS_6
trument : Varian Star #2
nnel : B = FID-B

Detector Type: ADCB (10 Volts)
Bus Address : 22
Sample Rate : 10.00 Hz
Run Time : 32.002 min

********* Star Chromatography Software ********** Version 4.0 **********

rt Speed = 0.66 cm/min Attenuation = 2500 Zero Offset = 5%
art Time = 0.500 min End Time = 32.002 min Min / Tick = 1.00



Sd File : C:\STAR\WD4.MTH
le ID : 2021 ceti

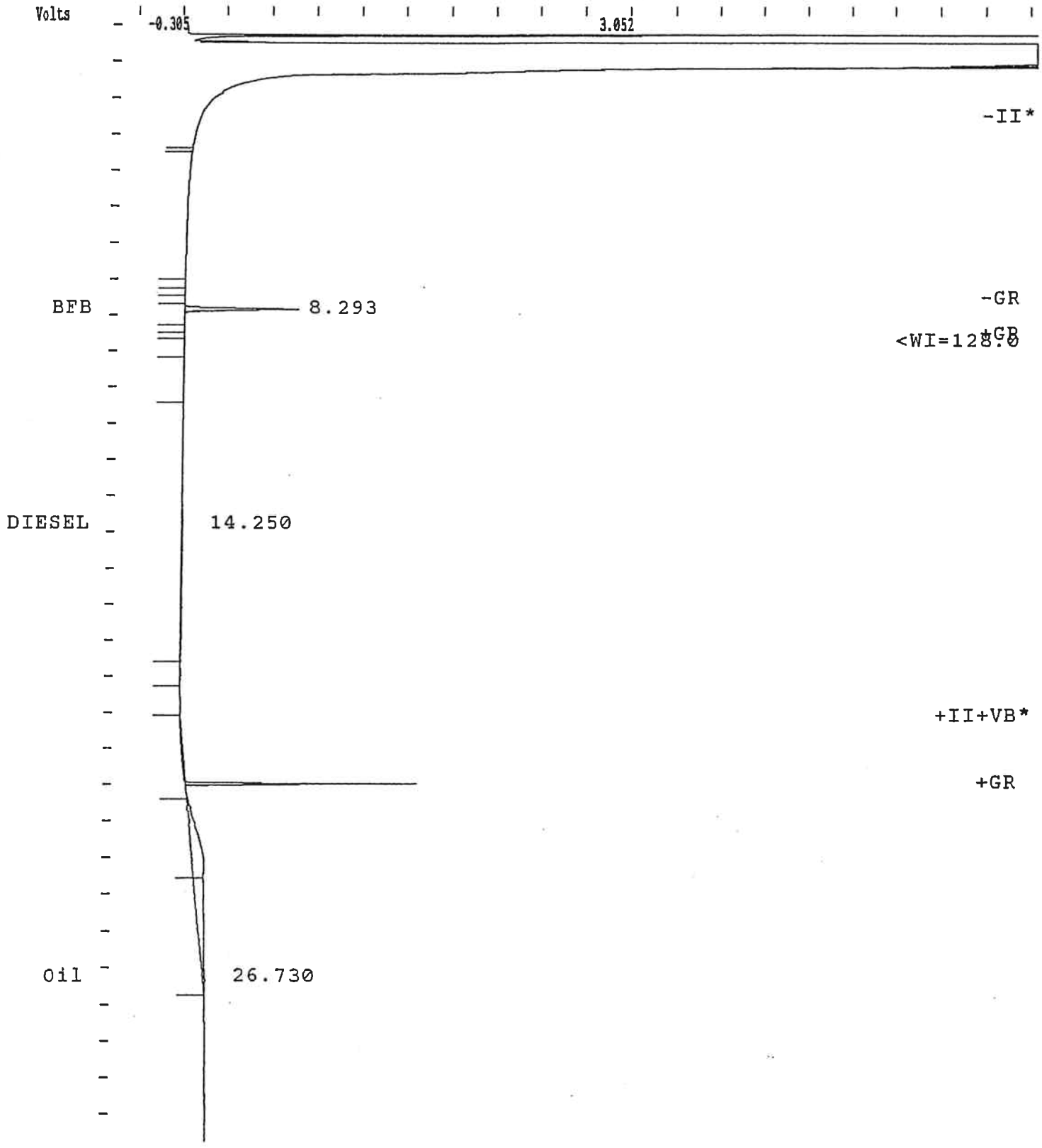
ction Date: 29-APR-99 7:18 PM Calculation Date: 29-APR-99 7:50 PM

ator : MD
station: MS-DOS_6
rument : Varian Star #2
nel : B = FID-B

Detector Type: ADCB (10 Volts)
Bus Address : 22
Sample Rate : 10.00 Hz
Run Time : 32.002 min

******* Star Chromatography Software ********** Version 4.0 **********

: Speed = 0.66 cm/min Attenuation = 2500 Zero Offset = 5%
: Time = 0.500 min End Time = 32.002 min Min / Tick = 1.00



ıple ID : 2022 ceti

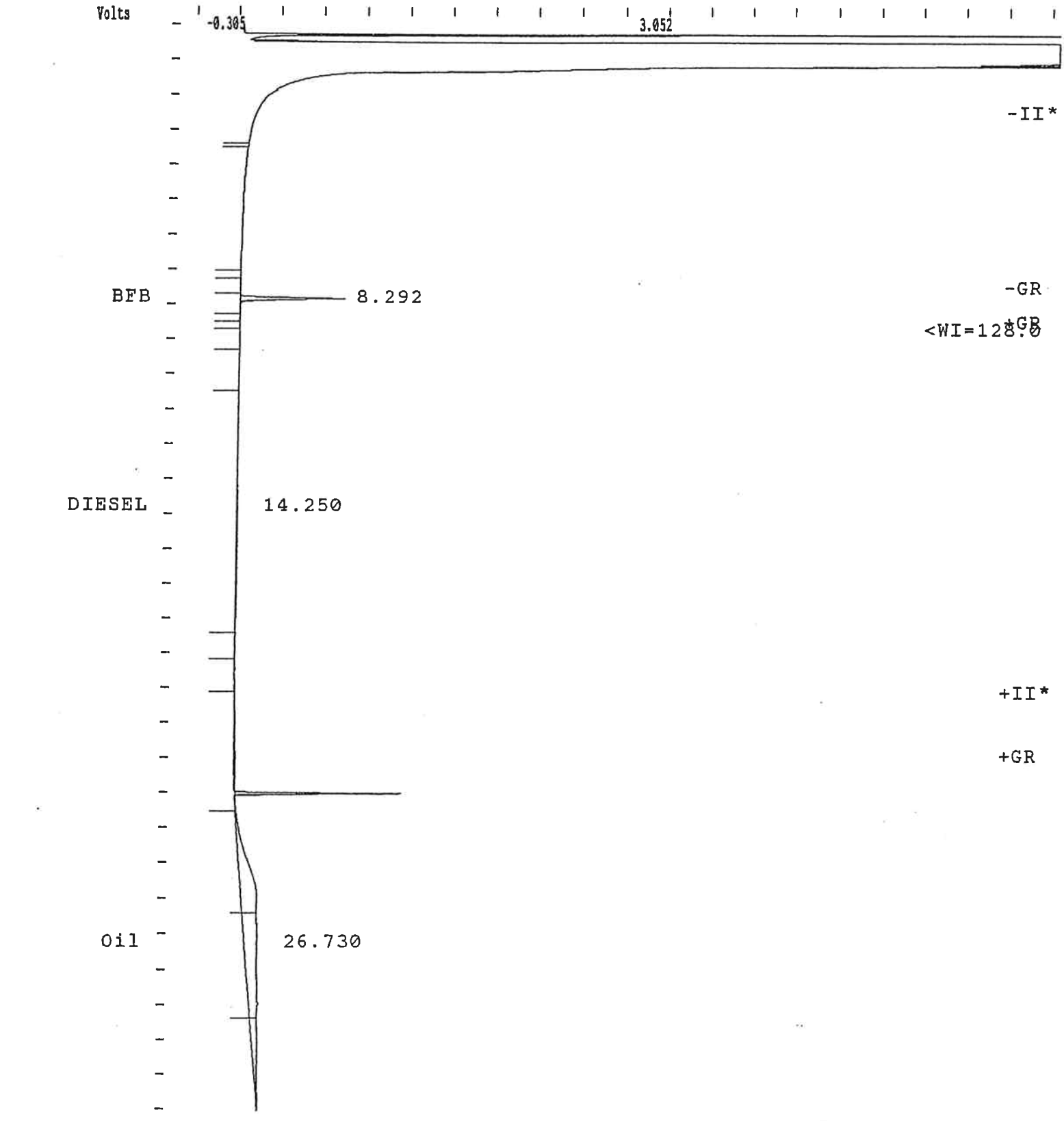
jection Date: 29-APR-99 7:57 PM Calculation Date: 29-APR-99 8:29 PM

ɜrator : MD
ɾkstation: MS-DOS_6
ʂtrument : Varian Star #2
ɹnnel : B = FID-B

Detector Type: ADCB (10 Volts)
Bus Address : 22
Sample Rate : 10.00 Hz
Run Time : 32.002 min

********* Star Chromatography Software ********** Version 4.0 **********

rt Speed = 0.66 cm/min Attenuation = 2500 Zero Offset = 5%
art Time = 0.500 min End Time = 32.002 min Min / Tick = 1.00



le ID : 2023 ceti

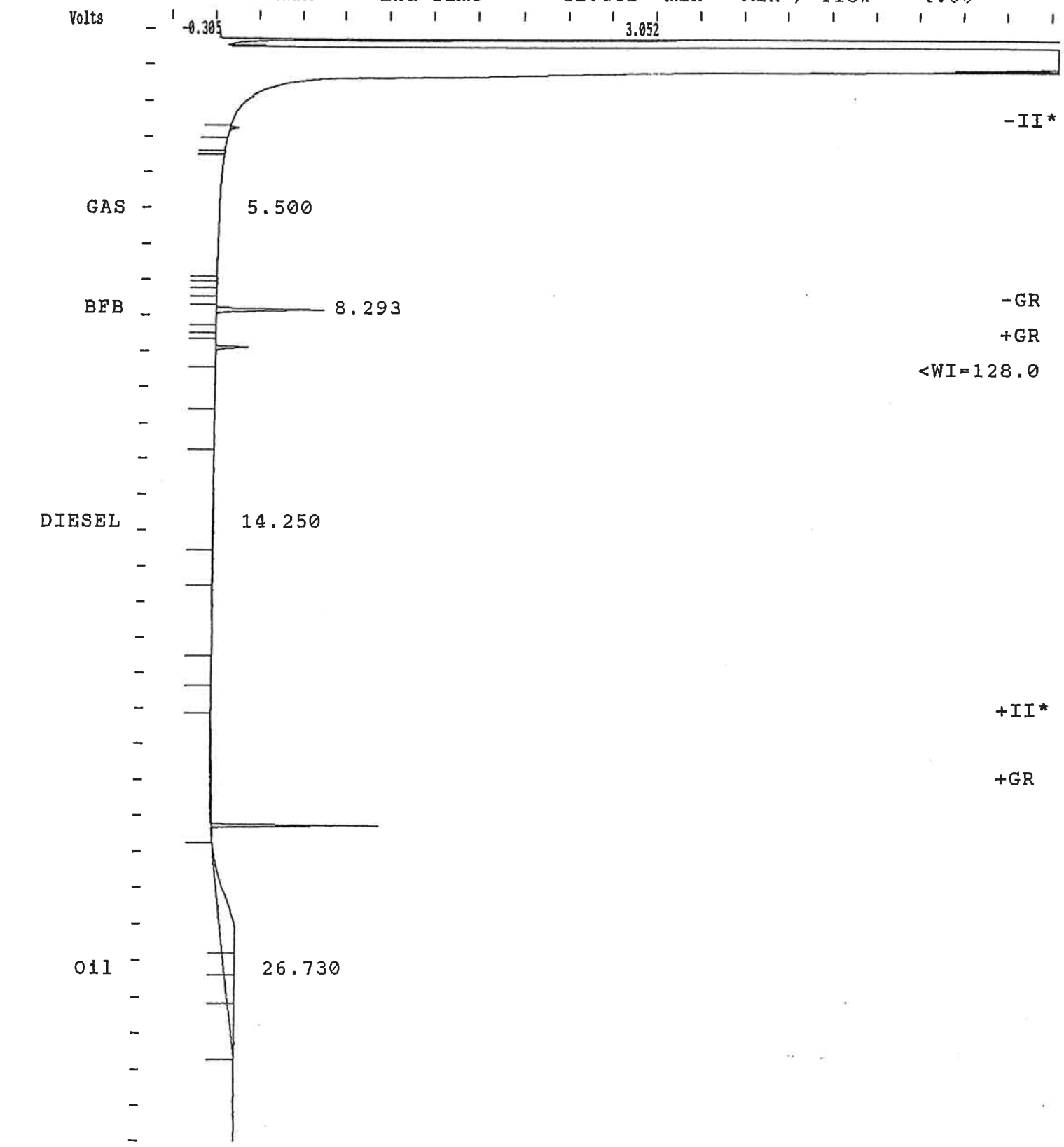
ction Date: 29-APR-99 8:36 PM Calculation Date: 29-APR-99 9:08 PM

ator : MD
station: MS-DOS_6
rument : Varian Star #2
nel : B = FID-B

Detector Type: ADCB (10 Volts)
Bus Address : 22
Sample Rate : 10.00 Hz
Run Time : 32.002 min

******* Star Chromatography Software ********** Version 4.0 ***************

t Speed = 0.66 cm/min Attenuation = 2500 Zero Offset = 5%
t Time = 0.500 min End Time = 32.002 min Min / Tick = 1.00



ıple ID : 2024 ceti

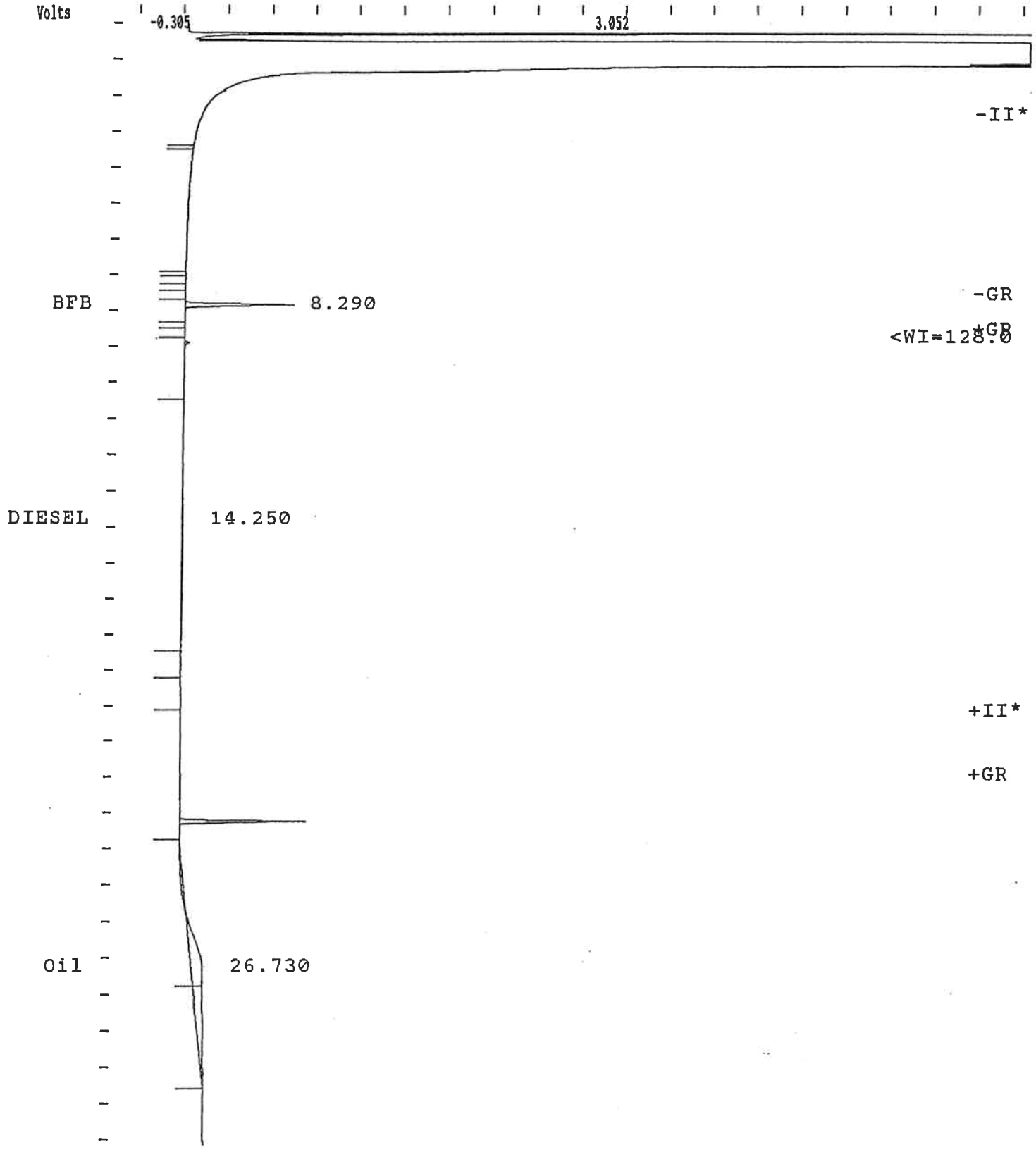
jection Date: 29-APR-99 9:15 PM Calculation Date: 29-APR-99 9:48 PM

·rator : MD
ɹkstation: MS-DOS_6
strument : Varian Star #2
nnel : B = FID-B

Detector Type: ADCB (10 Volts)
Bus Address : 22
Sample Rate : 10.00 Hz
Run Time : 32.002 min

********* Star Chromatography Software ********** Version 4.0 **********

rt Speed = 0.66 cm/min Attenuation = 2500 Zero Offset = 5%
ɹrt Time = 0.500 min End Time = 32.002 min Min / Tick = 1.00



le ID : 2025 ceti

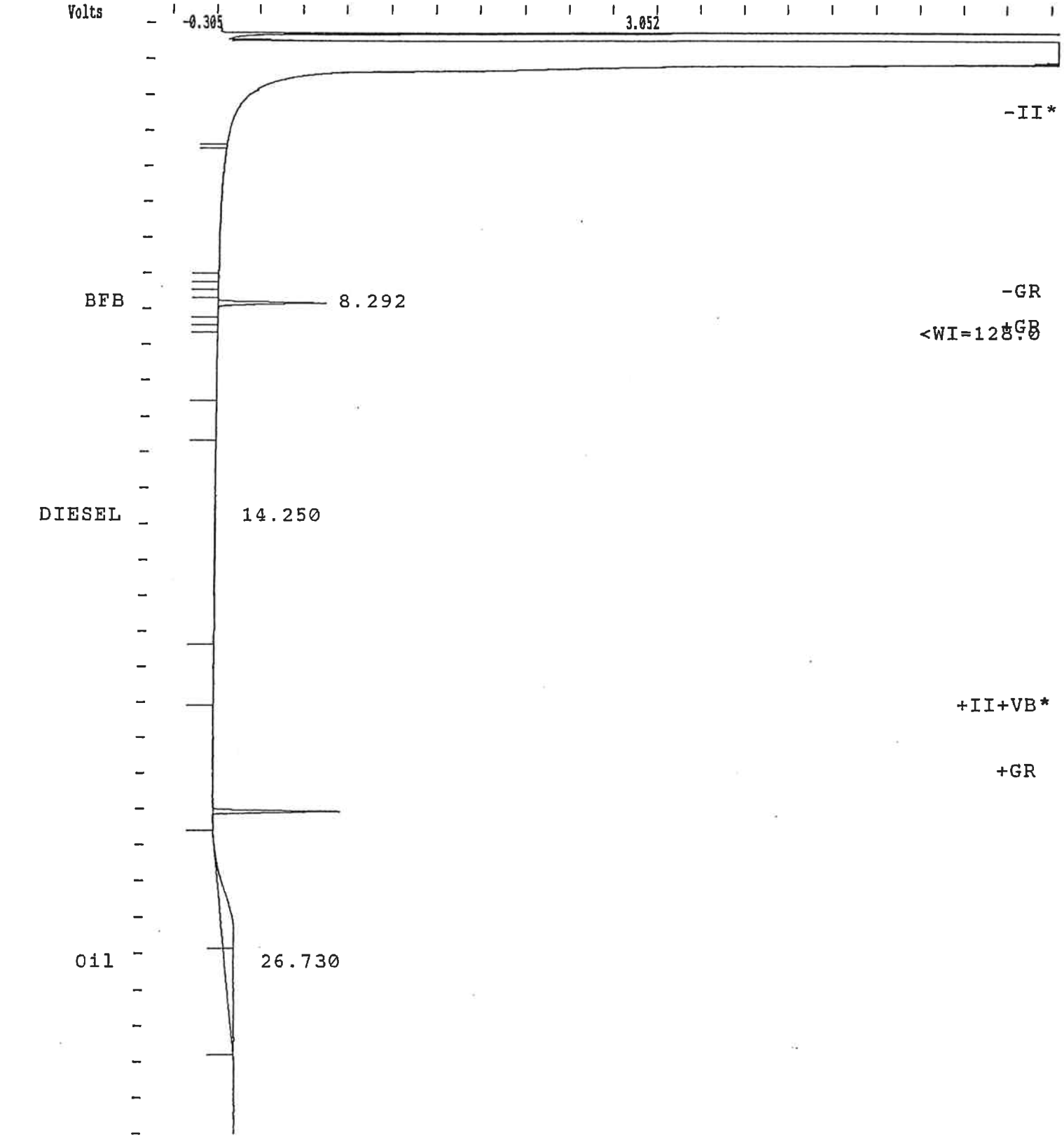
ction Date: 29-APR-99 9:54 PM Calculation Date: 29-APR-99 10:27 PM

ator : MD
station: MS-DOS_6
rument : Varian Star #2
nel : B = FID-B

Detector Type: ADCB (10 Volts)
Bus Address : 22
Sample Rate : 10.00 Hz
Run Time : 32.002 min

******* Star Chromatography Software ********** Version 4.0 **********

: Speed = 0.66 cm/min Attenuation = 2500 Zero Offset = 5%
: Time = 0.500 min End Time = 32.002 min Min / Tick = 1.00



ple ID : 2026 ceti

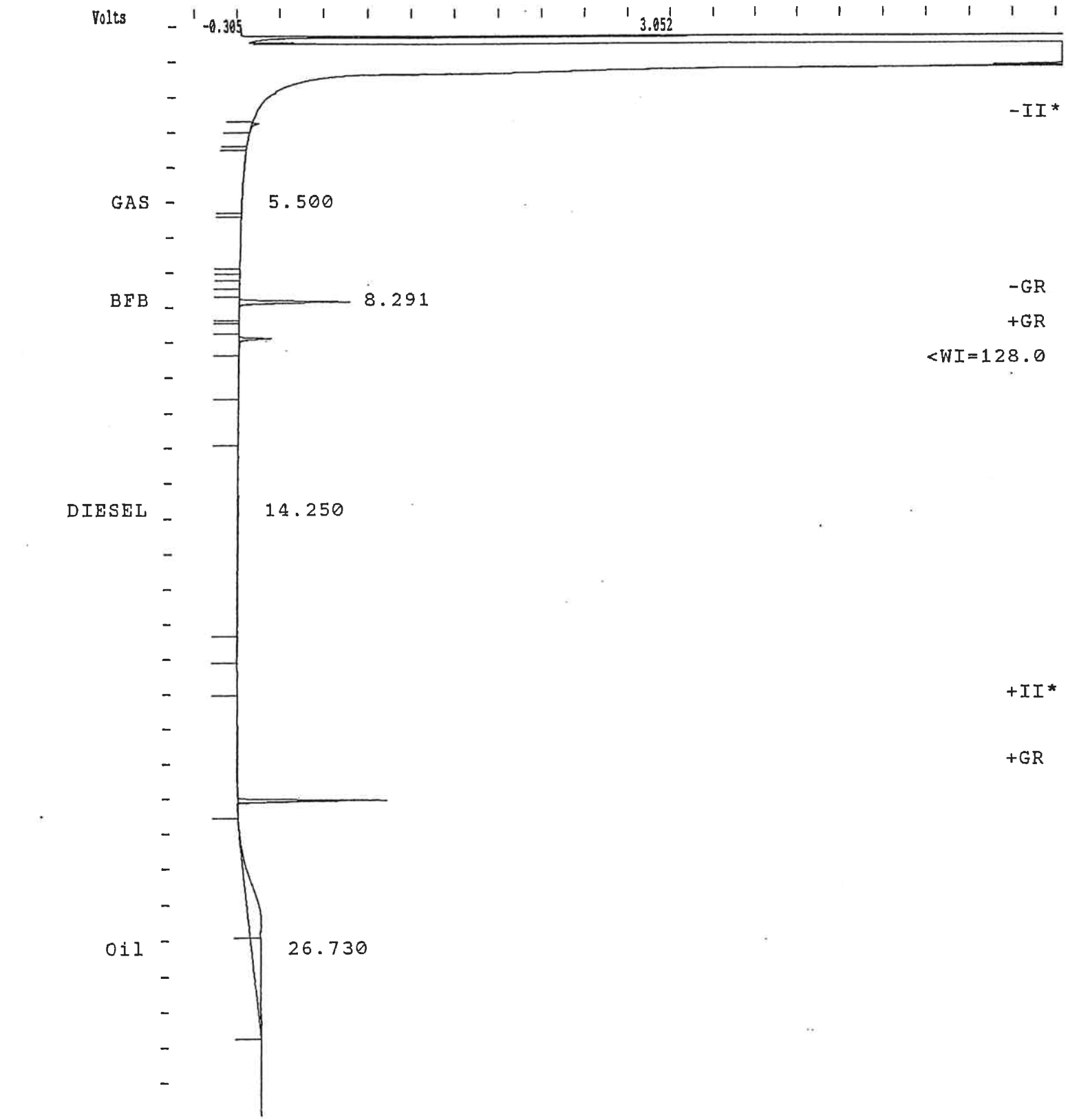
jection Date: 29-APR-99 10:34 PM Calculation Date: 29-APR-99 11:06 PM

rator : MD
:kstation: MS-DOS_6
strument : Varian Star #2
anel : B = FID-B

Detector Type: ADCB (10 Volts)
Bus Address : 22
Sample Rate : 10.00 Hz
Run Time : 32.002 min

********* Star Chromatography Software ********** Version 4.0 **********

rt Speed = 0.66 cm/min Attenuation = 2500 Zero Offset = 5%
art Time = 0.500 min End Time = 32.002 min Min / Tick = 1.00



le ID : 2027 ceti

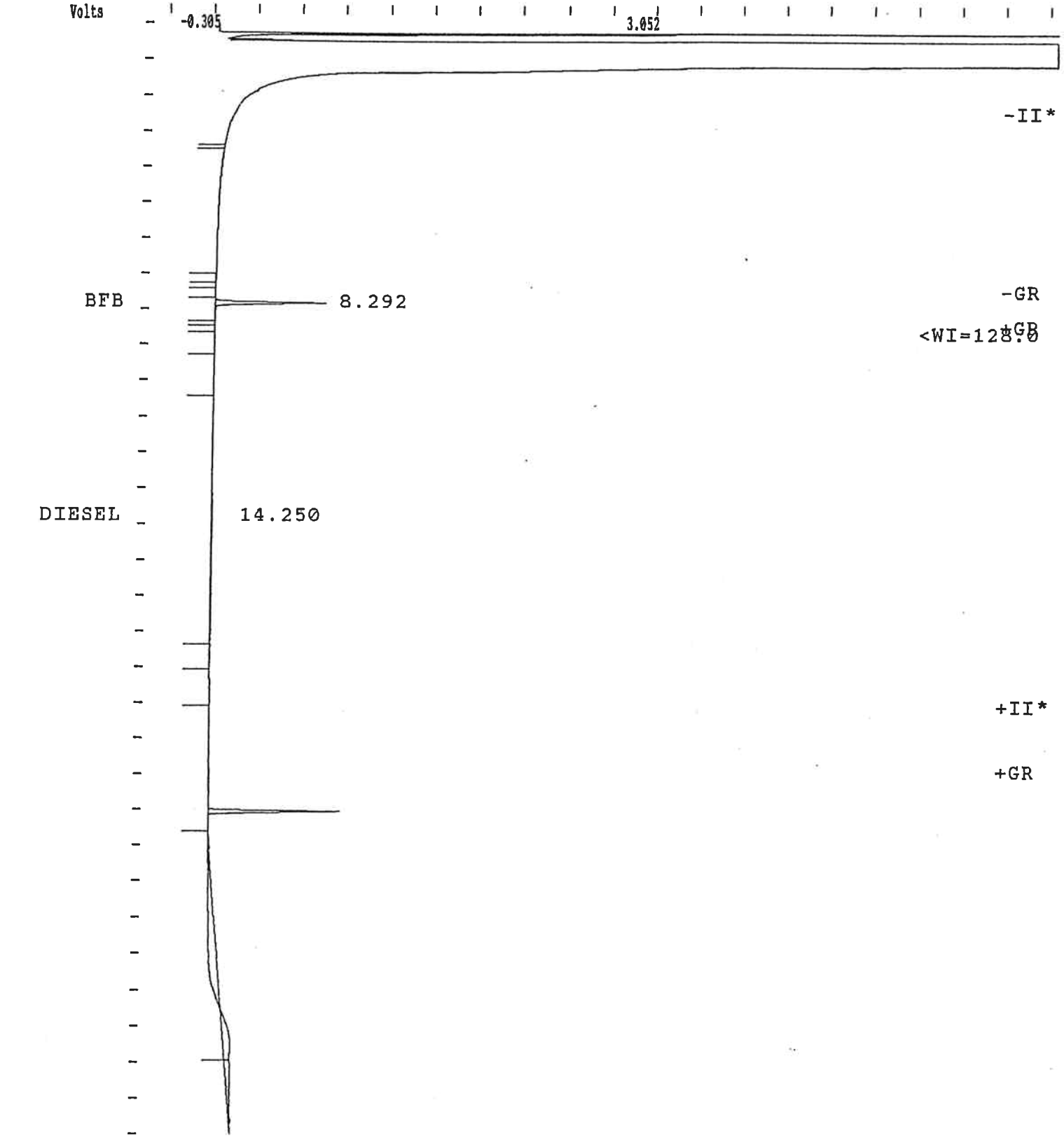
ction Date: 29-APR-99 11:13 PM Calculation Date: 29-APR-99 11:45 PM

ator : MD
station: MS-DOS_6
rument : Varian Star #2
nel : B = FID-B

Detector Type: ADCB (10 Volts)
Bus Address : 22
Sample Rate : 10.00 Hz
Run Time : 32.002 min

******* Star Chromatography Software ********** Version 4.0 **********

: Speed = 0.66 cm/min Attenuation = 2500 Zero Offset = 5%
: Time = 0.500 min End Time = 32.002 min Min / Tick = 1.00



ple ID : 2028 ceti

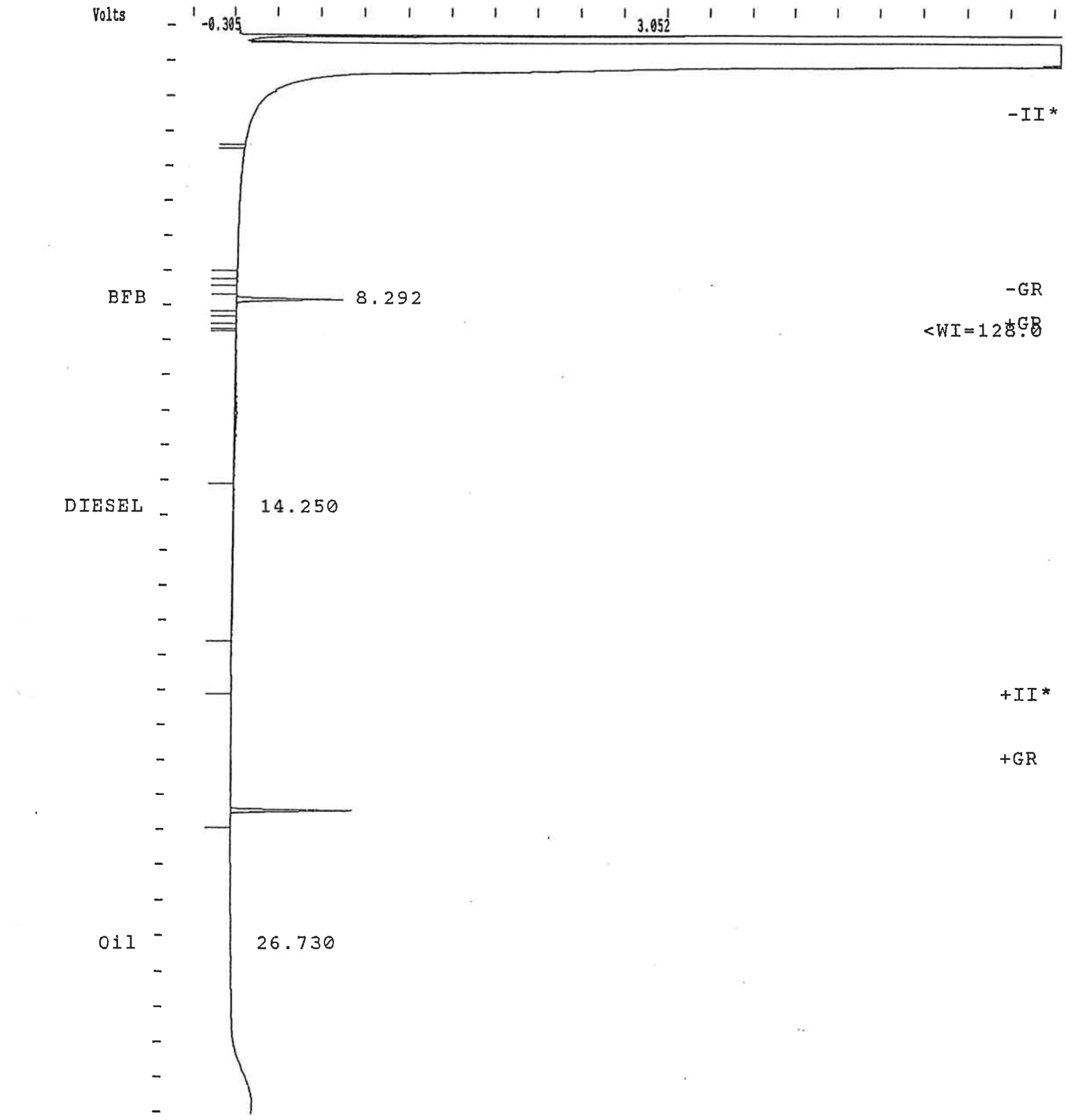
jection Date: 29-APR-99 11:52 PM Calculation Date: 30-APR-99 0:24 AM

rator : MD
kstation: MS-DOS_6
strument : Varian Star #2
nnel : B = FID-B

Detector Type: ADCB (10 Volts)
Bus Address : 22
Sample Rate : 10.00 Hz
Run Time : 32.002 min

********* Star Chromatography Software ********** Version 4.0 **********

rt Speed = 0.66 cm/min Attenuation = 2500 Zero Offset = 5%
irt Time = 0.500 min End Time = 32.002 min Min / Tick = 1.00



le ID : 2029 ceti

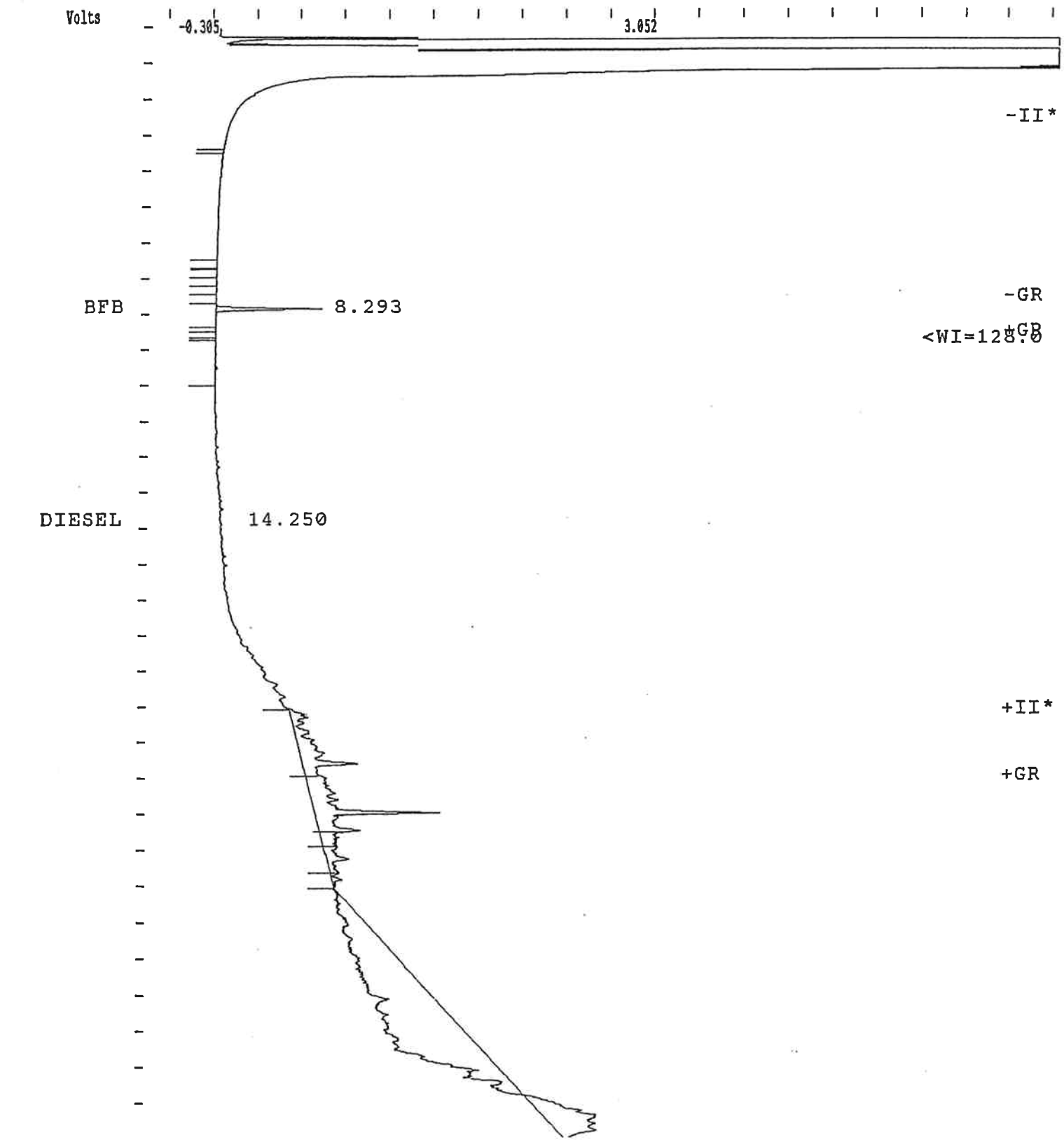
tion Date: 30-APR-99 0:31 AM Calculation Date: 30-APR-99 1:03 AM

ator : MD
station: MS-DOS_6
ument : Varian Star #2
nel : B = FID-B

Detector Type: ADCB (10 Volts)
Bus Address : 22
Sample Rate : 10.00 Hz
Run Time : 32.002 min

****** Star Chromatography Software ********** Version 4.0 **********

Speed = 0.66 cm/min Attenuation = 2500 Zero Offset = 5%
Time = 0.500 min End Time = 32.002 min Min / Tick = 1.00



ple ID : 2104 ceti

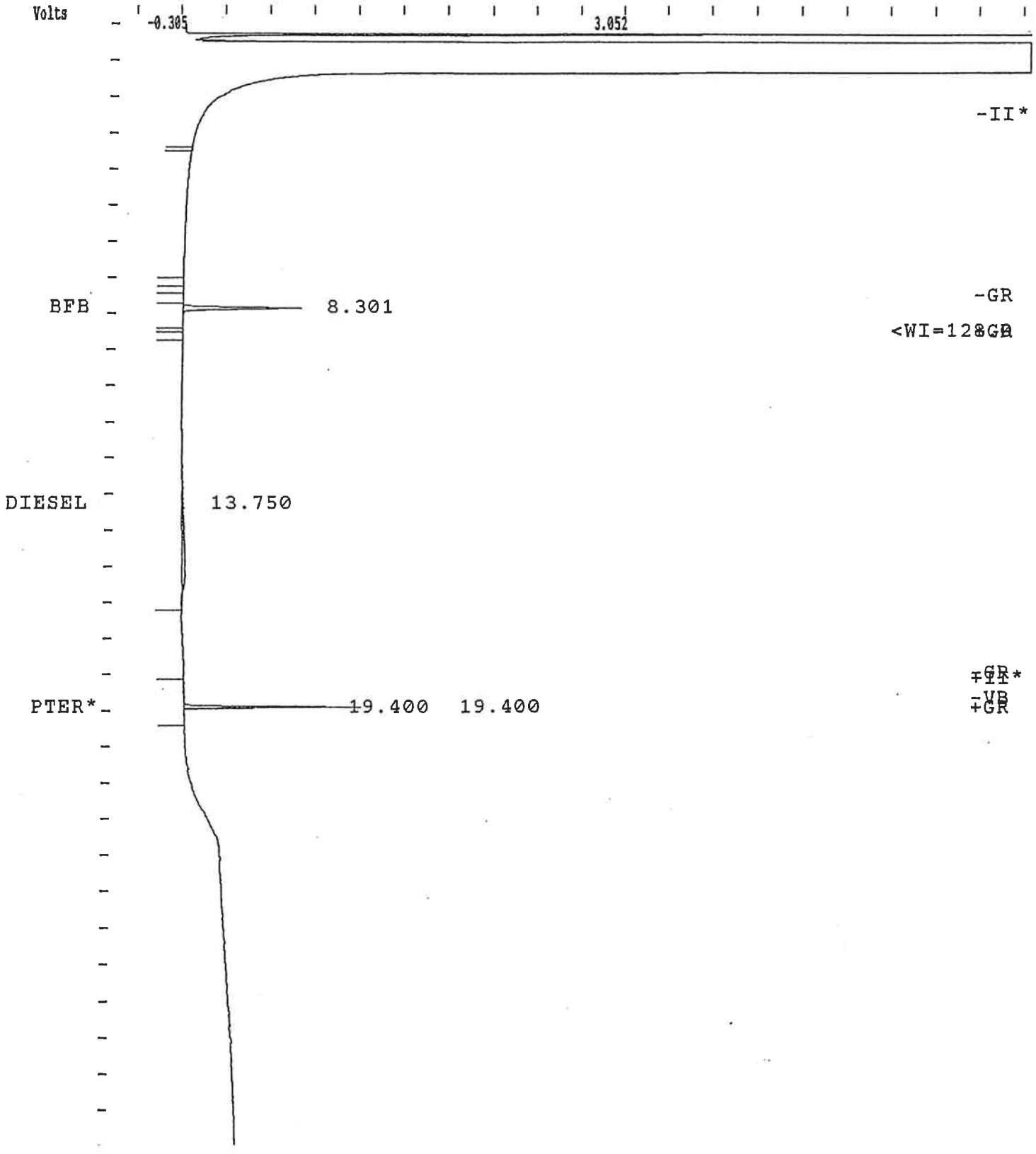
jection Date: 30-APR-99 6:11 PM Calculation Date: 30-APR-99 6:43 PM

rator : MD
:kstation: MS-DOS_6
:trument : Varian Star #2
nnel : B = FID-B

Detector Type: ADCB (10 Volts)
Bus Address : 22
Sample Rate : 10.00 Hz
Run Time : 32.002 min

******** Star Chromatography Software ********** Version 4.0 ***************

ct Speed = 0.66 cm/min Attenuation = 2500 Zero Offset = 5%
art Time = 0.500 min End Time = 32.002 min Min / Tick = 1.00



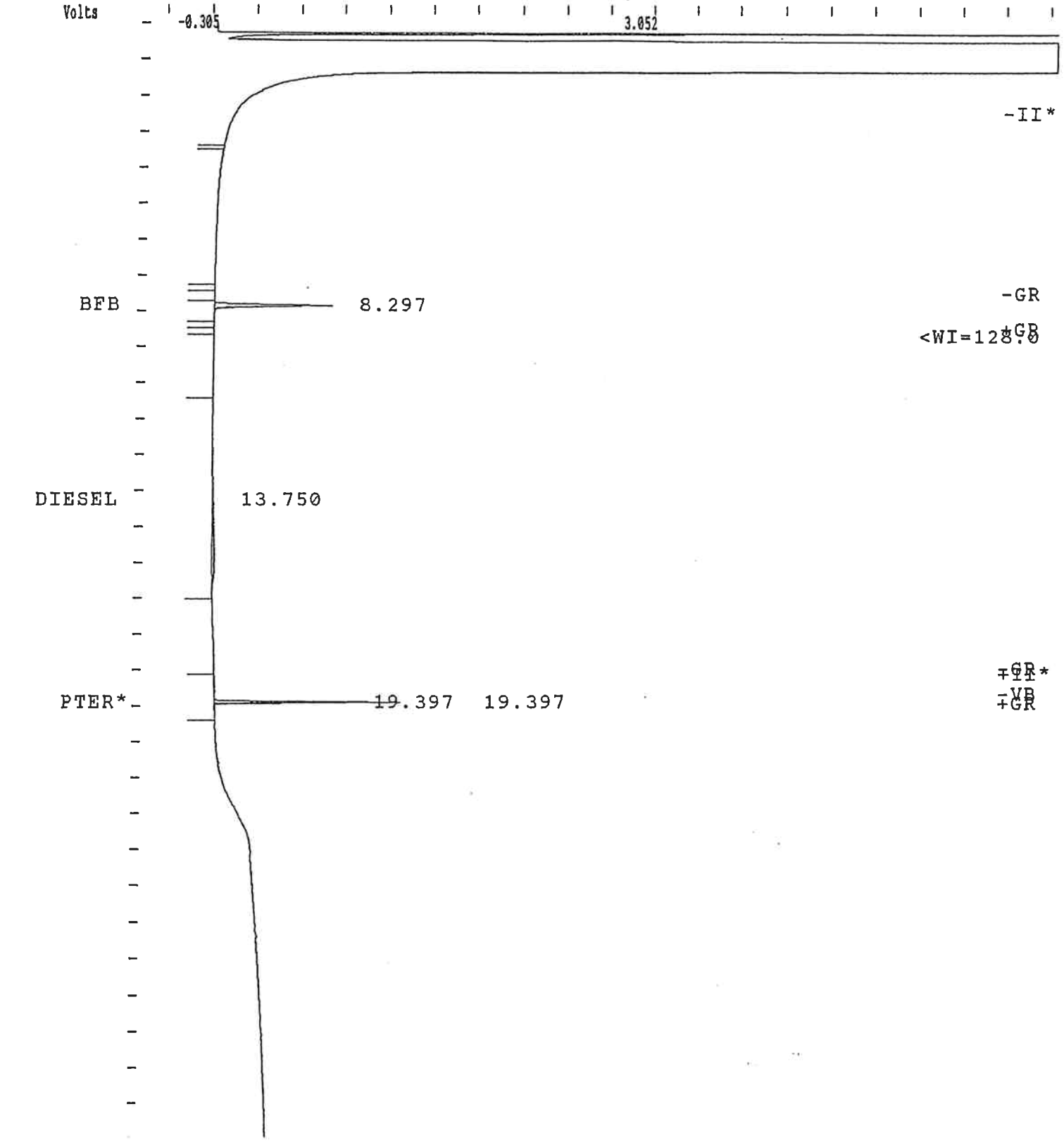
Data File : C:\STAR\WD4.RAW
Sample ID : 2105 ceti

Collection Date: 30-APR-99 6:51 PM Calculation Date: 30-APR-99 7:23 PM

Operator : MD Detector Type: ADCB (10 Volts)
Instrument: MS-DOS_6 Bus Address : 22
Instrument : Varian Star #2 Sample Rate : 10.00 Hz
Channel : B = FID-B Run Time : 32.002 min

******* Star Chromatography Software ********** Version 4.0 **********

Chart Speed = 0.66 cm/min Attenuation = 2500 Zero Offset = 5%
Plot Time = 0.500 min End Time = 32.002 min Min / Tick = 1.00



Method File : C:\STAR\WD4.MTH
Sample ID : 2100 ceti
2106

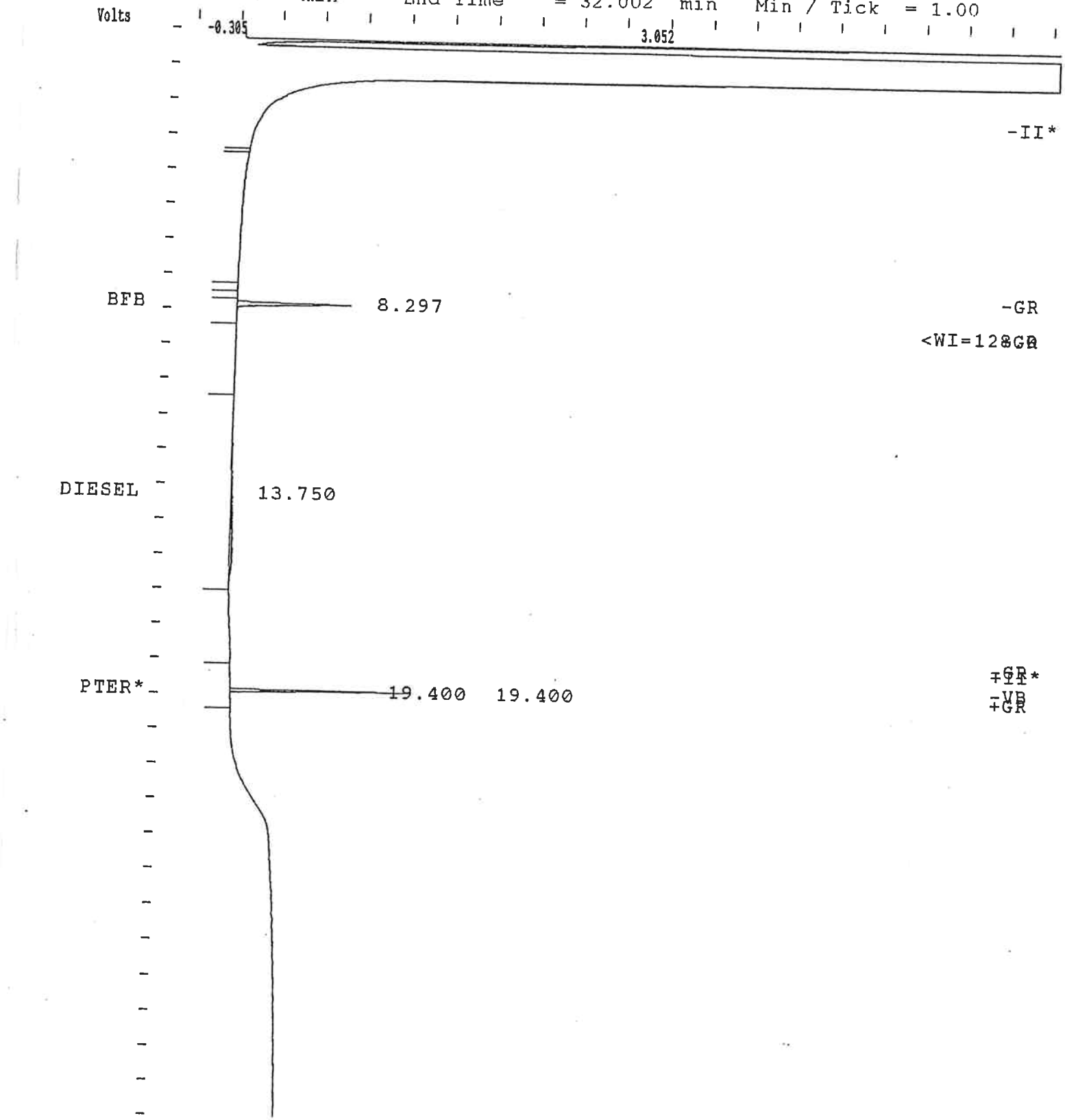
Injection Date: 30-APR-99 7:31 PM Calculation Date: 30-APR-99 8:03 PM

Operator : MD
Workstation: MS-DOS_6
Instrument : Varian Star #2
Channel : B = FID-B

Detector Type: ADCB (10 Volts)
Bus Address : 22
Sample Rate : 10.00 Hz
Run Time : 32.002 min

********** Star Chromatography Software ********** Version 4.0 **********

Chart Speed = 0.66 cm/min Attenuation = 2500 Zero Offset = 5%
Start Time = 0.500 min End Time = 32.002 min Min / Tick = 1.00



od File : C:\STAR\WD4.MTH
.e ID : 2107 ceti

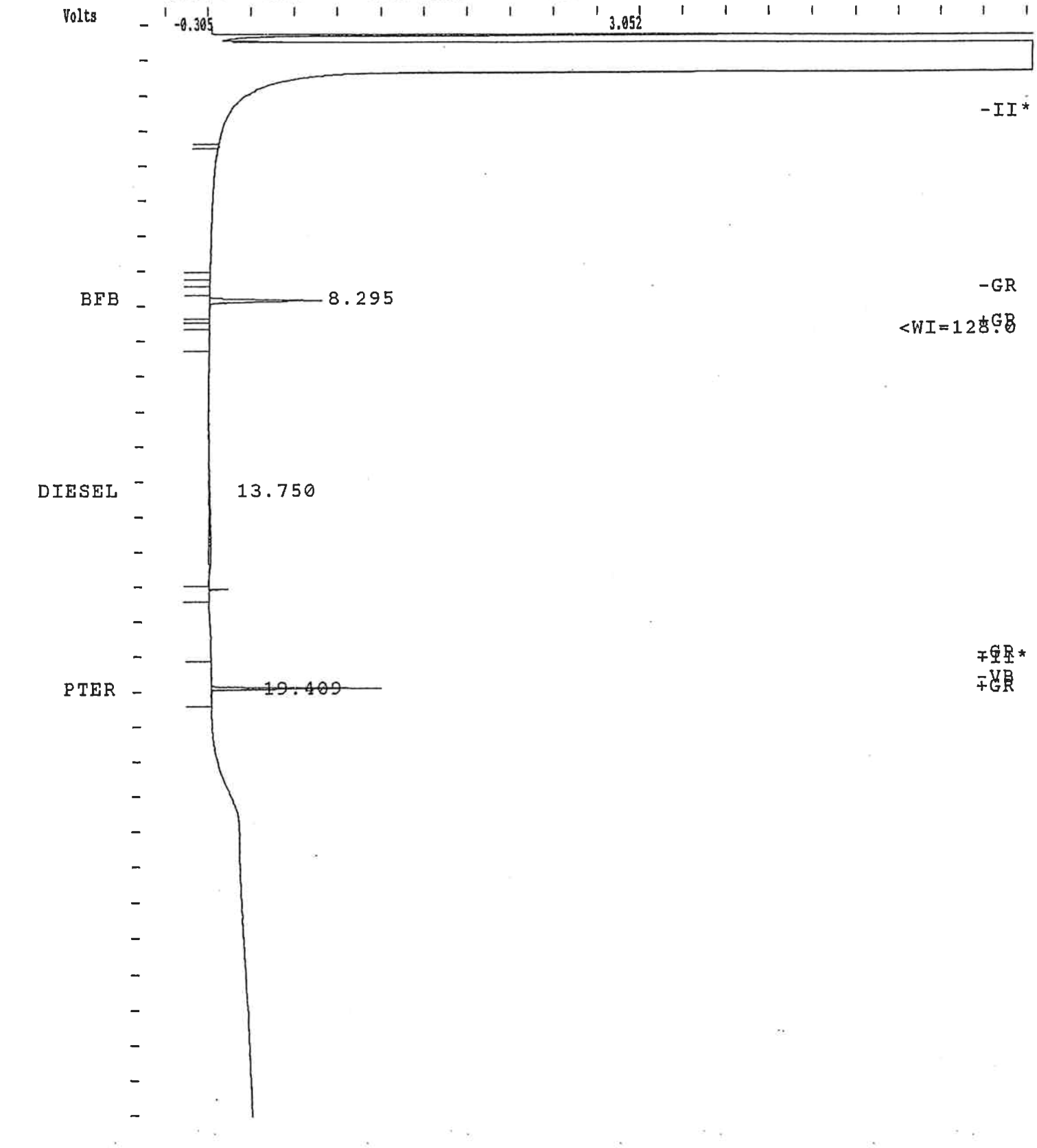
:tion Date: 30-APR-99 8:10 PM Calculation Date: 30-APR-99 8:43 PM

ıtor : MD
:tation: MS-DOS_6
:ument : Varian Star #2
ıel : B = FID-B

Detector Type: ADCB (10 Volts)
Bus Address : 22
Sample Rate : 10.00 Hz
Run Time : 32.002 min

'****** Star Chromatography Software ********** Version 4.0 **********

. Speed = 0.66 cm/min Attenuation = 2500 Zero Offset = 5%
. Time = 0.500 min End Time = 32.002 min Min / Tick = 1.00



Method File : C:\STAR\MD4.MTH
Sample ID : 2108 ceti

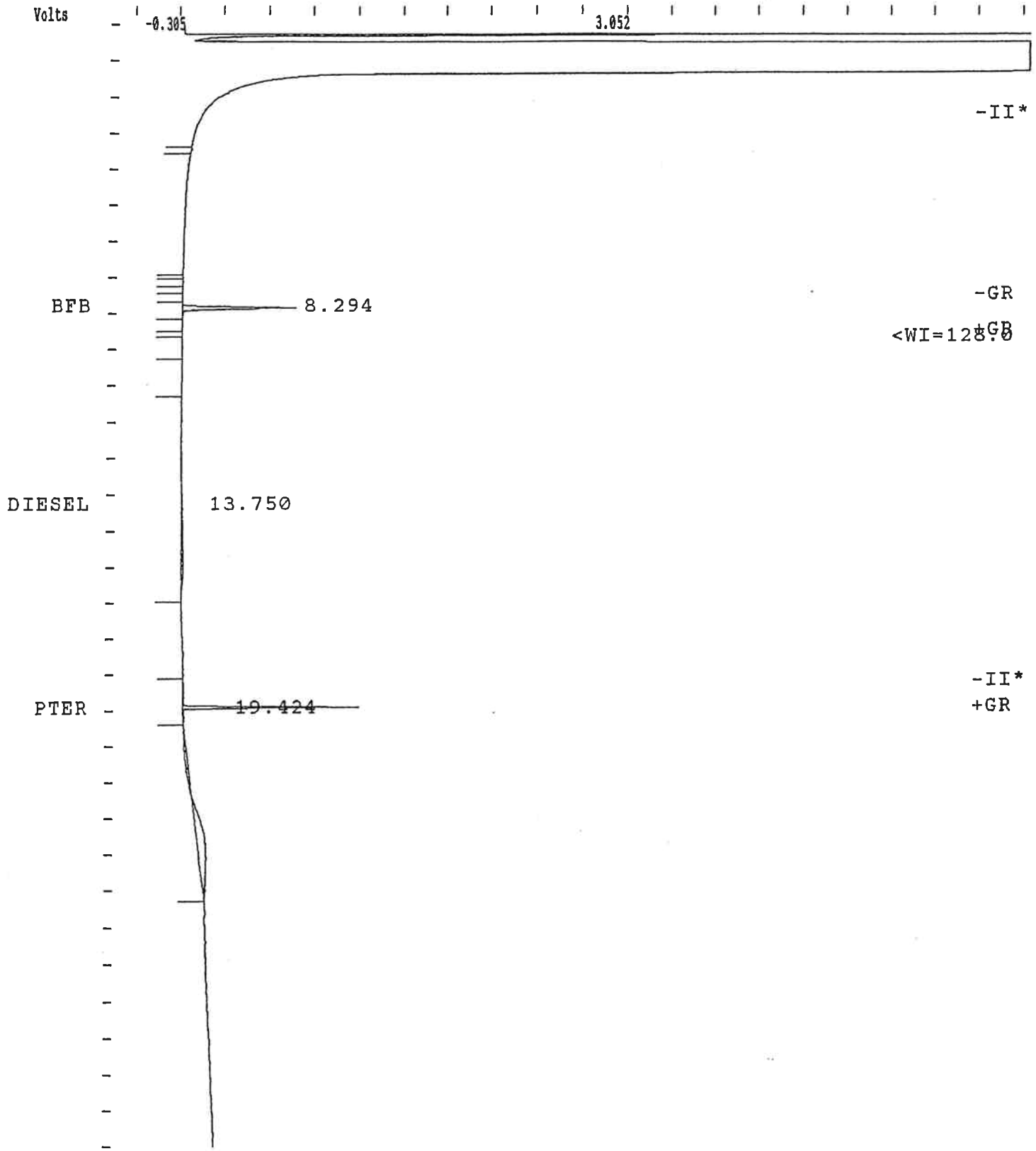
Injection Date: 30-APR-99 8:50 PM Calculation Date: 30-APR-99 9:22 PM

Operator : MD
Workstation: MS-DOS_6
Instrument : Varian Star #2
Channel : B = FID-B

Detector Type: ADCB (10 Volts)
Bus Address : 22
Sample Rate : 10.00 Hz
Run Time : 32.002 min

********* Star Chromatography Software ********** Version 4.0 **********

Chart Speed = 0.66 cm/min Attenuation = 2500 Zero Offset = 5%
Start Time = 0.500 min End Time = 32.002 min Min / Tick = 1.00



:e ID : 2109 ceti

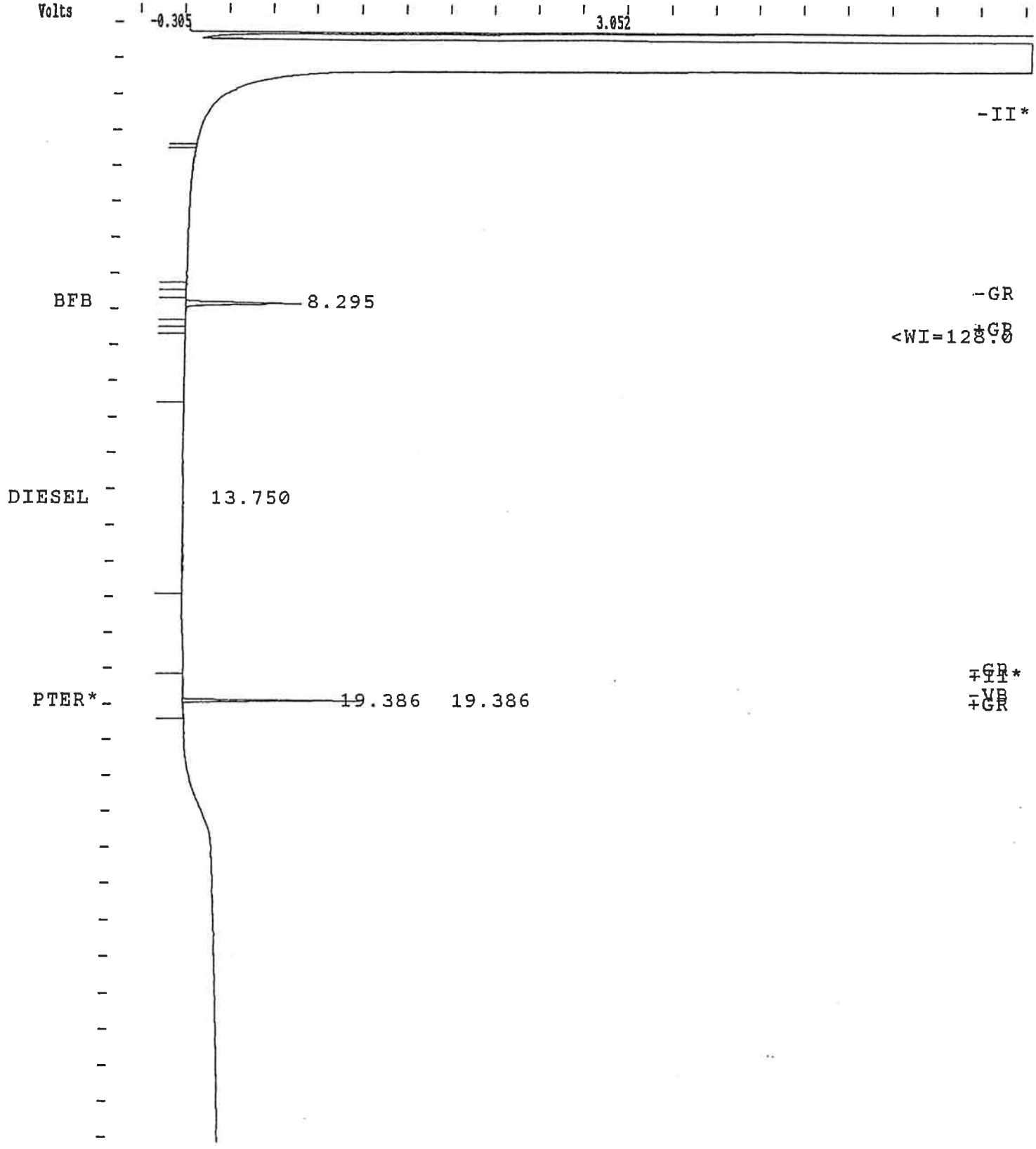
:tion Date: 30-APR-99 9:30 PM Calculation Date: 30-APR-99 10:02 PM

ıtor : MD
ıtation: MS-DOS_6
:ument : Varian Star #2
ıel : B = FID-B

Detector Type: ADCB (10 Volts)
Bus Address : 22
Sample Rate : 10.00 Hz
Run Time : 32.002 min

'****** Star Chromatography Software ********** Version 4.0 **********

Speed = 0.66 cm/min Attenuation = 2500 Zero Offset = 5%
Time = 0.500 min End Time = 32.002 min Min / Tick = 1.00



ple ID : 2110 ceti

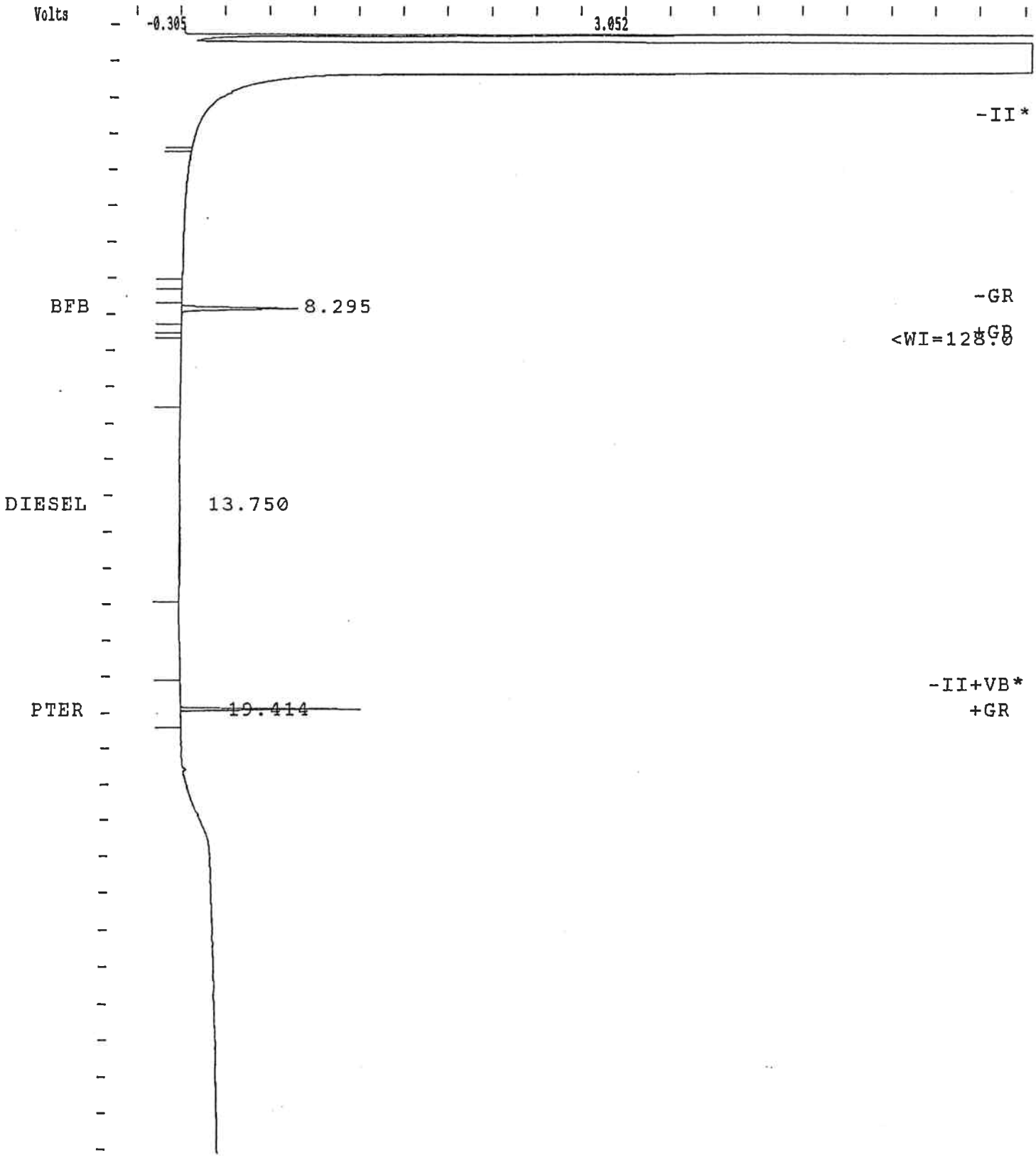
jection Date: 30-APR-99 10:09 PM Calculation Date: 30-APR-99 10:42 PM

rator : MD
.kstation: MS-DOS_6
strument : Varian Star #2
anel : B = FID-B

Detector Type: ADCB (10 Volts)
Bus Address : 22
Sample Rate : 10.00 Hz
Run Time : 32.002 min

********* Star Chromatography Software ********** Version 4.0 **********

ct Speed = 0.66 cm/min Attenuation = 2500 Zero Offset = 5%
art Time = 0.500 min End Time = 32.002 min Min / Tick = 1.00



le ID : 2111 ceti

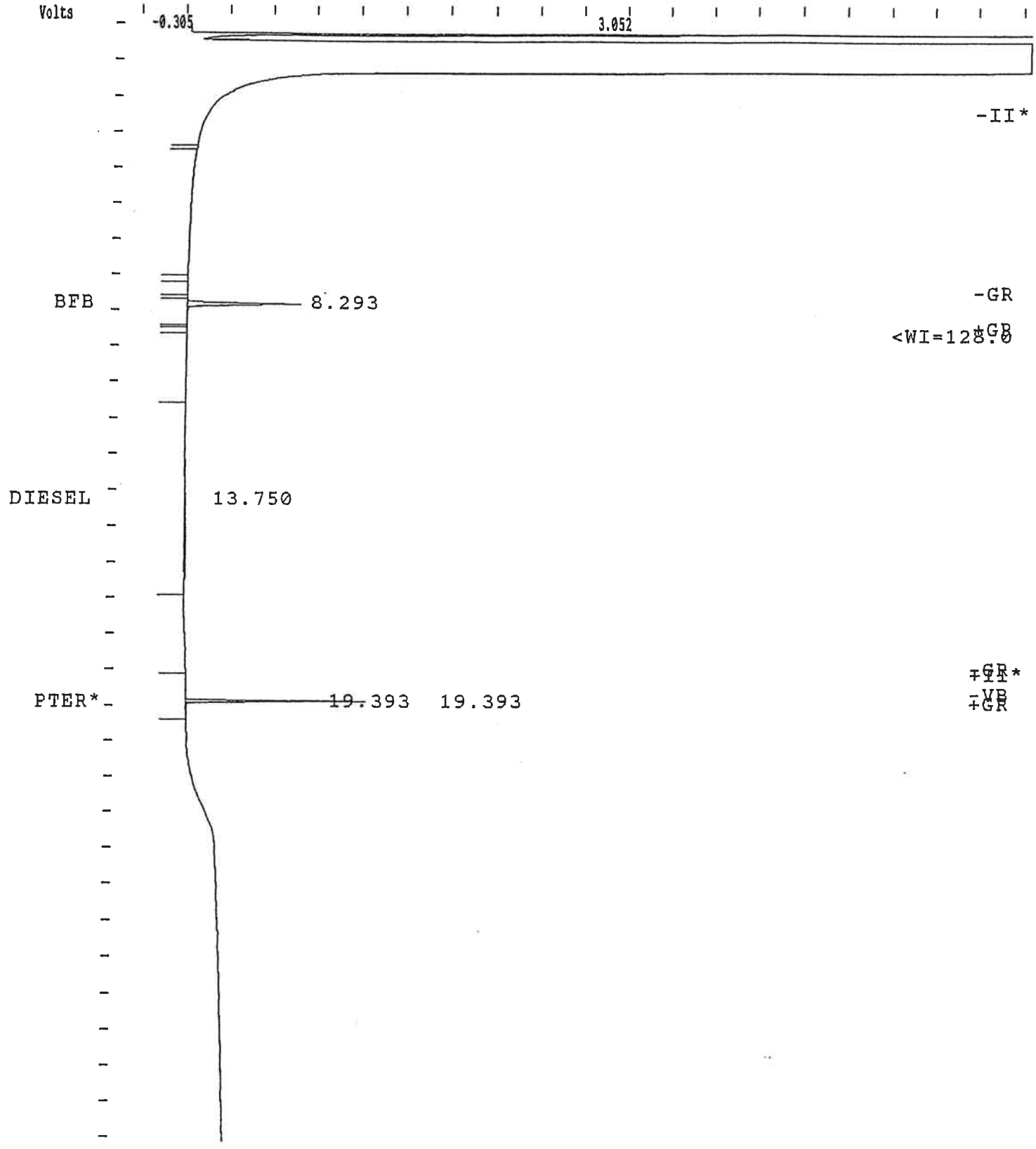
ction Date: 30-APR-99 10:49 PM Calculation Date: 30-APR-99 11:21 PM

ator : MD
station: MS-DOS_6
ument : Varian Star #2
nel : B = FID-B

Detector Type: ADCB (10 Volts)
Bus Address : 22
Sample Rate : 10.00 Hz
Run Time : 32.002 min

****** Star Chromatography Software ********** Version 4.0 **********

Speed = 0.66 cm/min Attenuation = 2500 Zero Offset = 5%
Time = 0.500 min End Time = 32.002 min Min / Tick = 1.00



hod File : C:\STAR\WD4.MTH
ple ID : 2112 ceti

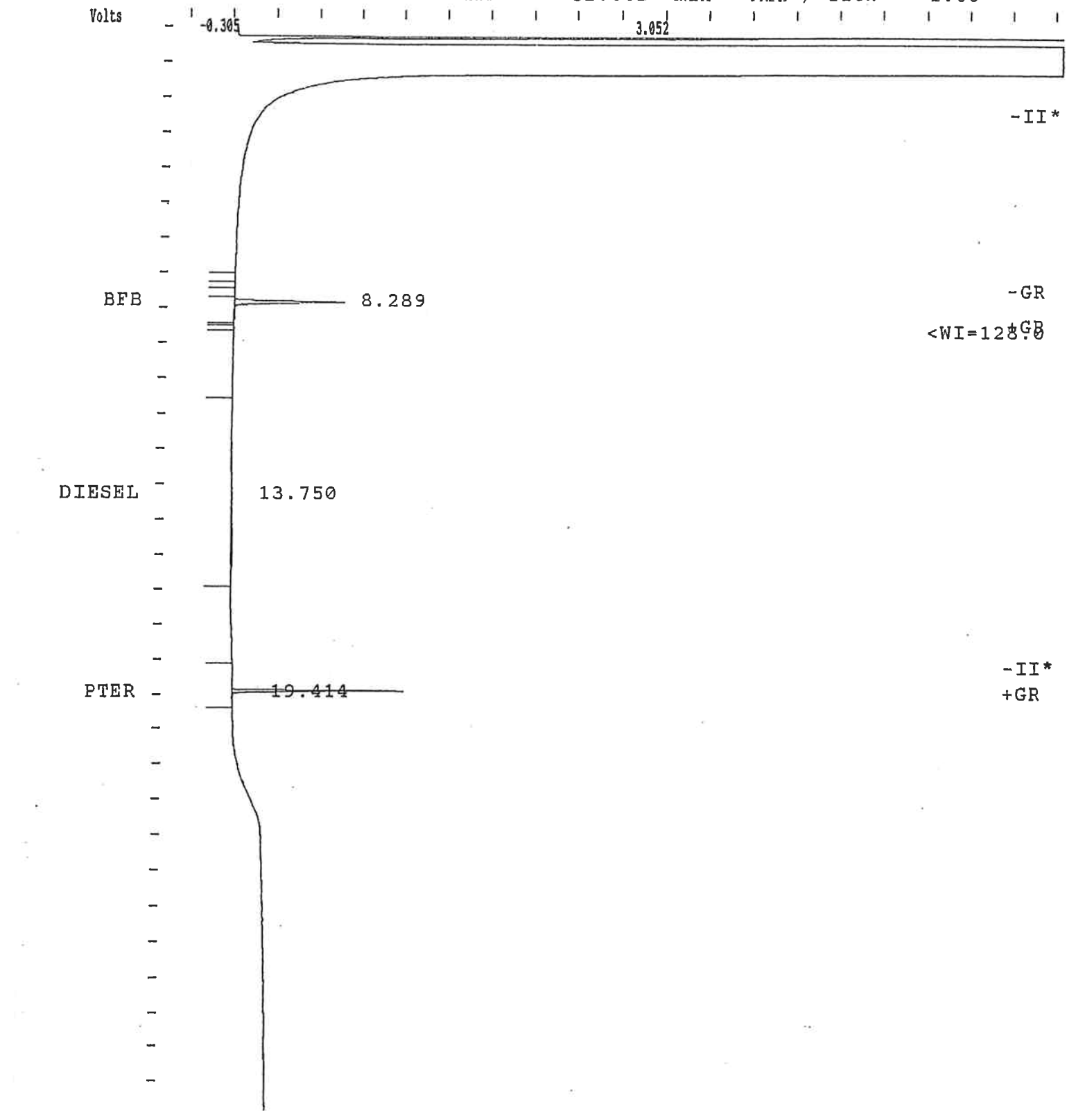
ection Date: 3-MAY-99 3:58 PM Calculation Date: 3-MAY-99 4:31 PM

rator : MD
kstation: MS-DOS_6
trument : Varian Star #2
nel : B = FID-B

Detector Type: ADCB (10 Volts)
Bus Address : 22
Sample Rate : 10.00 Hz
Run Time : 32.002 min

******** Star Chromatography Software ********** Version 4.0 ***************

rt Speed = 0.66 cm/min Attenuation = 2500 Zero Offset = 5%
rt Time = 0.500 min End Time = 32.002 min Min / Tick = 1.00



SPECTRA Laboratories, Inc.

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CHAIN OF CUSTODY

RCRA - 13

CLIENT: Metal Marine Pilot/CETI
PROJECT:
CONTACT: Janet Freeman-Daily
PHONE: (253) 564-5902
PURCHASE ORDER #:

SAMPLE ID	DATE	TIME	MATRIX	NUMBER OF CONTAINERS	WTPH-HCID	BTEX/WTPH-G	BTEX	WTPH-G	WTPH-D	TPH	F.O.G. 413.1/413.2	8260 VOA	8260 CHLOR SOLVENTS	8270 SEMI-VOA	PAH/PNA-8270	8080 ORG. CHLOR PEST.	8082 PCB	TCLP METALS (8)	TCLP-VOA	TCLP 8270 SEMI-VOA	TCLP PEST.	TCLP HERB.	TOTAL METALS ICP/DCP	TOTAL METALS GFAA	TOTAL LEAD	pH 9040/9045	TOX 9020/9076	TOC 9060/PSEP	FLASH POINT	SOLIDS (SPECIFY)				NORMAL / RUSH	LAB ID
S1-42699	4.26.99	3:40	Soil/H2O	1						X													X				X								

RETURN
DISPOSE
Fee applies

SPECIAL INSTRUCTIONS/COMMENTS:
cell # 606 2173 (Janet)
call both Janet and CETI when results come back.

	SIGNATURE	PRINTED NAME	COMPANY	DATE	TIME
RELINQUISHED BY		Fritz A. Carmine	CETI	4.26.99	4:40
RECEIVED BY		MARIE HALT	SPECTRA	4-26-99	4:40
RELINQUISHED BY					
RECEIVED BY					

Payment Terms: Net 30 days. Past due accounts subject to 18% per annum interest. Customer agrees to pay all costs of collection including reasonable attorney's fees and all other associated costs of collection regardless of whether suit is filed.

SPECTRA Laboratories, Inc.

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CHAIN of CUSTODY

CLIENT: CETI
PROJECT: Metal Marine 103-1
CONTACT: Stena Spencer
PHONE: 627-3347
PURCHASE ORDER #:

SAMPLE ID	DATE	TIME	MATRIX	NUMBER OF CONTAINERS	HYDROCARBONS: WTPH-HCID	BTEX/WTPH-G	BTEX	WTPH-G	WTPH-D	TPH	F.O.G. 413.1/413.2	ORGANICS: 8260 VOA	8260 CHLOR SOLVENTS	8270 SEMI-VOA	PAH/PNA-8270	8080 ORG. CHLOR PEST.	8082 PCB	TCLP D-LIST: TCLP METALS (8)	TCLP-VOA	TCLP 8270 SEMI-VOA	TCLP PEST.	TCLP HERB.	METALS: TOTAL METALS ICP/DCP	TOTAL METALS GFAA	TOTAL LEAD	OTHER: pH 9040/9045	TOX 9020/9076	TOC 9060/PSEP	FLASH POINT	SOLIDS (SPECIFY)					NORMAL / RUSH
S1	4.27.99		soil	1						X																								
S2	↓		↓	↓						↓																								
S3																																		
S4																																		
S5																																		
S6																																		
S7	↓		↓	↓						↓																								

RETURN

DISPOSE

Fee applies

LAB ID

SPECIAL INSTRUCTIONS/COMMENTS:

	SIGNATURE	PRINTED NAME	COMPANY	DATE	TIME
RELINQUISHED BY		Fritz Carmine	CETI	4-28-99	9:08
RECEIVED BY	D. Triska	D. Triska	Spectra	4-28-99	9:08
RELINQUISHED BY					
RECEIVED BY					

Payment Terms: Net 30 days. Past due accounts subject to 18% per annum interest. Customer agrees to pay all costs of collection including reasonable attorney's fees and all other associated costs of collection regardless of whether suit is filed.

CHAIN of CUSTODY

SPECTRA Laboratories, Inc.
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CLIENT: CETI
PROJECT: Marine metal
CONTACT: Steve Spencer
PHONE: 627-3317
PURCHASE ORDER #: 103-1

SAMPLE ID	DATE	TIME	MATRIX	NUMBER OF CONTAINERS	HYDROCARBONS: WTPH-HCID	BTEX/WTPH-G	BTEX	WTPH-G	WTPH-D Ext.	TPH	F.O.G. 413.1/413.2	ORGANICS: 8260 VOA	8260 CHLOR SOLVENTS	8270 SEMI-VOA	PAH/PNA-8270	8080 ORG. CHLOR PEST.	8082 PCB	TCLP D-LIST: TCLP METALS (8)	TCLP-VOA	TCLP 8270 SEMI-VOA	TCLP PEST.	TCLP HERB.	METALS: TOTAL METALS ICP/DCP	TOTAL METALS GFAA	TOTAL LEAD	OTHER: pH 9040/9045	TOX 9020/9076	TOC 9060/PSEP	FLASH POINT	SOLIDS (SPECIFY)					NORMAL / RUSH
C10-42899	4/28		Soil						X																									
S11-42899	"		"						"																									
S12-42899	"		"						"																									
S13-42899	"		"						"																									
S14-42899	"		"						"																									
S15-42899	"		"						"																									
S16-42899	"		"						"																									
S17-42899	"		"						"																									
S23-42899	"		"						"																									
S24-42899	"		"						"																									

RETURN: DISPOSE / Fee applies
LAB ID

SPECIAL INSTRUCTIONS/COMMENTS:

	SIGNATURE	PRINTED NAME	COMPANY	DATE	TIME
RELINQUISHED BY		Fritz Carmine	CETI	4.28.99	4:56
RECEIVED BY	D. Triska	D. Triska	Spectra	4.28.99	4:50
RELINQUISHED BY					
RECEIVED BY					

Payment Terms: Net 30 days. Past due accounts subject to 18% per annum interest. Customer agrees to pay all costs of collection including reasonable attorney's fees and all other associated costs of collection regardless of whether suit is filed.

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CHAIN of CUSTODY

CLIENT: CETI
PROJECT: Marine Metal 103
CONTACT: Steve Spencer
PHONE: 627 3347
PURCHASE ORDER #: 103-1

SAMPLE ID	DATE	TIME	MATRIX	NUMBER OF CONTAINERS
S25-42899	4/28		Soil	
S26-42899	"		"	
S27-42899	"		"	
S28-42899	"		"	
S29-42899	"		"	

HYDROCARBONS							ORGANICS						TCLP D-LIST					METALS			OTHER										RETURN
WTPH-HCID	BTEX/WTPH-G	BTEX	WTPH-G	WTPH-D EXT.	TPH	F.O.G. 413.1/413.2	8260 VOA	8260 CHLOR SOLVENTS	8270 SEMI-VOA	PAH/PNA-8270	8080 ORG. CHLOR PEST.	8082 PCB	TCLP METALS (8)	TCLP-VOA	TCLP 8270 SEMI-VOA	TCLP PEST.	TCLP HERB.	TOTAL METALS ICP/DCP	TOTAL METALS GFAA	TOTAL LEAD	pH 9040/9045	TOX 9020/9076	TOC 9060/PSEP	FLASH POINT	SOLIDS (SPECIFY)					NORMAL / RUSH	DISPOSE Fee applies
				K																										
				"																										
				"																										
				"																										
				"																										

LAB ID

SPECIAL INSTRUCTIONS/COMMENTS:

	SIGNATURE	PRINTED NAME	COMPANY	DATE	TIME
RELINQUISHED BY		Fritz Carmile	CETI	4-28-99	4:50
RECEIVED BY		D. Triska	Spectra	4-28-99	4:50
RELINQUISHED BY					
RECEIVED BY					

Payment Terms: Net 30 days. Past due accounts subject to 18% per annum interest. Customer agrees to pay all costs of collection including reasonable attorney's fees and all other associated costs of collection regardless of whether suit is filed.

CHAIN of CUSTODY

SPECTRA Laboratories, Inc.

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CLIENT: CETI
PROJECT: Metal Marine
CONTACT: Steve Spencer
PHONE: 627 - 3347
PURCHASE ORDER #:

SAMPLE ID	DATE	TIME	MATRIX	NUMBER OF CONTAINERS	WTPH-HCID	BTEX/WTPH-G	BTEX	WTPH-G	WTPH-D (ext.)	TPH	F.O.G. 413.1/413.2	8260 VOA	8260 CHLOR SOLVENTS	8270 SEMI-VOA	PAH/PNA-8270	8080 ORG. CHLOR PEST.	8082 PCB	TCLP METALS (8)	TCLP-VOA	TCLP 8270 SEMI-VOA	TCLP PEST.	TCLP HERB.	TOTAL METALS ICP/DCP	TOTAL METALS GFAA	TOTAL LEAD	pH 9040/9045	TOX 9020/9076	TOC 9060/PSEP	FLASH POINT	SOLIDS (SPECIFY)				NORMAL / RUSH	LAB ID
S30-43099	4.30.99	—	Soil	1					X																										
S31-43099	↓		↓	↓					↓																										
S32-43099																																			
S33-43099																																			
S34-43099																																			
S35-43099																																			
S36-43099																																			
S37-43099	↓		↓	↓					↓																										
S38-43099	↓		↓	↓					↓																										

RETURN
DISPOSE
Fee applies

SPECIAL INSTRUCTIONS/COMMENTS:

Needs Chromatograms

	SIGNATURE	PRINTED NAME	COMPANY	DATE	TIME
RELINQUISHED BY		Fritz Carmine	CETI	4.30.99	12:27
RECEIVED BY	Marie Holt	MARIE HOLT	Spectra	4-30-99	12:3[illegible]
RELINQUISHED BY					
RECEIVED BY					

Payment Terms: Net 30 days. Past due accounts subject to 18% per annum interest. Customer agrees to pay all costs of collection including reasonable attorney's fees and all other associated costs of collection regardless of whether suit is filed.

Hydro Slick #FR-200
MATERIAL SAFETY DATA SHEET

MANUFACTURER: G.W. Smith & Sons
1700 Spaulding Road
Dayton, OH 45432

INFORMATION PHONE: 513-253-5114
EMERGENCY PHONE: Same

HMIS INFORMATION: **HEALTH:** **FLAMMABILITY:** **REACTIVE:** **PROTECTION:**

SECTION I - PRODUCT IDENTIFICATION

PRODUCT NAME: Hydro Slick #FR-200
PRODUCT NUMBER:
PREPARED BY: Michael "V" Curtiss
DATE CREATED: 1/15/97
LAST REVISION: 1/5/99
SYNONYMS:

DOT CLASS: Not Regulated by DOT
HAZARD CLASS: N/A
UN NUMBER: N/A **PG:** N/A
GUIDE NUMBER: N/A
SHIPPING NAME:

SECTION II - HAZARDOUS INGREDIENTS

Chemical Name	CAS	OSHA PEL	ACGIH TLV	Weight %
Diethylene glycol	111-46-6			<50
TS Additives	Trade Secret	N/E	N/E	<5
TS Polyalkylene Glycol	Trade Secret	N/E	N/E	<15
Water	7732-18-5			<45

SECTION III - PHYSICAL CHARACTERISTICS

BOILING POINT: 223 F
VAPOR PRESSURE: @ 20 C = 13.2 mmHg. @ 20 C
EVAPORATION RATE: butly acetate = 1) 0.92

SPECIFIC GRAVITY: 1.086 @ 20 C
MELTING POINT: N/A
VAPOR DENSITY: (air=1) 1.3
POUNDS PER GALLON: N/A

SOLUBILITY IN WATER:
100%

APPEARANCE AND ODOR:
Red liquid, mild musty odor

SECTION IV - FIRE/EXPLOSION

FLASH POINT: None **ESTIMATED EXPLOSIVE LIMIT RANGE** **LEL:** 0.00% **UEL:** 0.00%

FLASH POINT METHOD USED: N/A

EXTINGUISHING MEDIA:
Non-Flammable (Aqueous solution): After water evaporates, remaining material will burn. Use alcohol-type or all-purpose type foam applied by manufacture's recommended technique for large fires. Use carbon dioxide or dry chemical media for small fires.

SPECIAL FIRE-FIGHTING PROCEDURES:
Firefighters should wear proper protective equipment and self-contained breathing apparatus with full facepiece in positive pressure mode. Move containers from fire area if it can be done without risk. Use water to keep fire-exposed containers cool.

UNUSUAL FIRE AND EXPLOSION HAZARDS:
During a fire , oxides of nitrogen may be produced.

SECTION V - REACTIVITY DATA

STABILITY: Stable

CONDITIONS TO AVOID:
WARNING! Do not mix this product with nitrites or nitrosating agents, nitrosamines may be formed. Nitrosamines may cause cancer.

INCOMPATIBILITY:
Normally unreactive; however, avoid strong bases at high temperatures, strong acids, strong oxidizing agents and materials reactive with hydroxyl compounds.

HAZARDOUS DECOMPOSITION OR BY PRODUCTS:
Combustion may produce oxides of carbon and nitrogen.

HAZARDOUS POLYMERIZATION: Will Not Occur

CONDITIONS TO AVOID:
N/A

SECTION VI - HEALTH HAZARD DATA

ACUTE HEALTH EFFECTS

EYE CONTACT: Can cause severe eye irritation

INHALATION: Short-term adverse health effects are not expected from exposure to vapor generated at ambient temperature. Aerosol or vapor formed by heating the material may cause nausea and headache.

INGESTION: Moderately high toxicity. May cause pain or discomfort in the abdomen, pain in the lumbar region, nausea, vomiting, diarrhea, dizziness, drowsiness, decreased urine production, malaise, and loss of consciousness. Severe kidney damage may occur which can be fatal if not properly and adequately treated.

SKIN CONTACT: Prolonged exposure may cause skin irritation.

SIGNS AND SYMPTOMS OF EXPOSURE:

Overexposure to vapor, aerosol or mist generated at high temperature may result in eye and respiratory tract irritation, dizziness, nausea and the inhalation of harmful amounts of material. Short-term repeated ingestion of diethylene glycol may produce renal failure. Overexposure to vapor generated at high temperature may result in eye and respiratory tract irritation, dizziness, nausea and the inhalationo f harmful amounts of material.

AGGRAVATED MEDICAL CONDITIONS:

May irritate pre existing respiratory and dermal conditions.

SUPPLEMENTAL HEALTH INFORMATION:

N/A

EMERGENCY FIRST AID PROCEDURES

EYE CONTACT: Immediately flush eyes with plenty of water. Get medical attention, if irritation persists.

INHALATION: Remove to fresh air.

INGESTION: If swallowed, induce vomitting immediately as directed by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention immediately.

SKIN CONTACT: Wash affected area with soap and water. If irritation persists, get medical attention.

SECTION VII - SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS SPILLED OR RELEASED:
Wear suitable protective equipment, especially eye protection. Small Spills: could be flushed with large amounts of water. Large Spills: should be collected for disposal.

WASTE DISPOSAL METHOD:
Dispose of residual product in accordance with state and federal regulations

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING:
Follow all MSDS/label precautions even after container is emptied because they may retain product residues.

OTHER PRECAUTIONS
N/A

SECTION VIII - CONTROL MEASURES

RESPIRATORY PROTECTION (Specify Type):
No respiratory protection is required when handling small quantities of this product.

VENTILATION:
Provide exhaust ventilation sufficient to keep the airborne concentration of this product below its exposure limits. Exhaust air may need to be cleaned by scrubbers or filters to reduce environmental contamination

PROTECTIVE GLOVES:
Polyvinyl Chloride coated

EYE PROTECTION:
Safety glasses with side shields (or goggles) and a face shield.

OTHER PROTECTIVE CLOTHING OR EQUIPMENT:
Always use this product in the vacinity of an eyewash station and a safety shower.

WORK/HYGIENIC PRACTICES:
Use good personal hygiene when handling this product. Wash hands after use, before smoking, or using the toilet.

SECTION IX - ADDITIONAL INFORMATION

OTHER ADDITIONAL INFORMATION:
No information available at this time.

The information contained herein is based on the data available to us and is believed to be accurate. However, no warranty is expressed or implied regarding the accuracy of this data or the results to be obtained from the use thereof. We assume no responsibility for injuries from the use of the product described herein.

Die Slick No. 390
MATERIAL SAFETY DATA SHEET

MANUFACTURER: G.W. Smith & Sons
1700 Spaulding Road
Dayton, OH 45432

INFORMATION PHONE: 513-253-5114
EMERGENCY PHONE: Same

HMIS INFORMATION: **HEALTH:** **FLAMMABILITY:** **REACTIVE:** **PROTECTION:**

SECTION I - PRODUCT IDENTIFICATION

PRODUCT NAME:	Die Slick No. 390	**DOT CLASS:**	Not Regulated by DOT	
PRODUCT NUMBER:		**HAZARD CLASS:**	N/A	
PREPARED BY:	Chad Lynn	**UN NUMBER:**	N/A	**PG:** N/A
DATE CREATED:	4/24/96	**GUIDE NUMBER:**	N/A	
LAST REVISION:		**SHIPPING NAME:**		
SYNONYMS:				

SECTION II - HAZARDOUS INGREDIENTS

Chemical Name	CAS	OSHA PEL	ACGIH TLV	Weight %
Ethanol	Mixture			1

SECTION III - PHYSICAL CHARACTERISTICS

BOILING POINT: 212 F
VAPOR PRESSURE: = Water mmHg. @ 20 C
EVAPORATION RATE: 1

SPECIFIC GRAVITY: 1
MELTING POINT: N/A
VAPOR DENSITY: = Water
POUNDS PER GALLON: N/A

SOLUBILITY IN WATER:
Dispersible

APPEARANCE AND ODOR:
Off-White Liquid. Bland Odor

SECTION IV - FIRE/EXPLOSION

FLASH POINT: None **ESTIMATED EXPLOSIVE LIMIT RANGE** **LEL:** 0.00% **UEL:** 0.00%

FLASH POINT METHOD USED: N/A

EXTINGUISHING MEDIA:
Use NFPA Class B extinguishers.(Carbon dioxide, dry chemical, or foam)

SPECIAL FIRE-FIGHTING PROCEDURES:
N/A

UNUSUAL FIRE AND EXPLOSION HAZARDS:
If water is evaporated, residue has a flash point of over 500 F

SECTION V - REACTIVITY DATA

STABILITY: Stable

CONDITIONS TO AVOID:
N/A

INCOMPATIBILITY:
Anything incompatable with water.

HAZARDOUS DECOMPOSITION OR BY PRODUCTS:
Oxides of carbon.

HAZARDOUS POLYMERIZATION: Will Not Occur

CONDITIONS TO AVOID:
N/A

SECTION VI - HEALTH HAZARD DATA

ACUTE HEALTH EFFECTS

EYE CONTACT: May cause slight irritation

INHALATION: May cause mild respiratory irritation

INGESTION: No hazard in normal industrial use.

SKIN CONTACT: Prolonged or repeated contact can result in defatting and drying of the skin which may result in skin irritation and dermatitis (rash).

SIGNS AND SYMPTOMS OF EXPOSURE:
Those items listed under Health Effects.

AGGRAVATED MEDICAL CONDITIONS:
N/A

SUPPLEMENTAL HEALTH INFORMATION:
N/A

EMERGENCY FIRST AID PROCEDURES

EYE CONTACT: Immediately flush eyes with plenty of water. Get medical attention, if irritation persists.

INHALATION: Remove to fresh air.

INGESTION: Do not induce vomiting. Give affected person plenty of liquid. Seek medical attention immediatelly.

SKIN CONTACT: Immediately wash skin with plenty of soap

SECTION VII - SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS SPILLED OR RELEASED:
Scoop back into container and/or soak up in absorbent materials.

WASTE DISPOSAL METHOD:
Dispose of residual product in accordance with state and federal regulations

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING:
Avoid exposure to mists and vapors. Keep from freezing.

OTHER PRECAUTIONS
Keep container closed when not in use and away from high heat.

SECTION VIII - CONTROL MEASURES

RESPIRATORY PROTECTION (Specify Type):
No respiratory protection is required when handling small quantities of this product.

VENTILATION:
Provide exhaust ventilation sufficient to keep the airborne concentration of this product below its exposure limits. Exhaust air may need to be cleaned by scrubbers or filters to reduce environmental contamination

PROTECTIVE GLOVES:
Impervious gloves are reccomended.

EYE PROTECTION:
Safety glasses with side shields (or goggles) and a face shield.

OTHER PROTECTIVE CLOTHING OR EQUIPMENT:
N/A

WORK/HYGIENIC PRACTICES:
Use good personal hygiene when handling this product. Wash hands after use, before smoking, or using the toilet.

SECTION IX - ADDITIONAL INFORMATION

OTHER ADDITIONAL INFORMATION:
No information available at this time.

The information contained herein is based on the data available to us and is believed to be accurate. However, no warranty is expressed or implied regarding the accuracy of this data or the results to be obtained from the use thereof. We assume no responsibility for injuries from the use of the product described herein.

Way Oil Vistac ISO 68
MATERIAL SAFETY DATA SHEET

MANUFACTURER: Cheveron, Associated Petrtoleum
2320 Milwaukee Way
Tacoma, WA 98421

INFORMATION PHONE: 800-457-2022
EMERGENCY PHONE:

HMIS INFORMATION: HEALTH: 0 FLAMMABILITY: 1 REACTIVE: 0 PROTECTION:

SECTION I - PRODUCT IDENTIFICATION

PRODUCT NAME:	Way Oil Vistac ISO 68	**DOT CLASS:**	Not Regulated by DOT	
PRODUCT NUMBER:		**HAZARD CLASS:**	N/A	
PREPARED BY:	Chad Lynn	**UN NUMBER:**	N/A	**PG:** N/A
DATE CREATED:	3/28/96	**GUIDE NUMBER:**	N/A	
LAST REVISION:		**SHIPPING NAME:**		
SYNONYMS:				

SECTION II - HAZARDOUS INGREDIENTS

Chemical Name	CAS	OSHA PEL	ACGIH TLV	Weight %
Lubricating Base Oil	64742 Series			90

SECTION III - PHYSICAL CHARACTERISTICS

BOILING POINT: 0
VAPOR PRESSURE: N/A mmHg. @ 20 C
EVAPORATION RATE: N/A

SPECIFIC GRAVITY: 0.9
MELTING POINT: N/A
VAPOR DENSITY: N/A
POUNDS PER GALLON: N/A

SOLUBILITY IN WATER:
Not water Soluable

APPEARANCE AND ODOR:
Dark amber liquid, hydrocarbon odor

SECTION IV - FIRE/EXPLOSION

FLASH POINT: 367 F min **ESTIMATED EXPLOSIVE LIMIT RANGE** **LEL:** 0.00% **UEL:** 0.00%

FLASH POINT METHOD USED: Cleveland Open Cup

EXTINGUISHING MEDIA:
Use NFPA Class B extinguishers.(Carbon dioxide, dry chemical, or foam)

SPECIAL FIRE-FIGHTING PROCEDURES:
Do not enter any enclosed or confined space without supplied air respirator.

UNUSUAL FIRE AND EXPLOSION HAZARDS:
N/A

SECTION V - REACTIVITY DATA

STABILITY: Stable

CONDITIONS TO AVOID:
N/A

INCOMPATIBILITY:
Strong oxidizing agents

HAZARDOUS DECOMPOSITION OR BY PRODUCTS:
Only those listed under combustion.

HAZARDOUS POLYMERIZATION: Will Not Occur

CONDITIONS TO AVOID:
N/A

SECTION VI - HEALTH HAZARD DATA

ACUTE HEALTH EFFECTS

EYE CONTACT: May cause slight irritation

INHALATION: The systemic toxicology of this product has not been determined;however, it should be practically non-toxic to internal organs if inhaled.

INGESTION: The systemic toxicology of this product has not been determined;however, it should be practically non-toxic to internal organs if swallowed.

SKIN CONTACT: Prolonged exposure may cause skin irritation.

SIGNS AND SYMPTOMS OF EXPOSURE:
N/A

AGGRAVATED MEDICAL CONDITIONS:
None reported

SUPPLEMENTAL HEALTH INFORMATION:
N/A

EMERGENCY FIRST AID PROCEDURES

EYE CONTACT: Hold eyelids apart and flush eyes with plenty of water for at least 15 minutes.

INHALATION: No specific treatment is necessary since this material is not likely to be hazardous by inhalation. If exposed to excessive levels of dusts or fumes, remove to fresh air and get medical attention if cough or other symptoms develop.

INGESTION: Give affected person plenty of milk or water. Call your nearest poison control center immediately.

SKIN CONTACT: Immediately wash skin with plenty of soap

SECTION VII - SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS SPILLED OR RELEASED:
Stop source of leak or spill. clean up released material as soon as possible, observing precautions in protective equipment.

WASTE DISPOSAL METHOD:
Dispose of residual product in accordance with state and federal regulations

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING:
Empty containers contain residual product. Do not cut, weld, grind, braze, solder or expose to heat or ignition sources.

OTHER PRECAUTIONS
N/A

SECTION VIII - CONTROL MEASURES

RESPIRATORY PROTECTION (Specify Type):
Respiratory protection is not normally reqired. When this product is involved in a fire, air supplied respirator is required.

VENTILATION:
Do not use product in an enclosed environment. Use adequate ventilation.

PROTECTIVE GLOVES:
No gloves are required when handling this product.

EYE PROTECTION:
Safety glasses are adequate protection under normal use.

OTHER PROTECTIVE CLOTHING OR EQUIPMENT:
Always use this product in the vacinity of an eyewash station and a safety shower.

WORK/HYGIENIC PRACTICES:
Use good personal hygiene when handling this product. Wash hands after use, before smoking, or using the toilet.

SECTION IX - ADDITIONAL INFORMATION

OTHER ADDITIONAL INFORMATION:
No information available at this time.

The information contained herein is based on the data available to us and is believed to be accurate. However, no warranty is expressed or implied regarding the accuracy of this data or the results to be obtained from the use thereof. We assume no responsibility for injuries from the use of the product described herein.

TABLE A

SUSPECT ASBESTOS-CONTAINING MATERIALS AND ANALYTICAL RESULTS
PROPOSED RETAIL SITE (No. 95984)
EXISTING METAL MARINE PILOT BUILDINGS
2119 MILDRED STREET WEST
FIRCREST, WASHINGTON

Sample Nos.	Material Description	Material Location	Material Condition	Friability[1]	Material Quantity[2]	Analysis Result[3]
A-1,2,3	9" x 9" Light Brown with Dark Brown and White Streaks Colored Vinyl Floor Tiles and Associated Mastic	Main Building - Front Offices, Display Room, Engineering Room, and Photocopy Room	Good	NF	1,660 SF	**Vinyl Floor Tile: 2% CH** **Mastic: 3% CH**
A-4,5,6	2' x 4' White Colored with Random Slash and Dot Pattern Acoustic Ceiling Tiles	Main Building - Front Offices, Display Room, Engineering Room, and Photocopy Room	Good	F	500 SF	ND
A-7	Brown Colored Counter-Top Covering Material and Associated Adhesive	Main Building - Main Front Office and Engineering Room	Good	NF	100 SF	Counter-Top Covering: ND Adhesive: ND
A-8	Black Colored Wall Panel Adhesive	Main Building - Display Room (Along West Wall)	Good	NF	3 SF	ND
A-9,10	Brown Colored Acoustic Wall Panels	Main Building - Photocopy Room and Display Room	Good	F	300 SF	ND
A-11,12	Paper Insulation Inside Metal Doors	Main Building - Perimeter Exit Doors	Good	F	160 SF	ND
A-13	White with Gold Speckles Colored Counter-Top Covering Material and Associated Adhesive	Main Building - Storeroom Counter Located East of Front Offices	Good	NF	25 SF	Counter-Top Covering: ND Adhesive: ND
A-14,15	Carpet Mastic	Main Building - Storeroom Located East of Front Offices	Good	NF	450 SF	ND
A-16	Blue Colored Sheet Vinyl Flooring Material and Associated Adhesive over Beige Colored Sheet Vinyl Flooring Material and Associated Adhesive	Main Building - Lunch Room and Southwest End Women's Restroom	Good	F/NF	160 SF	Blue Sheet Vinyl: ND Backing/Glue: ND Beige Sheet Vinyl: ND **Backing/Glue: 35% CH**
A-17	Blue Colored Sheet Vinyl Flooring Material and Associated Adhesive	Main Building - Southwest End Men's Restroom	Good	F/NF	50 SF	Blue Sheet Vinyl: ND Backing/Glue: ND
A-18,19	Baseboard Mastic	Main Building - Lunch Room, Southwest End Restrooms, Machine Shop (under Sinks), and Northeast End Restrooms and Locker Rooms	Good	NF	100 SF	ND
A-20	Pink-Grey Colored Counter-Top Covering Material and Associated Adhesive	Main Building - Southwest End Women's Restroom	Good	NF	12 SF	Counter-Top Covering: ND Adhesive: ND
A-21,22,23	Sheetrock with Joint Compound	Throughout Main Building Interior	Good	F	8,000 SF	Sheetrock: ND **Joint Compound: 2% CH** **Composite: <1% CH**
A-24 to A-30	Decorative Skim Coat Applied over Sheetrock Walls	Throughout Main Building Interior	Good	F	8,000 SF	ND

[1] F = Friable Building Material NF = Non-Friable Building Material
[2] SF = Square Feet LF = Linear Feet
[3] ND = No Asbestos Detected During Analysis CH = Chrysotile Asbestos Detected During Analysis

Note: Reported material quantities are estimates only. All bidding contractors are advised to confirm material quantities.

TABLE A (CONT'D)

SUSPECT ASBESTOS-CONTAINING MATERIALS AND ANALYTICAL RESULTS
PROPOSED RETAIL SITE (No. 95984)
EXISTING METAL MARINE PILOT BUILDINGS
2119 MILDRED STREET WEST
FIRCREST, WASHINGTON

Sample Nos.	Material Description	Material Location	Material Condition	Friability[1]	Material Quantity[2]	Analysis Result[3]
A-31,32	Tan with Gold Flakes Colored Targanol Flooring Material	Main Building - Compass Room	Good	NF	300 SF	ND
A-33,34	2' x 4' Off-White Colored with Large Slashes Acoustic Ceiling Tiles	Main Building - Compass Room	Good	F	150 SF	ND
A-35,36,37	Tan, Yellow, and White Colored with Mosaic Pattern Sheet Vinyl Flooring Material and Associated Backing Adhesive	Main Building - Northeast End Men's and Women's Restrooms and Locker Rooms	Good	F/NF	975 SF	Sheet Vinyl Flooring: ND **Backing/Glue: 45% CH**
A-38,39,40	2' x 4' White Colored Acoustic Ceiling Tiles	Main Building - Northeast End Men's and Women's Restrooms and Locker Rooms	Good	F	975 SF	ND
Not Sampled	Firedoor Insulation	Two Large Metal Sliding Doors Separating North End Warehouse and Electronic Assembly Area Located within the Main Building	Good	F	100 SF	**Assumed ACM**
A-41	Window Caulking	Main Building - Applied Around Perimeter Windows Located Along the Southwest End of the Building Exterior (Compass Room, Front Offices, Display Room, and Engineering Room Windows)	Good	F	20 SF	**3% CH**
A-42	HVAC Duct Sealant	Applied Around Seams in HVAC Ducts Located Outside the Main Building (Immediately North of the Compass Room)	Good	NF	35 SF	**5% CH**
A-43,44,45	Wall Coating Material	Located within the Painting Shed Interior	Good	NF	100 SF	ND

[1] F = Friable Building Material NF = Non-Friable Building Material
[2] SF = Square Feet LF = Linear Feet
[3] ND = No Asbestos Detected During Analysis CH = Chrysotile Asbestos Detected During Analysis

Note: Reported material quantities are estimates only. All bidding contractors are advised to confirm material quantities.

TABLE B

SUSPECT LEAD-BASED PAINTS AND ANALYTICAL RESULTS
PROPOSED RETAIL SITE (No. 95984)
EXISTING METAL MARINE PILOT BUILDINGS
2119 MILDRED STREET WEST
FIRCREST, WASHINGTON

Sample No.	Paint and Substrate Description	Paint Location	Paint Condition	Laboratory Analysis Limit of Detection[1]	Analysis Result[1]
L-1	Green Colored Paint Applied to Concrete Block Walls	Main Building - Front Offices, Display Room, and Engineering Room	Good	50 mg/kg	890 mg/kg
L-2	Green Colored Paint Applied to Sheetrock Walls	Throughout Main Building Interior	Good	54 mg/kg	260 mg/kg
L-3	Green Colored Paint Applied to Metal Panel Walls and Perimeter Exit Metal Doors	Throughout Main Building Interior	Good	81 mg/kg	1,100 mg/kg
L-4	Light Yellow Colored Paint Applied to Sheetrock Walls	Main Building - Storeroom and Northeast End Men's and Women's Restrooms and Locker Rooms	Good	53 mg/kg	280 mg/kg
L-5	White Colored Paint Applied to Sheetrock Walls	Main Building - Lunch Rm. and Southwest End Men's and Women's Restrooms	Good	61 mg/kg	270 mg/kg
L-6	White Colored Paint Applied to Concrete Block Walls	Main Building - Compass Room	Good	50 mg/kg	1,000 mg/kg
L-7	Dark Red Colored Primer Applied to Structural Steel	Throughout Main Building Interior	Good	49 mg/kg	4,400 mg/kg
L-8	Tan Colored Paint Applied to Metal Siding	Throughout Main Building Exterior	Good/Fair	53 mg/kg	1,300 mg/kg
L-9	Dark Red Colored Paint Applied to Metal Rain Gutters, Drainage Spouts, and Trim	Throughout Main Building Exterior	Good	330 mg/kg	< 330 mg/kg
L-10	Tan Colored Paint Applied to Metal Siding	Throughout Spray Painting Shed Exterior	Good	51 mg/kg	1,200 mg/kg
L-11	Green Colored Paint Applied to Structural Steel	Throughout Spray Painting Shed Interior	Good	50 mg/kg	55 mg/kg
L-12	Light Grey Colored Paint Applied to Metal Wall Panels	Throughout Spray Painting Shed Interior	Good	530 mg/kg	**5,100 mg/kg**

[1] **mg/kg = Milligrams per Kilogram**
Bold = Identified Lead-Based Paint

WISHA REGIONAL DIRECTIVE
WISHA Services
Department of Labor and Industries

23.30 ASBESTOS-CONTAINING JOINT COMPOUND IN WALLBOARD SYSTEMS

Date Issued: December 28, 2000

I. Background

Joint compound used on wallboard systems often contains asbestos added during the mixing process to improve the working texture of the material. The asbestos in the joint compound is typically much less than 5 percent by weight and the joint compound makes up a minor fraction of the material in the wallboard system. Where work with the wallboard system does not involve sanding, grinding or abrading the wall surface, joint compound will generally remain intact on the surface of the wallboard. The presence of joint compound has not been found to represent a greater hazard of asbestos exposure than treating the wallboard system as a homogenous material. It is important to implement prompt clean-up procedures and avoid pulverizing debris generated during the work.

Because of the circumstances presented by the use of asbestos in such joint compounds, questions arise relating to the application of the requirements of the asbestos standards adopted by the Department of Labor and Industries (L&I) under the authority of the Washington Industrial Safety and Health Act (WISHA), RCW 49.17 and the Washington Asbestos Act, RCW 49.26.

II. Scope and Application

This WISHA Regional Directive (WRD) provides guidance to WISHA enforcement and consultation staff whenever they must address issues concerning employee exposure to hazards involving asbestos-containing joint compound in wallboard systems. This document does not address materials sprayed or applied with a trowel across the full surface of the wall (such surfacing materials are covered under the Class I work provisions of the asbestos standard, found in WAC 296-62-07712).

This WRD supersedes all previous guidance on this subject, both formal and informal.

– policy continues on reverse of page –

III. Interpretive Guidance

A. How do the building survey requirements of WAC 296-62-07721 apply to joint compound?

1. Sampling for joint compound. Owners and employers can generally rely upon full-depth samples of wallboard systems containing joint compound collected during building inspections.

For general demolition and other work dealing with the wallboard system as a whole, building surveys using samples representing the full depth of wallboard material meet the good faith survey requirements. Where sample results identify trace or less than one percent asbestos for the wallboard system, some basic requirements of the asbestos standard will apply but the work will not be considered an "asbestos abatement project" under the definitions of the standard.

However, full-depth samples are not sufficient for wallboard systems where surfacing materials are present or where work will specifically disturb joint compound.

Building inspectors must examine wall systems in sufficient detail to identify extensive patching or application of surfacing layers on walls (as per the EPA AHERA inspection protocols for identification of surfacing materials in 40 CFR 763 Part E). These applications are considered to be "surfacing materials" under the standard, although similar plaster products may be used for joint compound. Surfacing materials have been associated with extensive asbestos exposure and have more stringent handling requirements than most other materials (see the OSHA preamble to the 1994 rulemaking for additional discussion).

Where work practices will selectively disturb joint compound, a full depth sample may not represent the workplace hazard. For example, sanding or scraping a wall may specifically disturb the joint compound and create dust and debris composed primarily of joint compound. Building inspectors must assess the work to be conducted and sample the materials representative of the hazard presented by the work. This may be accomplished using individual samples of different layers or having layers within samples analyzed separately. WISHA enforcement staff may elect to collect samples of dust or debris from the workplace or sample specific materials to make an assessment of the hazard represented by these materials. The specific work activity associated with the sample must be documented.

– policy continues on next page –

2. Re-analysis of materials. A full-depth sample result may substitute for layered results in situations where full-depth sampling is determined appropriate by an accredited building inspector. However, where sampling of joint compound has detected asbestos, the overall wallboard materials must not be reported as asbestos free.

Previous sampling may have been conducted for significantly different projects and specifically focused on joint compound (for example, samples assessing a prior painting project where sanding of the wall surface was planned). It is also common practice for laboratories to report layer by layer results for quality control reasons, whether or not this analysis is requested. In either case, it is improper to ignore the known presence of asbestos, but additional information may be collected and used to characterize the overall hazard due to asbestos in the current work.

An accredited building inspector must conduct any reassessment of wallboard systems. The reassessment must be conducted based on objective information collected during inspection of the wallboard system by an inspector or laboratory analysis of samples collected in accordance with EPA protocols. Pertinent objective information includes field documentation of the layers present in the samples and the relative quantities of materials represented by the samples. The level of proof should be equivalent to that for rebuttal of PACM designation and EPA inspection and analysis protocols must be followed. If resampling is conducted with full depth analysis and no asbestos is detected, the wallboard system must still be reported as containing trace or less than one percent asbestos based on the initial sampling.

B. *What are the work practice requirements for handling wallboard materials under WAC 296-62-07712 in the asbestos standard?*

1. Wallboard systems with greater than one percent asbestos content. Where asbestos-containing joint compound has been identified and the overall asbestos content of the wallboard system is greater than one percent, then work that disturbs the wall is Class II asbestos work. L&I considers the work an "asbestos project" or "asbestos abatement project" if the wall area involved is greater than one or three square feet, respectively. This also applies to any asbestos containing surfacing material.

Such work falls under the full requirements of the asbestos standard, including all Class II work practice and certification requirements. "Asbestos project" and "asbestos abatement project" are specifically defined terms in Washington State law on asbestos related to the certification requirements for contractors and workers. These terms apply to work where there is a possible exposure to asbestos above the permissible exposure limit.

– policy continues on reverse of page –

April 18, 2005

NVL™ LABS & HAZARDOUS MATERIALS SERVICES

Ted Sykes
Kleinfelder
2405 - 140th Avenue NE
Suite A-101
Bellevue, WA 98005

RE: Bulk Asbestos Fiber Analysis; NVL Batch # 2505122.00

Dear Mr. Sykes,

Enclosed please find test results for the bulk samples submitted to our laboratory for analysis. Examination of these samples was conducted for the presence of identifiable asbestos fibers using polarized light microscopy (PLM) with dispersion staining in accordance with U.S. EPA/600/R-93/116 Test Method.

NVLAP Lab Code: 102063

For samples containing more than one separable layer of materials, the report will include findings for each layer (labeled Layer 1 and Layer 2, etc. for each individual layer). The asbestos concentration in the sample is determined by visual estimation.

AIHA Environmental Lead and Industrial Hygiene ACCREDITED LABORATORY
AIHA - IH Lab Code: 101861

For those samples with asbestos concentrations between 1 and 10 percent based on visual estimation, the EPA recommends a procedure known as point counting (NESHAPS, 40 CFR Part 61). Point counting is a statistically more accurate means of quantification for samples with low concentrations of asbestos. If you would like us to further refine the concentration estimates of asbestos in these samples using point counting, please let me know.

This report is considered highly confidential and will not be released without your approval. Samples are archived for two weeks following analysis. Samples that are not retrieved by the client are discarded after two weeks.

Thank you for using our laboratory services. Please do not hesitate to call if there is anything further we can assist you with.

Sincerely,

Munaf Khan, Laboratory Director

Enc.: Sample Results

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NVLAP #102063

Bulk Asbestos Fibers Analysis

By Polarized Light Microscopy

Client: Kleinfelder
Address: 2405 - 140th Avenue NE
Bellevue, WA 98005
Attention: Mr. Ted Sykes
Project Location: 2119 Mildred Street West Fircrest, WA

Batch #: 2505122.00
Client Project #:n/a
Samples Received: 45
Samples Analyzed: 39
Method: EPA/600R-93/116

Lab ID : 25031014 Client Sample #: A-1
Location: 2119 Mildred Street West Fircrest, WA

Layer 1 of 2 **Description:** Tan tile

Non-Fibrous Materials:	Other Fibrous Materials:%		**Asbestos Type: %**
Fine particles,Vinyl/binder	None Detected	ND	**Chrysotile 2%**

Layer 2 of 2 **Description:** Black asphaltic mastic

Non-Fibrous Materials:	Other Fibrous Materials:%		**Asbestos Type: %**
Asphalt/binder	None Detected	ND	**Chrysotile 3%**

Lab ID : 25031015 Client Sample #: A-2 **SAMPLE NOT ANALYZED**

Lab ID : 25031016 Client Sample #: A-3 **SAMPLE NOT ANALYZED**

Lab ID : 25031017 Client Sample #: A-4
Location: 2119 Mildred Street West Fircrest, WA

Layer 1 of 1 **Description:** Light gray compressed fibrous material with paint

Non-Fibrous Materials:	Other Fibrous Materials:%		**Asbestos Type: %**
Binder/Filler,Glass beads,Paint	Cellulose	40%	**None Detected ND**
	Glass fibers	30%	

Lab ID : 25031018 Client Sample #: A-5
Location: 2119 Mildred Street West Fircrest, WA

Layer 1 of 1 **Description:** Light gray compressed fibrous material with paint

Non-Fibrous Materials:	Other Fibrous Materials:%		**Asbestos Type: %**
Binder/Filler,Glass beads,Paint	Cellulose	40%	**None Detected ND**
	Glass fibers	30%	

Lab ID : 25031019 Client Sample #: A-6
Location: 2119 Mildred Street West Fircrest, WA

Layer 1 of 1 **Description:** Light gray compressed fibrous material with paint

Non-Fibrous Materials:	Other Fibrous Materials:%		**Asbestos Type: %**
Binder/Filler,Paint	Cellulose	40%	**None Detected ND**
	Glass fibers	20%	

Sampled by: Client
Analyzed by: Lyudmila Manzar **Date Analyzed:** 04/18/2005
Reviewed by: Munaf Khan **Date Issued:** 04/18/2005

Munaf Khan, Laboratory Director

Note: If samples are not homogeneous, then subsamples of the components were analyzed separately. All bulk samples are analyzed using EPA 600/R-93/116 Method with the following measurement uncertainties for the reported % Asbestos (1%=0-3%, 5%=1-9%, 10%=5-15%, 20%=10-30%, 50%=40-60%). This report relates only to the items tested. If sample was not collected by NVL personnel, then the accuracy of the results is limited by the methodology and acuity of the sample collector. This report shall not be reproduced except in full, without written approval of NVL Laboratories, Inc. It shall not be used to claim product endorsement by NVLAP or any other agency of the US Government.

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Bulk Asbestos Fibers Analysis

By Polarized Light Microscopy

Client: Kleinfelder
Address: 2405 - 140th Avenue NE
Bellevue, WA 98005
Attention: Mr. Ted Sykes
Project Location: 2119 Mildred Street West Fircrest, WA

Batch #: 2505122.00
Client Project #:n/a
Samples Received: 45
Samples Analyzed: 39
Method: EPA/600R-93/116

Lab ID : 25031020 Client Sample #: A-7
Location: 2119 Mildred Street West Fircrest, WA

Layer 1 of 2 **Description:** Brown flat hard compressed fibrous material with tan surface

Non-Fibrous Materials:	Other Fibrous Materials:%	**Asbestos Type: %**
Binder/Filler	Cellulose 90%	**None Detected ND**

Layer 2 of 2 **Description:** Clear soft adhesive

Non-Fibrous Materials:	Other Fibrous Materials:%	**Asbestos Type: %**
Adhesive/binder	None Detected ND	**None Detected ND**

Lab ID : 25031021 Client Sample #: A-8
Location: 2119 Mildred Street West Fircrest, WA

Layer 1 of 1 **Description:** Black soft mastic

Non-Fibrous Materials:	Other Fibrous Materials:%	**Asbestos Type: %**
Mastic/binder	None Detected ND	**None Detected ND**

Lab ID : 25031022 Client Sample #: A-9
Location: 2119 Mildred Street West Fircrest, WA

Layer 1 of 1 **Description:** Light gray compressed fibrous material with paint

Non-Fibrous Materials:	Other Fibrous Materials:%	**Asbestos Type: %**
Binder/Filler,Perlite,Paint	Cellulose 40%	**None Detected ND**
	Glass fibers 30%	

Lab ID : 25031023 Client Sample #: A-10
Location: 2119 Mildred Street West Fircrest, WA

Layer 1 of 1 **Description:** Light gray compressed fibrous material with paint

Non-Fibrous Materials:	Other Fibrous Materials:%	**Asbestos Type: %**
Binder/Filler,Perlite,Paint	Cellulose 40%	**None Detected ND**
	Glass fibers 30%	

Lab ID : 25031024 Client Sample #: A-11
Location: 2119 Mildred Street West Fircrest, WA

Layer 1 of 1 **Description:** Tan fibrous material

Non-Fibrous Materials:	Other Fibrous Materials:%	**Asbestos Type: %**
Binder/Filler	Cellulose 97%	**None Detected ND**

Lab ID : 25031025 Client Sample #: A-12
Location: 2119 Mildred Street West Fircrest, WA

Sampled by: Client
Analyzed by: Lyudmila Manzar **Date Analyzed:** 04/18/2005
Reviewed by: Munaf Khan **Date Issued:** 04/18/2005

Munaf Khan, Laboratory Director

Note: If samples are not homogeneous, then subsamples of the components were analyzed separately. All bulk samples are analyzed using EPA 600/R-93/116 Method with the following measurement uncertainties for the reported % Asbestos (1%=0-3%, 5%=1-9%, 10%=5-15%, 20%=10-30%, 50%=40-60%). This report relates only to the items tested. If sample was not collected by NVL personnel, then the accuracy of the results is limited by the methodology and acuity of the sample collector.

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NVLAP #102063

Bulk Asbestos Fibers Analysis

By Polarized Light Microscopy

Client: Kleinfelder
Address: 2405 - 140th Avenue NE
Bellevue, WA 98005
Attention: Mr. Ted Sykes
Project Location: 2119 Mildred Street West Fircrest, WA

Batch #: 2505122.00
Client Project #:n/a
Samples Received: 45
Samples Analyzed: 39
Method: EPA/600R-93/116

	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: %
Layer 1 of 1 **Description:** Tan fibrous material	Binder/Filler	Cellulose 97%	**None Detected ND**

Lab ID : 25031026 Client Sample #: A-13
Location: 2119 Mildred Street West Fircrest, WA

	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: %
Layer 1 of 2 **Description:** Tan flat hard compressed fibrous material with white surface	Binder/Filler	Cellulose 90%	**None Detected ND**
Layer 2 of 2 **Description:** Clear soft adhesive	Adhesive/binder	None Detected ND	**None Detected ND**

Lab ID : 25031027 Client Sample #: A-14
Location: 2119 Mildred Street West Fircrest, WA

	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: %
Layer 1 of 1 **Description:** Gray brittle mastic	Mastic/binder,Synthetic foam	None Detected ND	**None Detected ND**

Lab ID : 25031028 Client Sample #: A-15
Location: 2119 Mildred Street West Fircrest, WA

	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: %
Layer 1 of 1 **Description:** Gray brittle mastic	Mastic/binder,Synthetic foam	None Detected ND	**None Detected ND**

Lab ID : 25031029 Client Sample #: A-16
Location: 2119 Mildred Street West Fircrest, WA

	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: %
Layer 1 of 4 **Description:** Blue tile	Calcareous particles,Vinyl/binder	None Detected ND	**None Detected ND**
Layer 2 of 4 **Description:** Off-white soft mastic	Mastic/binder	None Detected ND	**None Detected ND**
Layer 3 of 4 **Description:** Beige sheet vinyl	Fine particles,Vinyl/binder,Synthetic foam	None Detected ND	**None Detected ND**

Sampled by: Client
Analyzed by: Lyudmila Manzar **Date Analyzed:** 04/18/2005
Reviewed by: Munaf Khan **Date Issued:** 04/18/2005

Munaf Khan, Laboratory Director

Note: If samples are not homogeneous, then subsamples of the components were analyzed separately. All bulk samples are analyzed using EPA 600/R-93/116 Method with the following measurement uncertainties for the reported % Asbestos (1%=0-3%, 5%=1-9%, 10%=5-15%, 20%=10-30%, 50%=40-60%). This report relates only to the items tested. If sample was not collected by NVL personnel, then the accuracy of the results is limited by the methodology and acuity of the sample collector.

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Client: Kleinfelder
Address: 2405 - 140th Avenue NE
Bellevue, WA 98005
Attention: Mr. Ted Sykes
Project Location: 2119 Mildred Street West Fircrest, WA

Batch #: 2505122.00
Client Project #:n/a
Samples Received: 45
Samples Analyzed: 39
Method: EPA/600R-93/116

	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: %
Layer 4 of 4 **Description:** Gray fibrous backing with mastic	Binder/Filler,Mastic/binder	Cellulose 25%	**Chrysotile 35%**

Lab ID : 25031030 Client Sample #: A-17
Location: 2119 Mildred Street West Fircrest, WA

	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: %
Layer 1 of 2 **Description:** Blue tile	Calcareous particles,Vinyl/binder	None Detected ND	**None Detected ND**
Layer 2 of 2 **Description:** Off-white soft mastic	Mastic/binder	None Detected ND	**None Detected ND**

Lab ID : 25031031 Client Sample #: A-18
Location: 2119 Mildred Street West Fircrest, WA

	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: %
Layer 1 of 2 **Description:** Off-white soft mastic	Mastic/binder	None Detected ND	**None Detected ND**
Layer 2 of 2 **Description:** Brown brittle mastic	Mastic/binder	Talc fibers 2%	**None Detected ND**

Lab ID : 25031032 Client Sample #: A-19
Location: 2119 Mildred Street West Fircrest, WA

	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: %
Layer 1 of 2 **Description:** Off-white soft mastic	Mastic/binder	None Detected ND	**None Detected ND**
Layer 2 of 2 **Description:** Brown brittle mastic	Mastic/binder	Talc fibers 2%	**None Detected ND**

Lab ID : 25031033 Client Sample #: A-20
Location: 2119 Mildred Street West Fircrest, WA

	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: %
Layer 1 of 2 **Description:** Brown flat hard compressed fibrous material with tan surface	Binder/Filler	Cellulose 90%	**None Detected ND**

Sampled by: Client
Analyzed by: Lyudmila Manzar **Date Analyzed:** 04/18/2005
Reviewed by: Munaf Khan **Date Issued:** 04/18/2005

Munaf Khan, Laboratory Director

Note: If samples are not homogeneous, then subsamples of the components were analyzed separately. All bulk samples are analyzed using EPA 600/R-93/116 Method with the following measurement uncertainties for the reported % Asbestos (1%=0-3%, 5%=1-9%, 10%=5-15%, 20%=10-30%, 50%=40-60%). This report relates only to the items tested. If sample was not collected by NVL personnel, then the accuracy of the results is limited by the methodology and acuity of the sample collector.

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Attention: Mr. Ted Sykes
Project Location: 2119 Mildred Street West Fircrest, WA

Batch #: 2505122.00
Client Project #:n/a
Samples Received: 45
Samples Analyzed: 39
Method: EPA/600R-93/116

Layer 2 of 2 **Description:** Clear soft adhesive

Non-Fibrous Materials:	Other Fibrous Materials:%	**Asbestos Type: %**
Adhesive/binder	None Detected ND	**None Detected ND**

Lab ID : 25031034 **Client Sample #: A-21**
Location: 2119 Mildred Street West Fircrest, WA
Comments: Composite result for whole sample is less than 1% asbestos

Layer 1 of 3 **Description:** Off-white compacted powdery material with paint

Non-Fibrous Materials:	Other Fibrous Materials:%	**Asbestos Type: %**
Calcareous particles,Binder/Filler,Paint	None Detected ND	**Chrysotile 2%**

Layer 2 of 3 **Description:** Off-white compacted powdery matrial with paper

Non-Fibrous Materials:	Other Fibrous Materials:%	**Asbestos Type: %**
Calcareous particles,Binder/Filler	Cellulose 45%	**Chrysotile 2%**

Layer 3 of 3 **Description:** Off-white chalky material with paper

Non-Fibrous Materials:	Other Fibrous Materials:%	**Asbestos Type: %**
Fine particles,Gypsum/binder	Cellulose 12%	**None Detected ND**

Lab ID : 25031035 **Client Sample #: A-22** **SAMPLE NOT ANALYZED**

Lab ID : 25031036 **Client Sample #: A-23** **SAMPLE NOT ANALYZED**

Lab ID : 25031037 **Client Sample #: A-24**
Location: 2119 Mildred Street West Fircrest, WA

Layer 1 of 1 **Description:** Light gray sandy material with paint

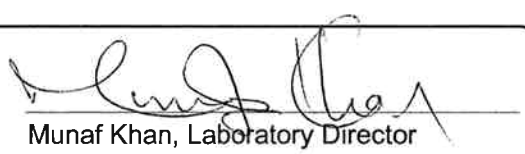
Non-Fibrous Materials:	Other Fibrous Materials:%	**Asbestos Type: %**
Sand,Paint	Cellulose 10%	**None Detected ND**

Lab ID : 25031038 **Client Sample #: A-25**
Location: 2119 Mildred Street West Fircrest, WA

Layer 1 of 1 **Description:** Light gray sandy material with paint

Non-Fibrous Materials:	Other Fibrous Materials:%	**Asbestos Type: %**
Sand,Paint	Cellulose 12%	**None Detected ND**

Sampled by: Client
Analyzed by: Lyudmila Manzar **Date Analyzed:** 04/18/2005
Reviewed by: Munaf Khan **Date Issued:** 04/18/2005



Munaf Khan, Laboratory Director

Note: If samples are not homogeneous, then subsamples of the components were analyzed separately. All bulk samples are analyzed using EPA 600/R-93/116 Method with the following measurement uncertainties for the reported % Asbestos (1%=0-3%, 5%=1-9%, 10%=5-15%, 20%=10-30%, 50%=40-60%). This report relates only to the items tested. If sample was not collected by NVL personnel, then the accuracy of the results is limited by the methodology and acuity of the sample collector.

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4708 Aurora Ave. N., Seattle, WA 98103
Tel: 206.547.0100, Fax: 206.634.1936
www.nvllabs.com

NVLAP #102063

Bulk Asbestos Fibers Analysis

By Polarized Light Microscopy

Client: Kleinfelder
Address: 2405 - 140th Avenue NE
Bellevue, WA 98005
Attention: Mr. Ted Sykes
Project Location: 2119 Mildred Street West Fircrest, WA

Batch #: 2505122.00
Client Project #:n/a
Samples Received: 45
Samples Analyzed: 39
Method: EPA/600R-93/116

Lab ID : 25031039 Client Sample #: A-26
Location: 2119 Mildred Street West Fircrest, WA

Layer 1 of 1 **Description:** Light gray sandy material with paint

Non-Fibrous Materials:	Other Fibrous Materials:%	**Asbestos Type: %**
Sand,Paint	Cellulose 5%	**None Detected ND**

Lab ID : 25031040 Client Sample #: A-27
Location: 2119 Mildred Street West Fircrest, WA

Layer 1 of 1 **Description:** Light gray sandy material with paint

Non-Fibrous Materials:	Other Fibrous Materials:%	**Asbestos Type: %**
Sand,Paint	Cellulose 5%	**None Detected ND**

Lab ID : 25031041 Client Sample #: A-28
Location: 2119 Mildred Street West Fircrest, WA

Layer 1 of 1 **Description:** Light gray sandy material with paint

Non-Fibrous Materials:	Other Fibrous Materials:%	**Asbestos Type: %**
Sand,Paint	Cellulose 5%	**None Detected ND**

Lab ID : 25031042 Client Sample #: A-29
Location: 2119 Mildred Street West Fircrest, WA

Layer 1 of 1 **Description:** Light gray sandy material with paint

Non-Fibrous Materials:	Other Fibrous Materials:%	**Asbestos Type: %**
Sand,Paint	Cellulose 5%	**None Detected ND**

Lab ID : 25031043 Client Sample #: A-30
Location: 2119 Mildred Street West Fircrest, WA

Layer 1 of 1 **Description:** Light gray sandy material with paint

Non-Fibrous Materials:	Other Fibrous Materials:%	**Asbestos Type: %**
Sand,Paint	Cellulose 7%	**None Detected ND**

Lab ID : 25031044 Client Sample #: A-31
Location: 2119 Mildred Street West Fircrest, WA

Layer 1 of 2 **Description:** Tan vinyl

Non-Fibrous Materials:	Other Fibrous Materials:%	**Asbestos Type: %**
Vinyl/binder	None Detected ND	**None Detected ND**

Sampled by: Client
Analyzed by: Lyudmila Manzar **Date Analyzed:** 04/18/2005
Reviewed by: Munaf Khan **Date Issued:** 04/18/2005

Munaf Khan, Laboratory Director

Note: If samples are not homogeneous, then subsamples of the components were analyzed separately. All bulk samples are analyzed using EPA 600/R-93/116 Method with the following measurement uncertainties for the reported % Asbestos (1%=0-3%, 5%=1-9%, 10%=5-15%, 20%=10-30%, 50%=40-60%). This report relates only to the items tested. If sample was not collected by NVL personnel, then the accuracy of the results is limited by the methodology and acuity of the sample collector. This report shall not be reproduced except in full, without written approval of NVL Laboratories, Inc. It shall not be used to claim product endorsement by NVLAP or any other agency of the US Government.

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NVLAP #102063

Bulk Asbestos Fibers Analysis

By Polarized Light Microscopy

Client: Kleinfelder
Address: 2405 - 140th Avenue NE
Bellevue, WA 98005
Attention: Mr. Ted Sykes
Project Location: 2119 Mildred Street West Fircrest, WA

Batch #: 2505122.00
Client Project #:n/a
Samples Received: 45
Samples Analyzed: 39
Method: EPA/600R-93/116

	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: %
Layer 2 of 2 **Description:** Gray cementitious material	Cement/binder,Mineral grains	None Detected ND	**None Detected ND**

Lab ID : 25031045 Client Sample #: A-32
Location: 2119 Mildred Street West Fircrest, WA

	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: %
Layer 1 of 2 **Description:** Tan vinyl	Vinyl/binder	None Detected ND	**None Detected ND**
Layer 2 of 2 **Description:** Gray cementitious material	Cement/binder,Mineral grains	None Detected ND	**None Detected ND**

Lab ID : 25031046 Client Sample #: A-33
Location: 2119 Mildred Street West Fircrest, WA

	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: %
Layer 1 of 1 **Description:** Tan compressed fibrous material with paint	Binder/Filler,Paint	Cellulose 90%	**None Detected ND**

Lab ID : 25031047 Client Sample #: A-34
Location: 2119 Mildred Street West Fircrest, WA

	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: %
Layer 1 of 1 **Description:** Tan compressed fibrous material with paint	Binder/Filler,Paint	Cellulose 90%	**None Detected ND**

Lab ID : 25031048 Client Sample #: A-35
Location: 2119 Mildred Street West Fircrest, WA

	Non-Fibrous Materials:	Other Fibrous Materials:%	Asbestos Type: %
Layer 1 of 2 **Description:** Tan sheet vinyl with rock pattern	Fine particles,Vinyl/binder	None Detected ND	**None Detected ND**
Layer 2 of 2 **Description:** Light gray fibrous backing with mastic	Binder/Filler,Mastic/binder	Cellulose 15%	**Chrysotile 45%**

Lab ID : 25031049 Client Sample #: A-36 **SAMPLE NOT ANALYZED**

Sampled by: Client
Analyzed by: Lyudmila Manzar **Date Analyzed:** 04/18/2005
Reviewed by: Munaf Khan **Date Issued:** 04/18/2005

Munaf Khan, Laboratory Director

Note: If samples are not homogeneous, then subsamples of the components were analyzed separately. All bulk samples are analyzed using EPA 600/R-93/116 Method with the following measurement uncertainties for the reported % Asbestos (1%=0-3%, 5%=1-9%, 10%=5-15%, 20%=10-30%, 50%=40-60%). This report relates only to the items tested. If sample was not collected by NVL personnel, then the accuracy of the results is limited by the methodology and acuity of the sample collector. This report shall not be reproduced except in full, without written approval of NVL Laboratories, Inc. It shall not be used to claim product endorsement by NVLAP or any other agency of the US Government.

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NVLAP #102063

Bulk Asbestos Fibers Analysis

By Polarized Light Microscopy

Client: Kleinfelder
Address: 2405 - 140th Avenue NE
Bellevue, WA 98005
Attention: Mr. Ted Sykes
Project Location: 2119 Mildred Street West Fircrest, WA

Batch #: 2505122.00
Client Project #:n/a
Samples Received: 45
Samples Analyzed: 39
Method: EPA/600R-93/116

Lab ID : 25031050 Client Sample #: A-37 **SAMPLE NOT ANALYZED**

Lab ID : 25031051 Client Sample #: A-38
Location: 2119 Mildred Street West Fircrest, WA

Layer 1 of 1 **Description:** Tan fibrous material with paint

Non-Fibrous Materials:	Other Fibrous Materials:%	**Asbestos Type: %**
Paint	Glass fibers 90%	**None Detected ND**

Lab ID : 25031052 Client Sample #: A-39
Location: 2119 Mildred Street West Fircrest, WA

Layer 1 of 1 **Description:** Tan fibrous material with paint

Non-Fibrous Materials:	Other Fibrous Materials:%	**Asbestos Type: %**
Paint	Glass fibers 90%	**None Detected ND**

Lab ID : 25031053 Client Sample #: A-40
Location: 2119 Mildred Street West Fircrest, WA

Layer 1 of 1 **Description:** Tan fibrous material with paint

Non-Fibrous Materials:	Other Fibrous Materials:%	**Asbestos Type: %**
Paint	Glass fibers 90%	**None Detected ND**

Lab ID : 25031054 Client Sample #: A-41
Location: 2119 Mildred Street West Fircrest, WA

Layer 1 of 1 **Description:** Gray putty material with paint

Non-Fibrous Materials:	Other Fibrous Materials:%	**Asbestos Type: %**
Fine particles,Binder/Filler,Paint	None Detected ND	**Chrysotile 3%**

Lab ID : 25031055 Client Sample #: A-42
Location: 2119 Mildred Street West Fircrest, WA

Layer 1 of 1 **Description:** Black asphaltic material with paint

Non-Fibrous Materials:	Other Fibrous Materials:%	**Asbestos Type: %**
Asphalt/binder,Paint	Cellulose 3%	**Chrysotile 5%**

Lab ID : 25031056 Client Sample #: A-43
Location: 2119 Mildred Street West Fircrest, WA

Sampled by: Client
Analyzed by: Lyudmila Manzar **Date Analyzed:** 04/18/2005
Reviewed by: Munaf Khan **Date Issued:** 04/18/2005

Munaf Khan, Laboratory Director

Note: If samples are not homogeneous, then subsamples of the components were analyzed separately. All bulk samples are analyzed using EPA 600/R-93/116 Method with the following measurement uncertainties for the reported % Asbestos (1%=0-3%, 5%=1-9%, 10%=5-15%, 20%=10-30%, 50%=40-60%). This report relates only to the items tested. If sample was not collected by NVL personnel, then the accuracy of the results is limited by the methodology and acuity of the sample collector. This report shall not be reproduced except in full, without written approval of NVL Laboratories, Inc. It shall not be used to claim product endorsement by NVLAP or any other agency of the US Government.

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NVLAP #102063

Bulk Asbestos Fibers Analysis

By Polarized Light Microscopy

Client: Kleinfelder
Address: 2405 - 140th Avenue NE
Bellevue, WA 98005
Attention: Mr. Ted Sykes
Project Location: 2119 Mildred Street West Fircrest, WA

Batch #: 2505122.00
Client Project #:n/a
Samples Received: 45
Samples Analyzed: 39
Method: EPA/600R-93/116

Layer 1 of 1 **Description:** Gray and white paint texture

Non-Fibrous Materials:	Other Fibrous Materials:%	**Asbestos Type: %**
Glitter,Paint	None Detected ND	**None Detected ND**

Lab ID : 25031057 **Client Sample #: A-44**
Location: 2119 Mildred Street West Fircrest, WA

Layer 1 of 1 **Description:** Gray and white paint texture

Non-Fibrous Materials:	Other Fibrous Materials:%	**Asbestos Type: %**
Glitter,Paint	None Detected ND	**None Detected ND**

Lab ID : 25031058 **Client Sample #: A-45**
Location: 2119 Mildred Street West Fircrest, WA

Layer 1 of 1 **Description:** Gray and white paint texture

Non-Fibrous Materials:	Other Fibrous Materials:%	**Asbestos Type: %**
Glitter,Paint	None Detected ND	**None Detected ND**

Sampled by: Client
Analyzed by: Lyudmila Manzar **Date Analyzed:** 04/18/2005
Reviewed by: Munaf Khan **Date Issued:** 04/18/2005

Munaf Khan, Laboratory Director

Note: If samples are not homogeneous, then subsamples of the components were analyzed separately. All bulk samples are analyzed using EPA 600/R-93/116 Method with the following measurement uncertainties for the reported % Asbestos (1%=0-3%, 5%=1-9%, 10%=5-15%, 20%=10-30%, 50%=40-60%). This report relates only to the items tested. If sample was not collected by NVL personnel, then the accuracy of the results is limited by the methodology and acuity of the sample collector. This report shall not be reproduced except in full, without written approval of NVL Laboratories, Inc. It shall not be used to claim product endorsement by NVLAP or any other agency of the US Government.

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1.888.NVL.LABS (685.5227)

CHAIN of CUSTODY SAMPLE LOG

BATCH ID
2505122.00
HAZARDOUS MATERIALS SERVICES

Client: Kleinfelder
Street: 2405 - 140th Avenue NE
Suite A-101
Bellevue, WA 98005
Project Manager: Ted Sykes
Project Location: 2119 MILDRED STREET WEST
FIRCREST, WASHINGTON
Phone: (425) 562-4200 Fax: (425) 562-4201

NVL Batch Number:
Client Job Number:
Total Samples: 45
Turn Around Time: ☐ 1-Hr ☐ 24-Hrs ☐ 4 Days
☐ 2-Hrs ☐ 2 Days ☒ 5 Days
☐ 4-Hrs ☐ 3 Days ☐ 6 to 10 Days
Please call for TAT less than 24 Hrs
Email address:
Cell: (425) 864-6710

☐ Asbestos Air ☐ PCM (NIOSH 7400) ☐ TEM (NIOSH 7402) ☐ TEM (AHERA) ☐ TEM (EPA Level II) ☐ Other
☒ Asbestos Bulk ☒ PLM (EPA/600/R-93/116) ☐ PLM (EPA Point Count) ☐ PLM (EPA Gravimetry) ☐ TEM Bulk

METALS	Det. Limit	Matrix		RCRA Metals		Other Metals
☐ Total Metals	☐ ppm (AAS)	☐ Air Filter	☐ Paint Chips	☐ Arsenic (As)	☐ All 8	☐ All 3
☐ TCLP	☐ ppb (GFAA)	☐ Drinking water	☐ Paint Chips (Area)	☐ Barium (Ba)	☐ Lead (Pb)	☐ Copper (Cu)
		☐ Dust/wipe	☐ Waste Water	☐ Cadmium (Cd)	☐ Mercury (Hg)	☐ Nickel (Ni)
		☐ Soil	☐ Other	☐ Chromium (Cr)	☐ Selenium (Se)	☐ Zinc (Zn)
					☐ Silver (Ag)	

☐ Other Types of Analysis ☐ Fiberglass ☐ Silica ☐ Nuisance Dust ☐ Respirable Dust ☐ Rotometer Calibration ☐ Mold/Fungus ☐ Other (Specify)

Condition of Package: ☒ Good ☐ Damaged (no spillage) ☐ Severe damage (spillage)

Seq. #	Lab ID	Client Sample Number	Comments	A/R
1		A-1	VINYL FLOOR TILE AND MASTIC	
2		* A-2	" " " " "	
3		A-3	" " " " "	
4				
5		A-4	CEILING TILE	
6		* A-5	" "	
7		A-6	" "	
8				
9		A-7	COUNTER-TOP COVERING MATERIAL AND ADHESIVE	
10				
11		A-8	WALL ADHESIVE	
12				
13		A-9	WALL PANEL	
14		* A-10	" "	
15				

	Print Below	Sign Below	Company	Date	Time
Sampled by	TED SYKES		KLEINFELDER	4/11/05	
Relinquished by	TED SYKES		KLEINFELDER	4/11/05	
Received by	Nicole Barnes		NVL	4.11.05	4:30pm
Analyzed by	L. MANZAK		NVL	04.18.05	14:25
Results Called by	↓			↓	↓
Results Faxed by					

Special Instructions: Unless requested in writing, all samples will be disposed of two (2) weeks after analysis.

* STOP AT FIRST POSITIVE IN EACH GROUP OF SAMPLES.

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CHAIN of CUSTODY SAMPLE LOG

BATCH ID
2505122.00

Client: Kleinfelder
Street: 2405 - 140th Avenue NE, Suite A-101, Bellevue, WA 98005
Project Manager: Ted Sykes
Project Location: 2119 MILDRED STREET WEST PIERCE, WASHINGTON
Phone: (425) 562-4200 Fax: (425) 562-4201

NVL Batch Number:
Client Job Number:
Total Samples: 45
Turn Around Time: ☐ 1-Hr ☐ 2-Hrs ☐ 4-Hrs ☐ 24-Hrs ☐ 2 Days ☐ 3 Days ☐ 4 Days ☒ 5 Days ☐ 6 to 10 Days
Please call for TAT less than 24 Hrs
Email address:
Cell: (425) 864-6710

☐ Asbestos Air ☐ PCM (NIOSH 7400) ☐ TEM (NIOSH 7402) ☐ TEM (AHERA) ☐ TEM (EPA Level II) ☐ Other
☒ Asbestos Bulk ☒ PLM (EPA/600/R-93/116) ☐ PLM (EPA Point Count) ☐ PLM (EPA Gravimetry) ☐ TEM Bulk

METALS	Det. Limit	Matrix		RCRA Metals		Other Metals
☐ Total Metals ☐ TCLP	☐ ppm (AAS) ☐ ppb (GFAA)	☐ Air Filter ☐ Drinking water ☐ Dust/wipe ☐ Soil	☐ Paint Chips ☐ Paint Chips (Area) ☐ Waste Water ☐ Other	☐ Arsenic (As) ☐ Barium (Ba) ☐ Cadmium (Cd) ☐ Chromium (Cr)	☐ All 8 ☐ Lead (Pb) ☐ Mercury (Hg) ☐ Selenium (Se) ☐ Silver (Ag)	☐ All 3 ☐ Copper (Cu) ☐ Nickel (Ni) ☐ Zinc (Zn)

☐ Other Types of Analysis: ☐ Fiberglass ☐ Silica ☐ Nuisance Dust ☐ Respirable Dust ☐ Rotometer Calibration ☐ Mold/Fungus ☐ Other (Specify)

Condition of Package: ☒ Good ☐ Damaged (no spillage) ☐ Severe damage (spillage)

Seq. #	Lab ID	Client Sample Number	Comments	A/R
1		* A-11	PAPER DOOR INSULATION	
2		* A-12	" " "	
3				
4		A-13	COUNTER-TOP COVERING MATERIAL AND ADHESIVE	
5				
6		* A-14	CARPET MASTIC	
7		* A-15	" "	
8				
9		* A-16	SHEET VINYL FLOORING MATERIAL AND ADHESIVE	
10		* A-17	" " " " " "	
11				
12		* A-18	BASEBOARD MASTIC	
13		* A-19	" "	
14				
15		A-20	COUNTER-TOP COVERING MATERIAL AND ADHESIVE	

	Print Below	Sign Below	Company	Date	Time
Sampled by	TED SYKES		KLEINFELDER	4/11/05	
Relinquished by	TED SYKES		KLEINFELDER	4/11/05	
Received by	Nicole Barnes	Nicole Barnes	NVL	4.11.05	4:30pm
Analyzed by					
Results Called by					
Results Faxed by					

Special Instructions: Unless requested in writing, all samples will be disposed of two (2) weeks after analysis.

* STOP AT FIRST POSITIVE IN EACH GROUP OF SAMPLES.

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CHAIN of CUSTODY SAMPLE LOG

BATCH ID
2505122.00

Client: Kleinfelder
Street: 2405 - 140th Avenue NE, Suite A-101, Bellevue, WA 98005
Project Manager: Ted Sykes
Project Location: 2119 MILDRED STREET WEST, FIRCREST, WASHINGTON
Phone: (425) 562-4200 Fax: (425) 562-4201

NVL Batch Number:
Client Job Number:
Total Samples: 45
Turn Around Time: ☐ 1-Hr ☐ 24-Hrs ☐ 4 Days ☐ 2-Hrs ☐ 2 Days ☒ 5 Days ☐ 4-Hrs ☐ 3 Days ☐ 6 to 10 Days
Please call for TAT less than 24 Hrs
Email address:
Cell: (425) 864-6710

☐ Asbestos Air ☐ PCM (NIOSH 7400) ☐ TEM (NIOSH 7402) ☐ TEM (AHERA) ☐ TEM (EPA Level II) ☐ Other
☒ Asbestos Bulk ☒ PLM (EPA/600/R-93/116) ☐ PLM (EPA Point Count) ☐ PLM (EPA Gravimetry) ☐ TEM Bulk

METALS	Det. Limit	Matrix		RCRA Metals		Other Metals
☐ Total Metals	☐ ppm (AAS)	☐ Air Filter	☐ Paint Chips	☐ Arsenic (As)	☐ All 8	☐ All 3
☐ TCLP	☐ ppb (GFAA)	☐ Drinking water	☐ Paint Chips (Area)	☐ Barium (Ba)	☐ Lead (Pb)	☐ Copper (Cu)
		☐ Dust/wipe	☐ Waste Water	☐ Cadmium (Cd)	☐ Mercury (Hg)	☐ Nickel (Ni)
		☐ Soil	☐ Other	☐ Chromium (Cr)	☐ Selenium (Se)	☐ Zinc (Zn)
					☐ Silver (Ag)	

☐ Other Types of Analysis: ☐ Fiberglass ☐ Nuisance Dust ☐ Rotometer Calibration ☐ Other (Specify) ☐ Silica ☐ Respirable Dust ☐ Mold/Fungus

Condition of Package: ☒ Good ☐ Damaged (no spillage) ☐ Severe damage (spillage)

Seq. #	Lab ID	Client Sample Number	Comments	A/R
1		A-21	SHEETROCK WITH JOINT COMPOUND	
2		* A-22	" " " "	
3		A-23	" " " "	
4				
5		A-24	SKIM COAT	
6		A-25	" "	
7		A-26	" "	
8		* A-27	" "	
9		A-28	" "	
10		A-29	" "	
11		A-30	" "	
12				
13		* A-31	TARGANOL FLOORING MATERIAL	
14		A-32	" " "	
15				

	Print Below	Sign Below	Company	Date	Time
Sampled by	TED SYKES		KLEINFELDER	4/11/05	
Relinquished by	TED SYKES		KLEINFELDER	4/11/05	
Received by	Nicole Burnes	Nicole Burnes	NVL	4.11.05	4:30PM
Analyzed by					
Results Called by					
Results Faxed by					

Special Instructions: Unless requested in writing, all samples will be disposed of two (2) weeks after analysis.

* STOP AT FIRST POSITIVE IN EACH GROUP OF SAMPLES.

NVL Laboratories, Inc.
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Tel: 206.547.0100 Emerg. Pager: 206.344.1878
1.888.NVL.LABS (685.5227)

CHAIN of CUSTODY SAMPLE LOG

BATCH ID
2505122.00

Client: Kleinfelder
Street: 2405 - 140th Avenue NE, Suite A-101, Bellevue, WA 98005
Project Manager: Ted Sykes
Project Location: 2119 MILDRED STREET WEST, FIRCREST, WASHINGTON
Phone: (425) 562-4200 Fax: (425) 562-4201

NVL Batch Number:
Client Job Number:
Total Samples: 45
Turn Around Time: ☐ 1-Hr ☐ 24-Hrs ☐ 4 Days ☐ 2-Hrs ☐ 2 Days ☒ 5 Days ☐ 4-Hrs ☐ 3 Days ☐ 6 to 10 Days
Please call for TAT less than 24 Hrs
Email address:
Cell: (425) 864-6710

☐ Asbestos Air ☐ PCM (NIOSH 7400) ☐ TEM (NIOSH 7402) ☐ TEM (AHERA) ☐ TEM (EPA Level II) ☐ Other
☒ Asbestos Bulk ☒ PLM (EPA/600/R-93/116) ☐ PLM (EPA Point Count) ☐ PLM (EPA Gravimetry) ☐ TEM Bulk

METALS	Det. Limit	Matrix		RCRA Metals		Other Metals
☐ Total Metals	☐ ppm (AAS)	☐ Air Filter	☐ Paint Chips	☐ Arsenic (As)	☐ All 8	☐ All 3
☐ TCLP	☐ ppb (GFAA)	☐ Drinking water	☐ Paint Chips (Area)	☐ Barium (Ba)	☐ Lead (Pb)	☐ Copper (Cu)
		☐ Dust/wipe	☐ Waste Water	☐ Cadmium (Cd)	☐ Mercury (Hg)	☐ Nickel (Ni)
		☐ Soil	☐ Other	☐ Chromium (Cr)	☐ Selenium (Se)	☐ Zinc (Zn)

☐ Other Types of Analysis: ☐ Fiberglass ☐ Nuisance Dust ☐ Rotometer Calibration ☐ Other (Specify) ☐ Silica ☐ Respirable Dust ☐ Mold/Fungus

Condition of Package: ☒ Good ☐ Damaged (no spillage) ☐ Severe damage (spillage)

Seq. #	Lab ID	Client Sample Number	Comments	A/R
1		* A-33	CEILING TILE	
2		* A-34	" "	
3				
4		A-35	SHEET VINYL FLOORING MATERIAL AND ADHESIVE	
5		* A-36	" " " " " "	
6		A-37	" " " " " "	
7				
8		A-38	CEILING TILE	
9		* A-39	" "	
10		A-40	" "	
11				
12		A-41	WINDOW CAULK	
13				
14		A-42	HVAC DUCT-JOINT SEALANT	
15				

	Print Below	Sign Below	Company	Date	Time
Sampled by	TED SYKES		KLEINFELDER	4/11/05	
Relinquished by	TED SYKES		KLEINFELDER	4/11/05	
Received by	Nicole Barnes	Nicole Barnes	NVL	4.11.05	4:30PM
Analyzed by					
Results Called by					
Results Faxed by					

Special Instructions: Unless requested in writing, all samples will be disposed of two (2) weeks after analysis.

* STOP AT FIRST POSITIVE IN EACH GROUP OF SAMPLES.

NVL Laboratories, Inc.
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Tel: 206.547.0100 Emerg. Pager: 206.344.1878
1.888.NVL.LABS (685.5227)

CHAIN of CUSTODY SAMPLE LOG

BATCH ID
2505122.00

Client: Kleinfelder
Street: 2405 - 140th Avenue NE, Suite A-101, Bellevue, WA 98005
Project Manager: Ted Sykes
Project Location: 2119 MILDRED STREET WEST, FIRCREST, WASHINGTON
Phone: (425) 562-4200 Fax: (425) 562-4201

NVL Batch Number:
Client Job Number:
Total Samples: 45
Turn Around Time: ☐ 1-Hr ☐ 24-Hrs ☐ 4 Days ☒ 5 Days ☐ 2-Hrs ☐ 2 Days ☐ 4-Hrs ☐ 3 Days ☐ 6 to 10 Days
Please call for TAT less than 24 Hrs
Email address:
Cell: (425) 864-6710

☐ Asbestos Air — ☐ PCM (NIOSH 7400) ☐ TEM (NIOSH 7402) ☐ TEM (AHERA) ☐ TEM (EPA Level II) ☐ Other
☒ Asbestos Bulk — ☒ PLM (EPA/600/R-93/116) ☐ PLM (EPA Point Count) ☐ PLM (EPA Gravimetry) ☐ TEM Bulk

METALS	Det. Limit	Matrix	RCRA Metals	Other Metals
☐ Total Metals ☐ TCLP	☐ ppm (AAS) ☐ ppb (GFAA)	☐ Air Filter ☐ Paint Chips ☐ Drinking water ☐ Paint Chips (Area) ☐ Dust/wipe ☐ Waste Water ☐ Soil ☐ Other	☐ Arsenic (As) ☐ All 8 ☐ Barium (Ba) ☐ Lead (Pb) ☐ Cadmium (Cd) ☐ Mercury (Hg) ☐ Chromium (Cr) ☐ Selenium (Se) ☐ Silver (Ag)	☐ All 3 ☐ Copper (Cu) ☐ Nickel (Ni) ☐ Zinc (Zn)

☐ Other Types of Analysis: ☐ Fiberglass ☐ Nuisance Dust ☐ Rotometer Calibration ☐ Other (Specify) ☐ Silica ☐ Respirable Dust ☐ Mold/Fungus

Condition of Package: ☒ Good ☐ Damaged (no spillage) ☐ Severe damage (spillage)

Seq. #	Lab ID	Client Sample Number	Comments	A/R
1		A-43	WALL COATING MATERIAL (PAINT SHED)	
2		* A-44	" " " " "	
3		A-45	" " " " "	
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				

	Print Below	Sign Below	Company	Date	Time
Sampled by	TED SYKES		KLEINFELDER	4/11/05	
Relinquished by	TED SYKES		KLEINFELDER	4/11/05	
Received by	Nicole Barnes	Nicole Barnes	NVL	4.11.05	4:30PM
Analyzed by					
Results Called by					
Results Faxed by					

Special Instructions: Unless requested in writing, all samples will be disposed of two (2) weeks after analysis.

* STOP AT FIRST POSITIVE IN EACH GROUP OF SAMPLES.

NVL Laboratories, Inc.
4708 Aurora Ave. N., Seattle, WA 98103
Tel: 206.547.0100, Fax: 206.634.1936
www.nvllabs.com

Analysis Report

AIHA - IH #101861

AIHA Environmental Lead and Industrial Hygiene ACCREDITED LABORATORY

Total Lead (Pb)

Client: Kleinfelder
Address: 2405 - 140th Avenue NE
Bellevue, WA 98005
Attention: Mr. Ted Sykes
Project Location: 2119 Mildred Street West, Fircrest, WA

Batch #: 2505119.00
Matrix: Paint Chips
Method: EPA 7000B
Client Project #:n/a
Samples Received: 12
Total Samples Analyzed:12

Lab ID	Client Sample #	Sample Weight	RL in mg/Kg	Results in mg/Kg	Results in percent
25030992	L-1	0.2015	50.0	890.0	0.0890
25030993	L-2	0.1840	54.0	260.0	0.0260
25030994	L-3	0.1231	81.0	1100.0	0.1100
25030995	L-4	0.1901	53.0	280.0	0.0280
25030996	L-5	0.1630	61.0	270.0	0.0270
25030997	L-6	0.1995	50.0	1000.0	0.1000
25030998	L-7	0.2024	49.0	4400.0	0.4400
25030999	L-8	0.1903	53.0	1300.0	0.1300
25031000	L-9	0.0303	330.0	< 330.0	< 0.0330
25031001	L-10	0.1964	51.0	1200.0	0.1200
25031002	L-11	0.1991	50.0	55.0	0.0055
25031003	L-12	0.0188	530.0	5100.0	0.5100

Sampled by: Client
Analyzed by: Holly Tuttle
Reviewed by: Nick Ly

Date Analyzed: 04/18/2005
Date Issued: 04/18/2005

Nick Ly, Technical Director

mg/ Kg =Milligrams per kilogram
Percent = Milligrams per kilogram / 10000

RL = Reporting Limit
'<' = Below the reporting Limit

Note : Method QC results are acceptable unless stated otherwise.

Bench Run No: 25-0418-7

NVL Laboratories, Inc.
4708 Aurora Ave N, Seattle, WA 98103
Tel: 206.547.0100 Emerg. Pager: 206.344.1878
1.888.NVL.LABS (685.5227)

CHAIN of CUSTODY SAMPLE LOG

BATCH ID
2505119.00

Client: Kleinfelder
Street: 2405 - 140th Avenue NE, Suite A-101, Bellevue, WA 98005
Project Manager: Ted Sykes
Project Location: 2119 MILDRED STREET WEST, FIRCREST, WASHINGTON
Phone: (425) 562-4200 Fax: (425) 562-4201

NVL Batch Number:
Client Job Number:
Total Samples: 12
Turn Around Time: ☐ 1-Hr ☐ 2-Hrs ☐ 4-Hrs ☐ 24-Hrs ☐ 2 Days ☐ 3 Days ☒ 4 Days ☒ 5 Days ☐ 6 to 10 Days
Please call for TAT less than 24 Hrs
Email address:
Cell: (425) 864-6710

☐ Asbestos Air — ☐ PCM (NIOSH 7400) ☐ TEM (NIOSH 7402) ☐ TEM (AHERA) ☐ TEM (EPA Level II) ☐ Other

☐ Asbestos Bulk — ☐ PLM (EPA/600/R-93/116) ☐ PLM (EPA Point Count) ☐ PLM (EPA Gravimetry) ☐ TEM Bulk

METALS: ☒ Total Metals ☐ TCLP
Det. Limit: ☒ ppm (AAS) ☐ ppb (GFAA)
Matrix: ☐ Air Filter ☐ Drinking water ☐ Dust/wipe ☐ Soil ☒ Paint Chips ☐ Paint Chips (Area) ☐ Waste Water ☐ Other
RCRA Metals: ☐ Arsenic (As) ☐ Barium (Ba) ☐ Cadmium (Cd) ☐ Chromium (Cr) ☐ All 8 ☒ Lead (Pb) ☐ Mercury (Hg) ☐ Selenium (Se) ☐ Silver (Ag)
Other Metals: ☐ All 3 ☐ Copper (Cu) ☐ Nickel (Ni) ☐ Zinc (Zn)

☐ Other Types of Analysis — ☐ Fiberglass ☐ Silica ☐ Nuisance Dust ☐ Respirable Dust ☐ Rotometer Calibration ☐ Mold/Fungus ☐ Other (Specify)

Condition of Package: ☒ Good ☐ Damaged (no spillage) ☐ Severe damage (spillage)

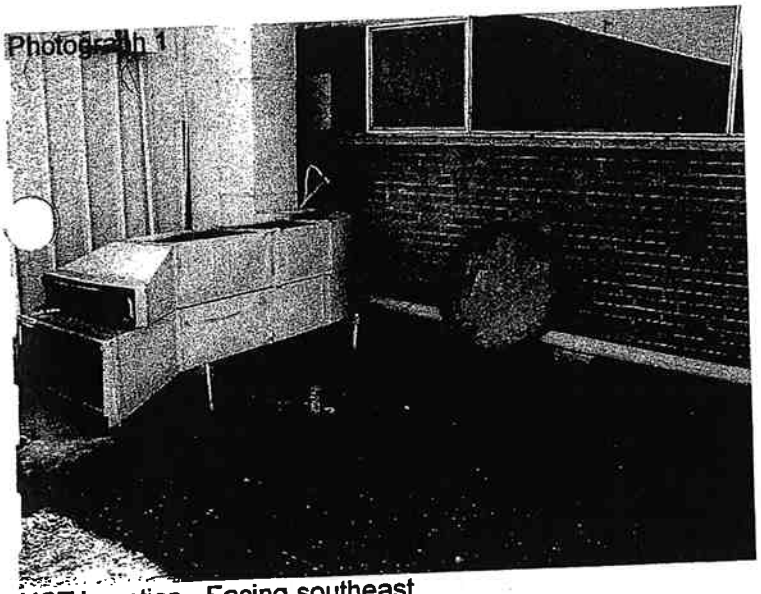
Seq. #	Lab ID	Client Sample Number	Comments	A/R
1		L-1	GREEN COLORED PAINT	
2		L-2	GREEN COLORED PAINT	
3		L-3	GREEN COLORED PAINT	
4		L-4	LIGHT YELLOW COLORED PAINT	
5		L-5	WHITE COLORED PAINT	
6		L-6	WHITE COLORED PAINT	
7		L-7	DARK RED PRIMER	
8		L-8	TAN COLORED PAINT	
9		L-9	DARK RED COLORED PAINT	
10		L-10	TAN COLORED PAINT	
11		L-11	GREEN COLORED PAINT	
12		L-12	LIGHT GREY COLORED PAINT	
13				
14				
15				

	Print Below	Sign Below	Company	Date	Time
Sampled by	TED SYKES		KLEINFELDER	4/11/05	
Relinquished by	TED SYKES		KLEINFELDER	4/11/05	
Received by	Nicole Barnes	Nicole Barnes	NVL	4.11.05	4:30 PM
Analyzed by			NVL	4/13/05	1612
Results Called by					
Results Faxed by					1626

Special Instructions: Unless requested in writing, all samples will be disposed of two (2) weeks after analysis.

ANALYZE ALL PAINT CHIP SAMPLES FOR LEAD CONTENT

Photograph 1



UST Location - Facing southeast

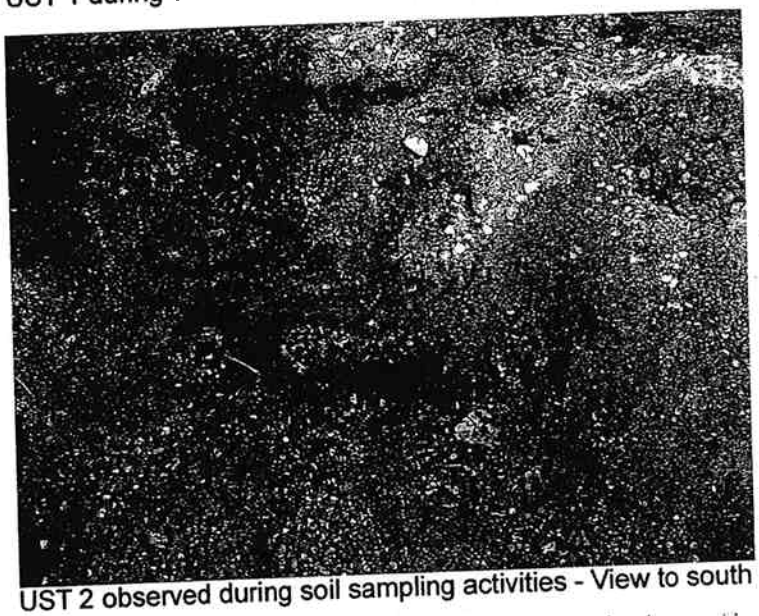
Photograph 2

UST 1 during excavation - View to southwest

Photograph 3

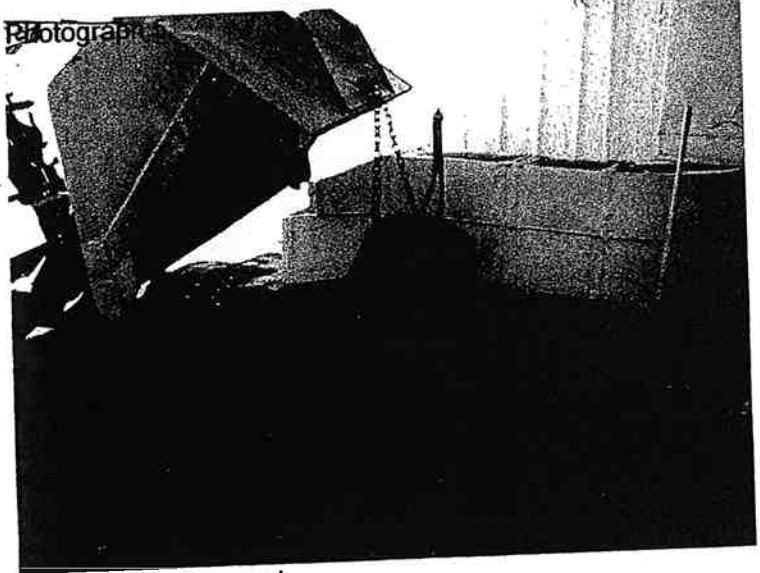
UST 1 during removal

Photograph 4



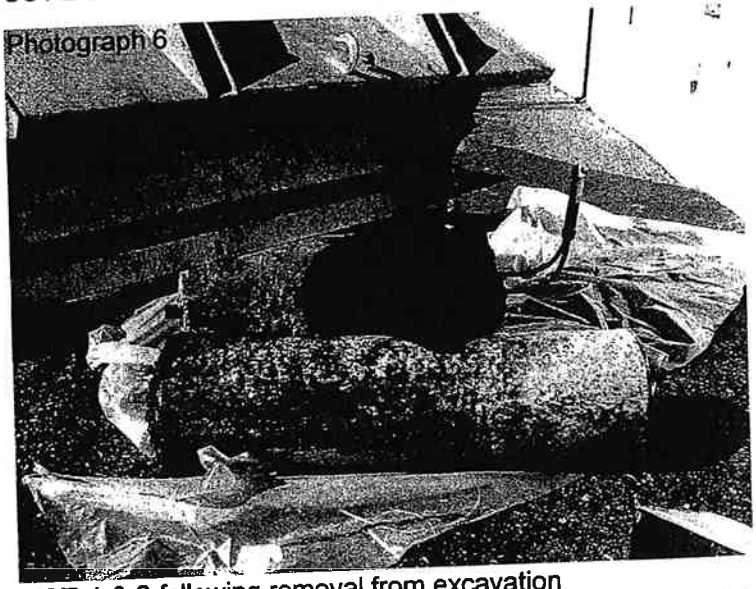
UST 2 observed during soil sampling activities - View to south

Photograph 5



UST 2 during removal

Photograph 6



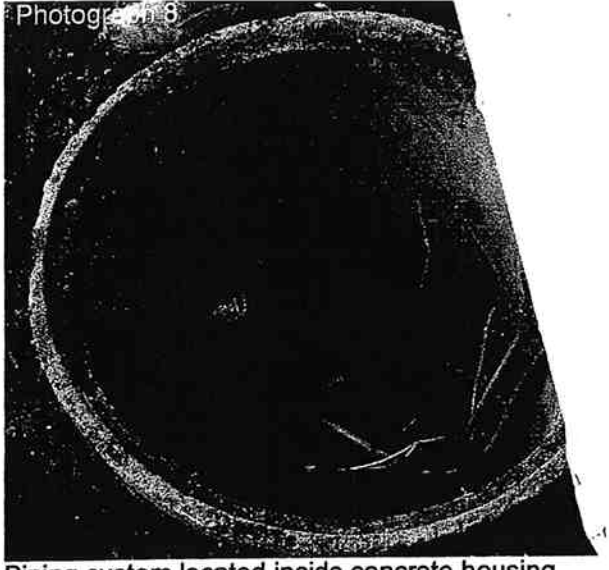
USTs1 & 2 following removal from excavation

SOUND ENVIRONMENTAL STRATEGIES

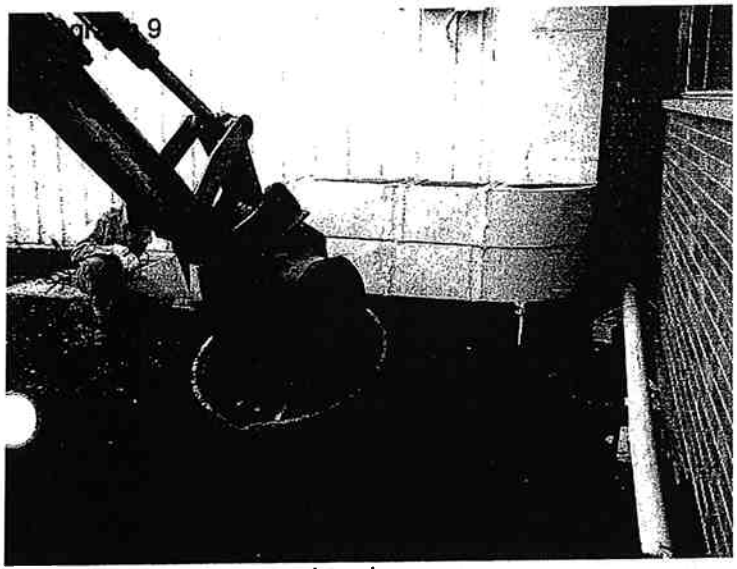
Robert & Ethyl Freeman Family, LLC
UST Decommissioning Project
2119 Mildred Street West
Fircrest, Washington

SES Project No.:	331-1
Date:	May 24, 2002
Drawn By:	SSpencer
Chk By:	Sspencer
File ID:	331-1 Project Photos

UST Excavation - View to south

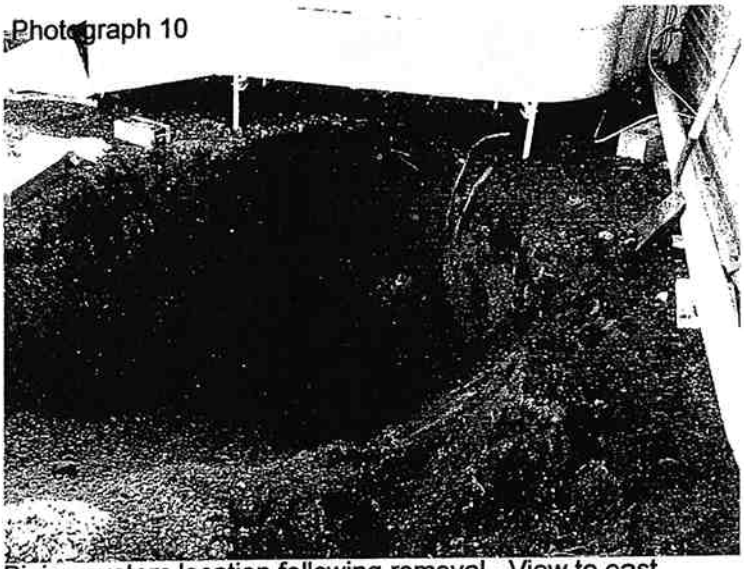


Piping system located inside concrete housing



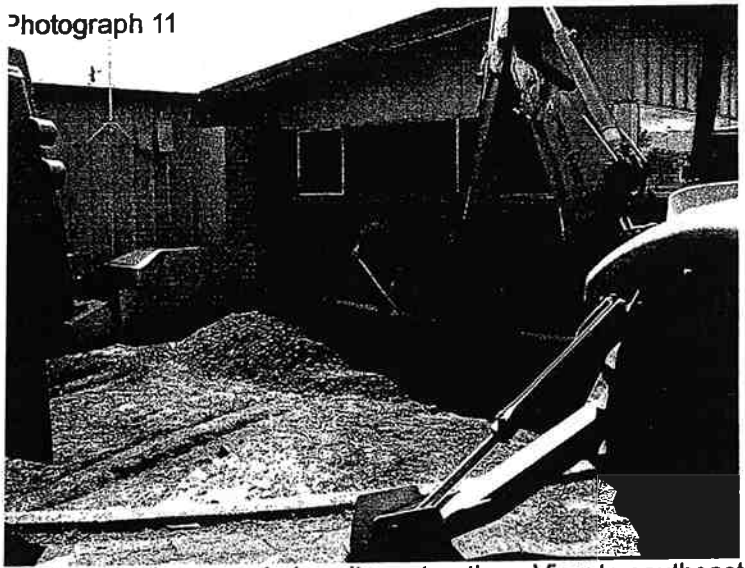
Removal of piping system housing

Photograph 10



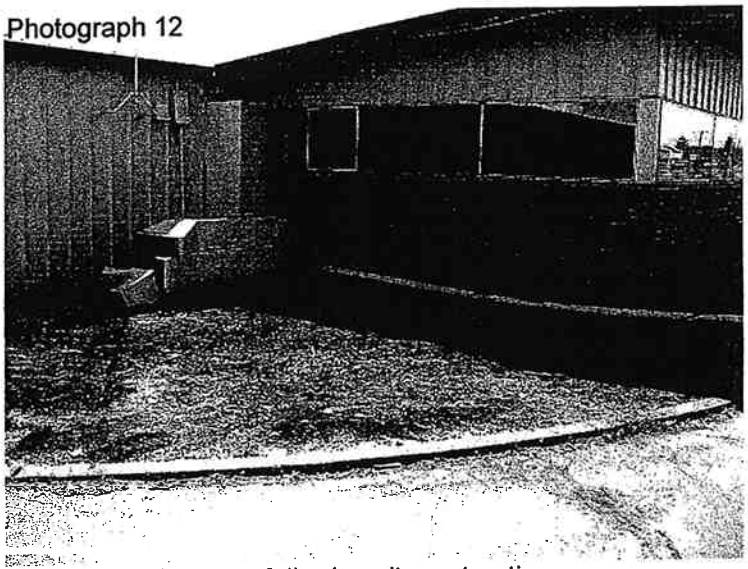
Piping system location following removal - View to east

Photograph 11



UST excavation area during site restoration - View to southeast

Photograph 12



UST excavation area following site restoration

SOUND ENVIRONMENTAL STRATEGIES	Robert & Ethyl Freeman Family, LLC UST Decommissioning Project 2119 Mildred Street West Fircrest, Washington	SES Project No.: 331-1 Date: May 24, 2002 Drawn By: SSpencer Chk By: Sspencer File ID: 331-1 Project Photos

Table 1 Petroleum Hydrocarbon Analyses

UST Decommissioning & Soil Remediation Project
2119 Mildred Street West
Fircrest, Washington

SOUND ENVIRONMENTAL STRATEGIES

May 24, 2002

Sample ID	Sample Location	Depth BGS	Sample Date	EPA Test Method								
				TPH-HCID				8260	NWTPH-G	NWTPH-Dx		
				Gasoline	Diesel	Oil	Mineral Oil	Volitale Organic Compounds	Gasoline	Diesel	Oil	Mineral Oil
				mg/kg								
S1-3.0'	North Sidewall	3.0'	4/5/2002	NA	NA	NA	NA	NA	NA	<20	<40	<40
S2-3.0'	East Sidewall - North	3.0'	4/5/2002	NA	NA	NA	NA	ND	NA	1700	<40	<40
S3-3.5'	UST 2 Floor	3.5'	4/5/2002	NA	NA	NA	NA	ND	NA	<20	<40	<40
S4-3.0'	West Sidewall - North	3.0'	4/5/2002	NA	NA	NA	NA	NA	NA	<20	<40	<40
S5-3.5'	UST 1 Floor	3.5'	4/5/2002	NA	NA	NA	NA	ND	NA	25	<40	<40
S6-3.5'	Pipe Housing Floor	3.5'	4/5/2002	NA	NA	NA	NA	ND	NA	<20	<40	<40
S7-3.0'	East Sidewall - South	3.0'	4/5/2002	NA	NA	NA	NA	ND	NA	440	<40	<40
S8-3.0'	South Sidewall	3.0'	4/5/2002	NA	NA	NA	NA	NA	NA	<20	<40	<40
S9-3.0'	West Sidewall - South	3.0'	4/5/2002	NA	NA	NA	NA	NA	**160**	<20	<40	<40
S1A-3.0'	North Sidewall	3.0'	5/23/2002	<20	<50	<100	<100	NA	NA	<20	<40	<40
S3A-3.5'	UST 2 Floor	3.5'	5/23/2002	<20	<50	<100	<100	NA	NA	<20	<40	<40
S5A-3.5'	UST 1 Floor	3.5'	5/23/2002	<20	<50	<100	<100	NA	NA	<20	<40	<40
S8A-3.0'	South Sidewall	3.0'	5/23/2002	<20	<50	<100	<100	NA	NA	<20	<40	<40
S11-4.0'	West Sidewall - 2nd Exe.	4.0'	5/23/2002	<20	<50	<100	<100	NA	NA	NA	NA	NA
S12-4.0'	North Sidewall - Over Exe.	4.0'	5/23/2002	<20	<50	<100	<100	NA	NA	NA	NA	NA
MTCA Method A Soil Cleanup Levels For Unrestricted Land Use:				100	2000	2000	2000	Listed	100	2000	2000	2000

Note:

MTCA Method A Cleanup Levels derived from Washington State Administrative Code Chapter 173-340,State of Washington Model Toxic Control Act (MTCA) Regulations as amended February 12, 2001 (Table 740-1, p.233).
BOLD/RED = analyte above MTCA Method A Cleanup Criteria
mg/kg = milligrams per kilogram
NA = not analyzed

Table 1 Petroleum Hydrocarbon Analyses

UST Decommissioning & Soil Remediation Project
2119 Mildred Street West
Fircrest, Washington

SOUND ENVIRONMENTAL STRATEGIES

May 24, 2002

Sample ID	Sample Location	Depth BGS	Sample Date	EPA Test Method								
				TPH-HCID				8260	NWTPH-G	NWTPH-Dx		
				Gasoline	Diesel	Oil	Mineral Oil	Volitale Organic Compounds	Gasoline	Diesel	Oil	Mineral Oil
				mg/kg								
S13-4.0'	South Sidewall - Over Exe.	4.0'	5/23/2002	<20	<50	<100	<100	NA	NA	NA	NA	NA
S14-4.0'	Floor - Over Exe.	4.0'	5/23/2002	<20	<50	<100	<100	NA	NA	NA	NA	NA
S15-4.0'	Pipe Housing Sidewall South	4.0'	5/23/2002	<20	<50	<100	<100	NA	NA	NA	NA	NA
S16-4.0'	Pipe Housing Sidewall East	4.0'	5/23/2002	<20	<50	<100	<100	NA	NA	NA	NA	NA
S17-4.0'	Pipe Housing Sidewall North	4.0'	5/23/2002	<20	<50	<100	<100	NA	NA	NA	NA	NA
S18-4.0'	Pipe Housing Sidewall Floor	4.0'	5/23/2002	<20	<50	<100	<100	NA	NA	NA	NA	NA
MTCA Method A Soil Cleanup Levels For Unrestricted Land Uses:				100	2000	2000	2000	Listed	100	2000	2000	2000

Note:

MTCA Method A Cleanup Levels derived from Washington State Administrative Code Chapter 173-340,State of Washington Model Toxic Control Act (MTCA) Regulations as amended February 12, 2001 (Table 740-1, p.233).
BOLD/RED = analyte above MTCA Method A Cleanup Criteria
mg/kg = milligrams per kilogram
NA = not analyzed

ESN NORTHWEST
Environmental Services Network

FILE COPY

April 23, 2002

Steve Spencer
Sound Environmental Strategies
12351 Lake City Way NE, Suite 102
Seattle, WA 98125

Dear Mr. Spencer:

Please find enclosed the analytical data report for the Freeman Project in Washington. Soil samples were analyzed for Diesel and Oil by NWTPH-Dx/Dx Extended, Gasoline by NWTPH-Gx, BTEX by Method 8021B, and VOC's by Method 8260 on March 8 – 17, 2002.

The results of these analyses are summarized in the attached tables. All soil values are reported on a dry weight basis. Applicable detection limits and QA/QC data are included. An invoice for this work is also enclosed.

ESN Northwest appreciates the opportunity to have provided analytical services to Sound Environmental Strategies for this project. It was a pleasure working with you on this project, and we are looking forward to the next opportunity to work together.

Sincerely,

Sherry L. Chilcutt
Vice President

677 Woodland Square Lp. SE, Suite D ■ Lacey, Washington 98503 ■ 360.459.4670 ■ FAX 360.459.3432
Web Site: *www.ESN-USA.com*
E-Mail: *esnnw@aol.com*

ESN NORTHWEST CHEMISTRY LABORATORY

FREEMAN PROJECT
Washington
Sound Environmental Strategies
Client Project #FREEMAN

Analyses of Diesel & Oil (NWTPH-Dx/Dx Extended) in Soil

Sample Number	Date Analyzed	Surrogate Recovery (%)	Diesel (mg/kg)	Oil (mg/kg)	Mineral Oil (mg/kg)
Method Blank	4/8/02	107	nd	nd	nd
Method Blank	4/9/02	97	nd	nd	nd
S2-3.0'	4/8/02	int	*1700	nd	nd
S3-3.5'	4/8/02	93	nd	nd	nd
S5-3.5'	4/8/02	95	*25	nd	nd
S6-3.5'	4/8/02	86	nd	nd	nd
S7-3.0'	4/9/02	104	*440	nd	nd
Method Detection Limits			20	40	40

"*" Indicates Diesel range hydrocarbons.
"nd" Indicates not detected at the listed detection limits.
"int" Indicates that interference prevents determination.

ACCEPTABLE RECOVERY LIMITS FOR SURROGATE : 65% TO 135%

ANALYSES PERFORMED BY: Dean Phillips

ESN NORTHWEST CHEMISTRY LABORATORY

FREEMAN PROJECT
Washington
SES

Analyses of Diesel & Oil (NWTPH-Dx/Dx Extended) in Soil

Sample Number	Date Analyzed	Surrogate Recovery (%)	Diesel (mg/kg)	Oil (mg/kg)	Mineral Oil (mg/kg)
Method Blank	4/17/02	106	nd	nd	nd
S1-3.0	4/17/02	88	nd	nd	nd
S1-3.0 Dup.	4/17/02	80	nd	nd	nd
S4-3.0	4/17/02	79	nd	nd	nd
S8-3.0	4/17/02	88	nd	nd	nd
S9-3.0	4/17/02	87	nd	nd	nd
Method Detection Limits			20	40	40

"nd" Indicates not detected at the listed detection limits.
"int" Indicates that interference prevents determination.

ACCEPTABLE RECOVERY LIMITS FOR SURROGATE : 65% TO 135%

ANALYSES PERFORMED BY: Tim McCall

ESN NORTHWEST CHEMISTRY LABORATORY

FREEMAN PROJECT
Washington
SES

Analyses of Gasoline (NWTPH-Gx) & BTEX (EPA Method 8021B) in Soil

Sample Number	Date Analyzed	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Xylenes (mg/kg)	Gasoline (mg/kg)	IPH (mg/kg)	Surrogate Recovery (%)
Method Blank	4/17/02	nd	nd	nd	nd	nd	nd	103
S9-3.0	4/17/02	nd	nd	nd	nd	nd	160	77
S9-3.0 Dup.	4/17/02	nd	nd	nd	nd	nd	140	72
Method Detection Limits		0.02	0.05	0.05	0.05	10	10	

"IPH" Indicates intermediate petroleum hydrocarbons.
"nd" Indicates not detected at the listed detection limits.
"int" Indicates that interference prevents determination.

ACCEPTABLE RECOVERY LIMITS FOR SURROGATE (Chlorobenzene): 65% TO 135%

ANALYSES PERFORMED BY: Tim McCall

ESN SEATTLE CHEMISTRY LABORATORY
(425) 957-9872, fax (425) 957-9904

ESN Job Number: S20408-1
Client: SES
Client Job Name: FREEMAN
Client Job Number: FREEMAN

Analytical Results

8260, µg/kg		MTH BLK	LCS	S2-3.0	MS S2-3.0	MSD S2-3.0	RPD S2-3.0	S3-3.5	S5-3.5
Matrix	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
Date extracted	Reporting	04/08/02	04/08/02	04/08/02	04/08/02	04/08/02	04/08/02	04/08/02	04/08/02
Date analyzed	Limits	04/08/02	04/08/02	04/08/02	04/08/02	04/08/02	04/08/02	04/08/02	04/08/02
Dichlorodifluoromethane	50	nd		nd				nd	nd
Chloromethane	50	nd		nd				nd	nd
Vinyl chloride	50	nd		nd				nd	nd
Bromomethane	50	nd		nd				nd	nd
Chloroethane	50	nd		nd				nd	nd
Trichlorofluoromethane	50	nd		nd				nd	nd
1,1-Dichloroethene	50	nd		nd				nd	nd
Methylene chloride	20	nd		nd				nd	nd
trans-1,2-Dichloroethene	50	nd		nd				nd	nd
1,1-Dichloroethane	50	nd		nd				nd	nd
cis-1,2-Dichloroethene	50	nd		nd				nd	nd
2,2-Dichloropropane	50	nd		nd				nd	nd
Chloroform	50	nd		nd				nd	nd
Bromochloromethane	50	nd		nd				nd	nd
1,1,1-Trichloroethane	50	nd		nd				nd	nd
1,2-Dichloroethane	50	nd		nd				nd	nd
1,1-Dichloropropene	50	nd		nd				nd	nd
Carbon tetrachloride	50	nd		nd				nd	nd
Benzene	20	nd	100%	nd	93%	95%	3%	nd	nd
Trichloroethene	20	nd	88%	nd	91%	95%	3%	nd	nd
1,2-Dichloropropane	50	nd		nd				nd	nd
Dibromomethane	50	nd		nd				nd	nd
Bromodichloromethane	50	nd		nd				nd	nd
cis-1,3-Dichloropropene	50	nd		nd				nd	nd
Toluene	50	nd	118%	nd	108%	112%	4%	nd	nd
trans-1,3-Dichloropropene	50	nd		nd				nd	nd
1,1,2-Trichloroethane	50	nd		nd				nd	nd
1,3-Dichloropropane	50	nd		nd				nd	nd
Dibromochloromethane	50	nd		nd				nd	nd
Tetrachloroethene	20	nd		nd				nd	nd
1,2-Dibromoethane (EDB)(*)	5	nd		nd				nd	nd
Chlorobenzene	50	nd	115%	nd	110%	113%	3%	nd	nd
1,1,1,2-Tetrachloroethane	50	nd		nd				nd	nd
Ethylbenzene	50	nd		nd				nd	nd
Xylenes	50	nd		nd				nd	nd
Styrene	50	nd		nd				nd	nd
Bromoform	50	nd		nd				nd	nd
1,1,2,2-Tetrachloroethane	50	nd		nd				nd	nd
Isopropylbenzene	50	nd		nd				nd	nd
1,2,3-Trichloropropane	50	nd		nd				nd	nd
Bromobenzene	50	nd		nd				nd	nd
n-Propylbenzene	50	nd		nd				nd	nd
2-Chlorotoluene	50	nd		nd				nd	nd
4-Chlorotoluene	50	nd		nd				nd	nd
1,3,5-Trimethylbenzene	50	nd		nd				nd	nd
tert-Butylbenzene	50	nd		nd				nd	nd
1,2,4-Trimethylbenzene	50	nd		nd				nd	nd
sec-Butylbenzene	50	nd		nd				nd	nd
1,3-Dichlorobenzene	50	nd		nd				nd	nd
1,4-Dichlorobenzene	50	nd		nd				nd	nd
Isopropyltoluene	50	nd		nd				nd	nd
1,2-Dichlorobenzene	50	nd		nd				nd	nd
n-Butylbenzene	50	nd		nd				nd	nd
1,2-Dibromo-3-Chloropropane	50	nd		nd				nd	nd
1,2,4-Trichlorobenzene	50	nd		nd				nd	nd
Naphthalene	50	nd		nd				nd	nd
Hexachloro-1,3-butadiene	50	nd		nd				nd	nd
1,2,3-Trichlorobenzene	50	nd		nd				nd	nd

*-instrument detection limits

ESN SEATTLE CHEMISTRY LABORATORY
(425) 957-9872, fax (425) 957-9904

ESN Job Number: S20408-1
Client: SES
Client Job Name: FREEMAN
Client Job Number: FREEMAN

Analytical Results

8260, µg/kg		MTH BLK	LCS	S2-3.0	MS S2-3.0	MSD S2-3.0	RPD S2-3.0	S3-3.5	S5-3.5
Matrix	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
Date extracted	Reporting	04/08/02	04/08/02	04/08/02	04/08/02	04/08/02	04/08/02	04/08/02	04/08/02
Date analyzed	Limits	04/08/02	04/08/02	04/08/02	04/08/02	04/08/02	04/08/02	04/08/02	04/08/02
Surrogate recoveries									
Dibromofluoromethane		88%	87%	87%	88%	90%		86%	86%
Toluene-d8		97%	95%	102%	96%	99%		97%	96%
4-Bromofluorobenzene		110%	116%	115%	111%	116%		111%	107%

Data Qualifiers and Analytical Comments
nd - not detected at listed reporting limits
Acceptable Recovery limits: 65% TO 135%
Acceptable RPD limit: 35%

ESN SEATTLE CHEMISTRY LABORATORY
(425) 957-9872, fax (425) 957-9904

ESN Job Number: S20408-1
Client: SES
Client Job Name: FREEMAN
Client Job Number: FREEMAN

Analytical Results

8260, µg/kg		S6-3.5	S7-3.0
Matrix	Soil	Soil	Soil
Date extracted	Reporting	04/08/02	04/08/02
Date analyzed	Limits	04/08/02	04/08/02
Dichlorodifluoromethane	50	nd	nd
Chloromethane	50	nd	nd
Vinyl chloride	50	nd	nd
Bromomethane	50	nd	nd
Chloroethane	50	nd	nd
Trichlorofluoromethane	50	nd	nd
1,1-Dichloroethene	50	nd	nd
Methylene chloride	20	nd	nd
trans-1,2-Dichloroethene	50	nd	nd
1,1-Dichloroethane	50	nd	nd
cis-1,2-Dichloroethene	50	nd	nd
2,2-Dichloropropane	50	nd	nd
Chloroform	50	nd	nd
Bromochloromethane	50	nd	nd
1,1,1-Trichloroethane	50	nd	nd
1,2-Dichloroethane	50	nd	nd
1,1-Dichloropropene	50	nd	nd
Carbon tetrachloride	50	nd	nd
Benzene	20	nd	nd
Trichloroethene	20	nd	nd
1,2-Dichloropropane	50	nd	nd
Dibromomethane	50	nd	nd
Bromodichloromethane	50	nd	nd
cis-1,3-Dichloropropene	50	nd	nd
Toluene	50	nd	nd
trans-1,3-Dichloropropene	50	nd	nd
1,1,2-Trichloroethane	50	nd	nd
1,3-Dichloropropane	50	nd	nd
Dibromochloromethane	50	nd	nd
Tetrachloroethene	20	nd	nd
1,2-Dibromoethane (EDB)(*)	5	nd	nd
Chlorobenzene	50	nd	nd
1,1,1,2-Tetrachloroethane	50	nd	nd
Ethylbenzene	50	nd	nd
Xylenes	50	nd	nd
Styrene	50	nd	nd
Bromoform	50	nd	nd
1,1,2,2-Tetrachloroethane	50	nd	nd
Isopropylbenzene	50	nd	nd
1,2,3-Trichloropropane	50	nd	nd
Bromobenzene	50	nd	nd
n-Propylbenzene	50	nd	nd
2-Chlorotoluene	50	nd	nd
4-Chlorotoluene	50	nd	nd
1,3,5-Trimethylbenzene	50	nd	nd
tert-Butylbenzene	50	nd	nd
1,2,4-Trimethylbenzene	50	nd	nd
sec-Butylbenzene	50	nd	nd
1,3-Dichlorobenzene	50	nd	nd
1,4-Dichlorobenzene	50	nd	nd
Isopropyltoluene	50	nd	nd
1,2-Dichlorobenzene	50	nd	nd
n-Butylbenzene	50	nd	nd
1,2-Dibromo-3-Chloropropane	50	nd	nd
1,2,4-Trichlorobenzene	50	nd	nd
Naphthalene	50	nd	nd
Hexachloro-1,3-butadiene	50	nd	nd
1,2,3-Trichlorobenzene	50	nd	nd

*-instrument detection limits

ESN SEATTLE CHEMISTRY LABORATORY
(425) 957-9872, fax (425) 957-9904

ESN Job Number:	S20408-1
Client:	SES
Client Job Name:	FREEMAN
Client Job Number:	FREEMAN

Analytical Results

8260, µg/kg		S6-3.5	S7-3.0
Matrix	Soil	Soil	Soil
Date extracted	Reporting	04/08/02	04/08/02
Date analyzed	Limits	04/08/02	04/08/02
Surrogate recoveries			
Dibromofluoromethane		83%	84%
Toluene-d8		97%	102%
4-Bromofluorobenzene		109%	104%

Data Qualifiers and Analytical Comments

nd - not detected at listed reporting limits
Acceptable Recovery limits: 65% TO 135%
Acceptable RPD limit: 35%

ESN NORTHWEST Environmental Services Network

CHAIN-OF-CUSTODY RECORD

CLIENT: SES
ADDRESS:
PHONE: 253-921-7059 FAX:
CLIENT PROJECT #: FREEMAN PROJECT MANAGER: SMS

DATE: 4-5-02 PAGE 1 OF 1
PROJECT NAME: FREEMAN
LOCATION:
COLLECTOR: SMS DATE OF COLLECTION 4-4

Sample Number	Depth	Time	Sample Type	Container Type	VOA 8021B	VOA 8021B BTEX Only	VOA 8260	SEMI VOL 8270	TPH - HCID	TPH 8015 (gasoline)	TPH 8015 (diesel)	TPH 8015 (d & o)	PAH 8100	PAH 8270	PCBs 8082	Pesticides 8081	EPH	VPH	Methamphetamine	Pb	Hex Chrome			NOTES	Total Number of Containers	Laboratory Note Number
1. S1-3.0'	3.0		GRAB	4 oz																				Hold		
2. S2-3.0'	3.0'		↓	4 oz			X					X														
3. S3-3.5'	3.5'			4 oz			X					X														
4. S4-3.0'	3.0			4 oz																				Hold		
5. S5-3.5'	3.5'			4 oz			X					X														
6. S6-3.5'	3.5'			4 oz			X					X														
7. S7-3.0'	3.0'			4 oz			X					X														
8. S8-3.0'	3.0'			4 oz																				Hold		
9. S9-3.0'	3.0'			4 oz																				Hold		
10.																										
11.																								Run S[illegible]		
12.																								S1-3.0, S[illegible] 3.0 [illegible]		
13.																								S9-3.0 FOR		
14.																								Dx/Dx HCID [illegible]		
15.																								SSN 4/11/02		
16.																										
17.																								S[illegible]		
18.																										

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SAMPLE RECEIPT	
TOTAL NUMBER OF CONTAINERS	9
CHAIN OF CUSTODY SEALS Y/N/NA	
SEALS INTACT? Y/N/NA	
RECEIVED GOOD COND./COLD	
NOTES:	

LABORATORY NOTES:
5 day Diesel } as per
48 hr 8260 } Steve

SAMPLE DISPOSAL INSTRUCTIONS

☐ ESN DISPOSAL @ $2.00 each ☐ Return ☐ Pickup

Turn Around Time: 24 HR (48 HR) 5 DAY

NORTHWEST Environmental Services Network

CHAIN-OF-CUSTODY RECORD

CLIENT: SES

ADDRESS:

PHONE: 253-931-7059 FAX:

CLIENT PROJECT #: FREEMAN PROJECT MANAGER: SWS

DATE: 4-5-02 PAGE 1 OF 1

PROJECT NAME: FREEMAN

LOCATION:

COLLECTOR: SWS DATE OF COLLECTION 4/4

Sample Number	Depth	Time	Sample Type	Container Type	VOA 8021B	VOA 8021B BTEX Only	VOA 8260	SEMI VOL 8270	TPH - HCID	TPH 8015 (gasoline)	TPH 8015 (diesel) BTEX	TPH 8015 (d & o)	PAH 8100	PAH 8270	PCBs 8082	Pesticides 8081	EPH	VPH	Methamphetamine	Pb	Hex Chrome				NOTES	Total Number of Containers	Laboratory Note Number
1. S1-2.0'	2.0'		Grab	4 oz								X													~~Hold~~		
2. S2-2.0'	2.0'		↓	4 oz			X					X															
3. S3-3.5'	3.5'		↓	4 oz			X					X															
4. S4-2.0'	2.0'		↓	4 oz			X					X													~~Hold~~		
5. S5-3.5'	3.5'		↓	4 oz			X					X															
6. S6-3.5'	3.5'		↓	4 oz			X					X															
7. S7-2.0'	2.0'		↓	4 oz			X					X															
8. S8-2.0'	2.0'		↓	4 oz			X					X													~~Hold~~		
9. S9-2.0'	2.0'			4 oz						X		X													~~Hold~~		
10.																											
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RELINQUISHED BY (Signature)	DATE/TIME	RECEIVED BY (Signature)	DATE/TIME

SAMPLE RECEIPT	
TOTAL NUMBER OF CONTAINERS	9
CHAIN OF CUSTODY SEALS Y/N/NA	
SEALS INTACT? Y/N/NA	
RECEIVED GOOD COND./COLD	
NOTES:	

LABORATORY NOTES:

Turn Around Time: 24 HR 48 HR 5 DAY

SAMPLE DISPOSAL INSTRUCTIONS

☐ ESN DISPOSAL @ $2.00 each ☐ Return ☐ Pickup

ESN NORTHWEST CHEMISTRY LABORATORY

FREEMAN PROJECT
Washington
SES
Client Project #331-1

PRELIMINARY DATA

Hydrocarbon Identification by NWTPH-HCID for Soil

Sample Number	Date Analyzed	Surrogate Recovery (%)	Gasoline (mg/kg)	Diesel (mg/kg)	Heavy Oil (mg/kg)	Mineral Oil (mg/kg)
Method Blank	5/30/02	101	nd	nd	nd	nd
S1A	5/30/02	81	nd	nd	nd	nd
S3A	5/30/02	75	nd	nd	nd	nd
S5A	5/30/02	114	nd	nd	nd	nd
S8A	5/30/02	84	nd	nd	nd	nd
Method Detection Limits			20	50	100	100

"nd" Indicates not detected at listed detection limits.
"D" Indicates detected above the listed detection limit.
"int" Indicates that interference prevents determination.

ACCEPTABLE RECOVERY LIMITS FOR SURROGATE : 65% TO 135%

ANALYSES PERFORMED BY: Tim McCall

ESN NORTHWEST CHEMISTRY LABORATORY

PRELIMINARY DATA

FREEMAN PROJECT
Washington
SES
Client Project #331-1

Hydrocarbon Identification by NWTPH-HCID for Soil

Sample Number	Date Analyzed	Surrogate Recovery (%)	Gasoline (mg/kg)	Diesel (mg/kg)	Heavy Oil (mg/kg)	Mineral Oil (mg/kg)
Method Blank	5/30/02	109	nd	nd	nd	nd
S11	5/30/02	81	nd	nd	nd	nd
S12	5/30/02	74	nd	nd	nd	nd
S13	5/30/02	79	nd	nd	nd	nd
S13 Dup.	5/30/02	67	nd	nd	nd	nd
S14	5/30/02	90	nd	nd	nd	nd
S15	5/30/02	78	nd	nd	nd	nd
S16	5/30/02	80	nd	nd	nd	nd
S17	5/30/02	87	nd	nd	nd	nd
S18	5/30/02	102	nd	nd	nd	nd
Method Detection Limits			20	50	100	100

"nd" Indicates not detected at listed detection limits.
"D" Indicates detected above the listed detection limit.
"int" Indicates that interference prevents determination.

ACCEPTABLE RECOVERY LIMITS FOR SURROGATE : 65% TO 135%

ANALYSES PERFORMED BY: Tim McCall

ESN NORTHWEST | Environmental Services Network

CHAIN-OF-CUSTODY RECORD

CLIENT: SES

ADDRESS:

PHONE: 206 306 1900 FAX: 206 306 1907

CLIENT PROJECT #: # 331-1 PROJECT MANAGER: SMS

DATE: 5-29-02 PAGE 1 OF 1

PROJECT NAME: FREEMAN-

LOCATION: Metal Marine

COLLECTOR: SMS DATE OF COLLECTION 5-23

Sample Number	Depth	Time	Sample Type	Container Type	VOA 8021B	VOA 8021B BTEX Only	VOA 8260	SEMI VOL 8270	TPH - HCID	TPH 8015 (gasoline)	TPH 8015 (diesel)	TPH 8015 (d & o)	PAH 8100	PAH 8270	PCBs 8082	Pesticides 8081	EPH	VPH	Methamphetamine	Pb	Hex Chrome				NOTES	Total Number of Containers	Laboratory Note Number
1. S10			GRAB	4 oz						X		X													HOLD		
2. S11										X		X	HCID														
3. S12										X		X	HCID														
4. S13										X		X	HCID														
5. S14										X		X	HCID														
6. S15										X		X	HCID														
7. S16										X		X	HCID														
8. S17										X		X	HCID														
9. S18										X		X	HCID														
10.																											
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SAMPLE DISPOSAL INSTRUCTIONS

☐ ESN DISPOSAL @ $2.00 each ☐ Return ☐ Pickup

SAMPLE RECEIPT	
TOTAL NUMBER OF CONTAINERS	9
CHAIN OF CUSTODY SEALS Y/N/NA	
SEALS INTACT? Y/N/NA	
RECEIVED GOOD COND./COLD	
NOTES:	

LABORATORY NOTES:

HCID for samples + Quant. Marked. Hold others 48 hr PM 5/30/02

Turn Around Time: 24 HR 48 HR 5 DAY

ESN NORTHWEST | Environmental Services Network

CHAIN-OF-CUSTODY RECORD

CLIENT: SES

ADDRESS:

PHONE: 206 306 1900 FAX: 206 306 1907

CLIENT PROJECT #: 331-1 PROJECT MANAGER: SMS

DATE: 5-29-02 PAGE 1 OF 1

PROJECT NAME: FREEWAY

LOCATION: Retail Mart

COLLECTOR: SMS DATE OF COLLECTION 5-23

Sample Number	Depth	Time	Sample Type	Container Type	VOA 8021B	VOA 8021B BTEX Only	VOA 8260	SEMI VOL 8270	TPH - HCID	TPH 8015 (gasoline)	TPH 8015 (diesel)	TPH 8015 (d & o)	PAH 8100	PAH 8270	PCBs 8082	Pesticides 8081	EPH	VPH	Methamphetamine	Pb	Hex Chrome	NOTES	Total Number of Containers	Laboratory Note Number
1. S1A									X	HCID														
2. S3A									X	HCID														
3. S4A									X													HOLD		
4. S5A									X	HCID														
5. S8A									X	HCID														
6.																								
7.																								
8.																								
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SAMPLE DISPOSAL INSTRUCTIONS

☐ ESN DISPOSAL @ $2.00 each ☐ Return ☐ Pickup

SAMPLE RECEIPT	
TOTAL NUMBER OF CONTAINERS	5
CHAIN OF CUSTODY SEALS Y/N/NA	
SEALS INTACT? Y/N/NA	
RECEIVED GOOD COND./COLD	
NOTES:	

LABORATORY NOTES:

48 hr
HCID for samples & Quant.
Hold others pm 5/30/..

Turn Around Time: 24 HR 48 HR 5 DAY

OLYMPIC VIEW
SANITARY LANDFILL INC

P.O. BOX 990 • BREMERTON, WA 98337
674-2331

№ 17321

Date 5/23/0

To: 2002-051

Weatherby @ Sound Envir

Loose cu. yds. @

1 Compacted cu. yds. @

Septic gals. @

G-59440

T-25980

47[3]

INVOICE No.

Signature

WASTE MANAGEMENT

OLYMPIC VIEW SANITARY LANDFILL

PERMIT # 2002-051

PERMIT TO DISPOSE OF NON-HAZARDOUS/ NON-DANGEROUS MATERIALS

EXPIRES: 8/22/02

GENERATOR: METAL MARINE PILOT		
DESCRIPTION: *PCS - DIESEL, CLASS IV*		TONS: *10*
LOCATION: *FIRCREST, WASHINGTON*		
CONTACT: *STEVE SPENCER*		PHONE: *206-306-1900*
BILLING: sound environmental	PO#:	JOB#:

We accept business checks, cash or charge (with prior approval)

SPECIAL HANDLING : *NONE:*

ME *BR* *MH*

APPROVED: Kristin Castner DATE: *05/22/02 8:46:30 AM*

A COPY OF THIS PERMIT MUST BE SHOWN BY EACH DRIVER

HAZARDOUS/DANGEROUS WASTE IS STRICTLY PROHIBITED

USA WASTE SERVICES, INC....THE QUALITY PLUS CHOICE

OLYMPIC VIEW SANITARY LANDFILL WASTE DISPOSAL APPLICATION
(Not applicable to MSW)

Mail to: Waste Management
Kristin Castner
7227 NE 55th Avenue
Portland, OR 97218
Phone: (800) 685-8001
Fax: ~~(800) 583-5263~~
503 ~~493~~-7822

Disposal Site: Olympic View Sanitary Landfill, Inc.
10015 SW Barney White Road
Port Orchard, WA 98337
Phone: (360) 674-2331
Fax: (360) 674-7028

Note: All questions must be answered for waste to be approved.

BKCHD # _____
OVSL # _____
Renewal # _____

1. Generator Information:

Company Name: Metal Marine Pilot
Mailing Address: 3512 SW 310th CT.
Federal Way, WA 98023
Contact: Janet Freeman-Daily
Phone/Fax: 253 606 2173
Project Name: UST INVESTIGATION
Project Location: 2119 MILDRED ST. FIRCREST, WA

2. Other Contacts *(If applicable)*

Consulting Firm: Sound Environmental Strategies
Contact: Stephen Spencer
Phone: 253 921 7050
Contractor Name: SAME
Contact:
Phone:
Laboratory: ESN
Contact: Shery Chilcutt
Phone: 306 459 3432

Billing (*Party responsible for invoices*): Sound Environmental
Contact: Steve Spencer
Address: 12351 Lake City Way Suite 102
Phone: 206 306 1900

3. **Source of Waste:**
Check the appropriate box below and briefly describe the project, process, and/or cleanup that will or has produced the waste requiring disposal. Include the gasoline service station number (if applicable).

- ☐ CERCLA / MTCA Remediation Agency Contact: _____
- ☐ Independent Remedial Action
- ☑ UST Removal
- ☐ Unused Chemical Product Spill
- ☐ Other

_____

_____

_____

4. **Waste Material Composition:** (*check all that apply and include percent of total*)

☑	Soil	100 %	☐	Foundry Slag	____ %
☐	Concrete Asphalt	____ %	☐	Dredge Sediments	____ %
☐	Preserved Wood	____ %	☐	Debris	____ %
☐	Coal Ash	____ %	☐	Other (list)	
☐	Wood Ash	____ %		_____	____ %
				_____	____ %

NOTE: Total must equal 100%

5. **Waste Material Contaminants:** (*check all that apply*)

☐	Gasoline	☑	Metals
☑	Diesel	☐	Solvents
☐	Heating Oil	☐	PCBs
☐	Unused Motor Oil	☐	Other _____
☐	Used Motor Oil / Waste Oil		_____
☐	Other Petroleum Product _____	☐	Unknown

NOTE: Supply MSDS information with application, if available.

6. **Estimated Quantity of Waste for Disposal:**

4-6 cubic yards / 6-8 tons (estimate both)

_____ drums / _____ tons (estimate both)

Other _____

NOTE: **Estimated quantity for disposal must be within 20% of the quantity actually disposed. (10% for projects over 7,500 tons or 5,000 cubic yards.)**

7. **Frequency of Disposal:**

☑ One time ☐ Monthly ☐ Annual ☐ Other

8. **Waste Sampling:**

Proper characterization of waste for disposal requires the collection of representative samples. The methods and equipment necessary for obtaining representative samples of a waste, and the frequency of sampling, will vary with the type and form of the waste. Check the appropriate box and briefly describe how and where the waste was sampled. Include site maps with sampling locations if possible.

Number of COMPOSITE samples 0 & number of discrete samples per composite 0

Number of DISCRETE samples 9

Sampling Per WAC 173-360 - UST ASSESSMENT GUIDELINES.

NOTE 1: **Unless prior approval has been granted by OVSL, the following sampling frequency will be used:**

0 – 25	cubic yards	= 1 composite sample
25 – 100	cubic yards	= 3 composite samples
101 – 500	cubic yards	= 5 composite samples
501 – 1000	cubic yards	= 7 composite samples
1001 – 2000	cubic yards	= 10 composite samples
>2000	cubic yards	= 10 plus one sample for each additional 500 cubic yards

NOTE 2: **One composite sample shall contain a minimum of three/maximum of five discrete samples.**

9. **Waste Analysis:**

The "Dangerous Waste Regulations" (WAC 173-303) shall be utilized to determine the appropriate analytical requirements for waste characterization. Ecology Publication # 91-30 "Guidance for Remediation of Petroleum Contaminated Soils" shall also be used to characterize petroleum contaminated soils from UST releases. Submit all laboratory analytical results, QA/QC data, and Chain of Custody sheets along with this application. **(NOTE the laboratory must be accredited by the Washington State Department of Ecology.)**

a) List all analytical test methods used:

NWTPH-Dx, NWTPH-G, 8260 VOC

b) Provide a narrative as to why the above analytical methods were selected:

Analytical Methods were selected based on the historical contents of the UST System.

NOTE: **Additional sheets attached (analytical with QA/QC and C.O.C.)** ☒ **YES** ☐ **NO**

10. Soil Classification: (**FOR PETROLEUM CONTAMINATED SOILS ONLY**)

Based on the analytical data and Ecology Publication #91-30, the soil classification is: (check one)

☐ Class 1 ☐ Class 2 ☐ Class 3 ☐ Class 4

11. Dangerous Waste Affidavit:

Based on a review of the analytical test results, site history, and the applicable regulations, this waste is classified as: (check one)

☑ Neither Dangerous Waste (DW) nor Extremely Hazardous Waste (EHW)

☐ Dangerous Waste (DW) and Waste Code: _____

☐ Extremely Hazardous Waste (EHW) and Waste Code: _____

TERMS AND CONDITIONS OF DISPOSAL

1. **ACCEPTABLE WASTE.** Customer shall deliver and Company shall accept for disposal only Acceptable Waste. Customer shall deliver the full quantity of Acceptable Waste generated, handled and/or collected by Customer as estimated above. Acceptable Waste means and includes only such waste as is described above and which is approved and permitted for disposal at the Designated Landfill and shall not include any Excluded Waste. As used herein, Excluded Waste means waste that: (a) is not in conformance with the description of the waste set forth above; (b) is or contains any infectious waste, or radioactive, volatile, corrosive, highly flammable, explosive, biomedical, biohazardous material or hazardous, dangerous, or toxic substances, as defined pursuant to or listed or regulated under applicable federal, state or local law above regulated levels permitted for disposal as the Designated Landfill; (c) is prohibited from being received or disposed of at the Designated Landfill by federal, state or local law, regulation, rule, code, ordinance, order, permit or permit condition; (d) Company reasonably believes would, as a result of or upon disposal, be a violation of local, state or federal law, regulation or ordinance, including land use restrictions or conditions applicable to the Designated Landfill; or (e) in Company's opinion would present a significant risk to human health or the environment, cause a nuisance or otherwise create or expose Company or Customer to potential liability.

2. **REPRESENTATIONS & WARRANTIES.** Customer represents and warrants that: (a) the description of the waste set forth on the first page hereof is true and correct in all material respects; (b) all waste delivered to the Designated Landfill by Customer shall be Acceptable Waste as defined above and shall not be or contain Excluded Waste; (c) Customer shall, and shall cause any carrier with which it contracts to, handle and transport the waste in a safe and workmanlike manner in full compliance with all applicable federal, state and local laws, ordinances, decisions, orders, rules or regulations; and (d) Customer has advised its drivers of Company's prohibition on delivery of Excluded Waste, of the definitions and listing of hazardous waste and hazardous substances under applicable federal and state law and regulations and of the definition of Acceptable Waste herein. Company represents and warrants that it shall dispose of the Acceptable Waste in a safe and workmanlike manner in full compliance with all applicable federal, state and local laws, ordinances, decisions, orders, rules or regulations.

3. **TITLE; INSPECTION, REJECTION OF WASTE.** Title to and ownership of all Acceptable Waste shall transfer to Company upon its final acceptance of Acceptable Waste Title to, ownership of and liability for Excluded Waste shall at all times remain with Customer. Company may inspect the waste delivered by Customer and reject Excluded Waste. If, following acceptance of the waste delivered by Customer, such waste is found to be or contain Excluded Waste, in whole or in part, Company may revoke its acceptance of all such waste. Revocation of acceptance by Company shall operate to re-vest all incidents of ownership in Customer at the time revocation is communicated, either orally or in writing. Customer shall remove Excluded Waste, at its sole cost and expense, from the possession of Company promptly, but in no event later than 7 days, after notice of rejection or revocation of acceptance. Company shall have the right to refuse to accept or to reject any Acceptable Waste in the event of Customer's failure to pay disposal fees owed by Customer.

4. **INDEMNITY.** Each party hereto (the "Indemnitor") hereby agrees to indemnify, hold harmless and defend the other party, and its owners, officers, directors, employees and agents (collectively, the "Indemnitees"), from and against any and all liabilities, penalties, fines, forfeitures, demands, claims, causes of action, suits, judgments and costs and expenses incidental thereto, including attorneys' fees (collectively, "Damages"), which any or all of the Indemnitees may hereafter suffer, incur, be responsible for or pay out as a result of personal injuries, property damage, or contamination of or adverse effects on the environment, to the extent caused by, or arising from or in connection with the breach of any representations or warranties of the Indemnitor set forth in this Agreement, or any negligent actions or omissions or willful misconduct of the Indemnitor, its employees, officers, owners, directors or agents, or the violation of any law, ordinance or regulation, including, without limitation, the Comprehensive Environmental Response, Compensation and Liability Act, 42 U.S.C. § 9601 et seq., as amended. Such indemnity shall exclude Damages to the extent they arise as a result of any negligent actions or omissions or willful misconduct of the Indemnitees or their employees, officers, owners, directors or agents. The indemnification obligation hereunder shall arise only in excess of any available and collectible insurance proceeds and the Indemnitor shall be liable hereunder to pay only its share of the amount of Damages, if any, that exceeds the total amount that all insurance has paid for the Damages, plus the total of all deductible and self-insured expenses paid under all insurance policies. The obligations in this Section 4 shall survive the performance and termination of this Agreement.

5. **UNCONTROLLABLE CIRCUMSTANCES; TERMINATION.** Except for the obligation to pay fees for disposal of Acceptable Waste accepted at the Designated Landfill, the performance of this Agreement may be discontinued or temporarily suspended by either party, and neither party shall be deemed to be in breach of this Agreement, in the event the delivery of waste by Customer, or the disposal of waste by Company are prevented by a cause or causes beyond the reasonable control of either party. Such causes shall include, but not be limited to, acts of God, acts of war, riot, fire, explosion, accident, flood or sabotage, governmental laws (including nuisance), permit conditions, regulations, restrictions (including land use), condition of the waste or injunction. Company may immediately terminate disposal services upon written notice to Customer in the event Customer breaches any term, provision or obligation under this Agreement, in which case, Customer shall be liable for and shall pay to Company all costs and losses incurred by Company as a result of or relating to any such termination.

6. MISCELLANEOUS. This Agreement shall be governed by the laws of the state in which the Designated Landfill is located. Every provision of this Agreement shall be severable. This Agreement represents the entire understanding and Agreement between the parties relating to the disposal of waste, except that, if the parties, or their parent companies, are parties to a national service agreement, the terms of such national service agreement shall control over any inconsistent terms in this Agreement. No representations, statements or Agreements, unless agreed to by the parties in writing, shall modify, change, amend or otherwise affect the obligations undertaken in this Agreement. No waiver by either party of any one or more defaults or breaches by the other in the performance of this Agreement shall operate or be construed as a waiver of any future defaults or breaches. Customer may not assign this Agreement without the prior written consent of Company. This Agreement shall be binding upon and shall inure to the benefit of the parties' successors and assigns.

CERTIFICATION

THIS DOCUMENT MUST BE SIGNED BY THE GENERATOR OR GENERATOR'S AUTHORIZED REPRESENTATIVE, AND INDICATES A FIRST HAND KNOWLEDGE OF THE WASTE'S CHARACTERISTICS. BY SIGNING BELOW, GENERATOR CERTIFIES THE TRUTH OF THE INFORMATION ON THE FIRST PAGE HEREOF AND THAT GENERATOR HAS READ AND AGREES TO THE TERMS AND CONDITIONS SET FORTH ON THE FIRST AND SECOND PAGES HEREOF WHICH ARE INCORPORATED HEREIN.

DATE: 5/22/02 CUSTOMER / GENERATOR: Metal Marine

PRINTED NAME: Janet Freeman - Daily

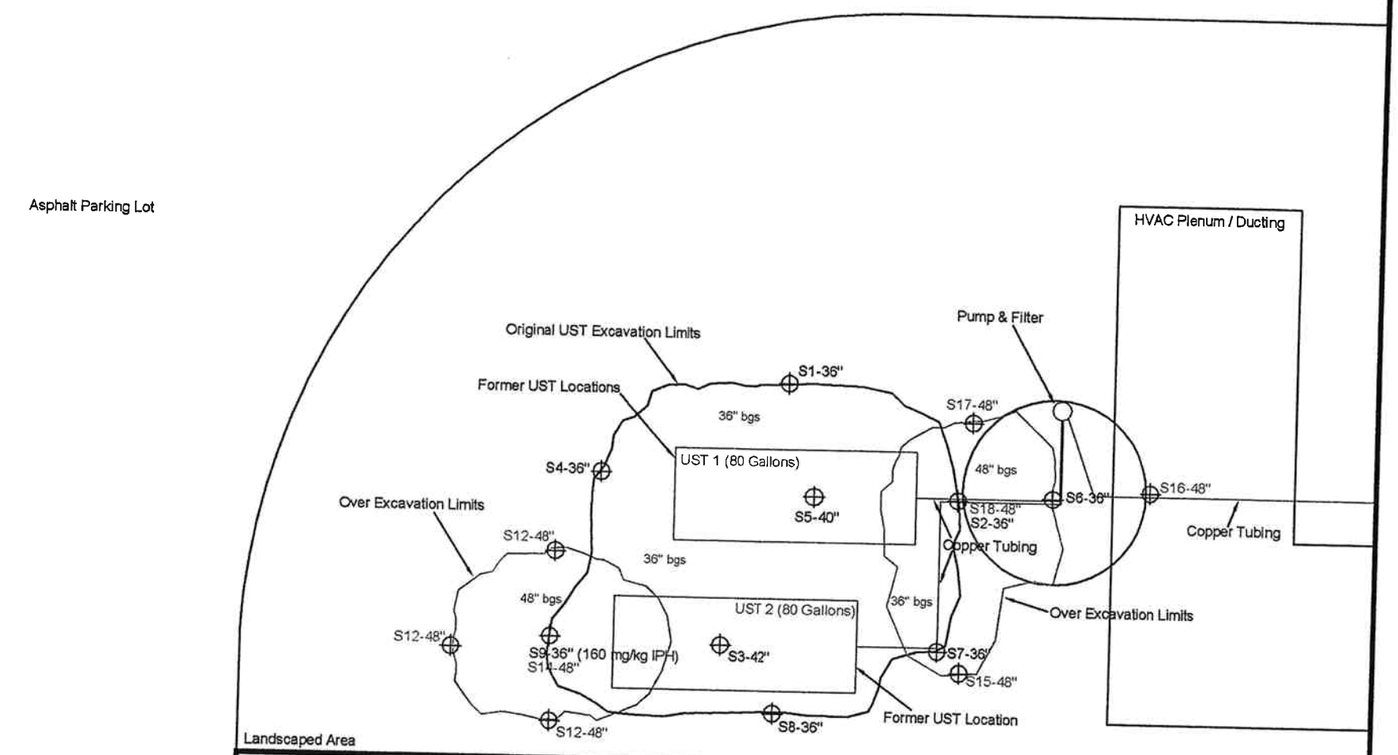
SIGNATURE: Agent for Janet Freeman Daily

APPROVAL

Authorized Signature: _____

Date: _____

Approval Expiration Date: _____



SOUND ENVIRONMENTAL STRATEGIES

FIGURE 2

SOIL SAMPLE LOCATION MAP

PROJECT NAME:	MILDRED STREET PROJECT
LOCATION:	2119 MILDRED STREET FIRCREST, WASHINGTON
SES PROJECT NUMBER:	331-1

Date:	05-24-02
Drawn By:	SSpencer
Checked By:	SSpencer
File ID:	331-1 Soil Sample Location Map

TACOMA-PIERCE COUNTY HEALTH DEPARTMENT

Site Hazard Assessment - Initial Investigation Report

ERTS ID #:	S521646
TPCHD ID #:	RO0000858
County:	Pierce
Date of Investigation:	10/24/01
Inspector:	Sharon Bell
Site Name:	Metal Marine Pilot
Type of Operation:	Marine Equipment manufaturer
Location:	2119 S Mildred ST
City/State/Zip:	Fircrest, WA 98456
Caller:	Mary Barnes City of Fircrest (253) 564-1146
Site Representative:	Janet Freeman-Daly Owner (253) 606-2173

Issue: Removal of a 60 - 80 gallon UST (hot water heater) filled with kerosene

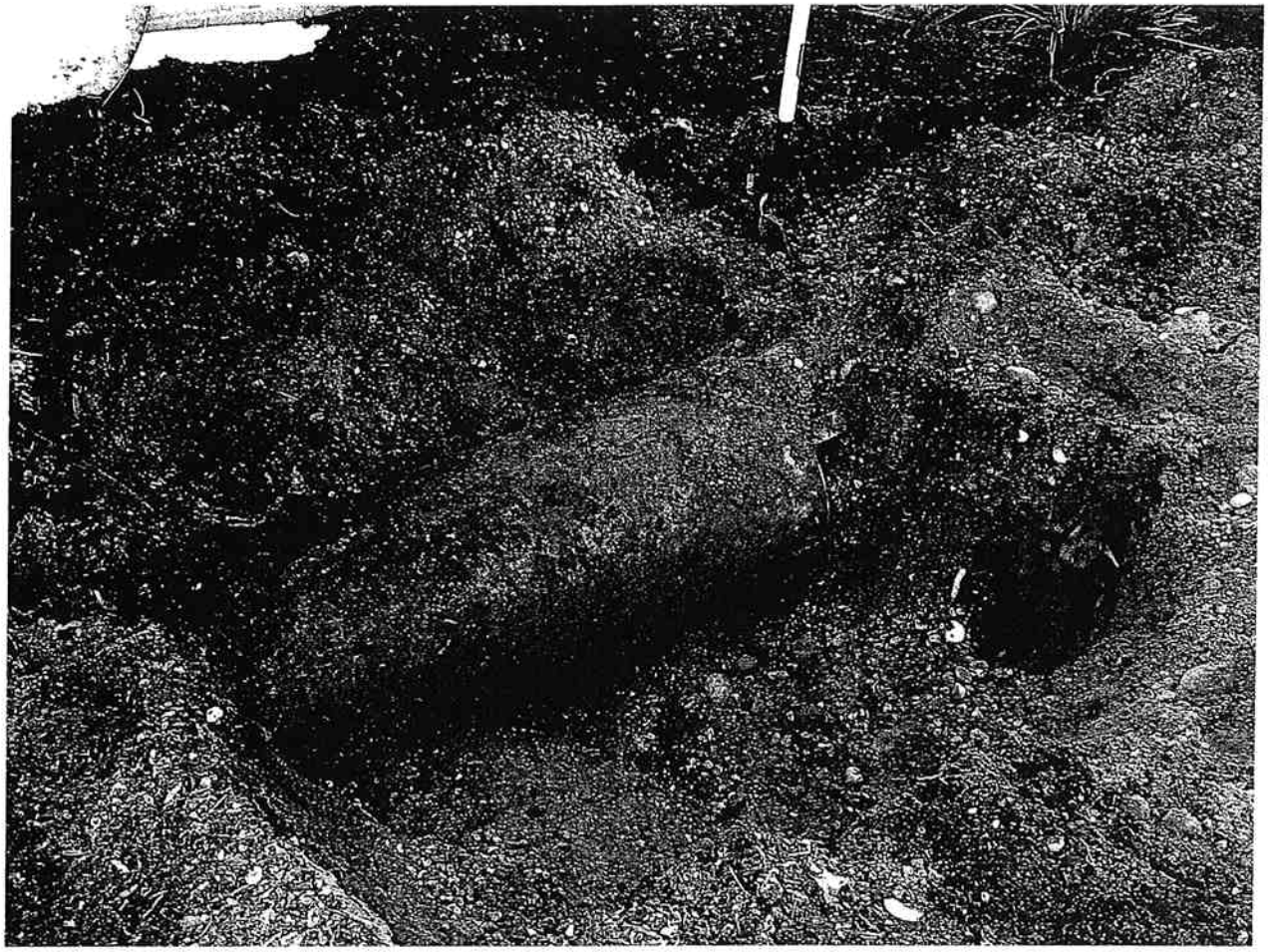
Narrative: UST was finally removed in early April 2002 by Sound Environmental Strategies; Steve Spencer is the Project Manager and he will send me a copy of the tank removal report by end of May 2002.

8.19.02: Received UST Decommissioning & Soil Remediation Report for this site from Steve Spencer, SES. Final determination was an 80 gallon hot water heater held kerosene that was used in a circulating system for parts cleaning in the manufacture of marine equipment. During excavation, a second 80 gallon hot water heater was discovered adjacent to the first. Both hot water heaters were used in a similar manner and neither showed evidence of leaking. The sides and bottom of the excavation were sampled for petroleum hydrocarbons, and one sample location had gasoline at 160 ppm. The area was overexcavated, resampled and all analytical results were below MTCA Method A cleanup levels for petroleum hydrocarbons.

Summary: USTs have been removed, small amount of soil that was contaminated has been removed to proper disposal facility.

Recommendation: **NFA**

Report Printed: 8/20/02



Underground Storage Tank Decommissioning & Soil Remediation Project

2119 Mildred Street West
Fircrest, Washington

May 24, 2002

Prepared for:

Robert and Ethel Freeman Family LLC
3512 SW 310th Ct.
Federal Way WA 98023

Prepared by:

Sound Environmental Strategies, Corp.
12351 Lake City Way, Suite 102
Seattle, Washington 98125

SOUND ENVIRONMENTAL STRATEGIES

Table of Contents

APPENDICES

1.0 INTRODUCTION

1.1 DOCUMENT PURPOSE

Sound Environmental Strategies, Corp. (SES) has prepared this underground storage tank (UST) assessment report on behalf of Ms. Janet Freeman-Daily, property manager of the property located at 2119 Mildred Street, Fircrest, Washington (Site). The property owner is Robert & Ethel Freeman Family, LLCI. SES was hired by the property owner to decommission by removal 1 – 80 gallon kerosene UST. During the UST decommissioning activities a second 80 gallon UST was identified adjacent to the first UST. Mrs. Freeman-Daily was contacted and had no knowledge of the second UST. This report documents the field observations and the results of the decommissioning activities

Tank closure and site assessment activities were completed in accordance with the following documents published by the Washington State Department of Ecology (Ecology):

Guidance for Site Checks and Site Assessments for Underground Storage Tanks (Ecology, February 1991);

Guidance for Remediation of Releases from Underground Storage Tanks (Ecology, July, 1991); and,

The Model Toxics Control Act Cleanup Regulation, Chapter 173-340 WAC (Ecology, February 2001).

1.2 SITE LOCATION AND DESCRIPTION

The subject property, 2119 Mildred Street, is located in a light industrial and commercial area of Fircrest Washington near the intersection of Mildred Street and Regents Blvd. The site is 9.5 acres in size and is occupied by one main building and one painting / storage building. The property Parcel Number is 0220112005.

2.0 PRE-EXCAVATION ACTIVITIES

2.1 ANTICIPATED SITE CONDITIONS

The site has been historically used as a manufacturing facility and warehouse space for light industrial activities. The area where the USTs were located is along the western side of the building set near an air intake HVAC system (Figure 2). Both USTs were located six to eight inches below ground surface (bgs) in a landscaped area adjacent to the building. The USTs were used to supply kerosene in a circulating system for parts cleaning and had been installed in the late 1960's to early 1970's. No known releases from the USTs had reportedly occurred.

2.2 HEALTH AND SAFETY

A site-specific Health and Safety Plan (HASP) was prepared in accordance with Chapter 296-62 of the Washington Administrative Code (WAC) and 29 CFR 1910.120 (Code of Federal Regulations). The HASP identified potential physical and chemical hazards and specified personal protection and safety monitoring requirements. Site health and safety meetings were conducted during fieldwork at the beginning of each workday to review aspects of the HASP, and to provide an opportunity for SES site workers and contractor personnel to discuss health and safety issues or concerns. On-site SES personnel associated with the field activities were required to be familiar with and comply with provisions put forth in the HASP. Subcontractors on-site were required to have their own HASP that identified potential physical and chemical hazards associated with their own work activities.

During intrusive field activities, the on-site SES site manager performed air monitoring using an organic vapor monitor/photoionization detector (Mini Ray 5 Gas Analyzer [PID]). The PID was properly calibrated to 100 parts per million (ppm) isobutylene daily. Organic vapors were not observed in the breathing zone, the excavation or in soil sample headspace above normal background levels, as described in the HASP, during remedial activities at the Site. No other incidences, releases, or worker injuries were recorded during the project.

2.3 UTILITY LOCATION

Prior to implementing site activities public underground utilities alert network was notified of intrusive activities. The service contacted appropriate agencies or companies with underground utilities in the area. These agencies then marked the location of their utilities along the right-of-ways and easements of the property.

3.0 UST CLOSURE

An UST Closure permit was obtained from the City of Fircrest prior to conducting the decommissioning activities. The UST sizes were below the Department of Ecology (WAC 173-360-110) and Tacoma Pierce County Health Department (TPCHD) notification requirements. The USTs were in fact old water heaters converted for use as kerosene storage tanks.

The USTs were excavated using a case 580 backhoe. Following the removal of the USTs from the excavation, each UST was inspected and showed no obvious sign of leakage or corrosion (Photograph 3). According to the former business owner, Michael Freeman, the USTs were installed in the late 1960's to early 1970's. Both USTs were steel, double-walled water heaters. Piping from each of the USTs ran through the concrete piping housing (Photograph 8) and into the adjacent building. The piping inside the building was reportedly previously cut and drained. The re-circulating system was decommissioned by the business owner prior to the UST decommissioning event. The USTs measured four feet in length and two feet in diameter. A total of seven gallons of kerosene was recovered and disposed of at a local recycling facility

during the decommissioning activities. The USTs were then transported to Rivers Edge Services to be cut up for disposal (disposal receipt attached - Appendix B).

During the excavation of the USTs, several soil field-screening techniques failed to detect any obvious indication of hydrocarbon contamination in the excavation area. Field screening methods included:

- Olfactory Observations
- Visual Observations
- Photoionization Detector (PID)
- Sheen Test

4.0 EXCAVATION, REMEDIATION AND SOIL SAMPLING ACTIVITIES

4.1 EXCAVATION & REMEDIATION ACTIVITIES

Following the removal of the USTs, soil samples were collected from each sidewall and below each UST along the excavation floor. In addition, a sample was obtained from the bottom of the piping housing (Table1, Figure 1). Each soil sample was collected in accordance with WAC 173-360 Washington State UST Site Assessment Requirements. The samples were analyzed by Environmental Services Network (ESN). All soil samples collected from the UST excavation were analyzed for kerosene using diesel extended range hydrocarbons analysis (NWTPH-Dx). Select samples (S2, S3, S5, S6 & S7) were also analyzed for volatile organic compounds. Based on laboratory chromatogram results, one sample (S9-3.0') was also analyzed for gasoline-range hydrocarbons. ESN laboratory chemist reported that while analyzing sample S9-3.0' for diesel range hydrocarbons, he detected an *"intermediate range petroleum hydrocarbon"* and suggested that additional petroleum hydrocarbon analyses be conducted. All sample analytical results were reported below Washington Department of Ecology (Ecology) MTCA Method A Soil Cleanup Levels for Unrestricted Land Uses.

As a precautionary measure and at the direction of the client, SES conducted additional excavation at the site to address the "intermediate-range petroleum hydrocarbon" reported by the laboratory. SES removed by excavation 6.7 tons of soil from the western excavation side wall that reportedly contained intermediate petroleum range hydrocarbons. The purpose of this excavation activity was to remove from the site any soil affected by petroleum hydrocarbons regardless of the reported concentrations. The excavation was guided by field parameters, including:

- Olfactory Observations
- Visual Observations
- Field Analytical Observations
    - Photoionization Detector (PID)
    - Sheen Test
    - Shaker Test

The excavated 6.7 tons (approximately 4 cubic yards) of affected soil was directly loaded into a dump truck and transported to Waste Managements, Olympic View disposal facility (Disposal receipt attached - Appendix B).

4.2 CONFIRMATION SAMPLING

Following the supplemental excavation activities, confirmation soil sampling was completed along the perimeter and the bottom of the UST excavation and over excavation (Figure 2). Soil samples were analyzed for Total Petroleum Hydrocarbons - Hydrocarbon Identification (TPH-HCID). Additional soil samples were also colleted from the original perimeter of the UST excavation and also analyzed for TPH-HCID. No indications of contamination were observed in any of the field screening activities completed during the confirmation soil sampling activity. Laboratory results for the twelve soil samples analyzed for TPH-HCID were reported below quantifiable analytical detection limits (Table 1).

4.3 SITE RESTORATION

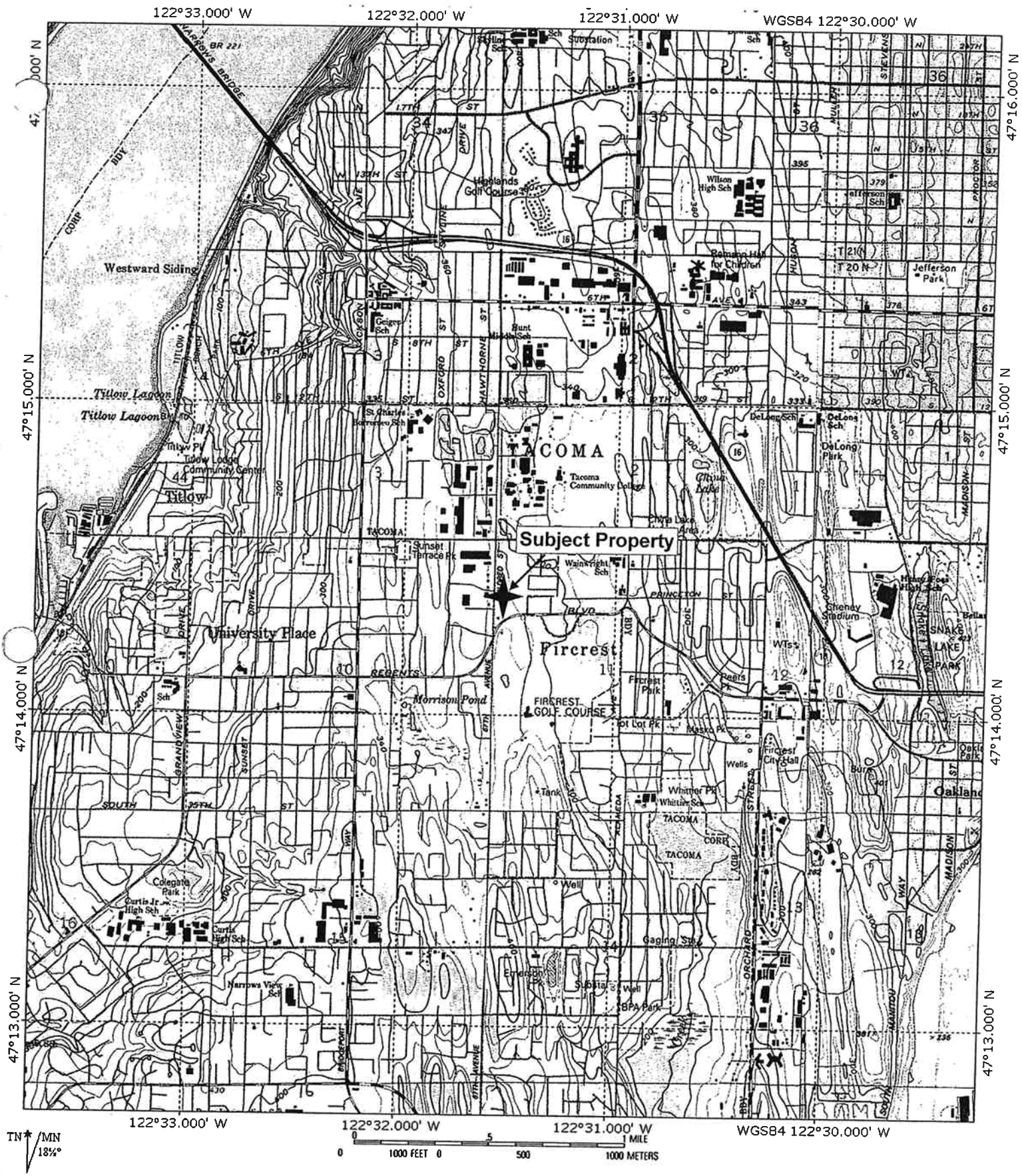
The excavation was backfilled with imported soil from Port Orchard Sand & Gravel following confirmation sampling. Bark dust removed during the excavation process was replaced over the excavation area.

5.0 SUMMARY

Both USTs were effectively decommissioned and disposed. Affected soil identified through analysis completed by a state licensed laboratory of containing intermediate petroleum range hydrocarbons was effectively removed through over excavation and disposed of at a state licensed disposal facility. Confirmation soil samples colleted from the excavation side walls and excavation floor were analyzed at a state licensed laboratory for contaminants of concern. Results of conformational samples were reported below the MTCA Method A Soil Cleanup Levels for Unrestricted Land Use. Further, laboratory results reported no confirmation samples analyzed exceeded laboratory detection limits. No groundwater was observed during excavation activities. No further work is recommended.

6.0 LIMITATIONS

SES services performed for this project, including this report, were conducted in accordance with generally accepted professional practices ordinarily exercised by other members of the environmental consulting profession, for the nature and conditions of the work completed in the same or similar localities, at the time the work was performed. These services were conducted subject to project-specific time limits and financial, physical and any other constraints applicable to this project. It is intended for the use of the client, for specific application to the referenced property. This report is not meant to represent a legal opinion. No other warranty, express or implied, is made.



SOUND ENVIRONMENTAL STRATEGIES	Site Location Map Robert & Ethyl Freeman Family, LLC UST Decommissioning Project 2119 Mildred Street West Fircrest, Washington	SES Project No.: 331-1 Date: May 24, 2002 Drawn By: SSpencer Chk By: Sspencer File ID: 331-1 Site Location Map

SOUND ENVIRONMENTAL STRATEGIES

www.soundenvironmental.com

October 8, 2001

Janet Freeman-Daily, President
Metal Marine Pilot, Inc.
3512 SW 310th Ct.
Federal Way, WA 98023

RE: Testing of surface soils near eastern swale of the property at 2119 Mildred Street, Fircrest, Washington

Dear Janet:

Sound Environmental Strategies (SES, formerly doing business as Creative Environmental Technologies, Inc.), is pleased to present the following letter report describing soil sampling that was performed in the eastern portion of the property at 2119 Mildred Street, Fircrest, Washington (see the attached Site Location Map).

Background

SES performed the work at your request to obtain information about soil associated with red staining in portions of the property. SES understood that the property might be involved in a real estate transaction in the future. Stormwater drainage on the property was in the process of being modified during the fall of 2000, and Metal Marine wanted to verify that potential metal contamination from soil was not being released into the stormwater system.

Sampling and Results

An initial sample was collected in an area approximately 3 feet in elevation above the floor of the swale, on the western slope of the swale, approximately 350 feet south of the northern property boundary. Stained soil was scraped from the top 1 inch of soil over approximately a 10 inch, by 10 inch area. The soil was a poorly sorted sand, with some rounded and angular medium gravel. Red staining coated soil grains and dead plant matter, penetrating to approximately a one inch depth.

Soil was collected using a stainless steel sampling spoon, and was placed in a jar provided by the analytical laboratory. The sample was stored in a cooler at approximately 4 C until it was delivered to the laboratory. Chains of custody documentation was established for the sample (chains of custody are included with the analytical results as an attachment to this letter).

This initial sample contained arsenic (160 mg/kg) and cadmium (30 mg/kg) at concentrations above MTCA Method A Cleanup Levels (20 mg/kg for arsenic, and 2 mg/kg for cadmium). Following the initial sampling, more samples were collected and analyzed. Results of initial and follow-up sampling are summarized in the table below. The locations of samples are shown in the attached map. The method of collecting samples was the same as for the initial sample.

One final sample was collected on November 27, 2000. After several heavy rain events, a sheen developed on water seeping out the swale slope. The sheen is visible in the attached photos. A surface soil sample was collected of soil with sheen. The sheen broke up easily and did not appear to be associated with oil. It was suspected that the sheen was due to biological activity, however, the sample was analyzed for petroleum hydrocarbons and metals.

The metal concentrations encountered in the initial sample were not confirmed by follow-up sampling. Sample S5-91500 was collected in an area of particularly strong red staining, near the location of the initial sample. This sample was analyzed for 13 metals. Arsenic was not detected, and cadmium was detected at a concentration of 1.3 mg/kg, (below the MTCA Method A Cleanup Level of 2.0 mg/kg).

One sample, S4-91500, contained arsenic concentrations (29 mg/Kg) slightly above the MTCA Method A Cleanup Level (20 mg/kg).

No pattern of occurrence was found in the sample results, and there did not appear to be a direct relationship between the red staining and arsenic and cadmium concentrations.

In the opinion of SES the red staining, and the sheen apparent during the November sampling event, are the result of naturally occurring bacteria. "Iron bacteria" consume dissolved iron leaving a residue of iron hydrate, and are not considered a health hazard.

Table 1: Results of the Metal Marine Facility Soil Sampling on the Swale Bank. Concentrations are in mg/Kg

Sample S1-82900 Sampled on August 29, 2000, depth of 0-2 inches

		MTCA Method A	MTCA Method B
Arsenic	160	20	1.67
Barium	260	na	5600
Cadmium	30	2	80
Chromium	6.7	19*	400*
Lead	18	250	na
Mercury	<.05	1	24
Selenium	<8	na	400
Silver	<.7	na	4000
Tetrachloroethene	<.25	0.5	19.6

Sample S5-91500 Sampled on September 15, 2000, depth of 0-1 inches

		MTCA Method A	MTCA Method B
Antimony	<5	na	na
Arsenic	<5	20	1.67
Beryllium	0.1	na	.23
Cadmium	1.3	2	80
Chromium	18	19*	400*
Copper	12	na	2960
Lead	12	250	na
Mercury	<.05	1	24
Nickel	17	na	na
Selenium	<8	na	4000
Silver	<.7	na	4000
Thallium	<.2	na	na
Zinc	29	na	24000

Sample	Arsenic	Depth
S1-91500	<5	0-1 inches
S2-91500	<5	6 inches
S3-91500	<5	0-4 inches
S4-91500	29	0-4 inches
S6-91500	<5	0-4 inches
S7-91500	<5	0-4 inches

Sample S1-112700 Sampled on November 27, 2000

		MTCA Method A	MTCA Method B
Arsenic	<5	20	1.67
Cadmium	<.3	2	80
Lead	8	250	na
HCID-gasoline	<20	100	na
HCID-Diesel	<50	2000	na
HCID-Oil	<100	4000	na

*Chromium VI

Regulatory Issues

Sampling in the swale did not identify the source of the metals found in the samples. Both arsenic and cadmium compounds are found in commercially available turf and lawn weed killers and fungicides. In the opinion of SES, the concentrations observed could be due to the proper application of such products. The metal concentrations observed do not appear to constitute a reportable release to the environment.

Conclusion

The occurrence of the metals does not represent a large area of contaminated soil. The occurrence and concentrations encountered do not appear to represent a release that is a threat to human health or the environment.

Closing

If you have questions regarding this technical memorandum or other matters, please do not hesitate to call me at (253) 627-3347. We appreciate the opportunity to provide you with environmental services.

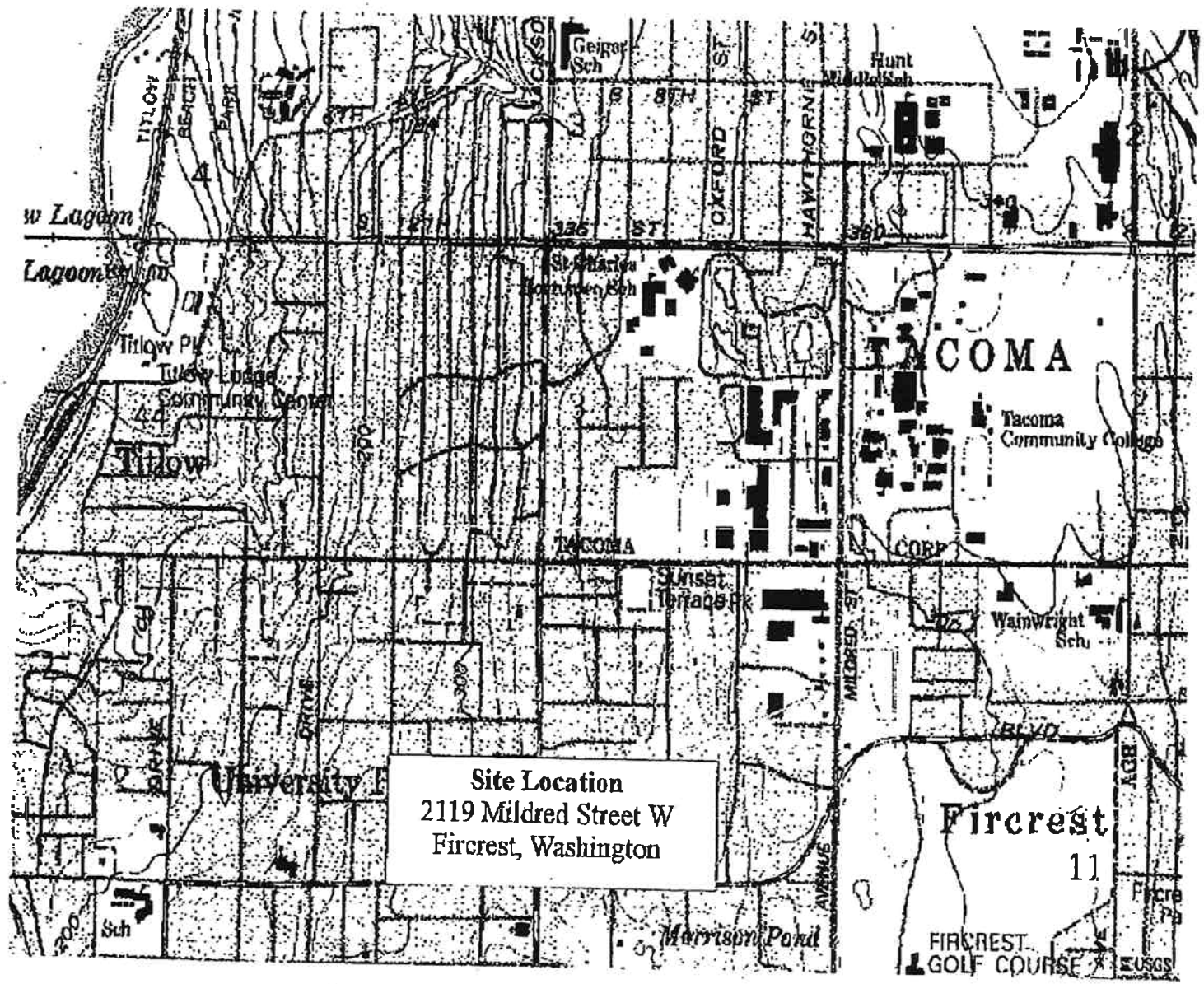
Respectfully,
Sound Environmental Strategies

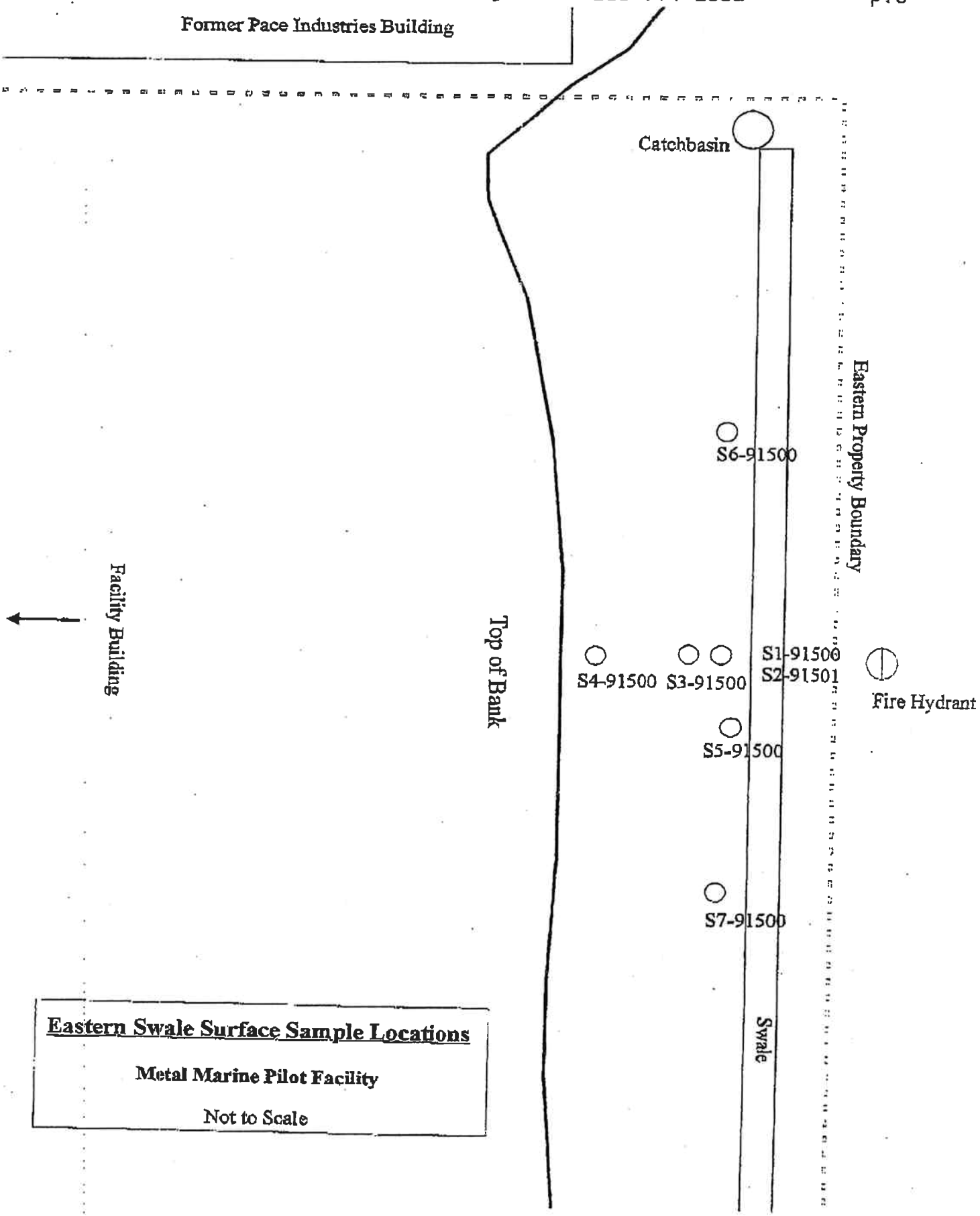
Linda Drake
Principal Hydrogeologist

253 627-3347
253 572-4207 fax
253 381-7575 cell
ldrake@soundenvironmental.com

c: Clark Davis, Esq.

Site Location Map

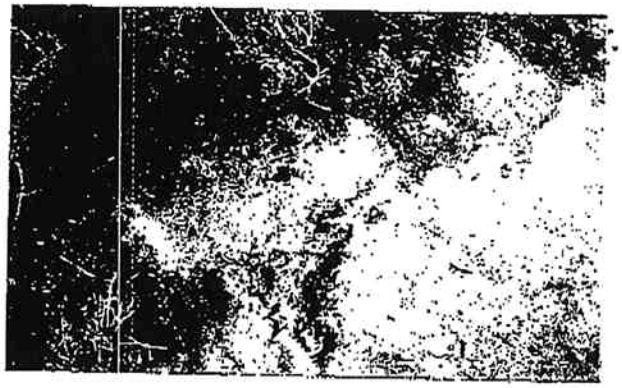




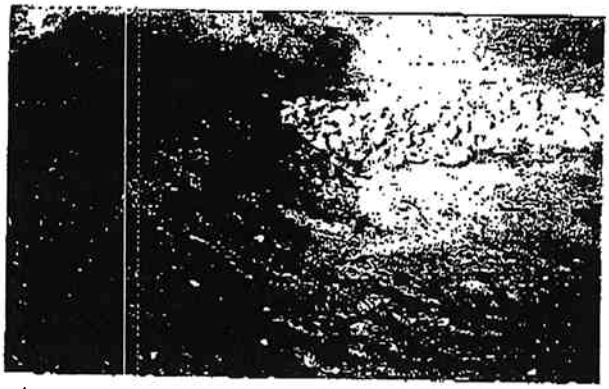
Eastern Swale Surface Sample Locations

Metal Marine Pilot Facility

Not to Scale



Photos 1 and 2: Seep of water with sheen on west side of swale.



Looking toward the north down the swale.

4

Looking toward the north.

5

Looking toward the south.

SOUND ENVIRONMENTAL STRATEGIES	Metal Marine Pilot Property 2119 Mildred Street West Fircrest, Washington	SES Project No.: 165-2 Date: 8/24/01 Drawn By: LAD File ID: Lindawork/165-1	Photographs Eastern Swale

SPECTRA Laboratories

2221 Ross Way • Tacoma, WA 98421 • (253) 272-4850

12/05/2000

Creative Environmental Technologies, Inc
P.O. Box 1803
Tacoma, WA 98401
Attn: Linda Drake

P.O.#:	5371
Project:	MET MAR
Client ID:	S1-112700
Sample Matrix:	Soil
Date Sampled:	11/27/2000
Date Received:	11/27/2000
Spectra Project:	2000110221
Spectra Number:	1
	Rush

Analyte	Result	Units	Method
Arsenic	< 5	mg/Kg	SW846 6010B
Cadmium	< 0.3	mg/Kg	SW846 6010B
Lead	8	mg/Kg	SW846 6010B
HCID- Gasoline	<20	mg/Kg	NWTPH-HCID
HCID-Diesel	<50	mg/Kg	NWTPH-HCID
HCID-Oil	<100	mg/Kg	NWTPH-HCID

Surrogate	Recovery	Method
4-Bromofluorobenzene	25	NWTPH-D
p-Terphenyl	43	NWTPH-D

SPECTRA LABORATORIES

Steve Hibbs, Laboratory Manager

2000111.0221

CHAIN of CUSTODY

SPECTRA Laboratories

PAGE 1 of 1

2221 Ross Way • Tacoma, WA 98421 • (253) 272-4850 • Fax (253) 572-9838 • www.spectra-lab.com

STANDARD ☐ RUSH ☒

CLIENT: CETI
PROJECT: MET MAR
CONTACT: LINDA DRAKE
PHONE: 627-3347
FAX: 253-572-4207 e-MAIL: lindar@cetinw.com
PURCHASE ORDER #: 5271

					HYDROCARBONS							ORGANICS					METALS				OTHER											
SAMPLE ID	DATE SAMPLED	TIME SAMPLED	MATRIX	NUMBER OF CONTAINERS	NWTPH-HCID	BTEX	BTEX/NWTPH-G	NWTPH-G	NWTPH-D	1664 SGT-HEM	1664 HEM	8260 VOA	8260 CHLOR SOLVENTS	8270 SEMI-VOA	PAH/PNA-8270	8082 PCB	TOTAL METALS RCRA 8	TOTAL METALS (SPECIFY)	TCLP METALS RCRA 8	TCLP METALS (SPECIFY)	pH 9040/9045	TX/TOX 9076	TOC 9060/PSEP	FLASH POINT	SOLIDS (SPECIFY)	[illegible]	HCID					
S1-112700	11-27-00	1:30	Soil	1														X								X					

SPECIAL INSTRUCTIONS/COMMENTS:

* As, Pb, Cd

~~** Tentatively Identified Compounds by GC/MS~~

	SIGNATURE	PRINTED NAME	COMPANY	DATE	TIME
RELINQUISHED BY	[signature]	LINDA DRAKE	CETI	11/27/00	4:30
RECEIVED BY	[signature]	MARIE HOLT	Spectra	11-27-00	4:30
RELINQUISHED BY					
RECEIVED BY					

RETURN SAMPLES ☐ DISPOSE SAMPLES ☐
(Fee Applies)

Payment Terms: Net 30 days. Past due accounts subject to 1½% per month interest. Customer agrees to pay all costs of collection including reasonable attorney's fees and all other associated costs of collection regardless of whether suit is filed. *Spectra Analytical, Inc.*

M99CS000569M 9

SPECTRA Laboratories
2221 Ross Way • Tacoma, WA 98421 • (253) 272-4850

09/26/2000

Creative Environmental Technologies, Inc
P.O. Box 1803
Tacoma, WA 98401
Attn: Ms. Linda Drake

Project: Met Mar
Sample Matrix: Soil
Date Sampled: 09/15/2000
Date Received: 09/18/2000
Spectra Project: 2000090174

Spectra #	Client ID	Analyte	Result	Units	Method
1	S5-91500	Antimony	< 5	mg/Kg	SW846 6010B
1	S5-91500	Arsenic	< 5	mg/Kg	SW846 6010B
1	S5-91500	Beryllium	0.1	mg/Kg	SW846 6010B
1	S5-91500	Cadmium	1.3	mg/Kg	SW846 6010B
1	S5-91500	Chromium	18	mg/Kg	SW846 6010B
1	S5-91500	Copper	12	mg/Kg	SW846 6010B
1	S5-91500	Lead	12	mg/Kg	SW846 6010B
1	S5-91500	Mercury	<0.05	mg/Kg	SW846 7471A
1	S5-91500	Nickel	17	mg/Kg	SW846 6010B
1	S5-91500	Selenium	< 8	mg/Kg	SW846 6010B
1	S5-91500	Silver	< 0.7	mg/Kg	SW846 6010B
1	S5-91500	Thallium	< 0.2	mg/Kg	SM 3113B
1	S5-91500	Zinc	29	mg/Kg	SW846 6010B
2	S1-91500	Arsenic	< 5	mg/Kg	SW846 6010B
3	S2-91500	Arsenic	< 5	mg/Kg	SW846 6010B
4	S3-91500	Arsenic	< 5	mg/Kg	SW846 6010B
5	S4-91500	Arsenic	29	mg/Kg	SW846 6010B
6	S6-91500	Arsenic	< 5	mg/Kg	SW846 6010B
7	S7-91500	Arsenic	< 5	mg/Kg	SW846 6010B
8	CS-NESW2-7	Tetrachloroethene	<0.25	mg/Kg	SW846 8260B

SPECTRA LABORATORIES

Steve Hibbs, Laboratory Manager
a7/scj

CHAIN of CUSTODY

PAGE 1 of 1

SPECTRA Laboratories

2221 Ross Way • Tacoma, WA 98421 • (253) 272-4850 • Fax (253) 572-9838

CLIENT: CETI
PROJECT: MET MAR
CONTACT: LINDA DRAKE
PHONE: 627-3347
PURCHASE ORDER #: 5279

SAMPLE ID	DATE SAMPLED	TIME SAMPLED	MATRIX	NUMBER OF CONTAINERS
S5-91500	9-15-00	11:00	SOIL	1
S1-91500				
S2-91500				
S3-91500				
S4-91500				
~~S5-91500~~				
S6-91500				
S7-91500				
CS-NESW2-7	9-15-00	12:35	SOIL	1

HYDROCARBONS							ORGANICS						TCLP D-LIST					METALS			OTHER								RETURN
NWTPH-HCID	BTEX/NWTPH-G	BTEX	NWTPH-G	NWTPH-D	1664 SGT-HEM	1664 HEM	8260 VOA **	8260 CHLOR SOLVENTS	8270 SEMI-VOA	PAH/PNA-8270	8081 ORG. CHLOR PEST.	8082 PCB	TCLP METALS (8)	TCLP-VOA	TCLP 8270 SEMI-VOA	TCLP PEST.	TCLP HERB.	TOTAL METALS ICP/ICP	TOTAL METALS GFAA ***	TOTAL LEAD	pH 9040/9045	TOX 9020/9076	TOC 9060/PSEP	FLASH POINT	SOLIDS (SPECIFY)	METALS *				DISPOSE
																		X							X				Fee applies
																		X											LAB ID
																		X											
																		X											
																		X											
																		X											
																		X											
																		X											
																		X											
							X																						

SPECIAL INSTRUCTIONS/COMMENTS:

* TOTAL METALS - 13 PRIORITY POLLUTANT METALS TO MTCA LIMITS

** Tetrachloroethylene (PCE) only.

*** As (Arsenic) only

	SIGNATURE	PRINTED NAME	COMPANY	DATE	TIME
RELINQUISHED BY		ERIC MELAND	CETI	9-18-00	12:05
RECEIVED BY	Vicki Cline	Vicki Cline	Spectra Labs	9-18-00	1205
RELINQUISHED BY					
RECEIVED BY					

Payment Terms: Net 30 days. Past due accounts subject to 18% per annum interest. Customer agrees to pay all costs of collection including reasonal attorney's fees and all other associated costs of collection regardless of whether suit is filed.

SPECTRA Laboratories

2221 Ross Way • Tacoma, WA 98421 • (253) 272-4850

09/12/2000

Creative Environmental Technologies, Inc
P.O. Box 1803
Tacoma, WA 98401
Attn: Linda Drake

P.O.#:	5263
Project:	Met Mar
Client ID:	S1-82900
Sample Matrix:	Soil
Date Sampled:	08/29/2000
Date Received:	09/07/2000
Spectra Project:	2000090051
Spectra Number:	1

Analyte	Result	Units	Method
Arsenic	160	mg/Kg	SW846 6010B
Barium	260	mg/Kg	SW846 6010B
Cadmium	30	mg/Kg	SW846 6010B
Chromium	6.7	mg/Kg	SW846 6010B
Lead	18	mg/Kg	SW846 6010B
Mercury	<0.05	mg/Kg	SW846 7471A
Selenium	< 8	mg/Kg	SW846 6010B
Silver	< 0.7	mg/Kg	SW846 6010B
Tetrachloroethene	<0.25	mg/Kg	SW846 8260B

Surrogate	Recovery	Method
Dibromofluoromethane	107	SW846 8260B
Toluene-d8	105	SW846 8260B
4-Bromofluorobenzene	101	SW846 8260B

SPECTRA LABORATORIES

Michael Deckert, Chemist

ss/mlk

SPECTRA Laboratories

2221 Ross Way • Tacoma, WA 98421 • (253) 272-4850 • Fax (253) 572-9838

CHAIN of CUSTODY

PAGE 1 of 1

D90051

CLIENT: CETI
PROJECT: METMAR
CONTACT: LINDA DRAKE
PHONE: 627-3347
PURCHASE ORDER #: 5263

SAMPLE ID	DATE SAMPLED	TIME SAMPLED	MATRIX	NUMBER OF CONTAINERS
S1-82900	8-29-00	9:00	SOIL	1

HYDROCARBONS							ORGANICS						TCLP D-LIST					METALS			OTHER								RETURN
NWTPH-HCID	BTEX/NWTPH-G	BTEX	NWTPH-G	NWTPH-D	1664 SGT-HEM	1664 HEM	8260 VOA	8260 CHLOR SOLVENTS	8270 SEMI-VOA	PAH/PNA-8270	8081 ORG. CHLOR PEST.	8082 PCB	TCLP METALS (8)	TCLP-VOA	TCLP 8270 SEMI-VOA	TCLP PEST.	TCLP HERB.	TOTAL METALS ICP/DOP	TOTAL METALS GFAA	TOTAL LEAD	pH 9040/9045	TOX 9020/9078	TOC 9060/PSEP	FLASH POINT	SOLIDS (SPECIFY)	TCE **			NORMAL / RUSH	DISPOSE Fee applies
		X																	X						X				LAB ID
																X													1

SPECIAL INSTRUCTIONS/COMMENTS:

** Tetrachloroethylene

* RCRA 8 List to Meet MTCA Limits

	SIGNATURE	PRINTED NAME	COMPANY	DATE	TIME
RELINQUISHED BY		ERIC MELLAND	CETI	9-7-00	11:55AM
RECEIVED BY		MAXIE HOLT	Spectra	9-7-00	11:55AM
RELINQUISHED BY					
RECEIVED BY					

Payment Terms: Net 30 days. Past due accounts subject to 18% per annum interest. Customer agrees to pay all costs of collection including reasonable attorney's fees and all other associated costs of collection regardless of whether suit is filed.

SOUND ENVIRONMENTAL STRATEGIES

www.soundenvironmental.com

October 14, 2001

Janet Freeman-Daily
3512 SW 310 Ct.
Federal Way, Washington

Dear Ms Freeman-Daily:

Please consider the corrections listed below in this letter as corrections to the Phase 1 Environmental Site Assessment (Level 1 Environmental Site Assessment), dated May 7, 1999, on the property at 2119 Mildred Street West, in Fircrest, Washington. The Phase 1 was prepared by Sound Environmental Strategies Corporation, formerly Creative Environmental Technologies. These changes are based on your communications with me.

Corrections to Level 1 Environmental Site Assessment, May 7, 1999:

Cover Page—**Prepared For: Janet Freeman-Daily, POA for Dr. Robert M. Freeman** should replace "Prepared For: Michael Freeman, Metal Marine Pilot, Inc., Wood Freeman Automatic Pilots"

Page 5, Section 1.0, paragraph 1—the address should read 2119 Mildred St. West, **Fircrest, Washington,** instead of "Tacoma, Washington."

Page 5, Section 1.0, paragraph 3, second sentence should be—**Based on interviews with Mr. Michael Freeman, son of the property owner and president of the current lessor, Metal Marine Pilot, Inc., previous on-site activites (ie. the improper disposal of certain chemical solvent wastes in the undeveloped area east of the manufacturing building) may have impacted the soil.** This replaces the sentence reading "Based on interviews with the property owner, Mr. Michael Freeman, previous on-site activites, i.e. the improper disposal of certain chemical solvent wastes in the undeveloped area east of the manufacturing building, may have impacted the soil."

Page 5, Section 2.0, paragraph 2, first sentence should be—**This report was prepared at the request of Janet Freeman-Daily, POA for the property owner, Dr. Robert Freeman.** This replaces the sentence "This report was prepared at the request of Michael Freeman."

Page 6, Section 2.2, paragraph 1, the third sentence should be—**Much of the undeveloped area of the property is recent fill material.** This replaces the sentence "The undeveloped area of the property is recent fill material."

Page 7, Section 3.0, paragraph 2 from top of page, the first sentence should be—**Metal Marine Pilot, Inc., a Freeman family business, has used the building since its construction.** This replaces the sentence "The Freeman family has owned and used the building since its construction."

Page 8-9, Section 3.4, paragraph 1, first sentence—**Polk business and residence directories indicate that the building was listed as occupied in 1961, however, in an interview Michael Freeman indicated the primary structure was in place in 1959.** This replaces "Polk business and residence directories indicate that the building was listed as occupied in 1961, however, an interview with the owner indicates the primary structure was in place in 1959."

Page 8, Section 3.5, paragraph 3, the second and third sentence—**A building appears on that property in aerial photographs as early as 1971. Correspondence with Janet Freeman-Daily indicates the property was previously occupied by the Airport Café. The café structure was demolished and replaced by the present structure, the Columbia Bank building.** This replaces "The building Columbia Bank occupies appears on aerial photographs as early as 1971 and interviews with the subject property owener indicate the land was sold by Metal Marine to the bank around that time."

Page 8, Section 3.5, paragraph 4, the first sentence—**The north adjoining property is 2101 Mildred St. West, and is presently leased by Pace Industries, an aluminum casting facility.** This replaces "The north adjoining property is 2101 Mildred St. West, and is presently owned by Pace Industries, an aluminum casing facility."

Page 19, Section 5.2, sub-heading—**Michael Freeman, Metal Marine Pilot, Inc., President.** This replaces "Michael Freeman, Metal Marine Pilot, Inc., Owner."

Thank you for the opportunity to provide you with environmental services. If you have any questions or comments concerning these changes please do not hesitate to contact me.

Sincerely,

Linda Drake
Principal Hydrogeologist

C: Clark Davis, Esq.
David Douglas

STATE OF WASHINGTON

DEPARTMENT OF ECOLOGY

P.O. Box 47775 • Olympia, Washington 98504-7775 • (360) 407-6300

March 6, 2001

Linda Drake
Creative Environmental Technologies, Inc.
P.O. Box 1803
Tacoma, WA 98401-1803

Re: Metal Marine Pilot, Inc., aka Freeman Property

Dear Ms. Drake:

Thank you for submitting, on behalf of facility owner Janet Freeman-Daily, the results of your independent remedial action for review by the State of Washington Department of Ecology (Ecology). Ecology appreciates your initiative in pursuing this administrative option under the Model Toxics Control Act (MTCA).

I have reviewed the following information regarding the Metal Marine Pilot, Inc., facility (also known as the Freeman Property) located at 2119 Mildred Street West, Fircrest, Washington, submitted by Creative Environmental Technologies, Inc:

1. PCE Contaminated Soil Remediation Report, dated January, 2000[sic],
2. Phase 2 Site Assessment, dated March 29, 2000,
3. Level 1 Environmental Site Assessment, dated May 7, 1999.

The above listed reports will be kept in the Central Files of the Southwest Regional Office (SWRO) of Ecology for review by appointment only. Appointments can be made by calling our resource contact at (360) 407-6365.

Based upon the above listed information Ecology has determined that, at this time, the release of tetrachloroethylene (PCE) into the soil no longer poses a threat to human health or the environment.

Therefore, Ecology is issuing this determination that no further remedial action is necessary at this site under MTCA, chapter 70.105D RCW. However, please note that because your actions were not conducted under a consent decree with Ecology, this letter is written pursuant to RCW 70.105D.030(1)(i) and does not constitute a settlement by the state under RCW 70.105D.040(4) and is not binding on Ecology.

Ecology's no further action determination is made only with respect to the release identified in the independent remedial action report dated January 2000[sic] and received by Ecology on February 27, 2001. This no further action determination applies only to the area of the property affected by the release identified in the report at 2119 Mildred Street West, Fircrest, Washington. It does not apply to any other release or potential release at the property, any other areas on the

property, nor any other properties owned or operated by Metal Marine Pilot, Inc., or Janet Freeman-Daily.

Ecology will update its database to reflect this "No Further Action" determination. The state, Ecology, and its officers and employees are immune from all liability and no cause of action of any nature may arise from any act or omission in providing this determination.

If you have any questions, please contact me at (360) 407-6248.

Sincerely,

Martha Maggi

Martha Maggi
Project Manager
Toxics Cleanup Program

cc: Janet Freeman-Daily
Chuck Cline, Ecology

PCE CONTAMINATED SOIL REMEDIATION REPORT

Subject Property:

2119 Mildred Street West
Fircrest, Washington
98466-6194

January, 2000

Prepared For:

Janet Freeman-Daily
Metal Marine Pilot. Inc.
3512 SW 310 CT
Federal Way, WA 98023

Prepared By:

Creative Environmental Technologies, Inc.
PO Box 1803
Tacoma, Washington 98401-1803
253.627.3347

Table Of Contents

1.0 Introduction and Summary

Creative Environmental Technologies, Inc. (CETI) was retained by Janet Freeman-Daily of Metal Marine Pilot, Inc., to remediate tetrachloroethyene (PCE, perchloroethyene, or perc) contaminated soil from property located at 2119 Mildred Street West in Fircrest, Washington.

A Phase 2 Environmental Site Assessment (dated March 28, 2000), performed by CETI, revealed levels of PCE exceeding the Model Toxics Control Act (MTCA) Method A cleanup levels in soil samples. The Phase 2 indicated that the contamination extended over an area approximately 20 feet by 40 feet, near a former loading dock. According to accounts by Metal Marine staff, during the 1960s small amounts of waste solvent were disposed of by dumping off the loading dock. The contaminated gravel road surface below the loading dock was subsequently covered by approximately four feet of fill material.

Excavation of contaminated soil occurred on September 11 and 12, 2000. The total excavation was approximately 25 feet wide by 40 feet long and 6 to 11 feet deep. The top 4 feet of clean fill material was stockpiled, sampled to confirm that it was uncontaminated, and then used as backfill. The rest of the excavation was backfilled with clean fill scrapped from another area of the site.

The bottom and sidewalls of the excavation were sampled to confirm that all contaminated soil was removed.

The contaminated soil was temporarily stockpiled to determine its regulatory status for disposal. The contaminated soil stockpile was sampled and found to be within the acceptable limits for land disposal restrictions.

On November 28 and November 29 the contaminated soil was transported and disposed of at the Olympic View Landfill in Port Orchard, Washington.

2.0 Remediation of contaminated soil

2.1 Safety Precautions

The contaminants were limited to PCE residual in soil at non-hazardous concentrations and a level D uniform was sufficient for the job site. The area surrounding the excavation was bound with caution tape and one entrance/exit was open near the northwest corner. The entrance/exit area had plastic sheeting on the ground, a decontamination station to scrub footwear with a trisodium phosphate solution, distilled water as a rinsate, and eyewash. A health and safety plan (HSP) was created by CETI, which required each person entering the site to read and sign as to understand the safety precautions, the nature of the contaminants, and who to call in the event of an emergency. A copy of the HSP is available in Attachment D.

2.2 Sampling method

Soil samples from the excavation were collected from the teeth of the track hoe bucket to select the most undisturbed soil sample. The samples were placed in EPA-approved glass jars with teflon-lined lids provided by the analytical laboratory. The soil samples were labeled, placed into a cooler and stored at 40 degrees Fahrenheit to maintain and preserve the integrity of the sample until it was delivered to the laboratory for analysis. The samples were analyzed at a state licensed laboratory on September 12, 2000. All samples were analyzed for PCE method SW846/8260B. All samples were logged on a chain of custody form provided by the laboratory (see analytical in Attachment A).

Some soil was screened using a photo ionization detector (PID). Soil was placed in sealed plastic bags. A small opening was made in the seal, and the sampling tube of the PID was inserted close to the soil. The result in percent volatile organic compounds (VOCs) was displayed on the PID, recorded in the field notes, and used to help delineate the extent of contaminated soil.

2.3 Excavation

In the Phase 2 ESA, dated March 28, 2000, CETI determined that the top four (4) feet of soil near the loading dock was uncontaminated recent fill material that consisted of poorly sorted sand with gravel. At approximately 4 feet below ground surface (BGS) there was an old gravel road surface. Below the gravel road surface the soil was older fill material that consisted of reworked glacial till and poorly sorted sand with a little gravel. The PCE contamination affected the old gravel road surface and the underlying soil. The contamination was associated with, but not limited to, the brown soil gravel with a black/orange mottled appearance and a solvent odor.

CETI began excavating the soil near the former loading dock on September 11, 2000 (see sitemap in attachment A). The weather during the excavation was clear, approximately 70° F, and without strong wind.

The top 4 feet of the soil was removed and stockpiled near the north portion of the excavation area. Soils were brown, poorly sorted sand with gravels at 4 feet BGS, which turned to gray at approximately 6 feet BGS.

A solvent odor was present when excavating to 6 feet BGS, but volatile organic compounds were not detected using a PID to screen the soil. A strong solvent odor was present at approximately 7 feet BGS. In the southwestern portion of the excavation, the strong odor was present to 11 feet BGS. When screened with a PID, this soil read .7% for VOCs. CETI continued excavating until no VOCs were detected with the PID and until there was no visual or olfactory evidence of contamination.

The total excavation was completed on September 12, 2000, and measured approximately

25 feet wide by 40 feet long and 6 to 11 feet deep. The excavation was 6 feet BGS at the north end, 8 feet BGS in the mid-portion, and 11 feet BGS in the south end. The PCE contaminated soil was stockpiled on site in a 6 mil. plastic-lined bermed area that measured approximately 20 feet wide by 40 feet long by 8 feet high, and was covered with 6 mil. plastic sheeting.

2.4 Confirmational Sample Results

Samples were collected from the bottom of the excavation and base of the sidewalls of the excavation. The samples were analyzed for PCE concentrations, in order to confirm that the contaminated soil had been removed. Figure 2 in Attachment A shows the location of the samples. The results of the confirmational samples are summarized in the table below.

Table 1: Results of Confirmational Sampling. Concentration in mg/Kg.

Sample	CS1-NW-6	CS2-NESW-6	CS3-NWSW-6	CS4-NB-6	CS9-MB-8	CS5-SW-11	CS6-SWSW-11	CS7-SB-11	CS8-SEW-11
Concentration	<.25	<.25	.39	<.25	<.25	<.25	<.25	<.25	<.25

MTCA method A cleanup level for PCE: .5 mg/Kg.

One of the confirmational samples contained detectable PCE, but at a concentration below the MTCA method A cleanup level. Other samples contained no detectable PCE.

2.5 Characterization and Disposal of the Contaminated Soil

On August 4, 2000, prior to excavation of contaminated soil, three test pits were excavated and sampled. The three samples were analyzed for PCE concentrations using the toxicity characteristic leaching procedures (TCLP) method SW846/8260B to characterize the soil for disposal. Results of soil characterization samples are summarized in the table below. Analytical results are included in Attachment B.

Table 2: Characterization Sample Results.

Sample	Location	Depth	Concentration	Analysis
S3-80400	Test pit 2	4'8"	13.9 mg/Kg	EPA 8260B
S1-80400	Test pit 1	4'3"	.025 mg/L	TCLP EPA 8260B
S2-80400	Test pit 2	3'9"	.108 mg/L	TCLP EPA 8260B
S3-80400	Test pit 2	4'8"	.27 mg/L	TCLP EPA 8260B

Previous sampling during the Level 2 investigation had indicated PCE concentrations above MTCA Method A cleanup levels in the soil ranging from .64 mg/Kg to 2.22 mg/Kg.

CETI requested a "contained-in" determination from the Washington Department of Ecology (Ecology) on behalf of Metal Marine Pilot, Inc. (a copy of the letter is in Attachment C), which would allow the disposal of the soil as non-hazardous waste. A letter from Ecology dated September 6, 2000 (included in Attachment C), summarized the regulatory status of the soil, and found that it did not appear to meet the Land Disposal Restrictions universal treatment standard of 6.0 mg/kg (one sample had a concentration of 13.9 mg/kg). Ecology suggested further characterization of the soil with a statistical sampling representation of the soil, which could take place after the soil had been excavated and stockpiled.

Following the excavation, contaminated soil was temporarily stockpiled on-site. The stockpile was placed in a plastic-lined, bermed area, and covered with impermeable plastic sheeting.

On September 29, 2000, the stockpile was sampled. Six samples were collected from the stockpile using a 2-inch diameter hand-held stainless steel auger. The samples were collected from 2 to 3 feet below the surface of the stockpiled dirt. The sampling equipment was decontaminated between each sample. CETI judged that six samples for approximately 100 square yards of soil was a sufficient statistical representation of the stockpiled soil to comply with Ecology's recommendation.

Analytical results for the stockpile samples are attached. The results are summarized below. The locations of the samples are shown in figure 2.

Table 3: Contaminated Soil Stockpile Sample Results. Concentrations in mg/Kg.

Sample	DSP 1-929	DSP 2-929	DSP 3-929	DSP 4-929	DSP 5-929	DSP 6-929
Concentration	2.15	.42	1.23	.30	.18	.16

Based on the results for the stockpile sampling, Ecology determined that the soil did meet the universal treatment standard for land disposal and could be disposed of as a non-listed (non-hazardous) waste (see Ecology letter dated November 1, 2000, Attachment C). The soil was transported to the Olympic View Landfill in Port Orchard, Washington. Weight tickets and the permit are included in Attachment B.

2.6 Backfilling the Excavation

The stockpiled soil from 0-4 feet BGS was sampled to confirm it was free of contamination prior to back-filling. A summary of the sample results are shown in the table below. Analytical results are in Attachment B. Sample locations are shown in Figure 2.

Table 4: 0-4 feet stockpile results. Concentrations in mg/Kg

Sample	SP2-N-4	SP4-SW-4	SP6-SE-4
Concentration	<.25	.34	<.25

One of the samples stockpile contained detectable PCE, but at a level below the MTCA method A cleanup level of .5 mg/Kg.

The 0-4 feet stockpile was used to partially backfill the excavation. The rest of the material used to backfill the excavation was scraped from surface fill material from a high area to the southeast of the excavation that Metal Marine Pilot wanted to reduce as part of a new grading and drainage plan.

4.0 Discussion and Conclusion

Based on the confirmational sampling of the excavation, the soil above MTCA method A cleanup levels for PCE was excavated. Once the characterization of the contaminated stockpile was completed, the contaminated soil was transported from the site, and disposed of at a licenced facility.

Groundwater was not encountered during the excavation. Based on the topography of the site and the nearest groundwater data, the depth to groundwater is estimated to be 20 feet or more. Since the PCE contaminated soil extended to a maximum depth of 11 feet BGS, it is very unlikely that the PCE impacted groundwater.

Analytical data and observations from the investigation and cleanup indicate that the PCE contaminated soil has been remediated from the site.

5.0 Signature of Environmental Professionals

CETI appreciates the opportunity to provide environmental services. Please contact us with any comments or questions concerning this report.

By: 

Linda Drake MS, RPG
President, Senior Environmental Scientist
CETI

6.0 Qualifications of Environmental Professional

Linda Drake

QUALIFICATIONS

Linda Drake, a Registered Professional Geologist (RPG), has more than 12 years of experience as a geochemist, hydrogeologist and geologist in environmental consulting, environmental academic research, and the petroleum industry. Teaching experience at the university level in oceanography, hydrology, and geology has helped her apply her knowledge in the field of environmental consulting. She is the author of many Level I and Level II Environmental Site Assessments, sampling plans, corrective action plans, and a RCRA facility investigation report. She is a registered geologist with the State of Oregon.

EDUCATION

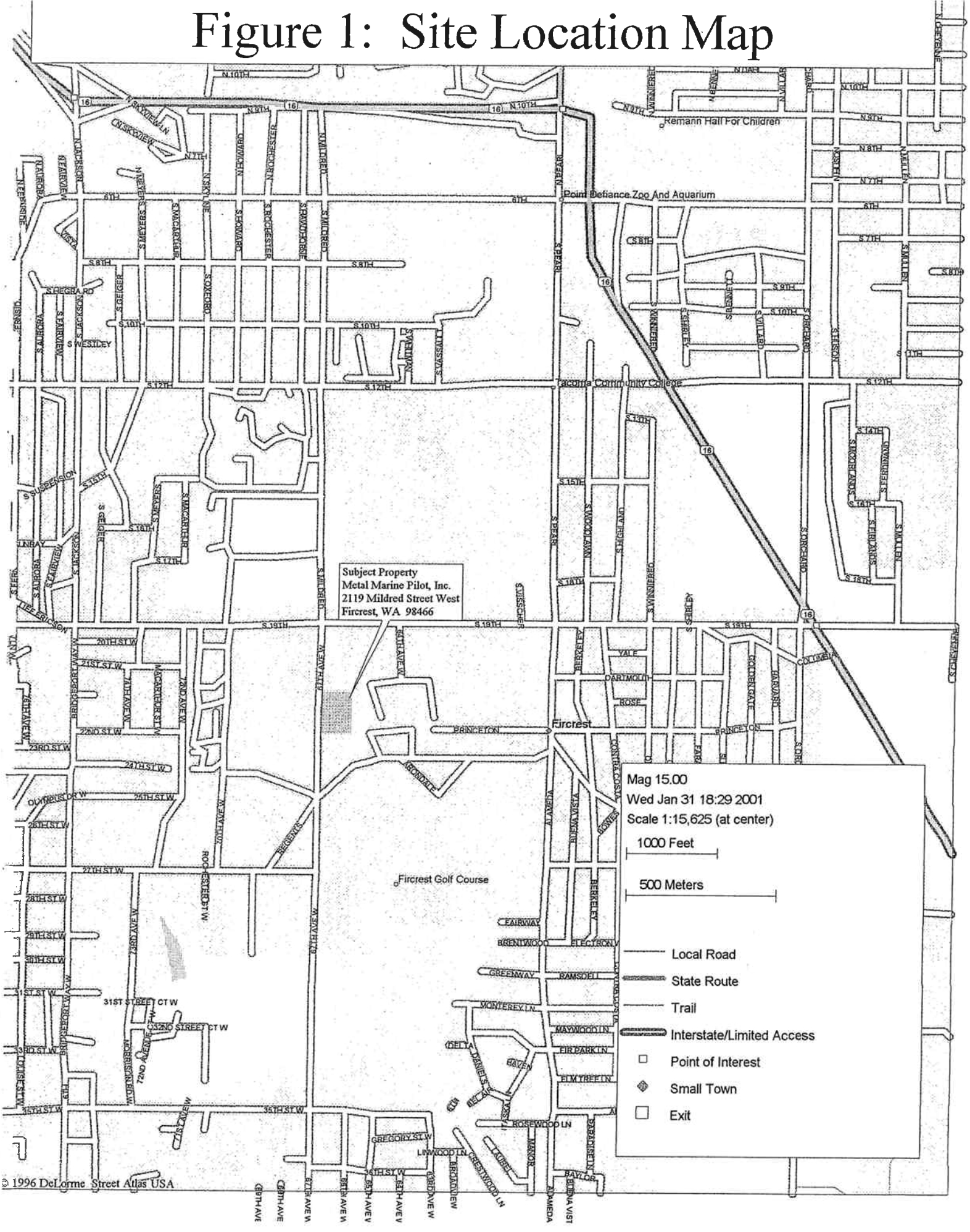
Master of Science, Geology and Geophysics; 1987, Yale University, New Haven, CT.
B.A. Geological Sciences; 1981, Bryn Mawr College, Bryn Mawr, PA.

PROFESSIONAL HISTORY

Environmental Geologist; Creative Environmental Geologist Technologies, Inc., 1998-present
Instructor of Geography and Oceanography; University of Puget Sound and Tacoma Community College, 1996-1998
Instructor of Engineering Technology; University of Massachusetts Lowell Continuing Education, 1994
Project Chemist; Bard Critical Care Research & Development, 1991-1992
Associate in Research; Department of Geology and Geophysics, Yale University, 1987-1991
Geophysicist, Staff Geologist; Cities Service Oil and Gas Corporation, 1981-1985

Attachment A - Drawings, Photographs and Figures

Figure 1: Site Location Map



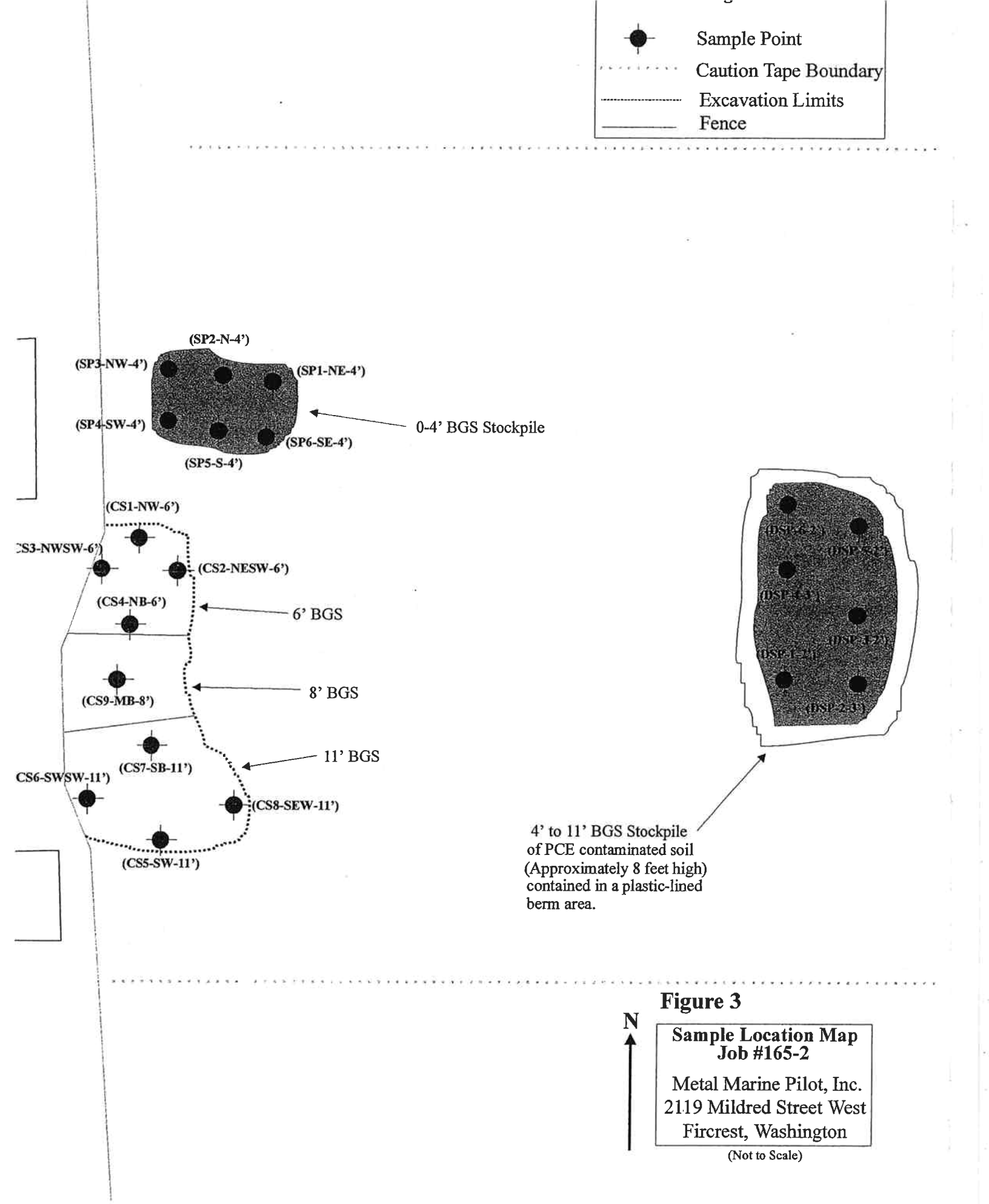
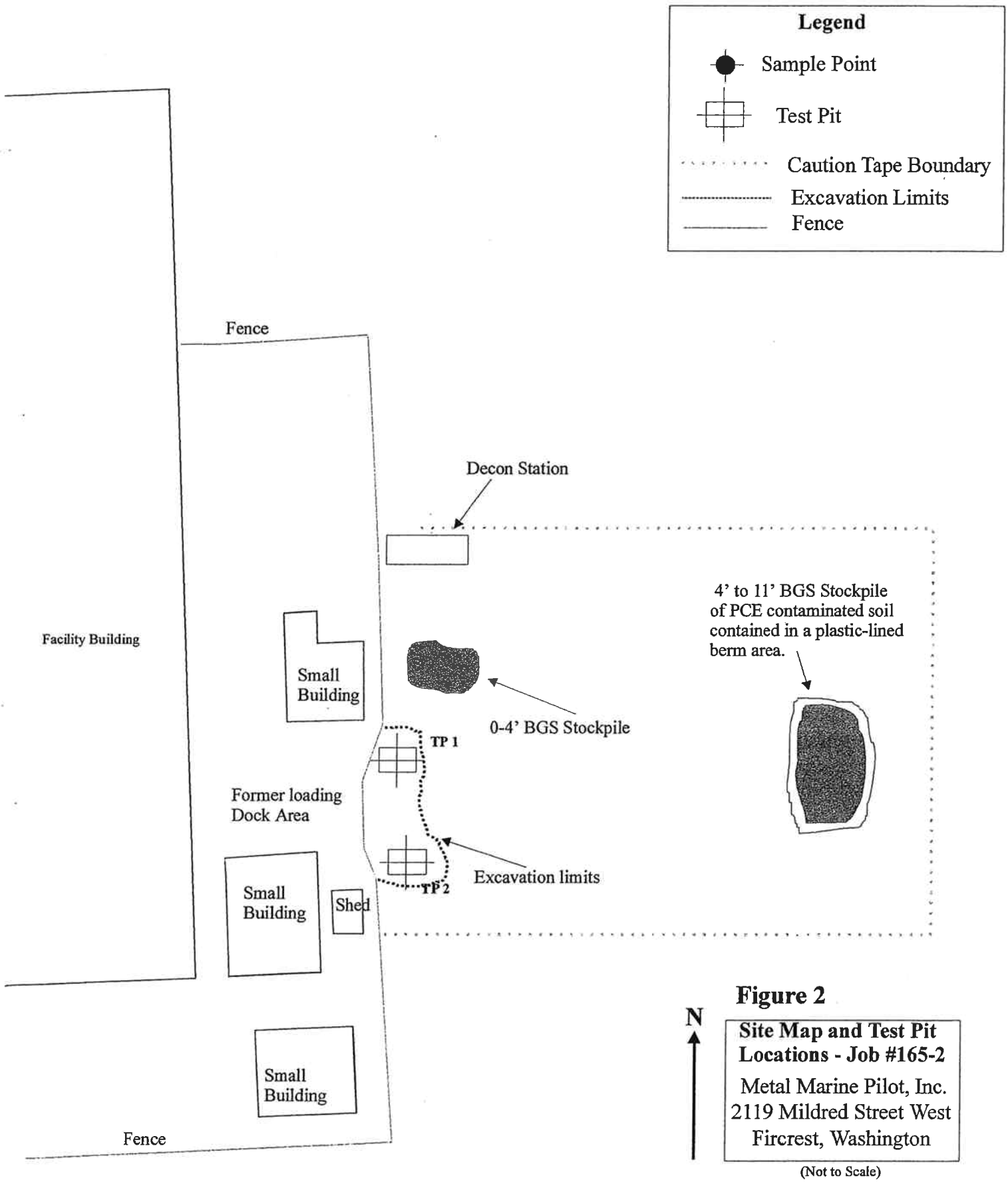


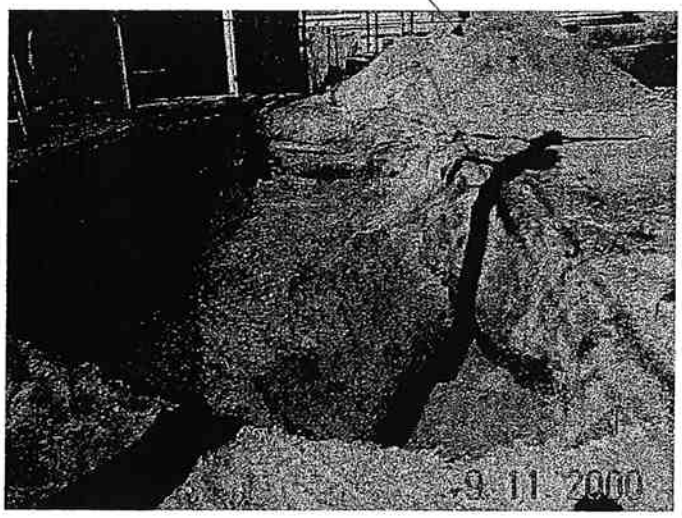
Figure 3

Sample Location Map
Job #165-2

Metal Marine Pilot, Inc.
2119 Mildred Street West
Fircrest, Washington

(Not to Scale)


Property Boundary with Pace, Inc.
Legend
Sample Point
Test Pit
Caution Tape Boundary
Excavation Limits
Fence
Fence
Decon Station
Facility Building
Small Building
4' to 11' BGS Stockpile of PCE contaminated soil contained in a plastic-lined berm area.
0-4' BGS Stockpile
TP 1
Former loading Dock Area
Excavation limits
TP 2
Small Building
Shed
Small Building
Fence
N
Figure 2
Site Map and Test Pit Locations - Job #165-2
Metal Marine Pilot, Inc.
2119 Mildred Street West
Fircrest, Washington
(Not to Scale)

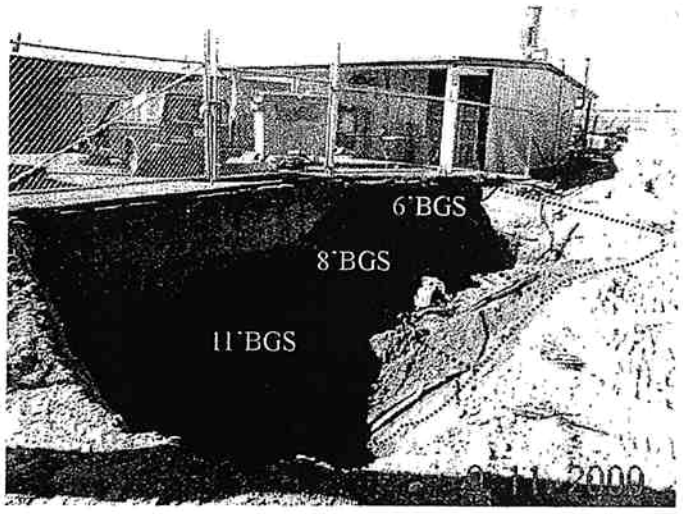


View the 0-4' BGS stockpile and excavation from the south, with excavation in the foreground..

View of 4 foot BGS excavation from the north.

PCE contaminated stockpile contained in a plastic-lined berm area.

View of excavation area after backfilling.



View of total excavation from the south.

PCE Contaminated Soil Remediation Photos

Metal Marine Pilot, Inc.
2119 Mildred Street West
Fircrest, Washington

Attachment B - Analytical Data, Permits

Samples.

SPECTRA Laboratories

2221 Ross Way • Tacoma, WA 98421 • (253) 272-4850

08/11/2000

Creative Environmental Technologies, Inc
P.O. Box 1803
Tacoma, WA 98401
Attn: Linda Drake

P.O.#: 005225
Project: Met Mar
Sample Matrix: Soil
Date Sampled: 08/04/2000
Date Received: 08/04/2000
Spectra Project: 2000080063

Spectra #	Client ID	Analyte	Result	Units	Method
1	S1-80400	TCLP Tetrachloroethene	0.025	mg/L	SW846 8260B
2	S2-80400	TCLP Tetrachloroethene	0.108	mg/L	SW846 8260B
3	S3-80400	Tetrachloroethene	13.9	mg/Kg	SW846 8260B

SPECTRA LABORATORIES

Steve Hibbs, Laboratory Manager

a7/dt

SPECTRA Laboratories

2221 Ross Way • Tacoma, WA 98421 • (253) 272-4850

08/15/2000

Creative Environmental Technologies, Inc
P.O. Box 1803
Tacoma, WA 98401
Attn: Linda Drake

P.O.#:	5220
Project:	Met Mar
Client ID:	S3-80400
Sample Matrix:	Soil
Date Sampled:	08/04/2000
Date Received:	08/11/2000
Spectra Project:	2000080128
Spectra Number:	1

Analyte	Result	Units	Method
TCLP Tetrachloroethene	0.27	mg/L	SW846 8260B

Surrogate	Recovery	Method
Dibromofluoromethane	78	SW846 8260B
Toluene-d8	106	SW846 8260B
4-Bromofluorobenzene	96	SW846 8260B

SPECTRA LABORATORIES

Steve Hibbs, Laboratory Manager
a6/jlc

SPECTRA Laboratories

CHAIN OF CUSTODY

2221 Ross Way • Tacoma, WA 98421 • (253) 272-4850 • Fax (253) 572-9838

080063

CLIENT: CETI
PROJECT: METMAR
CONTACT: LINDA DRAKE
PHONE: 627-3342
PURCHASE ORDER #: 005225

SAMPLE ID	DATE SAMPLED	TIME SAMPLED	MATRIX	NUMBER OF CONTAINERS	HYDROCARBONS: NWTPH-HCID	BTEX/NWTPH-G	BTEX	NWTPH-G	NWTPH-D	1664 SGT-HEM	1664 HEM	ORGANICS: 8260 VOA	8260 CHLOR SOLVENTS	8270 SEMI-VOA	PAH/PNA-8270	8081 ORG. CHLOR PEST.	8082 PCB	TCLP D-LIST: TCLP METALS (8)	TCLP-VOA	TCLP 8270 SEMI-VOA	TCLP PEST.	TCLP HERB.	METALS: TOTAL MELALS ICP/DCP	TOTAL METALS GFAA	TOTAL LEAD	OTHER: pH 9040/9045	TOX 9020/9076	TOC 9060/PSEP	FLASH POINT	SOLIDS (SPECIFY)				NORMAL/RUSH	LAB ID
S1-80400	8-4-00	10:45	SOIL	1															X																1
S2-080400	8-4-00	11:30	SOIL	1															X																2
S3-080400	8-4-00	11:40	SOIL	1								X																							3

RETURN

DISPOSE

Fee applies

SPECIAL INSTRUCTIONS/COMMENTS:

*TCE (perchloroethylene or tetrachloroethylene only)

	SIGNATURE	PRINTED NAME	COMPANY	DATE	TIME
RELINQUISHED BY	Vicki Cline				
RECEIVED BY					
RELINQUISHED BY		ERIC MELAND	CETI	8-4-00	1:42
RECEIVED BY	Vicki Cline	Vicki Cline	Spectra	8-4-00	134

Payment Terms: Net 30 days. Past due accounts subject to 18% per annum interest. Customer agrees to pay all costs of collection including reasona attorney's fees and all other associated costs of collection regardless of whether suit is filed.

0-4' Stockpile samples

SPECTRA Laboratories

2221 Ross Way • Tacoma, WA 98421 • (253) 272-4850

09/18/2000

Creative Environmental Technologies, Inc
P.O. Box 1803
Tacoma, WA 98401
Attn: Linda Drake

P.O.#: 5269
Project: Met Mar
Sample Matrix: Soil
Date Sampled: 09/11/2000
Date Received: 09/11/2000
Spectra Project: 2000090094

Spectra #	Client ID	Analyte	Result	Units	Method
1	SP2-N-4	Tetrachloroethene	<0.25	mg/Kg	SW846 8260B
2	SP4-SW-4	Tetrachloroethene	0.34	mg/Kg	SW846 8260B
3	SP6-SE-4	Tetrachloroethene	<0.25	mg/Kg	SW846 8260B

SPECTRA LABORATORIES

Steve Hibbs, Laboratory Manager

e7/mlh

Contaminated Stockpile samples

RECEIVED
OCT 0 4 2000
BY: am

SPECTRA Laboratories

2221 Ross Way • Tacoma, WA 98421 • (253) 272-4850

10/04/2000

Creative Environmental Technologies, Inc
P.O. Box 1803
Tacoma, WA 98401
Attn: Ms. Linda Drake

P.O.#: 5298
Project: METMAR
Sample Matrix: Soil
Date Sampled: 09/29/2000
Date Received: 10/02/2000
Spectra Project: 2000100010

Spectra #	Client ID	Analyte	Result	Units	Method
1	DSP-1 -929	Tetrachloroethene	2.15	mg/Kg	SW846 8260B
2	DSP-2 -929	Tetrachloroethene	0.42	mg/Kg	SW846 8260B
3	DSP-3 -929	Tetrachloroethene	1.23	mg/Kg	SW846 8260B
4	DSP- -929	Tetrachloroethene	0.30	mg/Kg	SW846 8260B
5	DSP-5 -929	Tetrachloroethene	0.18 J	mg/Kg	SW846 8260B
6	DSP-6-929	Tetrachloroethene	0.16 J	mg/Kg	SW846 8260B

J = Estimated Value. Result is less than normal reporting limits.

SPECTRA LABORATORIES

Steve Hibbs, Laboratory Manager

a7/dt

SPECTRA Laboratories

100010

CHAIN of CUSTODY

PAGE 1 of 1

RECEIVED
OCT 12 2000
BY:

2221 Ross Way • Tacoma, WA 98421 • (253) 272-4850 • Fax (253) 572-9838

CLIENT: CETI
PROJECT: METMAR
CONTACT: LINDA DRAKE
PHONE: 627-3317
PURCHASE ORDER #: 5298

SAMPLE ID	DATE SAMPLED	TIME SAMPLED	MATRIX	NUMBER OF CONTAINERS
DSP-1-929	9-21-00	3:50	Soil	1
DSP-2-929	"	3:55	"	1
DSP-3-929	"	4:05	"	1
DSP-4-929	"	4:05	"	1
DSP-5-929	"	4:10	"	1
DSP-6-929	"	4:15	"	1

HYDROCARBONS							ORGANICS						TCLP D-LIST					METALS			OTHER									RETURN	LAB ID
NWTPH-HCID	BTEX/NWTPH-G	BTEX	NWTPH-G	NWTPH-D	1664 SGT-HEM	1664 HEM	8260 VOA *	8260 CHLOR SOLVENTS	8270 SEMI-VOA	PAH/PNA-8270	8081 ORG. CHLOR PEST.	8082 PCB	TCLP METALS (8)	TCLP-VOA	TCLP 8270 SEMI-VOA	TCLP PEST.	TCLP HERB.	TOTAL MELALS ICP/DCP	TOTAL METALS GFAA	TOTAL LEAD	pH 9040/9045	TOX 9020/9076	TOC 9060/PSEP	FLASH POINT	SOLIDS (SPECIFY)				NORMAL/ RUSH	DISPOSE Fee applies	
							X																							-01
							X																							-02
							X																							-03
							X																							-04
							X																							-05
							X																							-06

SPECIAL INSTRUCTIONS/COMMENTS:

* Tetrachloroethylene (PCE) only

	SIGNATURE	PRINTED NAME	COMPANY	DATE	TIME
RELINQUISHED BY	Linda Drake	LINDA DRAKE	CETI	2-Oct-00	2:25
RECEIVED BY	Marie Holt	MARIE HOLT	Spectra	10-12-00	2:25
RELINQUISHED BY					
RECEIVED BY					

Payment Terms: Net 30 days. Past due accounts subject to 18% per annum interest. Customer agrees to pay all costs of collection including reasonable attorney's fees and all other associated costs of collection regardless of whether suit is filed.

Samples

SPECTRA Laboratories

2221 Ross Way • Tacoma, WA 98421 • (253) 272-4850

09/12/2000

Creative Environmental Technologies, Inc
P.O. Box 1803
Tacoma, WA 98401
Attn: Linda Drake

P.O.#: 5270
Project: Met Mar
Sample Matrix: Soil
Date Sampled: 09/11/2000
Date Received: 09/11/2000
Spectra Project: 2000090077
Rush

Spectra #	Client ID	Analyte	Result	Units	Method
1	CS1-NSW-6	Tetrachloroethene	<0.25	mg/Kg	SW846 8260B
2	CS2-NWSW-6	Tetrachloroethene	<0.25	mg/Kg	SW846 8260B
3	CS3-NESW-6	Tetrachloroethene	0.39	mg/Kg	SW846 8260B
4	CS4-NB-6	Tetrachloroethene	<0.25	mg/Kg	SW846 8260B

SPECTRA LABORATORIES

Michael Deckert

Michael Deckert, Chemist

a7/mlh

SPECTRA Laboratories

2221 Ross Way • Tacoma, WA 98421 • (253) 272-4850 • Fax (253) 572-9838

CHAIN OF CUSTODY

CLIENT: CETI
PROJECT: MET MAR
CONTACT: LINDA DEAKE
PHONE: 627-3347
PURCHASE ORDER #: 5270

SAMPLE ID	DATE SAMPLED	TIME SAMPLED	MATRIX	NUMBER OF CONTAINERS
CS1-NSW-6	9-11-00	3:00	SOIL	1
CS2-NWSW-6	9-11-00	3:00	"	1
CS3-NESW-6	"	3:00	"	1
CS4-NB-6	"	3:00	"	1

	HYDROCARBONS							ORGANICS						TCLP D-LIST					METALS			OTHER										RETURN
	NWTPH-HCID	BTEX/NWTPH-G	BTEX	NWTPH-G	NWTPH-D	1664 SGT-HEM	1664 HEM	8260 VOA *	8260 CHLOR SOLVENTS	8270 SEMI-VOA	PAH/PNA-8270	8081 ORG. CHLOR PEST.	8082 PCB	TCLP METALS (8)	TCLP-VOA	TCLP 8270 SEMI-VOA	TCLP PEST.	TCLP HERB.	TOTAL METALS ICP/DCP	TOTAL METALS GFAA	TOTAL LEAD	pH 9040/9045	TOX 9020/9076	TOC 9060/PSEP	FLASH POINT	SOLIDS (SPECIFY)					NORMAL / RUSH	DISPOSE
CS1-NSW-6								X																							LAB ID
CS2-NWSW-6								X																							1
CS3-NESW-6								X																							2
CS4-NB-6								X																							3
																															4

SPECIAL INSTRUCTIONS/COMMENTS:
*PCE (Tetrachloro-ethylene) only.

	SIGNATURE	PRINTED NAME	COMPANY	DATE	TIME
RELINQUISHED BY		LINDA DEAKE	CETI	9-11-00	4:2
RECEIVED BY	Marie Holt	MARIE HOLT	SpecLn	9-11-00	4:2
RELINQUISHED BY					
RECEIVED BY					

Payment Terms: Net 30 days. Past due accounts subject to 18% per annum interest. Customer agrees to pay all costs of collection including reasona attorney's fees and all other associated costs of collection regardless of whether suit is filed.

Contaminated Soil Samples

SPECTRA Laboratories

2221 Ross Way • Tacoma, WA 98421 • (253) 272-4850

09/13/2000

Creative Environmental Technologies, Inc
P.O. Box 1803
Tacoma, WA 98401

P.O.#: 5272
Project: 165-2 MET MAR
Sample Matrix: Soil
Date Sampled: 09/11/2000
Date Received: 09/12/2000
Spectra Project: 2000090097
Rush

Spectra #	Client ID	Analyte	Result	Units	Method
1	CS5-SW-11'	Tetrachloroethene	<0.25	mg/Kg	SW846 8260B
2	CS6-SWSW-11'	Tetrachloroethene	<0.25	mg/Kg	SW846 8260B
3	CS7-SB-11'	Tetrachloroethene	<0.25	mg/Kg	SW846 8260B
4	CS8-SEW-11'	Tetrachloroethene	<0.25	mg/Kg	SW846 8260B
5	CS9-MB-8'	Tetrachloroethene	<0.25	mg/Kg	SW846 8260B

SPECTRA LABORATORIES

Michael Deckert

Michael Deckert, Chemist

a7/mlh

SPECTRA Laboratories

2221 Ross Way • Tacoma, WA 98421 • (253) 272-4850 • Fax (253) 572-9838

CHAIN of CUSTODY

PAGE 1 of 1

CLIENT: CETI
PROJECT: 165-2 MET MAR
CONTACT: LINDA DRAKE
PHONE: 627-3347
PURCHASE ORDER #: 5272

SAMPLE ID	DATE SAMPLED	TIME SAMPLED	MATRIX	NUMBER OF CONTAINERS	HYDROCARBONS: NWTPH-HCID	BTEX/NWTPH-G	BTEX	NWTPH-G	NWTPH-D	1664 SGT-HEM	1664 HEM	ORGANICS: 8260 VOA	8260 CHLOR SOLVENTS	8270 SEMI-VOA	PAH/PNA-8270	8081 ORG. CHLOR PEST.	8082 PCB	TCLP D-LIST: TCLP METALS (8)	TCLP-VOA	TCLP 8270 SEMI-VOA	TCLP PEST.	TCLP HERB.	METALS: TOTAL METALS ICP/DCP	TOTAL METALS GFAA	TOTAL LEAD	OTHER: pH 9040/9045	TOX 9020/9076	TOC 9060/PSEP	FLASH POINT	SOLIDS (SPECIFY)	NORMAL/RUSH
CS5-SW-11'	9-11-00		Soil	1								X																		
CS6-SWSW-11'				1								X																		
CS7-SB-11'				1								X																		
CS8-SEW-11'				1								X																		
CS9-MB-8'				1								X																		

RETURN
DISPOSE
Fee applies
LAB ID

SPECIAL INSTRUCTIONS/COMMENTS:
* PCE (Tetrachloroethylene) only

	SIGNATURE	PRINTED NAME	COMPANY	DATE	TIME
RELINQUISHED BY		ERIC MELLAND	CETI	9-12-00	
RECEIVED BY		MARIE HOLT	Spectra	9-12-00	10:1
RELINQUISHED BY					
RECEIVED BY					

Payment Terms: Net 30 days. Past due accounts subject to 18% per annum interest. Customer agrees to pay all costs of collection including reasonable attorney's fees and all other associated costs of collection regardless of whether suit is filed.

WASTE MANAGEMENT

OLYMPIC VIEW SANITARY LANDFILL

PERMIT # 2000-177

PERMIT TO DISPOSE OF NON-HAZARDOUS/ NON-DANGEROUS MATERIALS

EXPIRES: 2/7/01

GENERATOR: METAL MARINE PILOT, INC.		
DESCRIPTION: *SOLVENT SOIL*		TONS: *150*
LOCATION: *FIRCREST, WASHINGTON*		
CONTACT: *LINDA DRAKE*		PHONE: *253-627-3347*
BILLING: rivers edge services, inc	PO#:	JOB#:

We accept business checks, cash or charge (with prior approval)

SPECIAL HANDLING : *NOTE: *****SOIL IS NOT TO BE USED FOR DAILY COVER, MUST BE LANDFILLED UPON RECEIVING FROM CUSTOMER PER DOE INSTRUCTIONS******

APPROVED: Kristin Castner DATE: *11/07/00 1:37:39 PM*

A COPY OF THIS PERMIT MUST BE SHOWN BY EACH DRIVER

HAZARDOUS/DANGEROUS WASTE IS STRICTLY PROHIBITED

Olympic View Sanitary Landfill
10015 SE Barney White Road
Port Orchard, WA 98367
Phone (360) 674-2452

TICKET: 63299
DATE: 11/28/2000
TIME: 10:53 - 11:12

CUSTOMER: 1096 / Rivers Edge Services Inc. P.O.:
GENERATOR: METAL MARI / Metal MarinPROFILE #: 2000-177GROSS: 92080 LBS Manual
COUNTY: PIE / Pierce TARE: 44500 LBS Manual
TRUCK: RIVER8001 LICENSE: NET: 47580 LBS
ROUTE: NA / Non App
COMMENT:

COMMODITY	UNIT	QNTY
CNTSL / Contaminated Soil	T	23.79

IN OPERATOR: Lennie H OUT OPERATOR: Lennie H

DRIVER: _____

Olympic View Sanitary Landfill
10015 SE Barney White Road
Port Orchard, WA 98367
Phone (360) 674-2452 This is a Reprint Ticket

TICKET: 63419
DATE: 11/28/2000
TIME: 15:14 - 15:17

CUSTOMER: 1096 / Rivers Edge Services Inc. P.O.:
GENERATOR: METAL MARI / Metal MarinPROFILE #: 2000-177GROSS: 87160 LBS Manual
COUNTY: PIE / Pierce TARE: 39020 LBS Manual
TRUCK: RIVER001 LICENSE: NET: 48140 LBS
ROUTE: NA / Non App
COMMENT:

COMMODITY	UNIT	QNTY
CNTSL / Contaminated Soil	T	24.07

IN OPERATOR: Carole S. OUT OPERATOR: Carole S.

DRIVER: _____

Olympic View Sanitary Landfill
10015 SE Barney White Road
Port Orchard, WA 98367
Phone (360) 674-2452

TICKET: 63420
DATE: 11/28/2000
TIME: 14:55 - 15:17

CUSTOMER: 1096 / Rivers Edge Services Inc.
GENERATOR: METAL MARI / Metal MarinPROFILE #: 2000-177
COUNTY: PIE / Pierce
TRUCK: RIVERS1 LICENSE:
ROUTE: NA / Non App
COMMENT:

P.O.:
GROSS: 83280 LBS Manual
TARE: 39040 LBS Manual
NET: 44240 LBS

COMMODITY	UNIT	QNTY
CNTSL / Contaminated Soil	T	22.12

IN OPERATOR: Carole S.
OUT OPERATOR: Carole S.

DRIVER: _____

Olympic View Sanitary Landfill
10015 SE Barney White Road
Port Orchard, WA 98367
Phone (360) 674-2452

TICKET: 63288
DATE: 11/28/2000
TIME: 10:43 - 10:43

CUSTOMER: 1114 / Emerald Services
GENERATOR: METAL MARI / Metal MarinPROFILE #: 2000-177
COUNTY: PIE / Pierce
TRUCK: RIVERS6 LICENSE:
ROUTE: NA / Non App
COMMENT:

P.O.:
GROSS: 47660 LBS Manual
TARE: 21900 LBS Manual
NET: 25760 LBS

COMMODITY	UNIT	QNTY	RATE	PRETAX	TAX	AMOUNT
CNTSL / Contaminated Soil	T	12.88	$ 13.23	$ 170.40	$ 22.80	$ 193.20
				$ 170.40	$ 22.80	$ 193.20

IN OPERATOR: Lennie H
OUT OPERATOR: Lennie H

DRIVER: _____

Olympic View Sanitary Landfill
10015 SE Barney White Road
Port Orchard, WA 98367
Phone (360) 674-2452

TICKET: 63229
DATE: 11/28/2000
TIME: 08:19 - 08:29

CUSTOMER: 1114 / Emerald Services P.O.:
GENERATOR: METAL MARI / Metal MarinPROFILE #: 2000-177GROSS: 45080 LBS Manual
COUNTY: PIE / Pierce TARE: 21900 LBS Manual
TRUCK: RIVER6 LICENSE: NET: 23160 LBS
ROUTE: NA / Non App
COMMENT:

COMMODITY	UNIT	QNTY	RATE	PRETAX	TAX	AMOUNT
CNTSL / Contaminated Soil	T	11.58	$ 15.23	$ 153.20	$ 20.50	$ 173.70
				$ 153.20	$ 20.50	$ 173.70

IN OPERATOR: Lennie H OUT OPERATOR: Lennie H

DRIVER: _____

Olympic View Sanitary Landfill
10015 SE Barney White Road
Port Orchard, WA 98367
Phone (360) 674-2452

TICKET: 63335
DATE: 11/28/2000
TIME: 12:38 - 12:45

CUSTOMER: 1096 / Rivers Edge Services Inc. P.O.:
GENERATOR: METAL MARI / Metal MarinPROFILE #: 2000-177GROSS: 43340 LBS Manual
COUNTY: PIE / Pierce TARE: 22400 LBS Manual
TRUCK: RIVER -6 LICENSE: NET: 20940 LBS
ROUTE: NA / Non App
COMMENT:

COMMODITY	UNIT	QNTY
CNTSL / Contaminated Soil	T	10.47

IN OPERATOR: LESLIE MEDEIROS OUT OPERATOR: LESLIE MEDEIROS

DRIVER: _____

Olympic View Sanitary Landfill
10015 SE Barney White Road
Port Orchard, WA 98367
Phone (360) 674-2452

TICKET: 63396
DATE: 11/28/2000
TIME: 14:22 - 14:32

CUSTOMER: 1096 / Rivers Edge Services Inc. P.O.:
GENERATOR: METAL MARI / Metal MarinPROFILE #: 2000-177GROSS: 44260 LBS Manual
COUNTY: PIE / Pierce TARE: 22380 LBS Manual
TRUCK: RIVERSEDGE LICENSE: NET: 21880 LBS
ROUTE: NA / Non App
COMMENT:

COMMODITY	UNIT	QNTY
CNTSL / Contaminated Soil	T	10.94

IN OPERATOR: Carole S. OUT OPERATOR: Carole S.

DRIVER:

Olympic View Sanitary Landfill
10015 SE Barney White Road
Port Orchard, WA 98367
Phone (360) 674-2452

TICKET: 63460
DATE: 11/29/2000
TIME: 06:44 - 07:27

CUSTOMER: 1096 / Rivers Edge Services Inc. P.O.:
GENERATOR: METAL MARI / Metal MarinPROFILE #: 2000-177GROSS: 87240 LBS Manual
COUNTY: PIE / Pierce TARE: 39340 LBS Manual
TRUCK: RIVERS1 LICENSE: NET: 47900 LBS
ROUTE: NA / Non App
COMMENT:

COMMODITY	UNIT	QNTY
CNTSL / Contaminated Soil	T	23.95

IN OPERATOR: Lennie H OUT OPERATOR: Lennie H

DRIVER:

Attachment C - Correspondence

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY
P.O. Box 47775 • Olympia, Washington 98504-7775 • (360) 407-6300

November 1, 2000

CERTIFIED MAIL

Ms. Linda Drake
Creative Environmental Technologies, Inc.
1326 Tacoma Avenue South, Suite 100
Tacoma, WA 98401-1803

RE: Metal Marine Pilot Inc. PCE Soils

Dear Ms. Drake:

I am writing in response to your request for the Department of Ecology to determine the designation and regulatory status of approximately one hundred cubic yards of soil excavated at Metal Marine Pilot, Inc. located at 2119 Mildred St. W. Fircrest, Washington.

On August 29, 2000, we received a proposal for a "contained-in" determination from you at this site. Included with the proposal was laboratory analysis from Spectra Laboratories. The soil samples showed contamination with tetrachloroethylene (PCE) only. You requested Ecology review information to see if PCE levels were low enough to remove the F-listing from the contaminated soil. Ecology determined there was not complete statistical representative sampling of the soil pile and we concluded that the listing still applied because the soil did not meet universal treatment standards for land disposal.

Based on our review of the information in the sampling data you sent on October 12, 2000; we have concluded that the soil does meet universal treatment standards for land disposal. **The soil is no longer considered a listed waste and can be disposed of in a Subtitle D landfill.** The basis for this conclusion is outlined in the following paragraphs.

Use of Site

Metal Marine Pilot, Inc. manufactures automatic pilots for ships. PCE was used in degreasing small motor parts in the 1960's. The releases occurred in the vicinity of a former loading dock.

Do the Soils Contain a Listed Hazardous Waste?

The soil contains an F-listed waste (F001). Tetrachloroethylene (PCE) was used in degreasing.

What is the regulatory status of the soil?

- The soil does not designate for toxicity characteristics: TCLP analysis for PCE was below the Toxicity Characteristic List limit of **0.7** mg/L (D039).

- The soil does not designate for persistence criteria: All total PCE samples were below **100** PPM.
- The soil is below the MTCA Method B cleanup level of **19.6** mg/kg.
- The soil meets Land Disposal Restrictions (40 CFR Part 268.40). The universal treatment standard for tetrachloroethylene (PCE) is **6.0** mg/kg. The highest of the six samples was 2.15 mg/kg.

Recommendations for the disposal of the soil in a Subtitle D landfill:

1. Disposal is subject to acceptance by the landfill operator.
2. During on-site storage, adequate measures should be taken to contain the soils and prevent their dispersion due to wind or rain erosion.
3. During transport, all loads should be covered to prevent wind dispersion.
4. Transport should be accompanied by use of a Uniform Hazardous Waste Manifest or bill of lading, with the description of the waste being "contaminated soils, not regulated by Washington Dangerous Waste Regulations."
5. Instruction should be provided to the landfill operator that these soils are not to be used for daily landfill cover.
6. Please provide copies of analytical data, upon request, to the Landfill Operator.
7. Please provide copies of any signed, returned manifests/ bills of lading to Department of Ecology, attention of Ms. Martha Maggi, Southwest Regional Office.

I hope this resolves the designation and management standards applicable to the Metal Marine Pilot soils. If you have any questions, please call Martha Maggi at (360) 407-6248 or Brett Manning at (360) 407-6337.

Sincerely,

K Seiler

K Seiler, Section Manager
Hazardous Waste & Toxics Reduction Program
Southwest Regional Office

KBS:BM:dn

cc: Brett Manning, Ecology HWTR
Martha Maggi, Ecology TCP
George Sidles, Ecology Solid Waste
Jan Broder, Bremerton-Kitsap County Health District
Michael Freeman, Metal Marine Pilot

CREATIVE ENVIRONMENTAL TECHNOLOGIES, INC.
PROVIDING ENVIRONMENTAL SERVICES TO THE NORTHWEST FOR OVER 15 YEARS

CETI

October 12, 2000

Martha Maggi
Department of Ecology
Southwest Regional Office
PO Box 47775
Olympia, WA 98504-7775

FAX and MAIL

Dear Ms Maggi:

Attached is a copy of a letter from Brett Manning concerning a proposal for a "contained-in" determination at the Metal Marine Pilot, Inc., site located at 2119 Mildred Street W., in Fircrest, WA. In Mr. Manning's letter, he states that the soil does not meet Land Disposal Restrictions since one sample from a delineation test pit exceeded the universal treatment standard from tetrachloroethylene (PCE) of 6.0 mg/kg (the sample had a concentration of 13.9 mg/kg). As a option for final disposal of the soil, Mr. Manning suggest a sampling plan for a complete statistical representation of the soil.

On September 11, 2000, CETI excavated approximately 100 yards of PCE contaminated soil in the affected area at the site. The excavated soil was stockpiled on the site, in a bermed, lined area. The stockpile was covered by plastic sheeting. On September 29, the stockpile was sampled. Six samples were collected from the stockpile using a 2 inch diameter hand-held, stainless steel auger. The samples were collected from 2 to 3 feet below the surface of the stockpiled dirt. The sampling equipment was decontaminated between each sample. Analytical results for the stockpile samples are attached. Results are summarized in the table below.

Table 1: Analytical Results from the PCE Contaminated Soil Stockpile at Metal Marine Site.

Sample	DSP 1-929	DSP 2-929	DSP 3-929	DSP 4-929	DSP 5-929	DSP 6-929
Concentration	2.15	.42	1.23	.30	.18 J	.16 J

None of the stockpile samples are above the universal treatment standard for PCE. On the basis of these samples, we would like to dispose of the contaminated soil as non-hazardous. Please review these results and consider this letter a renewal of our proposal for a "contained-in" determination for this soil.

Thank you.

Sincerely,

Linda Drake
Senior Environmental Scientist

P.O. Box 1803 ⊛ Tacoma, Washington 98401-1803 ⊛ 1326 Tacoma Avenue South, Suite 100
P: 253.627.3347 ⊛ F: 253.572.4207 ⊛ E: ceti@cetinw.com ⊛ www.cetinw.com

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY
P.O. Box 47775 • Olympia, Washington 98504-7775 • (360) 407-6300

September 6, 2000

VIA FACSIMILE AND
CERTIFIED MAIL

Ms. Linda Drake
Creative Environmental Technologies, Inc.
1326 Tacoma Avenue South, Suite 100
Tacoma, WA. 98401-1803

RE: Metal Marine Pilot Inc. PCE Soils

Dear Ms. Drake:

I am writing in response to your request for the Department of Ecology to determine the designation and regulatory status of approximately sixty to one hundred cubic yards of soil excavated at Metal Marine Pilot, Inc. located at 2119 Mildred St. W. Fircrest, Washington.

On August 29, 2000, we received a proposal for a "contained-in" determination from you at this site. Included with the proposal was attached laboratory analysis from Spectra Laboratories. Laboratory analysis of soil samples showed contamination with tetrachloroethylene (PCE) only. You requested Ecology review information to see if PCE levels were low enough to make a "contained-in" determination.

Based on our review of the information in the report you sent, we have concluded that the soil does not meet universal treatment standards for land disposal. The basis for this conclusion is outlined in the following paragraphs.

Use of Site

Metal Marine Pilot, Inc. manufactures automatic pilots for ships. PCE was used in degreasing small motor parts in the 1960's. The releases occurred in the vicinity of a former loading dock.

Do the Soils Contain a Listed Hazardous Waste?

The soil contains an F-listed waste (F001). Tetrachloroethylene (PCE) was used in degreasing.

What is the regulatory status of the soil?

- The soil does not designate for toxicity characteristics: TCLP analysis for PCE was below the Toxicity Characteristic List limit of **O.7** mg/L (D039).

- The soil does not designate for persistence criteria: All total PCE samples were below **100** PPM.

- The soil is below the MTCA Method B cleanup level of **19.6** mg/kg.

- The soil does not meet Land Disposal Restrictions (40 CFR Part 268.40). The universal treatment standard for tetrachloroethylene (PCE) is **6.0** mg/kg. A sample from test pit 2 had a concentration of **13.9** mg/kg.

Options for final disposal of the soil.

- Provide a sampling plan for a complete statistical representation of the soil.

- Provide a plan for treatment of the soil to reach the treatment standard of 6.0 mg/kg.

If you have any questions, please call me at (360) 407-6337.

Sincerely,

Brett Manning
Hazardous Waste & Toxics Reduction Section
Southwest Regional Office

cc: Chuck Cline, Ecology TCP
Jan Broder, Bremerton-Kitsap County Health District

August 29, 2000
SENT BY E-MAIL

Brett Manning
Department of Ecology
PO Box 47775
Olympia, WA 98504-7775

Dear Mr. Manning:

Please consider this letter and its attachments a proposal on behalf of Metal Marine Pilot, Inc., for a determination by Ecology that perchloroethylene (PCE) contaminated soil on the Metal Marine Pilot, Inc., property in Fircrest, Wasington, is not hazardous waste, under Ecology's "Contained-In" policy.

1.0 Site Location, Company name, Company Contact, Consultant Contact, Site Contact, Previous Work

The facility is located at 2119 Mildred St. W., Fircrest, WA, 98466-6197. The area to be remediated is flat. The site slopes steeply to the east approximately 250 feet east of the remediation area.

Location: A site location map is attached.
Company Name: Metal Marine Pilot, Inc. (Same address as above)
Company Contact: Janet Freeman-Daily cell phone: (253) 606-2173
Site Contact: Michael Freeman (253) 564-5902
Consultant Contact: Linda Drake, CETI (253) 627-3347, cell phone: (253) 381-7575

Previous Work: Phase 1 and Phase 2 Environmental Site Assessments (ESAs) have been performed on the site. The Phase 2 ESA identified an area of perchloroethylene contaminated soil behind the facility building. The approximate areal extent of the contamination is shown in the attached figure. The approximate dimensions are 20' by 40'. The contaminated soil appears to be in a 1' to 2' layer, approximately 4' below the ground surface (BGS).

The top 4' of material is recent fill consisting of poorly sorted sand with a little gravel to cobble sized material. At approximately 4' BGS there is a the former gravel road surface. Below the gravel is older fill material consisting of reworked glacial till, also poorly sorted sand with a little gravel. The contaminated soil is associated with, but not confined to, brown soil gravel with a black and orange mottled appearance. The contaminated soil has a solvent odor.

Groundwater was not encountered or sampled during the Phase 2 ESA, which investigated only soil on the property. Groundwater is anticipated to be at depths greater than 20 feet BGS at the site, based on the surrounding topography. The site is located on a ridge, and is more than 20 feet higher in elevation than adjacent property to the east. It is not anticipated that groundwater has been impacted by the contamination.

2.0 Site Map

A site map is attached; there are no wells or surface water on the property. The cleanup

area is approximately 20' by 40' on the east side of the facility building.

3.0 Cleanup Action

Metal Marine Pilot will be entering the Voluntary Cleanup Program (the forms should be received by Ecology this week). A letter (dated July 24, 2000) notifying Ecology of the historic release is attached.

The top 4 feet of uncontaminated fill material in the remediation area will be removed and stockpiled. The contaminated soil will then be excavated in a 2' lift. The anticipated volume of soil will be approximately 60 to 100 yards, or up to approximately 150 tons of material.

Contaminated soil may be directly loaded into trucks or temporally stockpiled on plastic until it can be loaded into trucks.

Once 2' of contaminated soil has been removed the underlying soil will be examined for visual or olfactory evidence of contamination. A PID will also be used to screen for the presence of volatiles. If the soil appears to be free of contamination, confirmational sampling will proceed. If contamination appears to remain, further excavation may be required. Further soil will be removed in approximately 1' lifts until no visual or olfactory evidence of contamination remains.

Soil samples will be collected from the bottom and lower sidewalls of the excavation, in approximately a 10' grid. Some samples may be analyzed "Rush" if necessarily to delineate the extent of the contamination.

Samples will be designated with by "MM", a serial number, depth, and date. Example: "MM-3-6'-8280"

8oz soil sample jars used will be provided by the analytical laboratory. Samples will be analyzed for PCE (SW846/8260B). After collection, samples will be placed in a cooler at 4° C until delivery at the analytical laboratory. If held over night they will be stored in a refrigerator. Maximum holding time is 7 days.

A chain of custody will be maintained for all samples. Chain of custody forms provided by the analytical laboratories will used. If the samples change hands, the change will be documented.

4.0 Type of Business, Description of Release

Metal Marine Pilot, Inc., manufactures automatic pilots for boats and ships.

The release took place during the 1960's. On one or two occasions a small amount (1 to 2 gallons) of PCE used for cleaning small motor parts was dumped on the property, in the vicinity of a former loading dock.

5.0 Sampling Method, and a Summary of Sample Results

The Phase 2 ESA identified the area of PCE contamination using a direct push

Geoprobe™ drilling rig. Samples were analyzed for volatile constituents (EPA 8260B). Analytical data is attached. Sample locations are shown in the site map.

Following identification of the contaminated area, further sampling of the contaminated soil was performed using a mini excavator, to collect samples for TCLP analysis for information on disposal characteristics. The TCLP samples were collected from two testpits in the contaminated area (testpit locations are shown on the site map). Soil was collected from the teeth of the excavator bucket, to obtain samples as undisturbed as possible.

The results for PCE are summarized below; all detected PCE results are shown. No other volatile constituent was detected in any sample.

Sample	Location	Depth	Concentration	Analysis
S1-13100	Borehole 4	2-4	1.26 mg/Kg	EPA 8260B
S4-13100	Borehole 5	4-8	.64 mg/Kg	EPA 8260B
S6-13100	Borehole 6	0-4	2.22 mg/Kg	EPA 8260B
S3-80400	Testpit 2	4'8"	13.9 mg/Kg	EPA 8260B
S1-80400	Testpit 1	4'3"	.025 mg/L	TCLP EPA 8260B
S2-80400	Testpit 2	3'9"	.108 mg/L	TCLP EPA 8260B
S3-80400	Testpit 2	4'8"	.27 mg/L	TCLP EPA 8260B

MTCA cleanup level for Soils: Method A - .5 mg/Kg
Method B - 19.6 mg/Kg
.0858 mg/Kg (protective of groundwater)

Regulatory level for TCLP: .7mg/L

As shown in the table above, detected total PCE ranges from .64 mg/Kg to 13.9 mg/Kg. This range is below the MTCA method B non-protective of groundwater concentration for PCE. Since groundwater at the site is estimated to be greater than 15 feet below the lowest contaminated soil at the site, this method B concentration would be appropriate to use. However, Metal Marine Pilot, Inc., may eventually wish to sell or develop the property, and the more conservative MTCA method A cleanup level (.5 mg/Kg) is the current cleanup objective.

6.0 Proposed Storage and Disposal of Contaminated Soil

Provided Ecology determines the soil to be non-hazardous, Waste Management has approved disposal of the material as non-hazardous, non-dangerous material at the Olympic View Sanitary Landfill. Waste Management has been provided with the data contained in this proposal.

If the material is temporarily stored on the site, it will be placed on a plastic sheet and covered by a plastic sheet.

As you know, we would like to proceed with the cleanup work as soon as possible. Plans for revising the storm water and drainage system at the site are in place, and these must be completed after the soil excavation and before the rainy season begins. Therefore, we are eager to provide any further information you may need to assist in the designation of this contaminated material, so that both the cleanup work and the City-required stormwater improvements can proceed without delay. Please let me know if you have any questions or comments regarding this proposal.

Thank you.

Sincerely,

Linda Drake, RPG
Senior Environmental Scientist

Attachments:
Site Location map
Site map with Sample locations
Letter notifying DOE
Analytical data
at least S1-13100
S4-13100
S6-13100

Attachment D - Health and Safety Plan

FIELD HEALTH AND SAFETY PLAN

GENERAL INFORMATION

The following Health and Safety Plan (HSP) provides guidance to personnel conducting work at 2119 Mildred Street West, Fircrest, Washington during the week of September 11, 2000. This plan discusses potential chemical and physical hazards anticipated on site and describes control measures to assure individual safety. The content of this HSP may change or undergo revision based upon additional information made available to Health and Safety Officer (HSO) which would include monitoring results or changes in the technical scope of work. If unanticipated changes in site or working conditions are encountered, HSP addenda will be provided by HSO.

Provisions set forth in this plan will apply to the employees of the contractor(s) working on the site, and their subcontractors working on this project, as well as any visitors to the site. The Health and Safety Officer, will issue a copy of the HSP to subcontractors hired for on-site work. Subcontractors are recommended to follow these provisions as minimum recommendations; more stringent measures may be taken at their discretion. Subcontractors are responsible for the health and safety of their own employees. All staff expected to work on this site will read this HSP and must sign the consent form of this plan prior to site entry.

This HSP has been designed in substantial conformance with the guidelines outlined in the EPA Standard Operating Safety Guide and the US Department of Labor OSHA Standards CFR Part 1910 (e.g., 29 CFR 1910.120 on hazardous waste). This HSP has been developed by EHM occupational and industrial health and safety specialists and the offices of Creative Environmental Technologies, Inc.

All employees, visitors, officials, subcontractors, and other personnel entering the work area will be briefed in an on-site meeting prior to the commencement of site activities, and as field conditions change. The field supervisor on site will be responsible for the conduct of the meeting and for maintaining adequate records of the briefings.

Site briefings will be conducted with all personnel and will review hazards that are known or suspected to be found at the site and will include the toxicological and physico-chemical data, required personal protective gear, use of the gear, warning signs of exposure and overexposure, evacuation routes and other emergency procedures relevant to the day's operations.

Chemical concerns are limited to solvent (Tetrachloroethylene) residual in soil at non-hazardous concentrations, and a level D uniform is sufficient for the job site. No special breathing devices are needed unless stated by the HSO for a specific area. No "HOT" areas are necessarily designated due to the low level (dose) of contaminates that may be encountered on this site. Precautions will be taken upon exit from the construction site with the use of a water and Trisodiumphosphate (TSP) mixture in green containers used to decontaminate footwear on the job site. The entire site shall be designated as a "construction" site and proper safety measures

taken to include normal level D clothing, safety barricades, stakes, and safety tape designating control areas.

It is not anticipated that any explosion or fire exposure on this site will be encountered.

In the event of emergency, notify the HSO immediately: If he is not available, use the following contract numbers for emergency response.

Emergency numbers are as follows:

Hospital: Allenmore Hospital
South 19th & Union Avenue
Tacoma Washington

Phone: **253-572-2323**
Emergency: 911

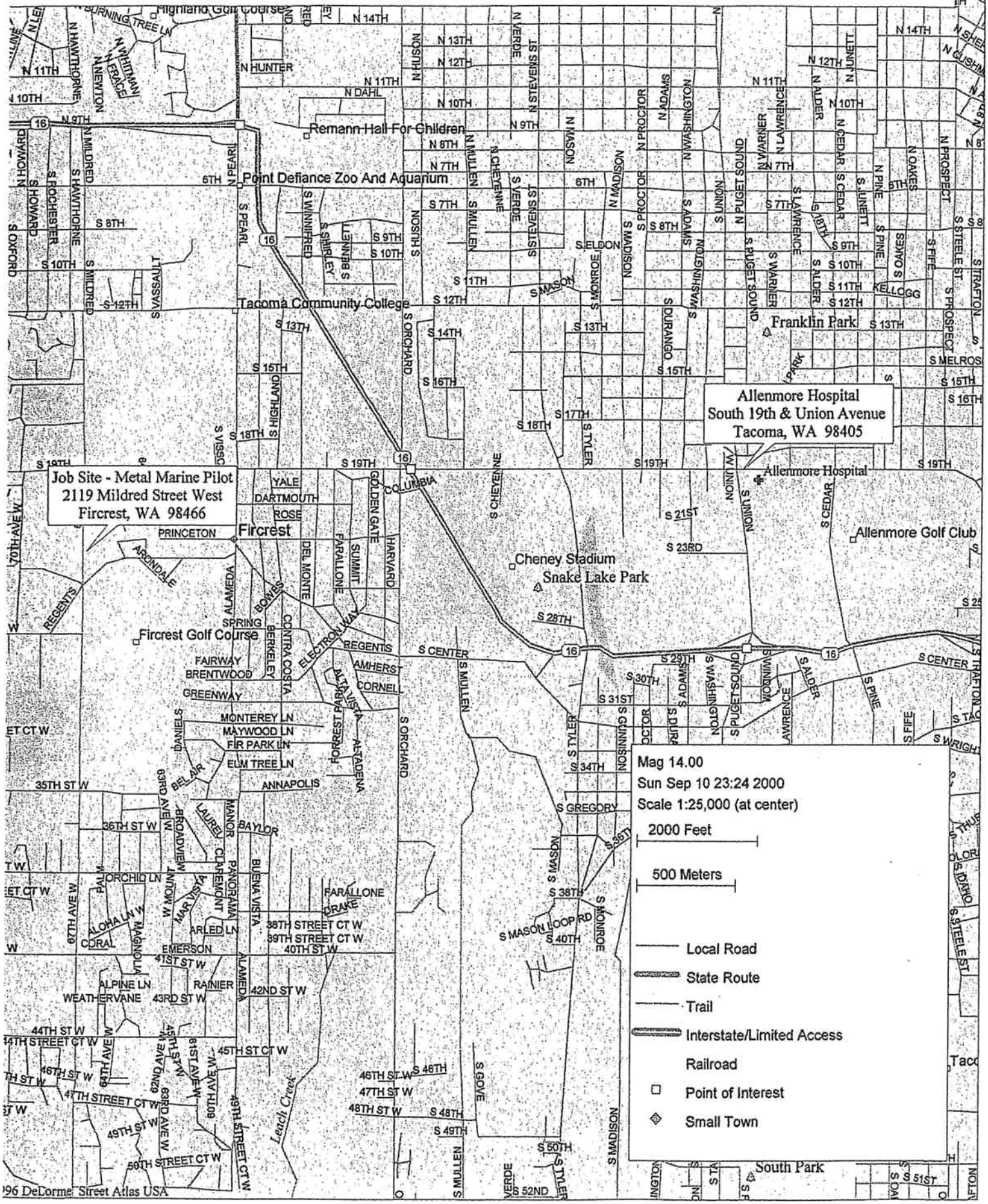
Fire Station / Medics: Tacoma Fire Department

Phone: **911**

Project H & S Officer: Eric Melland cell 380-2888, backup Steve Spencer 253-732-3436

24 Hour Emergency: **1-888-564-8509**

Job Site and Hospital Location



Health and Safety Sign - in Sheet (Job # 165-2)

Name (Print)	Signature	Company	Date
Ken Benda		R. Lee Ledge	9-11
LINDA DRAKE		CETI	9-11
Steve Spencer		CETI	9-11
ERIC MELAND		CETI - HSO	9-11-00

Addendum to the Phase 2 Site Assessment

Subject Property:

2119 Mildred Street West
Fircrest, WA 98466-6194

November, 2000

Prepared For:

Janet Freeman-Daily
Metal Marine Pilot, Inc.
2119 Mildred Street West
Fircrest, WA 98466-6194

Prepared By:

Creative Environmental Technologies, Inc.
PO Box 1803
Tacoma, Washington 98401-1803
(253) 627-3347

1326 Tacoma Avenue ⊛ P.O. Box 1803 ⊛ Tacoma, Washington 98401- 1803
P: 253. 627.3347 ⊛ F: 253.572.4207 ⊛ E: ceti@cetinw.com ⊛ W: www.cetinw.com

TABLE OF CONTENTS

ATTACHMENTS

1326 Tacoma Avenue ⊛ P.O. Box 1803 ⊛ Tacoma, Washington 98401- 1803
P: 253. 627.3347 ⊛ F: 253.572.4207 ⊛ E: ceti@cetinw.com ⊛ W: www.cetinw.com

1.0 Introduction and Background

Creative Environmental Technologies, Inc. (CETI), was retained by Janet Freeman-Daily to investigate the potential presence of contamination at a site at 2119 Mildred Street West. The purpose of this Addendum to the Level II Investigation is to present the analytical results of samples collected near the northern property boundary adjacent to Pace Industries.

On February 1, 2000, CETI sampled soil using a Geoprobe direct push drilling rig to obtain soil borings. The samples were collected to investigate several specific areas of the property. One soil boring, BH24 was collected near the Pace property boundary (the location is shown in Figure 1, and the soil boring in Attachement B), to investigate the possibility of contaminants from the Pace property impacting soils on the subject property. Soft ground prevented further investigation of the property boundary by the Geoprobe rig.

On February 15, 2000, three surface (approximately the top 3 inches) soil samples were collected by hand along the Pace property boundary (the locations are shown in Figure 1). Sample S1-21500 was collected at the corner of the fence line. Sample S2-21500 was collected approximately 30 feet to the west along the fence line. Both samples had an oily appearance and odor. Sample S3-21500 contained some black, sooty material. Similar material is associated with fan vents on the side of the Pace building. Sample S1 was analyzed for pH and diesel and oil range hydrocarbons, and sample S3 was analyzed for six metals.

2.0 Sample Results

Analytical results for metals and hydrocarbons are summarized in the table below. Sample S6-2100 was also analyzed for semi-volatile organic compounds.

Table 1: A summary of sample results for metals, hydrocarbons, and pH.

mg/Kg	S6-2100 BH 24	S3-21500	S1-21500	MTCA Cleanup
Antimony	13	na	na	
Arsenic	12	<5	na	20
Beryllium	<0.1	na	na	.233*
Cadmium	<0.3	<0.3	na	2
Chromium	16	20	na	100
Copper	130	na	na	2960*
Lead	39	16	na	250
Mercury	<0.05	<0.05	na	1
Nickel	15	na	na	
Selenium	<8	na	na	
Silver	<0.7	na	na	
Thallium	<0.1	na	na	
Zinc	250	1500	na	
Diesel	na	na	<25	200
Oil	na	na	35000	200
pH	na	na	4.96	

* Method B cleanup level.

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The result in bold in the table above indicates that the concentration of oil range hydrocarbons in sample S1-21500 (35000 mg/Kg) is above the MTCA cleanup level (200 mg/Kg).

Sample S6-2100 was analyzed for semi-volatile organic compounds (see attached analytical results). No semi-volatile constituent was detected.

The pH of the soil in sample S1-21500 (4.96) is somewhat lower than is usually encountered in the region, and maybe associated with the contamination.

3.0 Discussion

The results indicate that oil range hydrocarbons are present high concentrations in soil along the Pace property boundary.

On January 31, 2000, during the Geoprobe investigation of Metal Marine property, CETI personnel observed a man on the cement pad behind the Pace facility building, within the Pace facility fence, apparently washing something in a white bucket and decanting the wash liquid on the ground along the fence line. CETI took a photo of the man, which is attached to this addendum.

In April of 1999, Pace Industries had a release of an oil waste product, a special lubricating paraffin oil used in their machining process. The release lead to a cleanup on Metal Marine property, and along a portion of the Pace/Metal Marine property boundary, north of the sampling locations reported in this report. The approximate area of the cleanup is shown in Figure 1. The analytical results obtained from the more recent samples are consistent with the same contaminant involved in the 1999 release.

1326 Tacoma Avenue ⊛ P.O. Box 1803 ⊛ Tacoma, Washington 98401- 1803
P: 253. 627.3347 ⊛ F: 253.572.4207 ⊛ E: ceti@cetinw.com ⊛ W: www.cetinw.com

4.0 Signatures of Environmental Professional

CETI appreciates the opportunity to provide environmental services. Please call with any questions or concerns.

By: _____

Linda Drake, MS, RPG
Senior Environmental Scientist
CETI

Approved by: _____

John R. Spencer, BBA, LLB
President
CETI

1326 Tacoma Avenue ⊛ P.O. Box 1803 ⊛ Tacoma, Washington 98401- 1803
P: 253. 627.3347 ⊛ F: 253.572.4207 ⊛ E: ceti@cetinw.com ⊛ W: www.cetinw.com

Addendum - Attachment A

TOPOGRAPHIC SURV

PORTION OF THE NW 1/4 OF THE NW 1/4, SEC 11, TWP 20N, RGE 2E, W.M.

CITY OF FIRCREST, PIERCE COUNTY, WASHINGTON

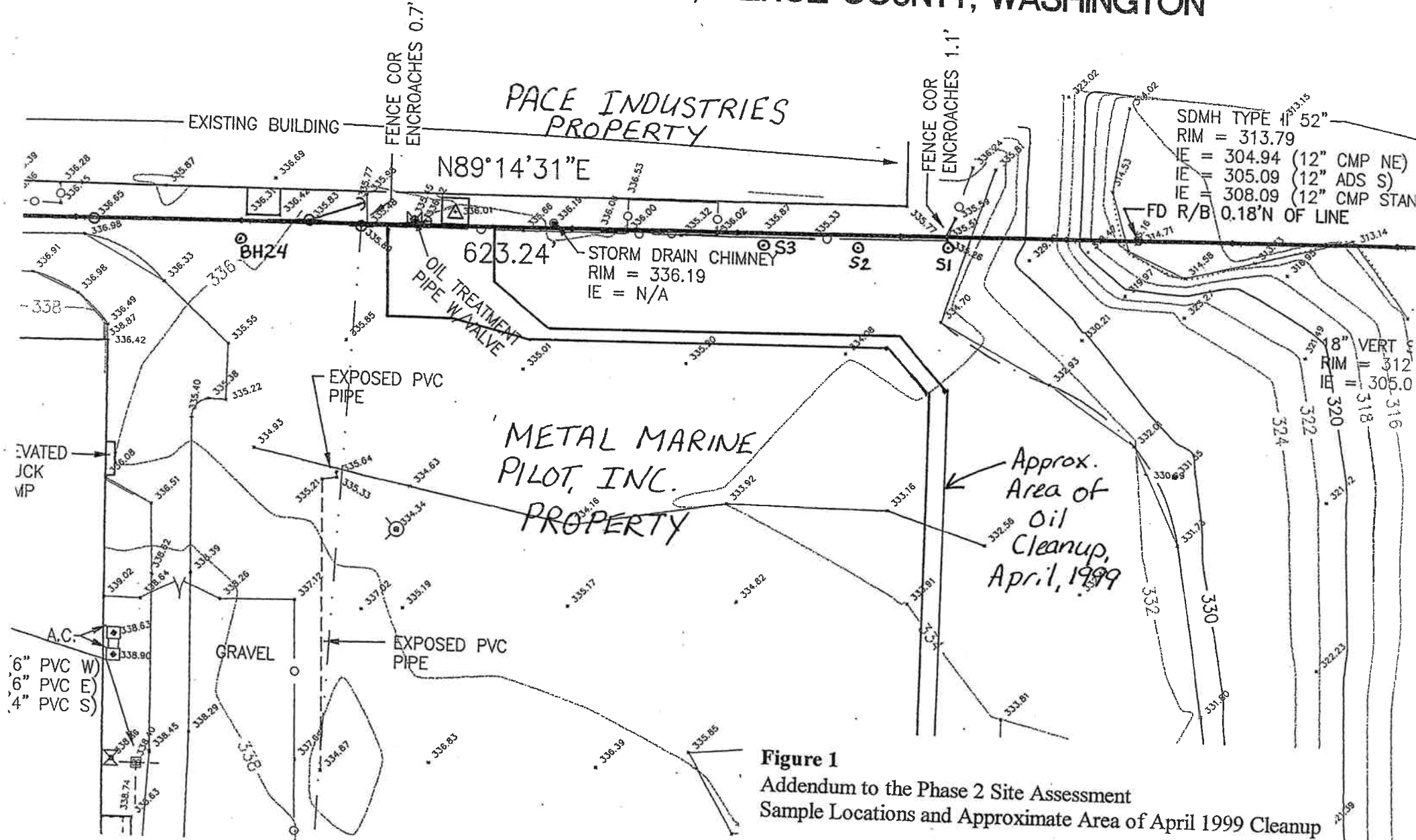
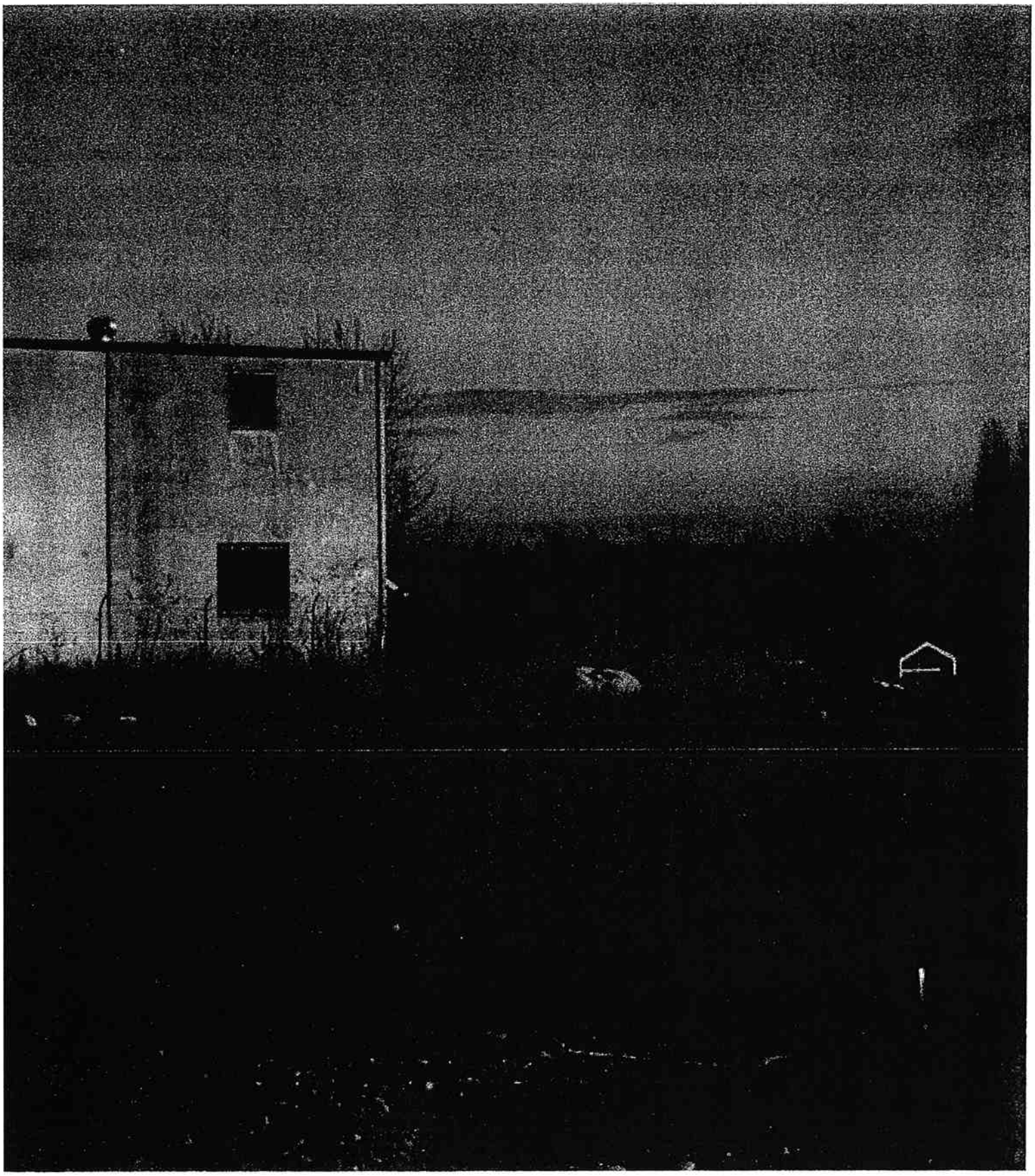


Figure 1
Addendum to the Phase 2 Site Assessment
Sample Locations and Approximate Area of April 1999 Cleanup



There is a man near the center of the photo, in the corner of the Pace Industries property. The light spot just above and to the left of the rock in the center of the photo is a white plastic bucket held by the man. The photo was taken on January 31, 2000.

Addendum - Attachment B

SPECTRA Laboratories

2221 Ross Way • Tacoma, WA 98421 • (253) 272-4850

03/03/2000

P.O.#: 5002
Project: Metal Marine 165-1
Client ID: S6-2100
Sample Matrix: Soil
Date Sampled: 02/01/2000
Date Received: 02/02/2000
Spectra Project: 2000020032
Spectra Number: 14

Creative Environmental Technologies, Inc
P.O. Box 1803
Tacoma, WA 98401
Attn: Linda Drake

Analyte	Result	Units	Method
ntimony	13	mg/Kg	SW846 6010B
rsenic	12	mg/Kg	SW846 6010B
eryllium	< 0.1	mg/Kg	SW846 6010B
admium	< 0.3	mg/Kg	SW846 6010B
hromium	16	mg/Kg	SW846 6010B
opper	130	mg/Kg	SW846 6010B
ead	39	mg/Kg	SW846 6010B
lercury	<0.05	mg/Kg	EPA 7471A
lickel	15	mg/Kg	SW846 6010B
elenium	< 8	mg/Kg	SW846 6010B
ilver	< 0.7	mg/Kg	SW846 6010B
hallium	< 0.1	mg/Kg	SM 3113B
inc	250	mg/Kg	SW846 6010B
henol	<0.33	mg/Kg	EPA 8270C
,2,4-Trichlorobenzene	<0.33	mg/Kg	EPA 8270C
,2-Dichlorobenzene	<0.33	mg/Kg	EPA 8270C
,3-Dichlorobenzene	<0.33	mg/Kg	EPA 8270C
,4-Dichlorobenzene	<0.33	mg/Kg	EPA 8270C
,4,5-Trichlorophenol	<0.33	mg/Kg	EPA 8270C
,4,6-Trichlorophenol	<0.33	mg/Kg	EPA 8270C
,4-Dichlorophenol	<0.33	mg/Kg	EPA 8270C

Analyte	Result	Units	Method
2,4-Dimethylphenol	<0.33	mg/Kg	EPA 8270C
2,4-Dinitrophenol	<1.65	mg/Kg	EPA 8270C
2,4-Dinitrotoluene	<0.33	mg/Kg	EPA 8270C
2,6-Dinitrotoluene	<0.33	mg/Kg	EPA 8270C
2-Chloronaphthalene	<0.33	mg/Kg	EPA 8270C
2-Chlorophenol	<0.33	mg/Kg	EPA 8270C
2-Methylnaphthalene	<0.33	mg/Kg	EPA 8270C
2-Methylphenol	<0.33	mg/Kg	SW846 8270C
2-Nitroaniline	<1.65	mg/Kg	EPA 8270C
2-Nitrophenol	<0.33	mg/Kg	EPA 8270C
3,3-Dichlorobenzidine	<0.66	mg/Kg	EPA 8270C
3-Nitroaniline	<1.65	mg/Kg	EPA 8270C
4,6-Dinitro-2-Methylphenol	<1.65	mg/Kg	EPA 8270C
4-Bromophenyl-phenylether	<0.33	mg/Kg	EPA 8270C
4-Chloro-3-Methylphenol	<0.33	mg/Kg	EPA 8270C
4-Chloroaniline	<0.33	mg/Kg	EPA 8270C
4-Chlorophenyl-phenylether	<0.33	mg/Kg	EPA 8270C
4-Methylphenol	<0.33	mg/Kg	EPA 8270C
4-Nitroaniline	<1.65	mg/Kg	EPA 8270C
4-Nitrophenol	<1.65	mg/Kg	EPA 8270C
Acenaphthene	<0.33	mg/Kg	EPA 8270C

Surrogate	Recovery	Method
Nitrobenzene-d5	42	EPA 8270C
2-Fluorobiphenyl	69	EPA 8270C
p-Terphenyl-d14	96	EPA 8270C
2-Fluorophenol	38	EPA 8270C

Surrogate	Recovery	Method
Phenol-d6	59	EPA 8270C
2,4,6-Tribromophenol	82	EPA 8270C

SPECTRA LABORATORIES

SPECTRA Laboratories

2221 Ross Way • Tacoma, WA 98421 • (253) 272-4850

03/03/2000

P.O.#:	5002
Project:	Metal Marine 165-1
Client ID:	S6-2100
Sample Matrix:	Soil
Date Sampled:	02/01/2000
Date Received:	02/02/2000
Spectra Project:	2000020032
Spectra Number:	14

Creative Environmental Technologies, Inc
P.O. Box 1803
Tacoma, WA 98401
Attn: Linda Drake

Analyte	Result	Units	Method
Acenaphthylene	<0.33	mg/Kg	EPA 8270C
Anthracene	<0.33	mg/Kg	EPA 8270C
Benzo(a)Anthracene	<0.33	mg/Kg	EPA 8270C
Benzo(a)Pyrene	<0.33	mg/Kg	EPA 8270C
Benzo(b)Fluoranthene	<0.33	mg/Kg	EPA 8270C
Benzo(ghi)Perylene	<0.33	mg/Kg	EPA 8270C
Benzo(k)Fluoranthene	<0.33	mg/Kg	EPA 8270C
Benzoic Acid	<1.65	mg/Kg	EPA 8270C
Benzyl Alcohol	<0.33	mg/Kg	EPA 8270C
Bis(2-Chloroethyl)Ether	<0.33	mg/Kg	EPA 8270C
Butylbenzylphthalate	<0.33	mg/Kg	EPA 8270C
Chrysene	<0.33	mg/Kg	EPA 8270C
Di-n-Butylphthalate	<0.33	mg/Kg	EPA 8270C
Di-n-Octyl Phthalate	<0.33	mg/Kg	EPA 8270C
Dibenz(a,h)Anthracene	<0.33	mg/Kg	EPA 8270C
Dibenzofuran	<0.33	mg/Kg	EPA 8270C
Diethylphthalate	<0.33	mg/Kg	EPA 8270C
Dimethyl Phthalate	<0.33	mg/Kg	EPA 8270C
Fluoranthene	<0.33	mg/Kg	EPA 8270C
Fluorene	<0.33	mg/Kg	EPA 8270C
Hexachlorobenzene	<0.33	mg/Kg	EPA 8270C

Analyte	Result	Units	Method
Hexachlorobutadiene	<0.33	mg/Kg	EPA 8270C
Hexachlorocyclopentadiene	<0.33	mg/Kg	EPA 8270C
Hexachloroethane	<0.33	mg/Kg	EPA 8270C
Indeno(1,2,3-cd)Pyrene	<0.33	mg/Kg	EPA 8270C
Isophorone	<0.33	mg/Kg	EPA 8270C
N-Nitroso-Di-n-Propylamine	<0.33	mg/Kg	EPA 8270C
N-Nitrosodiphenylamine	<0.33	mg/Kg	EPA 8270C
Naphthalene	<0.33	mg/Kg	EPA 8270C
Nitrobenzene	<0.33	mg/Kg	EPA 8270C
Pentachlorophenol	<1.65	mg/Kg	EPA 8270C
Phenanthrene	<0.33	mg/Kg	EPA 8270C
Pyrene	<0.33	mg/Kg	EPA 8270C
bis(2-Chloroethoxy)Methane	<0.33	mg/Kg	EPA 8270C
bis(2-Ethylhexyl)Phthalate	<0.33	mg/Kg	EPA 8270C
bis(2-chloroisopropyl)Ether	<0.33	mg/Kg	EPA 8270C

Surrogate	Recovery	Method
Nitrobenzene-d5	42	EPA 8270C
2-Fluorobiphenyl	69	EPA 8270C
p-Terphenyl-d14	96	EPA 8270C
2-Fluorophenol	38	EPA 8270C

Surrogate	Recovery	Method
Phenol-d6	59	EPA 8270C
2,4,6-Tribromophenol	82	EPA 8270C

SPECTRA LABORATORIES

SPECTRA Laboratories

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CHAIN OF CUSTOD

CLIENT: CETI
PROJECT: METAL MARINE 165-1
CONTACT: LINDA DRAKE
PHONE: 627-3317
PURCHASE ORDER #: 5002

SAMPLE ID	DATE SAMPLED	TIME SAMPLED	MATRIX	NUMBER OF CONTAINERS
S1-13100	1-31-00		Soil	1
S4-13100	"		"	1
S6-13100	"		"	1
S8-13100	"		"	1
S7-13100	"		"	1
S11-13100	"		"	1
S17-13100	"		"	1
S24-13100	"		"	1
S25-13100	"		"	1
S27-13100	"		"	1

HYDROCARBONS							ORGANICS						TCLP D-LIST					METALS			OTHER									RETUR
NWTPH-HCID	BTEX/NWTPH-G	BTEX	NWTPH-G	NWTPH-D	1664 SGT-HEM	1664 HEM	8260 VOA	8260 CHLOR SOLVENTS	8270 SEMI-VOA	PAH/PNA-8270	8081 ORG. CHLOR PEST.	8082 PCB	TCLP METALS (8)	TCLP-VOA	TCLP 8270 SEMI-VOA	TCLP PEST.	TCLP HERB.	TOTAL METALS ICP/DCP	TOTAL METALS GFAA	TOTAL LEAD	pH 9040/9045	TOX 9020/9076	TOC 9060/PSEP	FLASH POINT	SOLIDS (SPECIFY)					NORMAL / RUSH	DISPOS
							X												X										Fee appl
							X																						LAB ID
							X																						
							X												X										
							X																						
							X																						
							X																						
									X										X										
									X										X										
																			X										
							X																						

SPECIAL INSTRUCTIONS/COMMENTS:
* Priority Pollutants to MTCA limits (13 metals)

	SIGNATURE	PRINTED NAME	COMPANY	DATE	TIM
RELINQUISHED BY		LINDA DRAKE	CETI	2 Feb 99	12:
RECEIVED BY					
RELINQUISHED BY					
RECEIVED BY					

Payment Terms: Net 30 days. Past due accounts subject to 18% per annum interest. Customer agrees to pay all costs of collection including reaso attorney's fees and all other associated cos collection regardless of whether suit is filed.

SPECTRA Laboratories

CHAIN of CUSTODY

2221 Ross Way • Tacoma, WA 98421 • (253) 272-4850 • Fax (253) 572-9838

CLIENT: CETI
PROJECT: METAL MARINE 165-1
CONTACT: LINDA DRAKE
PHONE: 627-3347
PURCHASE ORDER #: 5002

SAMPLE ID	DATE SAMPLED	TIME SAMPLED	MATRIX	NUMBER OF CONTAINERS	NWTPH-HCID	BTEX/NWTPH-G	BTEX	NWTPH-G	NWTPH-D	1664 SGT-HEM	1664 HEM	8260 VOA	8260 CHLOR SOLVENTS	8270 SEMI-VOA	PAH/PNA-8270	8081 ORG. CHLOR PEST.	8082 PCB	TCLP METALS (8)	TCLP-VOA	TCLP 8270 SEMI-VOA	TCLP PEST.	TCLP HERB.	TOTAL METALS ICP/DCP	TOTAL METALS GFAA	TOTAL LEAD	pH 9040/9045	TOX 9020/9076	TOC 9060/PSEP	FLASH POINT	SOLIDS (SPECIFY)					NORMAL / RUSH	LAB ID
					HYDROCARBONS							ORGANICS						TCLP D-LIST					METALS			OTHER										
S28-13100	1-31-00		SOIL	1								X																								
S1-2100	2-1-00		SOIL	1								X																								
S3-2100	2-1-00		SOIL	1								X																								
S6-2100	〃		〃	1										X										X												
S26-13100	1-31-00		SOIL	1								X																								
S29-13100	1-31-00		SOIL	1								X																								

RETUR...
DISPOS...
Fee appl...

SPECIAL INSTRUCTIONS/COMMENTS:

	SIGNATURE	PRINTED NAME	COMPANY	DATE	TIM...
RELINQUISHED BY	[signature]	LINDA BRAKE	CETI	2-6-99	12..
RECEIVED BY	[signature]	[illegible]	[illegible]	[illegible]	[illegible]
RELINQUISHED BY					
RECEIVED BY					

Payment Terms: Net 30 days. Past due accounts subject to 18% per annum interest. Customer agrees to pay all costs of collection including reason... attorney's fees and all other associated cos... collection regardless of whether suit is filed.

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02/25/2000

Creative Environmental Technologies, Inc
P.O. Box 1803
Tacoma, WA 98401
Attn: Linda Drake

P.O.#:	5034
Project:	Metal Marine
Client ID:	S1-21500
Sample Matrix:	Soil
Date Sampled:	02/15/2000
Date Received:	02/17/2000
Spectra Project:	2000020175
Spectra Number:	1

Analyte	Result	Units	Method
Diesel	<25	mg/Kg	NWTPH-D
Oil	35000	mg/Kg	NWTPH-D
pH	4.96	pH Units	SW846 9045

SPECTRA LABORATORIES

Michael Deckert

Michael Deckert, Chemist

SPECTRA Laboratories

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02/25/2000

Creative Environmental Technologies, Inc
P.O. Box 1803
Tacoma, WA 98401
Attn: Linda Drake

P.O.#:	5034
Project:	Metal Marine
Client ID:	S3-21500
Sample Matrix:	Soil
Date Sampled:	02/15/2000
Date Received:	02/17/2000
Spectra Project:	2000020175
Spectra Number:	2

Analyte	Result	Units	Method
Arsenic	< 5	mg/Kg	SW846 6010B
Cadmium	< 0.3	mg/Kg	SW846 6010B
Chromium	20	mg/Kg	SW846 6010B
Lead	16	mg/Kg	SW846 6010B
Mercury	<0.05	mg/Kg	EPA 7471A
Zinc	1500	mg/Kg	SW846 6010B

SPECTRA LABORATORIES

Michael Deckert

Michael Deckert, Chemist

SPECTRA Laboratories

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CHAIN OF CUSTOD

PAGE 1 of 1

020175

CLIENT: CETI
PROJECT: METAL MARINE
CONTACT: LINDA DRAKE
PHONE: 627-3347
PURCHASE ORDER #: 5034

SAMPLE ID	DATE SAMPLED	TIME SAMPLED	MATRIX	NUMBER OF CONTAINERS
31-21500	2.15.00	4:20	Soil	1
53-21500	2.15.00	4:40	Soil	1

HYDROCARBONS							ORGANICS						TCLP D-LIST					METALS			OTHER										
NWTPH-HCID	BTEX/NWTPH-G	BTEX	NWTPH-G	NWTPH-D	1664 SGT-HEM	1664 HEM	8260 VOA	8260 CHLOR SOLVENTS	8270 SEMI-VOA	PAH/PNA-8270	8081 ORG. CHLOR PEST.	8082 PCB	TCLP METALS (8)	TCLP-VOA	TCLP 8270 SEMI-VOA	TCLP PEST.	TCLP HERB.	TOTAL METALS ICP/DCP	TOTAL METALS GFAA *	TOTAL LEAD	pH 9040/9045	TOX 9020/9076	TOC 9060/PSEP	FLASH POINT	SOLIDS (SPECIFY)						NORMAL / RUSH
				X			X			X			X		X				X		X										
															X				X												

RETU
DISPO
Fee app
LAB
1
2

SPECIAL INSTRUCTIONS/COMMENTS:
* Zn, Pb, As, Cr, Cd, Hg

	SIGNATURE	PRINTED NAME	COMPANY	DATE	TI
RELINQUISHED BY		LINDA DRAKE	CETI	2-17-00	
RECEIVED BY		D. TRISKA	SPECTRA	2-17-00	
RELINQUISHED BY					
RECEIVED BY					

Payment Terms: Net 30 days. Past due accounts subject to 18% per annum interest. Customer agrees to pay all costs of collection including reas
attorney's fees and all other associated co f collection regardless of whether suit is filed.

Borelog

Soil core collected with a GeoProbe™ direct push drilling rig on February 1, 2000.

Borehole #24 (Near Pace)

0-4 feet	Stiff gray to brown silty sand with some rounded to angular gravel. Sample S5-2100 collected from 0-2, and Sample S6-2100 from 2-4.
4-8 feet	Stiff gray and brown sand with some gravel. Sample S7-2100 collected.

Refusal at 8 feet BGS.

Phase 2 Site Assessment

Subject Property:

2119 Mildred Street West
Fircrest, WA 98466-6194

March 28, 2000

Prepared For:

Janet Freeman-Daily
Metal Marine Pilot, Inc.
2119 Mildred Steet West
Fircrest, WA 98466-6194

Prepared By:

Creative Environmental Technologies, Inc.
PO Box 1803
Tacoma, Washington 98401-1803
(253) 627-3347

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Executive Summary

1.0 Introduction

1.1 Purpose

This Level 2 environmental site investigation was performed at the request of Janet Freeman-Daily, representing Metal Marine Pilot, Inc. The investigation was performed for Metal Marine Pilot at 2119 Mildred Street West, Fircrest, Washington. The assessment was in preparation for leasing the facility and property.

The purpose of the investigation was to identify and delineate contamination in the soil at the site.

1.2 Terms, Limitations and Exceptions

The scope of this level 2 investigation was based on conversations with Janet Freeman-Daily and Michael Freeman of Metal Marine Pilot. The sampling plan was designed to test for specific possible contaminants in specific areas to the east of the current facility building. The investigation was limited to areas where possible contamination might be present. This investigation does not address the entire property.

The current investigation involved only soil samples; groundwater at the site was not investigated.

This investigation does not include sampling along the northern property boundary, near Pace Industries. Janet Freeman-Daily requested that an investigation near the northern property boundary be considered a separate job; it will be reported in an addendum to this Level 2 investigation report.

1.3 Limiting Conditions and Methods Used

This report includes samples collected in areas to the east of the facility building, and to the south east of the building, in former location of an underground storage tank. Samples collected close to the northern property boundary (adjacent to Pace Industries) will be described in an addendum to this report.

2.0 Background

A Level 1 Environmental Site Assessment was performed by CETI on the subject property (dated May 7, 1999). For a detailed description of the site, site history, and the history of

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adjacent properties, please refer to the Level 1 Site Assessment.

The property is bounded on the north by Pace Industries, on the west by Mildred Street West, on the south by two separate properties, and on the east by two apartment complexes and a mortgage firm.

The facility is used to manufacture automatic pilots. The original building was built in 1959, and has been subsequently added on to in 1961 and 1965, and again in 1979. The aerial photographs and interviews indicate that no structures were present on the property prior to 1959.

In the Level 1 Environmental Site Assessment, CETI identified several sources of possible contamination. Based on interviews with Michael Freeman previous on-site activities, such as the disposal of certain chemical solvent wastes in the undeveloped area east of the manufacturing building, may have impacted the soil. These solvents were used in the production of Metal Marine's automatic pilot systems.

3.0 Level 2 Environmental Assessment Activities

3.1 Conceptual Site Model and Sampling Plan

Four areas of potential soil contamination were established in conversation with Janet and Michael Freeman. The areas are shown in Figure 2:

Area A--An area directly adjacent to some of out-buildings and the main facility building where volatile solvents and metals may be present in the soil. This area includes a former loading dock area where some waste solvents were disposed of by tossing the solvents off the loading dock onto a former gravel road surface.

Area B--An area to the east of the southern end of the facility building, which was the drainage field for a drain that exited the facility, and may have carried metals and semivolatiles.

Area C--A area east of the former gravel road, where pits had been excavated and lined with lime for neutralization and disposal of acid. The acid was used in etching metal, so the possible contaminants associated with the lime pits are metals.

Area D--The site of a former underground storage tank. The tank had contained diesel fuel.

The area of the excavation has been filled and graded several times. Native soil at the site consists of a thin layer of topsoil above very compact glacial till. The fill consists primarily of reworked till. The total thickness of the fill layers varies across the investigation area from four feet to approximately 25 feet.

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Samples were collected using a Geoprobe™ direct push drilling rig with a stainless steel split spoon sampler. Distances to sampling locations were measured in the field by pacing from known reference points. Sample locations were mark on a site map.

Soil samples were collected to the depth that the drill rig met refusal. In most cases, refusal coincided with the bottom of fill material and the top of compacted native till.

Soil samples were placed in an EPA-approved sampling jar with a Teflon™-lined lid provided by the analytical laboratory. The soil samples were labeled and placed in a cooler to preserve the samples until they were delivered to the analytical laboratory. Container types, preservation techniques, sample volumes and holding times for the analyses performed on samples are shown in the table below.

Table 1: Requirements for Container Types, Preservation Techniques, Sample Volumes, and Holding Times.

Name	Analytical Method	Container	Preservation	Minimum Sample Volume	Maximum Holding Time
Metals (Priority Polutants to MTCA limits)	SW846 6010B, EPA 7471A, SM 3113B	Glass with Teflon-lined lid	4° C	8 ounces	180 days
Semi-volatiles	EPA 8270C	Glass with Teflon-lined lid	4° C	8 ounces	14 days until extraction, 40 days after extraction
Volatiles	EPA 8260B	Glass with Teflon-lined lid	4° C	8 ounces	7 days until extraction, 40 days after extraction

The management of samples collected in the field follows specific procedures to ensure sample integrity. A chain-of-custody for samples was established with the collection of samples, and documented with chain-of-custody forms. Copies of the chain-of-custody forms are included with the attached analytical results.

3.2 Field Exploration

Sampling occurred on January 31 and February 1, 2000. January 31 was clear in the morning, overcast with light rain late in the afternoon. Most of the sampling plan was executed

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on January 31. The outlook was for more rain on the following day, and the driller warned that heavy rain could cause the rig to became mired.

Heavy rain fell on February 1, but the remaining boreholes drilled on February 1 were located on firm, compacted areas.

Soil encountered in the borings were consistent with fill material primarily composed of reworked glacial till and compact native glacial till. Soil bore logs are included as an attachment. Sample locations are marked on the sample location map.

Depending on the areas described above, and the type of contaminant expected, the soil samples were analyzed for metals, volatile organic compounds or semi-volatile organic compounds. The table below summarizes the boreholes and the analyses performed.

Table 2: Location, Depth, Analysis Performed of Soil Samples.

Sample Designation	Borehole	Depth of Sample Feet BGS	Investigation Area	Analysis Perfomed
S1-13100	4	2-4	A, loading dock	VOA
S4-13100	5	4-8	A, loading dock	VOA
S6-13100	6	0-4	A, loading dock	VOA, Metals
S8-13100	7	4-8	A, loading dock	VOA
S9-13100	8	0-4	A, loading dock	VOA
S11-13100	9	0-4	A, loading dock	VOA
S17-13100	12	4-6	B	Semi-VOA, Metals
S24-13100	16	9-10	C	Semi-VOA, Metals
S25-13100	16	11-12	C	Metals
S26-13100	18	3-4	A	VOA
S27-13100	19	3-4	A	VOA
S29-13100	21	3-4	A	VOA
S1-2100	22	2-4	A	VOA
S3-2100	23	0-4	A	VOA
S6-2100	24	2-4	PACE	Semi-VOA, Metals

4.0 Evaluation and Presentation of Results

The results of soil testing shows tetrachloroethene (PCE, perchloroethlene, or perc) concentrations exceeding MTCA method A cleanup levels in three samples. All three samples were in the area of the former loading dock.

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Metals are present at detectable concentrations, but not above cleanup levels. Other constituents tested were not detected. Results are included as an attachment to this report.

The results for PCE concentrations which exceeded MTCA cleanup levels and the results for metals, with their cleanup levels, are summarized in the table below.

Table 3a: PCE results in mg/Kg (ppm) which exceed MTCA method A cleanup level.

Sample	Borehole	Depth	PCE (mg/Kg)
S1-13100	4	2-4	1.26 .05
S4-13100	5	4-8	.64 .05
S6-13100	6	0-4	2.22 .05
Cleanup Level			.5 .05

Table 3b: Metal results in mg/Kg and method A and method B protective of groundwater cleanup levels.

Metal	S6-13100	S17-13100	S24-13100	S25-13100	S6-2100	Cleanup Level
Antimony	19	21	18	21	13	NA
Arsenic	<5	<5	<5	<5	12	20
Beryllium	<.1	<.1	<.1	<.1	<.1	.002 (100 x groundwater)
Cadmium	<.3	<.3	<.3	<.3	<.3	2
Chromium	21	38	62	21	16	100 2,000
Copper	24	16	29	7.5	130	59 (100 x groundwater)
Lead	9	8	28	5	39	250
Mercury	.09	<.05	.07	<.05	<.05	1 2.0
Nickel	26	36	22	17	15	NA
Selenium	<8	<8	<8	<8	<8	8 (100 x groundwater)
Silver	<.7	<.7	<.7	<.7	<.7	8 (100 x groundwater)
Thallium	<.1	<.1	<.1	<.1	<.1	NA
Zinc	360	65	34	28	250	480 (100 x groundwater)

The cleanup level listed in the tables above generally represent the most stringent cleanup levels, including method B protective-of-groundwater cleanup levels. None of the metals appear to exceed these cleanup levels. However, the detection limit for beryllium is higher than the most stringent cleanup level, but below the method B beryllium in soil, non-protective of groundwater

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cleanup level of .233 mg/Kg. No beryllium was detected in any of the samples and beryllium does not appear to be a problem contaminant at the site.

5.0 Discussion of Findings

Each of the areas mentioned above in section 3.1 was sampled and assessed.

Area A: The area is immediately adjacent to the building and the out-buildings. Three samples from this area, specifically in the vicinity of the former loading dock, had concentrations of PCE above the MTCA cleanup level. Sample results and field observations suggest that the contamination coincides with a layer of black and orange mottled sand, which extend from approximately 3.5 to 4.5 feet BGS, and which has an organic chemical odor. The approximate area of PCE contamination in the subsurface is shown in the attached map.

Area B: The area is the drain field for a facility drain. The suspected contaminants were metals and PAHs. No visible signs of contamination were present in the boreholes. One of the samples collected in this area had a slight chemical or hydrocarbon odor. This sample was analyzed for semivolatiles and metals. No detectable concentrations of PAHs are present in the sample. Detectable levels of metals are present, but not above MTCA limits, and the measured concentrations of metals fall within the normal range of background soil metal concentrations in the Puget Sound area.

Area C: This area was the approximate site of lime-lined pits which were excavated for the disposal of waste acids. No clearly identifiable evidence of the pits were encountered in the borings in this area. Two samples from this area were analyzed: one for metals, and one for metals and semi-volatiles. The second sample was analyzed for semi-volatiles because of a black layer of material encountered in the borehole, with a slight asphalt odor. No semi-volatile constituents were detected in the sample. Detectable levels of metals are present, but not above MTCA limits, and most of the measured concentrations of metals fall within the normal range of background soil metal concentrations in the Puget Sound area.

Area D: Area D was the area of the former UST location. Only one borehole was drilled in this location. Safe locations for sampling were limited because of a buried storm sewer line and an overhead utility line. The soil in the borehole displayed no visual or olfactory evidence of contamination.

6.0 Recommendations

CETI recommends excavation and removal of the PCE contaminated soil at the site.

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Thank you for the opportunity to provide you with environmental services. Please do not hesitate to call if you have any questions concerning this report.

Signed: _____

Linda Drake, Senior Environmental Scientist

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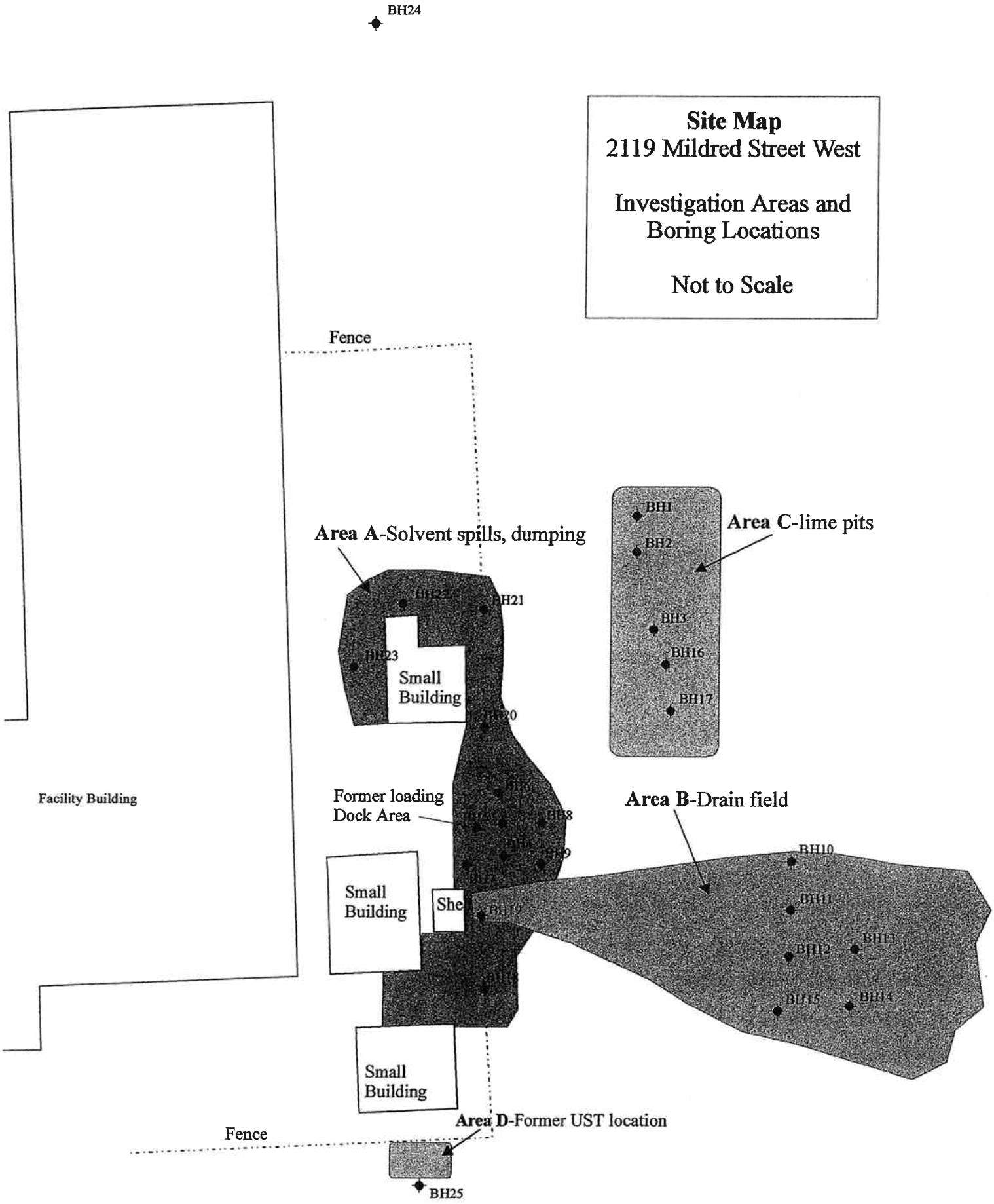
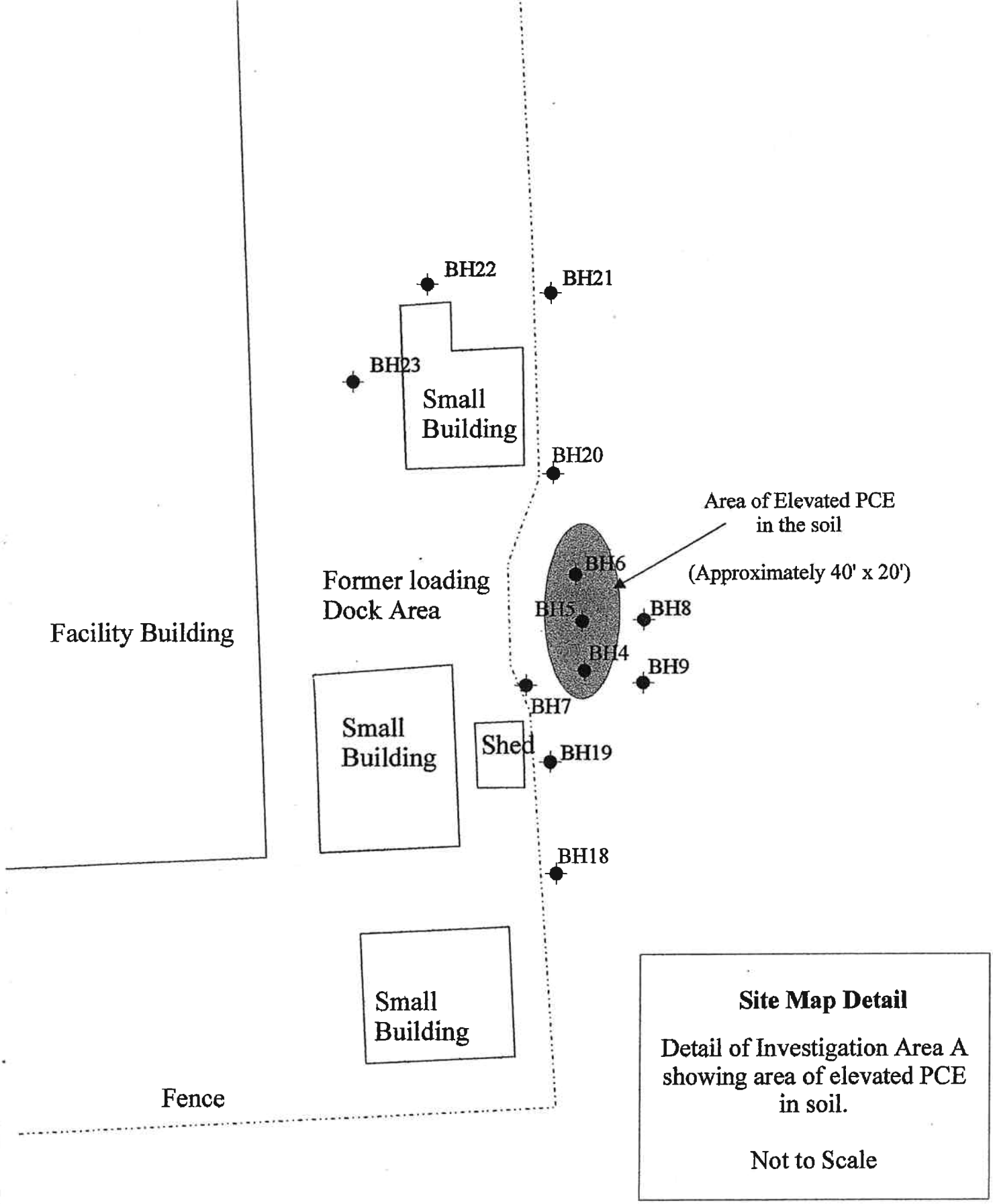
Attachment A- Site maps and Photographs


Property Boundary with Pace, Inc.
BH24
Site Map
2119 Mildred Street West
Investigation Areas and
Boring Locations
Not to Scale
Fence
Area A-Solvent spills, dumping
Area C-lime pits
BH1
BH2
BH3
BH16
BH17
BH22
BH21
BH23
Small
Building
BH20
Facility Building
Former loading
Dock Area
Area B-Drain field
BH10
BH11
BH13
BH12
BH15
BH14
Small
Building
She
Small
Building
Area D-Former UST location
Fence
BH25



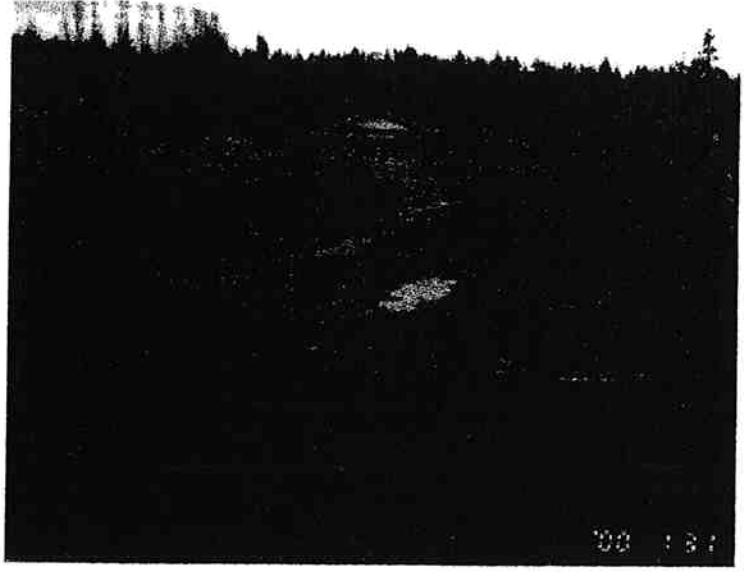
Site Map Detail

Detail of Investigation Area A showing area of elevated PCE in soil.

Not to Scale

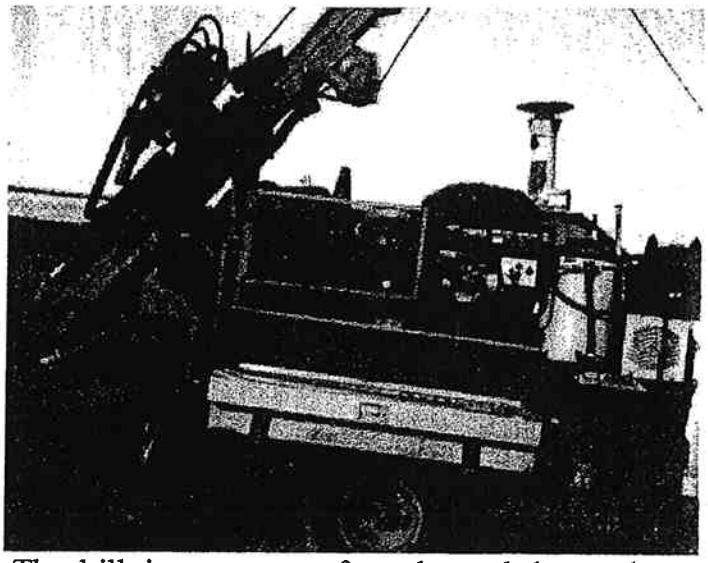
Site Photographs
2119 Mildred Street West

Photos taken on
January 31, 2000,
during the field exploration
portion of a Level 2
Environmental
Site Assessment

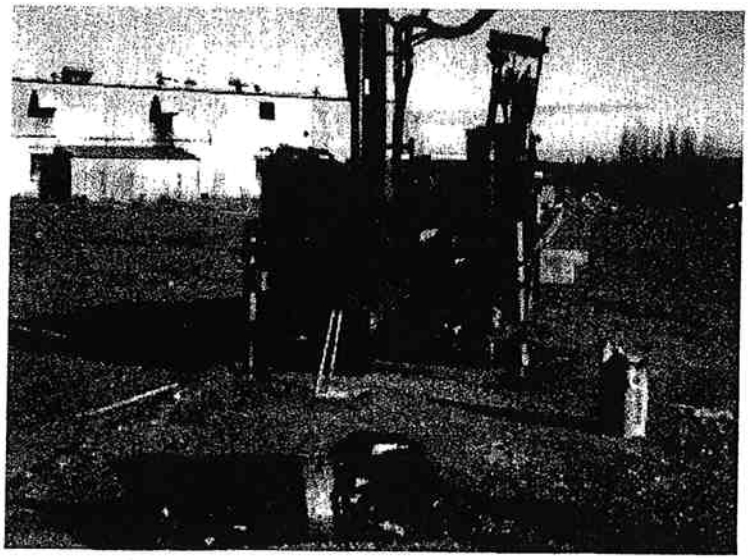


View of a portion of the study area. Photo taken in the northern portion of the study area, to the southeast.

Soil boring (resting on black plastic). Soil is brown, poorly sorted sand with gravel, and probably consists of reworked till used as fill material.



The drill rig set up to perform the angle bore at bore hole BH17.



The Geoprobe™ direct push drill rig set up to perform

Attachment B- Analytical Results

SPECTRA Laboratories

2221 Ross Way • Tacoma, WA 98421 • (253) 272-4850

03/03/2000

P.O.#: 5002
Project: Metal Marine 165-1
Client ID: S1-13100
Sample Matrix: Soil
Date Sampled: 01/31/2000
Date Received: 02/02/2000
Spectra Project: 2000020032
Spectra Number: 1

Creative Environmental Technologies, Inc
P.O. Box 1803
Tacoma, WA 98401
Attn: Linda Drake

Analyte	Result	Units	Method
1,1,1,2-tetrachloroethane	<0.25	mg/Kg	EPA 8260B
1,1,1-Trichloroethane	<0.25	mg/Kg	EPA 8260B
1,1,2,2-tetrachloroethane	<0.25	mg/Kg	EPA 8260B
1,1,2-Trichloroethane	<0.25	mg/Kg	EPA 8260B
1,1-Dichloroethane	<0.25	mg/Kg	EPA 8260B
1,1-Dichloroethene	<0.25	mg/Kg	EPA 8260B
1,1-Dichloropropene	<0.25	mg/Kg	EPA 8260B
1,2,3-Trichlorobenzene	<0.25	mg/Kg	EPA 8260B
1,2,3-Trichloropropane	<0.25	mg/Kg	EPA 8260B
1,2,4-Trichlorobenzene	<0.25	mg/Kg	EPA 8260B
1,2,4-Trimethylbenzene	<0.25	mg/Kg	EPA 8260B
1,2-Dibromo3Chloropropane	<2.50	mg/Kg	EPA 8260B
1,2-Dibromoethane (EDB)	<0.50	mg/Kg	EPA 8260B
1,2-Dichlorobenzene	<0.25	mg/Kg	EPA 8260B
1,2-Dichloroethane	<0.25	mg/Kg	EPA 8260B
1,2-Dichloropropane	<0.25	mg/Kg	EPA 8260B
1,3,5-Trimethylbenzene	<0.25	mg/Kg	EPA 8260B
1,3-Dichlorobenzene	<0.25	mg/Kg	EPA 8260B
1,3-Dichloropropane	<0.25	mg/Kg	EPA 8260B
1,4-Dichlorobenzene	<0.25	mg/Kg	EPA 8260B
2,2-Dichloropropane	<0.25	mg/Kg	EPA 8260B

Analyte	Result	Units	Method
2-Butanone (MEK)	<2.50	mg/Kg	EPA 8260B
2-Chlorotolouene	<0.25	mg/Kg	EPA 8260B
2-Hexanone (MBK)	<2.50	mg/Kg	EPA 8260B
4-Chlorotolouene	<0.25	mg/Kg	EPA 8260B
4-methyl-2-pentanone	<1.00	mg/Kg	EPA 8260B
Acetone	<2.50	mg/Kg	EPA 8260B
Benzene	<0.25	mg/Kg	EPA 8260B
Bromobenzene	<0.25	mg/Kg	EPA 8260B
Bromochloromethane	<0.25	mg/Kg	EPA 8260B
Bromodichloromethane	<0.25	mg/Kg	EPA 8260B
Bromoform	<0.25	mg/Kg	EPA 8260B
Bromomethane	<0.50	mg/Kg	EPA 8260B
Carbontetrachloride	<0.25	mg/Kg	EPA 8260B
Chlorobenzene	<0.25	mg/Kg	EPA 8260B
Chlorodibromomethane	<0.25	mg/Kg	EPA 8260B
Chloroethane	<0.50	mg/Kg	EPA 8260B
Chloroform	<0.50	mg/Kg	EPA 8260B
Chloromethane	<0.50	mg/Kg	EPA 8260B
Dibromomethane	<0.25	mg/Kg	EPA 8260B
Dichlorodifluoromethane	<0.50	mg/Kg	EPA 8260B
Ethylbenzene	<0.25	mg/Kg	EPA 8260B

Surrogate	Recovery	Method
Dibromofluoromethane	104	EPA 8260B
Toluene-d8	103	EPA 8260B
4-Bromofluorobenzene	89	EPA 8260B

SPECTRA LABORATORIES

Michael Duchet

SPECTRA Laboratories

2221 Ross Way • Tacoma, WA 98421 • (253) 272-4850

03/03/2000

P.O.#: 5002
Project: Metal Marine 165-1
Client ID: S1-13100
Sample Matrix: Soil
Date Sampled: 01/31/2000
Date Received: 02/02/2000
Spectra Project: 2000020032
Spectra Number: 1

Creative Environmental Technologies, Inc
P.O. Box 1803
Tacoma, WA 98401
Attn: Linda Drake

Analyte	Result	Units	Method
Hexachlorobutadiene	<0.25	mg/Kg	EPA 8260B
Isopropylbenzene	<0.25	mg/Kg	EPA 8260B
Methylene chloride	<0.25	mg/Kg	EPA 8260B
Naphthalene	<0.25	mg/Kg	EPA 8260B
Styrene	<0.25	mg/Kg	EPA 8260B
Tetrachloroethene	1.26	mg/Kg	EPA 8260B
Toluene	<0.25	mg/Kg	EPA 8260B
Total Xylenes	<0.25	mg/Kg	EPA 8260B
Trichloroethene	<0.25	mg/Kg	EPA 8260B
Trichlorofluoromethane	<0.25	mg/Kg	EPA 8260B
Vinyl chloride	<0.50	mg/Kg	EPA 8260B
cis-1,2-Dichloroethene	<0.25	mg/Kg	EPA 8260B
cis-1,3-Dichloropropene	<0.25	mg/Kg	EPA 8260B
n-Butylbenzene	<0.25	mg/Kg	EPA 8260B
n-Propylbenzene	<0.25	mg/Kg	EPA 8260B
p-Isopropyltoluene	<0.25	mg/Kg	EPA 8260B
sec-Butylbenzene	<0.25	mg/Kg	EPA 8260B
tert-Butylbenzene	<0.25	mg/Kg	EPA 8260B
trans-1,2-Dichloroethene	<0.25	mg/Kg	EPA 8260B
trans-1,3-Dichloropropene	<0.25	mg/Kg	EPA 8260B

Analyte	Result	Units	Method

Surrogate	Recovery	Method
Dibromofluoromethane	104	EPA 8260B
Toluene-d8	103	EPA 8260B
4-Bromofluorobenzene	89	EPA 8260B

SPECTRA LABORATORIES

Michael Dechert

SPECTRA Laboratories

2221 Ross Way • Tacoma, WA 98421 • (253) 272-4850

03/03/2000

P.O.#: 5002
Project: Metal Marine 165-1
Client ID: S4-13100
Sample Matrix: Soil
Date Sampled: 01/31/2000
Date Received: 02/02/2000
Spectra Project: 2000020032
Spectra Number: 2

Creative Environmental Technologies, Inc
P.O. Box 1803
Tacoma, WA 98401
Attn: Linda Drake

Analyte	Result	Units	Method
1,1,1,2-tetrachloroethane	<0.25	mg/Kg	EPA 8260B
1,1,1-Trichloroethane	<0.25	mg/Kg	EPA 8260B
1,1,2,2-tetrachloroethane	<0.25	mg/Kg	EPA 8260B
1,1,2-Trichloroethane	<0.25	mg/Kg	EPA 8260B
1,1-Dichloroethane	<0.25	mg/Kg	EPA 8260B
1,1-Dichloroethene	<0.25	mg/Kg	EPA 8260B
1,1-Dichloropropene	<0.25	mg/Kg	EPA 8260B
1,2,3-Trichlorobenzene	<0.25	mg/Kg	EPA 8260B
1,2,3-Trichloropropane	<0.25	mg/Kg	EPA 8260B
1,2,4-Trichlorobenzene	<0.25	mg/Kg	EPA 8260B
1,2,4-Trimethylbenzene	<0.25	mg/Kg	EPA 8260B
1,2-Dibromo3Chloropropane	<2.50	mg/Kg	EPA 8260B
1,2-Dibromoethane (EDB)	<0.50	mg/Kg	EPA 8260B
1,2-Dichlorobenzene	<0.25	mg/Kg	EPA 8260B
1,2-Dichloroethane	<0.25	mg/Kg	EPA 8260B
1,2-Dichloropropane	<0.25	mg/Kg	EPA 8260B
1,3,5-Trimethylbenzene	<0.25	mg/Kg	EPA 8260B
1,3-Dichlorobenzene	<0.25	mg/Kg	EPA 8260B
1,3-Dichloropropane	<0.25	mg/Kg	EPA 8260B
1,4-Dichlorobenzene	<0.25	mg/Kg	EPA 8260B
2,2-Dichloropropane	<0.25	mg/Kg	EPA 8260B

Analyte	Result	Units	Method
2-Butanone (MEK)	<2.50	mg/Kg	EPA 8260B
2-Chlorotolouene	<0.25	mg/Kg	EPA 8260B
2-Hexanone (MBK)	<2.50	mg/Kg	EPA 8260B
4-Chlorotolouene	<0.25	mg/Kg	EPA 8260B
4-methyl-2-pentanone	<1.00	mg/Kg	EPA 8260B
Acetone	<2.50	mg/Kg	EPA 8260B
Benzene	<0.25	mg/Kg	EPA 8260B
Bromobenzene	<0.25	mg/Kg	EPA 8260B
Bromochloromethane	<0.25	mg/Kg	EPA 8260B
Bromodichloromethane	<0.25	mg/Kg	EPA 8260B
Bromoform	<0.25	mg/Kg	EPA 8260B
Bromomethane	<0.50	mg/Kg	EPA 8260B
Carbontetrachloride	<0.25	mg/Kg	EPA 8260B
Chlorobenzene	<0.25	mg/Kg	EPA 8260B
Chlorodibromomethane	<0.25	mg/Kg	EPA 8260B
Chloroethane	<0.50	mg/Kg	EPA 8260B
Chloroform	<0.50	mg/Kg	EPA 8260B
Chloromethane	<0.50	mg/Kg	EPA 8260B
Dibromomethane	<0.25	mg/Kg	EPA 8260B
Dichlorodifluoromethane	<0.50	mg/Kg	EPA 8260B
Ethylbenzene	<0.25	mg/Kg	EPA 8260B

Surrogate	Recovery	Method
Dibromofluoromethane	120*	EPA 8260B
Toluene-d8	101	EPA 8260B
4-Bromofluorobenzene	90	EPA 8260B

SPECTRA LABORATORIES

Michael Pucket

SPECTRA Laboratories

2221 Ross Way • Tacoma, WA 98421 • (253) 272-4850

03/03/2000

P.O.#: 5002
Project: Metal Marine 165-1
Client ID: S4-13100
Sample Matrix: Soil
Date Sampled: 01/31/2000
Date Received: 02/02/2000
Spectra Project: 2000020032
Spectra Number: 2

Creative Environmental Technologies, Inc
P.O. Box 1803
Tacoma, WA 98401
Attn: Linda Drake

Analyte	Result	Units	Method
Hexachlorobutadiene	<0.25	mg/Kg	EPA 8260B
Isopropylbenzene	<0.25	mg/Kg	EPA 8260B
Methylene chloride	<0.25	mg/Kg	EPA 8260B
Naphthalene	<0.25	mg/Kg	EPA 8260B
Styrene	<0.25	mg/Kg	EPA 8260B
Tetrachloroethene	0.64	mg/Kg	EPA 8260B
Toluene	<0.25	mg/Kg	EPA 8260B
Total Xylenes	<0.25	mg/Kg	EPA 8260B
Trichloroethene	<0.25	mg/Kg	EPA 8260B
Trichlorofluoromethane	<0.25	mg/Kg	EPA 8260B
Vinyl chloride	<0.50	mg/Kg	EPA 8260B
cis-1,2-Dichloroethene	<0.25	mg/Kg	EPA 8260B
cis-1,3-Dichloropropene	<0.25	mg/Kg	EPA 8260B
n-Butylbenzene	<0.25	mg/Kg	EPA 8260B
n-Propylbenzene	<0.25	mg/Kg	EPA 8260B
p-Isopropyltoluene	<0.25	mg/Kg	EPA 8260B
sec-Butylbenzene	<0.25	mg/Kg	EPA 8260B
tert-Butylbenzene	<0.25	mg/Kg	EPA 8260B
trans-1,2-Dichloroethene	<0.25	mg/Kg	EPA 8260B
trans-1,3-Dichloropropene	<0.25	mg/Kg	EPA 8260B

Analyte	Result	Units	Method

Surrogate	Recovery	Method
Dibromofluoromethane	120*	EPA 8260B
Toluene-d8	101	EPA 8260B
4-Bromofluorobenzene	90	EPA 8260B

SPECTRA LABORATORIES

Michael Dickert

SPECTRA Laboratories

2221 Ross Way • Tacoma, WA 98421 • (253) 272-4850

03/03/2000

P.O.#: 5002
Project: Metal Marine 165-1
Client ID: S6-13100
Sample Matrix: Soil
Date Sampled: 01/31/2000
Date Received: 02/02/2000
Spectra Project: 2000020032
Spectra Number: 3

Creative Environmental Technologies, Inc
P.O. Box 1803
Tacoma, WA 98401
Attn: Linda Drake

Analyte	Result	Units	Method
Antimony	19	mg/Kg	SW846 6010B
Arsenic	< 5	mg/Kg	SW846 6010B
Beryllium	< 0.1	mg/Kg	SW846 6010B
Cadmium	< 0.3	mg/Kg	SW846 6010B
Chromium	21	mg/Kg	SW846 6010B
Copper	24	mg/Kg	SW846 6010B
Lead	9	mg/Kg	SW846 6010B
Mercury	0.09	mg/Kg	EPA 7471A
Nickel	26	mg/Kg	SW846 6010B
Selenium	< 8	mg/Kg	SW846 6010B
Silver	< 0.7	mg/Kg	SW846 6010B
Thallium	< 0.1	mg/Kg	SM 3113B
Zinc	360	mg/Kg	SW846 6010B
1,1,1,2-tetrachloroethane	<0.25	mg/Kg	EPA 8260B
1,1,1-Trichloroethane	<0.25	mg/Kg	EPA 8260B
1,1,2,2-tetrachloroethane	<0.25	mg/Kg	EPA 8260B
1,1,2-Trichloroethane	<0.25	mg/Kg	EPA 8260B
1,1-Dichloroethane	<0.25	mg/Kg	EPA 8260B
1,1-Dichloroethene	<0.25	mg/Kg	EPA 8260B
1,1-Dichloropropene	<0.25	mg/Kg	EPA 8260B
1,2,3-Trichlorobenzene	<0.25	mg/Kg	EPA 8260B

Analyte	Result	Units	Method
1,2,3-Trichloropropane	<0.25	mg/Kg	EPA 8260B
1,2,4-Trichlorobenzene	<0.25	mg/Kg	EPA 8260B
1,2,4-Trimethylbenzene	<0.25	mg/Kg	EPA 8260B
1,2-Dibromo3Chloropropane	<2.50	mg/Kg	EPA 8260B
1,2-Dibromoethane (EDB)	<0.50	mg/Kg	EPA 8260B
1,2-Dichlorobenzene	<0.25	mg/Kg	EPA 8260B
1,2-Dichloroethane	<0.25	mg/Kg	EPA 8260B
1,2-Dichloropropane	<0.25	mg/Kg	EPA 8260B
1,3,5-Trimethylbenzene	<0.25	mg/Kg	EPA 8260B
1,3-Dichlorobenzene	<0.25	mg/Kg	EPA 8260B
1,3-Dichloropropane	<0.25	mg/Kg	EPA 8260B
1,4-Dichlorobenzene	<0.25	mg/Kg	EPA 8260B
2,2-Dichloropropane	<0.25	mg/Kg	EPA 8260B
2-Butanone (MEK)	<2.50	mg/Kg	EPA 8260B
2-Chlorotoluene	<0.25	mg/Kg	EPA 8260B
2-Hexanone (MBK)	<2.50	mg/Kg	EPA 8260B
4-Chlorotoluene	<0.25	mg/Kg	EPA 8260B
4-methyl-2-pentanone	<1.00	mg/Kg	EPA 8260B
Acetone	<2.50	mg/Kg	EPA 8260B
Benzene	<0.25	mg/Kg	EPA 8260B
Bromobenzene	<0.25	mg/Kg	EPA 8260B

Surrogate	Recovery	Method
Dibromofluoromethane	115	EPA 8260B
Toluene-d8	102	EPA 8260B
4-Bromofluorobenzene	89	EPA 8260B

SPECTRA LABORATORIES

Michael Duckett

SPECTRA Laboratories

2221 Ross Way • Tacoma, WA 98421 • (253) 272-4850

03/03/2000

P.O.#: 5002
Project: Metal Marine 165-1
Client ID: S6-13100
Sample Matrix: Soil
Date Sampled: 01/31/2000
Date Received: 02/02/2000
Spectra Project: 2000020032
Spectra Number: 3

Creative Environmental Technologies, Inc
P.O. Box 1803
Tacoma, WA 98401
Attn: Linda Drake

Analyte	Result	Units	Method
Bromochloromethane	<0.25	mg/Kg	EPA 8260B
Bromodichloromethane	<0.25	mg/Kg	EPA 8260B
Bromoform	<0.25	mg/Kg	EPA 8260B
Bromomethane	<0.50	mg/Kg	EPA 8260B
Carbontetrachloride	<0.25	mg/Kg	EPA 8260B
Chlorobenzene	<0.25	mg/Kg	EPA 8260B
Chlorodibromomethane	<0.25	mg/Kg	EPA 8260B
Chloroethane	<0.50	mg/Kg	EPA 8260B
Chloroform	<0.50	mg/Kg	EPA 8260B
Chloromethane	<0.50	mg/Kg	EPA 8260B
Dibromomethane	<0.25	mg/Kg	EPA 8260B
Dichlorodifluoromethane	<0.50	mg/Kg	EPA 8260B
Ethylbenzene	<0.25	mg/Kg	EPA 8260B
Hexachlorobutadiene	<0.25	mg/Kg	EPA 8260B
Isopropylbenzene	<0.25	mg/Kg	EPA 8260B
Methylene chloride	<0.25	mg/Kg	EPA 8260B
Naphthalene	<0.25	mg/Kg	EPA 8260B
Styrene	<0.25	mg/Kg	EPA 8260B
Tetrachloroethene	2.22	mg/Kg	EPA 8260B
Toluene	<0.25	mg/Kg	EPA 8260B
Total Xylenes	<0.25	mg/Kg	EPA 8260B

Analyte	Result	Units	Method
Trichloroethene	<0.25	mg/Kg	EPA 8260B
Trichlorofluoromethane	<0.25	mg/Kg	EPA 8260B
Vinyl chloride	<0.50	mg/Kg	EPA 8260B
cis-1,2-Dichloroethene	<0.25	mg/Kg	EPA 8260B
cis-1,3-Dichloropropene	<0.25	mg/Kg	EPA 8260B
n-Butylbenzene	<0.25	mg/Kg	EPA 8260B
n-Propylbenzene	<0.25	mg/Kg	EPA 8260B
p-Isopropyltoluene	<0.25	mg/Kg	EPA 8260B
sec-Butylbenzene	<0.25	mg/Kg	EPA 8260B
tert-Butylbenzene	<0.25	mg/Kg	EPA 8260B
trans-1,2-Dichloroethene	<0.25	mg/Kg	EPA 8260B
trans-1,3-Dichloropropene	<0.25	mg/Kg	EPA 8260B

Surrogate	Recovery	Method
Dibromofluoromethane	115	EPA 8260B
Toluene-d8	102	EPA 8260B
4-Bromofluorobenzene	89	EPA 8260B

SPECTRA LABORATORIES

Michael Dubert

SPECTRA Laboratories

2221 Ross Way • Tacoma, WA 98421 • (253) 272-4850

03/03/2000

P.O.#: 5002
Project: Metal Marine 165-1
Client ID: S8-13100
Sample Matrix: Soil
Date Sampled: 01/31/2000
Date Received: 02/02/2000
Spectra Project: 2000020032
Spectra Number: 4

Creative Environmental Technologies, Inc
P.O. Box 1803
Tacoma, WA 98401
Attn: Linda Drake

Analyte	Result	Units	Method
1;1,1,2-tetrachloroethane	<0.25	mg/Kg	EPA 8260B
1,1,1-Trichloroethane	<0.25	mg/Kg	EPA 8260B
1,1,2,2-tetrachloroethane	<0.25	mg/Kg	EPA 8260B
1,1,2-Trichloroethane	<0.25	mg/Kg	EPA 8260B
1,1-Dichloroethane	<0.25	mg/Kg	EPA 8260B
1,1-Dichloroethene	<0.25	mg/Kg	EPA 8260B
1,1-Dichloropropene	<0.25	mg/Kg	EPA 8260B
1,2,3-Trichlorobenzene	<0.25	mg/Kg	EPA 8260B
1,2,3-Trichloropropane	<0.25	mg/Kg	EPA 8260B
1,2,4-Trichlorobenzene	<0.25	mg/Kg	EPA 8260B
1,2,4-Trimethylbenzene	<0.25	mg/Kg	EPA 8260B
1,2-Dibromo3Chloropropane	<2.50	mg/Kg	EPA 8260B
1,2-Dibromoethane (EDB)	<0.50	mg/Kg	EPA 8260B
1,2-Dichlorobenzene	<0.25	mg/Kg	EPA 8260B
1,2-Dichloroethane	<0.25	mg/Kg	EPA 8260B
1,2-Dichloropropane	<0.25	mg/Kg	EPA 8260B
1,3,5-Trimethylbenzene	<0.25	mg/Kg	EPA 8260B
1,3-Dichlorobenzene	<0.25	mg/Kg	EPA 8260B
1,3-Dichloropropane	<0.25	mg/Kg	EPA 8260B
1,4-Dichlorobenzene	<0.25	mg/Kg	EPA 8260B
2,2-Dichloropropane	<0.25	mg/Kg	EPA 8260B

Analyte	Result	Units	Method
2-Butanone (MEK)	<2.50	mg/Kg	EPA 8260B
2-Chlorotolouene	<0.25	mg/Kg	EPA 8260B
2-Hexanone (MBK)	<2.50	mg/Kg	EPA 8260B
4-Chlorotolouene	<0.25	mg/Kg	EPA 8260B
4-methyl-2-pentanone	<1.00	mg/Kg	EPA 8260B
Acetone	<2.50	mg/Kg	EPA 8260B
Benzene	<0.25	mg/Kg	EPA 8260B
Bromobenzene	<0.25	mg/Kg	EPA 8260B
Bromochloromethane	<0.25	mg/Kg	EPA 8260B
Bromodichloromethane	<0.25	mg/Kg	EPA 8260B
Bromoform	<0.25	mg/Kg	EPA 8260B
Bromomethane	<0.50	mg/Kg	EPA 8260B
Carbontetrachloride	<0.25	mg/Kg	EPA 8260B
Chlorobenzene	<0.25	mg/Kg	EPA 8260B
Chlorodibromomethane	<0.25	mg/Kg	EPA 8260B
Chloroethane	<0.50	mg/Kg	EPA 8260B
Chloroform	<0.50	mg/Kg	EPA 8260B
Chloromethane	<0.50	mg/Kg	EPA 8260B
Dibromomethane	<0.25	mg/Kg	EPA 8260B
Dichlorodifluoromethane	<0.50	mg/Kg	EPA 8260B
Ethylbenzene	<0.25	mg/Kg	EPA 8260B

Surrogate	Recovery	Method
Dibromofluoromethane	102	EPA 8260B
Toluene-d8	103	EPA 8260B
4-Bromofluorobenzene	88	EPA 8260B

SPECTRA LABORATORIES

Michael Duckett

SPECTRA Laboratories

2221 Ross Way • Tacoma, WA 98421 • (253) 272-4850

03/03/2000

P.O.#:	5002
Project:	Metal Marine 165-1
Client ID:	S8-13100
Sample Matrix:	Soil
Date Sampled:	01/31/2000
Date Received:	02/02/2000
Spectra Project:	2000020032
Spectra Number:	4

Creative Environmental Technologies, Inc
P.O. Box 1803
Tacoma, WA 98401
Attn: Linda Drake

Analyte	Result	Units	Method
Hexachlorobutadiene	<0.25	mg/Kg	EPA 8260B
Isopropylbenzene	<0.25	mg/Kg	EPA 8260B
Methylene chloride	<0.25	mg/Kg	EPA 8260B
Naphthalene	<0.25	mg/Kg	EPA 8260B
Styrene	<0.25	mg/Kg	EPA 8260B
Tetrachloroethene	<0.25	mg/Kg	EPA 8260B
Toluene	<0.25	mg/Kg	EPA 8260B
Total Xylenes	<0.25	mg/Kg	EPA 8260B
Trichloroethene	<0.25	mg/Kg	EPA 8260B
Trichlorofluoromethane	<0.25	mg/Kg	EPA 8260B
Vinyl chloride	<0.50	mg/Kg	EPA 8260B
cis-1,2-Dichloroethene	<0.25	mg/Kg	EPA 8260B
cis-1,3-Dichloropropene	<0.25	mg/Kg	EPA 8260B
n-Butylbenzene	<0.25	mg/Kg	EPA 8260B
n-Propylbenzene	<0.25	mg/Kg	EPA 8260B
p-Isopropyltoluene	<0.25	mg/Kg	EPA 8260B
sec-Butylbenzene	<0.25	mg/Kg	EPA 8260B
tert-Butylbenzene	<0.25	mg/Kg	EPA 8260B
trans-1,2-Dichloroethene	<0.25	mg/Kg	EPA 8260B
trans-1,3-Dichloropropene	<0.25	mg/Kg	EPA 8260B

Analyte	Result	Units	Method

Surrogate	Recovery	Method
Dibromofluoromethane	102	EPA 8260B
Toluene-d8	103	EPA 8260B
4-Bromofluorobenzene	88	EPA 8260B

SPECTRA LABORATORIES

Michael Duckett

SPECTRA Laboratories

2221 Ross Way • Tacoma, WA 98421 • (253) 272-4850

03/03/2000

P.O.#: 5002
Project: Metal Marine 165-1
Client ID: S9-13100
Sample Matrix: Soil
Date Sampled: 01/31/2000
Date Received: 02/02/2000
Spectra Project: 2000020032
Spectra Number: 5

Creative Environmental Technologies, Inc
P.O. Box 1803
Tacoma, WA 98401
Attn: Linda Drake

Analyte	Result	Units	Method
,1,1,2-tetrachloroethane	<0.25	mg/Kg	EPA 8260B
,1,1-Trichloroethane	<0.25	mg/Kg	EPA 8260B
,1,2,2-tetrachloroethane	<0.25	mg/Kg	EPA 8260B
,1,2-Trichloroethane	<0.25	mg/Kg	EPA 8260B
,1-Dichloroethane	<0.25	mg/Kg	EPA 8260B
,1-Dichloroethene	<0.25	mg/Kg	EPA 8260B
.,1-Dichloropropene	<0.25	mg/Kg	EPA 8260B
.,2,3-Trichlorobenzene	<0.25	mg/Kg	EPA 8260B
.,2,3-Trichloropropane	<0.25	mg/Kg	EPA 8260B
.,2,4-Trichlorobenzene	<0.25	mg/Kg	EPA 8260B
.,2,4-Trimethylbenzene	<0.25	mg/Kg	EPA 8260B
.,2-Dibromo3Chloropropane	<2.50	mg/Kg	EPA 8260B
.,2-Dibromoethane (EDB)	<0.50	mg/Kg	EPA 8260B
.,2-Dichlorobenzene	<0.25	mg/Kg	EPA 8260B
.,2-Dichloroethane	<0.25	mg/Kg	EPA 8260B
.,2-Dichloropropane	<0.25	mg/Kg	EPA 8260B
.,3,5-Trimethylbenzene	<0.25	mg/Kg	EPA 8260B
,3-Dichlorobenzene	<0.25	mg/Kg	EPA 8260B
,3-Dichloropropane	<0.25	mg/Kg	EPA 8260B
,4-Dichlorobenzene	<0.25	mg/Kg	EPA 8260B
',2-Dichloropropane	<0.25	mg/Kg	EPA 8260B

Analyte	Result	Units	Method
2-Butanone (MEK)	<2.50	mg/Kg	EPA 8260B
2-Chlorotolouene	<0.25	mg/Kg	EPA 8260B
2-Hexanone (MBK)	<2.50	mg/Kg	EPA 8260B
4-Chlorotolouene	<0.25	mg/Kg	EPA 8260B
4-methyl-2-pentanone	<1.00	mg/Kg	EPA 8260B
Acetone	<2.50	mg/Kg	EPA 8260B
Benzene	<0.25	mg/Kg	EPA 8260B
Bromobenzene	<0.25	mg/Kg	EPA 8260B
Bromochloromethane	<0.25	mg/Kg	EPA 8260B
Bromodichloromethane	<0.25	mg/Kg	EPA 8260B
Bromoform	<0.25	mg/Kg	EPA 8260B
Bromomethane	<0.50	mg/Kg	EPA 8260B
Carbontetrachloride	<0.25	mg/Kg	EPA 8260B
Chlorobenzene	<0.25	mg/Kg	EPA 8260B
Chlorodibromomethane	<0.25	mg/Kg	EPA 8260B
Chloroethane	<0.50	mg/Kg	EPA 8260B
Chloroform	<0.50	mg/Kg	EPA 8260B
Chloromethane	<0.50	mg/Kg	EPA 8260B
Dibromomethane	<0.25	mg/Kg	EPA 8260B
Dichlorodifluoromethane	<0.50	mg/Kg	EPA 8260B
Ethylbenzene	<0.25	mg/Kg	EPA 8260B

Surrogate	Recovery	Method
Dibromofluoromethane	101	EPA 8260B
Toluene-d8	102	EPA 8260B
4-Bromofluorobenzene	92	EPA 8260B

SPECTRA LABORATORIES

Michael Duchert

SPECTRA Laboratories

2221 Ross Way • Tacoma, WA 98421 • (253) 272-4850

03/03/2000

P.O.#: 5002
Project: Metal Marine 165-1
Client ID: S9-13100
Sample Matrix: Soil
Date Sampled: 01/31/2000
Date Received: 02/02/2000
Spectra Project: 2000020032
Spectra Number: 5

Creative Environmental Technologies, Inc
P.O. Box 1803
Tacoma, WA 98401
Attn: Linda Drake

Analyte	Result	Units	Method
Hexachlorobutadiene	<0.25	mg/Kg	EPA 8260B
Isopropylbenzene	<0.25	mg/Kg	EPA 8260B
Methylene chloride	<0.25	mg/Kg	EPA 8260B
Naphthalene	<0.25	mg/Kg	EPA 8260B
Styrene	<0.25	mg/Kg	EPA 8260B
Tetrachloroethene	<0.25	mg/Kg	EPA 8260B
Toluene	<0.25	mg/Kg	EPA 8260B
Total Xylenes	<0.25	mg/Kg	EPA 8260B
Trichloroethene	<0.25	mg/Kg	EPA 8260B
Trichlorofluoromethane	<0.25	mg/Kg	EPA 8260B
Vinyl chloride	<0.50	mg/Kg	EPA 8260B
cis-1,2-Dichloroethene	<0.25	mg/Kg	EPA 8260B
cis-1,3-Dichloropropene	<0.25	mg/Kg	EPA 8260B
n-Butylbenzene	<0.25	mg/Kg	EPA 8260B
n-Propylbenzene	<0.25	mg/Kg	EPA 8260B
p-Isopropyltoluene	<0.25	mg/Kg	EPA 8260B
sec-Butylbenzene	<0.25	mg/Kg	EPA 8260B
tert-Butylbenzene	<0.25	mg/Kg	EPA 8260B
trans-1,2-Dichloroethene	<0.25	mg/Kg	EPA 8260B
trans-1,3-Dichloropropene	<0.25	mg/Kg	EPA 8260B

Analyte	Result	Units	Method

Surrogate	Recovery	Method
Dibromofluoromethane	101	EPA 8260B
Toluene-d8	102	EPA 8260B
4-Bromofluorobenzene	92	EPA 8260B

SPECTRA LABORATORIES

Michael Arkett

SPECTRA Laboratories

2221 Ross Way • Tacoma, WA 98421 • (253) 272-4850

03/03/2000

P.O.#: 5002
Project: Metal Marine 165-1
Client ID: S11-13100
Sample Matrix: Soil
Date Sampled: 01/31/2000
Date Received: 02/02/2000
Spectra Project: 2000020032
Spectra Number: 6

Creative Environmental Technologies, Inc
P.O. Box 1803
Tacoma, WA 98401
Attn: Linda Drake

Analyte	Result	Units	Method
1;1,1,2-tetrachloroethane	<0.25	mg/Kg	EPA 8260B
1,1,1-Trichloroethane	<0.25	mg/Kg	EPA 8260B
1,1,2,2-tetrachloroethane	<0.25	mg/Kg	EPA 8260B
1,1,2-Trichloroethane	<0.25	mg/Kg	EPA 8260B
1,1-Dichloroethane	<0.25	mg/Kg	EPA 8260B
1,1-Dichloroethene	<0.25	mg/Kg	EPA 8260B
1,1-Dichloropropene	<0.25	mg/Kg	EPA 8260B
1,2,3-Trichlorobenzene	<0.25	mg/Kg	EPA 8260B
1,2,3-Trichloropropane	<0.25	mg/Kg	EPA 8260B
1,2,4-Trichlorobenzene	<0.25	mg/Kg	EPA 8260B
1,2,4-Trimethylbenzene	<0.25	mg/Kg	EPA 8260B
1,2-Dibromo3Chloropropane	<2.50	mg/Kg	EPA 8260B
1,2-Dibromoethane (EDB)	<0.50	mg/Kg	EPA 8260B
1,2-Dichlorobenzene	<0.25	mg/Kg	EPA 8260B
1,2-Dichloroethane	<0.25	mg/Kg	EPA 8260B
1,2-Dichloropropane	<0.25	mg/Kg	EPA 8260B
1,3,5-Trimethylbenzene	<0.25	mg/Kg	EPA 8260B
1,3-Dichlorobenzene	<0.25	mg/Kg	EPA 8260B
1,3-Dichloropropane	<0.25	mg/Kg	EPA 8260B
1,4-Dichlorobenzene	<0.25	mg/Kg	EPA 8260B
2,2-Dichloropropane	<0.25	mg/Kg	EPA 8260B

Analyte	Result	Units	Method
2-Butanone (MEK)	<2.50	mg/Kg	EPA 8260B
2-Chlorotolouene	<0.25	mg/Kg	EPA 8260B
2-Hexanone (MBK)	<2.50	mg/Kg	EPA 8260B
4-Chlorotolouene	<0.25	mg/Kg	EPA 8260B
4-methyl-2-pentanone	<1.00	mg/Kg	EPA 8260B
Acetone	<2.50	mg/Kg	EPA 8260B
Benzene	<0.25	mg/Kg	EPA 8260B
Bromobenzene	<0.25	mg/Kg	EPA 8260B
Bromochloromethane	<0.25	mg/Kg	EPA 8260B
Bromodichloromethane	<0.25	mg/Kg	EPA 8260B
Bromoform	<0.25	mg/Kg	EPA 8260B
Bromomethane	<0.50	mg/Kg	EPA 8260B
Carbontetrachloride	<0.25	mg/Kg	EPA 8260B
Chlorobenzene	<0.25	mg/Kg	EPA 8260B
Chlorodibromomethane	<0.25	mg/Kg	EPA 8260B
Chloroethane	<0.50	mg/Kg	EPA 8260B
Chloroform	<0.50	mg/Kg	EPA 8260B
Chloromethane	<0.50	mg/Kg	EPA 8260B
Dibromomethane	<0.25	mg/Kg	EPA 8260B
Dichlorodifluoromethane	<0.50	mg/Kg	EPA 8260B
Ethylbenzene	<0.25	mg/Kg	EPA 8260B

Surrogate	Recovery	Method
Dibromofluoromethane	110	EPA 8260B
Toluene-d8	101	EPA 8260B
4-Bromofluorobenzene	91	EPA 8260B

SPECTRA LABORATORIES

SPECTRA Laboratories

2221 Ross Way • Tacoma, WA 98421 • (253) 272-4850

03/03/2000

P.O.#: 5002
Project: Metal Marine 165-1
Client ID: S11-13100
Sample Matrix: Soil
Date Sampled: 01/31/2000
Date Received: 02/02/2000
Spectra Project: 2000020032
Spectra Number: 6

Creative Environmental Technologies, Inc
P.O. Box 1803
Tacoma, WA 98401
Attn: Linda Drake

Analyte	Result	Units	Method
Hexachlorobutadiene	<0.25	mg/Kg	EPA 8260B
Isopropylbenzene	<0.25	mg/Kg	EPA 8260B
Methylene chloride	<0.25	mg/Kg	EPA 8260B
Naphthalene	<0.25	mg/Kg	EPA 8260B
Styrene	<0.25	mg/Kg	EPA 8260B
Tetrachloroethene	<0.25	mg/Kg	EPA 8260B
Toluene	<0.25	mg/Kg	EPA 8260B
Total Xylenes	<0.25	mg/Kg	EPA 8260B
Trichloroethene	<0.25	mg/Kg	EPA 8260B
Trichlorofluoromethane	<0.25	mg/Kg	EPA 8260B
Vinyl chloride	<0.50	mg/Kg	EPA 8260B
cis-1,2-Dichloroethene	<0.25	mg/Kg	EPA 8260B
cis-1,3-Dichloropropene	<0.25	mg/Kg	EPA 8260B
n-Butylbenzene	<0.25	mg/Kg	EPA 8260B
n-Propylbenzene	<0.25	mg/Kg	EPA 8260B
p-Isopropyltoluene	<0.25	mg/Kg	EPA 8260B
sec-Butylbenzene	<0.25	mg/Kg	EPA 8260B
tert-Butylbenzene	<0.25	mg/Kg	EPA 8260B
trans-1,2-Dichloroethene	<0.25	mg/Kg	EPA 8260B
trans-1,3-Dichloropropene	<0.25	mg/Kg	EPA 8260B

Analyte	Result	Units	Method

Surrogate	Recovery	Method
Dibromofluoromethane	110	EPA 8260B
Toluene-d8	101	EPA 8260B
4-Bromofluorobenzene	91	EPA 8260B

SPECTRA LABORATORIES

Michael Duckett

SPECTRA Laboratories

2221 Ross Way • Tacoma, WA 98421 • (253) 272-4850

03/03/2000

P.O.#: 5002
Project: Metal Marine 165-1
Client ID: S17-13100
Sample Matrix: Soil
Date Sampled: 01/31/2000
Date Received: 02/02/2000
Spectra Project: 2000020032
Spectra Number: 7

Creative Environmental Technologies, Inc
P.O. Box 1803
Tacoma, WA 98401
Attn: Linda Drake

Analyte	Result	Units	Method
Antimony	21	mg/Kg	SW846 6010B
Arsenic	< 5	mg/Kg	SW846 6010B
Beryllium	< 0.1	mg/Kg	SW846 6010B
Cadmium	< 0.3	mg/Kg	SW846 6010B
Chromium	38	mg/Kg	SW846 6010B
Copper	16	mg/Kg	SW846 6010B
Lead	8	mg/Kg	SW846 6010B
Mercury	<0.05	mg/Kg	EPA 7471A
Nickel	36	mg/Kg	SW846 6010B
Selenium	< 8	mg/Kg	SW846 6010B
Silver	< 0.7	mg/Kg	SW846 6010B
Thallium	< 0.1	mg/Kg	SM 3113B
Zinc	65	mg/Kg	SW846 6010B
Phenol	<0.33	mg/Kg	EPA 8270C
1,2,4-Trichlorobenzene	<0.33	mg/Kg	EPA 8270C
1,2-Dichlorobenzene	<0.33	mg/Kg	EPA 8270C
1,3-Dichlorobenzene	<0.33	mg/Kg	EPA 8270C
1,4-Dichlorobenzene	<0.33	mg/Kg	EPA 8270C
2,4,5-Trichlorophenol	<0.33	mg/Kg	EPA 8270C
2,4,6-Trichlorophenol	<0.33	mg/Kg	EPA 8270C
2,4-Dichlorophenol	<0.33	mg/Kg	EPA 8270C

Analyte	Result	Units	Method
2,4-Dimethylphenol	<0.33	mg/Kg	EPA 8270C
2,4-Dinitrophenol	<1.65	mg/Kg	EPA 8270C
2,4-Dinitrotoluene	<0.33	mg/Kg	EPA 8270C
2,6-Dinitrotoluene	<0.33	mg/Kg	EPA 8270C
2-Chloronaphthalene	<0.33	mg/Kg	EPA 8270C
2-Chlorophenol	<0.33	mg/Kg	EPA 8270C
2-Methylnaphthalene	<0.33	mg/Kg	EPA 8270C
2-Methylphenol	<0.33	mg/Kg	SW846 8270C
2-Nitroaniline	<1.65	mg/Kg	EPA 8270C
2-Nitrophenol	<0.33	mg/Kg	EPA 8270C
3,3-Dichlorobenzidine	<0.33	mg/Kg	EPA 8270C
3-Nitroaniline	<1.65	mg/Kg	EPA 8270C
4,6-Dinitro-2-Methylphenol	<0.33	mg/Kg	EPA 8270C
4-Bromophenyl-phenylether	<0.33	mg/Kg	EPA 8270C
4-Chloro-3-Methylphenol	<0.33	mg/Kg	EPA 8270C
4-Chloroaniline	<0.33	mg/Kg	EPA 8270C
4-Chlorophenyl-phenylether	<0.33	mg/Kg	EPA 8270C
4-Methylphenol	<0.33	mg/Kg	EPA 8270C
4-Nitroaniline	<1.65	mg/Kg	EPA 8270C
4-Nitrophenol	<1.65	mg/Kg	EPA 8270C
Acenaphthene	<0.33	mg/Kg	EPA 8270C

Surrogate	Recovery	Method
Nitrobenzene-d5	56	EPA 8270C
2-Fluorobiphenyl	83	EPA 8270C
p-Terphenyl-d14	104	EPA 8270C
2-Fluorophenol	53	EPA 8270C

Surrogate	Recovery	Method
Phenol-d6	78	EPA 8270C
2,4,6-Tribromophenol	90	EPA 8270C

SPECTRA LABORATORIES

Michael Duckett

SPECTRA Laboratories

2221 Ross Way • Tacoma, WA 98421 • (253) 272-4850

03/03/2000

P.O.#:	5002
Project:	Metal Marine 165-1
Client ID:	S17-13100
Sample Matrix:	Soil
Date Sampled:	01/31/2000
Date Received:	02/02/2000
Spectra Project:	2000020032
Spectra Number:	7

Creative Environmental Technologies, Inc
P.O. Box 1803
Tacoma, WA 98401
Attn: Linda Drake

Analyte	Result	Units	Method
Acenaphthylene	<0.33	mg/Kg	EPA 8270C
Anthracene	<0.33	mg/Kg	EPA 8270C
Benzo(a)Anthracene	<0.33	mg/Kg	EPA 8270C
Benzo(a)Pyrene	<0.33	mg/Kg	EPA 8270C
Benzo(b)Fluoranthene	<0.33	mg/Kg	EPA 8270C
Benzo(ghi)Perylene	<0.33	mg/Kg	EPA 8270C
Benzo(k)Fluoranthene	<0.33	mg/Kg	EPA 8270C
Benzoic Acid	<1.65	mg/Kg	EPA 8270C
Benzyl Alcohol	<0.33	mg/Kg	EPA 8270C
Bis(2-Chloroethyl)Ether	<0.33	mg/Kg	EPA 8270C
Butylbenzylphthalate	<0.33	mg/Kg	EPA 8270C
Chrysene	<0.33	mg/Kg	EPA 8270C
Di-n-Butylphthalate	<0.33	mg/Kg	EPA 8270C
Di-n-Octyl Phthalate	<0.33	mg/Kg	EPA 8270C
Dibenz(a,h)Anthracene	<0.33	mg/Kg	EPA 8270C
Dibenzofuran	<0.33	mg/Kg	EPA 8270C
Diethylphthalate	<0.33	mg/Kg	EPA 8270C
Dimethyl Phthalate	<0.33	mg/Kg	EPA 8270C
Fluoranthene	<0.33	mg/Kg	EPA 8270C
Fluorene	<0.33	mg/Kg	EPA 8270C
Hexachlorobenzene	<0.33	mg/Kg	EPA 8270C

Analyte	Result	Units	Method
Hexachlorobutadiene	<0.33	mg/Kg	EPA 8270C
Hexachlorocyclopentadiene	<0.33	mg/Kg	EPA 8270C
Hexachloroethane	<0.33	mg/Kg	EPA 8270C
Indeno(1,2,3-cd)Pyrene	<0.33	mg/Kg	EPA 8270C
Isophorone	<0.33	mg/Kg	EPA 8270C
N-Nitroso-Di-n-Propylamine	<0.33	mg/Kg	EPA 8270C
N-Nitrosodiphenylamine	<0.33	mg/Kg	EPA 8270C
Naphthalene	<0.33	mg/Kg	EPA 8270C
Nitrobenzene	<0.33	mg/Kg	EPA 8270C
Pentachlorophenol	<1.65	mg/Kg	EPA 8270C
Phenanthrene	<0.33	mg/Kg	EPA 8270C
Pyrene	<0.33	mg/Kg	EPA 8270C
bis(2-Chloroethoxy)Methane	<0.33	mg/Kg	EPA 8270C
bis(2-Ethylhexyl)Phthalate	<0.33	mg/Kg	EPA 8270C
bis(2-chloroisopropyl)Ether	<0.33	mg/Kg	EPA 8270C

Surrogate	Recovery	Method
Nitrobenzene-d5	56	EPA 8270C
2-Fluorobiphenyl	83	EPA 8270C
p-Terphenyl-d14	104	EPA 8270C
2-Fluorophenol	53	EPA 8270C

Surrogate	Recovery	Method
Phenol-d6	78	EPA 8270C
2,4,6-Tribromophenol	90	EPA 8270C

SPECTRA LABORATORIES

Michael Duckett

SPECTRA Laboratories

2221 Ross Way • Tacoma, WA 98421 • (253) 272-4850

03/03/2000

P.O.#: 5002
Project: Metal Marine 165-1
Client ID: S24-13100
Sample Matrix: Soil
Date Sampled: 01/31/2000
Date Received: 02/02/2000
Spectra Project: 2000020032
Spectra Number: 8

Creative Environmental Technologies, Inc
P.O. Box 1803
Tacoma, WA 98401
Attn: Linda Drake

Analyte	Result	Units	Method
Antimony	18	mg/Kg	SW846 6010B
Arsenic	< 5	mg/Kg	SW846 6010B
Beryllium	< 0.1	mg/Kg	SW846 6010B
Cadmium	< 0.3	mg/Kg	SW846 6010B
Chromium	62	mg/Kg	SW846 6010B
Copper	29	mg/Kg	SW846 6010B
Lead	28	mg/Kg	SW846 6010B
Mercury	0.07	mg/Kg	EPA 7471A
Nickel	22	mg/Kg	SW846 6010B
Selenium	< 8	mg/Kg	SW846 6010B
Silver	< 0.7	mg/Kg	SW846 6010B
Thallium	< 0.1	mg/Kg	SM 3113B
Zinc	34	mg/Kg	SW846 6010B
Phenol	<0.33	mg/Kg	EPA 8270C
1,2,4-Trichlorobenzene	<0.33	mg/Kg	EPA 8270C
1,2-Dichlorobenzene	<0.33	mg/Kg	EPA 8270C
1,3-Dichlorobenzene	<0.33	mg/Kg	EPA 8270C
1,4-Dichlorobenzene	<0.33	mg/Kg	EPA 8270C
2,4,5-Trichlorophenol	<0.33	mg/Kg	EPA 8270C
2,4,6-Trichlorophenol	<0.33	mg/Kg	EPA 8270C
2,4-Dichlorophenol	<0.33	mg/Kg	EPA 8270C

Analyte	Result	Units	Method
2,4-Dimethylphenol	<0.33	mg/Kg	EPA 8270C
2,4-Dinitrophenol	<1.65	mg/Kg	EPA 8270C
2,4-Dinitrotoluene	<0.33	mg/Kg	EPA 8270C
2,6-Dinitrotoluene	<0.33	mg/Kg	EPA 8270C
2-Chloronaphthalene	<0.33	mg/Kg	EPA 8270C
2-Chlorophenol	<0.33	mg/Kg	EPA 8270C
2-Methylnaphthalene	<0.33	mg/Kg	EPA 8270C
2-Methylphenol	<0.33	mg/Kg	SW846 8270C
2-Nitroaniline	<1.65	mg/Kg	EPA 8270C
2-Nitrophenol	<0.33	mg/Kg	EPA 8270C
3,3-Dichlorobenzidine	<0.33	mg/Kg	EPA 8270C
3-Nitroaniline	<1.65	mg/Kg	EPA 8270C
4,6-Dinitro-2-Methylphenol	<0.33	mg/Kg	EPA 8270C
4-Bromophenyl-phenylether	<0.33	mg/Kg	EPA 8270C
4-Chloro-3-Methylphenol	<0.33	mg/Kg	EPA 8270C
4-Chloroaniline	<0.33	mg/Kg	EPA 8270C
4-Chlorophenyl-phenylether	<0.33	mg/Kg	EPA 8270C
4-Methylphenol	<0.33	mg/Kg	EPA 8270C
4-Nitroaniline	<1.65	mg/Kg	EPA 8270C
4-Nitrophenol	<1.65	mg/Kg	EPA 8270C
Acenaphthene	<0.33	mg/Kg	EPA 8270C

Surrogate	Recovery	Method
Nitrobenzene-d5	42	EPA 8270C
2-Fluorobiphenyl	62	EPA 8270C
p-Terphenyl-d14	82	EPA 8270C
2-Fluorophenol	33	EPA 8270C

Surrogate	Recovery	Method
Phenol-d6	49	EPA 8270C
2,4,6-Tribromophenol	82	EPA 8270C

SPECTRA LABORATORIES

Michael Duckett

SPECTRA Laboratories

2221 Ross Way • Tacoma, WA 98421 • (253) 272-4850

03/03/2000

P.O.#: 5002
Project: Metal Marine 165-1
Client ID: S24-13100
Sample Matrix: Soil
Date Sampled: 01/31/2000
Date Received: 02/02/2000
Spectra Project: 2000020032
Spectra Number: 8

Creative Environmental Technologies, Inc
P.O. Box 1803
Tacoma, WA 98401
Attn: Linda Drake

Analyte	Result	Units	Method
Acenaphthylene	<0.33	mg/Kg	EPA 8270C
Anthracene	<0.33	mg/Kg	EPA 8270C
Benzo(a)Anthracene	<0.33	mg/Kg	EPA 8270C
Benzo(a)Pyrene	<0.33	mg/Kg	EPA 8270C
Benzo(b)Fluoranthene	<0.33	mg/Kg	EPA 8270C
Benzo(ghi)Perylene	<0.33	mg/Kg	EPA 8270C
Benzo(k)Fluoranthene	<0.33	mg/Kg	EPA 8270C
Benzoic Acid	<1.65	mg/Kg	EPA 8270C
Benzyl Alcohol	<0.33	mg/Kg	EPA 8270C
Bis(2-Chloroethyl)Ether	<0.33	mg/Kg	EPA 8270C
Butylbenzylphthalate	<0.33	mg/Kg	EPA 8270C
Chrysene	<0.33	mg/Kg	EPA 8270C
Di-n-Butylphthalate	<0.33	mg/Kg	EPA 8270C
Di-n-Octyl Phthalate	<0.33	mg/Kg	EPA 8270C
Dibenz(a,h)Anthracene	<0.33	mg/Kg	EPA 8270C
Dibenzofuran	<0.33	mg/Kg	EPA 8270C
Diethylphthalate	<0.33	mg/Kg	EPA 8270C
Dimethyl Phthalate	<0.33	mg/Kg	EPA 8270C
Fluoranthene	<0.33	mg/Kg	EPA 8270C
Fluorene	<0.33	mg/Kg	EPA 8270C
Hexachlorobenzene	<0.33	mg/Kg	EPA 8270C

Analyte	Result	Units	Method
Hexachlorobutadiene	<0.33	mg/Kg	EPA 8270C
Hexachlorocyclopentadiene	<0.33	mg/Kg	EPA 8270C
Hexachloroethane	<0.33	mg/Kg	EPA 8270C
Indeno(1,2,3-cd)Pyrene	<0.33	mg/Kg	EPA 8270C
Isophorone	<0.33	mg/Kg	EPA 8270C
N-Nitroso-Di-n-Propylamine	<0.33	mg/Kg	EPA 8270C
N-Nitrosodiphenylamine	<0.33	mg/Kg	EPA 8270C
Naphthalene	<0.33	mg/Kg	EPA 8270C
Nitrobenzene	<0.33	mg/Kg	EPA 8270C
Pentachlorophenol	<1.65	mg/Kg	EPA 8270C
Phenanthrene	<0.33	mg/Kg	EPA 8270C
Pyrene	<0.33	mg/Kg	EPA 8270C
bis(2-Chloroethoxy)Methane	<0.33	mg/Kg	EPA 8270C
bis(2-Ethylhexyl)Phthalate	<0.33	mg/Kg	EPA 8270C
bis(2-chloroisopropyl)Ether	<0.33	mg/Kg	EPA 8270C

Surrogate	Recovery	Method
Nitrobenzene-d5	42	EPA 8270C
2-Fluorobiphenyl	62	EPA 8270C
p-Terphenyl-d14	82	EPA 8270C
2-Fluorophenol	33	EPA 8270C

Surrogate	Recovery	Method
Phenol-d6	49	EPA 8270C
2,4,6-Tribromophenol	82	EPA 8270C

SPECTRA LABORATORIES

Michael Herbert

SPECTRA Laboratories

2221 Ross Way • Tacoma, WA 98421 • (253) 272-4850

03/03/2000

P.O.#: 5002
Project: Metal Marine 165-1
Client ID: S25-13100
Sample Matrix: Soil
Date Sampled: 01/31/2000
Date Received: 02/02/2000
Spectra Project: 2000020032
Spectra Number: 9

Creative Environmental Technologies, Inc
P.O. Box 1803
Tacoma, WA 98401
Attn: Linda Drake

Analyte	Result	Units	Method	Analyte	Result	Units	Method
Antimony	21	mg/Kg	SW846 6010B				
Arsenic	< 5	mg/Kg	SW846 6010B				
Beryllium	< 0.1	mg/Kg	SW846 6010B				
Cadmium	< 0.3	mg/Kg	SW846 6010B				
Chromium	21	mg/Kg	SW846 6010B				
Copper	7.5	mg/Kg	SW846 6010B				
Lead	5	mg/Kg	SW846 6010B				
Mercury	<0.05	mg/Kg	EPA 7471A				
Nickel	17	mg/Kg	SW846 6010B				
Selenium	< 8	mg/Kg	SW846 6010B				
Silver	< 0.7	mg/Kg	SW846 6010B				
Thallium	< 0.1	mg/Kg	SM 3113B				
Zinc	28	mg/Kg	SW846 6010B				

SPECTRA LABORATORIES

Michael Duckett

SPECTRA Laboratories

2221 Ross Way • Tacoma, WA 98421 • (253) 272-4850

03/03/2000

P.O.#: 5002
Project: Metal Marine 165-1
Client ID: S27-13100
Sample Matrix: Soil
Date Sampled: 01/31/2000
Date Received: 02/02/2000
Spectra Project: 2000020032
Spectra Number: 10

Creative Environmental Technologies, Inc
P.O. Box 1803
Tacoma, WA 98401
Attn: Linda Drake

Analyte	Result	Units	Method
1,1,1,2-tetrachloroethane	<0.25	mg/Kg	EPA 8260B
1,1,1-Trichloroethane	<0.25	mg/Kg	EPA 8260B
1,1,2,2-tetrachloroethane	<0.25	mg/Kg	EPA 8260B
1,1,2-Trichloroethane	<0.25	mg/Kg	EPA 8260B
1,1-Dichloroethane	<0.25	mg/Kg	EPA 8260B
1,1-Dichloroethene	<0.25	mg/Kg	EPA 8260B
1,1-Dichloropropene	<0.25	mg/Kg	EPA 8260B
1,2,3-Trichlorobenzene	<0.25	mg/Kg	EPA 8260B
1,2,3-Trichloropropane	<0.25	mg/Kg	EPA 8260B
1,2,4-Trichlorobenzene	<0.25	mg/Kg	EPA 8260B
1,2,4-Trimethylbenzene	<0.25	mg/Kg	EPA 8260B
1,2-Dibromo3Chloropropane	<2.50	mg/Kg	EPA 8260B
1,2-Dibromoethane (EDB)	<0.50	mg/Kg	EPA 8260B
1,2-Dichlorobenzene	<0.25	mg/Kg	EPA 8260B
1,2-Dichloroethane	<0.25	mg/Kg	EPA 8260B
1,2-Dichloropropane	<0.25	mg/Kg	EPA 8260B
1,3,5-Trimethylbenzene	<0.25	mg/Kg	EPA 8260B
1,3-Dichlorobenzene	<0.25	mg/Kg	EPA 8260B
1,3-Dichloropropane	<0.25	mg/Kg	EPA 8260B
1,4-Dichlorobenzene	<0.25	mg/Kg	EPA 8260B
2,2-Dichloropropane	<0.25	mg/Kg	EPA 8260B

Analyte	Result	Units	Method
2-Butanone (MEK)	<2.50	mg/Kg	EPA 8260B
2-Chlorotolouene	<0.25	mg/Kg	EPA 8260B
2-Hexanone (MBK)	<2.50	mg/Kg	EPA 8260B
4-Chlorotolouene	<0.25	mg/Kg	EPA 8260B
4-methyl-2-pentanone	<1.00	mg/Kg	EPA 8260B
Acetone	<2.50	mg/Kg	EPA 8260B
Benzene	<0.25	mg/Kg	EPA 8260B
Bromobenzene	<0.25	mg/Kg	EPA 8260B
Bromochloromethane	<0.25	mg/Kg	EPA 8260B
Bromodichloromethane	<0.25	mg/Kg	EPA 8260B
Bromoform	<0.25	mg/Kg	EPA 8260B
Bromomethane	<0.50	mg/Kg	EPA 8260B
Carbontetrachloride	<0.25	mg/Kg	EPA 8260B
Chlorobenzene	<0.25	mg/Kg	EPA 8260B
Chlorodibromomethane	<0.25	mg/Kg	EPA 8260B
Chloroethane	<0.50	mg/Kg	EPA 8260B
Chloroform	<0.50	mg/Kg	EPA 8260B
Chloromethane	<0.50	mg/Kg	EPA 8260B
Dibromomethane	<0.25	mg/Kg	EPA 8260B
Dichlorodifluoromethane	<0.50	mg/Kg	EPA 8260B
Ethylbenzene	<0.25	mg/Kg	EPA 8260B

Surrogate	Recovery	Method
Dibromofluoromethane	118*	EPA 8260B
Toluene-d8	102	EPA 8260B
4-Bromofluorobenzene	89	EPA 8260B

SPECTRA LABORATORIES

Michael Dahl

SPECTRA Laboratories

2221 Ross Way • Tacoma, WA 98421 • (253) 272-4850

03/03/2000

P.O.#: 5002
Project: Metal Marine 165-1
Client ID: S27-13100
Sample Matrix: Soil
Date Sampled: 01/31/2000
Date Received: 02/02/2000
Spectra Project: 2000020032
Spectra Number: 10

Creative Environmental Technologies, Inc
P.O. Box 1803
Tacoma, WA 98401
Attn: Linda Drake

Analyte	Result	Units	Method
Hexachlorobutadiene	<0.25	mg/Kg	EPA 8260B
Isopropylbenzene	<0.25	mg/Kg	EPA 8260B
Methylene chloride	<0.25	mg/Kg	EPA 8260B
Naphthalene	<0.25	mg/Kg	EPA 8260B
Styrene	<0.25	mg/Kg	EPA 8260B
Tetrachloroethene	<0.25	mg/Kg	EPA 8260B
Toluene	<0.25	mg/Kg	EPA 8260B
Total Xylenes	<0.25	mg/Kg	EPA 8260B
Trichloroethene	<0.25	mg/Kg	EPA 8260B
Trichlorofluoromethane	<0.25	mg/Kg	EPA 8260B
Vinyl chloride	<0.50	mg/Kg	EPA 8260B
cis-1,2-Dichloroethene	<0.25	mg/Kg	EPA 8260B
cis-1,3-Dichloropropene	<0.25	mg/Kg	EPA 8260B
n-Butylbenzene	<0.25	mg/Kg	EPA 8260B
n-Propylbenzene	<0.25	mg/Kg	EPA 8260B
p-Isopropyltoluene	<0.25	mg/Kg	EPA 8260B
sec-Butylbenzene	<0.25	mg/Kg	EPA 8260B
tert-Butylbenzene	<0.25	mg/Kg	EPA 8260B
trans-1,2-Dichloroethene	<0.25	mg/Kg	EPA 8260B
trans-1,3-Dichloropropene	<0.25	mg/Kg	EPA 8260B

Analyte	Result	Units	Method

Surrogate	Recovery	Method
Dibromofluoromethane	118*	EPA 8260B
Toluene-d8	102	EPA 8260B
4-Bromofluorobenzene	89	EPA 8260B

SPECTRA LABORATORIES

Michael Dubois

SPECTRA Laboratories

2221 Ross Way • Tacoma, WA 98421 • (253) 272-4850

03/03/2000

P.O.#: 5002
Project: Metal Marine 165-1
Client ID: S28-13100
Sample Matrix: Soil
Date Sampled: 01/31/2000
Date Received: 02/02/2000
Spectra Project: 2000020032
Spectra Number: 11

Creative Environmental Technologies, Inc
P.O. Box 1803
Tacoma, WA 98401
Attn: Linda Drake

Analyte	Result	Units	Method
1,1,1,2-tetrachloroethane	<0.25	mg/Kg	EPA 8260B
1,1,1-Trichloroethane	<0.25	mg/Kg	EPA 8260B
1,1,2,2-tetrachloroethane	<0.25	mg/Kg	EPA 8260B
1,1,2-Trichloroethane	<0.25	mg/Kg	EPA 8260B
1,1-Dichloroethane	<0.25	mg/Kg	EPA 8260B
1,1-Dichloroethene	<0.25	mg/Kg	EPA 8260B
1,1-Dichloropropene	<0.25	mg/Kg	EPA 8260B
1,2,3-Trichlorobenzene	<0.25	mg/Kg	EPA 8260B
1,2,3-Trichloropropane	<0.25	mg/Kg	EPA 8260B
1,2,4-Trichlorobenzene	<0.25	mg/Kg	EPA 8260B
1,2,4-Trimethylbenzene	<0.25	mg/Kg	EPA 8260B
1,2-Dibromo3Chloropropane	<2.50	mg/Kg	EPA 8260B
1,2-Dibromoethane (EDB)	<0.50	mg/Kg	EPA 8260B
1,2-Dichlorobenzene	<0.25	mg/Kg	EPA 8260B
1,2-Dichloroethane	<0.25	mg/Kg	EPA 8260B
1,2-Dichloropropane	<0.25	mg/Kg	EPA 8260B
1,3,5-Trimethylbenzene	<0.25	mg/Kg	EPA 8260B
1,3-Dichlorobenzene	<0.25	mg/Kg	EPA 8260B
1,3-Dichloropropane	<0.25	mg/Kg	EPA 8260B
1,4-Dichlorobenzene	<0.25	mg/Kg	EPA 8260B
2,2-Dichloropropane	<0.25	mg/Kg	EPA 8260B

Analyte	Result	Units	Method
2-Butanone (MEK)	<2.50	mg/Kg	EPA 8260B
2-Chlorotolouene	<0.25	mg/Kg	EPA 8260B
2-Hexanone (MBK)	<2.50	mg/Kg	EPA 8260B
4-Chlorotolouene	<0.25	mg/Kg	EPA 8260B
4-methyl-2-pentanone	<1.00	mg/Kg	EPA 8260B
Acetone	<2.50	mg/Kg	EPA 8260B
Benzene	<0.25	mg/Kg	EPA 8260B
Bromobenzene	<0.25	mg/Kg	EPA 8260B
Bromochloromethane	<0.25	mg/Kg	EPA 8260B
Bromodichloromethane	<0.25	mg/Kg	EPA 8260B
Bromoform	<0.25	mg/Kg	EPA 8260B
Bromomethane	<0.50	mg/Kg	EPA 8260B
Carbontetrachloride	<0.25	mg/Kg	EPA 8260B
Chlorobenzene	<0.25	mg/Kg	EPA 8260B
Chlorodibromomethane	<0.25	mg/Kg	EPA 8260B
Chloroethane	<0.50	mg/Kg	EPA 8260B
Chloroform	<0.50	mg/Kg	EPA 8260B
Chloromethane	<0.50	mg/Kg	EPA 8260B
Dibromomethane	<0.25	mg/Kg	EPA 8260B
Dichlorodifluoromethane	<0.50	mg/Kg	EPA 8260B
Ethylbenzene	<0.25	mg/Kg	EPA 8260B

Surrogate	Recovery	Method
Dibromofluoromethane	105	EPA 8260B
Toluene-d8	102	EPA 8260B
4-Bromofluorobenzene	91	EPA 8260B

SPECTRA LABORATORIES

Michael Duke

SPECTRA Laboratories

2221 Ross Way • Tacoma, WA 98421 • (253) 272-4850

03/03/2000

P.O.#: 5002
Project: Metal Marine 165-1
Client ID: S28-13100
Sample Matrix: Soil
Date Sampled: 01/31/2000
Date Received: 02/02/2000
Spectra Project: 2000020032
Spectra Number: 11

Creative Environmental Technologies, Inc
P.O. Box 1803
Tacoma, WA 98401
Attn: Linda Drake

Analyte	Result	Units	Method
Hexachlorobutadiene	<0.25	mg/Kg	EPA 8260B
Isopropylbenzene	<0.25	mg/Kg	EPA 8260B
Methylene chloride	<0.25	mg/Kg	EPA 8260B
Naphthalene	<0.25	mg/Kg	EPA 8260B
Styrene	<0.25	mg/Kg	EPA 8260B
Tetrachloroethene	<0.25	mg/Kg	EPA 8260B
Toluene	<0.25	mg/Kg	EPA 8260B
Total Xylenes	<0.25	mg/Kg	EPA 8260B
Trichloroethene	<0.25	mg/Kg	EPA 8260B
Trichlorofluoromethane	<0.25	mg/Kg	EPA 8260B
Vinyl chloride	<0.50	mg/Kg	EPA 8260B
cis-1,2-Dichloroethene	<0.25	mg/Kg	EPA 8260B
cis-1,3-Dichloropropene	<0.25	mg/Kg	EPA 8260B
n-Butylbenzene	<0.25	mg/Kg	EPA 8260B
n-Propylbenzene	<0.25	mg/Kg	EPA 8260B
p-Isopropyltoluene	<0.25	mg/Kg	EPA 8260B
sec-Butylbenzene	<0.25	mg/Kg	EPA 8260B
tert-Butylbenzene	<0.25	mg/Kg	EPA 8260B
trans-1,2-Dichloroethene	<0.25	mg/Kg	EPA 8260B
trans-1,3-Dichloropropene	<0.25	mg/Kg	EPA 8260B

Analyte	Result	Units	Method

Surrogate	Recovery	Method
Dibromofluoromethane	105	EPA 8260B
Toluene-d8	102	EPA 8260B
4-Bromofluorobenzene	91	EPA 8260B

SPECTRA LABORATORIES

SPECTRA Laboratories

2221 Ross Way • Tacoma, WA 98421 • (253) 272-4850

03/03/2000

P.O.#: 5002
Project: Metal Marine 165-1
Client ID: S1-2100
Sample Matrix: Soil
Date Sampled: 02/01/2000
Date Received: 02/02/2000
Spectra Project: 2000020032
Spectra Number: 12

Creative Environmental Technologies, Inc
P.O. Box 1803
Tacoma, WA 98401
Attn: Linda Drake

Analyte	Result	Units	Method
1,1,1,2-tetrachloroethane	<0.25	mg/Kg	EPA 8260B
1,1,1-Trichloroethane	<0.25	mg/Kg	EPA 8260B
1,1,2,2-tetrachloroethane	<0.25	mg/Kg	EPA 8260B
1,1,2-Trichloroethane	<0.25	mg/Kg	EPA 8260B
1,1-Dichloroethane	<0.25	mg/Kg	EPA 8260B
1,1-Dichloroethene	<0.25	mg/Kg	EPA 8260B
1,1-Dichloropropene	<0.25	mg/Kg	EPA 8260B
1,2,3-Trichlorobenzene	<0.25	mg/Kg	EPA 8260B
1,2,3-Trichloropropane	<0.25	mg/Kg	EPA 8260B
1,2,4-Trichlorobenzene	<0.25	mg/Kg	EPA 8260B
1,2,4-Trimethylbenzene	<0.25	mg/Kg	EPA 8260B
1,2-Dibromo3Chloropropane	<2.50	mg/Kg	EPA 8260B
1,2-Dibromoethane (EDB)	<0.50	mg/Kg	EPA 8260B
1,2-Dichlorobenzene	<0.25	mg/Kg	EPA 8260B
1,2-Dichloroethane	<0.25	mg/Kg	EPA 8260B
1,2-Dichloropropane	<0.25	mg/Kg	EPA 8260B
1,3,5-Trimethylbenzene	<0.25	mg/Kg	EPA 8260B
1,3-Dichlorobenzene	<0.25	mg/Kg	EPA 8260B
1,3-Dichloropropane	<0.25	mg/Kg	EPA 8260B
1,4-Dichlorobenzene	<0.25	mg/Kg	EPA 8260B
2,2-Dichloropropane	<0.25	mg/Kg	EPA 8260B

Analyte	Result	Units	Method
2-Butanone (MEK)	<2.50	mg/Kg	EPA 8260B
2-Chlorotolouene	<0.25	mg/Kg	EPA 8260B
2-Hexanone (MBK)	<2.50	mg/Kg	EPA 8260B
4-Chlorotolouene	<0.25	mg/Kg	EPA 8260B
4-methyl-2-pentanone	<1.00	mg/Kg	EPA 8260B
Acetone	<2.50	mg/Kg	EPA 8260B
Benzene	<0.25	mg/Kg	EPA 8260B
Bromobenzene	<0.25	mg/Kg	EPA 8260B
Bromochloromethane	<0.25	mg/Kg	EPA 8260B
Bromodichloromethane	<0.25	mg/Kg	EPA 8260B
Bromoform	<0.25	mg/Kg	EPA 8260B
Bromomethane	<0.50	mg/Kg	EPA 8260B
Carbontetrachloride	<0.25	mg/Kg	EPA 8260B
Chlorobenzene	<0.25	mg/Kg	EPA 8260B
Chlorodibromomethane	<0.25	mg/Kg	EPA 8260B
Chloroethane	<0.50	mg/Kg	EPA 8260B
Chloroform	<0.50	mg/Kg	EPA 8260B
Chloromethane	<0.50	mg/Kg	EPA 8260B
Dibromomethane	<0.25	mg/Kg	EPA 8260B
Dichlorodifluoromethane	<0.50	mg/Kg	EPA 8260B
Ethylbenzene	<0.25	mg/Kg	EPA 8260B

Surrogate	Recovery	Method
Dibromofluoromethane	107	EPA 8260B
Toluene-d8	102	EPA 8260B
4-Bromofluorobenzene	90	EPA 8260B

SPECTRA LABORATORIES

SPECTRA Laboratories

2221 Ross Way • Tacoma, WA 98421 • (253) 272-4850

03/03/2000

P.O.#: 5002
Project: Metal Marine 165-1
Client ID: S1-2100
Sample Matrix: Soil
Date Sampled: 02/01/2000
Date Received: 02/02/2000
Spectra Project: 2000020032
Spectra Number: 12

Creative Environmental Technologies, Inc
P.O. Box 1803
Tacoma, WA 98401
Attn: Linda Drake

Analyte	Result	Units	Method
Hexachlorobutadiene	<0.25	mg/Kg	EPA 8260B
Isopropylbenzene	<0.25	mg/Kg	EPA 8260B
Methylene chloride	<0.25	mg/Kg	EPA 8260B
Naphthalene	<0.25	mg/Kg	EPA 8260B
Styrene	<0.25	mg/Kg	EPA 8260B
Tetrachloroethene	<0.25	mg/Kg	EPA 8260B
Toluene	<0.25	mg/Kg	EPA 8260B
Total Xylenes	<0.25	mg/Kg	EPA 8260B
Trichloroethene	<0.25	mg/Kg	EPA 8260B
Trichlorofluoromethane	<0.25	mg/Kg	EPA 8260B
Vinyl chloride	<0.50	mg/Kg	EPA 8260B
cis-1,2-Dichloroethene	<0.25	mg/Kg	EPA 8260B
cis-1,3-Dichloropropene	<0.25	mg/Kg	EPA 8260B
n-Butylbenzene	<0.25	mg/Kg	EPA 8260B
n-Propylbenzene	<0.25	mg/Kg	EPA 8260B
p-Isopropyltoluene	<0.25	mg/Kg	EPA 8260B
sec-Butylbenzene	<0.25	mg/Kg	EPA 8260B
tert-Butylbenzene	<0.25	mg/Kg	EPA 8260B
trans-1,2-Dichloroethene	<0.25	mg/Kg	EPA 8260B
trans-1,3-Dichloropropene	<0.25	mg/Kg	EPA 8260B

Analyte	Result	Units	Method

Surrogate	Recovery	Method
Dibromofluoromethane	107	EPA 8260B
Toluene-d8	102	EPA 8260B
4-Bromofluorobenzene	90	EPA 8260B

SPECTRA LABORATORIES

m.l. Dr.h.t

SPECTRA Laboratories

2221 Ross Way • Tacoma, WA 98421 • (253) 272-4850

03/03/2000

P.O.#: 5002
Project: Metal Marine 165-1
Client ID: S3-2100
Sample Matrix: Soil
Date Sampled: 02/01/2000
Date Received: 02/02/2000
Spectra Project: 2000020032
Spectra Number: 13

Creative Environmental Technologies, Inc
P.O. Box 1803
Tacoma, WA 98401
Attn: Linda Drake

Analyte	Result	Units	Method
1,1,1,2-tetrachloroethane	<0.25	mg/Kg	EPA 8260B
1,1,1-Trichloroethane	<0.25	mg/Kg	EPA 8260B
1,1,2,2-tetrachloroethane	<0.25	mg/Kg	EPA 8260B
1,1,2-Trichloroethane	<0.25	mg/Kg	EPA 8260B
1,1-Dichloroethane	<0.25	mg/Kg	EPA 8260B
1,1-Dichloroethene	<0.25	mg/Kg	EPA 8260B
1,1-Dichloropropene	<0.25	mg/Kg	EPA 8260B
1,2,3-Trichlorobenzene	<0.25	mg/Kg	EPA 8260B
1,2,3-Trichloropropane	<0.25	mg/Kg	EPA 8260B
1,2,4-Trichlorobenzene	<0.25	mg/Kg	EPA 8260B
1,2,4-Trimethylbenzene	<0.25	mg/Kg	EPA 8260B
1,2-Dibromo3Chloropropane	<2.50	mg/Kg	EPA 8260B
1,2-Dibromoethane (EDB)	<0.50	mg/Kg	EPA 8260B
1,2-Dichlorobenzene	<0.25	mg/Kg	EPA 8260B
1,2-Dichloroethane	<0.25	mg/Kg	EPA 8260B
1,2-Dichloropropane	<0.25	mg/Kg	EPA 8260B
1,3,5-Trimethylbenzene	<0.25	mg/Kg	EPA 8260B
1,3-Dichlorobenzene	<0.25	mg/Kg	EPA 8260B
1,3-Dichloropropane	<0.25	mg/Kg	EPA 8260B
1,4-Dichlorobenzene	<0.25	mg/Kg	EPA 8260B
2,2-Dichloropropane	<0.25	mg/Kg	EPA 8260B

Analyte	Result	Units	Method
2-Butanone (MEK)	<2.50	mg/Kg	EPA 8260B
2-Chlorotolouene	<0.25	mg/Kg	EPA 8260B
2-Hexanone (MBK)	<2.50	mg/Kg	EPA 8260B
4-Chlorotolouene	<0.25	mg/Kg	EPA 8260B
4-methyl-2-pentanone	<1.00	mg/Kg	EPA 8260B
Acetone	<2.50	mg/Kg	EPA 8260B
Benzene	<0.25	mg/Kg	EPA 8260B
Bromobenzene	<0.25	mg/Kg	EPA 8260B
Bromochloromethane	<0.25	mg/Kg	EPA 8260B
Bromodichloromethane	<0.25	mg/Kg	EPA 8260B
Bromoform	<0.25	mg/Kg	EPA 8260B
Bromomethane	<0.50	mg/Kg	EPA 8260B
Carbontetrachloride	<0.25	mg/Kg	EPA 8260B
Chlorobenzene	<0.25	mg/Kg	EPA 8260B
Chlorodibromomethane	<0.25	mg/Kg	EPA 8260B
Chloroethane	<0.50	mg/Kg	EPA 8260B
Chloroform	<0.50	mg/Kg	EPA 8260B
Chloromethane	<0.50	mg/Kg	EPA 8260B
Dibromomethane	<0.25	mg/Kg	EPA 8260B
Dichlorodifluoromethane	<0.50	mg/Kg	EPA 8260B
Ethylbenzene	<0.25	mg/Kg	EPA 8260B

Surrogate	Recovery	Method
Dibromofluoromethane	113	EPA 8260B
Toluene-d8	102	EPA 8260B
4-Bromofluorobenzene	94	EPA 8260B

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2221 Ross Way • Tacoma, WA 98421 • (253) 272-4850

03/03/2000

P.O.#: 5002
Project: Metal Marine 165-1
Client ID: S3-2100
Sample Matrix: Soil
Date Sampled: 02/01/2000
Date Received: 02/02/2000
Spectra Project: 2000020032
Spectra Number: 13

Creative Environmental Technologies, Inc
P.O. Box 1803
Tacoma, WA 98401
Attn: Linda Drake

Analyte	Result	Units	Method
Hexachlorobutadiene	<0.25	mg/Kg	EPA 8260B
Isopropylbenzene	<0.25	mg/Kg	EPA 8260B
Methylene chloride	<0.25	mg/Kg	EPA 8260B
Naphthalene	<0.25	mg/Kg	EPA 8260B
Styrene	<0.25	mg/Kg	EPA 8260B
Tetrachloroethene	<0.25	mg/Kg	EPA 8260B
Toluene	<0.25	mg/Kg	EPA 8260B
Total Xylenes	<0.25	mg/Kg	EPA 8260B
Trichloroethene	<0.25	mg/Kg	EPA 8260B
Trichlorofluoromethane	<0.25	mg/Kg	EPA 8260B
Vinyl chloride	<0.50	mg/Kg	EPA 8260B
cis-1,2-Dichloroethene	<0.25	mg/Kg	EPA 8260B
cis-1,3-Dichloropropene	<0.25	mg/Kg	EPA 8260B
n-Butylbenzene	<0.25	mg/Kg	EPA 8260B
n-Propylbenzene	<0.25	mg/Kg	EPA 8260B
p-Isopropyltoluene	<0.25	mg/Kg	EPA 8260B
sec-Butylbenzene	<0.25	mg/Kg	EPA 8260B
tert-Butylbenzene	<0.25	mg/Kg	EPA 8260B
trans-1,2-Dichloroethene	<0.25	mg/Kg	EPA 8260B
trans-1,3-Dichloropropene	<0.25	mg/Kg	EPA 8260B

Analyte	Result	Units	Method

Surrogate	Recovery	Method
Dibromofluoromethane	113	EPA 8260B
Toluene-d8	102	EPA 8260B
4-Bromofluorobenzene	94	EPA 8260B

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2221 Ross Way • Tacoma, WA 98421 • (253) 272-4850

03/03/2000

P.O.#: 5002
Project: Metal Marine 165-1
Client ID: S6-2100
Sample Matrix: Soil
Date Sampled: 02/01/2000
Date Received: 02/02/2000
Spectra Project: 2000020032
Spectra Number: 14

Creative Environmental Technologies, Inc
P.O. Box 1803
Tacoma, WA 98401
Attn: Linda Drake

Analyte	Result	Units	Method
Antimony	13	mg/Kg	SW846 6010B
Arsenic	12	mg/Kg	SW846 6010B
Beryllium	< 0.1	mg/Kg	SW846 6010B
Cadmium	< 0.3	mg/Kg	SW846 6010B
Chromium	16	mg/Kg	SW846 6010B
Copper	130	mg/Kg	SW846 6010B
Lead	39	mg/Kg	SW846 6010B
Mercury	<0.05	mg/Kg	EPA 7471A
Nickel	15	mg/Kg	SW846 6010B
Selenium	< 8	mg/Kg	SW846 6010B
Silver	< 0.7	mg/Kg	SW846 6010B
Thallium	< 0.1	mg/Kg	SM 3113B
Zinc	250	mg/Kg	SW846 6010B
Phenol	<0.33	mg/Kg	EPA 8270C
1,2,4-Trichlorobenzene	<0.33	mg/Kg	EPA 8270C
1,2-Dichlorobenzene	<0.33	mg/Kg	EPA 8270C
1,3-Dichlorobenzene	<0.33	mg/Kg	EPA 8270C
1,4-Dichlorobenzene	<0.33	mg/Kg	EPA 8270C
2,4,5-Trichlorophenol	<0.33	mg/Kg	EPA 8270C
2,4,6-Trichlorophenol	<0.33	mg/Kg	EPA 8270C
2,4-Dichlorophenol	<0.33	mg/Kg	EPA 8270C

Analyte	Result	Units	Method
2,4-Dimethylphenol	<0.33	mg/Kg	EPA 8270C
2,4-Dinitrophenol	<1.65	mg/Kg	EPA 8270C
2,4-Dinitrotoluene	<0.33	mg/Kg	EPA 8270C
2,6-Dinitrotoluene	<0.33	mg/Kg	EPA 8270C
2-Chloronaphthalene	<0.33	mg/Kg	EPA 8270C
2-Chlorophenol	<0.33	mg/Kg	EPA 8270C
2-Methylnaphthalene	<0.33	mg/Kg	EPA 8270C
2-Methylphenol	<0.33	mg/Kg	SW846 8270C
2-Nitroaniline	<1.65	mg/Kg	EPA 8270C
2-Nitrophenol	<0.33	mg/Kg	EPA 8270C
3,3-Dichlorobenzidine	<0.66	mg/Kg	EPA 8270C
3-Nitroaniline	<1.65	mg/Kg	EPA 8270C
4,6-Dinitro-2-Methylphenol	<1.65	mg/Kg	EPA 8270C
4-Bromophenyl-phenylether	<0.33	mg/Kg	EPA 8270C
4-Chloro-3-Methylphenol	<0.33	mg/Kg	EPA 8270C
4-Chloroaniline	<0.33	mg/Kg	EPA 8270C
4-Chlorophenyl-phenylether	<0.33	mg/Kg	EPA 8270C
4-Methylphenol	<0.33	mg/Kg	EPA 8270C
4-Nitroaniline	<1.65	mg/Kg	EPA 8270C
4-Nitrophenol	<1.65	mg/Kg	EPA 8270C
Acenaphthene	<0.33	mg/Kg	EPA 8270C

Surrogate	Recovery	Method
Nitrobenzene-d5	42	EPA 8270C
2-Fluorobiphenyl	69	EPA 8270C
p-Terphenyl-d14	96	EPA 8270C
2-Fluorophenol	38	EPA 8270C

Surrogate	Recovery	Method
Phenol-d6	59	EPA 8270C
2,4,6-Tribromophenol	82	EPA 8270C

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SPECTRA Laboratories

2221 Ross Way • Tacoma, WA 98421 • (253) 272-4850

03/03/2000

P.O.#: 5002
Project: Metal Marine 165-1
Client ID: S6-2100
Sample Matrix: Soil
Date Sampled: 02/01/2000
Date Received: 02/02/2000
Spectra Project: 2000020032
Spectra Number: 14

Creative Environmental Technologies, Inc
P.O. Box 1803
Tacoma, WA 98401
Attn: Linda Drake

nalyte	Result	Units	Method
cenaphthylene	<0.33	mg/Kg	EPA 8270C
nthracene	<0.33	mg/Kg	EPA 8270C
enzo(a)Anthracene	<0.33	mg/Kg	EPA 8270C
enzo(a)Pyrene	<0.33	mg/Kg	EPA 8270C
enzo(b)Fluoranthene	<0.33	mg/Kg	EPA 8270C
enzo(ghi)Perylene	<0.33	mg/Kg	EPA 8270C
enzo(k)Fluoranthene	<0.33	mg/Kg	EPA 8270C
enzoic Acid	<1.65	mg/Kg	EPA 8270C
enzyl Alcohol	<0.33	mg/Kg	EPA 8270C
is(2-Chloroethyl)Ether	<0.33	mg/Kg	EPA 8270C
utylbenzylphthalate	<0.33	mg/Kg	EPA 8270C
hrysene	<0.33	mg/Kg	EPA 8270C
i-n-Butylphthalate	<0.33	mg/Kg	EPA 8270C
i-n-Octyl Phthalate	<0.33	mg/Kg	EPA 8270C
ibenz(a,h)Anthracene	<0.33	mg/Kg	EPA 8270C
ibenzofuran	<0.33	mg/Kg	EPA 8270C
iethylphthalate	<0.33	mg/Kg	EPA 8270C
imethyl Phthalate	<0.33	mg/Kg	EPA 8270C
luoranthene	<0.33	mg/Kg	EPA 8270C
luorene	<0.33	mg/Kg	EPA 8270C
exachlorobenzene	<0.33	mg/Kg	EPA 8270C

Analyte	Result	Units	Method
Hexachlorobutadiene	<0.33	mg/Kg	EPA 8270C
Hexachlorocyclopentadiene	<0.33	mg/Kg	EPA 8270C
Hexachloroethane	<0.33	mg/Kg	EPA 8270C
Indeno(1,2,3-cd)Pyrene	<0.33	mg/Kg	EPA 8270C
Isophorone	<0.33	mg/Kg	EPA 8270C
N-Nitroso-Di-n-Propylamine	<0.33	mg/Kg	EPA 8270C
N-Nitrosodiphenylamine	<0.33	mg/Kg	EPA 8270C
Naphthalene	<0.33	mg/Kg	EPA 8270C
Nitrobenzene	<0.33	mg/Kg	EPA 8270C
Pentachlorophenol	<1.65	mg/Kg	EPA 8270C
Phenanthrene	<0.33	mg/Kg	EPA 8270C
Pyrene	<0.33	mg/Kg	EPA 8270C
bis(2-Chloroethoxy)Methane	<0.33	mg/Kg	EPA 8270C
bis(2-Ethylhexyl)Phthalate	<0.33	mg/Kg	EPA 8270C
bis(2-chloroisopropyl)Ether	<0.33	mg/Kg	EPA 8270C

Surrogate	Recovery	Method
Nitrobenzene-d5	42	EPA 8270C
2-Fluorobiphenyl	69	EPA 8270C
p-Terphenyl-d14	96	EPA 8270C
2-Fluorophenol	38	EPA 8270C

Surrogate	Recovery	Method
Phenol-d6	59	EPA 8270C
2,4,6-Tribromophenol	82	EPA 8270C

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2221 Ross Way • Tacoma, WA 98421 • (253) 272-4850

03/03/2000

P.O.#: 5002
Project: Metal Marine 165-1
Client ID: S26-13100
Sample Matrix: Soil
Date Sampled: 01/31/2000
Date Received: 02/02/2000
Spectra Project: 2000020032
Spectra Number: 15

Creative Environmental Technologies, Inc
P.O. Box 1803
Tacoma, WA 98401
Attn: Linda Drake

Analyte	Result	Units	Method
1,1,1,2-tetrachloroethane	<0.25	mg/Kg	EPA 8260B
1,1,1-Trichloroethane	<0.25	mg/Kg	EPA 8260B
1,1,2,2-tetrachloroethane	<0.25	mg/Kg	EPA 8260B
1,1,2-Trichloroethane	<0.25	mg/Kg	EPA 8260B
1,1-Dichloroethane	<0.25	mg/Kg	EPA 8260B
1,1-Dichloroethene	<0.25	mg/Kg	EPA 8260B
1,1-Dichloropropene	<0.25	mg/Kg	EPA 8260B
1,2,3-Trichlorobenzene	<0.25	mg/Kg	EPA 8260B
1,2,3-Trichloropropane	<0.25	mg/Kg	EPA 8260B
1,2,4-Trichlorobenzene	<0.25	mg/Kg	EPA 8260B
1,2,4-Trimethylbenzene	<0.25	mg/Kg	EPA 8260B
1,2-Dibromo3Chloropropane	<2.50	mg/Kg	EPA 8260B
1,2-Dibromoethane (EDB)	<0.50	mg/Kg	EPA 8260B
1,2-Dichlorobenzene	<0.25	mg/Kg	EPA 8260B
1,2-Dichloroethane	<0.25	mg/Kg	EPA 8260B
1,2-Dichloropropane	<0.25	mg/Kg	EPA 8260B
1,3,5-Trimethylbenzene	<0.25	mg/Kg	EPA 8260B
1,3-Dichlorobenzene	<0.25	mg/Kg	EPA 8260B
1,3-Dichloropropane	<0.25	mg/Kg	EPA 8260B
1,4-Dichlorobenzene	<0.25	mg/Kg	EPA 8260B
2,2-Dichloropropane	<0.25	mg/Kg	EPA 8260B

Analyte	Result	Units	Method
2-Butanone (MEK)	<2.50	mg/Kg	EPA 8260B
2-Chlorotolouene	<0.25	mg/Kg	EPA 8260B
2-Hexanone (MBK)	<2.50	mg/Kg	EPA 8260B
4-Chlorotolouene	<0.25	mg/Kg	EPA 8260B
4-methyl-2-pentanone	<1.00	mg/Kg	EPA 8260B
Acetone	<2.50	mg/Kg	EPA 8260B
Benzene	<0.25	mg/Kg	EPA 8260B
Bromobenzene	<0.25	mg/Kg	EPA 8260B
Bromochloromethane	<0.25	mg/Kg	EPA 8260B
Bromodichloromethane	<0.25	mg/Kg	EPA 8260B
Bromoform	<0.25	mg/Kg	EPA 8260B
Bromomethane	<0.50	mg/Kg	EPA 8260B
Carbontetrachloride	<0.25	mg/Kg	EPA 8260B
Chlorobenzene	<0.25	mg/Kg	EPA 8260B
Chlorodibromomethane	<0.25	mg/Kg	EPA 8260B
Chloroethane	<0.50	mg/Kg	EPA 8260B
Chloroform	<0.50	mg/Kg	EPA 8260B
Chloromethane	<0.50	mg/Kg	EPA 8260B
Dibromomethane	<0.25	mg/Kg	EPA 8260B
Dichlorodifluoromethane	<0.50	mg/Kg	EPA 8260B
Ethylbenzene	<0.25	mg/Kg	EPA 8260B

Surrogate	Recovery	Method
Dibromofluoromethane	112	EPA 8260B
Toluene-d8	101	EPA 8260B
4-Bromofluorobenzene	91	EPA 8260B

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2221 Ross Way • Tacoma, WA 98421 • (253) 272-4850

03/03/2000

P.O.#: 5002
Project: Metal Marine 165-1
Client ID: S26-13100
Sample Matrix: Soil
Date Sampled: 01/31/2000
Date Received: 02/02/2000
Spectra Project: 2000020032
Spectra Number: 15

Creative Environmental Technologies, Inc
P.O. Box 1803
Tacoma, WA 98401
Attn: Linda Drake

Analyte	Result	Units	Method
exachlorobutadiene	<0.25	mg/Kg	EPA 8260B
opropylbenzene	<0.25	mg/Kg	EPA 8260B
ethylene chloride	<0.25	mg/Kg	EPA 8260B
aphthalene	<0.25	mg/Kg	EPA 8260B
yrene	<0.25	mg/Kg	EPA 8260B
trachloroethene	<0.25	mg/Kg	EPA 8260B
luene	<0.25	mg/Kg	EPA 8260B
tal Xylenes	<0.25	mg/Kg	EPA 8260B
ichloroethene	<0.25	mg/Kg	EPA 8260B
ichlorofluoromethane	<0.25	mg/Kg	EPA 8260B
nyl chloride	<0.50	mg/Kg	EPA 8260B
s-1,2-Dichloroethene	<0.25	mg/Kg	EPA 8260B
s-1,3-Dichloropropene	<0.25	mg/Kg	EPA 8260B
Butylbenzene	<0.25	mg/Kg	EPA 8260B
Propylbenzene	<0.25	mg/Kg	EPA 8260B
Isopropyltoluene	<0.25	mg/Kg	EPA 8260B
c-Butylbenzene	<0.25	mg/Kg	EPA 8260B
t-Butylbenzene	<0.25	mg/Kg	EPA 8260B
ms-1,2-Dichloroethene	<0.25	mg/Kg	EPA 8260B
ms-1,3-Dichloropropene	<0.25	mg/Kg	EPA 8260B

Analyte	Result	Units	Method

Surrogate	Recovery	Method
Dibromofluoromethane	112	EPA 8260B
Toluene-d8	101	EPA 8260B
4-Bromofluorobenzene	91	EPA 8260B

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2221 Ross Way • Tacoma, WA 98421 • (253) 272-4850

03/03/2000

P.O.#: 5002
Project: Metal Marine 165-1
Client ID: S29-13100
Sample Matrix: Soil
Date Sampled: 01/31/2000
Date Received: 02/02/2000
Spectra Project: 2000020032
Spectra Number: 16

Creative Environmental Technologies, Inc
P.O. Box 1803
Tacoma, WA 98401
Attn: Linda Drake

Analyte	Result	Units	Method
1,1,1,2-tetrachloroethane	<0.25	mg/Kg	EPA 8260B
1,1,1-Trichloroethane	<0.25	mg/Kg	EPA 8260B
1,1,2,2-tetrachloroethane	<0.25	mg/Kg	EPA 8260B
1,1,2-Trichloroethane	<0.25	mg/Kg	EPA 8260B
1,1-Dichloroethane	<0.25	mg/Kg	EPA 8260B
1,1-Dichloroethene	<0.25	mg/Kg	EPA 8260B
1,1-Dichloropropene	<0.25	mg/Kg	EPA 8260B
1,2,3-Trichlorobenzene	<0.25	mg/Kg	EPA 8260B
1,2,3-Trichloropropane	<0.25	mg/Kg	EPA 8260B
1,2,4-Trichlorobenzene	<0.25	mg/Kg	EPA 8260B
1,2,4-Trimethylbenzene	<0.25	mg/Kg	EPA 8260B
1,2-Dibromo3Chloropropane	<2.50	mg/Kg	EPA 8260B
1,2-Dibromoethane (EDB)	<0.50	mg/Kg	EPA 8260B
1,2-Dichlorobenzene	<0.25	mg/Kg	EPA 8260B
1,2-Dichloroethane	<0.25	mg/Kg	EPA 8260B
1,2-Dichloropropane	<0.25	mg/Kg	EPA 8260B
1,3,5-Trimethylbenzene	<0.25	mg/Kg	EPA 8260B
1,3-Dichlorobenzene	<0.25	mg/Kg	EPA 8260B
1,3-Dichloropropane	<0.25	mg/Kg	EPA 8260B
1,4-Dichlorobenzene	<0.25	mg/Kg	EPA 8260B
2,2-Dichloropropane	<0.25	mg/Kg	EPA 8260B

Analyte	Result	Units	Method
2-Butanone (MEK)	<2.50	mg/Kg	EPA 8260B
2-Chlorotolouene	<0.25	mg/Kg	EPA 8260B
2-Hexanone (MBK)	<2.50	mg/Kg	EPA 8260B
4-Chlorotolouene	<0.25	mg/Kg	EPA 8260B
4-methyl-2-pentanone	<1.00	mg/Kg	EPA 8260B
Acetone	<2.50	mg/Kg	EPA 8260B
Benzene	<0.25	mg/Kg	EPA 8260B
Bromobenzene	<0.25	mg/Kg	EPA 8260B
Bromochloromethane	<0.25	mg/Kg	EPA 8260B
Bromodichloromethane	<0.25	mg/Kg	EPA 8260B
Bromoform	<0.25	mg/Kg	EPA 8260B
Bromomethane	<0.50	mg/Kg	EPA 8260B
Carbontetrachloride	<0.25	mg/Kg	EPA 8260B
Chlorobenzene	<0.25	mg/Kg	EPA 8260B
Chlorodibromomethane	<0.25	mg/Kg	EPA 8260B
Chloroethane	<0.50	mg/Kg	EPA 8260B
Chloroform	<0.50	mg/Kg	EPA 8260B
Chloromethane	<0.50	mg/Kg	EPA 8260B
Dibromomethane	<0.25	mg/Kg	EPA 8260B
Dichlorodifluoromethane	<0.50	mg/Kg	EPA 8260B
Ethylbenzene	<0.25	mg/Kg	EPA 8260B

Surrogate	Recovery	Method
Dibromofluoromethane	105	EPA 8260B
Toluene-d8	109	EPA 8260B
4-Bromofluorobenzene	89	EPA 8260B

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2221 Ross Way • Tacoma, WA 98421 • (253) 272-4850

03/03/2000

P.O.#: 5002
Project: Metal Marine 165-1
Client ID: S29-13100
Sample Matrix: Soil
Date Sampled: 01/31/2000
Date Received: 02/02/2000
Spectra Project: 2000020032
Spectra Number: 16

Creative Environmental Technologies, Inc
P.O. Box 1803
Tacoma, WA 98401
Attn: Linda Drake

Analyte	Result	Units	Method
Hexachlorobutadiene	<0.25	mg/Kg	EPA 8260B
Isopropylbenzene	<0.25	mg/Kg	EPA 8260B
Methylene chloride	<0.25	mg/Kg	EPA 8260B
Naphthalene	<0.25	mg/Kg	EPA 8260B
Styrene	<0.25	mg/Kg	EPA 8260B
Tetrachloroethene	<0.25	mg/Kg	EPA 8260B
Toluene	<0.25	mg/Kg	EPA 8260B
Total Xylenes	<0.25	mg/Kg	EPA 8260B
Trichloroethene	<0.25	mg/Kg	EPA 8260B
Trichlorofluoromethane	<0.25	mg/Kg	EPA 8260B
Vinyl chloride	<0.50	mg/Kg	EPA 8260B
cis-1,2-Dichloroethene	<0.25	mg/Kg	EPA 8260B
cis-1,3-Dichloropropene	<0.25	mg/Kg	EPA 8260B
n-Butylbenzene	<0.25	mg/Kg	EPA 8260B
n-Propylbenzene	<0.25	mg/Kg	EPA 8260B
p-Isopropyltoluene	<0.25	mg/Kg	EPA 8260B
sec-Butylbenzene	<0.25	mg/Kg	EPA 8260B
tert-Butylbenzene	<0.25	mg/Kg	EPA 8260B
trans-1,2-Dichloroethene	<0.25	mg/Kg	EPA 8260B
trans-1,3-Dichloropropene	<0.25	mg/Kg	EPA 8260B

Analyte	Result	Units	Method

Surrogate	Recovery	Method
Dibromofluoromethane	105	EPA 8260B
Toluene-d8	109	EPA 8260B
4-Bromofluorobenzene	89	EPA 8260B

SPECTRA LABORATORIES

Attachment C- Bore Logs

Metal Marine 165-1

Borehole logs

Borehole #1

0-4 feet BGS	Medium stiff grey silty sand, moist little rounded to angular gravel. Most likely reworked glacial till used as fill material.
4-8 feet BGS	50 % recovery, medium stiff grey silty sand, moist little rounded to angular gravel, small amount of organic material grass or roots small plants.
8-12 BGS	Stiff, grey to brown silty sand with some rounded to angular gravel. At 10 feet the silty sand is brown with some fine. At 12 feet the silty sand is grey and becomes very stiff.
12-16 BGS	Grey, hard silty sand with some rounded to angular gravel.
16-20 BGS	Grey, hard silty sand with some rounded to angular gravel.
20-24 BGS	Grey, hard silty sand with some rounded to angular gravel.
24 BGS	Refusal.

No samples collected.

Borehole #2

0-4 feet BGS	Medium stiff grey silty sand, moist little rounded to angular gravel. Most likely reworked glacial till used as fill material.
4-8 feet BGS	medium stiff grey silty sand, moist little rounded to angular gravel.
8-12 BGS	Stiff, grey to brown silty sand with some rounded to angular gravel.
12 BGS	Refusal.

No samples collected.

Borehole #3

0-4 feet BGS	Medium stiff grey silty sand, moist little rounded to angular gravel. Most likely reworked glacial till used as fill material.
4-8 feet BGS	medium stiff grey silty sand, moist little rounded to angular gravel.

8-12 BGS Stiff, grey to brown silty sand with some rounded to angular gravel.

14 BGS Refusal.

No samples collected.

Borehole #4

0-2 BGS Very stiff, grey silty sand. Moderately sorted fill material.

2-4 BGS Black, brown, poorly sorted angular gravel, probably surface of old road. Sample S1-13100 collected 2 to 4 feet section, slight odor in sampled material.

8 BGS Stiff orange to tan sand, moderately sorted, some angular to rounded gravel. Sample S2-13100 collected between 6 to 8 feet BGS, no odor present in sample material.

Near 8 BGS There appears to be a contact with brown sand above and grey sand below. Refusal at 8' BGS, possibly coinciding with the top of the very hard and compact native glacial till.

Borehole #5

0-4 BGS Medium stiff grey silty sand, probably fill material, some wood encountered at 2 feet BGS. 3 to 4 foot section has odor; sample S3-13100 collected at 3.5 to 4 feet.

4-8 BGS Top 8 inches of the section is a brown silty sand with some black organic material, possibly sawdust or wood. The rest of the section is a stiff tan to grey silty sand with rounded to angular gravel. Sample S4-13100 collected from this section; no odor. Refusal at 8 feet BGS.

Borehole #6

0-4 BGS Top 2 feet is grey silty sand, fill material. At approximately 3 feet BGS, there is a layer of crushed gravel, probably the old road surface, mixed in there are brass shavings, and wire fragments. Below this layer the soil is grey to black silty sand with angular to rounded gravel. Sample S6-13100 collected.

4-8 BGS Stiff to very stiff, tan to grey silty sand with angular to rounded gravel. Sample S5-13100 collected.

Refusal at 8 feet BGS.

Borehole #7 Angled bore at approximately 45 degree angle to the surface, to obtain a sample below a cement slab.

0-4 feet Brown, grey silty sand with angular to rounded gravel. No noticeable odor. Sample S7-13100 collected.

4-8 feet Medium stiff grey, brown silty sand with angular to rounded gravel. No odor. Trace of wood; sample S8-13100 collected.

Refusal at 8 feet BGS.

Borehole #8

0-4 feet Top 2 feet grey silty sand fill material. 3 to 4 feet dark brown silty sand, with some gravel. No noticeable odor. Sample S9-13100 collected.

4-8 feet Brown to grey silty sand, some rounded to angular gravel. Sample S10-13100 collected. No odor.

Refusal at 8 feet BGS.

Borehole #9

0-4 feet 50 % recovery, grey silty sand, fill material. At close to 4 feet with grey silty sand becomes slightly darker. No odor. Sample S11-13100 collected.

4-8 feet Dark black to grey silty sand, some to mostly gravel, and broken rock. Sample S12-13100 collected; no odor.

Borehole #10

Stiff to hard grey to brown silty sand with angular to rounded gravel. Refusal at 18 feet BGS. Sample S13-13100 collected at 17 to 18 feet BGS.

Borehole #11

0-4 feet BGS Stiff grey silty sand with some rounded to angular gravel. Some organic (wood) material. No odor. Sample S14-13100 collected.

4-8 feet Stiff gray moist sand with some gravel. Dark sand with small gravel. No

odor. Sample S15-13100 collected.

Refusal at 8 feet BGS.

Borehole #12

0-4 feet	Gray and brown silty sand with some gravel. No noticeable odor. Sample S16-13100 collected.
4-8 feet	Brown to grey silty sand, some rounded to angular gravel. Sample S17-13100 collected. Slight hydrocarbon odor.
8-12 feet	Brown to grey silty sand, some rounded to angular gravel, above hard, gray till. Sample S18-13100 collected.

Refusal at 12 feet BGS.

Borehole #13

0-4 feet	Stiff grey silty sand with some rounded to angular gravel. Moss near 4 feet. No odor.
4-8 feet	Stiff gray and brown sand with some gravel. Some roots. Decomposition odor. Sample S19-13100 collected.

Borehole #14

0-4 feet	No recovery.
4-8 feet	Stiff gray to brown sand with some gravel. Sample S20-13100 collected.

Borehole #15

0-4 feet	Poor recovery
4-8 feet	Stiff gray and brown sand with some gravel. Some roots. Decomposition odor. Sample S21-13100 collected.

Borehole #16

0-4 feet	Stiff grey to brown silty sand with some rounded to angular gravel. Sample S22-

13100 collected.

4-8 feet	Stiff gray and brown sand with some gravel. Layer of dark, asphalt-smelling mater. Sample S23-13100 collected.
4-8	Stiff gray and brown sand with gravel. Layer of dark material at 10'. Dark layer sampled S24-13100.

Refusal at 14

Borehole #17

0-4 feet	Stiff gray to brown silty sand with some rounded to angular gravel. Contact apparent between gray to brown fill material and underlying gray fill material.
4-8 feet	Stiff gray and brown sand with some gravel. Darker towards bottom.
8-12 feet	Silty sand. Refusal at 12 feet BGS.

Borehole #18

0-4 feet	No recovery.
4-8 feet	Stiff gray and brown sand with some gravel. Sample S26-13100.

Refusal at 8 feet BGS.

Borehole #19

0-4 feet	Stiff grey to brown silty sand with some rounded to angular gravel.
4-8 feet	Stiff gray and brown sand with some gravel. Sample S27-13100.

Refusal at 8 feet BGS.

Borehole #20

0-4 feet	Stiff grey to brown silty sand with some rounded to angular gravel. Sample S28-13100 collected near 4 feet BGS, at contact between older and younger fill material.

4-8 feet Stiff gray and brown sand with some gravel.

Refusal at 8 feet BGS.

Borehole #21

0-4 feet Stiff grey to brown silty sand with some rounded to angular gravel. Sample S29-13100.

4-8 feet Stiff gray and brown sand with some gravel.

Refusal at 8 feet BGS.

Borehole #22

0-4 feet Stiff gray to brown silty sand with some rounded to angular gravel. Sample S1-2100 collected.

4-8 feet Stiff gray and brown sand with some gravel. Sample S2-2100 collected.

Refusal at 8 feet BGS.

Borehole #23

0-4 feet Stiff gray to brown silty sand with some rounded to angular gravel. Sample S3-2100 collected.

4-8 feet Stiff gray and brown sand with some gravel. Sample S4-2100 collected.

Refusal at 8 feet BGS.

Borehole #24 (Near Pace)

0-4 feet Stiff gray to brown silty sand with some rounded to angular gravel. Sample S5-2100 collected from 0-2, and Sample S6-2100 from 2-4.

4-8 feet Stiff gray and brown sand with some gravel. Sample S7-2100 collected.

Refusal at 8 feet BGS.

Borehole #25 (Former UST location)

0-4 feet	Stiff gray to brown silty sand with some rounded to angular gravel. No odor.
4-8 feet	Stiff gray and brown sand with some gravel. No odor.
8-12 feet	Stiff gray and brown sand with some gravel. Layer of pea gravel at approximately 8-9 feet BGS, possibly the UST bedding material. Sample S9-2100 collected just below bedding material. No odor, or visual signs of hydrocarbons.

CREATIVE ENVIRONMENTAL TECHNOLOGIES, INC.
PROVIDING ENVIRONMENTAL SERVICES TO THE NORTHWEST FOR 15 YEARS

CETI

April 6, 2000

Janet Freeman-Daily
3512 SW 310th Court
Federal Way, WA 98023

Dear Janet:

Here are two copies of the Level II report on the Metal Marine Pilot Property. The work on the Metal Marine/Pace property boundary is not quite finished. I will be on vacation next week; that part of the report will probably be finished the following week.

While I'm gone, I'll ask someone here at the office to put together an estimate on the recommendation in this report, to cleanup the PCE contaminated soil at the site. I would like to discuss that with you when I get back.

An invoice on this part of the work will probably be sent to you the week of April 17th.

Thank you for the opportunity to provide you with environmental services.

Sincerely,

Linda Drake
Senior Environmental Scientist

Janet - Eric Melland at our office will be working on an estimate for the cleanup. The next step will probably involve collecting one more sample to run for PCE-TCLP - to see how leachable the material is. That will show if it needs to be disposed of as hazardous waste or not (big $ difference) Anyway, if you have any questions call Eric next week. I'll be in touch when I get back.

Thanks - Linda

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P: 253. 627.3347 ⊛ F: 253.572.4207 ⊛ E: ceti@cetinw.com ⊛ W: www.cetinw.com

AGREEMENT FOR SERVICES

This is an agreement for environmental services by and between Creative Environmental Technologies, Inc., and Metal Marine Pilot, Inc. Services will be completed at 2119 Mildred Street W, Fircrest, WA, 98466-6194.

SCOPE OF SERVICES - Cleanup of PCE contaminated soil, according to attached letter.

BILLING RATES - Not to Exceed $15,000 without approval from the client

STAFF - In the event of any change order or extra work, charges for all professional, technical and administrative personnel working on the project (directly charging time to the project) will be calculated and billed at the following hourly "Billing Rates". Billing Rates include fringe benefits, burden and fee. No additional project billing exceeding the contracted amount will be completed until approved by the client.

Staff Category	Rate per Hour	
Sr. Environmental Engineer (P.E.)	$110.00	SEE
Sr. Civil Engineer (P.E.)	$100.00	SCE
Civil Engineer	$ 85.00	CE
Certified Industrial Hygienist	$110.00	CIH
Sr. Environmental Specialist	$125.00	SES
Environmental Specialist	$ 75.00	ES
Environmental Engineer	$ 75.00	EE
Sr. Environmental Geologist (R.P.G.)	$ 85.00	SEG
Environmental Geologist I	$ 75.00	EGI
Environmental Geologist II	$ 65.00	EG2
Sr. Project Manager	$ 95.00	SPM
Project Manager	$ 75.00	PM
Site Manager	$ 65.00	SM
UST Site Assessor	$ 75.00	USA
UST Decommissioner	$ 65.00	USD
Sr. Environmental Tech	$ 65.00	SET
Environmental Tech I	$ 60.00	ET1
Environmental Tech II	$ 55.00	ET2
Laborer	$ 45.00	LB
Research Assistant	$ 45.00	RA
Administrative assistant	$ 35.00	AA

Billing Rates for Corporate Officers will be quoted upon request. All staff personnel have been classified in the above staff categories based on discipline skills, education and experience level.

Billing Rates are based on a forty hour work week. Overtime hours are billed at time and a half (150%). Overtime hours, authorized by Client, of exempt (hourly-non-supervisory) employees are charged at 130% of the Billing Rate after 45 hours per week.

EXPERT TESTIMONY - Expert witness testimony or participation at hearings or depositions, including necessary preparation time will be charged at 150% of the Billing Rate of the person testifying.

DIRECT COSTS - Where applicable, "Direct Costs" are all costs and expenses incurred by CETI that are directly attributable to the performance of Services, together with a thirty percent (30%) cost markup.

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ng charges, printing and reproduction, special fees, permits, special insurance and
ices Agd miscellaneous materials. Travel and travel-related expenses, and costs of Client-
at purchases will be computed on the basis of actual cost plus thirty percent (30%). Charges
usage and lease of CETI-owned equipment carry no override. Rate sheets for these items are
st. Client will be receive two (2) copies of the final written report. Any additional reports will be
client at .15 cents a page, plus the expense of mailing said reports.

VOICING AND PAYMENT - Invoices will be issued bi-monthly or at the project end, itemizing all
ormed and all Direct Costs incurred in the billing period. Supporting documentation will be provided upon
request and at Client's expense, including associated labor and copying costs. Payment in full is due upon receipt of invoice, unless other written payment arrangements are made in advance. Interest at the rate of 1.5% per month (18% per annum) will accrue on any unpaid balance older than 30 days. In addition, CETI may, after giving seven (7) days written notice to Client, suspend services without liability until the Client has paid in full all amounts due CETI on account of services rendered and expenses incurred including interest on past due invoices.

ESTIMATES OF COSTS AND SCHEDULES - CETI prepares estimates of costs and schedules to assist Client with its budget and planning needs. Cost and schedule estimates reflect CETI's best judgment of the requirements of the project, based on the information available at the time of preparation. The actual cost of the project may exceed or be less than the estimate, depending upon the Client's needs and/or unforeseen circumstances. In the event a fixed "bid" or pre-approved dollar amount accompanies the scope of work proposal, CETI will honor this "Bid" amount and completed all work outlined in the scope of work for the pre-approved sum. If it is determined that the work required will exceed the pre-approved dollar amount a change order reflecting the new job conditions and requirements will be submitted to the Client. Prior to approval of the change order by the Client, work will be stopped.

CETI will endeavor to perform the Services and accomplish the objectives within the estimated costs and schedule and notify the Client in advance of material variances. In such event, the Client may wish to (1) redefine the scope of services in order to accomplish Client's budget objectives, or (2) terminate Services at a specific expenditure level. If option (2) is chosen, CETI will turn over data, results and materials completed at the authorized level without further obligation or liability to either party except payment for Services performed.

ACCESS - Client grants or shall obtain for CETI and its subcontractors authority to enter the property upon which CETI's Services are to be performed ("Site"). CETI will take reasonable precautions to minimize damage to the Site and adjoining properties and any cost of correction, repair or replacement shall be borne by Client.

CLIENT INFORMATION - Client warrants the completeness and accuracy of information supplied by it to CETI and acknowledges that CETI is relying upon such information without verification by CETI of its completeness and accuracy. Client shall immediately notify CETI in writing of any information or data in the possession of or known to Client relating to subsurface conditions affecting the Site.

Client agrees to advise CETI in writing prior to the commencement of Services of the existence of dust, fumes, gas, noise, vibrations or other particulate or nonparticulate matter at or near the Site which may create a potential health hazard or nuisance to anyone working within the area. Client further agrees to advise CETI in writing of the existence and identity of any known hazardous substance or waste materials. In the event any such conditions are encountered during the course of CETI's Services, Client agrees that the Services, schedule and fees may be adjusted.

STANDARD OF SERVICES AND WARRANTY - CETI shall perform its Services in accordance with generally accepted engineering and scientific practice in effect at the time Services are rendered and adopted by environmental firms performing services of a similar nature.

Client acknowledges that the Services may involve the use of tests, calculations, analyses and procedures which are in a constant state of change and refinement, and that changes in methods and procedures have been made, are now being made, and are expected to be made in the future. Client recognizes that the state or practice, including the practice relating to contamination or hazardous waste conditions, is changing and evolving and that standards existing at the present time may change as knowledge increases and the state of the practice continues to improve. Client recognizes that projects involving hazardous substances or contaminated materials may not perform as anticipated by Client even though CETI's Services are performed in accordance with the level of care and skill required of it. Further, government regulations relating to hazardous waste sites may purport to require achievement

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of results which cannot be accomplished in an absolute sense. Client recognizes that common exploration methods used for investigations, such as drilling, boring or excavating trenches involve an inherent risk to the Site and adjoining properties. In the event CETI is to conduct test borings or establish monitoring wells, Client acknowledges that the accuracy of said test borings and wells relates only to the specific location of the boring or the well and that the nature of many Sites is such that differing subsurface soil characteristics can be experienced within a small distance and that greater accuracy may be obtained when the number of test borings or monitoring wells are increased.

CETI warrants that, if any of its completed Services fail to conform to the above professional responsibility standard, CETI will, at its expense, perform corrective Services of the type originally performed as may be required to correct any such defective Services of which CETI is notified by Client in writing within six months of the completion of Services. CETI's total aggregate responsibility for defective Services shall not exceed the lesser of $50,000.00 or one hundred percent (100%) of the amount paid for the Services determined to be deficient. CETI shall, for the protection of Client, request from all vendors and subcontractors from which CETI procures equipment, materials or services, guarantees which will be made available to Client to the full extent of the terms thereof. CETI's responsibility with respect to such equipment, services and materials shall be limited to the assignment of such guarantees and rendering assistance to Client in enforcing the same.

Except as provided in this section, CETI makes no other warranty, express or implied, and CETI shall have no other liability to Client for defective Services, whether caused by error, omission, negligence or otherwise.

CONFIDENTIAL INFORMATION - CETI will not knowingly disclose to others any confidential information furnished by the Client in connection with this project. Any information which the Client intends to be covered by this paragraph shall be clearly marked "Confidential". These restrictions shall not apply to information that: (i) CETI had in its possession prior to disclosure by the Client, (ii) becomes public knowledge through no fault of CETI, (iii) CETI lawfully acquires from a party not under an obligation of confidentiality to the Client, (iv) is independently developed by CETI, or (v) CETI is required to disclose by law or administrative order. CETI will not publish, in any technical articles or otherwise, information obtained from the Services in a manner that would be identifiable to the Client's project without prior consent. Client agrees that CETI may use and publish Client's name and a general description of the Services provided to Client by CETI in describing CETI's experience and qualifications to other clients or potential clients.

USAGE OF DATA AND DOCUMENTS - "Information" includes all reports, field data, notes and laboratory test data prepared by CETI. This information shall be considered instruments of services and CETI shall retain a property interest. Client shall have the right to make and retain copies and use all information, provided however, such use shall be limited to the particular Site and project for which the Information is provided. Client may release the information to third parties at its sole risk and discretion; provided, however, CETI shall not be liable for any claims or damages resulting from or connected with such release and Client shall indemnity, defend, and hold CETI harmless from any and all such claims or damages.

INSURANCE AND INDEMNITY - CETI shall maintain Workers' Compensation and Employer's Liability Insurance in accordance with requirements of the state in which the Services are being performed, comprehensive liability insurance with combined single limit of $1,000,000. per occurrence for bodily injury and property damage and automobile liability coverage including owned and hired vehicles with a combined single limit of $500,000. per occurrence for bodily injury and property damage.

CETI shall indemnity Client, its officers, directors, agents and employees against claims, demands, and causes of action including expenses of defense for personal injury, disease or death, and loss or damage of property (other than property of Client for which Client hereby assumes responsibility) arising during the performance of services and caused by the sole negligence or willful misconduct of CETI. CETI's aggregate liability shall not exceed the recoveries under the types and limits of insurance provided by CETI hereunder and Client agrees to release, defend and indemnity CETI from and against all further liability arising from such Services.

Client shall defend and save harmless CETI, its officers, directors, agents and employees from all claims, demands and causes of action including expenses of defense for personal injury, disease or death, and loss or damage of property (including personnel of Client, CETI or subcontractors performing work hereunder) and air, subsurface or ground pollution or environmental impairment arising out of or in any manner connected with or related to the performance of Services, except where such injury, loss or damage shall have been caused by the sole negligence or

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resulted from CETI's joint or concurrent negligence. Client agrees to be responsible for the removal and disposal of any hazardous substance or waste uncovered as a result of the Services including drilling mud, if any, used in site investigation which may become contaminated as a result of said investigation.

REMEDIES - Neither party nor their affiliated companies, nor the officers, agents and employees or contractors of any of the foregoing, shall be liable to the other in any action or claim for consequential or special damages, loss of profits, loss of opportunity, loss of product, or loss of use and any protection or limitation against liability for losses or damages afforded any individual or entity by these terms shall apply whether the action in which recovery of damages is sought is based on contract, tort (including sole, concurrent or other negligence and strict liability of any protected individual or entity), statute or otherwise. To the extent permitted by law, any statutory remedies which are inconsistent with these terms are waived.

EXCAVATION AND SUBSURFACE OPERATIONS - In the event that the Services include excavation, drilling, boring or other intrusive operations, Client shall provide to CETI the identity, description and location of all subsurface facilities and obstructions at the Site in writing. CETI shall have no responsibility for any damage arising from the failure to accurately identify and locate such facilities or obstructions and Client shall waive all claims for such damages and hold CETI harmless therefrom.

RELATIONSHIP OF PARTIES - CETI's Services are performed as an independent contractor and not as the Client's agent, partner or joint venturer.

FORCE MAJEURE - CETI will have no liability for any failure to perform or delay in performance due to any circumstances beyond its reasonable control, including, but not limited to, strikes, riots, wars, fires, flood, explosion, acts of nature, acts of government, labor disturbances, delays in transportation or inability to obtain material or equipment.

ENTIRE AGREEMENT - The Client's engagement of CETI represents Client's acceptance of CETI's Commercial Terms as well as the Scope of Services, which constitute the entire understanding and supersede any prior or subsequent communications, representations or agreements of the parties, whether oral or written, including Client's additional or different terms and conditions that may be contained in any purchase order, work order, invoice, acknowledgment form, manifest or other document forwarded by Client to CETI to which notice of objection is hereby given. If any portion of the Commercial Terms or these General Conditions are held invalid or unenforceable, any remaining portion shall continue in full force and effect. There shall be no assignment of the rights or obligations by either party and any assignment shall render the duties and obligations of the other party null and void. Termination of the agreement or the Services for any reason shall not affect or minimize the respective rights, obligations and limitations of liability contained herein.

Executed this July 21, 2000

CREATIVE ENVIRONMENTAL TECHNOLOGIES, INC.

Signature	Title	Date
[signature]	RPG Senior Environmental Scientist	21 July 2000

METAL MARINE PILOT, INC.

Signature	Title	Date
Janet E. Fillegan-Daly	President + CEO	4-Aug-2000

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SITE CHARACTERIZATION AND CONTAMINATED SOIL REMEDIATION REPORT

Pace Industries Oil Release April 26, 1999

Located At:
2119 Mildred Street W.
Fircrest, Washington
May 5, 1999

Prepared For:

Metal Marine Pilot, Inc.
Wood Freeman Autopilot
2119 Mildred Street W.
Fircrest, Washington

Prepared By:

Creative Environmental Technologies, Inc.
PO Box 1803
Tacoma, Washington 98401-1803
(253) 627-3347

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Table Of Contents

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1.0 Introduction

Creative Environmental Technologies, Inc. (CETI) was retained by Metal Marine Pilot, Inc. and Mr. Michael Freeman to supervise the remedial activities for an oil / water waste product release on to the north end of Metal Marines property by Pace Industries, a local metal fabricator.

Pace Industries uses a special lubricating paraffin oil in their machining process (MSDS sheets attached). This oil is collected in several areas throughout their facility. One of these collection areas discharges from the rear of Pace's building in an underground four inch PVC piping system. This piping system runs along the southern end of Pace's building and discharges into a holding system for treatment prior to disposal into the City of Fircrest sanitary sewer system. Along this piping is a clean out that protrudes at a 45 degree angle out of the ground. This is the point of release. CETI was told by Jeff Bartunek, Pace's casting / maintenance manager & CPD Safety Director, that the system backed up and the pressure blew the cap of the clean out. At this time it is unclear the amount of oil / water released.

The release was noticed by Pace and Metal Marine employees Monday morning April 26, 1999. Pace immediately implemented a cleanup action by pumping all standing fluid from Paces's property and Metal Marines Property into 55 gallon drums. The exact amount of waste product versus standing water collected is unknown. The released material pooled in the general vicinity of the release point then flowed following the natural gradient to the east. Prior to the release, Metal Marine trenched an area along their eastern property boundary to collect surface storm water and channel it for storm water runoff control. The released material followed the storm water trench for approximately two hundred feet along Metal Marine's eastern property boundary. Pace recovered all the water and released product from the trench line. It is unclear if the trench line had standing water prior to the release.

CETI identified oil range hydrocarbon contamination in the surface and sub-surface soils at the site during a site walk approximately 24 hours following the release. Foss Environmental Services was initially contacted by Pace following the collection of the standing water. CETI technicians samples the soil prior to the remedial activity and following the remedial activity by Foss. The sample results from this first round of sampling indicated further remedial activity would be required. At CETI's request, Pace contacted a local environmental contracted, Clean Service, to complete the remedial activity. CETI supervised the remedial activity and collected samples following the removal of all soil impacted by the release on Metal Marine's property. There still exists contamination on Pace's property directly adjacent to Metal Marine's property. This area was fenced impeding remedial activities.

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2.0 Site Description and Limits of the Contamination

Metal Marine's property is located in the City of Fircrest, in Pierce County, Washington at 2119 Mildred Street West. The property has been owned by the Freeman family for over fifty years. It covers approximately 10 acres fronting Mildred street. Pace Puget occupies the property directly adjacent to the north of Metal Marine. The piping system where the release occurred runs along the southern end of Pace's building approximately twenty four (24) inches from Metal Marines property line (Figure 2). The release point is inside a fenced area. The gradient of the immediate area adjacent to the release point slopes to the south onto Metal Marine's property then slopes to the east.

The released material pooled in a twenty by thirty (approximate) foot area before flowing down-slope to the east. The flow limited the horizontal extent of contamination to a path twenty to forty inches wide. The material released was a milky white, emulsified oil / water waste product. The color of the material helped in tracing the flow. There were several hay bails placed on the northeast corner of Metal Marines property prior to the release directly in the path of the flow. These hay bails acted at a barrier and significantly reduced the amount of contamination along the eastern storm water trench.

The horizontal extent of contamination was observed along Metal Marine's eastern storm water ditch line. On site sampling indicated clean up levels outlined by MTCA[1] (Model Toxic Control Act) were not exceeded in surface and sub-surface soils past two hundred feet from the northeast property corner of Metal Marine's property and the start of the eastern ditch line.

Generally, vertical extent of contamination was observed from the surface to twenty four inches below ground surface (BGS). Where the contamination pooled, the vertical extent of contamination was greater.

[1] The Model Toxic Control Act (MTCA) Cleanup Regulations sets requirements for allowable petroleum and other potentially harmful constituents and there clean up limits in surface and sub-surface soils and groundwater in the state of Washington. These limits are found in Washington Administrative Code (WAC) 173-340.

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3.0 Geologic Conditions

In the area where the released occurred, the soil consisted of light to medium gray silt and glacial till sand with few rounded coarse to fine gravels. According to Mr. Freeman, the majority of the surface soils have been imported over the past 15 years.

4.0 Contaminated Soil Removal

Remedial activities were started on April 27, 1999 and finished on April 29, 1999, on soil contaminated by the release from Pace Puget on April 19, 1990, and identified by CETI through on-site soil sampling. Soil was removed along Metal Marine's northern property line and along the eastern storm water ditch. Approximately eighty cubic tons of contaminated soil were excavated and removed from the property.

On April 27, 1999, Foss Environmental Services started excavating contaminated soils by hand but soon learned that the contamination was greater than first thought. CETI was on site sampling soils and recommended that Clean Service be hired to excavate the remaining contaminated soil. A track hoe was delivered on April 28, 1999 by Clean Service. Under CETI's supervision, soils that were screened by CETI and found to contain hydrocarbons exceeding MTCA limits were excavated and trucked off-site for disposal. The soil was disposed of at TPS, a local hydrocarbon contaminated soil disposal facility.

The area most significantly contaminated was near the release point where the contaminate had pooled. Soil was excavated in this area to a depth of twenty four to thirty six inches BGS. This excavated area was approximately twenty feet by thirty feet. The path the released material followed along the northern property boundary, approximately one hundred sixty feet to the hay bails on the northeast corner of the property was excavated to six inches BGS. Twelve to eighteen inches of soil was excavated in an area fifteen feet by twenty feet around the hay bail location. The storm water ditch following the eastern property line was the final area excavated. The ditch started on the northeast corner of the property and runs the entire eastern length of the property. CETI screened the ditch bottom and found oil contamination exceeding the MTCA limits for approximately 200 feet along the ditch line. Six to twelve inches of soil was removed from the bottom and side walls of the ditch, removing all contamination.

Confirmatory samples were collected from the excavated areas. These samples showed no levels of oil exceeding the MTCA limits.

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5.0 Soil Sampling

CETI collected soils samples from the excavation area along the perimeter and the bottom of the excavated areas. Soil collection depths followed the final excavation depth and varied through out the area (Figure 2 - Soil Sample Location Map)

Soil sampling procedures followed the Washington State Department Of Ecology Toxics Cleanup Program Guidance on Sampling and Data Analysis Methods, Publication Number 94-49. The soil samples were collected from the excavation using a stainless steel sampling spoon. Select soil was placed in a EPA approved 4 oz glass sample collection jar with a Teflon™ lined lid. All samples were stored in a cooler at 40° F. to maintain and preserve the integrity of the sample until delivered to the laboratory for analysis.

The soil samples were submitted to Spectra laboratories for analysis between April 27 and April 29, 1999. Analysis performed was for Total Petroleum Hydrocarbons- diesel extended (WTPH-D Extended).

6.0 Analytical Results

Washington administrative code (WAC) 173-340-745 Method A sets an action level (maximum allowable limit) of 200 ppm (mg/kg) petroleum hydrocarbon oils in soil.

Soil Analysis
Heavy Oil Release Excavation
Method: WTPH-418.1

Sample ID	Sample Location	Heavy Oils (ppm)	Action Level
S1-42799	Release Point	14,000	200 ppm
S2-42799	Trench Following Hay Bails	1,000	200 ppm
S3-42799	Release Path Before Hay Bails	81,000	200 ppm
S4-42799	30' Following Hay Bails	3,900	200 ppm
S5-42799	60' Following Hay Bails	1,800	200 ppm
S6-42799	Beginning Of Flow After Pooling	1,400	200 ppm
S7-42799	Release Path Before Hay Bails	1,100	200 ppm
S10-42899	Northeast Corner of Excavation	<100	200 ppm
S11-42899	East Wall of Excavation	<100	200 ppm
S12-42899	Southeast Corner of Excavation	<100	200 ppm

CURRENT MTCA METHOD 2,000

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Sample ID	Sample Location	Heavy Oils (ppm)	Action Level
S13-42899	Southwest Corner of Excavation	<100	200 ppm
S14-42899	South Wall of Excavation (West)	1,100	200 ppm
S15-42899	Bottom of Excavation (West)	<100	200 ppm
S16-42899	Bottom of Excavation (East)	<100	200 ppm
S17-42899	South Wall of Excavation (East)	<100	200 ppm
S23-42899	Release Path 90' Before Hay Bails	<100	200 ppm
S24-42899	Release Path 60' Before Hay Bails	<100	200 ppm
S25-42899	Release Path 30' Before Hay Bails	<100	200 ppm
S26-42899	Soil Beneath Hay Bales	<100	200 ppm
S27-42899	Northwest Corner of Excavation	<100	200 ppm
S28-42899	West Wall of Excavation	<100	200 ppm
S29-42899	Below Pipe Break at Release Point	5,800	200 ppm
S30-43099	Soil Beneath Hay Bales	<100	200 ppm
S31-43099	20' Following Hay Bales	<100	200 ppm
S32-43099	Blank	<100	200 ppm
S33-43099	50' Following Hay Bales	<100	200 ppm
S34-43099	80' Following Hay Bales	<100	200 ppm
S35-43099	110' Following Hay Bales	<100	200 ppm
S36-43099	140' Following Hay Bales	<100	200 ppm
S37-43099	170' Following Hay Bales	<100	200 ppm
S38-43099	20' Down Gradient East of S37	<100	200 ppm

Analytical results for samples taken in contaminated soil excavation August 5, 1998

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7.0 Conclusions

Based on the results of the laboratory soil analysis, on site soil screening and on site observations, it is CETI's opinion that the remaining subsurface soils located in the area identified during the site delineation on Metal Marine's property following the remedial activity, are free of petroleum hydrocarbons. Pace Industries property immediately adjacent to Metal Marines norther property boundary were the release originated, is still heavily contaminated. Sub-surface soil samples in this area (samples location S-29) revealed oil range hydrocarbon levels exceeding 5000 mg/Kg (parts per million). Current MTCA method A limits are 200 mg/Kg (ppm). If the contaminated soil is left, there is a strong possibility that the contaminate will migrate across property lines and re-contaminate Metal Marines Property. CETI has advised Metal Marine to adamantly pursue the removal of all contaminated soil by Pace Industries, that is posing an immediate threat to Metal Marine's property.

Creative Environmental Technologies, Inc. extends its appreciation for the opportunity to provide environmental services on this project. If there are any questions regarding this report please do not hesitate to contact us.

Respectfully Submitted,

By: _____

Stephen Spencer
Creative Environmental Technologies, Inc.

Approved By: _____

John R. Spencer, BBA, LLB
President
Creative Environmental Technologies, Inc.

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Appendix A - Site Location Map, Site Map, Sample Location Map, Plat Drawing, Photographs of Site

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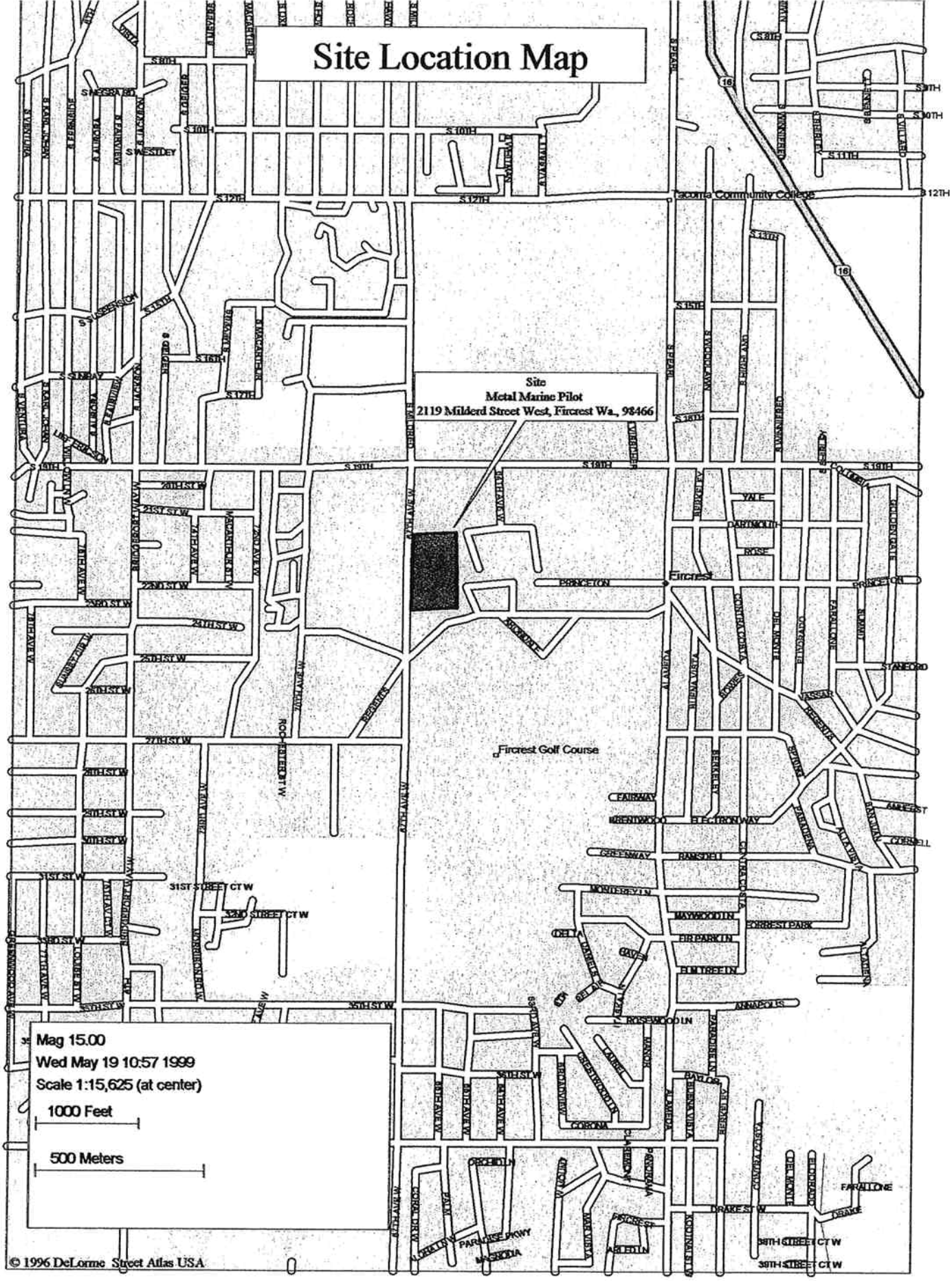
Site Location Map



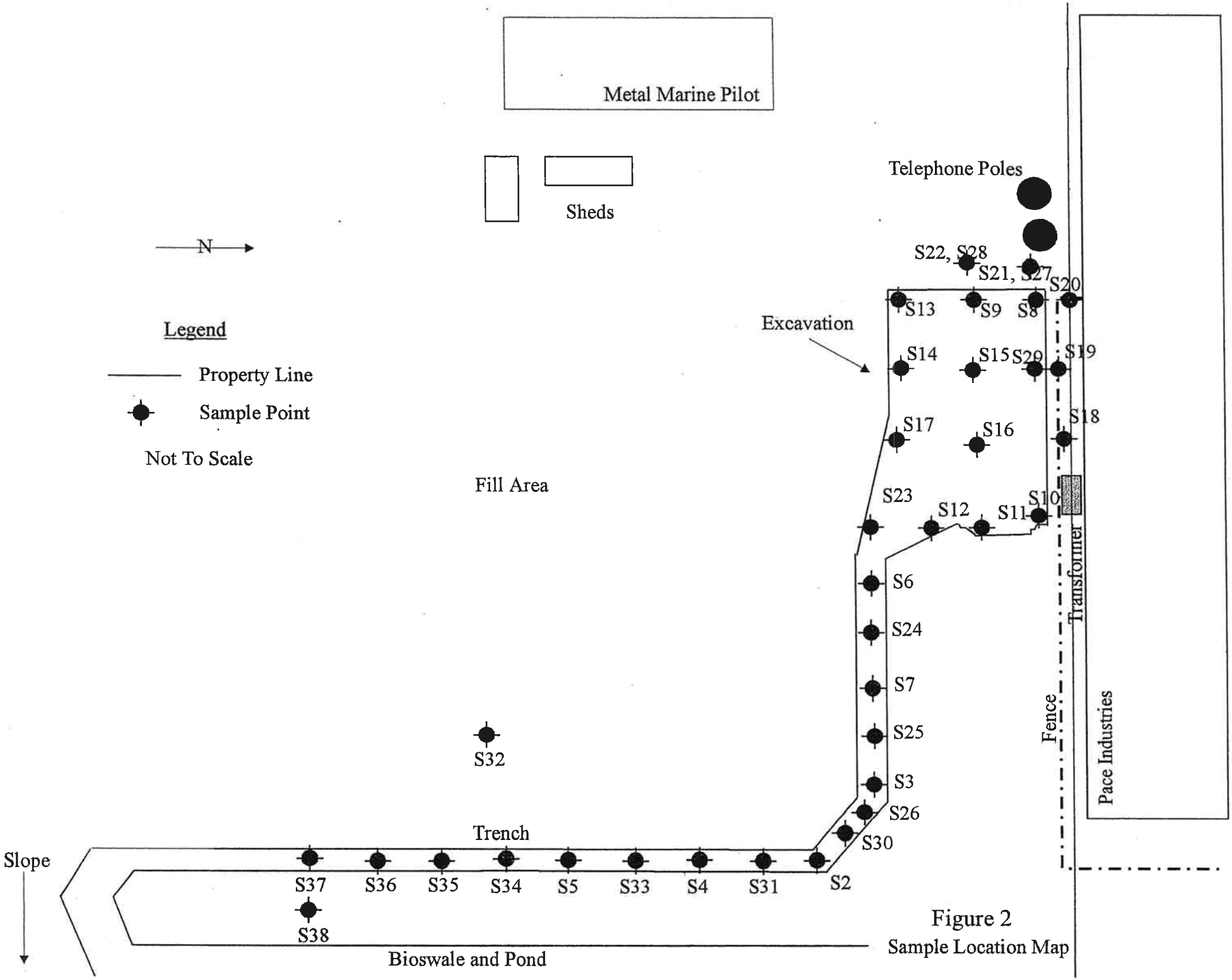
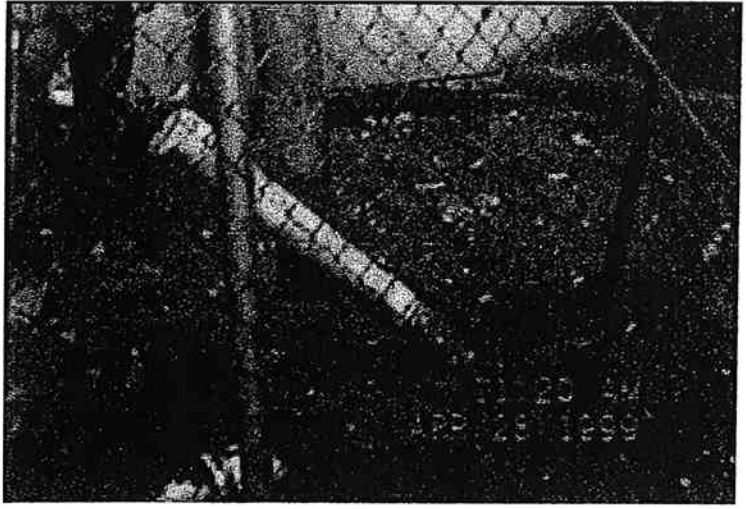
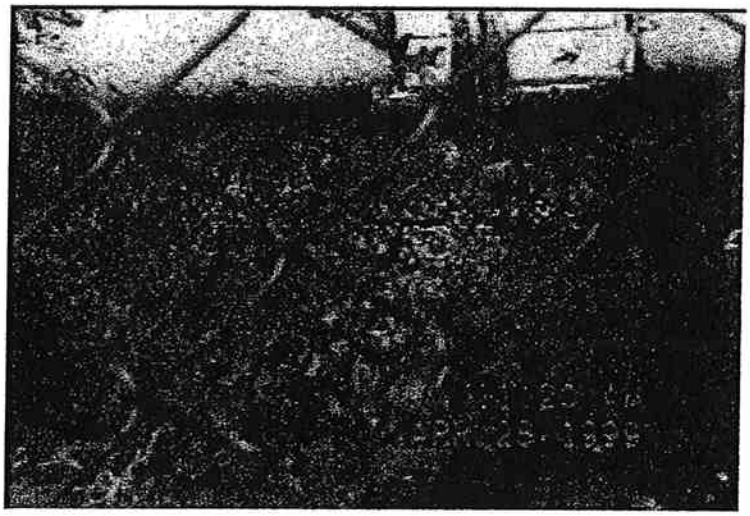


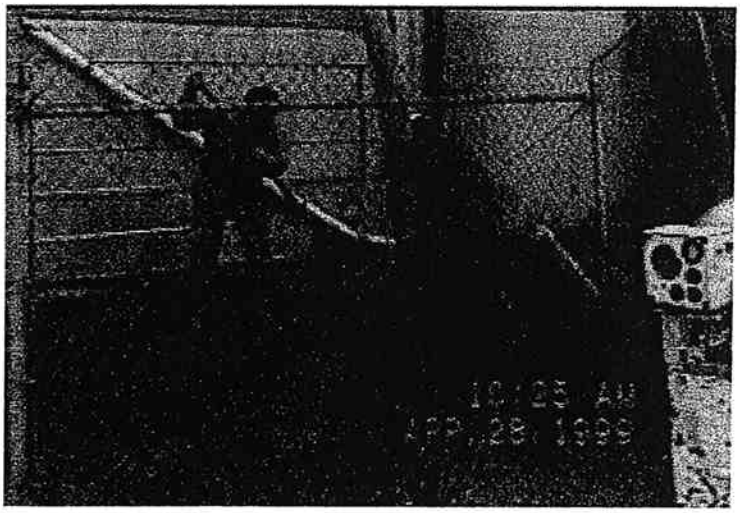
Figure 2
Sample Location Map



Clean Out - Source Of Contamination

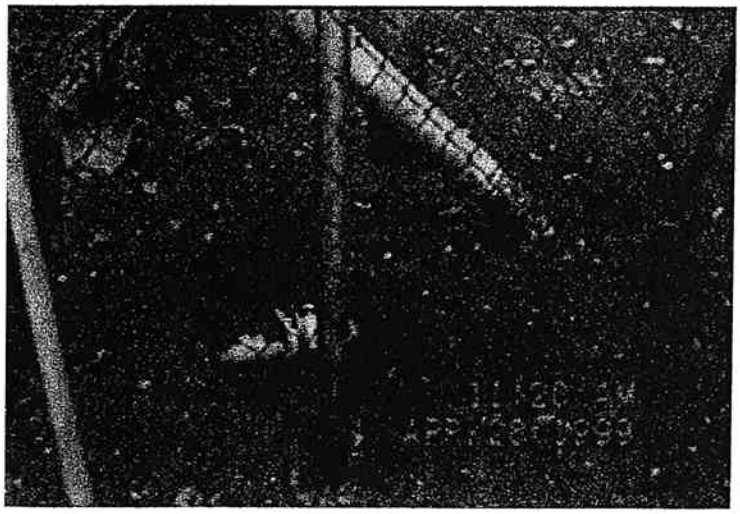


Below Clean Out - Leaking Piping Syste

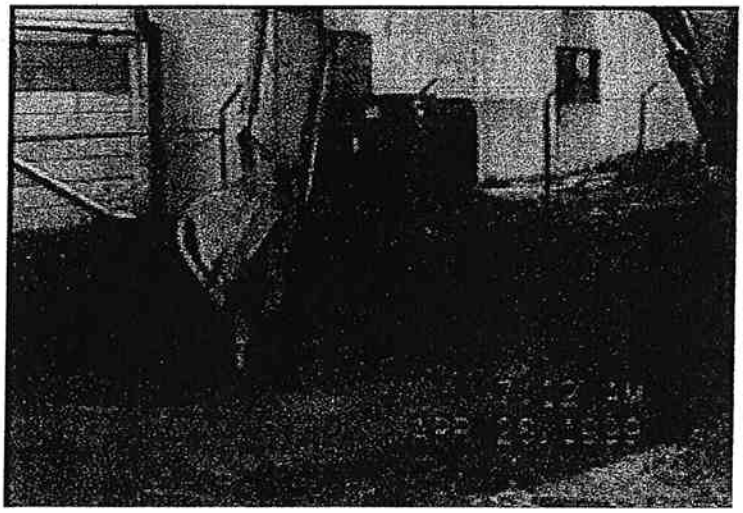


Removal of contaminated surface soil

Removal of surface water and contaminate

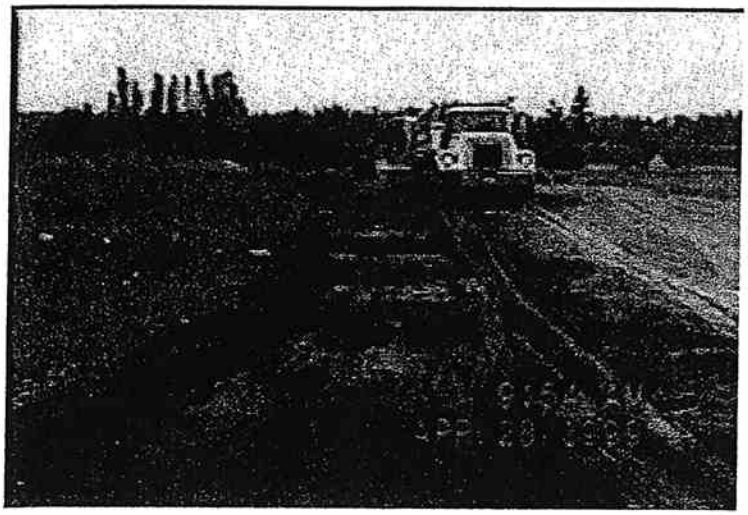


Clean out and sub-surface piping

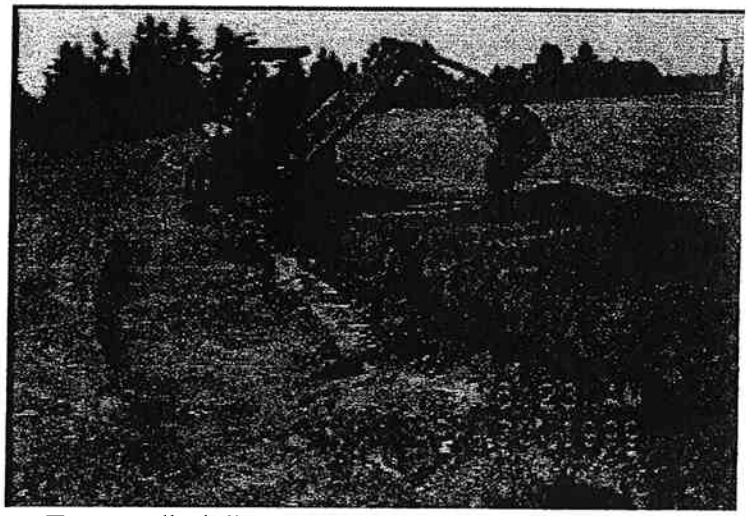


Excavation of contaminated soil

Site Photographs
Pace Industries Soil Clean up
Metal Marine Pilot, Inc Site
2119 Mildred Street W.



Norther area following contaminated soil removal



Eastern ditch line during contaminated soil removal

Eastern ditch line following contaminated soil removal

Site Photographs
Pace Industries Soil Clean up
Metal Marine Pilot, Inc Site
2119 Mildred Street W.

Appendix B - Analytical Results, Chromatographs, Chains of Custody

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SPECTRA Laboratories, Inc.

2221 Ross Way • Tacoma, WA 98421 • (253) 272-4850

April 29, 1999

Creative Environmental Technologies, Inc.
P.O. Box 1803
Tacoma, WA 98401

Attn: Steven Spencer

Project: Metal Marine 103-1
Sample Matrix: Soil
Date Sampled: 4-28-99
Date Received: 4-28-99
Date Analyzed: 4-28-99
Spectra Project: S904-210
RUSH

WTPH-D EXTENDED

Spectra #	Sample ID:	WTPH-D mg/Kg dry wt.	Heavy Oils mg/Kg dry wt.	Surrogate Recovery p-Terphenyl
1977	S1	<25	14,000	114%
1978	S2	<25	1,000	117%
1979	S3	74	81,000	109%
1980	S4	<25	3,900	118%
1981	S5	<25	1,800	112%
1982	S6	<25	1,400	117%
1983	S7	<25	1,100	115%
Method Blank		<25	<100	125%

SPECTRA LABORATORIES, INC.

Steven G. Hibbs, Laboratory Manager

SPECTRA Laboratories, Inc.

2221 Ross Way • Tacoma, WA 98421 • (253) 272-4850

April 30, 1999

Creative Environmental Technologies, Inc.
PO Box 1803
Tacoma, WA 98401

Attn: Steven Spencer

PO #103-1
Project: Marine Metal
Sample Matrix: Soil
Date Sampled: 4- 28-99
Date Received: 4-28-99
Date Analyzed: 4-29-99
Spectra Project: S904-225
RUSH

WTPH-D EXTENDED

Spectra #	Sample ID:	WTPH-D mg/Kg dry wt.	Heavy Oils mg/Kg dry wt.	Surrogate Recovery p-Terphenyl
2015	S10-42899	<25	<100	123%
2016	S11-42899	<25	<100	127%
2017	S12-42899	<25	<100	136%
2018	S13-42899	<25	<100	132%
2019	S14-42899	<25	1,100	132%
2020	S15-42899	<25	<100	132%
2021	S16-42899	<25	<100	132%
2022	S17-42899	<25	<100	127%
2023	S23-42899	<25	<100	129%
2024	S24 -42899	<25	<100	128%
2025	S25 -42899	<25	<100	129%
2026	S26-42899	<25	<100	131%
2027	S27-42899	<25	<100	130%
2028	S28-42899	<25	<100	128%
2029	S29-42899	<25	5,800	127%
Method Blank		<25	<100	139%

SPECTRA LABORATORIES, INC.

Michael Deckert

Michael Deckert, Chemist

SPECTRA Laboratories, Inc.

2221 Ross Way • Tacoma, WA 98421 • (253) 272-4850

May 4, 1999

Creative Environmental Technologies, Inc.
P.O. Box 1803
Tacoma, WA 98401

Attn: Steven Spencer

Project: Metal Marine
Sample Matrix: Soil
Date Sampled: 4-30-99
Date Received: 4-30-99
Date Analyzed: 4-30-99
Spectra Project: S904-248
RUSH

WTPH-D EXTENDED

Spectra #	Sample ID:	WTPH-D mg/Kg dry wt.	Heavy Oils mg/Kg dry wt.	Surrogate Recovery
2104	S30-43099	<25	<100	139%
2105	S31-43099	<25	<100	140%
2106	S32-43099	<25	<100	140%
2107	S33-43099	<25	<100	135%
2108	S34-43099	<25	<100	133%
2109	S35-43099	<25	<100	138%
2110	S36-43099	<25	<100	136%
2111	S37-43099	<25	<100	137%
2112	S38-43099	<25	<100	135%
Method Blank		<25	<100	99%

SPECTRA LABORATORIES, INC.

Steven G. Hibbs, Laboratory Manager

SPECTRA Laboratories, Inc.

2221 Ross Way • Tacoma, WA 98421 • (253) 272-4850

March 29, 1999

Pace Industries Puget Division
2101 Mildred St. W.
Tacoma, WA 98466

Attn: Jeff

Sample ID: Effluent Grab
Project: Wastewater Monitoring
Sample Matrix: Water
Date Sampled: 3-17-99
Date Received: 3-17-99
Spectra Project: S903-175
Spectra #1237

pH	5.58
Total Phenols, mg/L	<0.05
Total Petroleum Hydrocarbons, mg/L	1.3
Fats, Oil and Grease, mg/L	8

pH testing performed by EPA Method 150.1
Total Phenols testing performed by EPA Method 420.1
Total Petroleum Hydrocarbons testing performed by EPA Method 418.1
Fats, Oil and Grease testing performed by EPA Method 413.2

SPECTRA LABORATORIES, INC.

Steven G. Hibbs, Laboratory Manager

SPECTRA Laboratories, Inc.

2221 Ross Way • Tacoma, WA 98421 • (253) 272-4850

March 29, 1999

Pace Industries Puget Division
2101 Mildred St. W.
Tacoma, WA 98466

Attn: Jeff

Sample ID: Effluent Comp.
Project: Wastewater Monitoring
Sample Matrix: Water
Date Sampled: 3-17-99
Date Received: 3-17-99
Spectra Project: S903-175
Spectra #1238

Total Recoverable Metals, mg/L

Lead	(Pb)	<0.04
Copper	(Cu)	<0.01
Zinc	(Zn)	0.26

Total Recoverable Metals testing performed by EPA Method 200.7

SPECTRA LABORATORIES, INC.

Steven G. Hibbs, Laboratory Manager

SPECTRA Laboratories, Inc.

2221 Ross Way • Tacoma, WA 98421 • (253) 272-4850

March 29, 1999

Pace Industries Puget Division
2101 Mildred St. W.
Tacoma, WA 98466

Attn: Jeff

METHOD BLANK
Date Analyzed: 3-18-99
Spectra Project: S903-175
Applies to Spectra #1238

Total Recoverable Metals, mg/L

Lead	(Pb)	<0.04
Copper	(Cu)	<0.01
Zinc	(Zn)	<0.006

Total Recoverable Metals testing performed by EPA Method 200.7

SPECTRA LABORATORIES, INC.

Steven G. Hibbs, Laboratory Manager

SPECTRA Laboratories, Inc.

2221 Ross Way • Tacoma, WA 98421 • (253) 272-4850

March 29, 1999

Pace Industries Puget Division
2101 Mildred St. W.
Tacoma, WA 98466

Attn: Jeff

EPA Method: 418.1
Sample Matrix: Water
Spectra Project: S903-175
Applies to Spectra #1237

HYDROCARBON ANALYSIS
QUALITY CONTROL RESULTS

MS/MSD

Spiked Sample: Method Blank
Units: mg/L

Date Analyzed: 3-24-99

Compound	Sample Result	Spike Amount	Spike Result	% Recovery	Dup. Result	Dup. Recovery	% RPD
TPH	<0.5	5.92	4.90	83	5.15	87	5

METHOD BLANK

Date Extracted: 3-26-99

Date Analyzed: 3-26-99

Total Petroleum Hydrocarbons, mg/L

<0.5

SPECTRA LABORATORIES, INC.

Steven G. Hibbs, Laboratory Manager

SPECTRA Laboratories, Inc.

2221 Ross Way • Tacoma, WA 98421 • (253) 272-4850

March 29, 1999

Pace Industries Puget Division
2101 Mildred St. W.
Tacoma, WA 98466

Attn: Jeff

EPA Method 413.2
Sample Matrix: Water
Spectra Project: S903-175
Applies to Spectra #1237

OIL AND GREASE
QUALITY CONTROL RESULTS

MS/MSD

Spiked Sample: Method Blank
Units: mg/L

Date Analyzed: 3-24-99

Compound	Sample Result	Spike Amount	Spike Result	% Recovery	Dup. Result	Dup. Recovery	% RPD
Oil and Grease	<0.5	5.92	5.12	86.5	5.55	93.7	8

METHOD BLANK

Date Extracted: 3-26-99

Date Analyzed: 3-26-99

Oil and Grease, mg/L

<0.5

SPECTRA LABORATORIES, INC.

Steven G. Hibbs, Laboratory Manager

SPECTRA Laboratories, Inc.

2221 Ross Way • Tacoma, WA 98421 • (253) 272-4850 • Fax (253) 572-9838

CLIENT: PACE Industries

PROJECT: Wastewater monitoring

CONTACT: Jeff

PHONE:

PURCHASE ORDER #:

SAMPLE ID	DATE	TIME	MATRIX	NUMBER OF CONTAINERS	WTPH-HCID	BTEX/WTPH-G	BTEX	WTPH-G	WTPH-D	TPH (H_2SO_4)	F.O.G. 413.1/413.2 (H_2SO_4)	8260 VOA	8260 CHLOR SOLVENTS	8270 SEMI-VOA	PAH/PNA-8270	8080 ORG. CHLOR PEST.	8082 PCB
Eff-grab	3-17	13:20	ww							X	X						
Eff comp	3-16/17	13:20	↓														

SAMPLE ID	TCLP METALS (8)	TCLP-VOA	TCLP 8270 SEMI-VOA	TCLP PEST.	TCLP HERB.	TOTAL METALS ICP/DCP	TOTAL METALS GFAA	TOTAL LEAD	pH 9040/9045	TOX 9020/9076	TOC 9060/PSEP	FLASH POINT	SOLIDS (SPECIFY)	T. Phenol (H_2SO_4)				NORMAL / RUSH
Eff-grab									X					X				
Eff comp						X												

RETUR[N]

DISPOS[AL]

Fee appl[ies]

LAB I[D]

SPECIAL INSTRUCTIONS/COMMENTS:

T-metals: pb, cu, ZN
Samples were chilled and/or preserved on site

	SIGNATURE	PRINTED NAME	COMPANY	DATE	TI[ME]
RELINQUISHED BY	[signature]	K E Kuester	Misquality Environmental	3-17	13:[illegible]
RECEIVED BY	Barb Minnei	Barb Minnei	Spectra	3/17/99	1[illegible]
RELINQUISHED BY					
RECEIVED BY					

Payment Terms: Net 30 days. Past due accounts subject to 18% per annum interest. Customer agrees to pay all costs of collection including reaso[nable] attorney's fees and all other associated costs of collection regardless of whether suit is filed.

le ID : 1977 ceti

ction Date: 28-APR-99 12:49 PM Calculation Date: 28-APR-99 1:21 PM

ator : MD
station: MS-DOS_6
rument : Varian Star #2
nel : B = FID-B

Detector Type: ADCB (10 Volts)
Bus Address : 22
Sample Rate : 10.00 Hz
Run Time : 32.002 min

******* Star Chromatography Software ********** Version 4.0 **********

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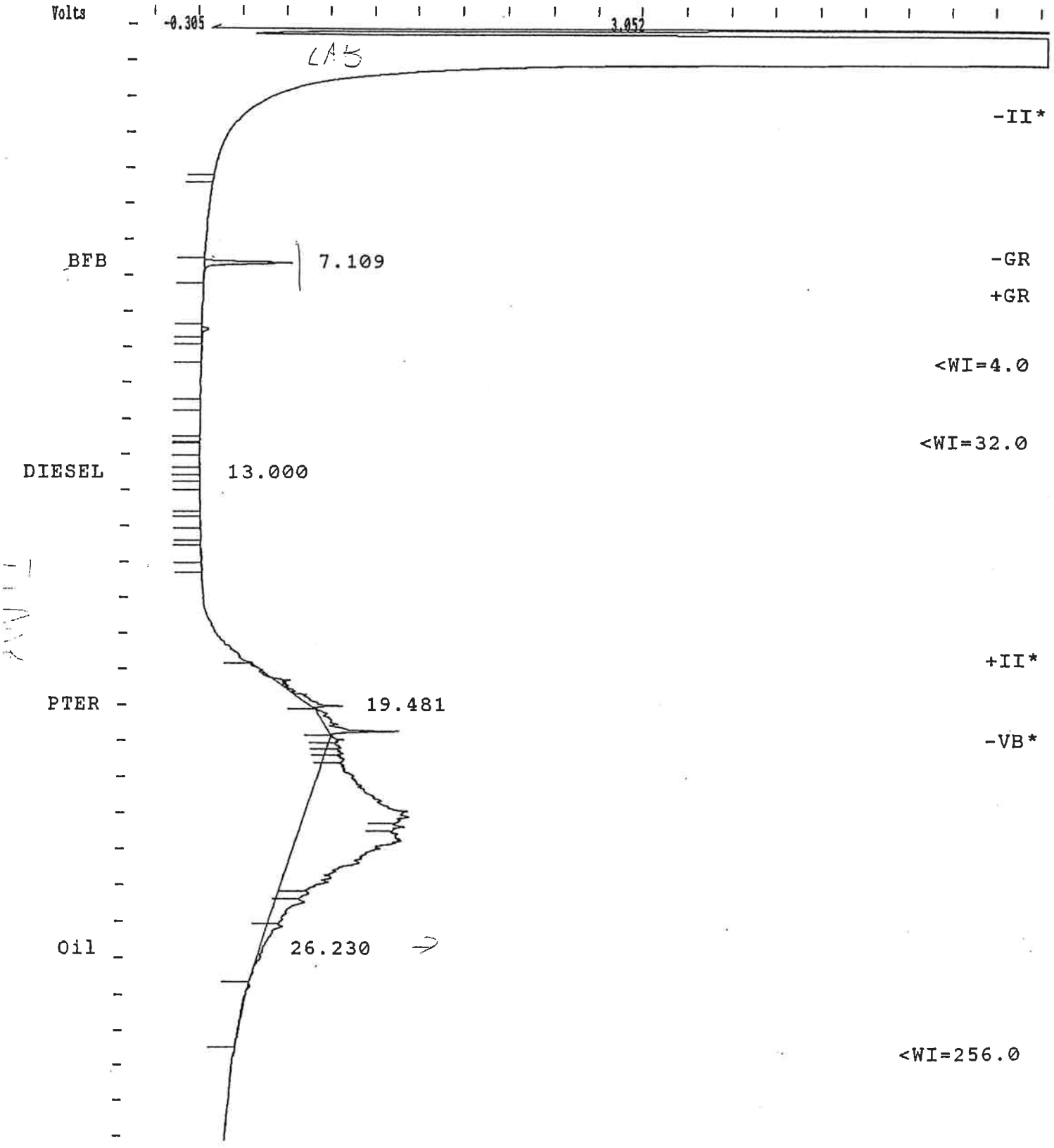
: Time = 0.500 min End Time = 32.002 min Min / Tick = 1.00



ıple ID : 1977ms ceti

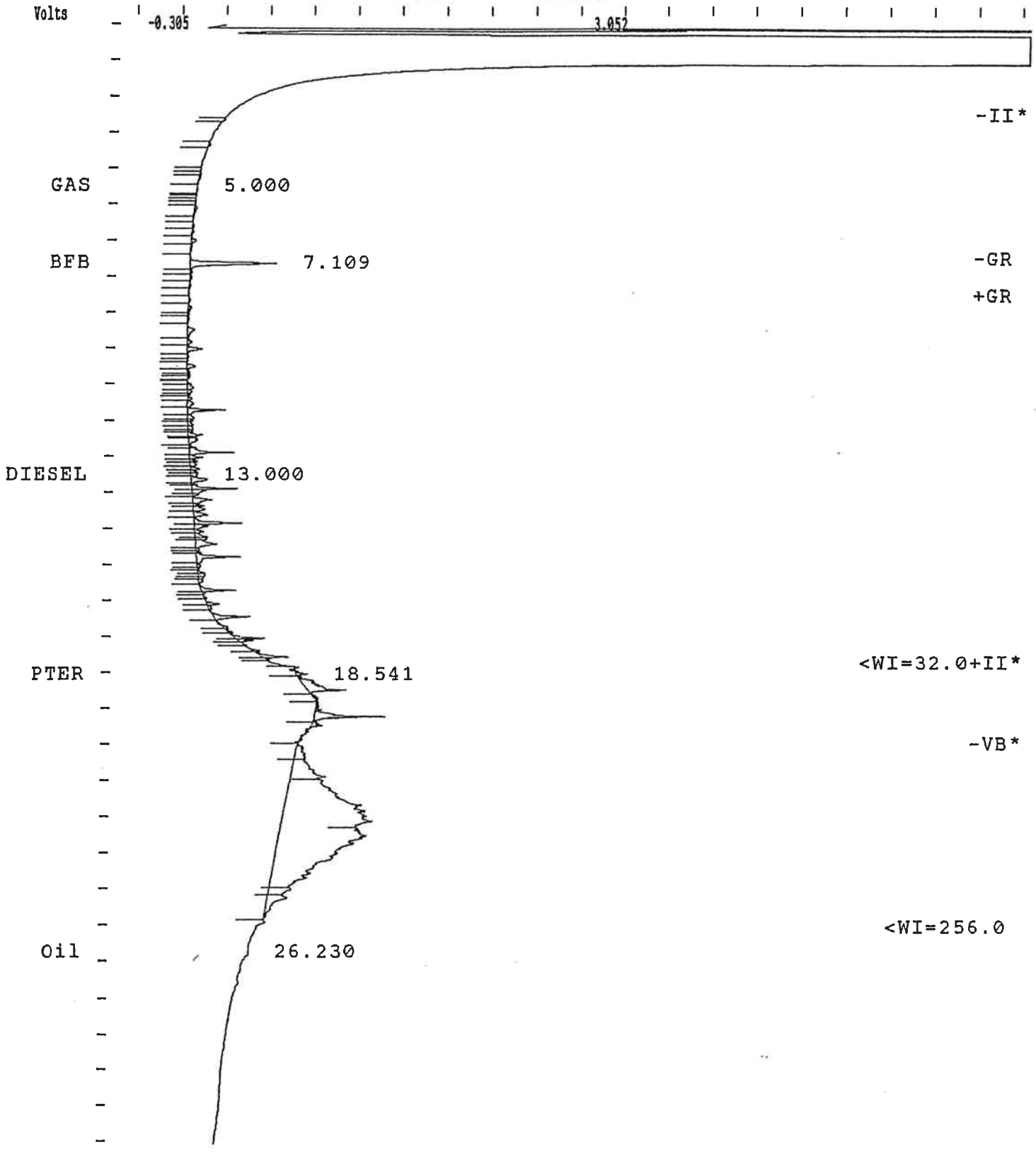
jection Date: 28-APR-99 1:28 PM Calculation Date: 28-APR-99 2:00 PM

rator : MD
:kstation: MS-DOS_6
strument : Varian Star #2
nnel : B = FID-B

Detector Type: ADCB (10 Volts)
Bus Address : 22
Sample Rate : 10.00 Hz
Run Time : 32.002 min

******** Star Chromatography Software ********** Version 4.0 **********

rt Speed = 0.66 cm/min Attenuation = 2500 Zero Offset = 5%
ırt Time = 0.500 min End Time = 32.002 min Min / Tick = 1.00



le ID : 1977msd ceti

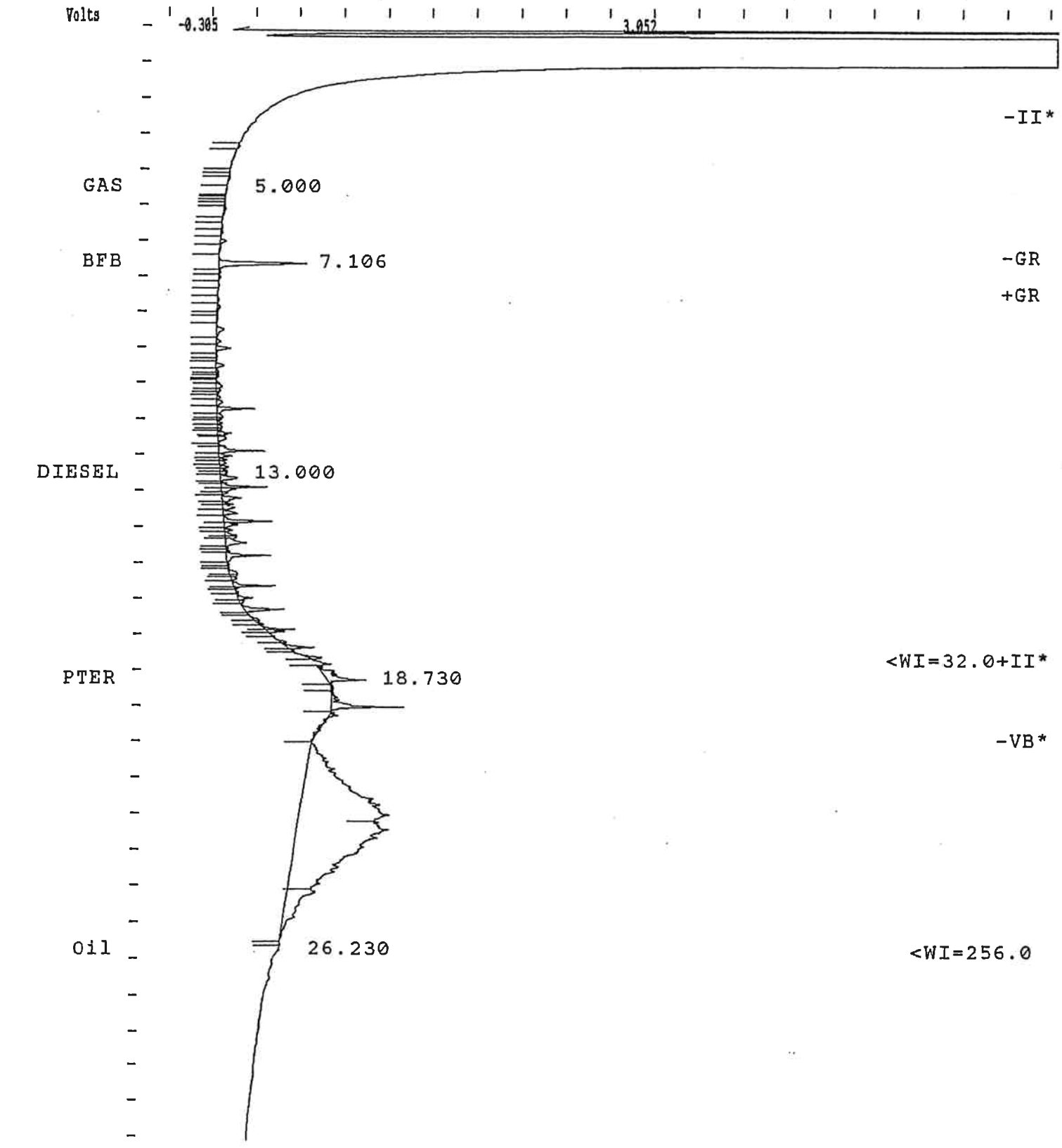
ction Date: 28-APR-99 2:07 PM Calculation Date: 28-APR-99 2:39 PM

ator : MD
station: MS-DOS_6
rument : Varian Star #2
nel : B = FID-B

Detector Type: ADCB (10 Volts)
Bus Address : 22
Sample Rate : 10.00 Hz
Run Time : 32.002 min

******* Star Chromatography Software ********** Version 4.0 **********

: Speed = 0.66 cm/min Attenuation = 2500 Zero Offset = 5%
: Time = 0.500 min End Time = 32.002 min Min / Tick = 1.00



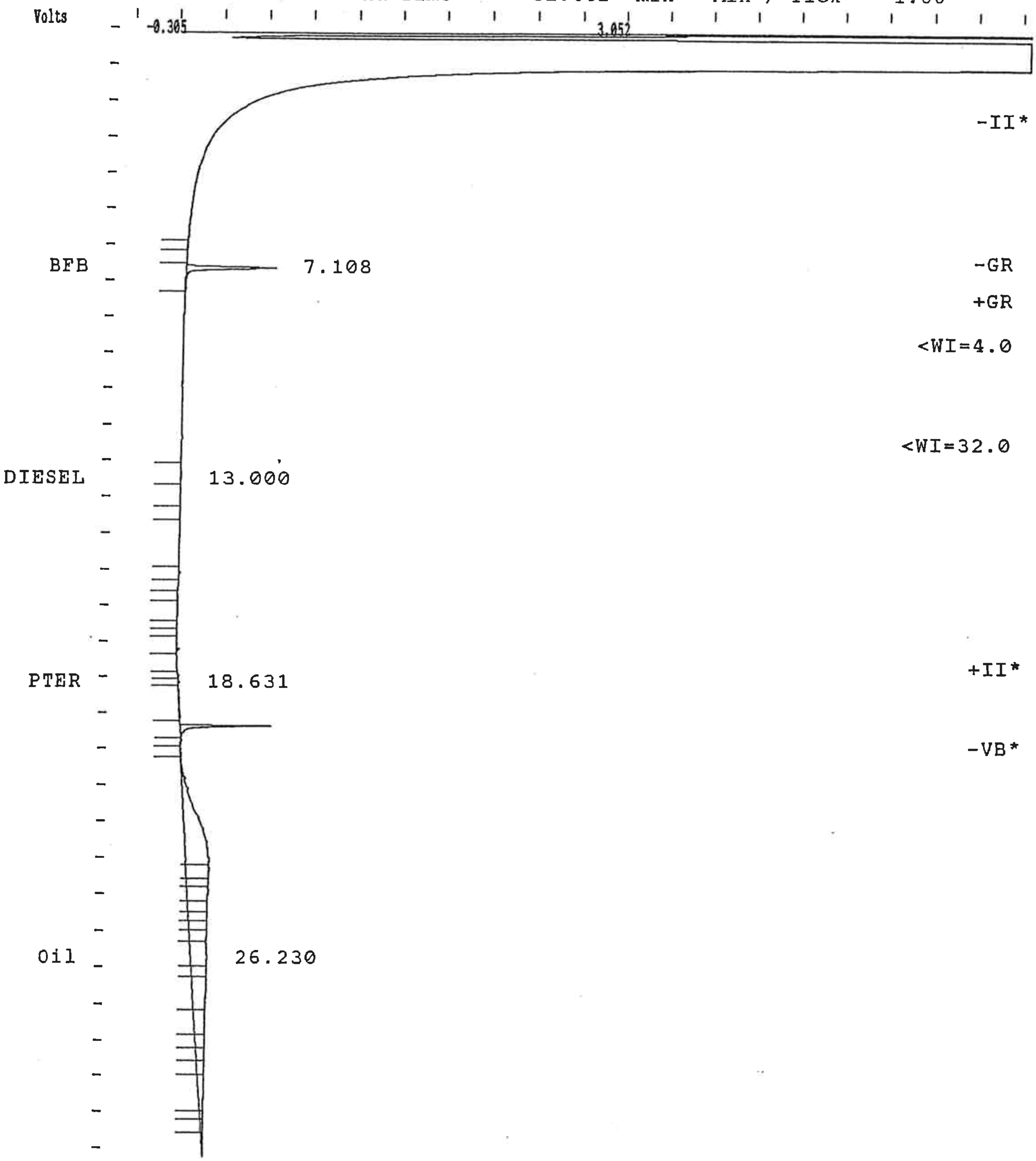
ıple ID : 1978 ceti

jection Date: 28-APR-99 2:47 PM   Calculation Date: 28-APR-99 3:19 PM

ırator : MD   Detector Type: ADCB (10 Volts)
ıkstation: MS-DOS_6   Bus Address : 22
ıstrument : Varian Star #2   Sample Rate : 10.00 Hz

********* Star Chromatography Software ********** Version 4.0 ***************

rt Speed = 0.66 cm/min   Attenuation = 2500   Zero Offset = 5%
art Time = 0.500 min   End Time = 32.002 min   Min / Tick = 1.00



le ID : 1979 ceti

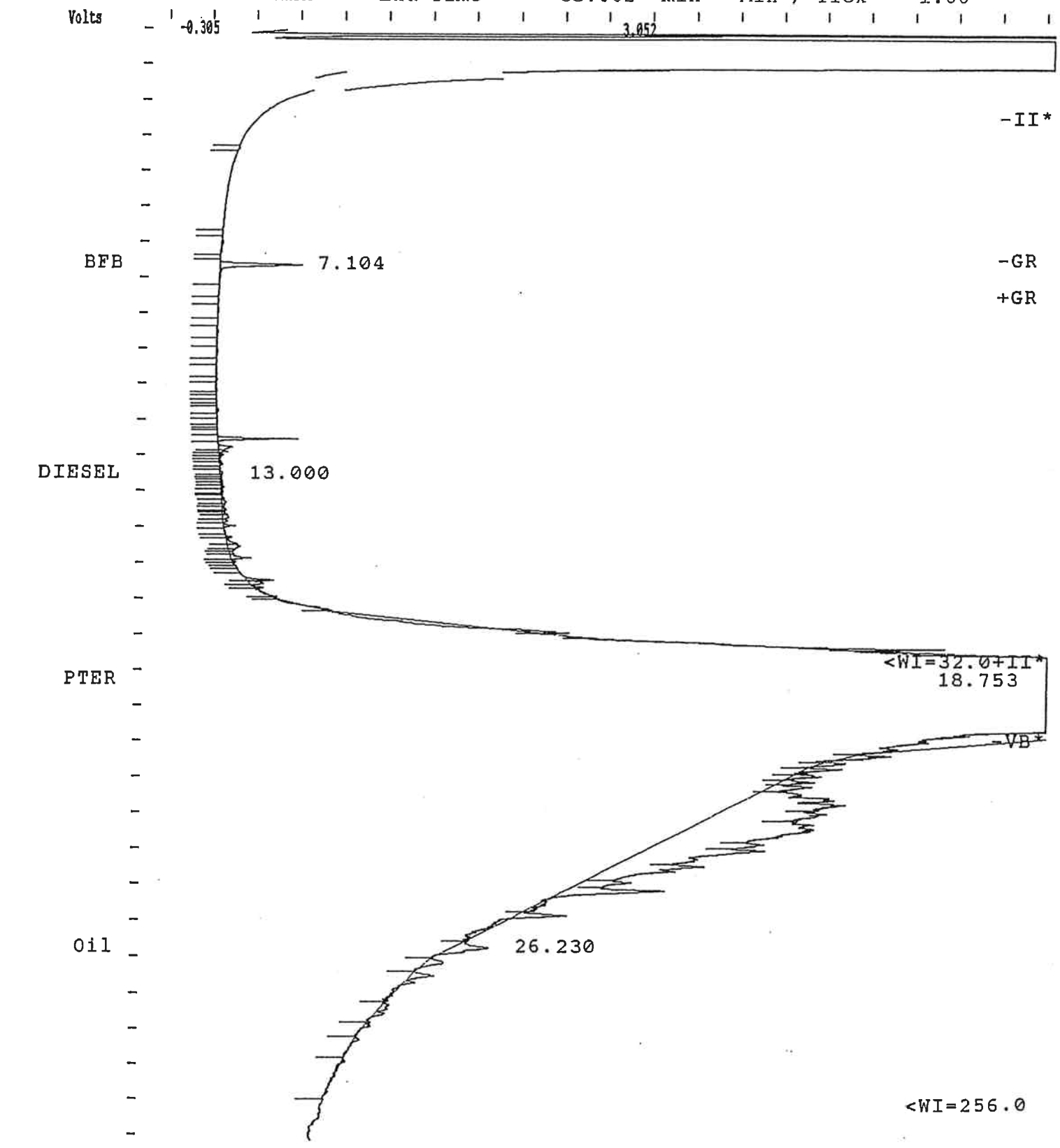
ction Date: 28-APR-99 3:26 PM Calculation Date: 28-APR-99 3:58 PM

ator : MD
station: MS-DOS_6
rument : Varian Star #2
nel : B = FID-B

Detector Type: ADCB (10 Volts)
Bus Address : 22
Sample Rate : 10.00 Hz
Run Time : 32.002 min

******* Star Chromatography Software ********** Version 4.0 **********

: Speed = 0.66 cm/min Attenuation = 2500 Zero Offset = 5%
: Time = 0.500 min End Time = 32.002 min Min / Tick = 1.00



aple ID : 1980 ceti

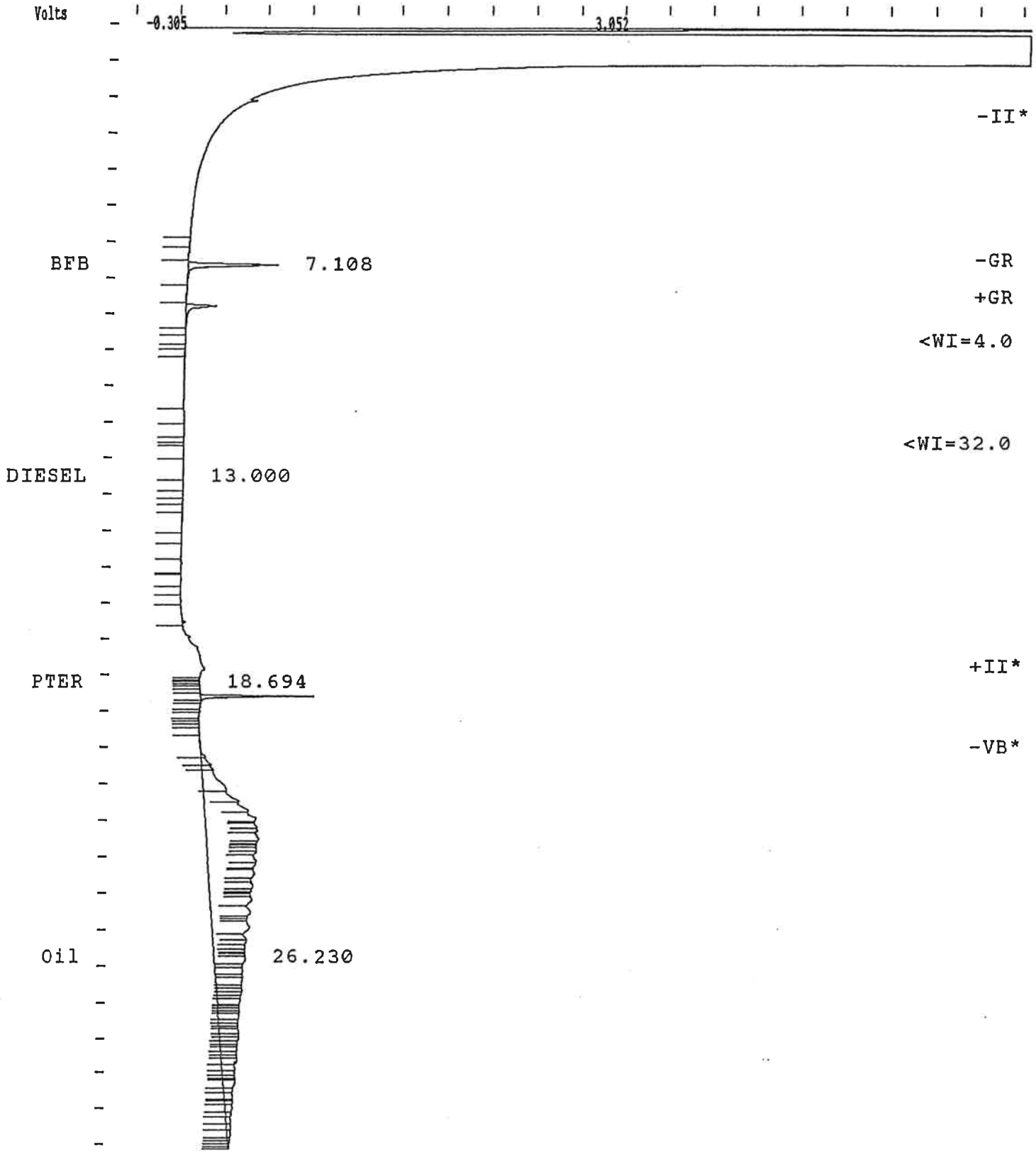
jection Date: 28-APR-99 4:05 PM Calculation Date: 28-APR-99 4:38 PM

erator : MD
rkstation: MS-DOS_6
strument : Varian Star #2
annel : B = FID-B

Detector Type: ADCB (10 Volts)
Bus Address : 22
Sample Rate : 10.00 Hz
Run Time : 32.002 min

********** Star Chromatography Software ********** Version 4.0 **********

art Speed = 0.66 cm/min Attenuation = 2500 Zero Offset = 5%
art Time = 0.500 min End Time = 32.002 min Min / Tick = 1.00



le ID : 1981 ceti

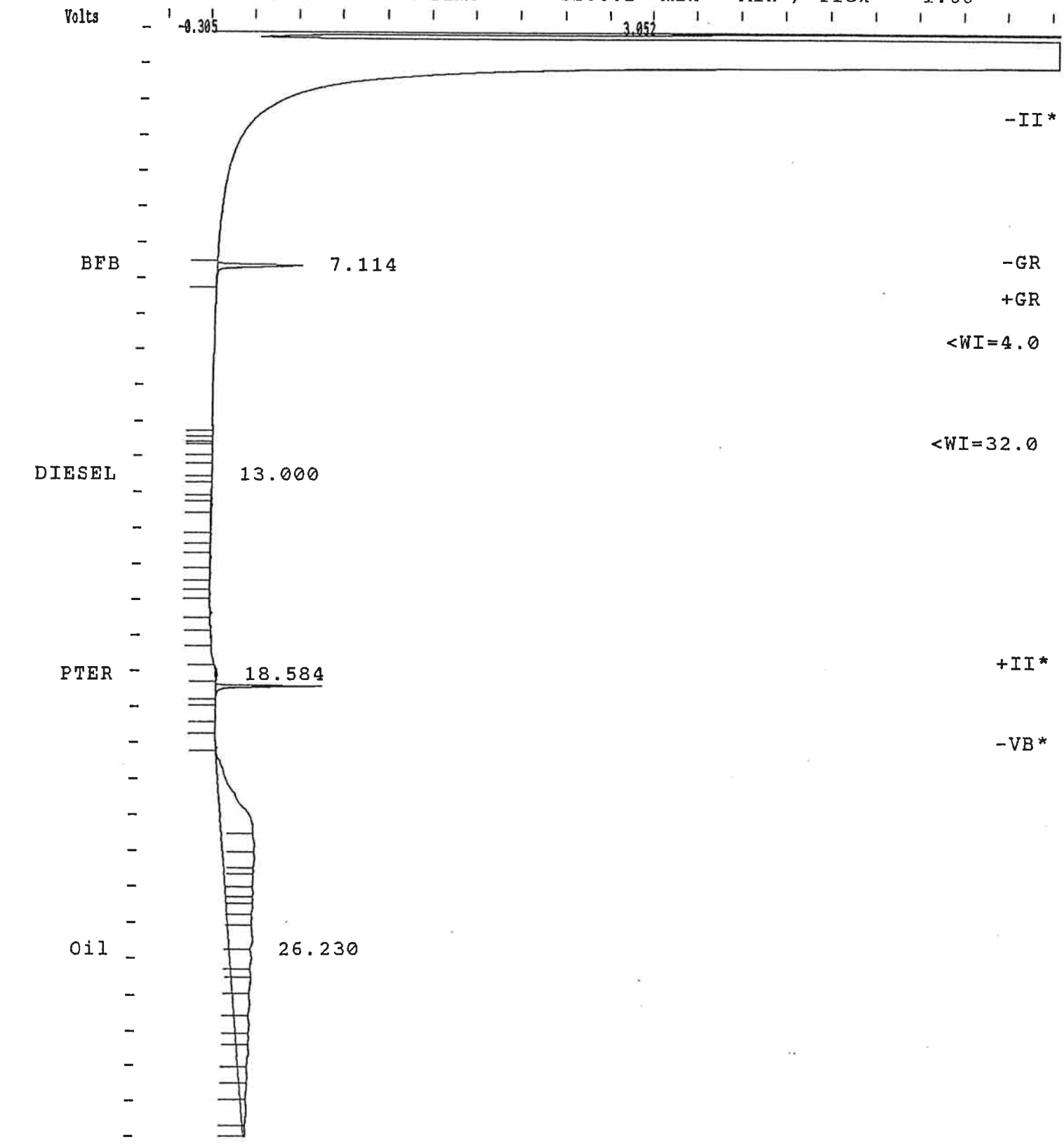
ction Date: 28-APR-99 4:45 PM Calculation Date: 28-APR-99 5:17 PM

ator : MD
station: MS-DOS_6
ument : Varian Star #2
nel : B = FID-B

Detector Type: ADCB (10 Volts)
Bus Address : 22
Sample Rate : 10.00 Hz
Run Time : 32.002 min

****** Star Chromatography Software ********** Version 4.0 **********

Speed = 0.66 cm/min Attenuation = 2500 Zero Offset = 5%
Time = 0.500 min End Time = 32.002 min Min / Tick = 1.00



ple ID : 1982 ceti

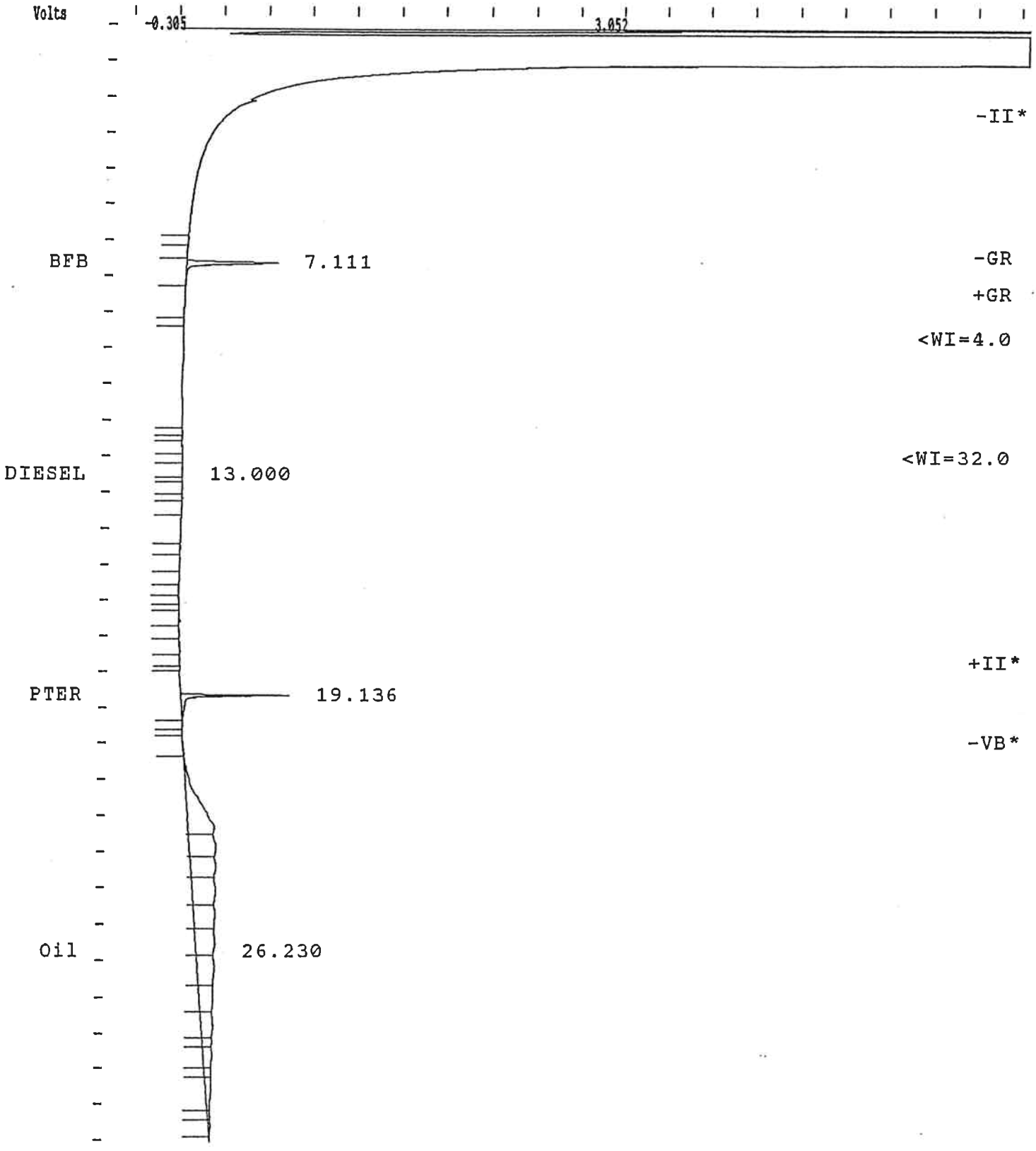
jection Date: 28-APR-99 5:24 PM Calculation Date: 28-APR-99 5:57 PM

rator : MD
:kstation: MS-DOS_6
strument : Varian Star #2
nnel : B = FID-B

Detector Type: ADCB (10 Volts)
Bus Address : 22
Sample Rate : 10.00 Hz
Run Time : 32.002 min

******** Star Chromatography Software ********** Version 4.0 **********

rt Speed = 0.66 cm/min Attenuation = 2500 Zero Offset = 5%
irt Time = 0.500 min End Time = 32.002 min Min / Tick = 1.00



le ID : 1983 ceti

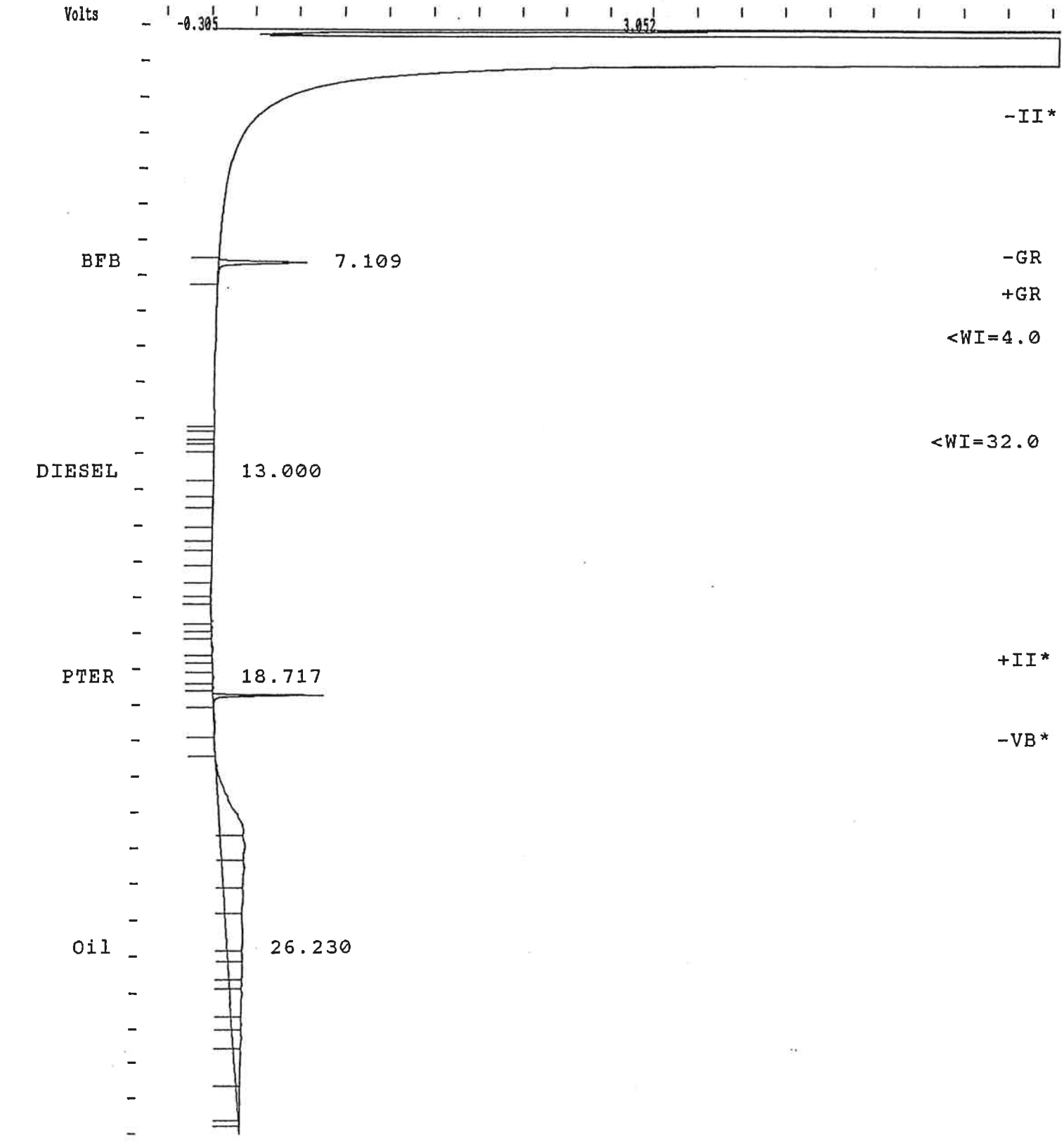
ction Date: 28-APR-99 6:04 PM Calculation Date: 28-APR-99 6:36 PM

ator : MD
station: MS-DOS_6
ument : Varian Star #2
nel : B = FID-B

Detector Type: ADCB (10 Volts)
Bus Address : 22
Sample Rate : 10.00 Hz
Run Time : 32.002 min

****** Star Chromatography Software ********** Version 4.0 **********

Speed = 0.66 cm/min Attenuation = 2500 Zero Offset = 5%
Time = 0.500 min End Time = 32.002 min Min / Tick = 1.00



:hod File : C:\STAR\WD4.MTH
ıple ID : mblk soil 4-29-99

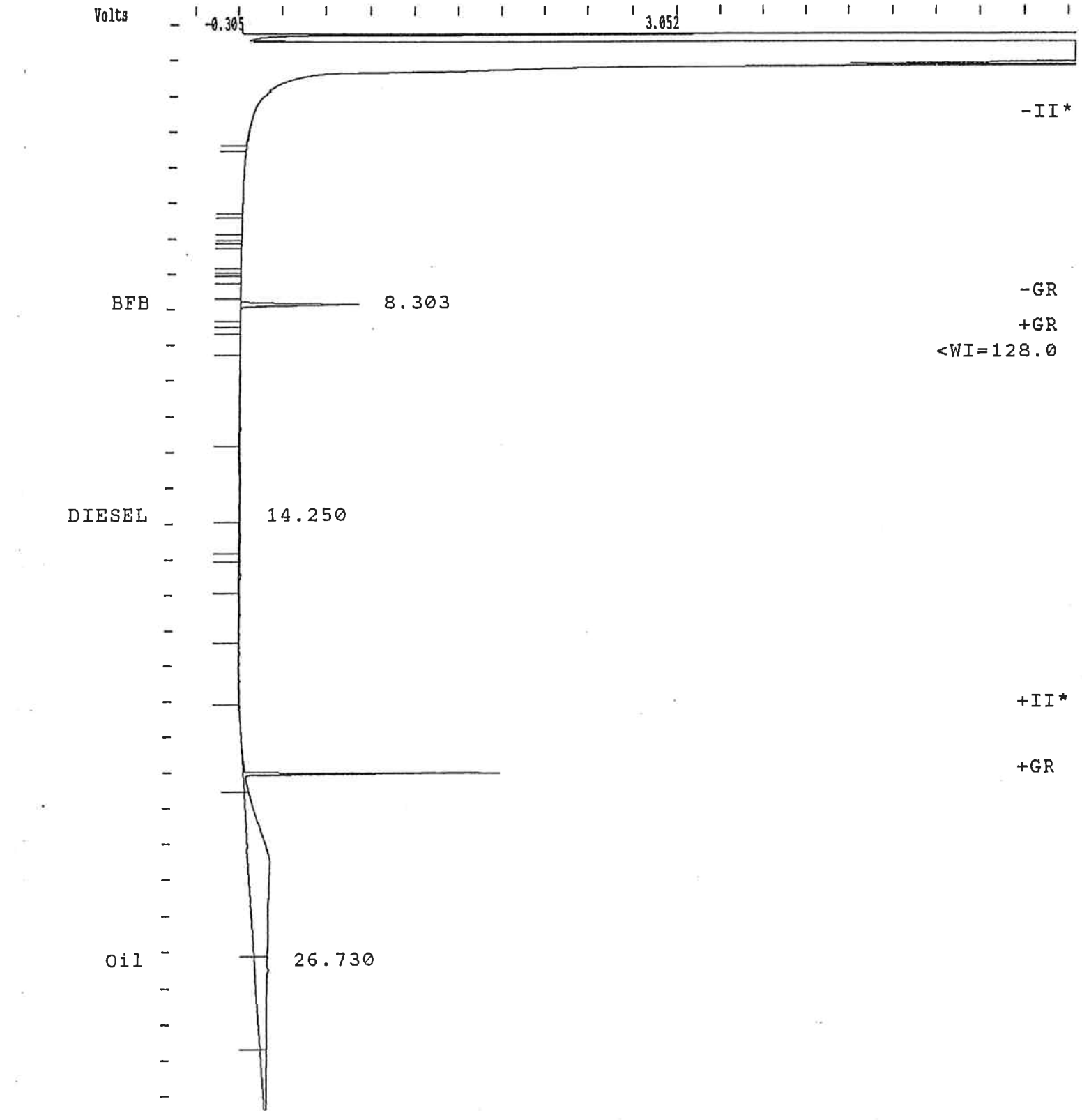
'ection Date: 29-APR-99 3:22 PM Calculation Date: 29-APR-99 3:54 PM

ɐrator : MD
ckstation: MS-DOS_6
trument : Varian Star #2
nnel : B = FID-B

Detector Type: ADCB (10 Volts)
Bus Address : 22
Sample Rate : 10.00 Hz
Run Time : 32.002 min

'******** Star Chromatography Software ********** Version 4.0 ***************

ɹrt Speed = 0.66 cm/min Attenuation = 2500 Zero Offset = 5%
ɹrt Time = 0.500 min End Time = 32.002 min Min / Tick = 1.00



un File : C:\STAR\MODULE22\wtphd027.RUN
ethod File : C:\STAR\WD4.MTH
ample ID : 2015 cet1

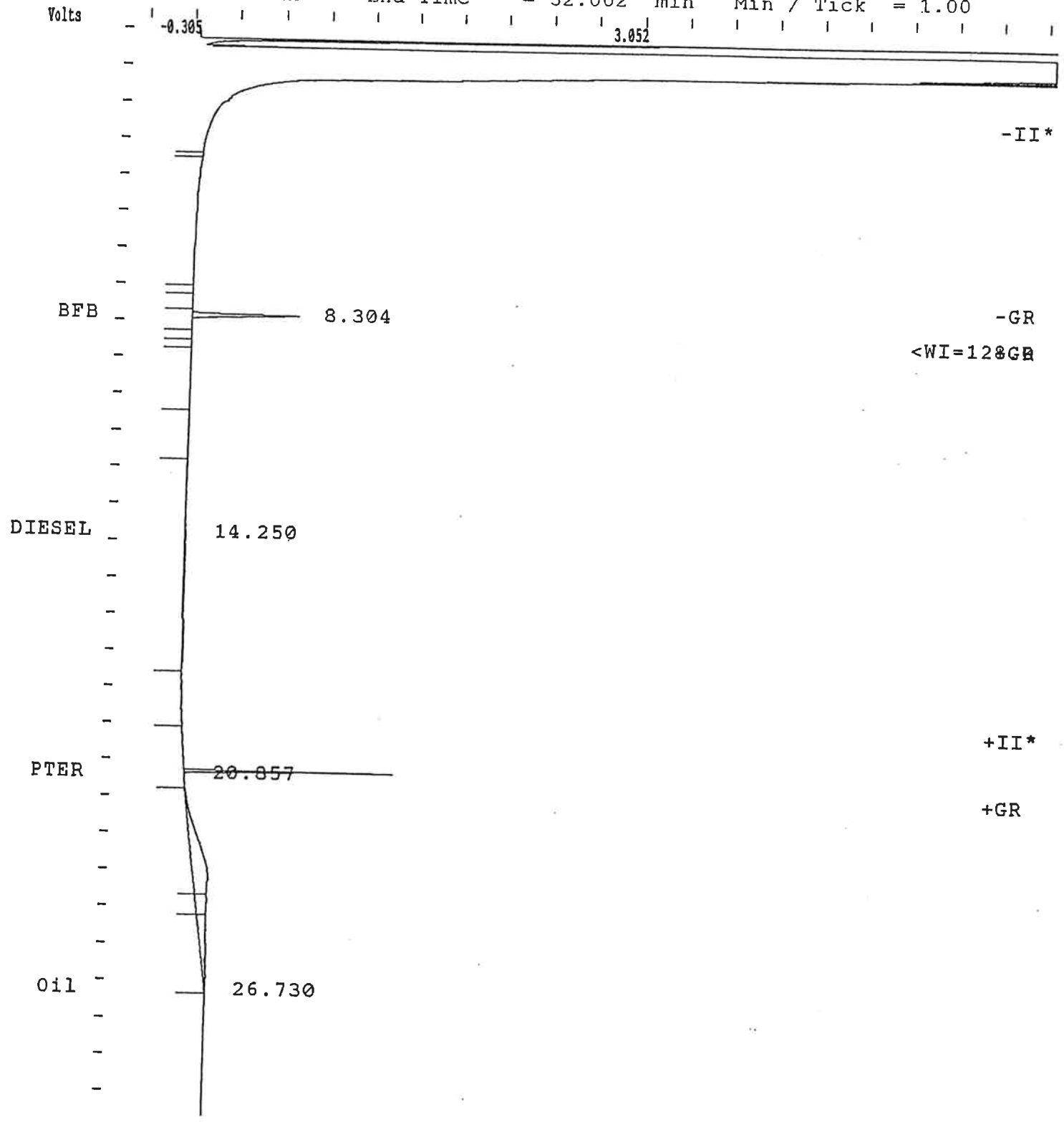
njection Date: 29-APR-99 4:01 PM Calculation Date: 29-APR-99 4:33 PM

perator : MD
orkstation: MS-DOS_6
nstrument : Varian Star #2
hannel : B = FID-B

Detector Type: ADCB (10 Volts)
Bus Address : 22
Sample Rate : 10.00 Hz
Run Time : 32.002 min

********** Star Chromatography Software ********** Version 4.0 **********

art Speed = 0.66 cm/min Attenuation = 2500 Zero Offset = 5%
art Time = 0.500 min End Time = 32.002 min Min / Tick = 1.00



ple ID : 2016ceti

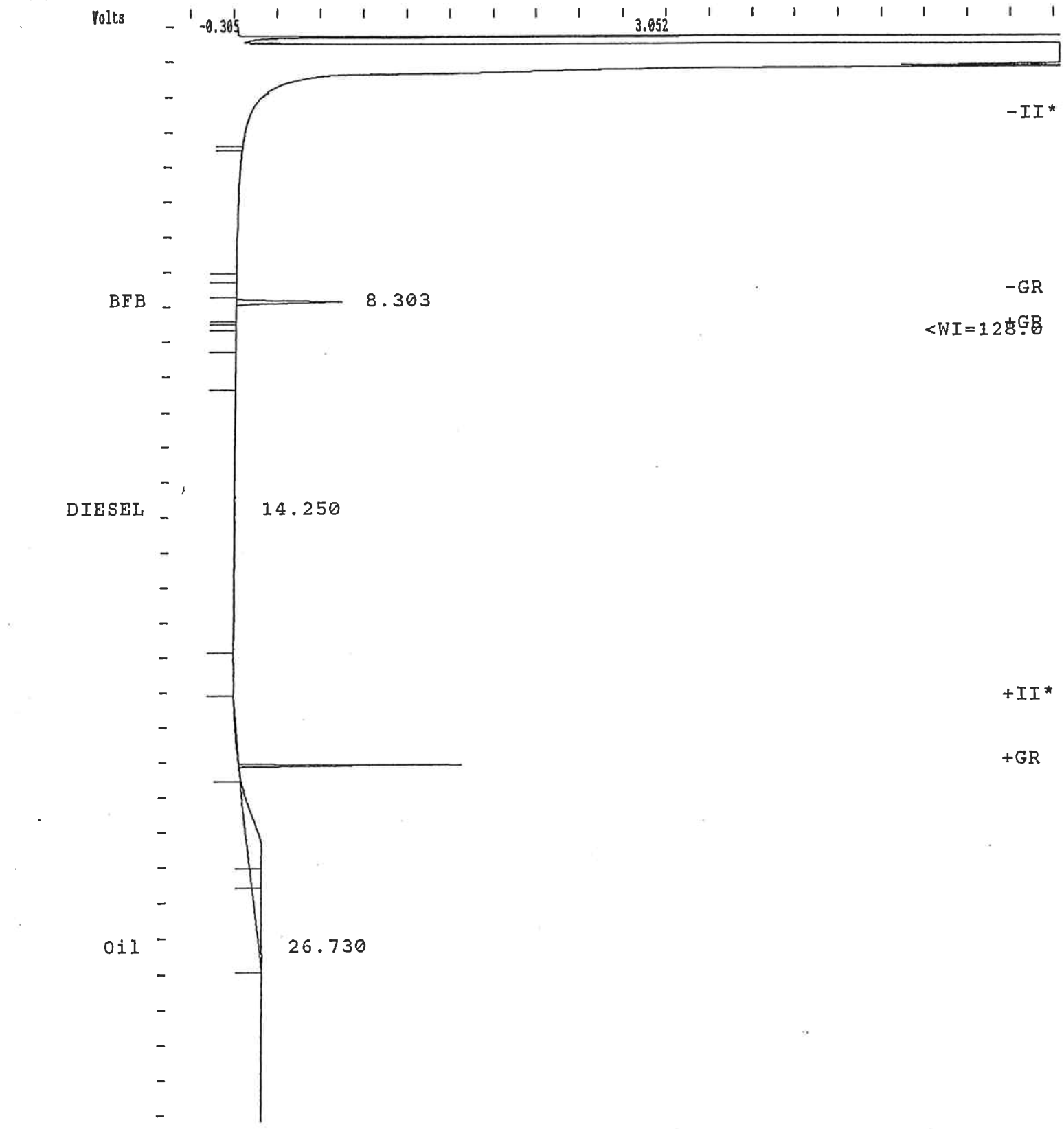
jection Date: 29-APR-99 4:41 PM Calculation Date: 29-APR-99 5:13 PM

rator : MD
kstation: MS-DOS_6
strument : Varian Star #2
nnel : B = FID-B

Detector Type: ADCB (10 Volts)
Bus Address : 22
Sample Rate : 10.00 Hz
Run Time : 32.002 min

********* Star Chromatography Software ********** Version 4.0 **********

rt Speed = 0.66 cm/min Attenuation = 2500 Zero Offset = 5%
art Time = 0.500 min End Time = 32.002 min Min / Tick = 1.00



le ID : 2017 ceti

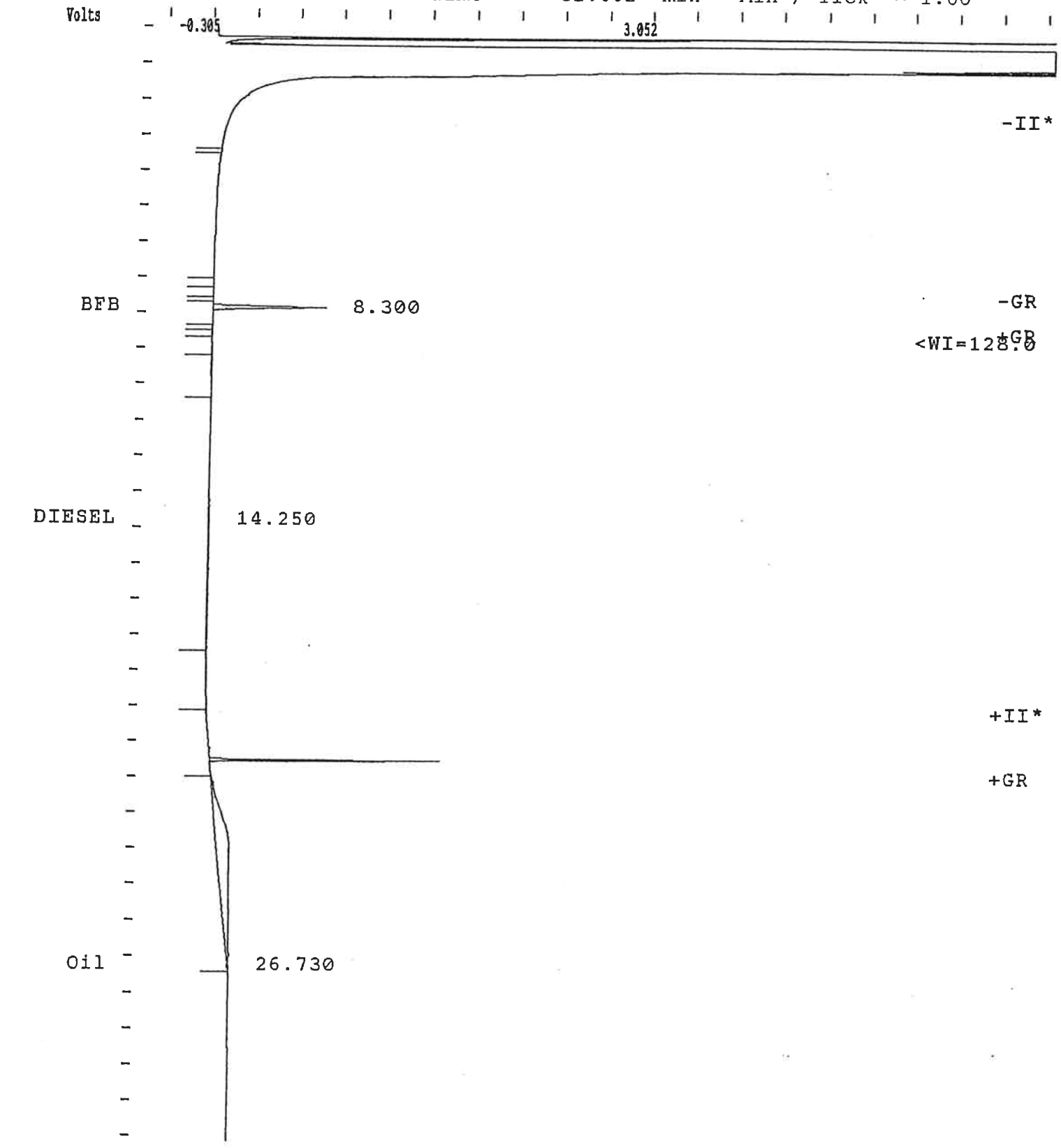
ction Date: 29-APR-99 5:20 PM Calculation Date: 29-APR-99 5:52 PM

ator : MD
station: MS-DOS_6
rument : Varian Star #2
nel : B = FID-B

Detector Type: ADCB (10 Volts)
Bus Address : 22
Sample Rate : 10.00 Hz
Run Time : 32.002 min

****** Star Chromatography Software ********** Version 4.0 **********

: Speed = 0.66 cm/min Attenuation = 2500 Zero Offset = 5%
: Time = 0.500 min End Time = 32.002 min Min / Tick = 1.00



ıple ID : 2018 ceti

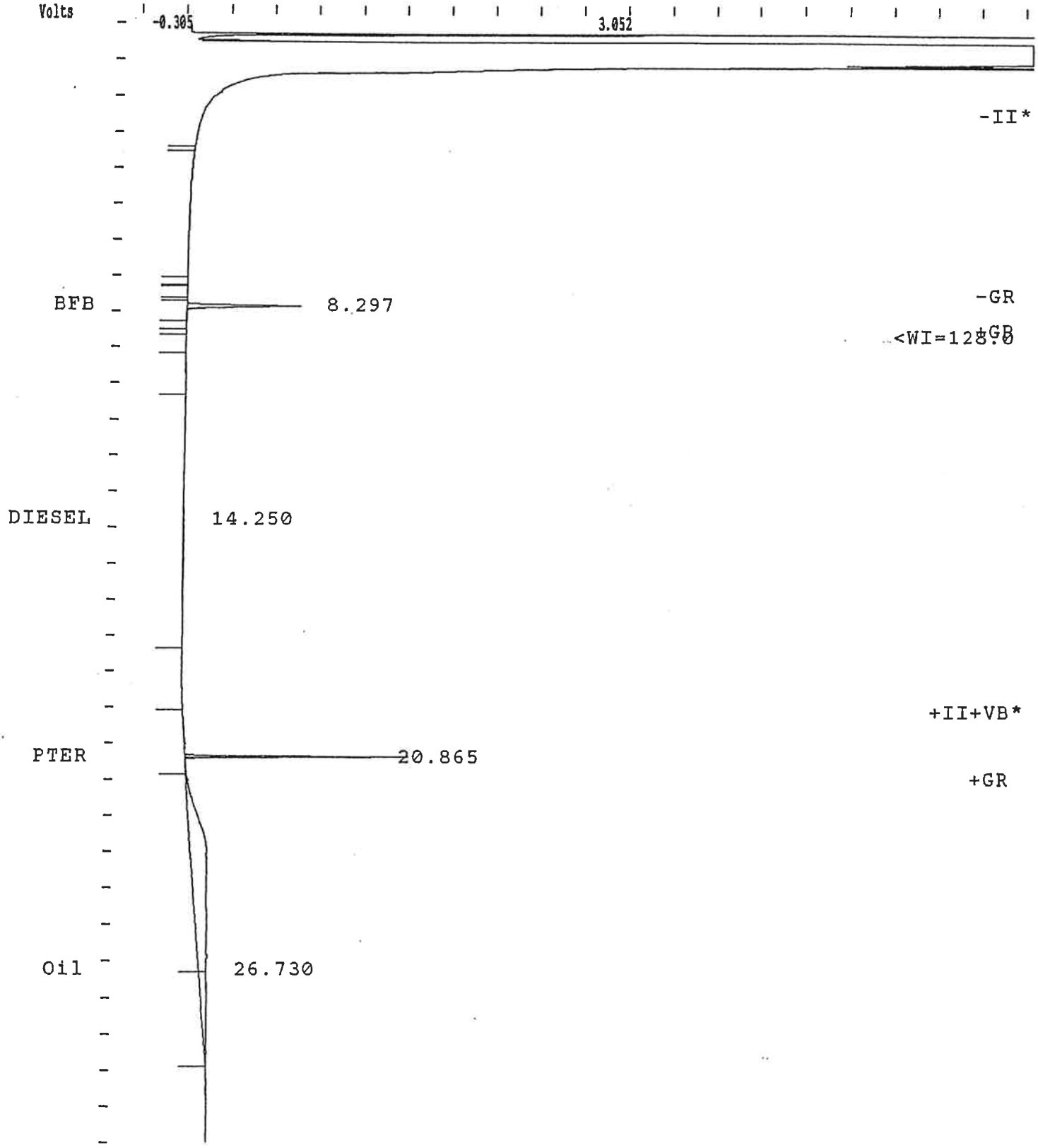
jection Date: 29-APR-99 6:00 PM Calculation Date: 29-APR-99 6:32 PM

ɜrator : MD
rkstation: MS-DOS_6
ɜtrument : Varian Star #2
.nnel : B = FID-B

Detector Type: ADCB (10 Volts)
Bus Address : 22
Sample Rate : 10.00 Hz
Run Time : 32.002 min

********* Star Chromatography Software ********** Version 4.0 ***************

rt Speed = 0.66 cm/min Attenuation = 2500 Zero Offset = 5%
art Time = 0.500 min End Time = 32.002 min Min / Tick = 1.00



le ID : 2019 ceti

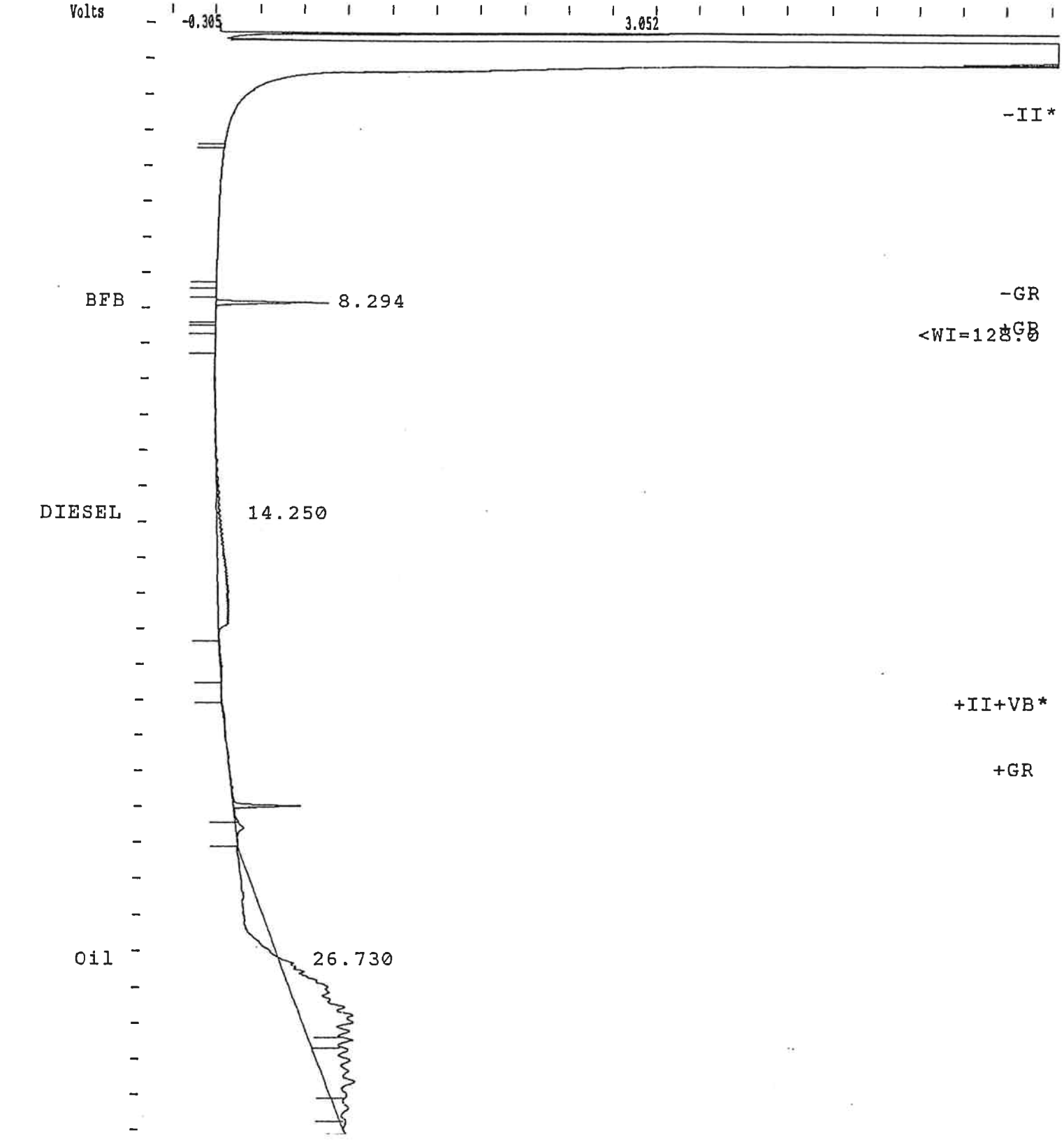
ction Date: 30-APR-99 1:09 AM Calculation Date: 30-APR-99 1:42 AM

ator : MD
station: MS-DOS_6
rument : Varian Star #2
nel : B = FID-B

Detector Type: ADCB (10 Volts)
Bus Address : 22
Sample Rate : 10.00 Hz
Run Time : 32.002 min

******* Star Chromatography Software ********** Version 4.0 **********

t Speed = 0.66 cm/min Attenuation = 2500 Zero Offset = 5%
t Time = 0.500 min End Time = 32.002 min Min / Tick = 1.00



ple ID : 2020 ceti

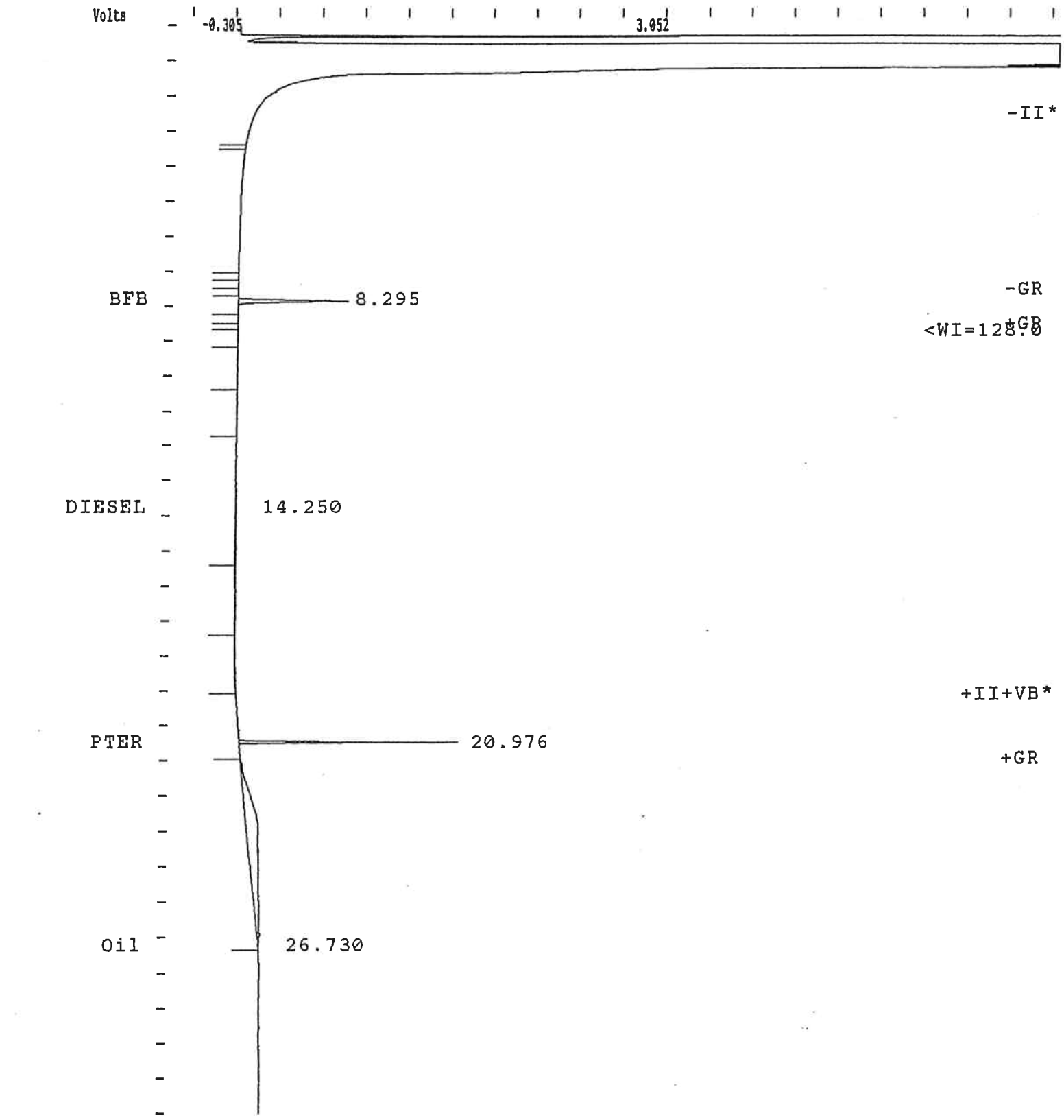
jection Date: 29-APR-99 6:39 PM Calculation Date: 29-APR-99 7:11 PM

rator : MD
kstation: MS-DOS_6
trument : Varian Star #2
nnel : B = FID-B

Detector Type: ADCB (10 Volts)
Bus Address : 22
Sample Rate : 10.00 Hz
Run Time : 32.002 min

********* Star Chromatography Software ********** Version 4.0 **********

rt Speed = 0.66 cm/min Attenuation = 2500 Zero Offset = 5%
art Time = 0.500 min End Time = 32.002 min Min / Tick = 1.00



Sd File : C:\STAR\WD4.MTH
le ID : 2021 ceti

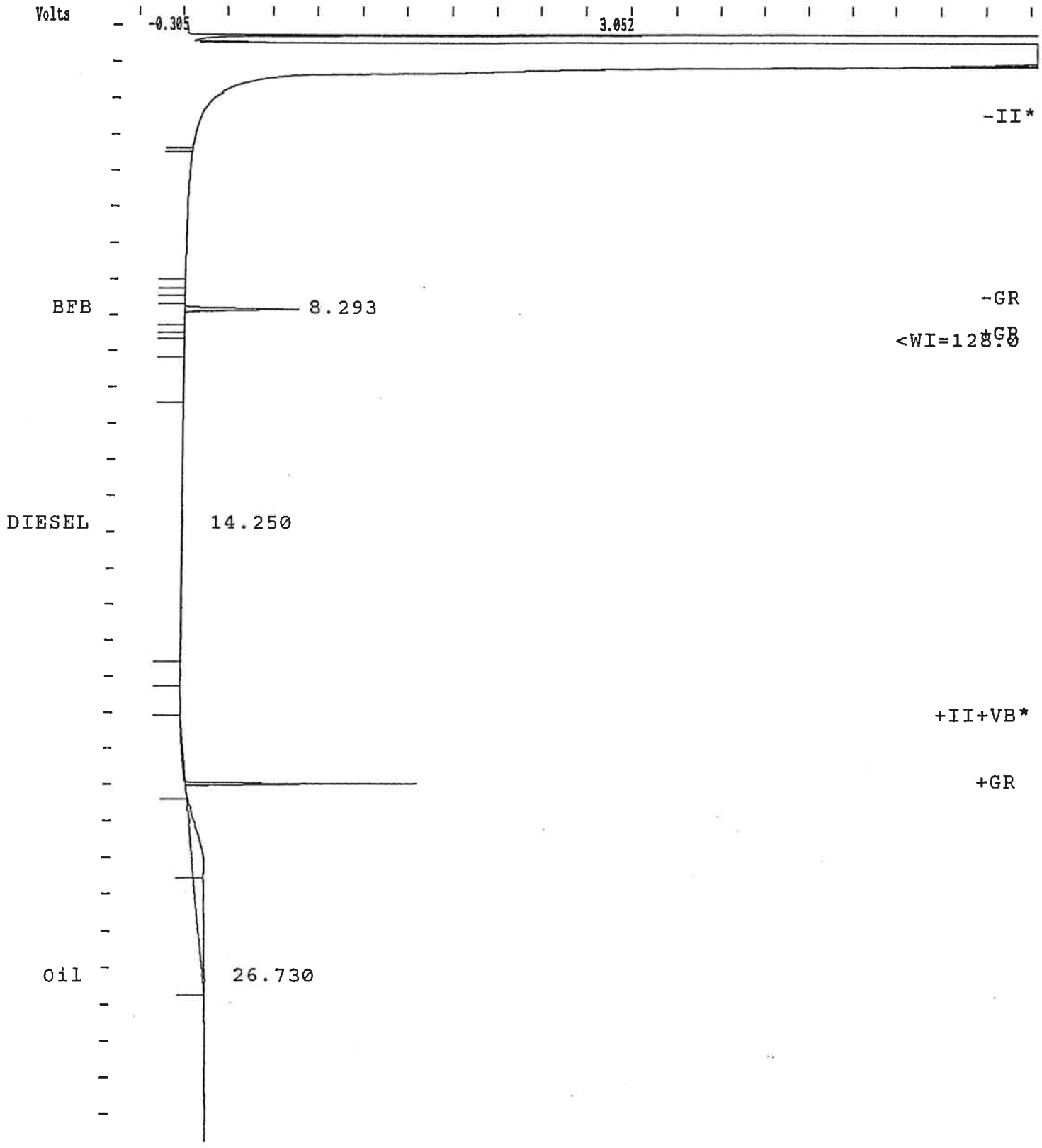
ction Date: 29-APR-99 7:18 PM Calculation Date: 29-APR-99 7:50 PM

ator : MD
station: MS-DOS_6
rument : Varian Star #2
nel : B = FID-B

Detector Type: ADCB (10 Volts)
Bus Address : 22
Sample Rate : 10.00 Hz
Run Time : 32.002 min

******* Star Chromatography Software ********** Version 4.0 **********

: Speed = 0.66 cm/min Attenuation = 2500 Zero Offset = 5%
: Time = 0.500 min End Time = 32.002 min Min / Tick = 1.00



ıple ID : 2022 ceti

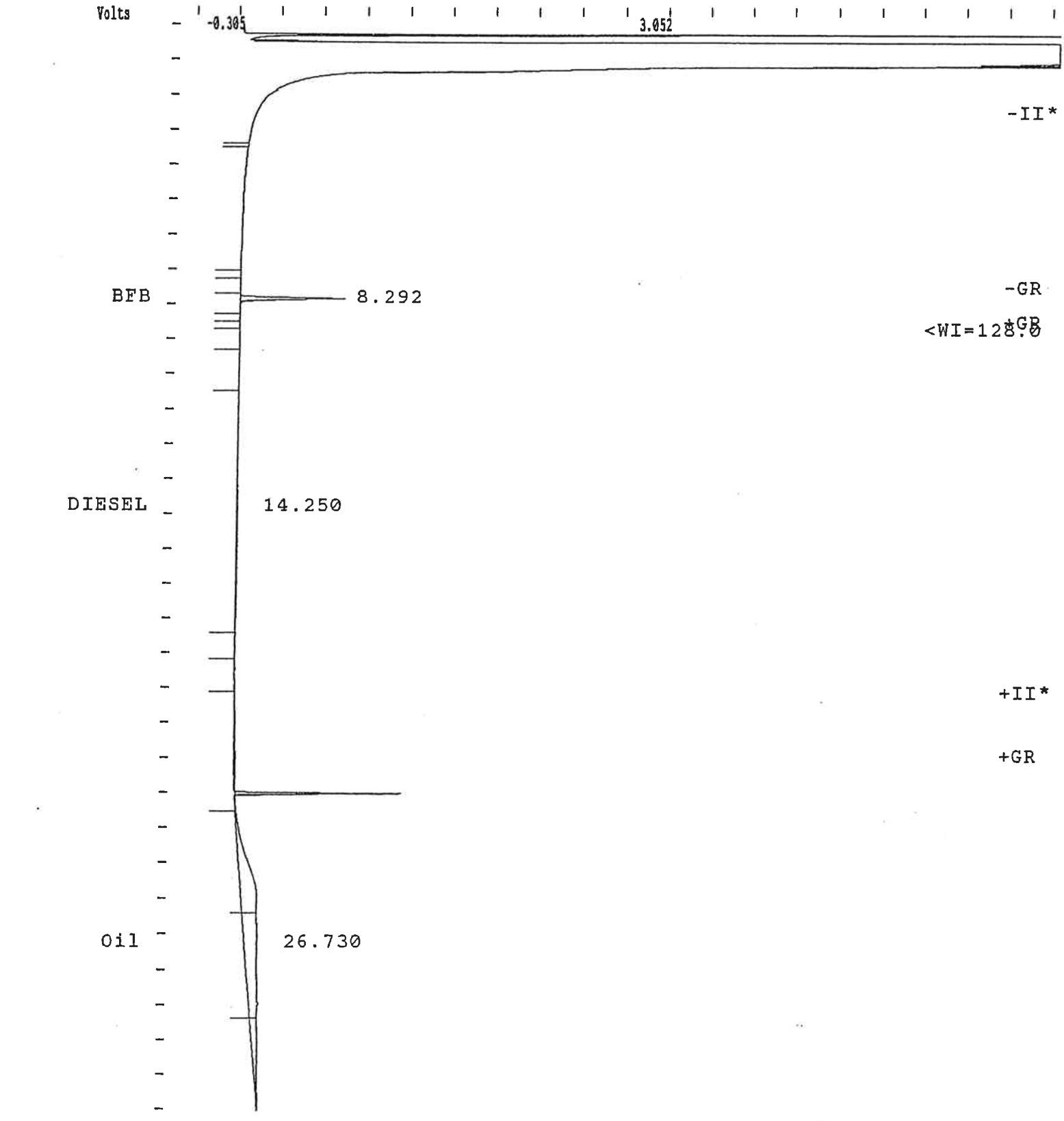
jection Date: 29-APR-99 7:57 PM Calculation Date: 29-APR-99 8:29 PM

ɜrator : MD
ɾkstation: MS-DOS_6
ʂtrument : Varian Star #2
ɹnnel : B = FID-B

Detector Type: ADCB (10 Volts)
Bus Address : 22
Sample Rate : 10.00 Hz
Run Time : 32.002 min

********* Star Chromatography Software ********** Version 4.0 **********

rt Speed = 0.66 cm/min Attenuation = 2500 Zero Offset = 5%
art Time = 0.500 min End Time = 32.002 min Min / Tick = 1.00



le ID : 2023 ceti

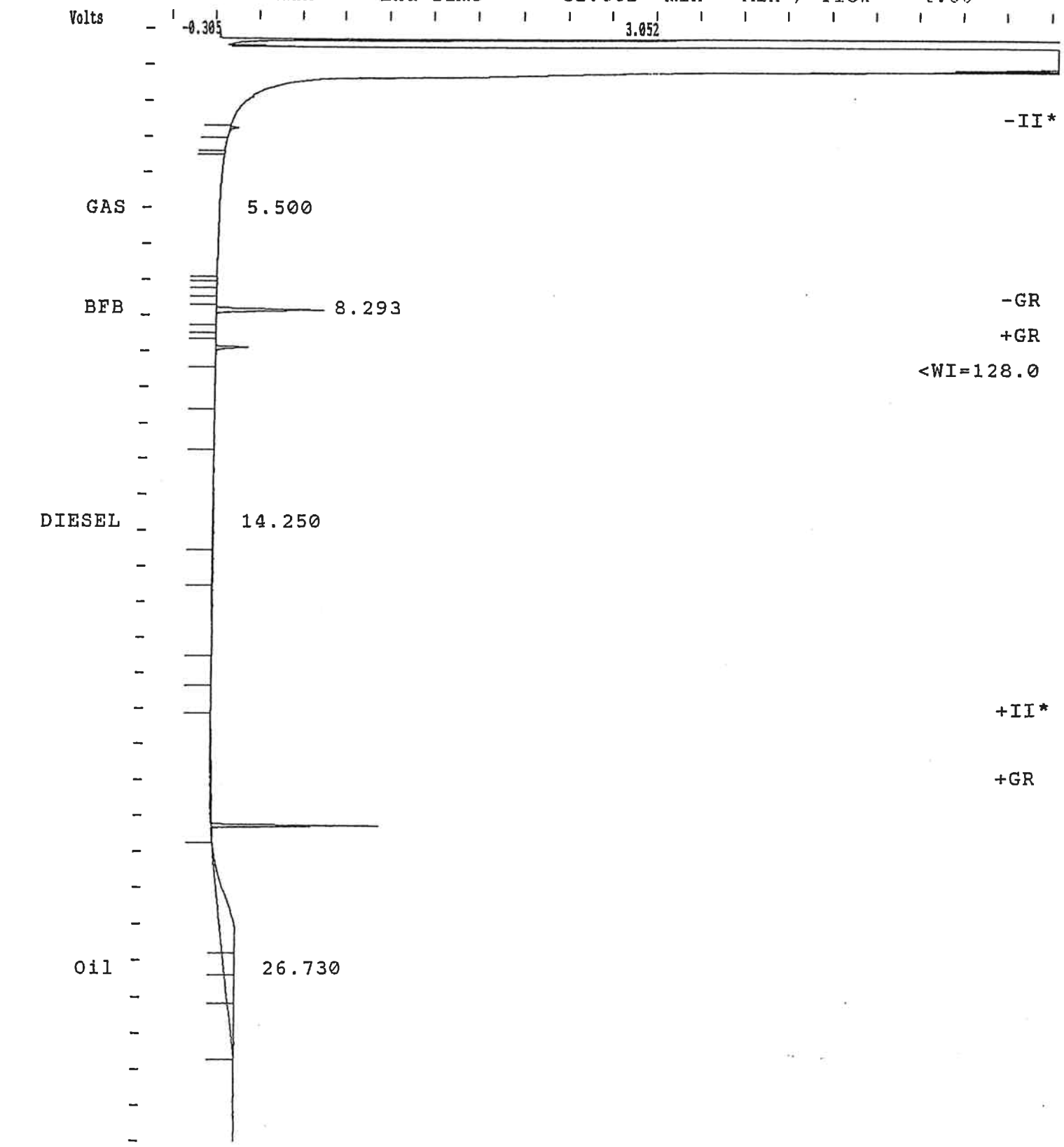
ction Date: 29-APR-99 8:36 PM Calculation Date: 29-APR-99 9:08 PM

ator : MD
station: MS-DOS_6
rument : Varian Star #2
nel : B = FID-B

Detector Type: ADCB (10 Volts)
Bus Address : 22
Sample Rate : 10.00 Hz
Run Time : 32.002 min

******* Star Chromatography Software ********** Version 4.0 ***************

t Speed = 0.66 cm/min Attenuation = 2500 Zero Offset = 5%
t Time = 0.500 min End Time = 32.002 min Min / Tick = 1.00



ıple ID : 2024 ceti

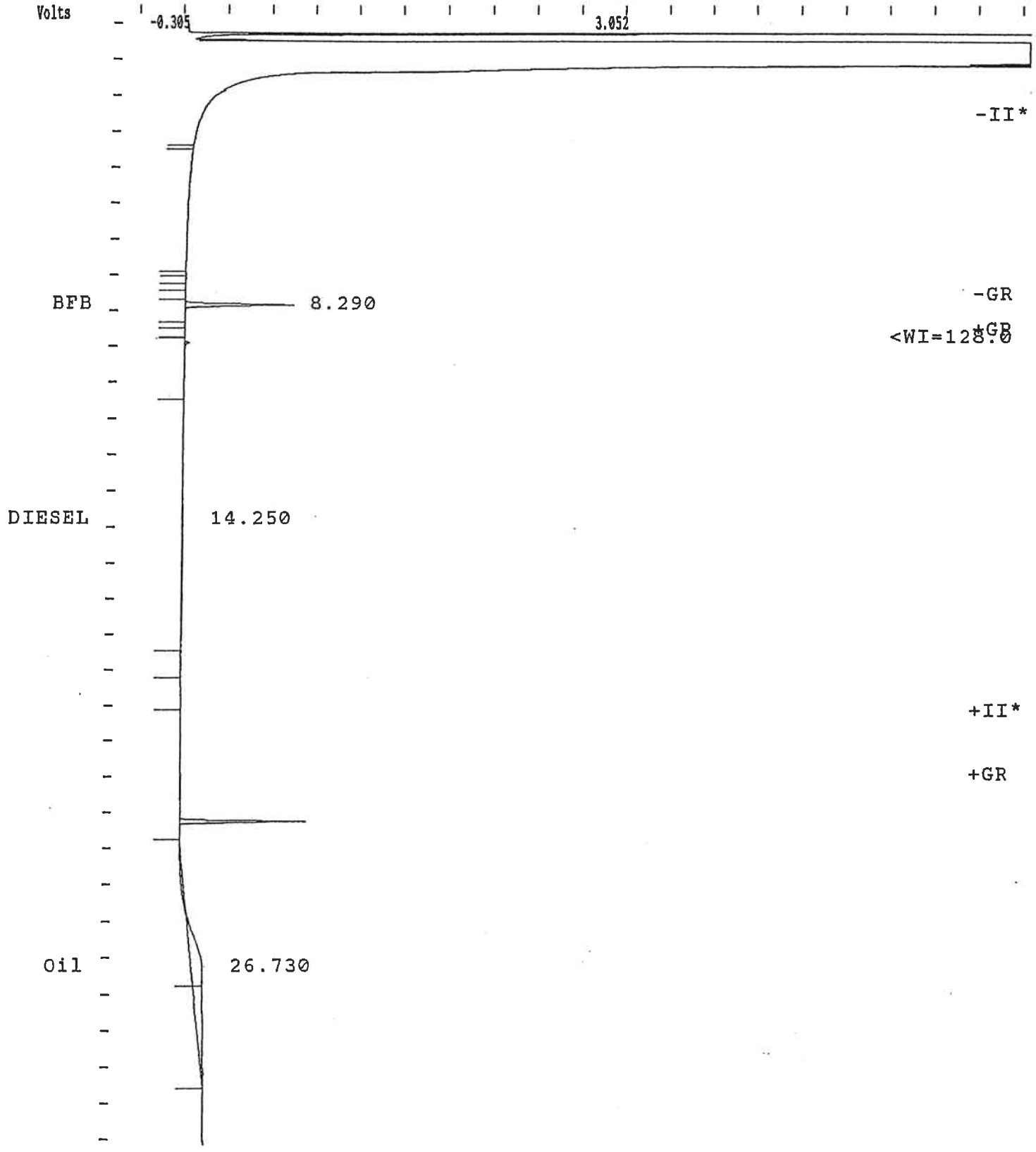
jection Date: 29-APR-99 9:15 PM Calculation Date: 29-APR-99 9:48 PM

·rator : MD
ɹkstation: MS-DOS_6
strument : Varian Star #2
nnel : B = FID-B

Detector Type: ADCB (10 Volts)
Bus Address : 22
Sample Rate : 10.00 Hz
Run Time : 32.002 min

********* Star Chromatography Software ********** Version 4.0 **********

rt Speed = 0.66 cm/min Attenuation = 2500 Zero Offset = 5%
ɹrt Time = 0.500 min End Time = 32.002 min Min / Tick = 1.00



le ID : 2025 ceti

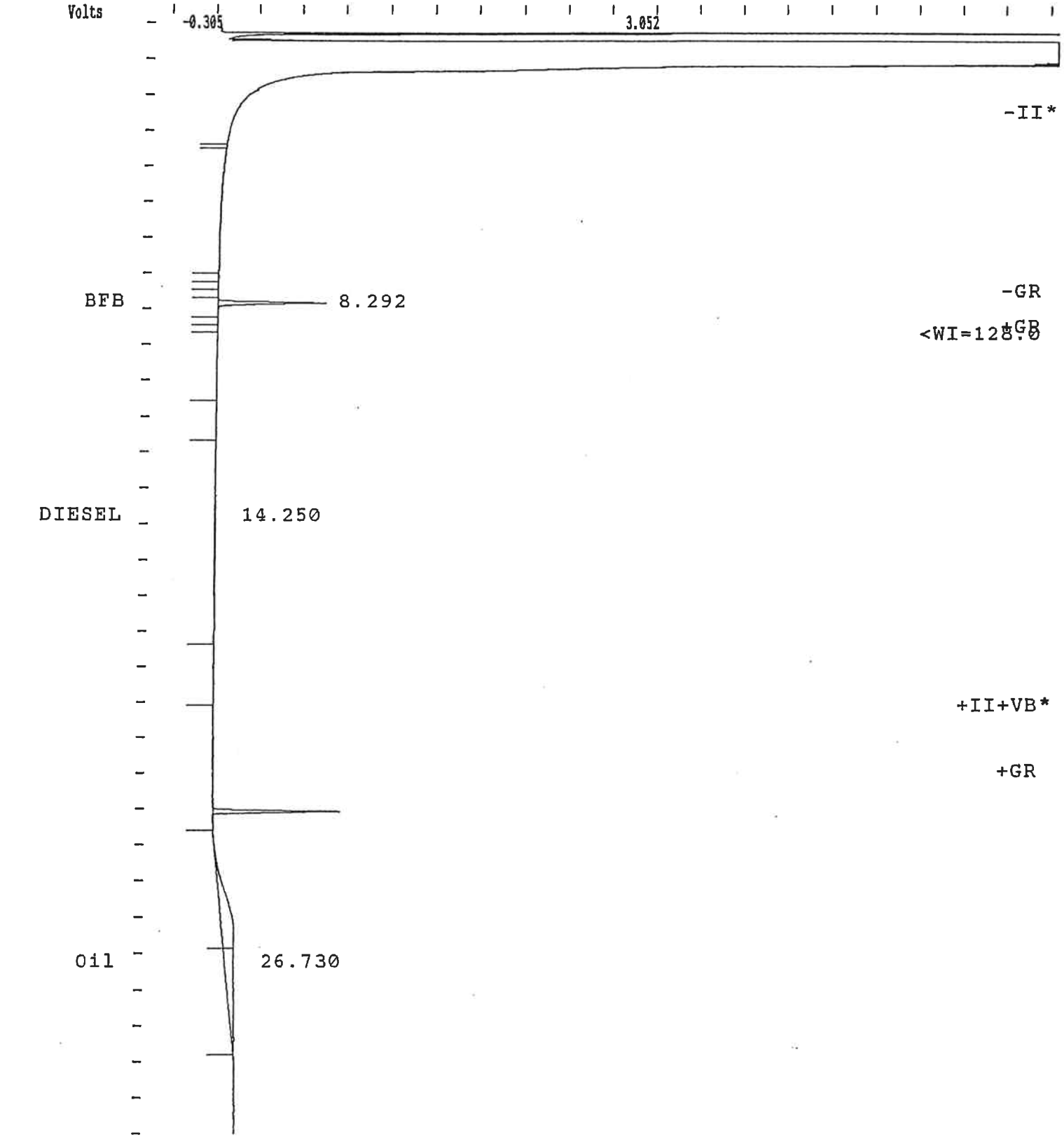
ction Date: 29-APR-99 9:54 PM Calculation Date: 29-APR-99 10:27 PM

ator : MD
station: MS-DOS_6
rument : Varian Star #2
nel : B = FID-B

Detector Type: ADCB (10 Volts)
Bus Address : 22
Sample Rate : 10.00 Hz
Run Time : 32.002 min

******* Star Chromatography Software ********** Version 4.0 **********

: Speed = 0.66 cm/min Attenuation = 2500 Zero Offset = 5%
: Time = 0.500 min End Time = 32.002 min Min / Tick = 1.00



ple ID : 2026 ceti

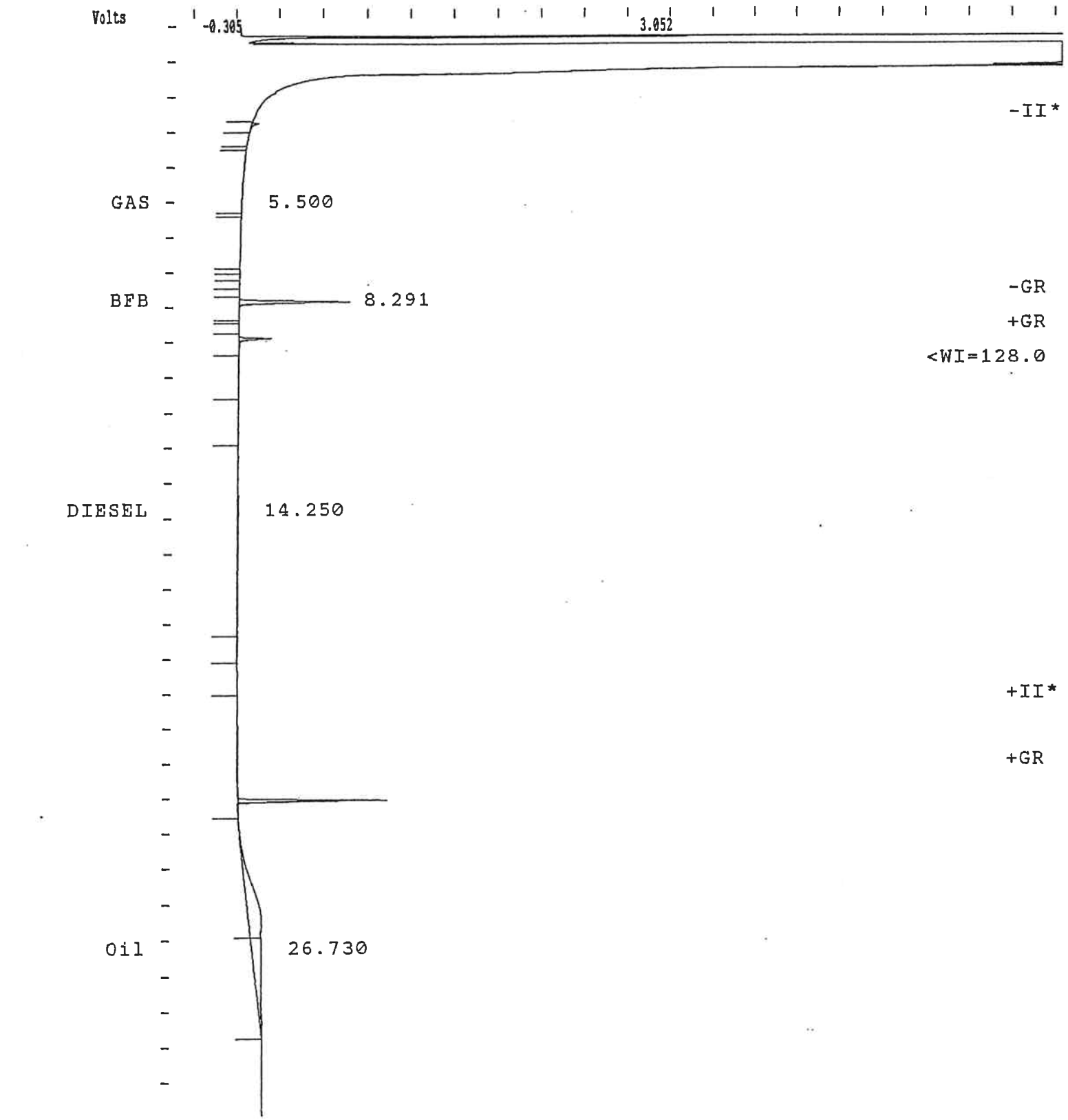
jection Date: 29-APR-99 10:34 PM Calculation Date: 29-APR-99 11:06 PM

rator : MD
:kstation: MS-DOS_6
strument : Varian Star #2
anel : B = FID-B

Detector Type: ADCB (10 Volts)
Bus Address : 22
Sample Rate : 10.00 Hz
Run Time : 32.002 min

********* Star Chromatography Software ********** Version 4.0 **********

rt Speed = 0.66 cm/min Attenuation = 2500 Zero Offset = 5%
art Time = 0.500 min End Time = 32.002 min Min / Tick = 1.00



le ID : 2027 ceti

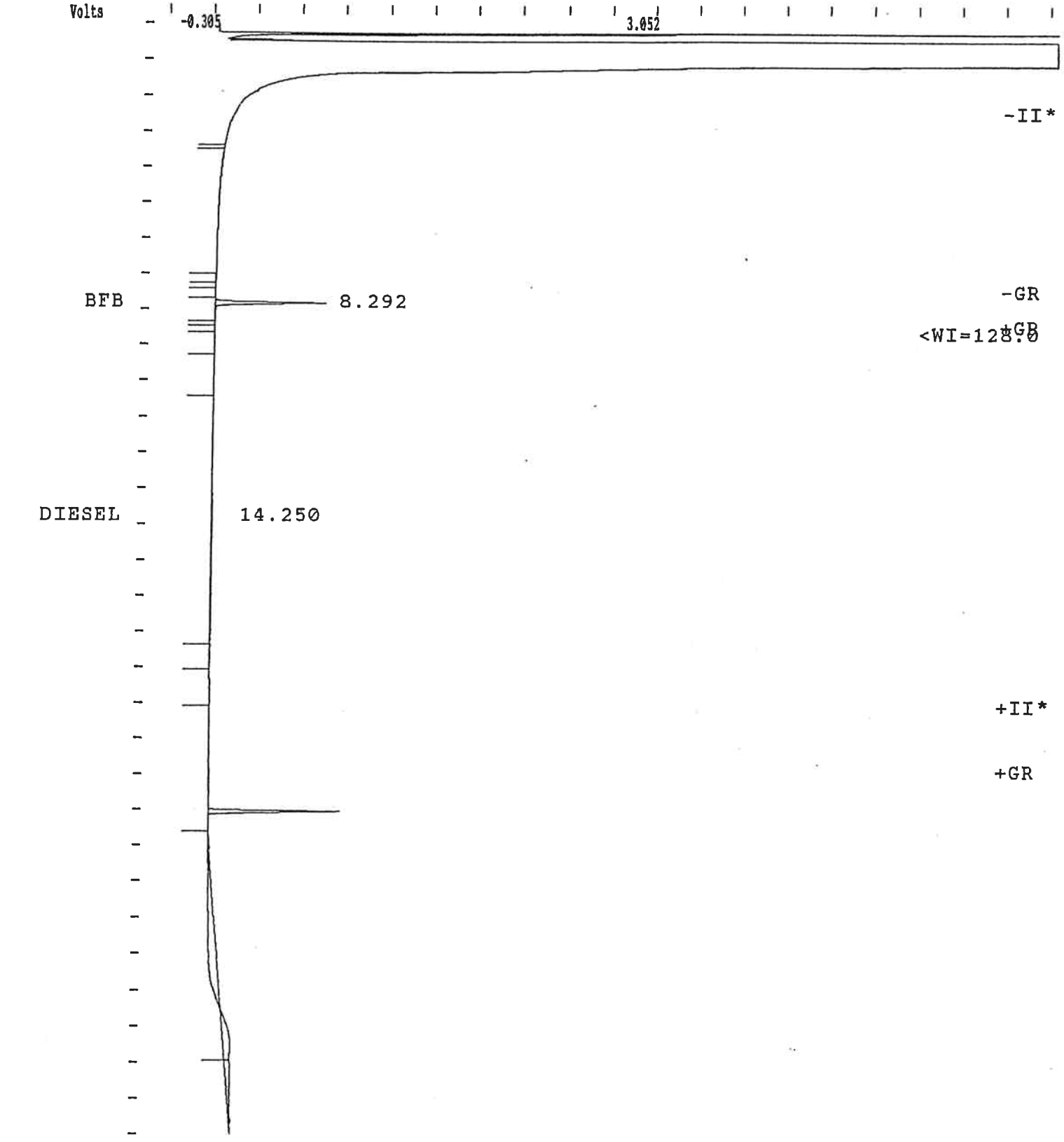
ction Date: 29-APR-99 11:13 PM Calculation Date: 29-APR-99 11:45 PM

ator : MD
station: MS-DOS_6
rument : Varian Star #2
nel : B = FID-B

Detector Type: ADCB (10 Volts)
Bus Address : 22
Sample Rate : 10.00 Hz
Run Time : 32.002 min

******* Star Chromatography Software ********** Version 4.0 **********

: Speed = 0.66 cm/min Attenuation = 2500 Zero Offset = 5%
: Time = 0.500 min End Time = 32.002 min Min / Tick = 1.00



ple ID : 2028 ceti

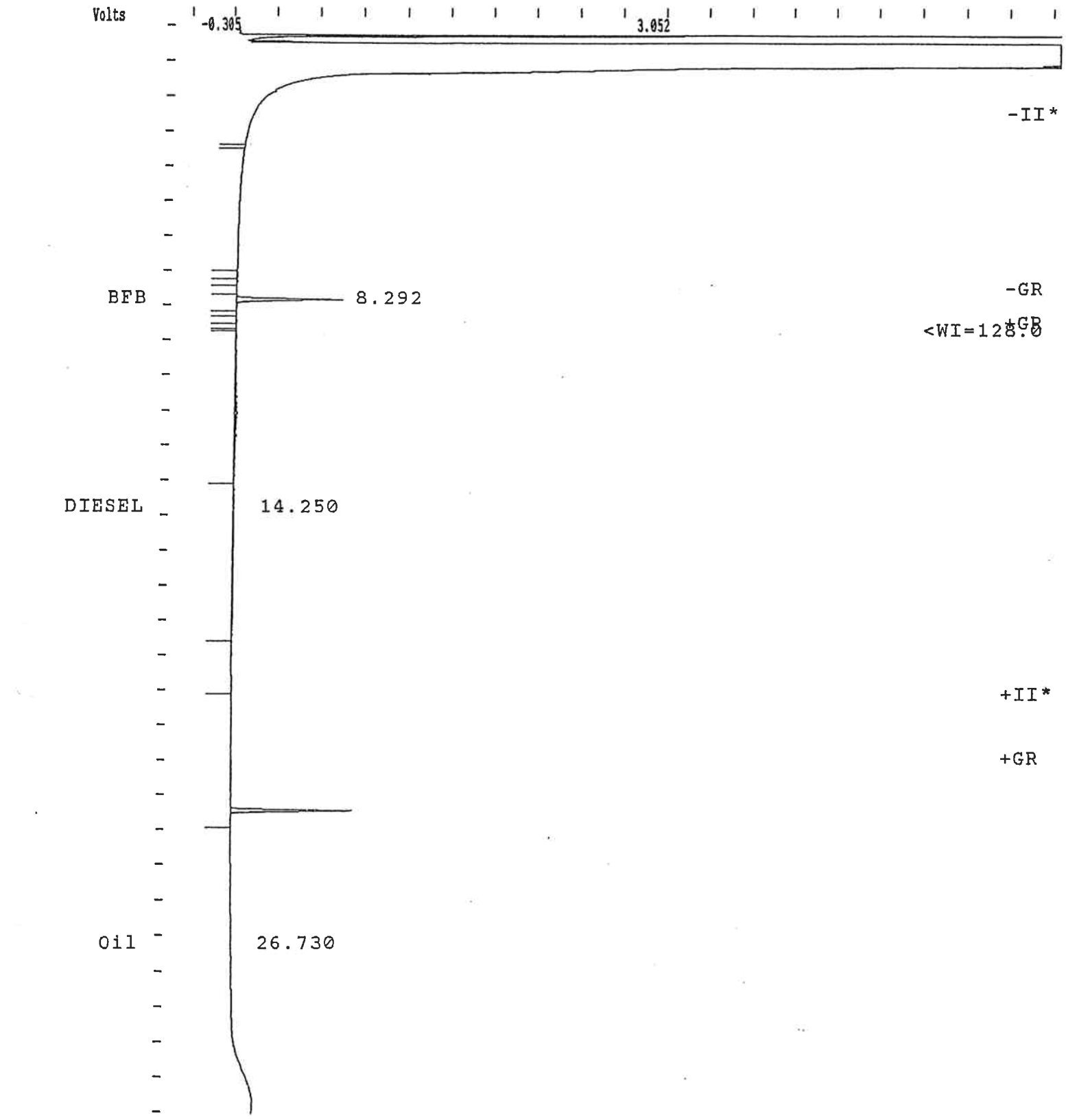
jection Date: 29-APR-99 11:52 PM Calculation Date: 30-APR-99 0:24 AM

rator : MD
kstation: MS-DOS_6
strument : Varian Star #2
nnel : B = FID-B

Detector Type: ADCB (10 Volts)
Bus Address : 22
Sample Rate : 10.00 Hz
Run Time : 32.002 min

********* Star Chromatography Software ********** Version 4.0 **********

rt Speed = 0.66 cm/min Attenuation = 2500 Zero Offset = 5%
irt Time = 0.500 min End Time = 32.002 min Min / Tick = 1.00



le ID : 2029 ceti

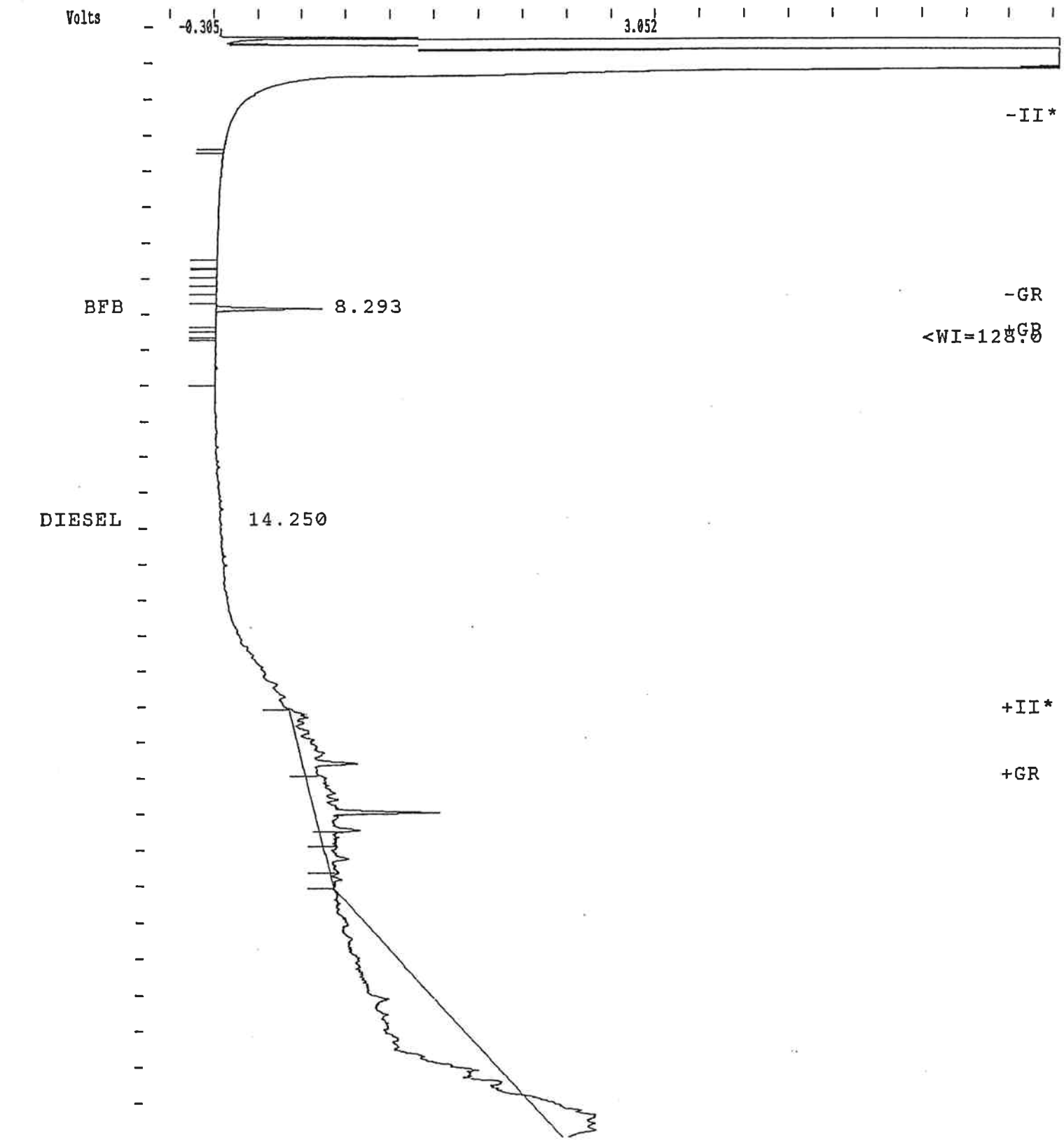
tion Date: 30-APR-99 0:31 AM Calculation Date: 30-APR-99 1:03 AM

ator : MD
station: MS-DOS_6
ument : Varian Star #2
nel : B = FID-B

Detector Type: ADCB (10 Volts)
Bus Address : 22
Sample Rate : 10.00 Hz
Run Time : 32.002 min

****** Star Chromatography Software ********** Version 4.0 **********

Speed = 0.66 cm/min Attenuation = 2500 Zero Offset = 5%
Time = 0.500 min End Time = 32.002 min Min / Tick = 1.00



ple ID : 2104 ceti

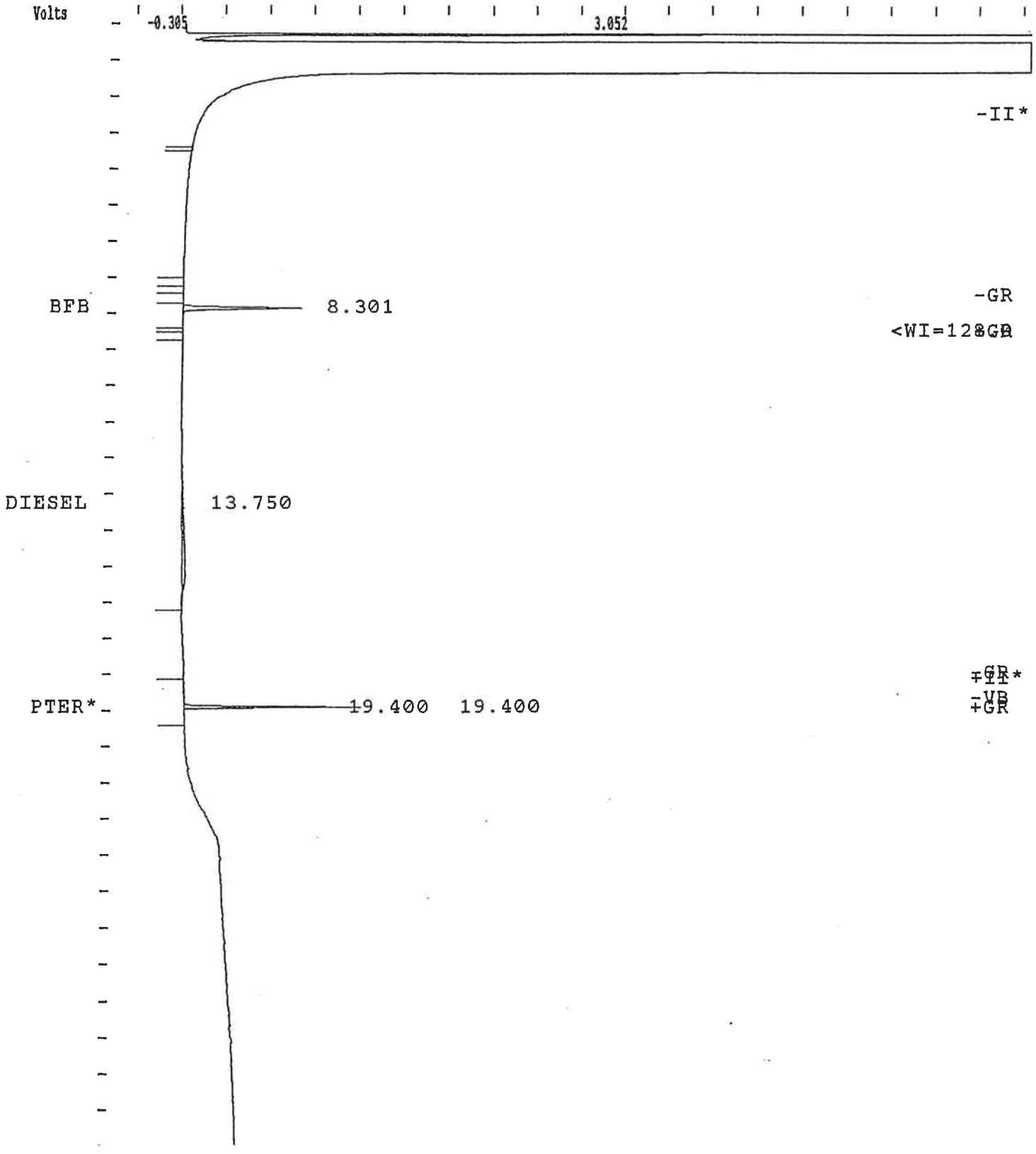
jection Date: 30-APR-99 6:11 PM Calculation Date: 30-APR-99 6:43 PM

rator : MD
:kstation: MS-DOS_6
:trument : Varian Star #2
nnel : B = FID-B

Detector Type: ADCB (10 Volts)
Bus Address : 22
Sample Rate : 10.00 Hz
Run Time : 32.002 min

******** Star Chromatography Software ********** Version 4.0 ***************

ct Speed = 0.66 cm/min Attenuation = 2500 Zero Offset = 5%
art Time = 0.500 min End Time = 32.002 min Min / Tick = 1.00



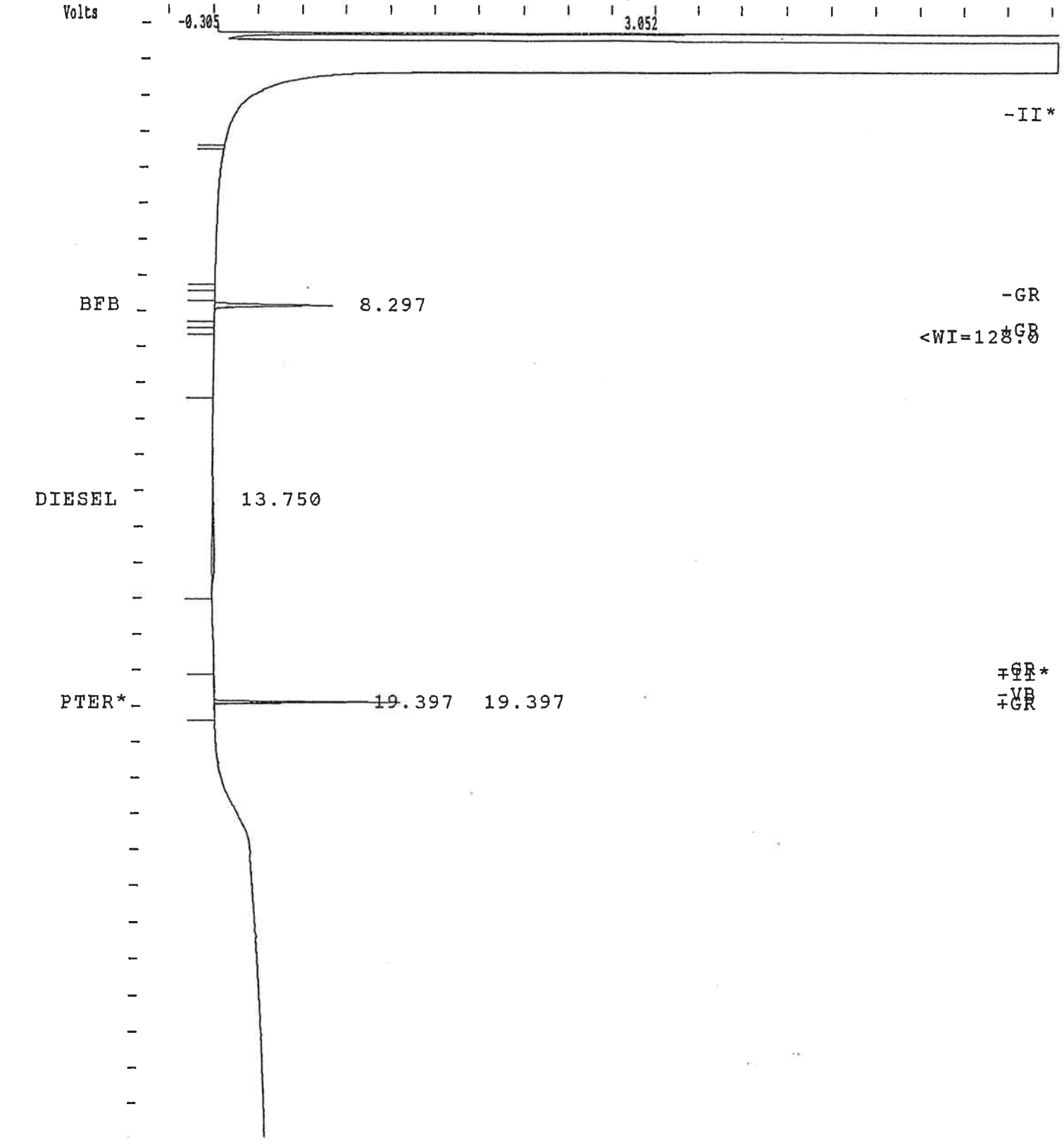
Data File : C:\STAR\WD4.RAW
Sample ID : 2105 ceti

Collection Date: 30-APR-99 6:51 PM Calculation Date: 30-APR-99 7:23 PM

Operator : MD Detector Type: ADCB (10 Volts)
Instrument: MS-DOS_6 Bus Address : 22
Instrument : Varian Star #2 Sample Rate : 10.00 Hz
Channel : B = FID-B Run Time : 32.002 min

******* Star Chromatography Software ********** Version 4.0 **********

Chart Speed = 0.66 cm/min Attenuation = 2500 Zero Offset = 5%
Plot Time = 0.500 min End Time = 32.002 min Min / Tick = 1.00



Method File : C:\STAR\WD4.MTH
Sample ID : 2100 ceti
2106

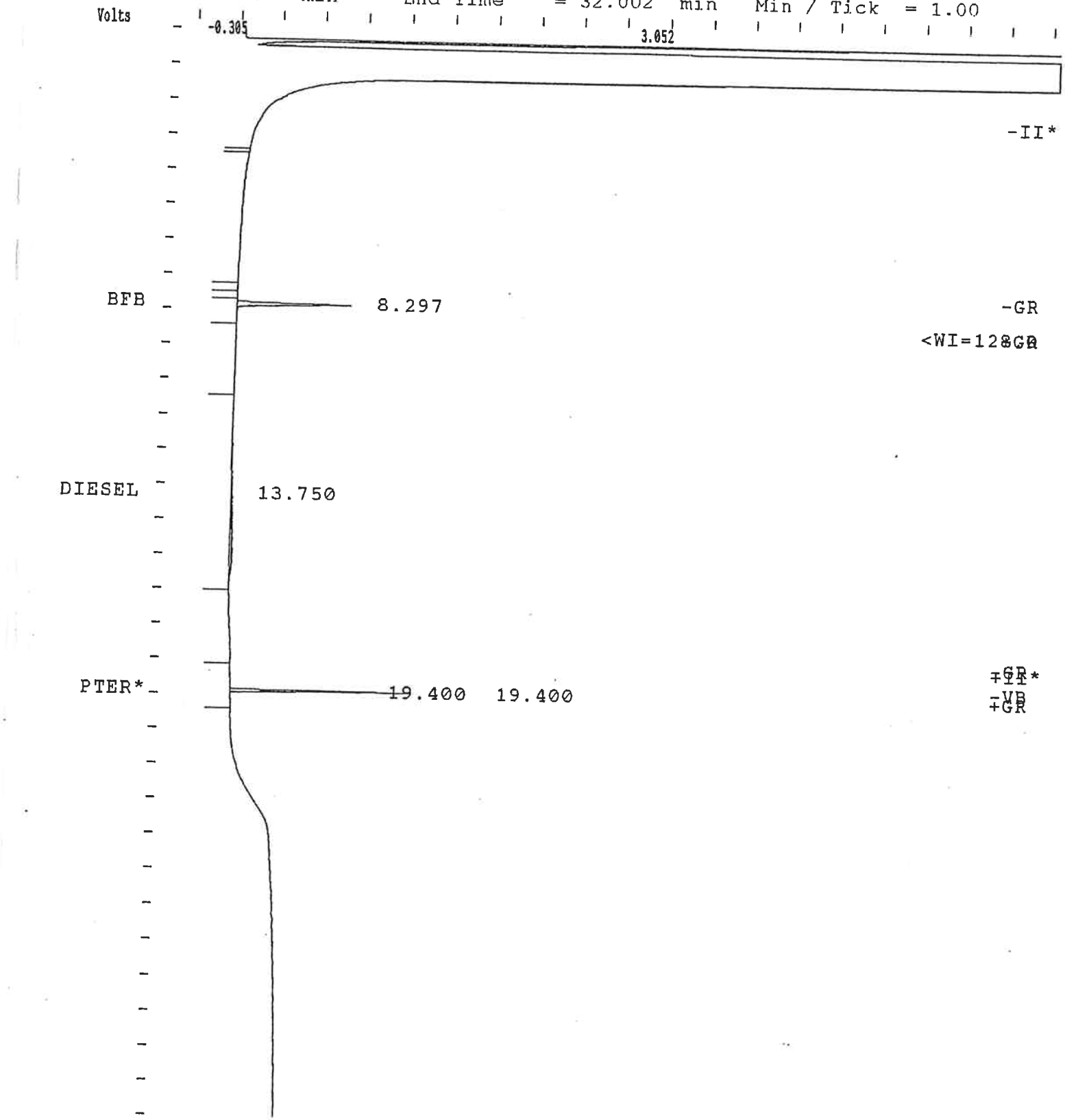
Injection Date: 30-APR-99 7:31 PM Calculation Date: 30-APR-99 8:03 PM

Operator : MD
Workstation: MS-DOS_6
Instrument : Varian Star #2
Channel : B = FID-B

Detector Type: ADCB (10 Volts)
Bus Address : 22
Sample Rate : 10.00 Hz
Run Time : 32.002 min

********** Star Chromatography Software ********** Version 4.0 **********

Chart Speed = 0.66 cm/min Attenuation = 2500 Zero Offset = 5%
Start Time = 0.500 min End Time = 32.002 min Min / Tick = 1.00



od File : C:\STAR\WD4.MTH
.e ID : 2107 ceti

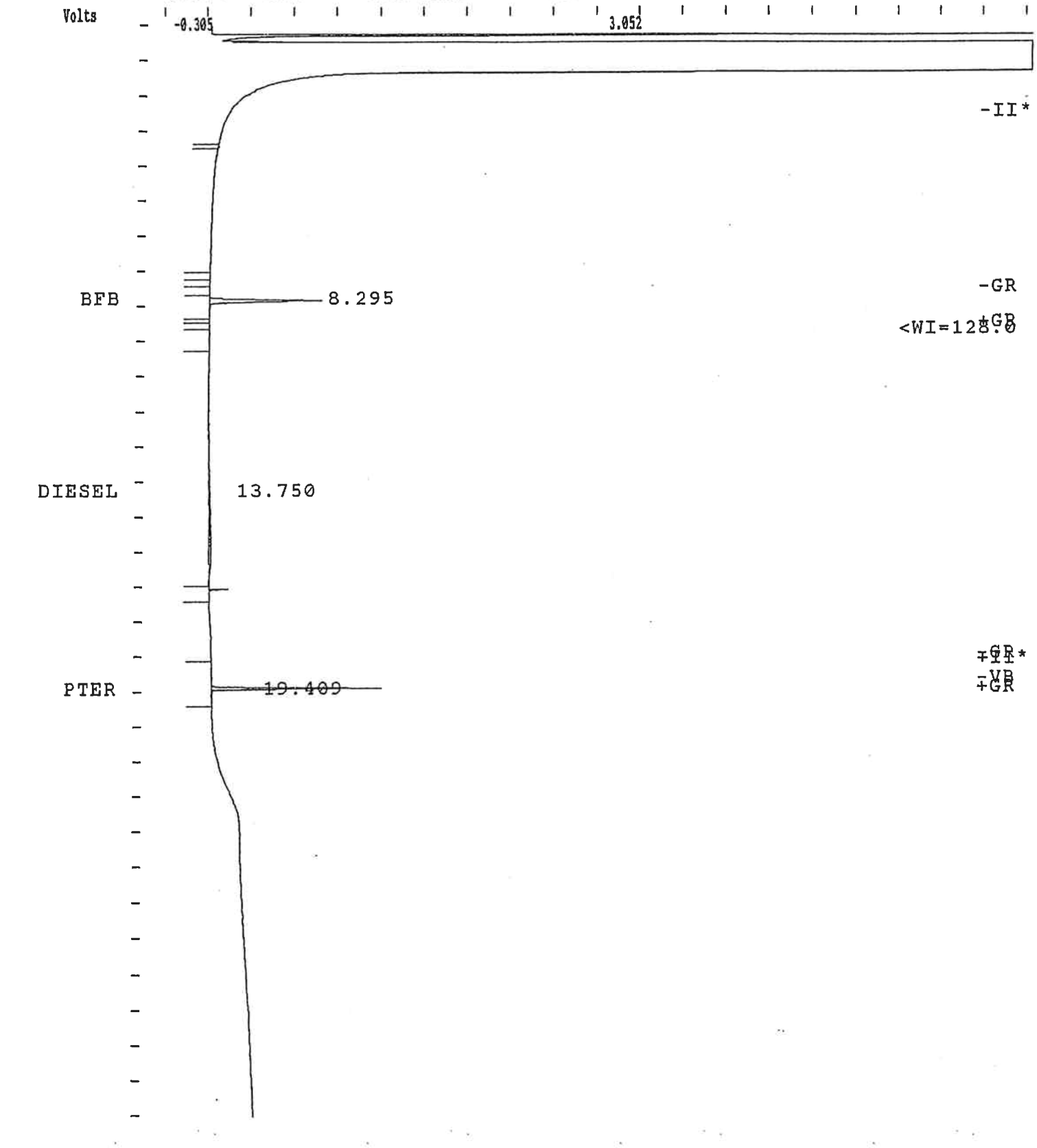
:tion Date: 30-APR-99 8:10 PM Calculation Date: 30-APR-99 8:43 PM

ıtor : MD
:tation: MS-DOS_6
:ument : Varian Star #2
ıel : B = FID-B

Detector Type: ADCB (10 Volts)
Bus Address : 22
Sample Rate : 10.00 Hz
Run Time : 32.002 min

'****** Star Chromatography Software ********** Version 4.0 **********

. Speed = 0.66 cm/min Attenuation = 2500 Zero Offset = 5%
. Time = 0.500 min End Time = 32.002 min Min / Tick = 1.00



Method File : C:\STAR\MD4.MTH
Sample ID : 2108 ceti

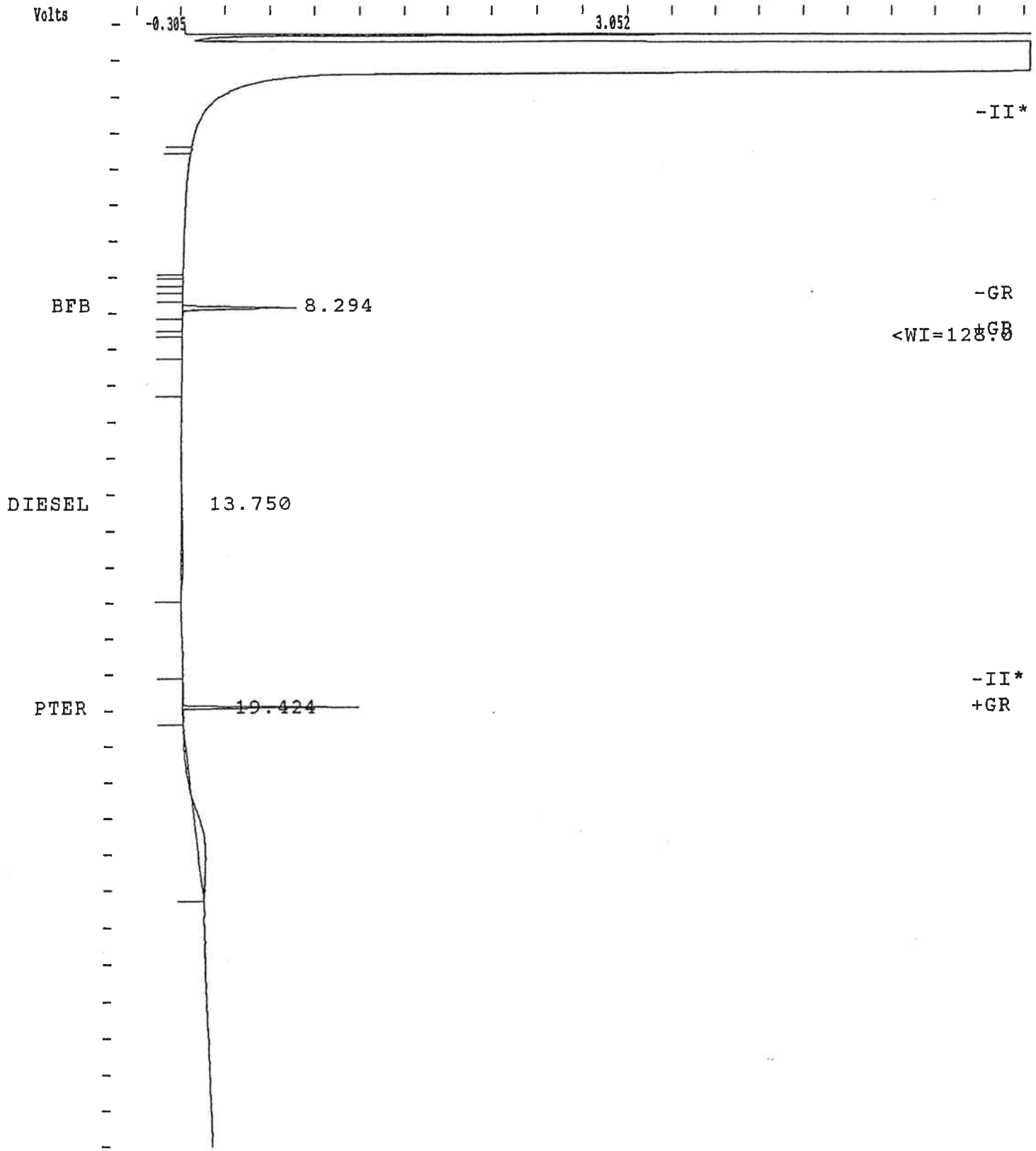
Injection Date: 30-APR-99 8:50 PM Calculation Date: 30-APR-99 9:22 PM

Operator : MD
Workstation: MS-DOS_6
Instrument : Varian Star #2
Channel : B = FID-B

Detector Type: ADCB (10 Volts)
Bus Address : 22
Sample Rate : 10.00 Hz
Run Time : 32.002 min

********* Star Chromatography Software ********** Version 4.0 **********

Chart Speed = 0.66 cm/min Attenuation = 2500 Zero Offset = 5%
Start Time = 0.500 min End Time = 32.002 min Min / Tick = 1.00



:e ID : 2109 ceti

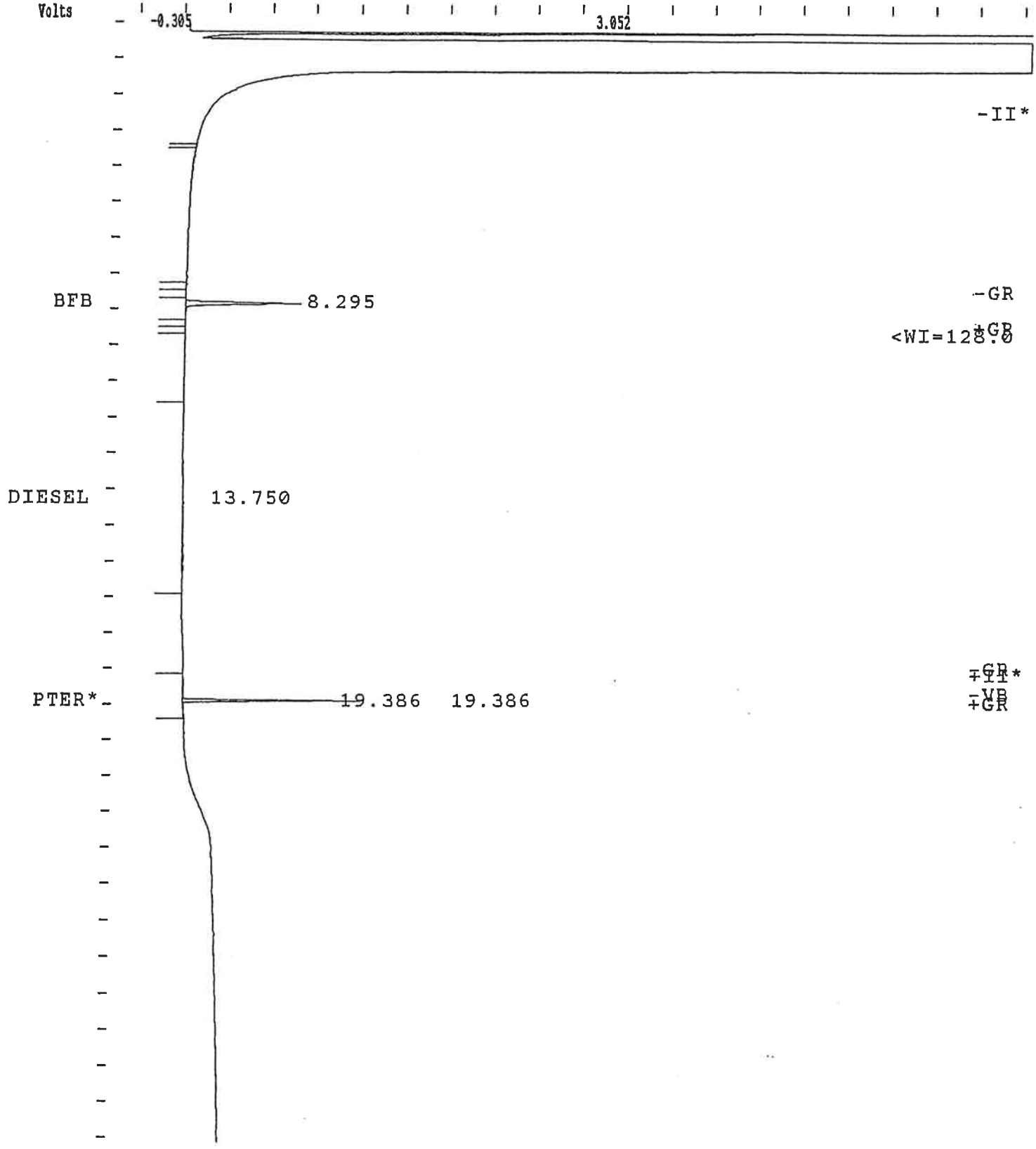
:tion Date: 30-APR-99 9:30 PM Calculation Date: 30-APR-99 10:02 PM

ıtor : MD
ıtation: MS-DOS_6
:ument : Varian Star #2
ıel : B = FID-B

Detector Type: ADCB (10 Volts)
Bus Address : 22
Sample Rate : 10.00 Hz
Run Time : 32.002 min

'****** Star Chromatography Software ********** Version 4.0 **********

Speed = 0.66 cm/min Attenuation = 2500 Zero Offset = 5%
Time = 0.500 min End Time = 32.002 min Min / Tick = 1.00



ple ID : 2110 ceti

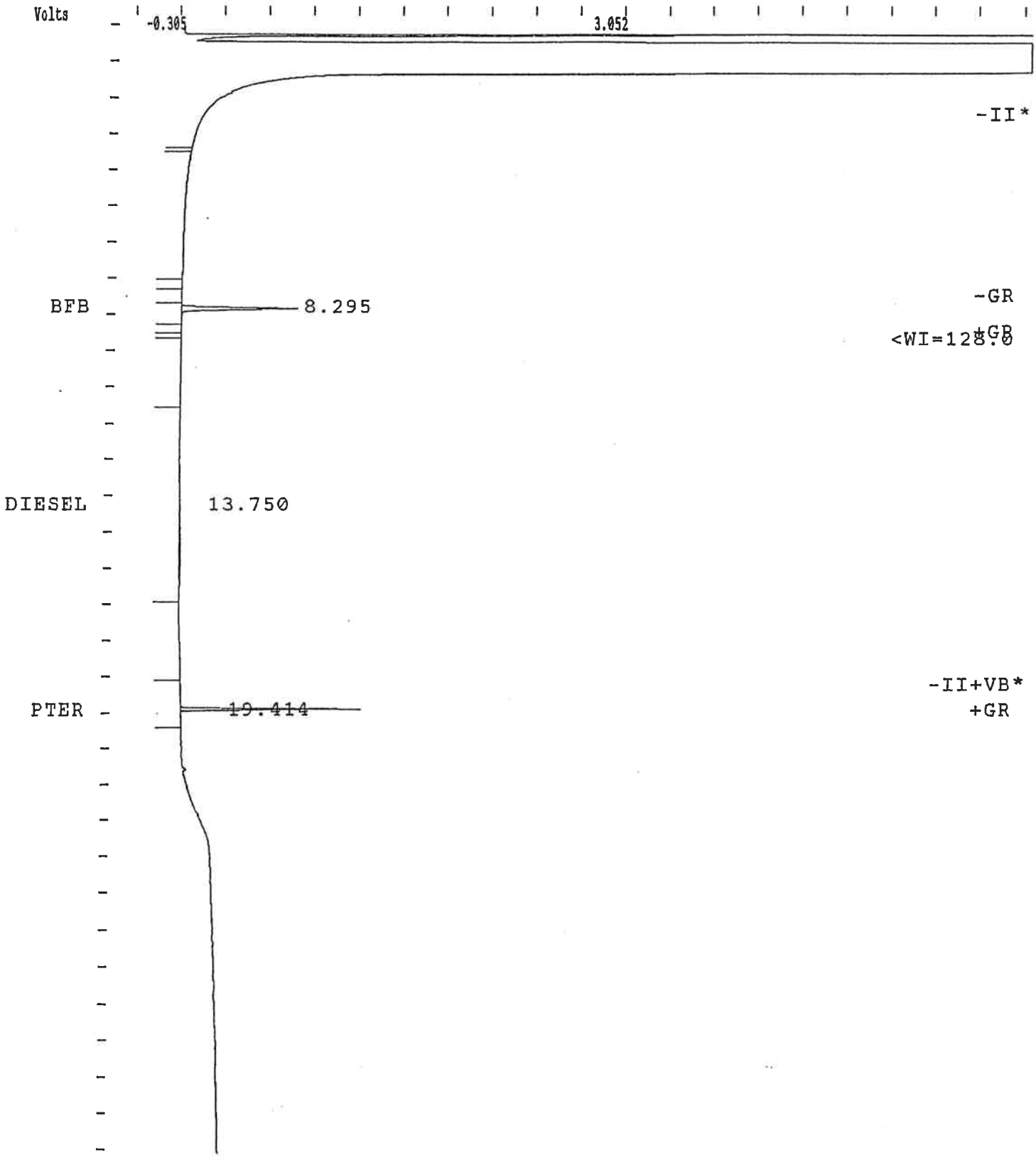
jection Date: 30-APR-99 10:09 PM Calculation Date: 30-APR-99 10:42 PM

rator : MD
.kstation: MS-DOS_6
strument : Varian Star #2
anel : B = FID-B

Detector Type: ADCB (10 Volts)
Bus Address : 22
Sample Rate : 10.00 Hz
Run Time : 32.002 min

********* Star Chromatography Software ********** Version 4.0 **********

ct Speed = 0.66 cm/min Attenuation = 2500 Zero Offset = 5%
art Time = 0.500 min End Time = 32.002 min Min / Tick = 1.00



le ID : 2111 ceti

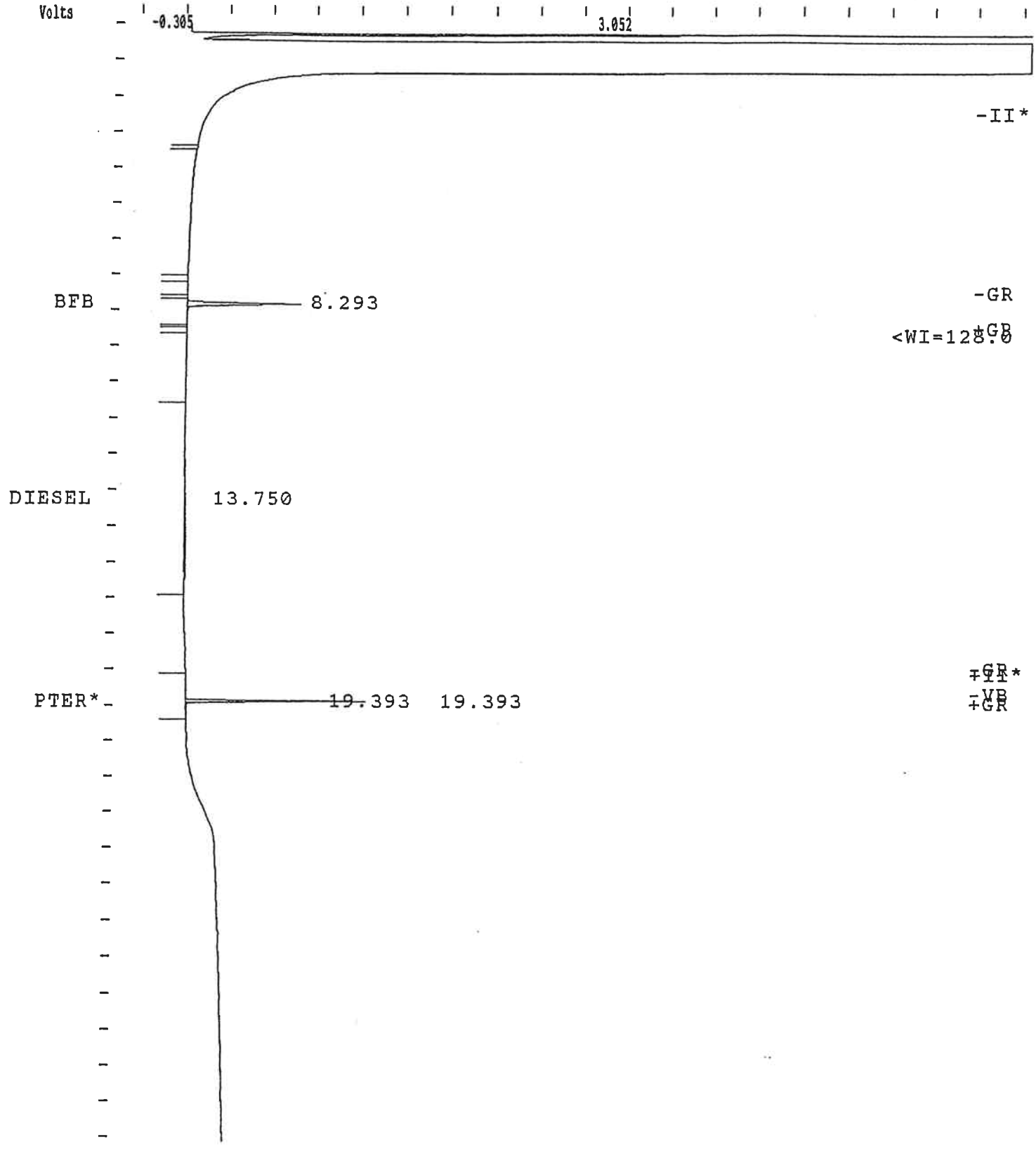
ction Date: 30-APR-99 10:49 PM Calculation Date: 30-APR-99 11:21 PM

ator : MD
station: MS-DOS_6
ument : Varian Star #2
nel : B = FID-B

Detector Type: ADCB (10 Volts)
Bus Address : 22
Sample Rate : 10.00 Hz
Run Time : 32.002 min

****** Star Chromatography Software ********** Version 4.0 **********

Speed = 0.66 cm/min Attenuation = 2500 Zero Offset = 5%
Time = 0.500 min End Time = 32.002 min Min / Tick = 1.00



hod File : C:\STAR\WD4.MTH
ple ID : 2112 ceti

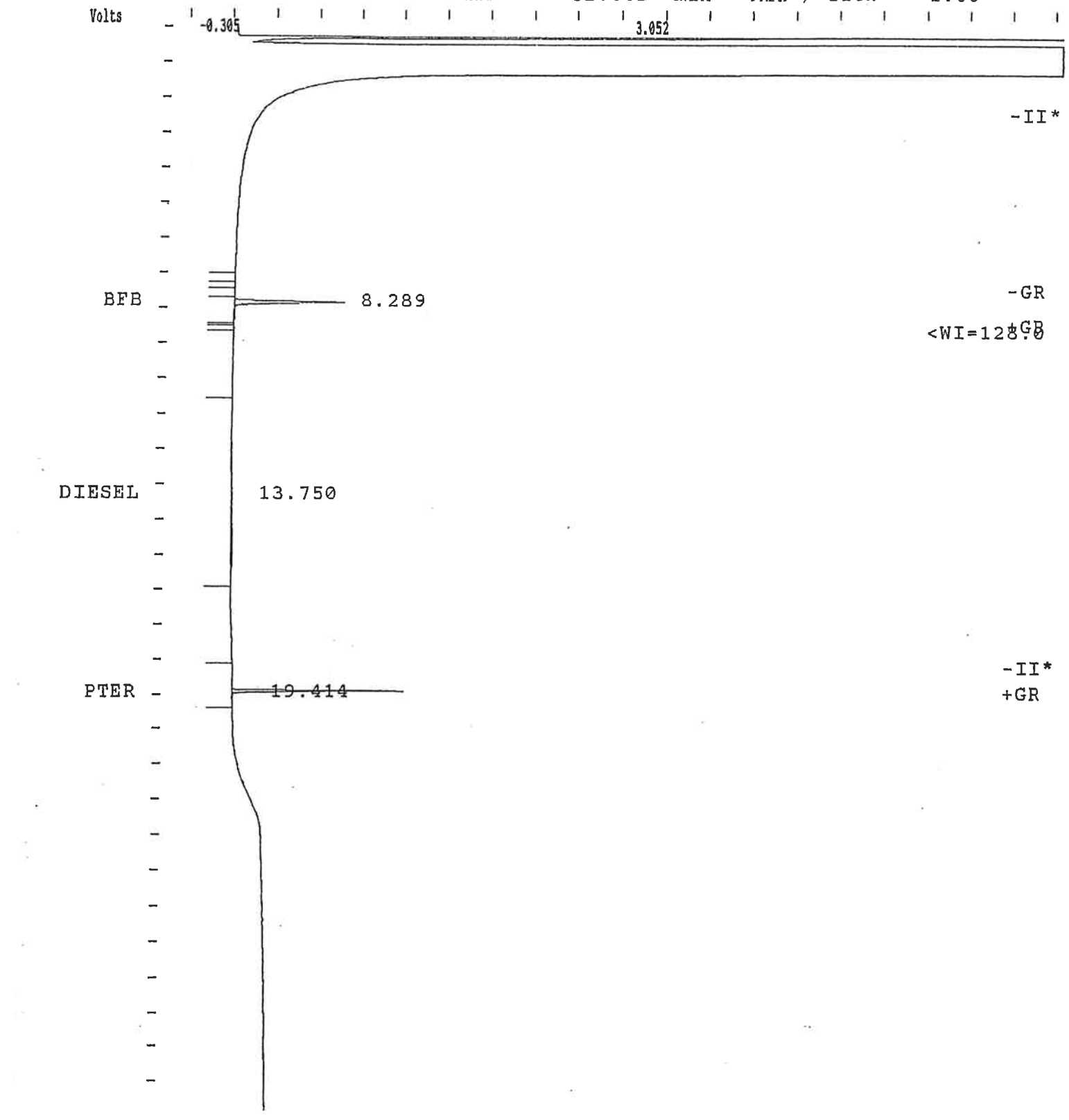
ection Date: 3-MAY-99 3:58 PM Calculation Date: 3-MAY-99 4:31 PM

rator : MD
kstation: MS-DOS_6
trument : Varian Star #2
nel : B = FID-B

Detector Type: ADCB (10 Volts)
Bus Address : 22
Sample Rate : 10.00 Hz
Run Time : 32.002 min

******** Star Chromatography Software ********** Version 4.0 ***************

rt Speed = 0.66 cm/min Attenuation = 2500 Zero Offset = 5%
rt Time = 0.500 min End Time = 32.002 min Min / Tick = 1.00



SPECTRA Laboratories, Inc.

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CHAIN OF CUSTODY

RCRA - 13

CLIENT: Metal Marine Pilot/CETI
PROJECT:
CONTACT: Janet Freeman-Daily
PHONE: (253) 564-5902
PURCHASE ORDER #:

SAMPLE ID	DATE	TIME	MATRIX	NUMBER OF CONTAINERS	WTPH-HCID	BTEX/WTPH-G	BTEX	WTPH-G	WTPH-D	TPH	F.O.G. 413.1/413.2	8260 VOA	8260 CHLOR SOLVENTS	8270 SEMI-VOA	PAH/PNA-8270	8080 ORG. CHLOR PEST.	8082 PCB	TCLP METALS (8)	TCLP-VOA	TCLP 8270 SEMI-VOA	TCLP PEST.	TCLP HERB.	TOTAL METALS ICP/DCP	TOTAL METALS GFAA	TOTAL LEAD	pH 9040/9045	TOX 9020/9076	TOC 9060/PSEP	FLASH POINT	SOLIDS (SPECIFY)				NORMAL / RUSH	LAB ID
S1-42699	4.26.99	3:40	Soil/H2O	1						X													X				X								

RETURN
DISPOSE
Fee applies

SPECIAL INSTRUCTIONS/COMMENTS:
cell # 606 2173 (Janet)
call both Janet and CETI when results come back.

	SIGNATURE	PRINTED NAME	COMPANY	DATE	TIME
RELINQUISHED BY		Fritz A. Carmine	CETI	4.26.99	4:40
RECEIVED BY		MARIE HALT	SPECTRA	4-26-99	4:40
RELINQUISHED BY					
RECEIVED BY					

Payment Terms: Net 30 days. Past due accounts subject to 18% per annum interest. Customer agrees to pay all costs of collection including reasonable attorney's fees and all other associated costs of collection regardless of whether suit is filed.

SPECTRA Laboratories, Inc.

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CHAIN of CUSTODY

CLIENT: CETI
PROJECT: Metal Marine 103-1
CONTACT: Stena Spencer
PHONE: 627-3347
PURCHASE ORDER #:

SAMPLE ID	DATE	TIME	MATRIX	NUMBER OF CONTAINERS	HYDROCARBONS: WTPH-HCID	BTEX/WTPH-G	BTEX	WTPH-G	WTPH-D	TPH	F.O.G. 413.1/413.2	ORGANICS: 8260 VOA	8260 CHLOR SOLVENTS	8270 SEMI-VOA	PAH/PNA-8270	8080 ORG. CHLOR PEST.	8082 PCB	TCLP D-LIST: TCLP METALS (8)	TCLP-VOA	TCLP 8270 SEMI-VOA	TCLP PEST.	TCLP HERB.	METALS: TOTAL METALS ICP/DCP	TOTAL METALS GFAA	TOTAL LEAD	OTHER: pH 9040/9045	TOX 9020/9076	TOC 9060/PSEP	FLASH POINT	SOLIDS (SPECIFY)					NORMAL / RUSH
S1	4.27.99		soil	1						X																								
S2	↓		↓	↓						↓																								
S3																																		
S4																																		
S5																																		
S6																																		
S7	↓		↓	↓						↓																								

RETURN

DISPOSE

Fee applies

LAB ID

SPECIAL INSTRUCTIONS/COMMENTS:

	SIGNATURE	PRINTED NAME	COMPANY	DATE	TIME
RELINQUISHED BY		Fritz Carmine	CETI	4-28-99	9:08
RECEIVED BY	D. Triska	D. Triska	Spectra	4-28-99	9:08
RELINQUISHED BY					
RECEIVED BY					

Payment Terms: Net 30 days. Past due accounts subject to 18% per annum interest. Customer agrees to pay all costs of collection including reasonable attorney's fees and all other associated costs of collection regardless of whether suit is filed.

CHAIN of CUSTODY

SPECTRA Laboratories, Inc.
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CLIENT: CETI
PROJECT: Marine metal
CONTACT: Steve Spencer
PHONE: 627-3317
PURCHASE ORDER #: 103-1

SAMPLE ID	DATE	TIME	MATRIX	NUMBER OF CONTAINERS	HYDROCARBONS: WTPH-HCID	BTEX/WTPH-G	BTEX	WTPH-G	WTPH-D Ext.	TPH	F.O.G. 413.1/413.2	ORGANICS: 8260 VOA	8260 CHLOR SOLVENTS	8270 SEMI-VOA	PAH/PNA-8270	8080 ORG. CHLOR PEST.	8082 PCB	TCLP D-LIST: TCLP METALS (8)	TCLP-VOA	TCLP 8270 SEMI-VOA	TCLP PEST.	TCLP HERB.	METALS: TOTAL METALS ICP/DCP	TOTAL METALS GFAA	TOTAL LEAD	OTHER: pH 9040/9045	TOX 9020/9076	TOC 9060/PSEP	FLASH POINT	SOLIDS (SPECIFY)					NORMAL / RUSH
C10-42899	4/28		Soil						X																									
S11-42899	"		"						"																									
S12-42899	"		"						"																									
S13-42899	"		"						"																									
S14-42899	"		"						"																									
S15-42899	"		"						"																									
S16-42899	"		"						"																									
S17-42899	"		"						"																									
S23-42899	"		"						"																									
S24-42899	"		"						"																									

RETURN: DISPOSE / Fee applies
LAB ID

SPECIAL INSTRUCTIONS/COMMENTS:

	SIGNATURE	PRINTED NAME	COMPANY	DATE	TIME
RELINQUISHED BY		Fritz Carmine	CETI	4.28.99	4:56
RECEIVED BY	D. Triska	D. Triska	Spectra	4.28.99	4:50
RELINQUISHED BY					
RECEIVED BY					

Payment Terms: Net 30 days. Past due accounts subject to 18% per annum interest. Customer agrees to pay all costs of collection including reasonable attorney's fees and all other associated costs of collection regardless of whether suit is filed.

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CHAIN of CUSTODY

CLIENT: CETI
PROJECT: Marine Metal 103
CONTACT: Steve Spencer
PHONE: 627 3347
PURCHASE ORDER #: 103-1

SAMPLE ID	DATE	TIME	MATRIX	NUMBER OF CONTAINERS
S25-42899	4/28		Soil	
S26-42899	"		"	
S27-42899	"		"	
S28-42899	"		"	
S29-42899	"		"	

HYDROCARBONS							ORGANICS						TCLP D-LIST					METALS			OTHER										RETURN
WTPH-HCID	BTEX/WTPH-G	BTEX	WTPH-G	WTPH-D EXT.	TPH	F.O.G. 413.1/413.2	8260 VOA	8260 CHLOR SOLVENTS	8270 SEMI-VOA	PAH/PNA-8270	8080 ORG. CHLOR PEST.	8082 PCB	TCLP METALS (8)	TCLP-VOA	TCLP 8270 SEMI-VOA	TCLP PEST.	TCLP HERB.	TOTAL METALS ICP/DCP	TOTAL METALS GFAA	TOTAL LEAD	pH 9040/9045	TOX 9020/9076	TOC 9060/PSEP	FLASH POINT	SOLIDS (SPECIFY)					NORMAL / RUSH	DISPOSE Fee applies
				K																										
				"																										
				"																										
				"																										
				"																										

LAB ID

SPECIAL INSTRUCTIONS/COMMENTS:

	SIGNATURE	PRINTED NAME	COMPANY	DATE	TIME
RELINQUISHED BY		Fritz Carmile	CETI	4-28-99	4:50
RECEIVED BY		D. Triska	Spectra	4-28-99	4:50
RELINQUISHED BY					
RECEIVED BY					

Payment Terms: Net 30 days. Past due accounts subject to 18% per annum interest. Customer agrees to pay all costs of collection including reasonable attorney's fees and all other associated costs of collection regardless of whether suit is filed.

CHAIN of CUSTODY

SPECTRA Laboratories, Inc.

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CLIENT: CETI
PROJECT: Metal Marine
CONTACT: Steve Spencer
PHONE: 627 - 3347
PURCHASE ORDER #:

SAMPLE ID	DATE	TIME	MATRIX	NUMBER OF CONTAINERS	WTPH-HCID	BTEX/WTPH-G	BTEX	WTPH-G	WTPH-D (ext.)	TPH	F.O.G. 413.1/413.2	8260 VOA	8260 CHLOR SOLVENTS	8270 SEMI-VOA	PAH/PNA-8270	8080 ORG. CHLOR PEST.	8082 PCB	TCLP METALS (8)	TCLP-VOA	TCLP 8270 SEMI-VOA	TCLP PEST.	TCLP HERB.	TOTAL METALS ICP/DCP	TOTAL METALS GFAA	TOTAL LEAD	pH 9040/9045	TOX 9020/9076	TOC 9060/PSEP	FLASH POINT	SOLIDS (SPECIFY)				NORMAL / RUSH	LAB ID
S30-43099	4.30.99	—	Soil	1					X																										
S31-43099	↓		↓	↓					↓																										
S32-43099																																			
S33-43099																																			
S34-43099																																			
S35-43099																																			
S36-43099																																			
S37-43099	↓		↓	↓					↓																										
S38-43099	↓		↓	↓					↓																										

RETURN
DISPOSE
Fee applies

SPECIAL INSTRUCTIONS/COMMENTS:

Needs Chromatograms

	SIGNATURE	PRINTED NAME	COMPANY	DATE	TIME
RELINQUISHED BY		Fritz Carmine	CETI	4.30.99	12:27
RECEIVED BY	Marie Holt	MARIE HOLT	Spectra	4-30-99	12:3[illegible]
RELINQUISHED BY					
RECEIVED BY					

Payment Terms: Net 30 days. Past due accounts subject to 18% per annum interest. Customer agrees to pay all costs of collection including reasonable attorney's fees and all other associated costs of collection regardless of whether suit is filed.

Hydro Slick #FR-200
MATERIAL SAFETY DATA SHEET

MANUFACTURER: G.W. Smith & Sons
1700 Spaulding Road
Dayton, OH 45432

INFORMATION PHONE: 513-253-5114
EMERGENCY PHONE: Same

HMIS INFORMATION: **HEALTH:** **FLAMMABILITY:** **REACTIVE:** **PROTECTION:**

SECTION I - PRODUCT IDENTIFICATION

PRODUCT NAME: Hydro Slick #FR-200
PRODUCT NUMBER:
PREPARED BY: Michael "V" Curtiss
DATE CREATED: 1/15/97
LAST REVISION: 1/5/99
SYNONYMS:

DOT CLASS: Not Regulated by DOT
HAZARD CLASS: N/A
UN NUMBER: N/A **PG:** N/A
GUIDE NUMBER: N/A
SHIPPING NAME:

SECTION II - HAZARDOUS INGREDIENTS

Chemical Name	CAS	OSHA PEL	ACGIH TLV	Weight %
Diethylene glycol	111-46-6			<50
TS Additives	Trade Secret	N/E	N/E	<5
TS Polyalkylene Glycol	Trade Secret	N/E	N/E	<15
Water	7732-18-5			<45

SECTION III - PHYSICAL CHARACTERISTICS

BOILING POINT: 223 F
VAPOR PRESSURE: @ 20 C = 13.2 mmHg. @ 20 C
EVAPORATION RATE: butly acetate = 1) 0.92

SPECIFIC GRAVITY: 1.086 @ 20 C
MELTING POINT: N/A
VAPOR DENSITY: (air=1) 1.3
POUNDS PER GALLON: N/A

SOLUBILITY IN WATER:
100%

APPEARANCE AND ODOR:
Red liquid, mild musty odor

SECTION IV - FIRE/EXPLOSION

FLASH POINT: None **ESTIMATED EXPLOSIVE LIMIT RANGE** **LEL:** 0.00% **UEL:** 0.00%

FLASH POINT METHOD USED: N/A

EXTINGUISHING MEDIA:
Non-Flammable (Aqueous solution): After water evaporates, remaining material will burn. Use alcohol-type or all-purpose type foam applied by manufacture's recommended technique for large fires. Use carbon dioxide or dry chemical media for small fires.

SPECIAL FIRE-FIGHTING PROCEDURES:
Firefighters should wear proper protective equipment and self-contained breathing apparatus with full facepiece in positive pressure mode. Move containers from fire area if it can be done without risk. Use water to keep fire-exposed containers cool.

UNUSUAL FIRE AND EXPLOSION HAZARDS:
During a fire , oxides of nitrogen may be produced.

SECTION V - REACTIVITY DATA

STABILITY: Stable

CONDITIONS TO AVOID:
WARNING! Do not mix this product with nitrites or nitrosating agents, nitrosamines may be formed. Nitrosamines may cause cancer.

INCOMPATIBILITY:
Normally unreactive; however, avoid strong bases at high temperatures, strong acids, strong oxidizing agents and materials reactive with hydroxyl compounds.

HAZARDOUS DECOMPOSITION OR BY PRODUCTS:
Combustion may produce oxides of carbon and nitrogen.

HAZARDOUS POLYMERIZATION: Will Not Occur

CONDITIONS TO AVOID:
N/A

SECTION VI - HEALTH HAZARD DATA

ACUTE HEALTH EFFECTS

EYE CONTACT: Can cause severe eye irritation

INHALATION: Short-term adverse health effects are not expected from exposure to vapor generated at ambient temperature. Aerosol or vapor formed by heating the material may cause nausea and headache.

INGESTION: Moderately high toxicity. May cause pain or discomfort in the abdomen, pain in the lumbar region, nausea, vomiting, diarrhea, dizziness, drowsiness, decreased urine production, malaise, and loss of consciousness. Severe kidney damage may occur which can be fatal if not properly and adequately treated.

SKIN CONTACT: Prolonged exposure may cause skin irritation.

SIGNS AND SYMPTOMS OF EXPOSURE:

Overexposure to vapor, aerosol or mist generated at high temperature may result in eye and respiratory tract irritation, dizziness, nausea and the inhalation of harmful amounts of material. Short-term repeated ingestion of diethylene glycol may produce renal failure. Overexposure to vapor generated at high temperature may result in eye and respiratory tract irritation, dizziness, nausea and the inhalationo f harmful amounts of material.

AGGRAVATED MEDICAL CONDITIONS:

May irritate pre existing respiratory and dermal conditions.

SUPPLEMENTAL HEALTH INFORMATION:

N/A

EMERGENCY FIRST AID PROCEDURES

EYE CONTACT: Immediately flush eyes with plenty of water. Get medical attention, if irritation persists.

INHALATION: Remove to fresh air.

INGESTION: If swallowed, induce vomitting immediately as directed by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention immediately.

SKIN CONTACT: Wash affected area with soap and water. If irritation persists, get medical attention.

SECTION VII - SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS SPILLED OR RELEASED:
Wear suitable protective equipment, especially eye protection. Small Spills: could be flushed with large amounts of water. Large Spills: should be collected for disposal.

WASTE DISPOSAL METHOD:
Dispose of residual product in accordance with state and federal regulations

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING:
Follow all MSDS/label precautions even after container is emptied because they may retain product residues.

OTHER PRECAUTIONS
N/A

SECTION VIII - CONTROL MEASURES

RESPIRATORY PROTECTION (Specify Type):
No respiratory protection is required when handling small quantities of this product.

VENTILATION:
Provide exhaust ventilation sufficient to keep the airborne concentration of this product below its exposure limits. Exhaust air may need to be cleaned by scrubbers or filters to reduce environmental contamination

PROTECTIVE GLOVES:
Polyvinyl Chloride coated

EYE PROTECTION:
Safety glasses with side shields (or goggles) and a face shield.

OTHER PROTECTIVE CLOTHING OR EQUIPMENT:
Always use this product in the vacinity of an eyewash station and a safety shower.

WORK/HYGIENIC PRACTICES:
Use good personal hygiene when handling this product. Wash hands after use, before smoking, or using the toilet.

SECTION IX - ADDITIONAL INFORMATION

OTHER ADDITIONAL INFORMATION:
No information available at this time.

The information contained herein is based on the data available to us and is believed to be accurate. However, no warranty is expressed or implied regarding the accuracy of this data or the results to be obtained from the use thereof. We assume no responsibility for injuries from the use of the product described herein.

Die Slick No. 390
MATERIAL SAFETY DATA SHEET

MANUFACTURER: G.W. Smith & Sons
1700 Spaulding Road
Dayton, OH 45432

INFORMATION PHONE: 513-253-5114
EMERGENCY PHONE: Same

HMIS INFORMATION: **HEALTH:** **FLAMMABILITY:** **REACTIVE:** **PROTECTION:**

SECTION I - PRODUCT IDENTIFICATION

PRODUCT NAME:	Die Slick No. 390	**DOT CLASS:**	Not Regulated by DOT	
PRODUCT NUMBER:		**HAZARD CLASS:**	N/A	
PREPARED BY:	Chad Lynn	**UN NUMBER:**	N/A	**PG:** N/A
DATE CREATED:	4/24/96	**GUIDE NUMBER:**	N/A	
LAST REVISION:		**SHIPPING NAME:**		
SYNONYMS:				

SECTION II - HAZARDOUS INGREDIENTS

Chemical Name	CAS	OSHA PEL	ACGIH TLV	Weight %
Ethanol	Mixture			1

SECTION III - PHYSICAL CHARACTERISTICS

BOILING POINT: 212 F
VAPOR PRESSURE: = Water mmHg. @ 20 C
EVAPORATION RATE: 1

SPECIFIC GRAVITY: 1
MELTING POINT: N/A
VAPOR DENSITY: = Water
POUNDS PER GALLON: N/A

SOLUBILITY IN WATER:
Dispersible

APPEARANCE AND ODOR:
Off-White Liquid. Bland Odor

SECTION IV - FIRE/EXPLOSION

FLASH POINT: None **ESTIMATED EXPLOSIVE LIMIT RANGE** **LEL:** 0.00% **UEL:** 0.00%

FLASH POINT METHOD USED: N/A

EXTINGUISHING MEDIA:
Use NFPA Class B extinguishers.(Carbon dioxide, dry chemical, or foam)

SPECIAL FIRE-FIGHTING PROCEDURES:
N/A

UNUSUAL FIRE AND EXPLOSION HAZARDS:
If water is evaporated, residue has a flash point of over 500 F

SECTION V - REACTIVITY DATA

STABILITY: Stable

CONDITIONS TO AVOID:
N/A

INCOMPATIBILITY:
Anything incompatable with water.

HAZARDOUS DECOMPOSITION OR BY PRODUCTS:
Oxides of carbon.

HAZARDOUS POLYMERIZATION: Will Not Occur

CONDITIONS TO AVOID:
N/A

SECTION VI - HEALTH HAZARD DATA

ACUTE HEALTH EFFECTS

EYE CONTACT: May cause slight irritation

INHALATION: May cause mild respiratory irritation

INGESTION: No hazard in normal industrial use.

SKIN CONTACT: Prolonged or repeated contact can result in defatting and drying of the skin which may result in skin irritation and dermatitis (rash).

SIGNS AND SYMPTOMS OF EXPOSURE:
Those items listed under Health Effects.

AGGRAVATED MEDICAL CONDITIONS:
N/A

SUPPLEMENTAL HEALTH INFORMATION:
N/A

EMERGENCY FIRST AID PROCEDURES

EYE CONTACT: Immediately flush eyes with plenty of water. Get medical attention, if irritation persists.

INHALATION: Remove to fresh air.

INGESTION: Do not induce vomiting. Give affected person plenty of liquid. Seek medical attention immediatelly.

SKIN CONTACT: Immediately wash skin with plenty of soap

SECTION VII - SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS SPILLED OR RELEASED:
Scoop back into container and/or soak up in absorbent materials.

WASTE DISPOSAL METHOD:
Dispose of residual product in accordance with state and federal regulations

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING:
Avoid exposure to mists and vapors. Keep from freezing.

OTHER PRECAUTIONS
Keep container closed when not in use and away from high heat.

SECTION VIII - CONTROL MEASURES

RESPIRATORY PROTECTION (Specify Type):
No respiratory protection is required when handling small quantities of this product.

VENTILATION:
Provide exhaust ventilation sufficient to keep the airborne concentration of this product below its exposure limits. Exhaust air may need to be cleaned by scrubbers or filters to reduce environmental contamination

PROTECTIVE GLOVES:
Impervious gloves are reccomended.

EYE PROTECTION:
Safety glasses with side shields (or goggles) and a face shield.

OTHER PROTECTIVE CLOTHING OR EQUIPMENT:
N/A

WORK/HYGIENIC PRACTICES:
Use good personal hygiene when handling this product. Wash hands after use, before smoking, or using the toilet.

SECTION IX - ADDITIONAL INFORMATION

OTHER ADDITIONAL INFORMATION:
No information available at this time.

The information contained herein is based on the data available to us and is believed to be accurate. However, no warranty is expressed or implied regarding the accuracy of this data or the results to be obtained from the use thereof. We assume no responsibility for injuries from the use of the product described herein.

Way Oil Vistac ISO 68
MATERIAL SAFETY DATA SHEET

MANUFACTURER: Cheveron, Associated Petrtoleum
2320 Milwaukee Way
Tacoma, WA 98421

INFORMATION PHONE: 800-457-2022
EMERGENCY PHONE:

HMIS INFORMATION: HEALTH: 0 FLAMMABILITY: 1 REACTIVE: 0 PROTECTION:

SECTION I - PRODUCT IDENTIFICATION

PRODUCT NAME:	Way Oil Vistac ISO 68	**DOT CLASS:**	Not Regulated by DOT	
PRODUCT NUMBER:		**HAZARD CLASS:**	N/A	
PREPARED BY:	Chad Lynn	**UN NUMBER:**	N/A	**PG:** N/A
DATE CREATED:	3/28/96	**GUIDE NUMBER:**	N/A	
LAST REVISION:		**SHIPPING NAME:**		
SYNONYMS:				

SECTION II - HAZARDOUS INGREDIENTS

Chemical Name	CAS	OSHA PEL	ACGIH TLV	Weight %
Lubricating Base Oil	64742 Series			90

SECTION III - PHYSICAL CHARACTERISTICS

BOILING POINT: 0
VAPOR PRESSURE: N/A mmHg. @ 20 C
EVAPORATION RATE: N/A

SPECIFIC GRAVITY: 0.9
MELTING POINT: N/A
VAPOR DENSITY: N/A
POUNDS PER GALLON: N/A

SOLUBILITY IN WATER:
Not water Soluable

APPEARANCE AND ODOR:
Dark amber liquid, hydrocarbon odor

SECTION IV - FIRE/EXPLOSION

FLASH POINT: 367 F min **ESTIMATED EXPLOSIVE LIMIT RANGE** **LEL:** 0.00% **UEL:** 0.00%

FLASH POINT METHOD USED: Cleveland Open Cup

EXTINGUISHING MEDIA:
Use NFPA Class B extinguishers.(Carbon dioxide, dry chemical, or foam)

SPECIAL FIRE-FIGHTING PROCEDURES:
Do not enter any enclosed or confined space without supplied air respirator.

UNUSUAL FIRE AND EXPLOSION HAZARDS:
N/A

SECTION V - REACTIVITY DATA

STABILITY: Stable

CONDITIONS TO AVOID:
N/A

INCOMPATIBILITY:
Strong oxidizing agents

HAZARDOUS DECOMPOSITION OR BY PRODUCTS:
Only those listed under combustion.

HAZARDOUS POLYMERIZATION: Will Not Occur

CONDITIONS TO AVOID:
N/A

SECTION VI - HEALTH HAZARD DATA

ACUTE HEALTH EFFECTS

EYE CONTACT: May cause slight irritation

INHALATION: The systemic toxicology of this product has not been determined;however, it should be practically non-toxic to internal organs if inhaled.

INGESTION: The systemic toxicology of this product has not been determined;however, it should be practically non-toxic to internal organs if swallowed.

SKIN CONTACT: Prolonged exposure may cause skin irritation.

SIGNS AND SYMPTOMS OF EXPOSURE:
N/A

AGGRAVATED MEDICAL CONDITIONS:
None reported

SUPPLEMENTAL HEALTH INFORMATION:
N/A

EMERGENCY FIRST AID PROCEDURES

EYE CONTACT: Hold eyelids apart and flush eyes with plenty of water for at least 15 minutes.

INHALATION: No specific treatment is necessary since this material is not likely to be hazardous by inhalation. If exposed to excessive levels of dusts or fumes, remove to fresh air and get medical attention if cough or other symptoms develop.

INGESTION: Give affected person plenty of milk or water. Call your nearest poison control center immediately.

SKIN CONTACT: Immediately wash skin with plenty of soap

SECTION VII - SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS SPILLED OR RELEASED:
Stop source of leak or spill. clean up released material as soon as possible, observing precautions in protective equipment.

WASTE DISPOSAL METHOD:
Dispose of residual product in accordance with state and federal regulations

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING:
Empty containers contain residual product. Do not cut, weld, grind, braze, solder or expose to heat or ignition sources.

OTHER PRECAUTIONS
N/A

SECTION VIII - CONTROL MEASURES

RESPIRATORY PROTECTION (Specify Type):
Respiratory protection is not normally reqired. When this product is involved in a fire, air supplied respirator is required.

VENTILATION:
Do not use product in an enclosed environment. Use adequate ventilation.

PROTECTIVE GLOVES:
No gloves are required when handling this product.

EYE PROTECTION:
Safety glasses are adequate protection under normal use.

OTHER PROTECTIVE CLOTHING OR EQUIPMENT:
Always use this product in the vacinity of an eyewash station and a safety shower.

WORK/HYGIENIC PRACTICES:
Use good personal hygiene when handling this product. Wash hands after use, before smoking, or using the toilet.

SECTION IX - ADDITIONAL INFORMATION

OTHER ADDITIONAL INFORMATION:
No information available at this time.

The information contained herein is based on the data available to us and is believed to be accurate. However, no warranty is expressed or implied regarding the accuracy of this data or the results to be obtained from the use thereof. We assume no responsibility for injuries from the use of the product described herein.

ATTACHMENT E

COPY OF ECOLOGY'S SEPTEMBER 12, 2005 E-MAIL CONCERNING THE SUBJECT SITE

Ted Sykes - Detection of Dissolved G.W. Arsenic (Fircrest Site)

From: "San Juan, Charles" <csan461@ECY.WA.GOV>
To: "'tsykes@kleinfelder.com'" <tsykes@kleinfelder.com>
Date: 9/12/2005 9:53:43 AM
Subject: Detection of Dissolved G.W. Arsenic (Fircrest Site)

Ted -

Per our phone conversation about the site you are working on, it's my understanding that dissolved arsenic (9.47-17.9 ug/L) was detected in a shallow perched zone. It's my understanding that temporary wells were used to collect samples and that the wells were developed to the extent practicable.

Arsenic can occur naturally in excess of the MTCA Method A standard of 5 ppb. For example, Welch et al. (1988) found that arsenic in ground water (in the Western U.S.) can occur naturally (15-50 ug/L). In a subsequent publication, Welch et al. (2000) found that ~10% of 30,000 ground water samples (across the U.S.) contained arsenic concentrations > 10 ug/L. The USGS also found similar trends in a study of naturally occurring arsenic in Southeast Michigan (http://mi.water.usgs.gov/splan2/sp07800/dwiarsenic.php).

Thus, it's my opinion that the arsenic you detected may be naturally occurring and is therefore not related to any anthropogenic activities. This site is located within the footprint of the Tacoma Smelter Plume; however, my check of the soil data indicates that lead and arsenic concentrations tend to drop off significantly with the first 0-24 inches. In other words, it doesn't seem that there is any correlation between high concentrations of arsenic in surficial soils and shallow perched ground water 15-20 ft. below land surface.

References

Welch et al. (1988). Arsenic in Ground Water of the Western United States. GROUND WATER, Vol. 26. No. 3, pp. 333-347.
Welch et a. (2000). Arsenic in Ground Water of the Unites States: Occurrence and Geochemistry. GROUND WATER, Vol. 38, No. 4, pp. 589-604.

Charles San Juan
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Toxics Cleanup Program
Washington Department of Ecology
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Olympia, WA 98054-7600
(360)407-7191
Fax: (360)407-7154
email: csan461@ecy.wa.gov

ATTACHMENT F

THIRD PARTY RELIANCE LETTER TEMPLATE

[Date]

[Name of Third-Party Representative]
[Third-Party's Full and Formal Name]
[Third-Party's Address]

Re: Agreement Concerning Release of Report
Report Number [Report Number]

Dear [Name of Third-Party Representative]:

The attached report was prepared pursuant to a specific scope of service and written contract between [Name of Kleinfelder's Client], (Client) and Kleinfelder, Inc., (Kleinfelder) dated [Date of Contract]. Client has given us permission to release the report to you. You may rely on this report as though it were addressed to you at the time of the issuance for a period of six months from the date of issuance, with the express understanding that Kleinfelder shall not be responsible for problems arising from events or changes that may have occurred subsequent to our preparation of said report.

This reliance letter is expressly contingent upon your acceptance of the General Terms and Conditions attached hereto and actual payment of $[Amount]. Your payment shall also indicate your acceptance of the attached General Terms and Conditions which include a provision limiting Kleinfelder's liability, whether such liability arises in breach of contract or warranty, tort (including negligence), strict or statutory liability, or any other cause of action, to the maximum extent permitted by law. This reliance letter shall be void in the event your acceptance and said consideration is not received within seven days of the above date.

Sincerely,

Kleinfelder, Inc.

[Name of Kleinfelder Representative]
[Representative's Title]

Attachments: Report
General Terms and Conditions

[Name of Third-Party Representative]
[Third-Party's Full and Formal Name]
[Third-Party's Address]

I acknowledge and accept the Letter Agreement Concerning Release of Report dated _____ regarding Report No. _____, including the attached General Terms and Conditions, and remit payment of the consideration in the amount of $_____.

_____ _____

[Name and Title] Date

KLEINFELDER, INC. GENERAL CONDITIONS (PROFESSIONAL SERVICES)

1. Services. This Agreement is entered into between Third Party and Kleinfelder, Inc. ("Consultant") wherein Third Party engages Consultant to provide a reliance letter to support professional services ("Services") in connection with the project for Consultant's client (Client) described in the proposal ("Project") to which these General Conditions apply. Third party agrees that services not specifically described in the Scope of Services identified in Consultant's proposal to Client are not included in the Scope of Services described by Consultant. This Agreement, including the original or any revised proposal, these General Conditions, any Consultant Addenda and Fee Schedule, represents the entire Agreement between the parties and supercedes any and all agreements between the parties, either oral or in writing, including any purchase or work order issued by Client or Third Party.

2. Work Product. Services provided under this Agreement, including all reports, information, recommendations, or opinions ("Reports") prepared or issued by Consultant, are for the exclusive use and benefit of Client or Third Party in connection with the Project, are not intended to inform, guide or otherwise influence any other entities or persons with respect to any particular business transactions, and should not be relied upon by any entities or persons other than Client or Third Party for any purpose other than the Project. Third Party will not distribute or convey such Reports to any other persons or entities without Consultant's prior written consent which shall include a release of Consultant from liability and indemnification by such party. Consultant's Reports, boring logs, maps, field data, drawings, test results and other work products are part of Consultant's professional services, do not constitute goods or products and are copyrighted works of Consultant. Third Party understands that Third Party may rely upon the final report for a period not to exceed 180 days from the date the report was issued by Consultant to the Client.

3. Standard of Care. Consultant has performed the Services in a manner consistent with that level of care and skill ordinarily exercised by members of the Consultant's profession practicing in the same locality under similar circumstances at the time the services were performed. This Agreement creates no other representation, warranty or guarantee, express or implied.

4. Limitation of Liability. Consultant's potential liability to Third Party is grossly disproportionate to Consultant's fee. Therefore, unless Third Party and Consultant otherwise agree in writing in consideration for an increase in Consultant's fee, Third Party, including its directors, officers, partners, employees, agents, contractors and their respective assigns, agree to limit Consultant's liability (whether arising from contract, statutory violation or tort) to the greater of $5,000 or the amount of Consultant's fee. This limitation of liability shall apply to all phases of Services performed in connection with this Project, whether subsequent to or prior to the execution of this Agreement. In no event shall Consultant be liable for consequential, incidental or special damages.

5. Indemnification. To the fullest extent permitted by law, Third Party, including its directors, officers, partners, employees, agents, contractors and their respective assigns, waives any claim against and agrees to indemnify, defend, and hold harmless Consultant, its directors, officers, employees and subcontractors from and against all claims, liability, damages, or expenses ("Claims") arising out of, in connection with or relating to any alleged act, failure to act, or other conduct of Consultant, including but not limited to, Claims alleging the negligence or other fault of Consultant, but specifically excepting Claims arising out of Consultant's sole negligence or willful misconduct. Third Party shall indemnify Consultant even if Third Party is partially or wholly without fault for such Claims.

6. Dispute Resolution. The parties shall attempt resolution of any dispute arising under or related to this Agreement by mediation. Either party may demand mediation by serving a written notice on the other party stating the essential nature of the dispute. The mediation shall be conducted in accordance with, but not under the supervision of, the AAA Construction Industry Mediation Rules then in effect within forty-five (45) days from the service of notice. The parties shall share the fees equally. If mediation fails, either party may institute litigation in the state or federal court of the county in which Consultant's office issuing the proposal is located. The prevailing party shall be entitled to attorneys' fees, cost, including costs incurred in the mediation and costs of enforcement of any judgment. The parties expressly waive any statute of limitations for a longer period of time and agree that any action shall be brought within one year from the date of Consultant's final report. The parties expressly waive any and all rights to a trial by jury in any action, proceeding or counterclaim brought by either of the parties against the other with respect to any matter relating to, arising out of or in any way connected with this Agreement.

7. Changed Conditions. If during the course of performance of this Agreement conditions or circumstances were discovered which were not contemplated by Consultant at the commencement of the agreement, Consultant shall notify Third Party of the newly discovered conditions or circumstances, and Third Party and Consultant shall renegotiate, in good faith, the terms and conditions of this Agreement. If amended terms and conditions cannot be agreed upon within thirty (30) days after notice, Consultant may terminate this Agreement.

8. Governing Law. The laws of the State where the Agreement was entered into shall govern interpretation of this Agreement. If any term is deemed unenforceable, the remainder of the Agreement shall stay in full force and effect.

9. Additional Provisions. Neither party may assign its interest in this Agreement without the prior written consent of the other. Any modification to this Agreement will be effective only if it is in writing signed by the party to be bound, except that if Consultant has performed services in reliance on Third Party's verbal approval to proceed, Third Party shall be bound by such verbal approval. One or more waivers of any term, condition or covenant by either party shall not be construed as a waiver of any other term, condition or covenant. This Agreement may be signed in counterpart.