SITE ASSESSMENT REPORT
TIME OIL CO. SITE 2750
2750 WEST COMMODORE WAY
SEATTLE, WASHINGTON

Project 783336

March 8, 2000

Prepared for:

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EXECUTIVE SUMMARY

IT Corporation conducted a subsurface investigation at the Time Oil Co. property located at 2750 West Commodore Way in Seattle, Washington. The investigation area included the former location of an underground storage tank (UST) removed from the site in September of 1991. The UST was reported to have been used to store waste oil. The purpose of the investigation was to assess soil and groundwater for substances regulated by the current Washington State Model Toxics Control Act[1] (MTCA) Method A Compliance Cleanup Levels (Jan. 1996 revision). Tasks performed during the assessment included: 1) locating underground utilities; 2) drilling nine soil borings to a maximum depth of 26.5 feet below grade (bg) at strategic locations; 3) drilling and installing five groundwater monitoring wells; 4) collecting twenty-eight soil samples from the soil borings (continuously in soil boring 02SB-01 and at approximate 5-foot intervals in remaining borings and fifteen soil sample from the monitoring wells; 5) collecting eight soil boring water samples (one each from borings 02SB-02 through 02SB-09); 6) developing the wells and sampling the groundwater in each; 7) performing quantitative chemical analyses on the soil and water samples collected; 8) interpreting the information obtained; and 9) compiling and arranging the data for this report.

Observations and findings:

- Sediments observed underlying the site include orange brown to gray green sands and silts with varying amounts of clay and gravel predominating the site from the surface to a depth of approximately ten to fifteen feet below grade (bg). A very dense, dry gray clay underlies the sand/silt unit. This unit acts as an apparent aquitard at the site. Existing data show that the hydraulic conductivity of the clay is 1.7×10^{-8} cm/s (IT Corp., 2000).

- Two soil samples (02SB-01 at 3.5 ft below grade [bg] and 02SB-01 at 6 ft bg) contained TPH-D and TPH-O at concentrations that exceeded the 200 mg/kg MTCA CCL(a) for TPH as diesel and heavier oils. A third sample (02SB-08 at 3.5 feet below grade) contained TPH-O at a concentration of 426 mg/kg. This level exceeds the MTCA (CCL[a]. No other soil samples contained regulated substances in concentrations that exceeded the MTCA CCL(a)s.

- Soil sample 02SB-08 collected at a depth of 3.5 feet bg was also analyzed for total metals, organochlorine pesticides and PCBs, and volatile organic compounds due to its location down gradient of the former used oil tank. All regulated compounds were reported to be either not detected at the method reporting limit, or below their respective MTCA method A or method B guidelines.

[1] Washington Department of Ecology (WAC 173-340), revised Jan. 1996

- Groundwater was encountered in eight of the nine borings and all of the groundwater monitoring wells. Groundwater was reported during drilling at depths of two to 23 feet bg. Boring 02SB-01 was discontinued before water was reached. The stabilized depth to groundwater in the monitoring wells ranged from 6.09 to 17.85 feet bg. Groundwater flow is to the north at a gradient of 0.007 feet per foot.

- Soil Boring Water Samples - Total petroleum hydrocarbons as gasoline (TPH-G) were reported to be above the CCL(a) in water samples 02SB-02H2O and 02SB-09H2O at concentrations of 8.26 milligrams per liter (mg/L) and 1.36 mg/L, respectively. TPH-D was reported to be above the CCL(a) in samples 02SB-02H2O, 02SB-03H2O, and 02SB-07H2O at concentrations ranging from 1.07 to 3.12 mg/l. Benzene was reported to be above the CCL(a) in samples 02SB-02H2O through 02SB-05H2O, and 02SB-09H2O at concentrations ranging from 6.64 micrograms per liter (ug/L) to 639 ug/L. Dissolved lead in the soil boring water samples was either not present or present below the CCL(a).

- Groundwater Monitoring Well Water Samples - The monitoring wells were sampled September 28, 1999. The TPH-G concentrations in the monitoring wells were similar to the concentrations found in the soil boring water samples: Two wells did not contain detectable TPH-G (02MW-02 and 02MW-05), two wells had TPH-G concentrations below the CCL(a), and remaining well (02MW-04) had a TPH-G concentration of 3.7 mg/l. Neither TPH-D nor TPH-O was detected in any of the wells. Benzene was not detected in wells 02MW-02 and 02MW-04 but was present in wells 02MW-01 and 02MW-03 at concentrations of 72.9 and 56.7 ug/l, respectively. These levels exceed the CCL(a) for benzene. Total lead exceeded the CCL(a) in unfiltered water samples collected from all wells except 02MW-03 (<1.00 ug/l). The highest total lead concentration was detected in 02MW-02 (133 ug/l).

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1.0 INTRODUCTION/BACKGROUND

This report presents the work steps and results associated with subsurface investigation work conducted by IT Corporation at the Time Oil Co. property located at 2750 West Commodore Way in Seattle, Washington (Figure 1, Site Location Map). The work was conducted to assess the subsurface extent and concentration of substances regulated under the Washington Department of Ecology (WDOE) Model Toxics Control Act (MTCA; revised Jan. 1996). IT Corporation conducted this investigation at the request of the Time Oil Co.

1.1 Work Scope

The following outline summarizes the specific work conducted during the investigation:

- Reviewed the results of the previous investigation of the subject property.
- Located subsurface utilities.
- Drilled and sampled nine soil borings.
- Drilled, installed and developed five groundwater monitoring wells.
- Analyzed forty-three soil samples for petroleum compounds.
- Gauged, sampled and analyzed eight soil boring water samples and five groundwater monitoring well water samples for petroleum hydrocarbons and lead.
- Performed total metals, organochlorine pesticides and PCBs, and volatile organic compounds analysis on one soil sample.
- Evaluated, summarized and presented the information obtained in report form.

1.2 Background

The subject property (Figure 2) was the former site of a 300-gallon underground storage tank (UST). The UST location is shown in Figure 3. The UST stored used oil. This UST tank was removed from the site on September 16, 1991. Discolored soil and a petroleum odor were noted during the UST removal. An attempt was made to over-excavate hydrocarbon-affected soils after the UST was removed. Over-excavation activities were discontinued after approximately 100 cubic yards of affected soil had been removed. The resulting excavation measured approximately 35 feet by 20 feet and varied in depth from 2 to 6 feet. The northern boundary of the excavation appeared most heavily impacted and a hydrocarbon sheen was observed upon groundwater pooled in the excavation. A test pit was excavated approximately 20 feet north of the excavation in an effort to assess the lateral limits of the hydrocarbon impacts.

During the 1991 UST removal five soil samples were collected from the limits of the excavation and the test pit. The north sidewall of the excavation was not sampled due to the presence of visible hydrocarbon impacts. The soil samples were analyzed for TPH-diesel and TPH-motor oil. TPH-motor oil and/or diesel results in two of the five samples were equal to or exceeded the MTCA Soil Cleanup Levels were reported by the analytical laboratory (Appendix A, Table 2). Additional soil samples were collected from the limits of the excavation on December 10, 1991. The samples collected from the east and north sidewalls contained TPH concentrations exceeding MTCA Method A Soil Cleanup

Levels. TPH concentrations exceeding the CCL(a) ranged from 200 mg/kg to 25,000 mg/kg in soil samples 02-TIF, 02-TP1, 02-NS2, and 02-ES4 (Figure 3).

Additional excavation activities were conducted on July 28 and 29, 1992 in an effort to define and remove hydrocarbon-affected soils. Excavating activities were terminated on July 29, 1992 because observed impacts appeared to be increasing in severity to the east and excavation of the full extent of affected soils did not appear feasible. Approximately 150 cubic yards of soil were removed during the additional excavating activities. The excavation was backfilled by placing crushed rock from the bottom of the excavation to the top of the saturated zone. The crushed rock was then covered with a layer of 10-mil visqueen. The remaining excavation was backfilled with clean, imported fill sand.

During the 1992 excavation activities, eight soil samples were recovered from the limits of the expanded excavation (Figure 3). HCID analyses determined that TPH chromatogram patterns typical of gasoline, diesel, motor oil and mineral spirits were present in four of the soil samples. Follow-up analysis determined that BTEX concentrations appeared minimal but that TPH impacts (as gasoline, diesel, motor oil and mineral spirits) in excess of MTCA Soil Cleanup Levels were present in three samples (02-A2, 02-A6, and 02-WOWC). Concentrations ranged from 110 mg/kg to 2,800 mg/kg.

Details of work conducted in association with the UST removal conducted in September 1991, and the additional excavating activities conducted in July 1992, are presented respectively in Time Oil Co. reports dated December 30, 1991 and September 22, 1992 (Appendix A). Tank removal work conducted at the 2750 W. Commodore Way property is referenced as Excavation #2 in the December 1991 report. Since fuel service USTs were removed from 2737 W. Commodore Way on the same day, results of that UST removal are discussed as Excavation #1 in the same report. Work referenced as Excavation #1 is not applicable to the 2750 W. Commodore Way site.

2.0 GEOLOGY/HYDROGEOLOGY

The site is located on the south shore of Salmon Bay abutting the bay. The site topography slopes to the north from Commodore Way to the shoreline. The site has approximately 15 feet of relief from the southern high at Commodore Way to the shoreline. Sediments observed underlying the site include brown to gray green sands and silts with varying amounts of clay and gravel predominating the site from the surface to depths of approximately ten to thirty-five ft below grade (bg) depending upon location relative to the shoreline. A very dense, dry gray clay of unknown thickness underlies the site beginning at approximately 15 feet MSL (10-30 ft bg, depending on proximity to the shoreline). This unit is an apparent aquitard for the water table aquifer in this area.

Groundwater was encountered in eight of the nine the borings during drilling, excluding 02SB-01. The depth to groundwater was generally between 2 and 23 feet below grade. The stabilized depth to water in the groundwater monitoring wells ranged from 6.09 to 17.85 feet below grade. Groundwater flows to the north at a gradient of 0.007 feet per foot as measured on September 28, 1999 (Figure 5).

3.0 ASSESSMENT ACTIVITY

IT Corporation developed a work plan to install nine soil borings and five groundwater monitoring wells at strategic locations to assess subsurface conditions with respect to petroleum hydrocarbons (Figure 4). The locations of these borings were based on the findings of the underground storage tank (UST) decommissioning and excavation activities conducted by Time Oil Co. (Appendix A) and on site

access considerations (underground utilities, fences, etc.). The monitoring wells were sited based upon the results of the soil boring phase of work.

Prior to the initiation of drilling activities, IT contracted Applied Professional Services (APS) to clear the proposed drilling area for underground utilities. In addition, IT contracted Apollo Geophysics to conduct an electromagnetic resonance and ground penetrating radar survey of the site to define any subsurface utilities noted during the APS work and to better define the area containing the terminals underground product lines. The product lines run northwesterly along the eastern edge of the site driveway (Figure 2).

3.1 Soil Borings

Nine soil borings were drilled on June 7 and June 11, 1999 by Cascade Drilling Inc. (Cascade) of Woodinville, Washington. The borings were advanced by hollow stem auger to depths ranging from 9 to 26.5 feet bg. A complete description of the exploration depths for each soil boring is shown in Table 1a, Drilling Summary. Boring locations are shown on Figure 4. Each boring was sampled using a 2-inch inside diameter, split-spoon sampler. An IT Corporation engineer supervised the drilling and maintained a log of the materials encountered in accordance with the Unified Soil Classification System (Appendix B, Drill Logs).

Soil samples were collected continuously in soil boring 02SB-01 and at approximate five-foot intervals in soil borings 02SB-02 through 02SB-09. Each soil sample was screened in the field for volatile hydrocarbons using a photo-ionization detector (PID). PID results are noted on the drill logs. Twenty-eight soil samples collected from the nine borings were submitted for laboratory analysis. Analytical methods and procedures are discussed in the following section. The drilling and soil sampling activities were conducted in accordance with the Standard Operating Procedures (SOP) presented in Appendix C.

Soil encountered in borings 02SB-01 through 02SB-09 were orange brown to gray green sands and silts with varying amounts of clay and gravel predominating the site from the surface to a depth of approximately ten to fifteen feet bg. A very dense, dry gray clay underlies the sand/silt unit. Cross sections of the site detailing the stratigraphy are shown in Figures 9 through 11.

Water was observed in all soil borings except 02SB-01. Depth to water ranged from approximately 2 to 20 feet bg.

3.2 Groundwater Monitoring Wells

Five groundwater monitoring wells were drilled and installed on September 13, 1999 by Cascade Drilling Inc. (Cascade) of Woodinville, Washington. The borings were advanced by hollow stem auger to a maximum depth of 35 feet bg. All of the wells were terminated near the upper boundary of the dense clay that underlies the site at a depth of 10-35 feet bg depending upon location. A description of the construction details for each well is shown in Table 1b. Well locations are shown on Figure 4. Wells 02-MW01, 02MW-04 and 02MW-05 were sampled at five-foot intervals using a 2-inch inside diameter, split-spoon sampler. Two wells (02MW-02, and -03) were drilled without sampling due to their proximity to the recently drilled soil borings. An IT Corporation engineer supervised the drilling and well installation. A log of the materials encountered and well as-built data is included in Appendix B, Drill Logs).

Soil samples were screened in the field for volatile hydrocarbons using a photo-ionization detector (PID). Fifteen soil samples collected from wells 02MW-01, 02MW-04, and 01MW-05 were submitted for laboratory analysis. Analytical methods and procedures are discussed in the following section.

The drilling and soil sampling activities were conducted in accordance with the Standard Operating Procedures (SOP) presented in Appendix C.

Soils encountered during the drilling of the monitoring wells were similar to those observed in the soil borings. In wells 02MW-01, -04 and –05 the dense, dry clay was encountered at 19, 19.5, and 35 ft bg, respectively.

Water was encountered in all five wells. The stabilized depth to water ranged from 6.09 to 17.85 feet bg. The direction of groundwater flow at the site was to the north at a gradient of 0.007 feet per foot between wells 02MW-02 and 02MW-05.

4.0 RESULTS

Soil and groundwater samples were collected during the drilling of the nine boreholes and five monitoring wells. These samples were collected using standard IT sampling protocols. The samples were stored on ice under chain of custody protocols for shipment to the project laboratory (North Creek Analytical). North Creek Analytical (NCA) is a Washington State certified laboratory. The results of the sampling effort are discussed below. Laboratory analytical results are referenced against the current MTCA Method A Compliance Cleanup Levels (Jan. 1996 revision).

4.1 Gauging Results

The wells were installed on September 11, 1999. After well development and prior to sampling, the wells were gauged for depth to water and apparent product thickness on September 28, 1999. The gauging results are summarized in Table 2. The depth to groundwater was generally between 14 and 19 feet below grade.

The stabilized depth to water in the groundwater monitoring wells ranged from 6.09 to 17.85 feet below grade. Groundwater flows to the north at a gradient of 0.007 feet per foot as measured on September 28, 1999 (Figure 5).

4.2 Soil

A total of 43 soil samples (28 from the soil borings, 15 from the monitoring wells) were selected for laboratory analysis during the project. The soil samples were analyzed by North Creek Analytical of Bothell, WA. Samples were analyzed for BTEX by EPA method 8021B, TPH-G by Method NWTPH-Gx, TPH-D and TPH-O by Method NWTPH-Dx and total lead by EPA Method 6000/7000. One soil sample was also analyzed for VOCs (EPA 8260B), pesticides/PCBs (EPA8081/8082), and RCRA metals (EPA 6000/7000 series methods).

4.2.1 Soil Boring Soil Samples

Two soil samples (02SB-01 at 3.5 ft below grade [bg] and 02SB-01 at 6 ft bg) contained TPH-D and TPH-O at concentrations that exceeded the 200 mg/kg MTCA CCL(a) for TPH as diesel and heavier oils. A third sample (02SB-08 at 3.5 feet below grade) contained TPH-O at a concentration of 426 mg/kg. This level exceeds the MTCA (CCL[a]. All other analyte concentrations, including the VOCs, PEST/PCBs, and RCRA metals in sample 02SB-08 were reported to be either below the CCL(a)/CCL(b) or reported as not detected at the method reporting limit. The additional analyses (VOCs, PEST/PCBs/RCRA metals) were run on sample 02SB-08 only due to the samples' TPH-O concentration and the borings' location down gradient of the former used oil tank. Chemical analytical results and CCL(a)s for soil are summarized in Tables 3 through 6. Complete laboratory reports for soil samples are contained in Appendix D.

4.2.2 Monitoring Well Soil Samples
None of the monitoring well soil samples contained TPH or BTEX concentrations that exceeded the CCL(a)s. Complete laboratory reports for soil samples are contained in Appendix D.

4.3 Water

Water samples were analyzed North Creek Analytical of Bothell, Washington. Eight soil boring water samples and five groundwater monitoring well water samples were analyzed for BTEX by EPA Method 8020, TPH-G by Method NWTPH-Gx, TPH-D and TPH-O by Method NWTPH-Dx, and total/dissolved lead by EPA 6020.

The water samples collected from the soil borings were collected using a stainless steel screen set in the open borehole. The results of the soil boring water samples were used to site the monitoring wells. Soil boring water samples are not considered to be representative of groundwater conditions. Water samples collected from the monitoring wells were collected according to standard IT Corporation procedures. These samples are considered to be representative of water quality at the site.

4.3.1 Soil Boring Water Samples
Total petroleum hydrocarbons as gasoline (TPH-G) were reported to be above the CCL(a) in water samples 02SB-02H2O and 02SB-09H2O at concentrations of 8.26 milligrams per liter (mg/L) and 1.36 mg/L, respectively. TPH-D was reported to be above the CCL(a) in samples 02SB-02H2O, 02SB-03H2O, and 02SB-07H2O at concentrations ranging from 1.07 to 3.12 mg/l. Benzene was reported to be above the CCL(a) in samples 02SB-02H2O through 02SB-05H2O, and 02SB-09H2O at concentrations ranging from 6.64 micrograms per liter (ug/L) to 639 ug/L. Dissolved lead in the soil boring water samples was either not present or present below the CCL(a). A summary of the water sample analytical results can be found in Table 7. Laboratory reports of the water analyses are contained in Appendix D.

4.3.2 Groundwater Monitoring Well Water Samples
The monitoring wells were sampled September 28, 1999. The TPH-G concentrations in the monitoring wells were similar to the concentrations found in the soil boring water samples: Two wells did not contain detectable TPH-G (02MW-02 and 02MW-05), two wells had TPH-G concentrations below the CCL(a), and remaining well (02MW-04) had a TPH-G concentration of 3.7 mg/l (Figure 6). Neither TPH-D nor TPH-O was detected in any of the wells. Benzene was not detected in wells 02MW-02 and 02MW-04 but was present in wells 02MW-01 and 02MW-03 at concentrations of 72.9 and 56.7 ug/l, respectively (Figure 7). These levels exceed the CCL(a) for benzene. Well 02MW-05 contained benzene at a concentration that was below the CCL(a). Total lead exceeded the CCL(a) in unfiltered samples collected from all wells except 02MW-03 (<1.00 ug/l; Figure 8). The highest total lead concentration was detected in 02MW-02 (133 ug/l). Dissolved lead samples were not collected from the monitoring wells. A summary of the analytical results can be found in Table 7. Laboratory reports of the water analyses are contained in Appendix D.

5.0 CONCLUSIONS

Nine soil borings and five groundwater monitoring wells were drilled in strategic locations to assess the subsurface conditions at Time Oil Co. Seattle Terminal Site 2750. The work was conducted during June and September, 1999.

Groundwater was encountered at depths of two to 23 feet bg during drilling. Static water levels at the site ranged from 6.02 to 17.85 feet bg in the groundwater monitoring wells.

With the exception of one soil sample from boring 02SB-08 and two samples from 02SB-01, the site soils are in compliance with the MTCA CCL(a)s for all site contaminants of concern. The three samples cited above all contained non-compliant levels of TPH-D or TPH-O only.

Site groundwater is impacted with gasoline range hydrocarbons, and benzene. The impacts appear to be restricted to the site wells located in the middle and upgradient of the site relative to the original site work performed in 1991-2. Total lead in the groundwater exceed the CCL(a), however, dissolved lead samples collected from soil boring water samples indicates that the lead at the site is due to suspended sediments.

6.0 RECOMMENDATIONS

IT recommends additional assessment of the groundwater conditions at the site. This includes monitoring of the newly installed wells and the installation of additional borings/wells to define the extent of the groundwater impacts to the south, east, and west of the study area.

7.0 REFERENCES

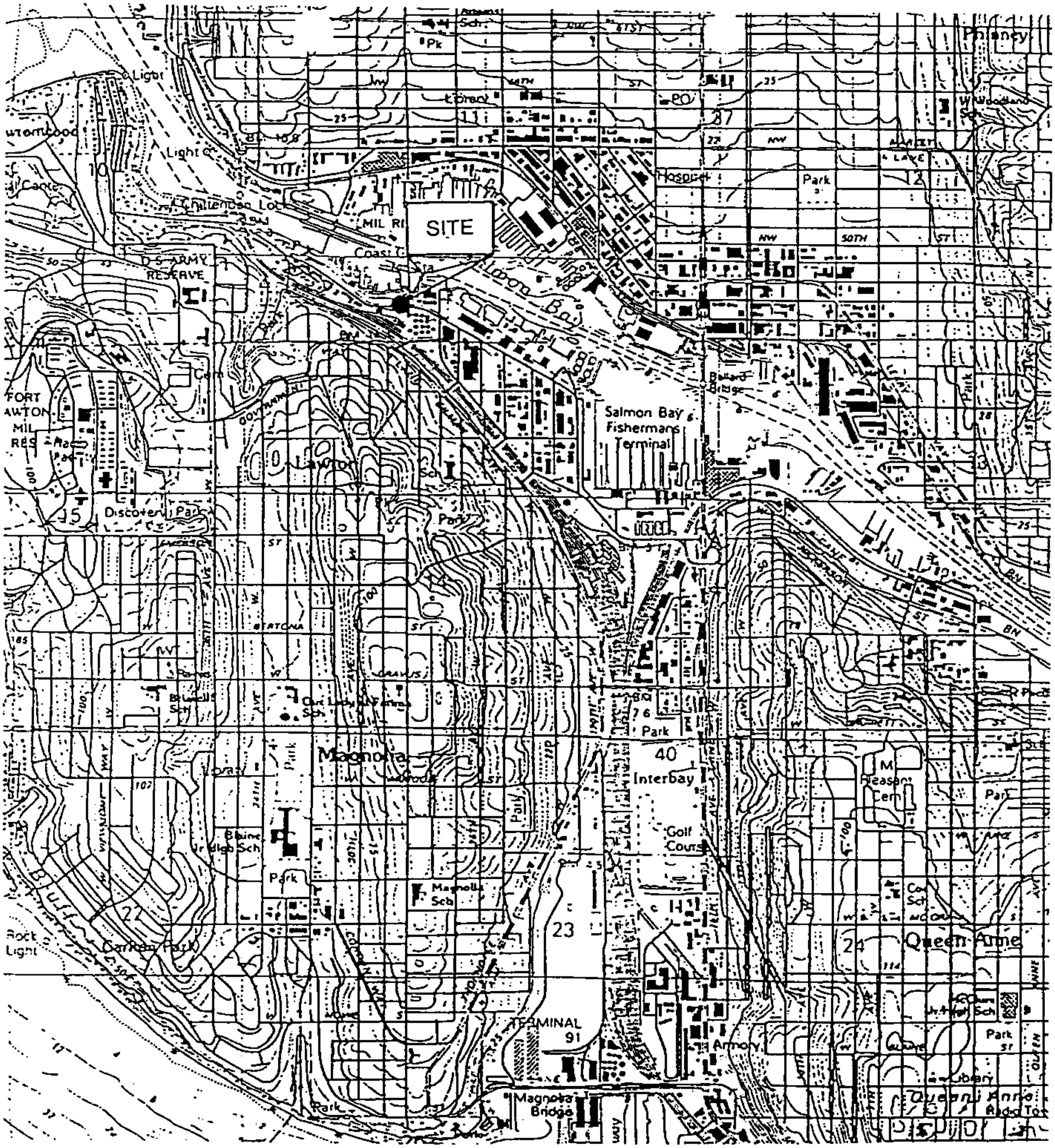
IT Corp., 2000. Site Assessment Report – Time Oil Co. Site 2737, 2737 West Commodore Way, Seattle, Washington. January 26, 2000.

Sloan, Scott B., 1991. Letter report "Underground Storage Tank Site Check/Site Assessment as Seattle Terminal", Time Oil Co. Company. December 30, 1991.

Sloan, Scott B., 1992. Letter report "Excavating Activities Conducted at Former Waste Oil Tank Location Former Time Oil Co. Maintenance Facility", Time Oil Co. Company. September 22, 1992.

Washington State Department of Ecology. Model Toxics Control Act, WAC 173-340. Revised Jan. 1996.

FIGURES



IT CORPORATION

SOURCE: U.S.G.S. 7.5' QUAD SHEET
Seattle North, Washington
Photorevised 1983

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SCALE:
0 FEET 2000

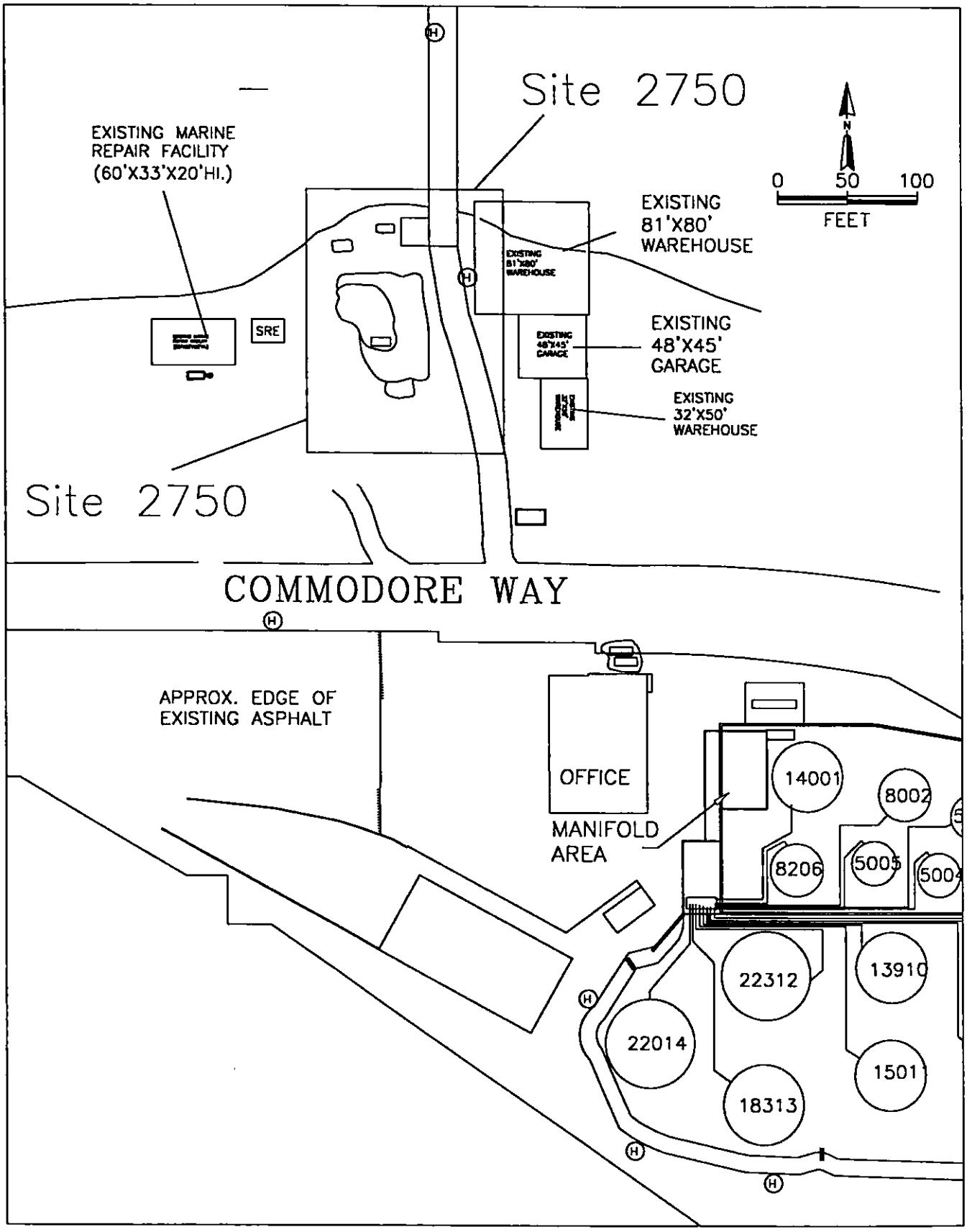
SITE LOCATION MAP

CLIENT: Time Oil Co.

DATE: 7/28/99

LOCATION: 2737–3031 West Commodore Way
Seattle, Washington

FIGURE: 1



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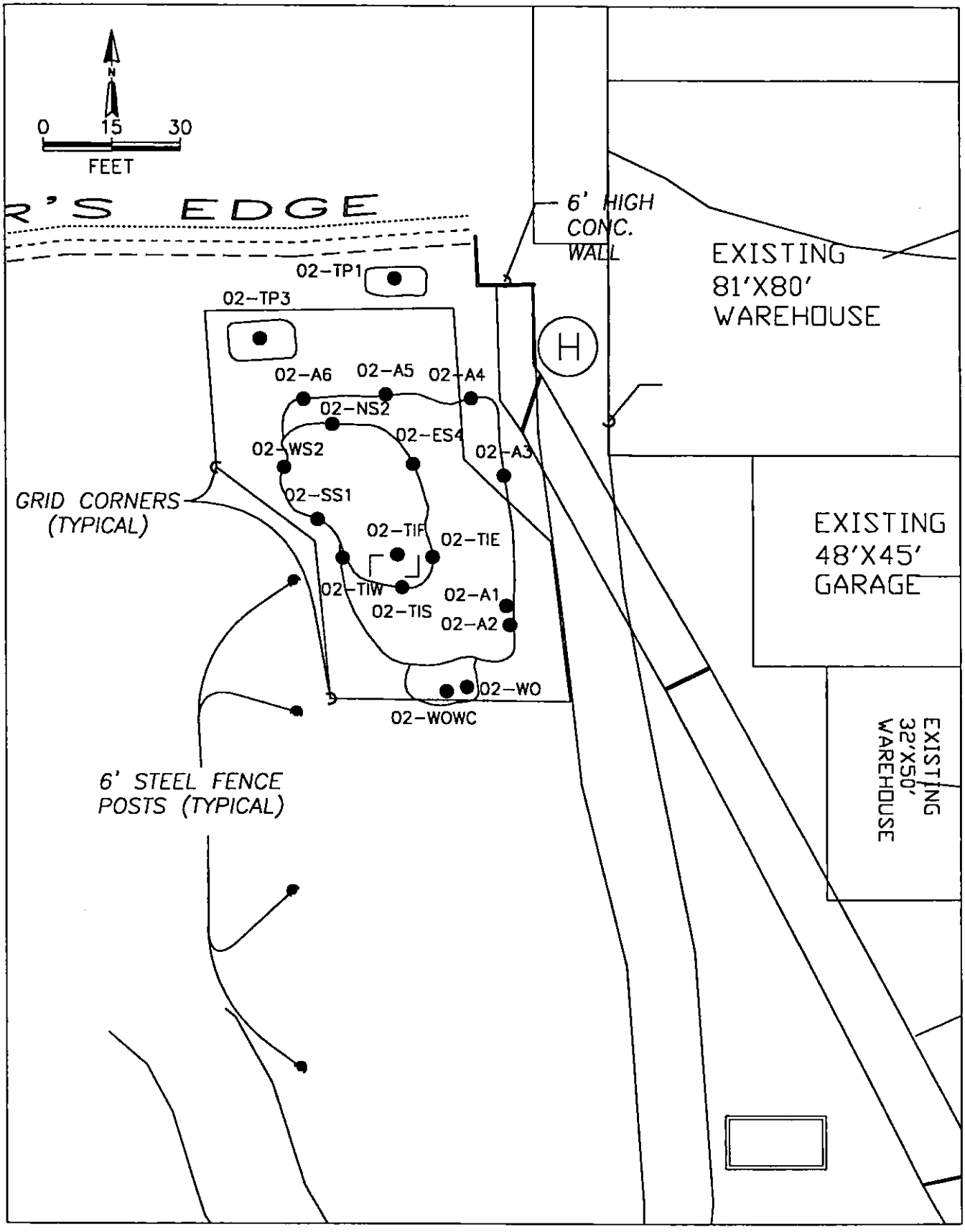

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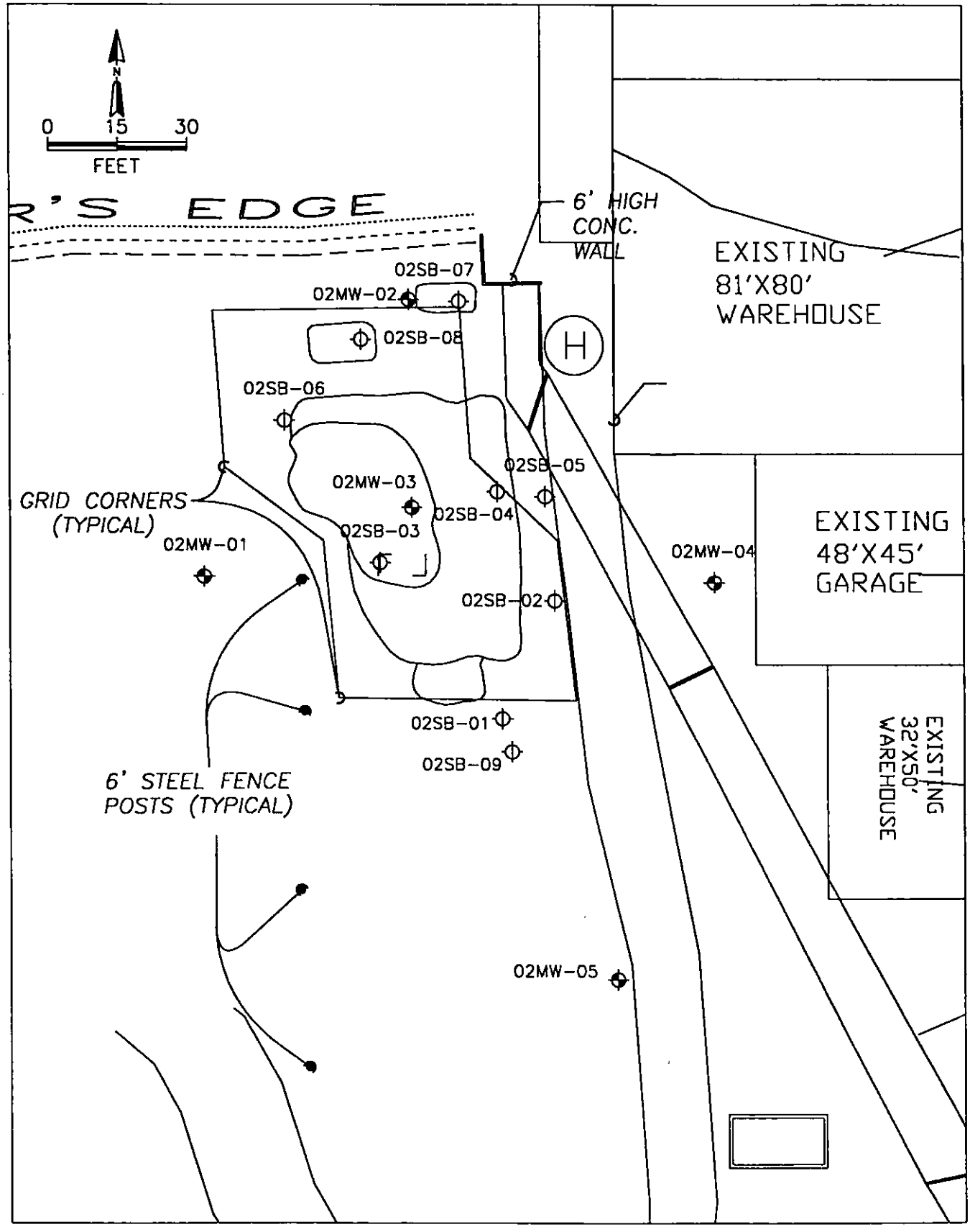

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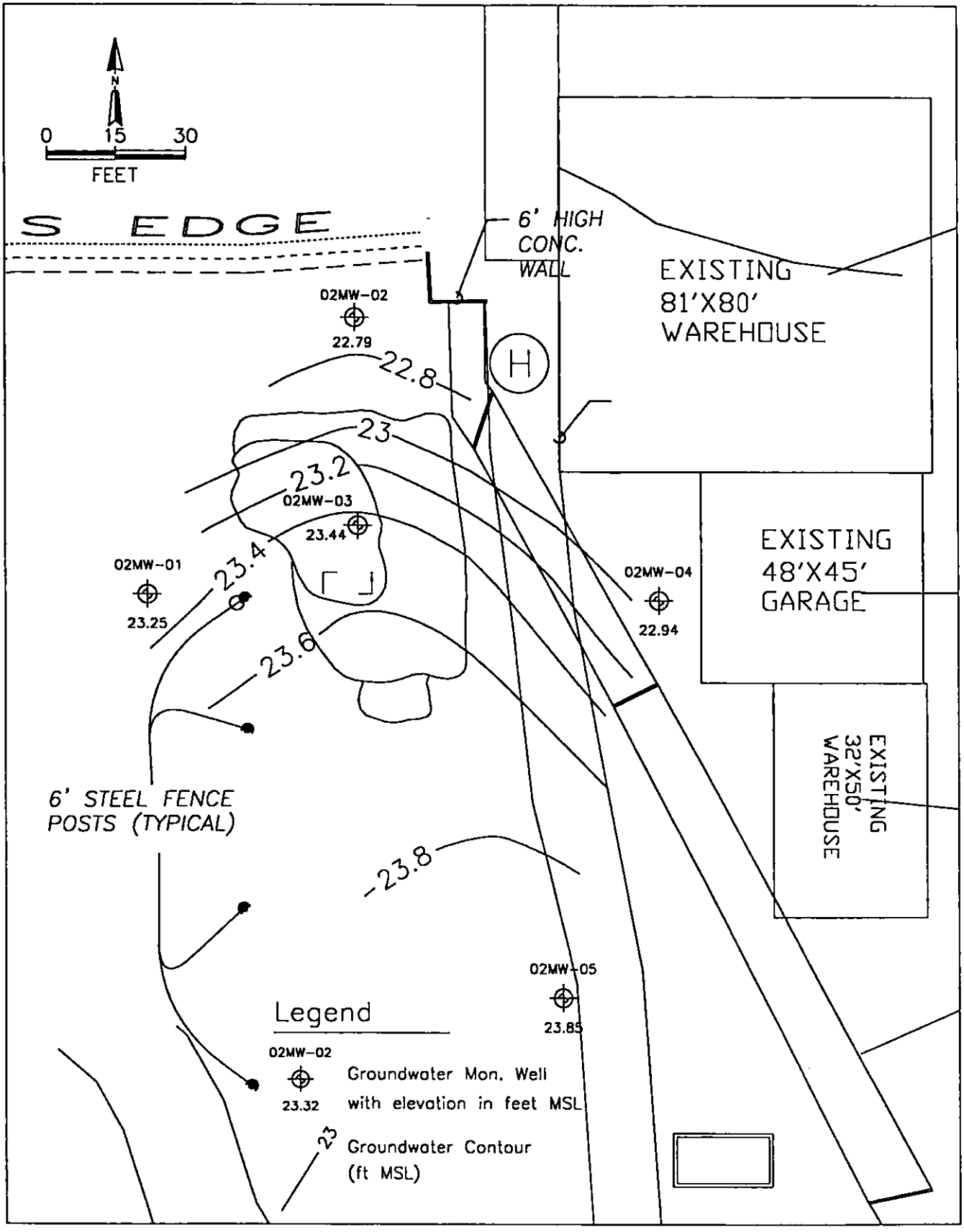

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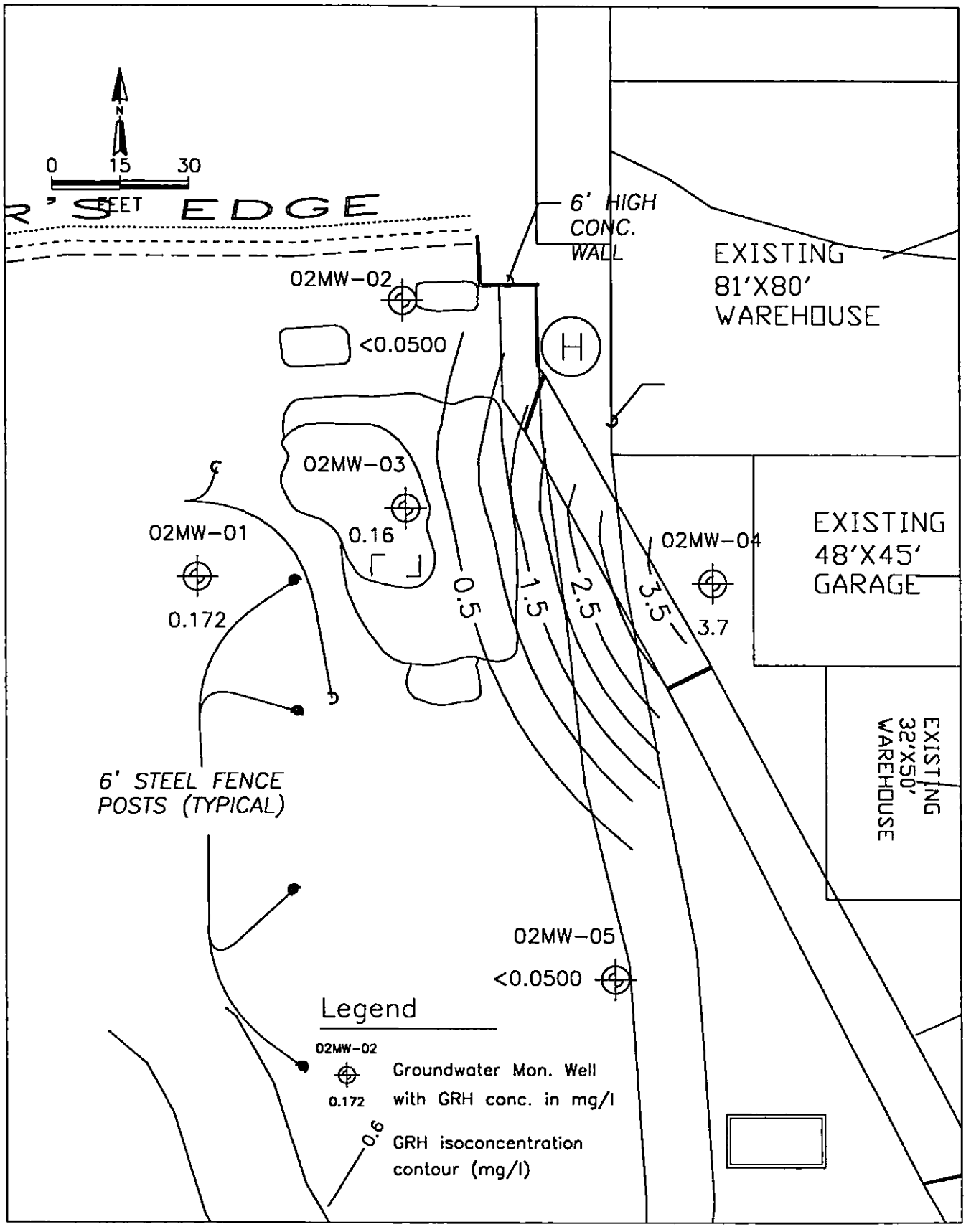

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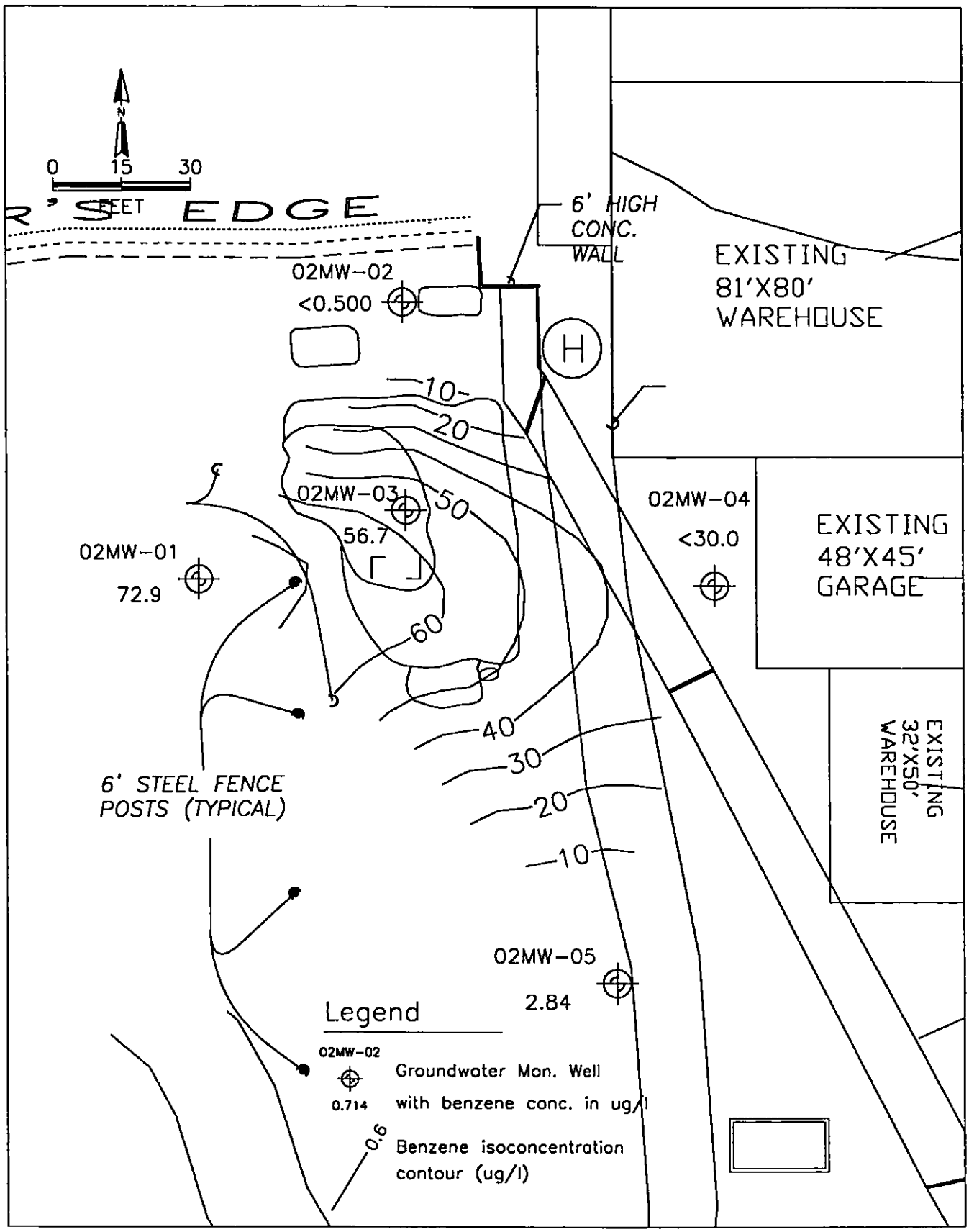

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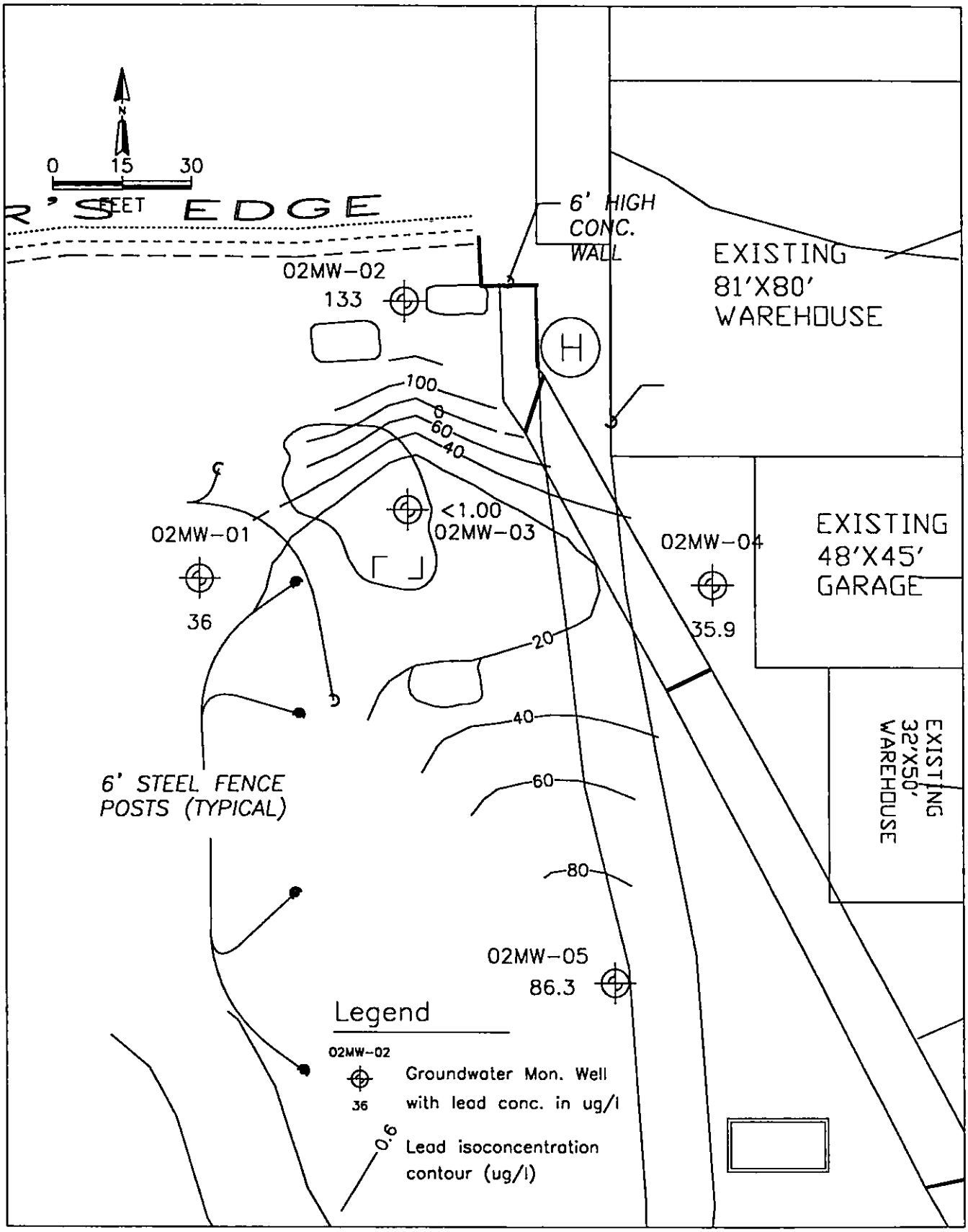

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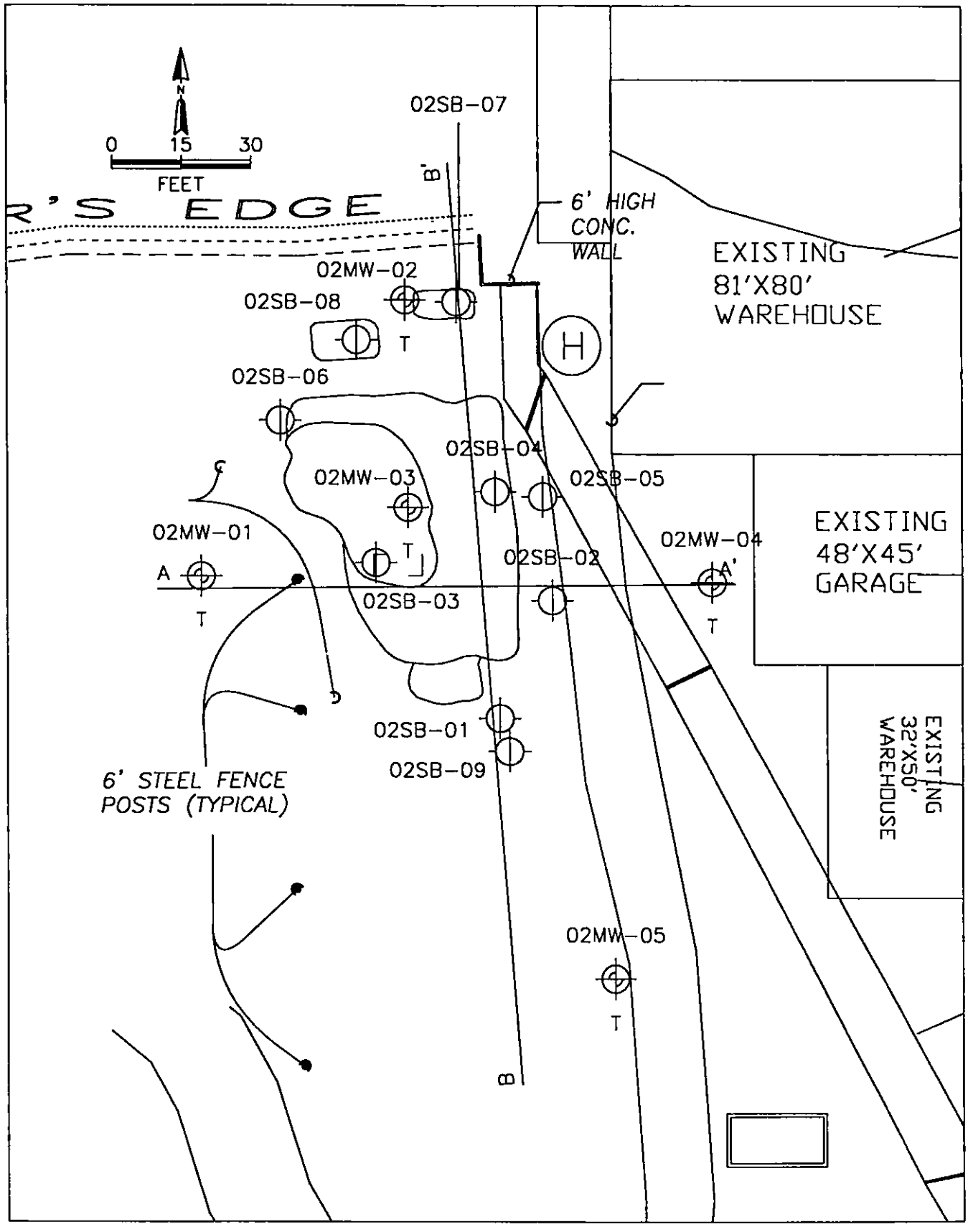

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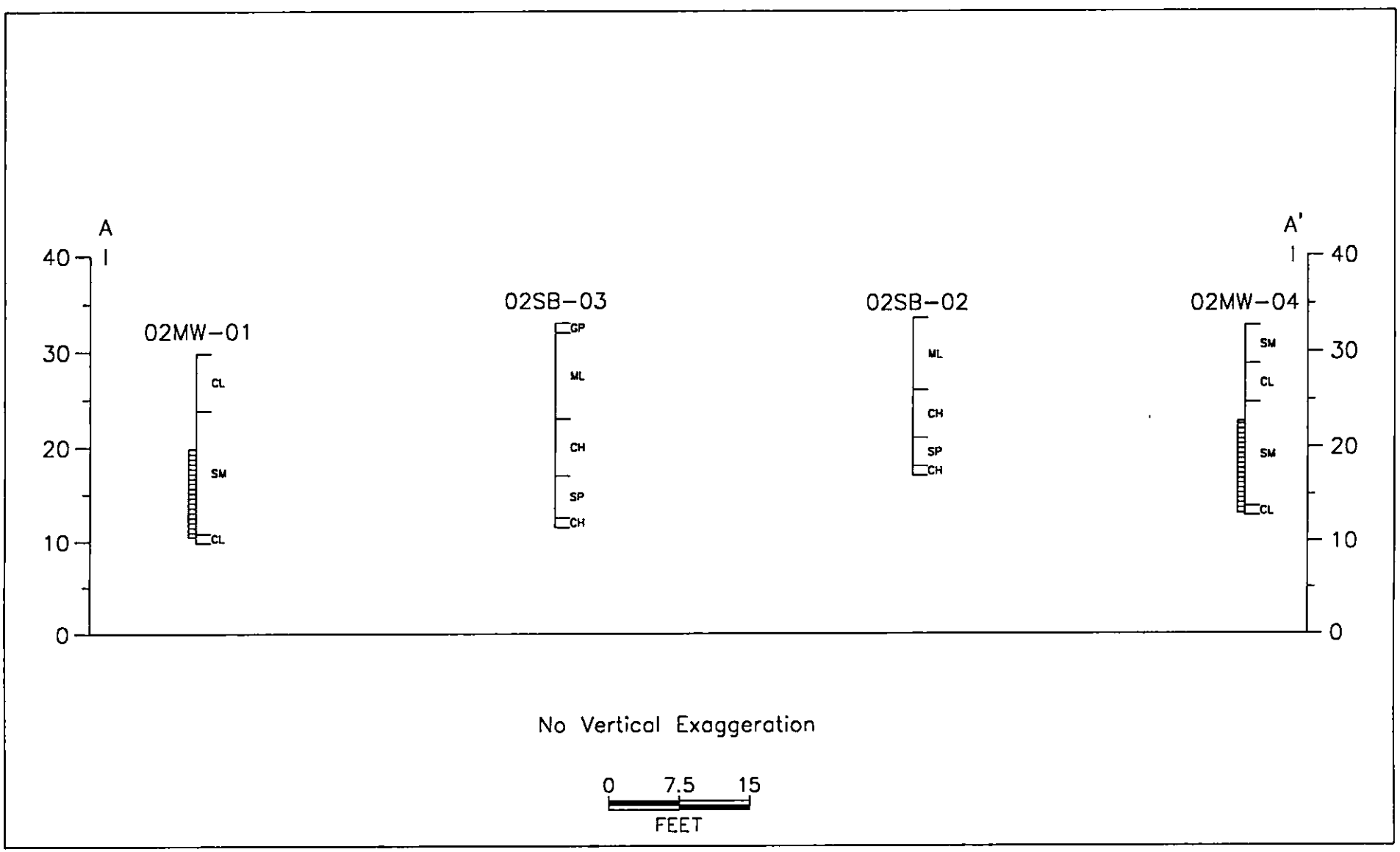

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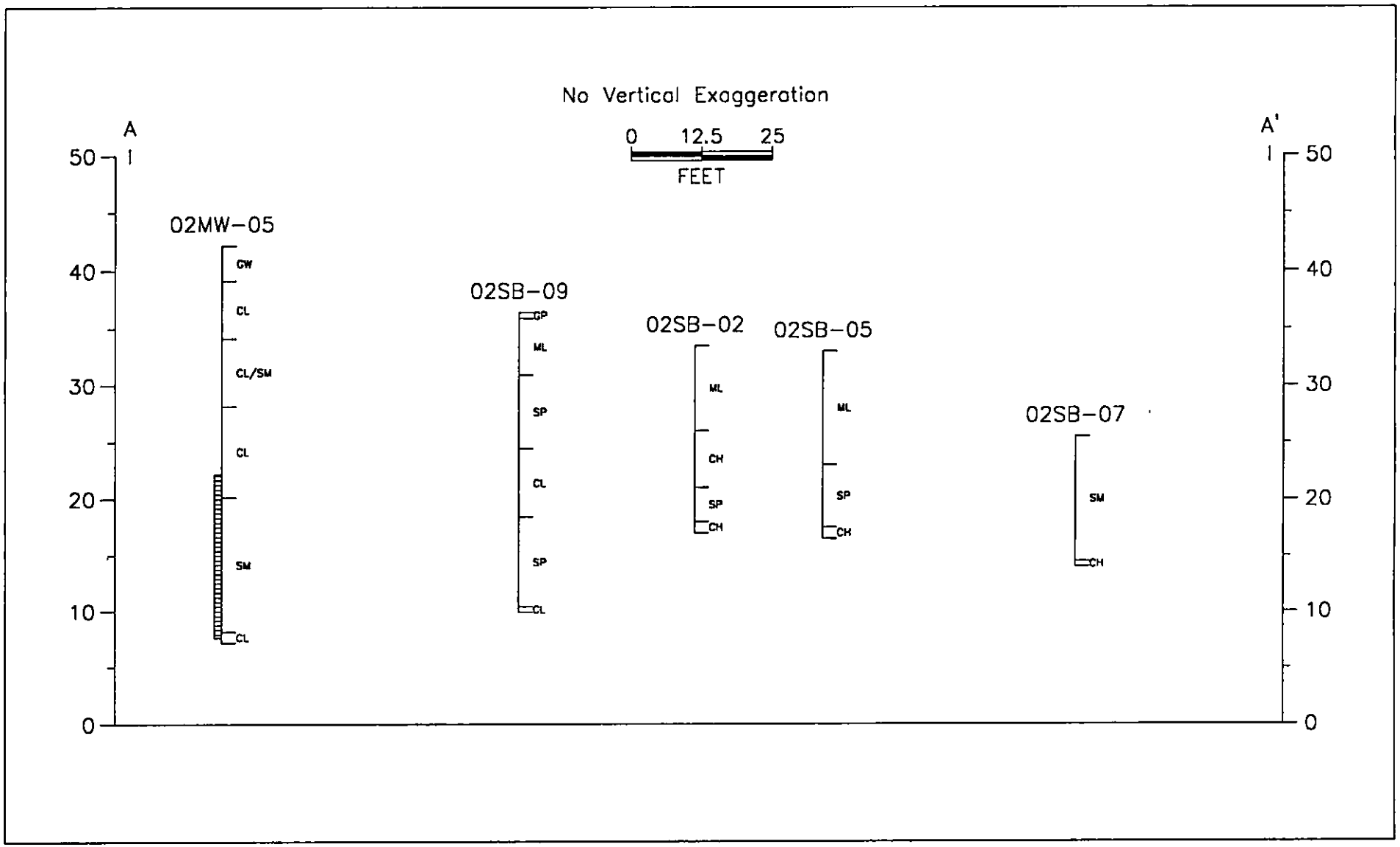

IT CORPORATION

TITLE:
Cross Section B-B'
Seattle Terminal Site 2750
Time Oil Co., Seattle, Washington

DWN:	DES.:	PROJECT NO.:
jh	jh	783336
CHKD:	APPD:	FIGURE NO.:
DATE: 1/25/00	REV.: 2	11

TABLES

Table 1a.
Drilling Summary for Soil Borings
Time Oil Co. Site 2750
2750 West Commodore Way, Seattle, WA

SITE	SURVEY COORDINATES X	Y	Z	BORE DEPTH TOTAL (feet bgs)	DATE	DRILLING METHOD	DRILLER	CONSULTANT
02SB-01	4176.5	5448.0	0.00	14.00	06/07/99	Hollow Stem Auger	CASCADE	IT
02SB-02	4187.8	5473.7	0.00	16.50	06/07/99	Hollow Stem Auger	CASCADE	IT
02SB-03	4149.8	5481.9	0.00	21.50	06/07/99	Hollow Stem Auger	CASCADE	IT
02SB-04	4175.5	5497.3	0.00	16.50	06/07/99	Hollow Stem Auger	CASCADE	IT
02SB-05	4185.8	5496.3	0.00	16.50	06/07/99	Hollow Stem Auger	CASCADE	IT
02SB-06	4129.2	5512.7	0.00	11.50	06/07/99	Hollow Stem Auger	CASCADE	IT
02SB-07	4167.2	5538.4	0.00	11.50	06/07/99	Hollow Stem Auger	CASCADE	IT
02SB-08	4145.7	5530.2	0.00	9.00	06/07/99	Hollow Stem Auger	CASCADE	IT
02SB-09	4178.6	5440.8	0.00	26.50	06/11/99	Hollow Stem Auger	CASCADE.	IT

Table 1b.
Drilling Summary for Monitoring Wells
Time Oil Co. Site 2750
2750 West Commodore Way, Seattle, Washington

SITE	WELL DEPTH (feet bgs)	TOTAL DEPTH (feet bgs)	GROUND SURFACE ELEVATION (feet)	MP ELEVATION (feet)	CASING DIAMETER (inches)	SCREENS (feet bgs)		ANNULAR FILLS (feet bgs)	
						INTERVAL	DESCRIPTION	INTERVAL	TYPE
02MW-01	19.33	20.00	0.00	29.34	2.00	10.0-19.3	Slotted PVC		
02MW-02	9.82	10.00	0.00	25.20	2.00	5.0-9.8	Slotted PVC		
02MW-03	19.80	20.00	0.00	33.02	4.00	10.0-19.8	Slotted PVC		
02MW-04	19.80	20.00	0.00	32.31	2.00	10.0-19.8	Slotted PVC		
02MW-05	34.54	35.00	0.00	41.70	2.00	20.0-34.5	Slotted PVC		

Table 2
Monitoring Well Gauging Results
Time Oil Co. Site 2750
2750 West Commodore Way, Seattle, Washington

DATE	SITE	MP ELEVATION	TIME	DEPTH TO WATER	FLOATING PRODUCT THICKNESS	WATER ELEV.	CHANGE IN WATER ELEV.	EQUIV. FRESH WATER HEAD
9/28/99	02MW-01	29.34	10:05	6.09	0	23.25	NA	23.25
9/28/99	02MW-02	25.20	9:55	2.41	0	22.79	NA	22.79
9/28/99	02MW-03	33.02	10:00	9.58	0	23.44	NA	23.44
9/28/99	02MW-04	32.31	9:50	9.37	0	22.94	NA	22.94
9/28/99	02MW-05	41.70	9:45	17.85	0	23.85	NA	23.85

All Measurements in Feet Based on Mean Sea Level

Table 3
Soil Sample Analytical Results - NWTPH/BTEX/Lead
Time Oil Co. Site 2750
2750 West Commodore Way, Seattle, WA

SITE	DATE	DEPTH (ft)	Gasoline Range Hydrocarbons (mg/kg)	Diesel Range Hydrocarbons (mg/kg)	Heavy Oil Range Hydrocarbons (mg/kg)	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Xylenes (total) (mg/kg)
MTCA/A/U			100	200	200	0.5	40	20	20
02MW-01	09/13/99	5.00	<5.00	<10.0	<25.0	<0.0500	<0.0500	<0.0500	<0.100
02MW-01	09/13/99	10.00	<5.00	<10.0	<25.0	<0.0500	<0.0500	<0.0500	<0.100
02MW-01	09/13/99	15.00	<5.00	10.5	27.7	<0.0500	<0.0500	<0.0500	<0.100
02MW-01	09/13/99	19.00	<5.00	<10.0	<25.0	<0.0500	<0.0500	<0.0500	<0.100
02MW-04	09/13/99	2.00	<5.00	<10.0	<25.0	<0.0500	<0.0500	<0.0500	<0.100
02MW-04	09/13/99	5.00	6.88	<10.0	<25.0	<0.0500	<0.0500	<0.0500	<0.100
02MW-04	09/13/99	10.00	<5.00	<10.0	<25.0	<0.0500	<0.0500	<0.0500	<0.100
02MW-04	09/13/99	15.00	<5.00	<10.0	<25.0	<0.0500	<0.0500	<0.0500	<0.100
02MW-04	09/13/99	19.00	<5.00	<10.0	<25.0	<0.0500	<0.0500	<0.0500	<0.100
02MW-05	09/13/99	5.00	<5.00	<10.0	<25.0	<0.0500	<0.0500	<0.0500	<0.100
02MW-05	09/13/99	10.00	<5.00	<10.0	<25.0	<0.0500	<0.0500	<0.0500	<0.100
02MW-05	09/13/99	15.00	<5.00	10.3	37.0	<0.0500	<0.0500	<0.0500	<0.100
02MW-05	09/13/99	20.00	<5.00	<10.0	<25.0	<0.0500	<0.0500	<0.0500	<0.100
02MW-05	09/13/99	25.00	<5.00	<10.0	<25.0	0.222	<0.0500	<0.0500	<0.100
02MW-05	09/13/99	30.00	<5.00	<10.0	<25.0	<0.0500	<0.0500	<0.0500	<0.100
02MW-05	09/13/99	34.00	<5.00	<10.0	<25.0	<0.0500	<0.0500	<0.0500	<0.100
02SB-01	06/07/99	3.50	<5.00	540	1320	<0.0500	<0.0500	<0.0500	<0.100
02SB-01	06/07/99	6.00	<5.00	285	712	<0.0500	<0.0500	<0.0500	<0.100
02SB-01	06/07/99	8.00	<5.00	<10.0	<25.0	<0.0500	<0.0500	<0.0500	<0.100
02SB-01	06/07/99	10.50	<5.00	<10.0	31.2	<0.0500	<0.0500	<0.0500	<0.100
02SB-01	06/07/99	12.50	<5.00	<10.0	<25.0	<0.0500	0.0596	<0.0500	<0.100
02SB-02	06/07/99	3.50	<5.00	14	42.7	<0.0500	<0.0500	<0.0500	<0.100
02SB-02	06/07/99	8.50	<5.00	<10.0	<25.0	<0.0500	<0.0500	<0.0500	<0.100
02SB-02	06/07/99	13.50	<5.00	<10.0	<25.0	<0.0500	<0.0500	<0.0500	<0.100
02SB-02	06/07/99	15.00	<5.00	<10.0	<25.0	<0.0500	<0.0500	<0.0500	<0.100
02SB-03	06/07/99	5.50	<5.00	<10.0	<25.0	<0.0500	<0.0500	<0.0500	<0.100

Values represent total concentrations unless noted < = Not detected at indicated reporting limit --- = Not analyzed

Limit 2 is used for results comparison For RCL REPT_01S MTCA/A/U = MTCA Method A Cleanup Levels (revised 1/96)

Table 3
Soil Sample Analytical Results - NWTPH/BTEX/Lead
Time Oil Co. Site 2750
2750 West Commodore Way, Seattle, WA

SITE	DATE	DEPTH (ft)	Lead (mg/kg)
MTCA/A/U			250
02MW-01	09/13/99	5.00	3.86
02MW-01	09/13/99	10.00	3.59
02MW-01	09/13/99	15.00	1.81
02MW-01	09/13/99	19.00	6.46
02MW-04	09/13/99	2.00	5.04
02MW-04	09/13/99	5.00	7.15
02MW-04	09/13/99	10.00	2.47
02MW-04	09/13/99	15.00	2.26
02MW-04	09/13/99	19.00	6.77
02MW-05	09/13/99	5.00	6.91
02MW-05	09/13/99	10.00	2.82
02MW-05	09/13/99	15.00	6.92
02MW-05	09/13/99	20.00	3.97
02MW-05	09/13/99	25.00	1.69
02MW-05	09/13/99	30.00	3.37
02MW-05	09/13/99	34.00	3.46
02SB-01	06/07/99	3.50	11.1
02SB-01	06/07/99	6.00	15.1
02SB-01	06/07/99	8.00	2.8
02SB-01	06/07/99	10.50	6.03
02SB-01	06/07/99	12.50	6.18
02SB-02	06/07/99	3.50	22.8
02SB-02	06/07/99	8.50	5
02SB-02	06/07/99	13.50	2.79
02SB-02	06/07/99	15.00	2.29
02SB-03	06/07/99	5.50	4.49

Values represent total concentrations unless noted < = Not detected at indicated reporting limit --- = Not analyzed

Limit 2 is used for results comparison For RCL REPT_01S MTCA/A/U = MTCA Method A Cleanup Levels (revised 1/96)

Table 3
Soil Sample Analytical Results - NWTPH/BTEX/Lead
Time Oil Co. Site 2750
2750 West Commodore Way, Seattle, WA

SITE	DATE	DEPTH (ft)	Gasoline Range Hydrocarbons (mg/kg)	Diesel Range Hydrocarbons (mg/kg)	Heavy Oil Range Hydrocarbons (mg/kg)	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Xylenes (total) (mg/kg)
MTCA/A/U			100	200	200	0.5	40	20	20
02SB-03	06/07/99	11.00	<5.00	<10.0	<25.0	<0.0500	<0.0500	<0.0500	<0.100
02SB-03	06/07/99	16.00	<5.00	<10.0	<25.0	<0.0500	<0.0500	<0.0500	<0.100
02SB-03	06/07/99	20.00	<5.00	11.3	38.8	<0.0500	<0.0500	<0.0500	<0.100
02SB-04	06/07/99	10.50	<5.00	<10.0	<25.0	<0.0500	<0.0500	<0.0500	<0.100
02SB-04	06/07/99	15.00	<5.00	15.2	62.5	<0.0500	<0.0500	<0.0500	<0.100
02SB-05	06/07/99	6.00	<5.00	17.6	64.5	<0.0500	<0.0500	<0.0500	<0.100
02SB-05	06/07/99	11.00	<5.00	<10.0	<25.0	<0.0500	<0.0500	<0.0500	<0.100
02SB-05	06/07/99	15.50	<5.00	<10.0	<25.0	<0.0500	<0.0500	<0.0500	<0.100
02SB-06	06/07/99	5.50	<5.00	<10.0	<25.0	<0.0500	<0.0500	<0.0500	<0.100
02SB-06	06/07/99	10.50	<5.00	<10.0	<25.0	<0.0500	<0.0500	<0.0500	<0.100
02SB-07	06/07/99	5.50	<5.00	61.8	53.1	<0.0500	<0.0500	<0.0500	0.134
02SB-07	06/07/99	10.50	<5.00	<10.0	<25.0	<0.0500	<0.0500	<0.0500	<0.100
02SB-08	06/07/99	3.50	72.6	127	428	<0.0500	<0.0500	<0.0800	<0.570
02SB-08	06/07/99	8.50	<5.00	<10.0	38.1	<0.0500	<0.0500	<0.0500	<0.100
02SB-09	06/11/99	6.00	<5.00	<10.0	<25.0	<0.0500	<0.0500	<0.0500	<0.100
02SB-09	06/11/99	10.00	<5.00	<10.0	<25.0	<0.0500	0.0699	<0.0500	<0.100
02SB-09	06/11/99	15.50	<5.00	<10.0	<25.0	<0.0500	<0.0500	<0.0500	<0.100
02SB-09	06/11/99	20.50	<5.00	11	<25.0	<0.0500	<0.0500	<0.0500	<0.100

Values represent total concentrations unless noted < = Not detected at indicated reporting limit --- = Not analyzed

Limit 2 is used for results comparison For RCL REPT_01S MTCA/A/U = MTCA Method A Cleanup Levels (revised 1/96)

Table 3
Soil Sample Analytical Results - NWTPH/BTEX/Lead
Time Oil Co. Site 2750
2750 West Commodore Way, Seattle, WA

SITE	DATE	DEPTH (ft)	Lead (mg/kg)
MTCA/A/U			250
02SB-03	06/07/99	11.00	6.16
02SB-03	06/07/99	16.00	2.99
02SB-03	06/07/99	20.00	3.5
02SB-04	06/07/99	10.50	2.57
02SB-04	06/07/99	15.00	2.97
02SB-05	06/07/99	6.00	18
02SB-05	06/07/99	11.00	3.72
02SB-05	06/07/99	15.50	4.23
02SB-06	06/07/99	5.50	2.78
02SB-06	06/07/99	10.50	2.2
02SB-07	06/07/99	5.50	7.85
02SB-07	06/07/99	10.50	2.4
02SB-08	06/07/99	3.50	10.6
02SB-08	06/07/99	8.50	3.02
02SB-09	06/11/99	6.00	---
02SB-09	06/11/99	10.00	---
02SB-09	06/11/99	15.50	---
02SB-09	06/11/99	20.50	---

Values represent total concentrations unless noted < = Not detected at indicated reporting limit --- = Not analyzed

Limit 2 is used for results comparison For RCL REPT_01S MTCA/A/U = MTCA Method A Cleanup Levels (revised 1/96)

Table 4
Soil Sample Analytical Results - VOCs
Time Oil Co. Site 2750
2750 West Commodore Way, Seattle, WA

CONSTITUENT (Units in mg/kg)	SITE	02SB-08
	SAMPLE ID	02SB-08A
	DATE	06/07/99
	DEPTH (ft)	3.50
Carbon tetrachloride		<0.100
Acetone		<2.00
Chloroform		<0.100
Benzene		---
1,1,1-Trichloroethane		<0.100
Bromomethane		<0.100
Chloromethane		<0.500
Dibromomethane		<0.100
Bromochloromethane		<0.100
Chloroethane		<0.100
Vinyl chloride		<0.100
Methylene chloride		<1.00
Carbon disulfide		<0.100
Bromoform		<0.100
Bromodichloromethane		<0.100
1,1-Dichloroethane		<0.100
1,1-Dichloroethene		<0.100
Trichlorofluoromethane		<0.100
Dichlorodifluoromethane		<0.100
1,2-Dichloropropane		<0.100
2-Butanone		<1.00
1,1,2-Trichloroethane		<0.100
Trichloroethene		<0.100
1,1,2,2-Tetrachloroethane		<0.100
1,2,3-Trichlorobenzene		<0.100
Hexachlorobutadiene		<0.100
Naphthalene		<0.100
o-Xylene		<0.100
2-Chlorotoluene		<0.100
1,2-Dichlorobenzene		<0.100
1,2,4-Trimethylbenzene		0.102
1,2-Dibromo-3-chloropropane		<0.500
1,2,3-Trichloropropane		<0.100

Values represent total concentrations unless noted < = Not detected at indicated reporting limit --- = Not analyzed

Limit 2 is used for results comparison For RCL 8260BNCAB

Table 4
Soil Sample Analytical Results - VOCs
Time Oil Co. Site 2750
2750 West Commodore Way, Seattle, WA

CONSTITUENT (Units in mg/kg)	SITE	02SB-08
	SAMPLE ID	02SB-08A
	DATE	06/07/99
	DEPTH (ft)	3.50
tert-Butylbenzene		<0.100
Isopropylbenzene		<0.100
p-Isopropyltoluene		<0.100
4-Nitroaniline		<0.200
Ethylbenzene		---
Styrene		<0.100
n-Propylbenzene		<0.100
n-Butylbenzene		<0.100
4-Chlorotoluene		<0.100
1,4-Dichlorobenzene		<0.100
1,2-Dibromoethane		<0.100
1,2-Dichloroethane		<0.100
4-Methyl-2-pentanone		<1.00
1,3,5-Trimethylbenzene		<0.100
Bromobenzene		<0.100
Toluene		---
Chlorobenzene		<0.100
1,2,4-Trichlorobenzene		<0.100
Dibromochloromethane		<0.100
Tetrachloroethene		<0.100
sec-Butylbenzene		<0.100
1,3-Dichloropropane		<0.100
cis-1,2-Dichloroethene		<0.100
trans-1,2-Dichloroethene		<0.100
1,3-Dichlorobenzene		<0.100
1,1-Dichloropropene		<0.100
2,2-Dichloropropane		<0.100
2-Hexanone		<1.00
1,1,1,2-Tetrachloroethane		<0.100
Methyl tert-butyl ether		---
cis-1,3-Dichloropropene		<0.100
trans-1,3-Dichloropropene		<0.100

Values represent total concentrations unless noted < =Not detected at indicated reporting limit ---=Not analyzed

Limit 2 is used for results comparison For RCL 8260BNCAB

Table 5
Soil Sample Analytical Results - PEST/PCBs
Time Oil Co. Site 2750
2750 West Commodore Way, Seattle, WA

CONSTITUENT (Units in ug/kg)	SITE	02SB-08
	SAMPLE ID	02SB-08A
	DATE	06/07/99
	DEPTH (ft)	3.50
4,4'-DDT		<1.00
CHLORDANE		<1.00
gamma-BHC (Lindane)		<1.00
DIELDRIN		<2.00
ENDRIN		<2.00
Methoxychlor		<4.00
4,4'-DDD		<1.00
4,4'-DDE		<1.00
HEPTACHLOR		<1.00
ALDRIN		<1.00
alpha-BHC		<0.500
beta-BHC		<0.900
delta-BHC		<0.600
Endosulfan I		<1.00
Heptachlor epoxide		<1.00
Endosulfan sulfate		<1.00
alpha-Chlordane		<0.800
gamma-Chlordane		<0.700
Endrin aldehyde		<2.00
Toxaphene		<50.0
Aroclor 1260		<50.0
Aroclor 1254		<50.0
Aroclor 1268		<50.0
Aroclor 1221		<50.0
Aroclor 1232		<50.0
Aroclor 1248		<50.0
Aroclor 1016		<50.0
Endosulfan II		<2.00
Aroclor 1262		<50.0
Aroclor 1242		<50.0

Values represent total concentrations unless noted < = Not detected at indicated reporting limit --- = Not analyzed

Limit 2 is used for results comparison For RCL 8081A/8082

Table 6
Soil Sample Analytical Results - RCRA Metals
Time Oil Co. Site 2750
2750 West Commodore Way, Seattle, WA

CONSTITUENT (Units in mg/kg)	SITE	02SB-08	02SB-08
	SAMPLE ID	02SB-08A	02SB-08B
	DATE	06/07/99	06/07/99
	DEPTH (ft)	3.50	8.50
Arsenic		4.78	---
Barium		86.3	---
Cadmium		<0.500	---
Chromium		33.1	---
Lead		10.6	3.02
Mercury		---	---
Selenium		<0.500	---
Silver		<0.500	---

Values represent total concentrations unless noted < = Not detected at indicated reporting limit --- = Not analyzed

Limit 2 is used for results comparison For RCL 6020NCAB

Table 7
Groundwater Sample Analytical Results
Time Oil Co. Site 2750
2750 West Commodore Way, Seattle, WA

SITE	DATE	Gasoline Range Hydrocarbons (mg/l)	Diesel Range Hydrocarbons (mg/l)	Heavy Oil Range Hydrocarbons (mg/l)	Benzene (ug/l)	Toluene (ug/l)	Ethylbenzene (ug/l)	Xylenes (total) (ug/l)	Total Lead (ug/l)
MTCA/A/U		1.0000	1.0000	1.0000	5.0	40.0	30.0	20.0	5.0
02MW-01	09/28/99	0.172	<0.250	<0.500	72.9	0.811	<0.500	<1.00	36
02MW-02	09/28/99	<0.0500	<0.250	<0.500	<0.500	<0.500	<0.500	<1.00	133
02MW-03	09/28/99	0.16	<0.250	<0.500	56.7	1.13	<0.500	1.14	<1.00
02MW-04	09/28/99	3.7	<0.250	<0.500	<30.0	185	226	473	35.9
02MW-05	09/28/99	<0.0500	<0.250	<0.500	2.84	<0.500	<0.500	<1.00	86.3
02SB-02	06/07/99	8.26	3.12	<0.500	214	155	459	1110	---
02SB-03	06/07/99	<0.0500	1.07	<0.500	6.64	1.36	0.617	1.93	---
02SB-04	06/07/99	0.0556	0.867	0.503	59.8	2.28	1.62	8.18	---
02SB-05	06/07/99	0.685	0.865	<0.500	19.9	4.18	19.9	20.2	---
02SB-06	06/07/99	0.103	0.456	<0.500	<0.500	1.11	0.585	4.03	---
02SB-07	06/07/99	<0.0500	1.07	0.626	<0.500	<0.500	<0.500	<1.00	---
02SB-08	06/07/99	0.128	0.668	<0.500	1.59	1.25	<0.500	2.78	---
02SB-09	06/11/99	1.36	0.617	<0.500	639	1.89	1.31	9.66	---

Values represent total concentrations unless noted < = Not detected at indicated reporting limit --- = Not analyzed

Limit 2 is used for results comparison For RCL REPT_02W MTCA/A/U = MTCA Method A Cleanup Levels (revised 1/96)

Table 7
Groundwater Sample Analytical Results
Time Oil Co. Site 2750
2750 West Commodore Way, Seattle, WA

SITE	DATE	Dissolved Lead (ug/l)
MTCA/A/U		5.0
02MW-01	09/28/99	---
02MW-02	09/28/99	---
02MW-03	09/28/99	---
02MW-04	09/28/99	---
02MW-05	09/28/99	---
02SB-02	06/07/99	---
02SB-03	06/07/99	<1.00
02SB-04	06/07/99	<1.00
02SB-05	06/07/99	1.29
02SB-06	06/07/99	<1.00
02SB-07	06/07/99	<1.00
02SB-08	06/07/99	<1.00
02SB-09	06/11/99	---

Values represent total concentrations unless noted < = Not detected at indicated reporting limit --- = Not analyzed

Limit 2 is used for results comparison For RCL REPT_02W MTCA/A/U = MTCA Method A Cleanup Levels (revised 1/96)

APPENDIX A
PREVIOUS REPORTS

ENCLOSURE 1

PHONE 285-2400
CABLE ADDRESS: TIMOIL
(FAX) 206-283-6036

SEATTLE
TACOMA
PORTLAND
STOCKTON
RENO
RICHMOND
LOS ANGELES

TIME OIL CO.

2737 WEST COMMODORE WAY
P.O. BOX 24447

SEATTLE, WA 98199-1233
SEATTLE, WA 98124-0447

December 30, 1991

Washington State Department of Ecology
Attention: Joe Hickey
3190 160th Ave. S.E.
Bellevue, Wa 98008-5452

RE: Underground Storage Tank Site Check/Site Assessment at Seattle Terminal, 2737 West Commodore Way, Seattle, Wa - Property No. 01-228.

Dear Mr. Hickey:

This letter report is submitted to provide initial information on the removal of underground storage tanks at the above referenced site. The property is located at the north end of the community of Magnolia on the south shore of Salmon Bay in Seattle, Washington (Figure 1). The site is the location of Time Oil Co.'s Seattle Terminal which consists of a two-story office structure, warehouses and above ground storage tanks. Properties surrounding the site are light to heavy marine/industrial.

On September 16, 1991 four tanks were removed by Lee Morse Construction as part of a facility upgrade. They were 4,000, 2,500, 1,500 and 300 gallon capacity tanks that had contained unleaded gasoline, diesel fuel, regular leaded gasoline, and used oil, respectively. See Figures 2 and 3 for tank locations.

The removal of the tanks resulted in two excavations. The gasoline and diesel fuel tanks were removed from excavation #1 and the used oil tank was removed from excavation #2 (Figures 2 and 3).

One 4,000 gallon tank was installed in excavation #1, replacing the former gasoline and diesel fuel tank system. This tank is baffled to provide two compartments of 3,000 and 1,000 gallon capacities and is, therefore, registered as two tanks. The tanks contain regular unleaded gasoline and diesel fuel, respectively. Two new fuel dispensers were also installed replacing the old dispensers.

The following discusses tank removal and sample collection activities, and analytical results.

FIELD INVESTIGATION

The removal of contaminated soil and sample collection was based on organic vapor analysis readings. Soil samples were collected and placed in Zip-lock bags for headspace analysis using a Micro-tip organic vapor analyzer. When head space readings were below 50 parts per million or contaminated soil removal was not feasible, samples were collected.

Samples were collected from the excavation using a backhoe bucket. Each sample was taken from near the teeth of the backhoe after approximately 6 inches of soil was removed, then transferred to a 4 ounce jar and placed in an ice chest for delivery to Friedman and Bruya analytical laboratory. Sample equipment consisted of disposable latex gloves and a stainless steel spoon which was triple washed between each sampling.

Excavation #1

The 4,000, 2,500 and 1,500 gallon tanks were removed from excavation #1. The 2,500 and 1,500 gallon tanks were part of a 4,000 gallon baffled tank system that was installed in 1980. They were registered as individual tanks with the Department of Ecology. It is unknown when the 4,000 gallon unleaded gasoline tank was installed. The 4,000 gallon tank and the 2,500 and 1,500 gallon compartments of the baffled tank were tightness tested annually using the Petro-Tite testing system. They were last tested in September 1990 and found to be tight.

Areas of slight rusting and pitting were observed on the 4,000 gallon tank and the baffled tank system but no holes were noted. As the tanks were removed gasoline contamination was observed in the surrounding soil. This contamination is consistent with the nature of contamination found from years of tank overfills and spillage.

Soil encountered at the site consisted of artificial fill and natural material. Artificial fill was encountered from the surface to a depth of approximately 7 feet in the excavation and consisted of brown and grey sandy silt with gravel. Decaying organic material such as wood and grass, and metal debris was observed in the fill.

Natural soils were observed underlying the fill to a minimum depth of approximately 18 feet and was composed of brown sandy silt with gravel that graded to gray silty fine to medium sand with depth. Backfill material for the tank excavation generally consisted of imported sand and soil similar to the surrounding artificial fill. The soil appeared discolored and a hydrocarbon odor was encountered in the excavation during tank removal. Groundwater with a heavy hydrocarbon sheen was encountered at a depth of 18 feet below the ground surface in the excavation.

After the two 4,000 gallon tanks and associated backfill soils were removed, an attempt was made to assess the extent of contamination and remove it. Because of these efforts the excavation was extended to the north, east and west. However, due to high head space readings near the groundwater in the excavation and the proximity of the excavation to the Time Oil office building, excavating was abandoned and soil samples were collected. Approximately 140 cubic yards of soil was removed from the excavation and stockpiled on site.

A total of eight soil samples were collected from the sidewalls and floor within excavation #1 and the former location of the fuel dispensers (Figure 2 - Provides the location and depth of sampling points). A groundwater sample was not collected at the time of tank removal due to the presence of a heavy hydrocarbon sheen. The soil samples were submitted to the analytical laboratory for chemical

testing for total petroleum hydrocarbons as gasoline (TPH-g) and diesel (TPH-d), benzene, toluene, ethylbenzene, xylenes (BTEX), and total lead using EPA methods 8015 (modified), 8020 and 7421, respectively.

Analytical results for these soil samples indicated TPH-g concentrations ranging from less than 2 parts per million (ppm) to 12,000 ppm. The highest TPH concentration of 12,000 ppm was encountered in the sample collected from the area of the fuel dispensers. TPH-d concentrations ranged from less than 50 ppm to 220 ppm. Table 1 provides a summary of soil samples and analytical results for excavation #1 soil samples. See the attached laboratory report for further information.

Excavation #2

The 300 gallon tank was removed from excavation #2. It is not known when the tank was installed. However, the tank was used for storing used oil collected during servicing of Time Oil fleet vehicles.

Areas of rusting and pitting were present on the tank and a pin-sized hole was observed after corrosion had been removed indicating that the tank may not have leaked under normal circumstances. As the tank was removed hydrocarbon contamination was observed in the surrounding soil. As in excavation #1, this contamination is also consistent with the nature of contamination found from years of tank overfills and spillage.

Artificial fill and natural soil was encountered in this excavation. The fill ranged in depth from the surface to 4.5 feet at the south end of the excavation and 1 foot at the north end. Natural soil consisting of brown and gray silty fine to medium sand was observed underlying the fill and extending to a minimum depth of groundwater. The soil appeared discolored and a hydrocarbon odor was encountered in the excavation during tank removal.

The depth to groundwater varied from 6 feet to 2 feet below the ground surface as the property sloped down to Salmon Bay to the north. A heavy sheen was observed on the groundwater.

After the 300 gallon tank and associated backfill were removed, an attempt was made to assess the extent of contamination and remove it. Because of these efforts the excavation was extended to the north toward Salmon Bay. When contamination was observed to be extensive, excavating was abandoned and soil samples were collected. A total of approximately 100 cubic yards of soil was removed from the excavation and stockpiled on site.

A total of four soil samples were collected from the sidewalls and floor within the excavation. Soil samples were not collected from the north end of the excavation because very strong hydrocarbon odors and gray discoloration was observed in that area. Instead, a test pit was dug between the excavation and the shoreline (Figure 3) to assess the horizontal extent of contamination. One sample was collected from that test pit. A groundwater sample was not collected at the time of tank removal due to the presence of a heavy hydrocarbon sheen.

The excavation and test pit samples were submitted for chemical analysis for total petroleum hydrocarbons as diesel (TPH-d) and motor oil (TPH-m) using EPA method 8015 (modified). Analytical results for excavation #2 and test pit samples indicated TPH-d concentrations ranging from less than 10 ppm to 310 ppm. TPH-m concentrations ranged from less than 10 ppm to 410 ppm.

Four soil samples were collected from stockpiled soil and combined to form one stockpile composite sample. The composite sample was tested for TCLP lead, halogenated volatile organic compounds using EPA method 8010, PCBs, TPH-d and TPH-m using EPA methods 8015 (modified) and 418.1, respectively. Chemical test results for the stockpile composite sample indicated TPH-d and TPH-m concentrations of 78 ppm and 1700 ppm, respectively.

Table 2 provides a summary of TPH analytical results for excavation #2, test pit and composite soil samples. See the attached laboratory report for the remaining chemical test results.

Time Oil is currently in the process of sending Request for Proposals for further site assessment to environmental consultants in the area. The next stage of work will address the contaminated soil stockpile, the extent of subsurface soil contamination at both excavations, the impact, if any, to the shallow ground water, and provide recommendations for cleanup, if necessary.

If there are any further questions regarding this site please contact me at (206) 286-4490.

Sincerely,

Liam J. Russell
Geologist

Attachments:
Table 1
Table 2
Figure 1
Figure 2
Figure 3
Analytical Report

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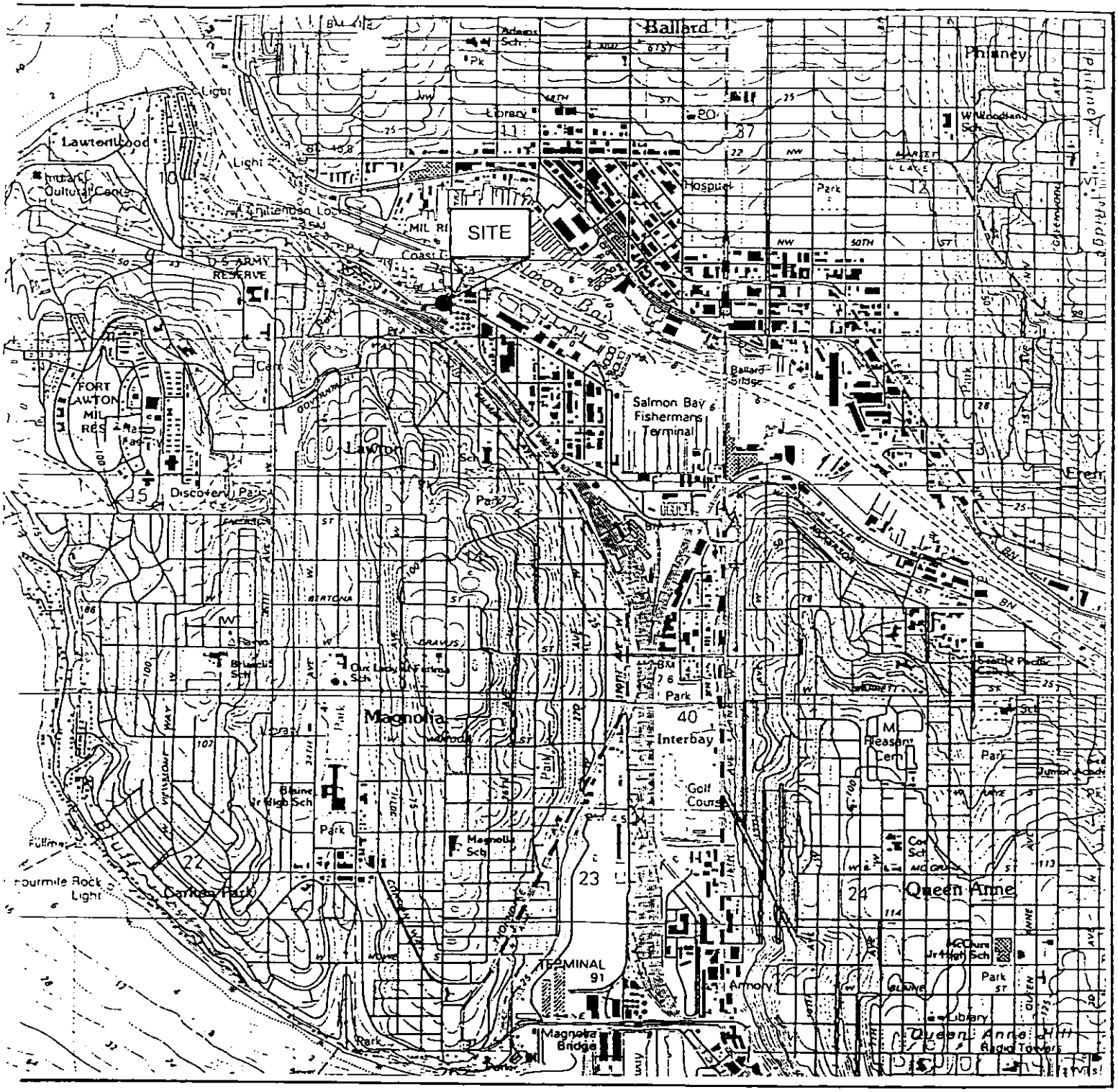
TABLE 1
SUMMARY OF SOIL SAMPLES
AND ANALYTICAL RESULTS
(Excavation #1)

Sample I.D.	TPH g/d (ppm)	Benzene (ppm)	Toluene (ppm)	Ethylben (ppm)	xylenes (ppm)
1617-PI1	12,000/220	330	370	390	1600
1617-PI2	1,300/66	27	21	26	64
1500-N1	<2/17	0.003	0.003	<0.002	<0.006
0829-S1	19/76	<0.22	0.38	0.099	0.056
0834-E1	180/<50	<0.22	2.5	5.0	7.2
0839-W1	<2/<50	0.013	0.060	0.023	0.065
0845-Floor	120/200	1.1	1.3	3.2	12
0926-NW1	<2/<50	0.005	0.049	0.015	0.062

TABLE 2
SUMMARY OF SOIL SAMPLES
AND ANALYTICAL RESULTS
(Excavation #2, Test Pit and Stockpile)

Sample I.D.	TPH-d(8015) (ppm)	TPH-m(8015) (ppm)	TPH-m(418.1) (ppm)
TPI-3	310	410	
TI-N-4	<10	<10	
TI-E-4	<10	<10	
TI-F-6	<10	200	
TI-W-4	<10	<10	
Pile Composite	78		1700



N

SCALE

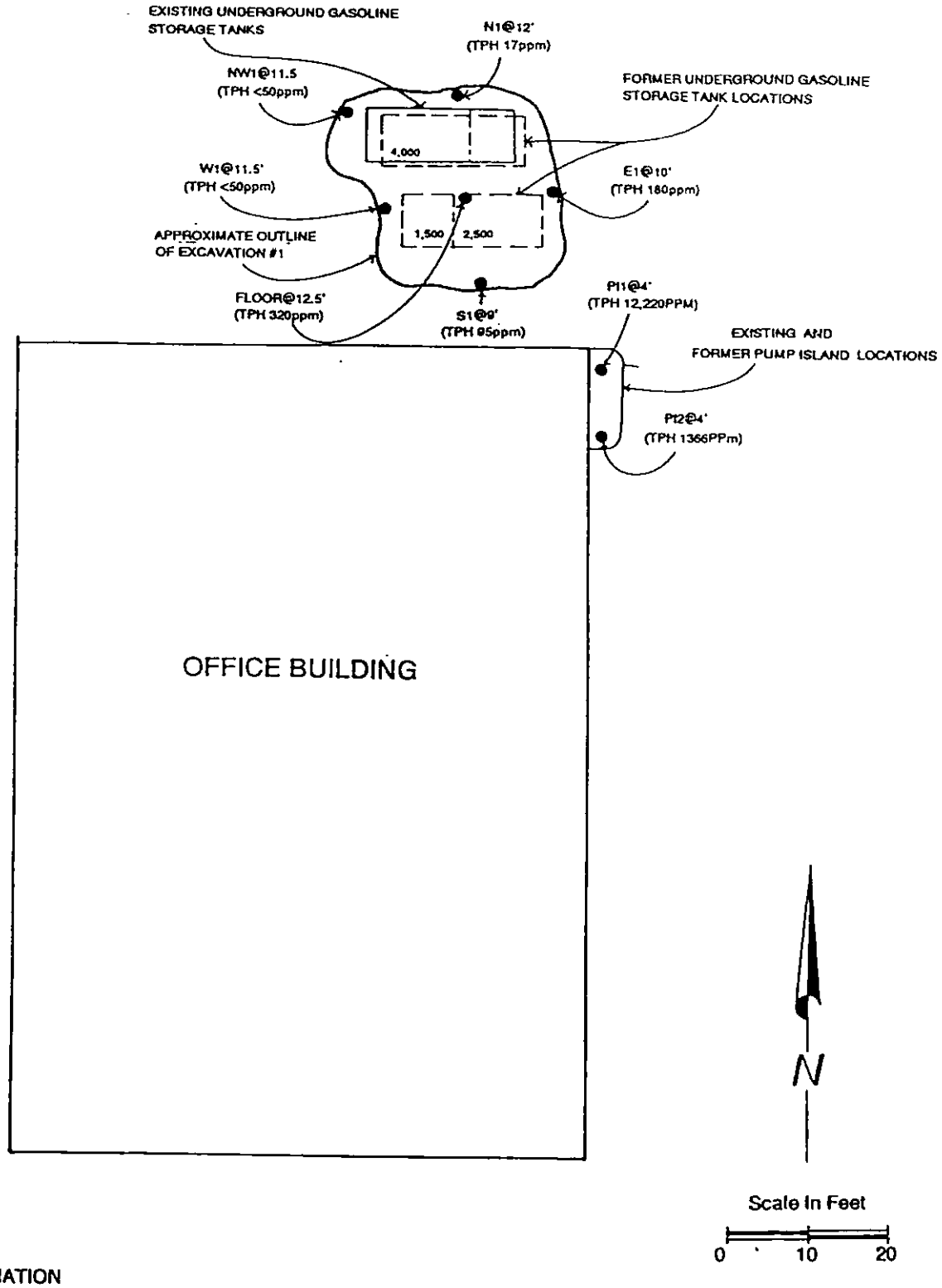
MILES 1 .5 0

TIME OIL CO.

2737 West Commodore Way

SEATTLE TERMINAL

WEST COMMODORE WAY

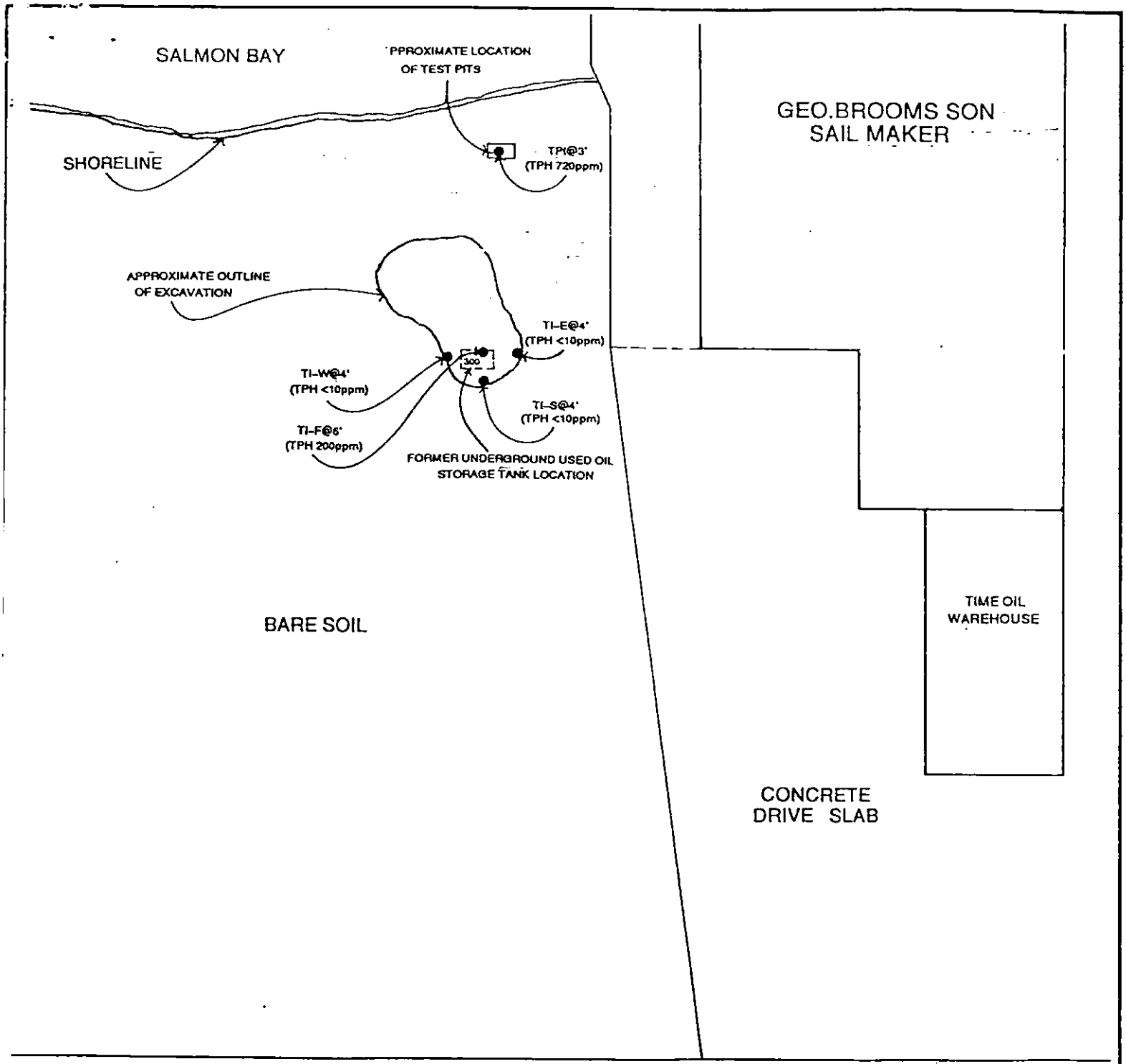


EXPLANATION

● N1@12' (TPH 17ppm) — APPROXIMATE SAMPLE LOCATION WITH RESPECTIVE DEPTH AND TPH CONCENTRATION

FIGURE 2

TIME OIL CO.
2737 West Commodore Way
SEATTLE TERMINAL



EXPLANATION

TP1@3' (TPH 720ppm) — APPROXIMATE SAMPLE LOCATION WITH RESPECTIVE DEPTH AND TPH CONCENTRATION

SCALE: 1" = 30'

FIGURE 3

TIME OIL CO.

2737 West Commodore Way

SEATTLE TERMINAL

2737 WEST COMMODORE WAY, SEATTLE, WA

ENCLOSURE 2

PHONE 255-2400
CABLE ADDRESS TIMOIL
(FAX) 206-253-8036

SEATTLE
TACOMA
PORTLAND
STOCKTON
RENO
RICHMOND
LOS ANGELES

TIME OIL CO.

2737 WEST COMMODORE WAY
P.O. BOX 24447

SEATTLE, WA 98199-1233
SEATTLE, WA 98124-0447

September 22, 1992

Washington State Department of Ecology
Northwest Region
3190 160th SE
Bellevue, Washington 98008-5452
Attention: Mr. Joe Hickey

SUBJECT: Excavating Activities Conducted at Former Waste Oil Tank Location
Former Time Oil Co. Vehicle Maintenance Facility
2750 Commodore Way; Seattle, Washington

Dear Mr. Hickey,

This letter is to inform you of the findings of additional assessment activities conducted at the above referenced site. On July 28th and 29th, 1992 additional excavation was conducted in the former location of a waste oil tank which was removed in September 1991. Hydrocarbon contamination was discovered during removal of the tank; thus, this additional phase of excavation was undertaken in an attempt to remove remaining soil contamination.

A small amount of groundwater had pooled in the initial excavation associated with tank removal; therefore, lateral excavation was conducted in an attempt to define the limits of the contaminated area. Previous excavating activities had documented that soils located on the southern and western edges of the excavation did not contain hydrocarbons exceeding MTCA Method A Cleanup Levels; thus, the excavation was expanded primarily to the north and east.

After approximately 150 cubic yards of contaminated soil had been removed, excavating activities were terminated because field observations suggested that contaminant severity increased in an easterly direction, and excavation of the full extent of soil contamination did not appear to be feasible. The excavation was backfilled by placing crushed rock below the groundwater surface, installing a layer of 10-mil visqueen upon the crushed rock to reduce settling and surface water infiltration, and backfilling the remaining excavation with fine sand.

Six soil samples were collected from the limits of the northern and eastern sides of the excavation, directly above the groundwater surface, to assess remaining contaminant levels and evaluate the potential for a groundwater impact (See Figure 1 - Site Map for sample locations). The six samples were submitted to a State certified laboratory for hydrocarbon identification (WHCID) analysis to identify the hydrocarbons present. Hydrocarbons identified as gasoline, diesel, and mineral spirits were identified in samples A-1 @8', A-2 @9', and A-6 @3'. Motor oil was also detected in sample A-6 @3'. Additional analysis was conducted on the three samples in which hydrocarbons

were detected to quantify levels of TPH and BTEX by the WTPH Method and EPA Method 8020. These three samples were found to contain levels of TPH-gasoline ranging from 60 to 290 parts per million (ppm), TPH-diesel ranging from 90 to 1,600 ppm, TPH-mineral spirits between 50 and 210 ppm, and 2,300 ppm TPH-motor oil was detected in sample A-6 @3' (See Table 1 - Analytical Results). Laboratory reports are attached.

Two additional soil samples were recovered from the vicinity of an area of visibly impacted soil located near the ground surface on the south side of the excavation. Sample WO-WC was recovered from material believed to represent "worst case" conditions in order to conduct disposal profiling. Sample WO @5' was collected from the same area at a depth of 5 feet below grade to verify removal of the impacted soil once field observations indicated that the visibly impacted area had been fully excavated. WHCID analysis on these two samples detected the presence of diesel fuel in Sample WO-WC and did not detect petroleum hydrocarbons in sample WO @5'. WTPH analysis conducted on Sample WO-WC detected 2,800 ppm TPH-diesel. Laboratory reports are attached.

These analytical results, in combination with field observations, indicate that petroleum hydrocarbon contamination remains beneath the site, and that an impact upon groundwater may have occurred. Time Oil Co. is in the process of submitting a request for proposals to environmental consultants for further assessment of this area. This next phase of assessment will include the installation of soil borings and groundwater monitoring wells to assess the extent of remaining soil contamination and the potential for an impact upon groundwater.

The excavated soil is currently stockpiled upon an adjacent property also owned by Time Oil Co. Samples of this material have been submitted for disposal profiling. Arrangements to recycle the soil will be made once analytical results are received.

If you have any questions regarding this site, please contact either myself at (206) 286-6457 or Liam Russell at (206) 286-4490. If we are not available, Kevin Murphy may be able to answer your questions.

Sincerely,

Scott B. Sloan
Geologist

Enclosures:
Table 1 - Analytical Results
Figure 1 - Site Map
Analytical Reports

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TABLE 1

Soil Analytical Results
Time Oil Co. Property No. 01-228
2750 Commodore Way; Seattle, Washington

Sample Number	Depth	TPH	Benzene	Toluene	Ethyl-benzene	Total Xylenes
Samples Collected 10/3/91						
TI-F	6'	200	NT	NT	NT	NT
TI-E	4'	ND	NT	NT	NT	NT
TI-S	4'	ND	NT	NT	NT	NT
TI-W	4'	ND	NT	NT	NT	NT
TP1	3'	720	NT	NT	NT	NT
Samples Collected 12/10/91						
SS1	6.5'	12	NT	NT	NT	NT
NS2	2'	840	NT	NT	NT	NT
ES4	5'	25,000	NT	NT	NT	NT
TP3	2'	15	NT	NT	NT	NT
Samples Collected 7/29/92						
A1	8'	60-g	ND	ND	ND	ND
		50-m	—	—	—	—
		90-d	—	—	—	—
A2	9'	290-g	ND	ND	ND	ND
		200-m	—	—	—	—
		330-d	—	—	—	—
A3	6'	ND*	NT	NT	NT	NT
A4	3'	ND*	NT	NT	NT	NT
A5	3'	ND*	NT	NT	NT	NT
A6	3'	110-g	0.16	0.14	2.6	4.9
		210-m	—	—	—	—
		1,600-d	—	—	—	—
		2,300-o	—	—	—	—
WO-WC	2'	2,800-d	NT	NT	NT	NT
WO @ 5'	5'	ND*	NT	NT	NT	NT

NOTES:

Results reported in milligrams per kilogram (mg/kg) of parts per million (ppm).

g = TPH as gasoline, d = TPH as diesel,

m = TPH as mineral spirits, o = TPH as motor oil.

Detection limit for benzene, toluene, and ethylbenzene = 0.02 ppm

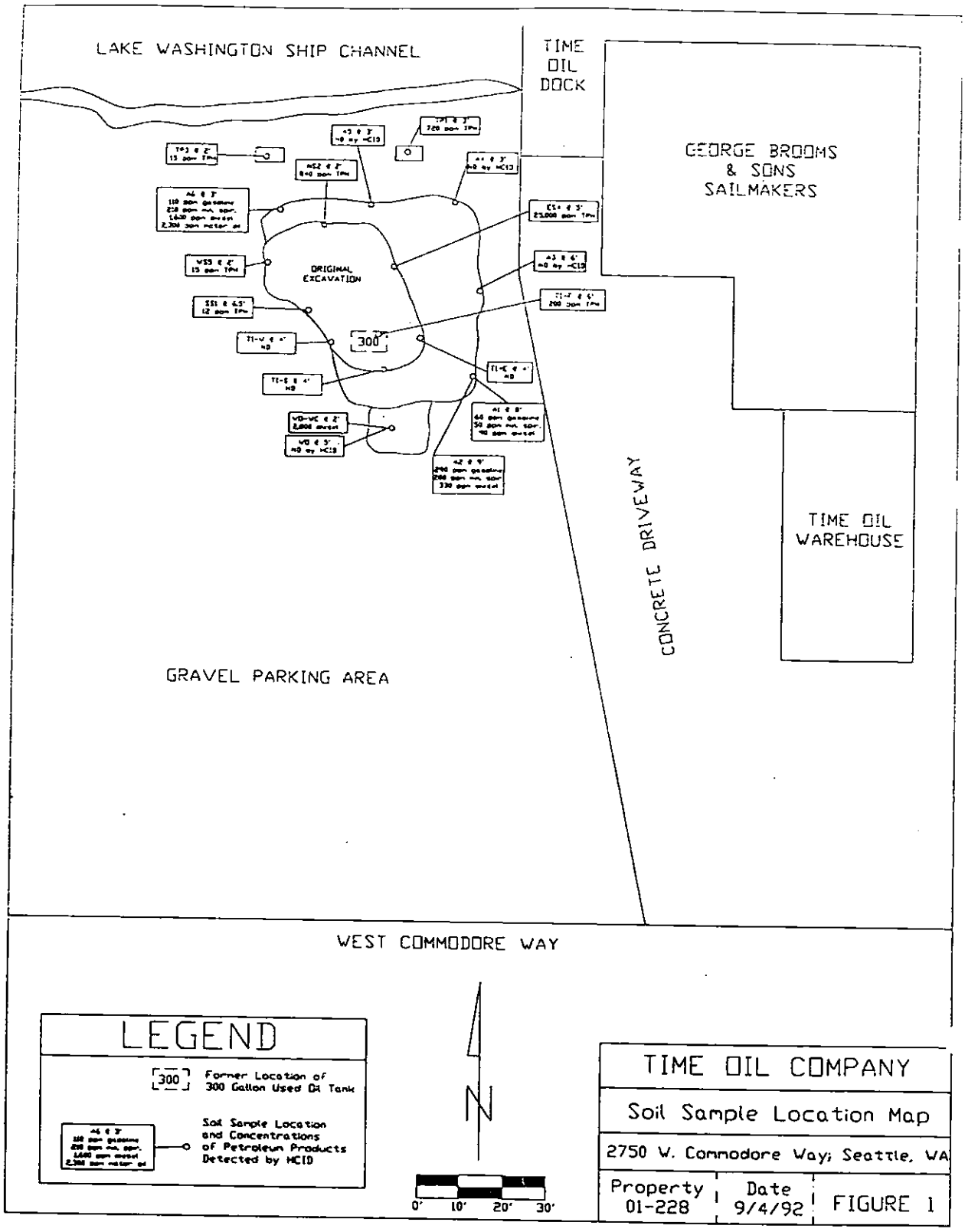
Detection limit for total xylenes = 0.04 ppm.

Shading denotes sample with at least one constituent exceeding Method A Cleanup Standards.

NT = Sample not tested for this constituent.

ND = Not detected.

* = TPH analysis by HCID.


LAKE WASHINGTON SHIP CHANNEL
TIME OIL DOCK
GEORGE BROOMS & SONS SAILMAKERS
ORIGINAL EXCAVATION
300
TIME OIL WAREHOUSE
CONCRETE DRIVEWAY
GRAVEL PARKING AREA
WEST COMMODORE WAY
LEGEND
300 Former Location of 300 Gallon Used Oil Tank
Soil Sample Location and Concentrations of Petroleum Products Detected by HCID
N
0' 10' 20' 30'
TIME OIL COMPANY
Soil Sample Location Map
2750 W. Commodore Way; Seattle, WA
Property 01-228
Date 9/4/92
FIGURE 1

APPENDIX B
DRILL LOGS

IT CORPORATION

Drilling Log

Site ID: 02MW-01

Project Name: Time Oil Co. Seattle Terminal
ocation:
urface Elevation: 0.00'
Borehole Diameter: 8.00in
lank Casing:
pe: PVC dia: 2.00in fm: 0.0' to: 10.00'
creens:
type: Slotted size: 0.020in dia: 2.00in fm: 10.00' to: 19.33'
Drilling Company:
gged By:
ecked By:

Project Number:
Total Hole Depth: 20.00'
Top of Casing: 29.34'
Static Water Level:
Annular Fill:
type: fm: to:
type: fm: to:
type: fm: to:
Method: Hollow Stem Auger
Date Started: / /
Permit #:

See Site Map For Boring Location

Comments:

egun (ft)	Well Completion	PID	Sample ID	Recovery	Graphic Log	USCS Code	Water Level	Description
1						CL		Gravel base/fill
2								
3								Brown soft clay with gray fine grained sand. No odor. Damp.
4								
5								
6						SM		
7								
8								
9								
10								Gray fine grained sand with little silt. Dry, no odor.
1								
12								
3								
14								
5								Grades to coarse grained sand, wet.
6								
17								
3								
19						CL		
0								Dry, gray hard clay, no odor.#
21								
2								
23								
1								
25								
3								
27								

IT CORPORATION

Drilling Log

Site ID: 02MW-02

Project Name: Time Oil Co. Seattle Terminal
Location:
Surface Elevation: 0.00'
Borehole Diameter: 8.00in
Blank Casing:
Type: PVC dia: 2.00in fm: 0.0' to: 5.00'
Screens:
Type: Slotted size: 0.020in dia: 2.00in fm: 5.00' to: 9.82'
Drilling Company:
Logged By:
Checked By:

Project Number:
Total Hole Depth: 10.00'
Top of Casing: 25.20'
Static Water Level:
Annular Fill:
Type: fm: to:
Type: fm: to:
Type: fm: to:
Method: Hollow Stem Auger
Date Started: / /
Permit #:

See Site Map For Boring Location

Comments:

Depth (ft)	Well Completion	PID	Sample ID	Recovery	Graphic Log	USCS Code	Water Level	Description
1								Gravel base/fill
2								
3								Hole not sampled – see log for 02SB-07 for stratigraphy#
4								WATER
5								
6								
7								
8								
9								
10								
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								
21								
22								
23								
24								
25								
26								
27								

IT CORPORATION

Drilling Log

Site ID: 02MW-03

Project Name: Time Oil Co. Seattle Terminal
Location:
Surface Elevation: 0.00'
Borehole Diameter: 12.00in
Blank Casing:
Type: PVC dia: 4.00in fm: 0.0' to: 10.00'
Screens:
type: Slotted size: 0.020in dia: 4.00in fm: 10.00' to: 19.80'
Drilling Company:
Logged By:
Checked By:

Project Number:
Total Hole Depth: 20.00'
Top of Casing: 33.02'
Static Water Level:
Annular Fill:
type: fm: to:
type: fm: to:
type: fm: to:
Method: Hollow Stem Auger
Date Started: / /
Permit #:

See Site Map For Boring Location

Comments:

Depth (ft)	Well Completion	PID	Sample ID	Recovery	Graphic Log	USCS Code	Water Level	Description
1								Gravel base/fill
2								
3								Hole not sampled – see log for 02SB-03 for stratigraphy#
4								WATER
5								
6								
7								
8								
9								
10								
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								
21								
22								
23								
24								
25								
26								
27								

IT CORPORATION

Drilling Log

Site ID: 02MW-04

Project Name: Time Oil Co. Seattle Terminal
ocation:
urface Elevation: 0.00'
Borehole Diameter: 8.00in
lank Casing:
ype: PVC dia: 2.00in fm: 0.0' to: 10.00'
creens:
type: Slotted size: 0.020in dia: 2.00in fm: 10.00' to: 19.80'
Drilling Company:
ogged By:
hecked By:

Project Number:
Total Hole Depth: 20.00'
Top of Casing: 32.31'
Static Water Level:
Annular Fill:
type: fm: to:
type: fm: to:
type: fm: to:
Method: Hollow Stem Auger
Date Started: / /
Permit #:

See Site Map For Boring Location

Comments:

Depth (ft)	Well Completion	PID	Sample ID	Recovery	Graphic Log	USCS Code	Water Level	Description
1						SM		Concrete
2								Hand dig/hand auger to 5 ft.
3								
4						CL		
5								Orange to blue gray clay, moist with gray fine grained sand stringers. No odor. Damp.
6								
7								
8						SM		
9								
10								Gray to brown, med. grained sand. Moist to wet, no odor.
11								
12								
13								
14								
15								Gray sand, wet.
16								
17								
18								
19						CL		
20								Dry, gray hard clay, with sand/silt stringers, no odor.
21								
22								
23								
24								
25								
26								
27								

IT CORPORATION

Drilling Log

Site ID: 02MW-05

Project Name: Time Oil Co. Seattle Terminal
Location:
Surface Elevation: 0.00'
Borehole Diameter: 8.00in
Blank Casing:
Type: PVC dia: 2.00in fm: 0.0' to: 20.00'
Screens:
Type: Slotted size: 0.020in dia: 2.00in fm: 20.00' to: 34.54'
Drilling Company:
Logged By:
Checked By:

Project Number:
Total Hole Depth: 35.00'
Top of Casing: 41.70'
Static Water Level:
Annular Fill:
Type: fm: to:
Type: fm: to:
Type: fm: to:
Method: Hollow Stem Auger
Date Started: / /
Permit #:

See Site Map For Boring Location

Comments:

Depth (ft)	Well Completion	PID	Sample ID	Recovery	Graphic Log	USCS Code	Water Level	Description
1						GW		Gravel
2								Hand dig/hand auger to 5 ft.
3						CL		
4								
5								Orange to blue gray clay, moist with gray fine grained sand stringers. No odor. Damp.
6								
7								
8						CL/SM		
9								Grades to brown clay, gray sand stringers. Damp, no odor. Black, thick fluid adhering to soil.
10								
11								
12								
13								
14						CL		
15								Soft gray clay, dry, no odor.
16								
17								
18								
19								
20								
21								
22						SM		
23								
24								
25								Gray, med. to coarse grained sand. Wet, no odor.
26								
27								

IT CORPORATION

Drilling Log

Site ID: 02MW-05

Project Name: Time Oil Co. Seattle Term Project Number: Location:

Depth (ft)	Well Completion	PID	Sample ID	Recovery	Graphic Log	USCS Code	Water Level	Description
30								Gray wet sand, no odor.
35						CL		Dry, gray hard clay, no odor.

IT CORPORATION

Drilling Log

Site ID: 02SB-01

Project Name: Time Oil Co. Seattle Terminal
Location:
Surface Elevation: 0.00'
Borehole Diameter: 6.00in
Drilling Company: CASCADE
Logged By: CNS
Checked By:

Project Number:
Total Hole Depth: 14.00'
Static Water Level:
Method: Hollow Stem Auger
Date Started: 06/07/99
Permit #:

See Site Map For Boring Location

Comments:

Depth (ft)	FID	Sample ID	Recovery	Graphic Log	USCS Code	Water Level	Description
1					GP		Surficial covering of gravel and sand. Hand dug to 24"
1					ML		Brown Silt, some clay, dry, slight odor
5							Grades lighter brown, moist to dry
7							Brown orange medium grain Sand, very damp to wet, slight odor
8					SP		
10					CH		Soft gray Clay, dry, no to slight odor
11						▽	
12							Water level at 11.50 feet IP
13							Grades hard, dry–moist, no odor
14							End borehole

IT CORPORATION

Drilling Log

Site ID: 02SB-02

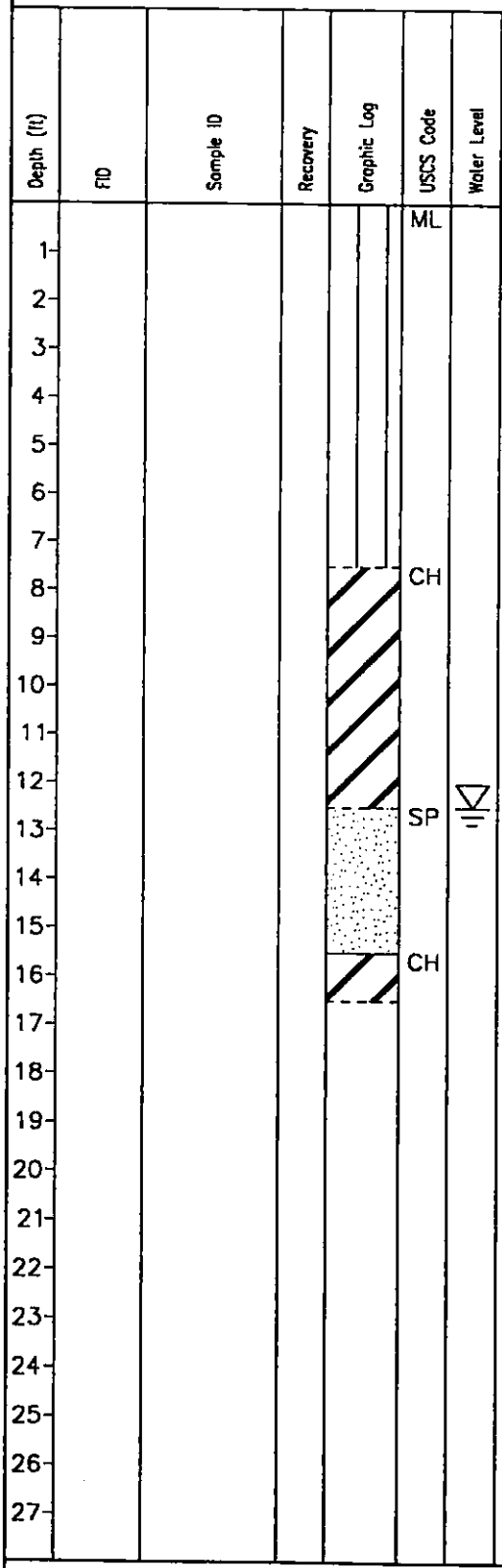
Project Name: Time Oil Co. Seattle Terminal
Location:
Surface Elevation: 0.00'
Borehole Diameter: 6.00in
Drilling Company: CASCADE
Logged By: CNS
Checked By:

Project Number:
Total Hole Depth: 16.50'
Static Water Level:

Method: Hollow Stem Auger
Date Started: 06/07/99
Permit #:

See Site Map For Boring Location

Comments:



IT CORPORATION

Drilling Log

Site ID: 02SB-03

Project Name: Time Oil Co. Seattle Terminal
Location:
Surface Elevation: 0.00'
Borehole Diameter: 6.00in
Drilling Company: CASCADE
Logged By: CNS
Checked By:

Project Number:
Total Hole Depth: 21.50'
Static Water Level:
Method: Hollow Stem Auger
Date Started: 06/07/99
Permit #:

See Site Map For Boring Location

Comments:

Depth (ft)	FID	Sample ID	Recovery	Graphic Log	USCS Code	Water Level	Description
1					GP		Surficial covering of brown Gravel and sand. Hand dug to 24"
					ML		
5							Light brown Silt, some sand, damp to moist, no odor
10					CH		Light brown and blue Clay, dry no odor
16					SP		Gray Sand, wet, no odor
19							Water level at ~19.50 feet IP
21					CH		Gray Clay, very wet
22							End borehole

IT CORPORATION

Drilling Log

Site ID: 02SB-04

Project Name: Time Oil Co. Seattle Terminal
Location:
Surface Elevation: 0.00'
Borehole Diameter: 6.00in
Drilling Company: CASCADE
Logged By: CNS
Checked By:

Project Number:
Total Hole Depth: 16.50'
Static Water Level:

Method: Hollow Stem Auger
Date Started: 06/07/99
Permit #:

See Site Map For Boring Location

Comments:

Depth (ft)	FID	Sample ID	Recovery	Graphic Log	USCS Code	Water Level	Description
1					SP		Light brown Gravel and sand. Hand dug to 24"
9							Plastic sheet from bottom of former tank pit discovered on auger flight
10					ML	▽	Gray Silt, wet, no odor. Water level at ~10.00 feet IP
16							Driller reported contact with Clay. Clay not found in sampler
17							End borehole

IT CORPORATION

Drilling Log

Site ID: 02SB-05

Project Name: Time Oil Co. Seattle Terminal
Location:
Surface Elevation: 0.00'
Borehole Diameter: 6.00in
Drilling Company: CASCADE
Logged By: CNS
Checked By:

Project Number:
Total Hole Depth: 16.50'
Static Water Level:
Method: Hollow Stem Auger
Date Started: 06/07/99
Permit #:

See Site Map For Boring Location

Comments:

Depth (ft)	FID	Sample ID	Recovery	Graphic Log	USCS Code	Water Level	Description
1					ML		Surficial covering of Gravel and sand. Hand dug to 24"
2							Light brown Silt, some sand, little gravel, dry, no odor
3							
4							
5							Grades dark gray, no gravel, damp, slight odor
6							
7							
8							
9							
10					SP		Gray Sand, moist to damp, odor
11							
12							
13							Water level at ~13.50 feet IP
14						▽	
15							Grades orange, wet, slight odor
16					CH		Gray Clay, damp, no odor
17							End borehole
18							
19							
20							
21							
22							
23							
24							
25							
26							
27							

IT CORPORATION

Drilling Log

Site ID: 02SB-06

Project Name: Time Oil Co. Seattle Terminal
Project Number:
Location:
Total Hole Depth: 11.50'
Surface Elevation: 0.00'
Static Water Level:
Borehole Diameter: 6.00in
Drilling Company: CASCADE
Method: Hollow Stem Auger
Logged By: CNS
Date Started: 06/07/99
Checked By:
Permit #:

See Site Map For Boring Location

Comments:

Depth (ft)	FID	Sample ID	Recovery	Graphic Log	USCS Code	Water Level	Description
1					SM		Surficial covering of sand and gravel. Hand dug to 24"
2							
3						▽	Water level at ~3.00 feet IP
4							
5							Orange brown Sand, little silt, wet, no odor
6							
7							
8							
9							
10							
11					CH		Gray Clay, trace gravel, dry to moist, no odor
12							End borehole
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							
23							
24							
25							
26							
27							

IT CORPORATION

Drilling Log

Site ID: 02SB-07

See Site Map For Boring Location

Project Name: Time Oil Co. Seattle Terminal
Project Number:
Location:
Total Hole Depth: 11.50'
Surface Elevation: 0.00'
Static Water Level:
Borehole Diameter: 6.00in
Drilling Company: CASCADE
Method: Hollow Stem Auger
Logged By: CNS
Date Started: 06/07/99
Checked By:
Permit #:

Comments:

Depth (ft)	FID	Sample ID	Recovery	Graphic Log	USCS Code	Water Level	Description
1					SM		Hand dug to 24"
2						▽	Dark brown Sand, dry, no odor. Water level at ~1.72 feet IP
3							
4							
5							Grades gray green and brown, fine to medium grain, little silt, wet, no odor
6							
7							
8							
9							
10							Grades no silt
11					CH		Gray Clay, damp, no odor
12							End borehole
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							
23							
24							
25							
26							
27							

IT CORPORATION

Drilling Log

Site ID: 02SB-08

Project Name: Time Oil Co. Seattle Terminal
Location:
Surface Elevation: 0.00'
Borehole Diameter: 6.00in
Drilling Company: CASCADE
Logged By: CNS
Checked By:

Project Number:
Total Hole Depth: 9.00'
Static Water Level:
Method: Hollow Stem Auger
Date Started: 06/07/99
Permit #:

See Site Map For Boring Location

Comments:

Depth (ft)	FID	Sample ID	Recovery	Graphic Log	USCS Code	Water Level	Description
1					SM		Hand dug to 24"
2							Light brown Sand and silt, some gravel, dry, no odor
3							Grades moist to damp, odor
4						▽	Water level at ~4.00 feet IP
5							
6							
7							Gray brown medium grain Sand, little silt, wet, no odor
8							
9							End borehole
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							
23							
24							
25							
26							
27							

IT CORPORATION

Drilling Log

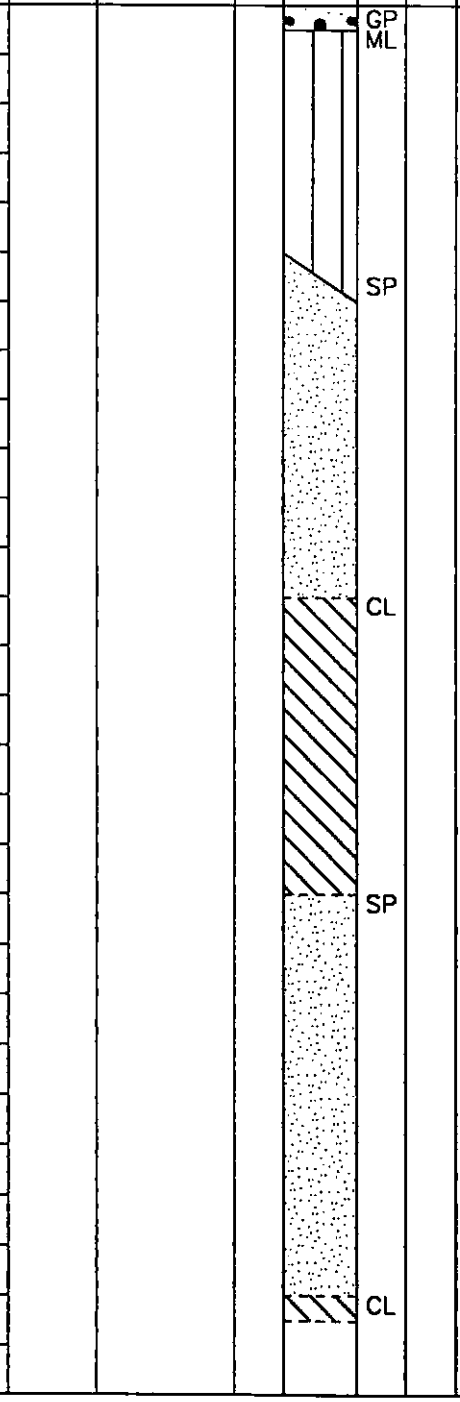
Site ID: 02SB-09

Project Name: Time Oil Co. Seattle Terminal
Location:
Surface Elevation: 0.00'
Borehole Diameter: 6.00in
Drilling Company: CASCADE
Logged By: JH
Checked By:

Project Number:
Total Hole Depth: 26.50'
Static Water Level:
Method: Hollow Stem Auger
Date Started: 06/11/99
Permit #:

See Site Map For Boring Location

Comments:



Description

Surficial covering of gray Gravel 6". Hand dug to 24"

Brown Silt and gravel, dry

Tan to brown very fine grain Sand, very little silt, no gravel, dry, no odor

Grades gray, little fines, wet, odor

Gray soft Clay and silt, moderately dense, no odor

Gray fine to medium grain Sand, little fines, no odor

Gray hard Clay

End borehole

1.0 DRILLING

1.1 The principle reason for requiring on-site drilling supervision is to acquire reliable information.

1.2 While supervising a test boring or well installation, the geologist should always make certain that the driller is making accurate depth measurements by ruler and not by visually "eyeballing" the measurements (five foot auger lengths or drill rods may vary in length by +/- .75 feet.

1.3 Discrepancies between the driller's statements of depth and the geologist's should be immediately clarified by remeasurement so that the driller and geologist are in agreement.

1.4 Note lithologic changes that occur between sampling depths. Lithologic changes can be estimated by: noting changes in the rate of penetration of the drilling tools; noting color and/or soil-type changes in the drill cuttings; and, noting the soil on the auger flights.

1.5 Samples obtained by split-spoon sampler should follow the standard penetration test procedure (see Section 2.0).

1.6 For each soil sample taken, the following information must be recorded on the well/boring log:
- sample depth
- sample number
- sampling method: split-spoon (SS), wash sample, auger flight sample, drill cutting sample.
- blow counts for every 6 inches penetration of the split-spoon sampler
- sample description should follow the Unified Soil Classification System.

1.7 The sample brass tubes must be labeled with the following information
- job number
- date and time
- well/boring number
- sample number
- sample depth
- name of sampler

1.8 Insure that samples are sealed in brass tubes as nearly intact and undisturbed as possible. Soil structure can be an important feature in interpreting the subsurface geology.

1.9 Seal the ends of the brass tubes with aluminum foil or teflon tape prior to placing on the air tight cap. Place the sealed and labeled tube on ice in a cooler for shipment to the lab along with a chain-of-custody.

1.10 Seal the contents of a second brass tube in a plastic sample bag for vapor level measurements.

1.11 Measure vapor levels with a photoionization detector (PID) when the samples reach room temperature (70 degrees F). Otherwise keep the samples cool until an instrument is available. Bring the samples to room temperature prior to measuring the vapor levels.

1.12 Attempt to determine the depth to groundwater as drilling progresses. After a well has been installed, measure the initial groundwater level. If no well has been installed,

measure the water level in the boring prior to removing all of the auger flights or casing and backfilling the borehole.

1.13 When drilling in soils such as loose sands and silts, which tend to run up into the borehole, whether it is stabilized with casing or augers or not, the driller should maintain a positive head of water in the borehole (that is above the water table) at ALL times.

1.14 All pertinent data concerning drilling method, groundwater, penetration resistance, soil description, etc. should be entered onto the well/boring log.

1.15 Locate each well/boring location by taping the distances to at least three permanent physical features at the site. These may include any feature that is shown on the site plan provided, such as building corners, pump island, light standards, fences, planters, etc. DO NOT measure to another well/boring as one of the three measurements unless it is absolutely necessary. DO include measurements between well/borings as additional location information. This information, entered onto the well/boring log, will be used in conjunction with survey data to complete the site map and to generate groundwater contour and petroleum distribution maps.

1.16 At the completion of drilling, arrange to survey the well/boring locations and elevations.

1.17 Groundwater Technology does not assume the responsibility of directing the operations of independent contractors or insuring the safety of their workmen. Inform the contractor of the project requirements. Do not drive contractor trucks or operate or borrow his equipment.

1.18 Comply with all applicable articles of the Occupational Safety and Health Act of 1970, (OSHA).

2.0 STANDARD PENETRATION TEST

2.1 The standard split-spoon sampler consists of a 2-inch O.D. by 1-3/8-inch I.D., 18-inch minimum length, heat treated, case hardened, steel head, split-spoon and shoe assembly.

2.2 The head is vented to prevent pressure buildup during sampling and must be kept clean. A ball check valve is located in the head to prevent downward water pressure during sampling and sample retrieval. Removal of the water check valve often results in sample loss.

2.3 The drive rods which connect the split-spoon must have a stiffness equal or greater than an A-rod. In order to reduce rod deflection, especially in deep holes, it may be preferable to use larger diameter rods. The size of the drive rods must be consistent throughout a specific exploration as the energy absorbed will vary with the size and the weight of the rods used. The type of drive rod should be noted on the well/boring log.

2.4 The drive head consists of a guide rod to give the drop hammer a free fall in order to strike the anvil attached to the lower end of the assembly. The rod must be a minimum of 3-1/2 feet in length to insure the correct 30-inch hammer drop.

2.5 The drop hammer must weigh 140 pounds and have a 2-1/2-inch diameter hole through the center for the passage of the drive head rod.

2.6 The hammer is raised with a rope activated by the drill rig cathead. No more than two turns of rope should be allowed on the cathead.

2.7 A 30-inch free hammer drop is mandatory and extreme care should be exercised to insure consistent results.

2.8 Automatic trip hammers are available which insure a 30-inch, free-fall drop. These are recommended when retaining soil-structure data is critical, such as in liquefaction studies.

2.9 Attach the split-spoon sampler to the drill rods and lower the assembly to the bottom of the hole. Measure the drill rod stickup to determine if the bottom of the sampler is resting on the bottom of the hole. If the sampler is not on the bottom (ex. blow-up of the stratum being sampled), remove the assembly and clean out the hole to the appropriate sampling depth.

2.10 Note any penetration of the sampler/rod assembly due to the weight of the rods. Do not drop the assembly to the bottom of the hole.

2.11 Raise the 140-pound hammer 30 inches above the drivehead anvil and then allow it to drop, free-fall, and strike the anvil. This procedure is repeated until the sampler has been driven 18 inches into the stratum at the bottom of the hole (a 24-inch sampler may be driven 24 inches).

2.12 The number of blows of the hammer required for each 6 inches of penetration of the sampler is counted and recorded.

2.13 A penetration rate of 100 blows per foot is normally considered refusal; however, this criterion may be varied depending on the nature of the project and the desired information.

2.14 The penetration resistance, density, is calculated by adding together the second and the third resistance blowcounts. (Ex: for blow counts 2-6-6, density = 12.)

2.15 The sampler is then withdrawn form the borehole, preferably by pulling the rope rather than by bumping it out using the cathead and hammer in reverse.

2.16 Keeping the casing/augers/borehole full of water when removing the sampler will enhance sample recovery. however, this practice may not be appropriate when drilling at contamination sites.

2.17 When sampling soils where recovery is poor, lining the sampler with a flexible material such as plastic wrap or placing a sand catch in the shoe will often increase sample recovery.

2.18 Careful measurement of all drilling tools, samplers, casing, etc. must be exercised throughout all phases of the test boring operation.

2.19 Carefully open the sampler and describe the contents, noting soil structure, color, characteristics, etc. following the Unified Soils Classification System.

2.20 All pertinent data concerning sampling activities including sampling, interval, blow counts and sample recovery should be entered on the well/boring log.

3.0 WATER QUALITY SAMPLING

3.1 Water samples should not be taken from the stagnant water in the well.

3.2 Water samples should be taken in triplicate.

3.3 Remove 3 to 5 volumes of water in the well prior to sampling. The water may be removed by bailing, submersible pump, or purge system. Wells with a slow recovery period should be bailed dry and then sampled within 1 hour or when recovered to 80%. Monitor pH, temperature and specific conductivity with each well volume to insure water quality stabilization has occurred. However, this is not necessary at every well or in all circumstances.

3.4 Use only Teflon, stainless steel, or glass bailers to obtain the sample. Use Teflon only for sampling water containing chlorinated compounds and also for bacteriological samples. PVC bailers can be used for one-time sampling for other than EPA 624 analysis. Using a bailer for a one-time sampling reduces the possibility for cross-contamination.

3.5 When sampling, avoid stirring up any sediments in the well and agitating the water to reduce volitization of any dissolved compounds that may be present.

3.6 All sampling equipment must be cleaned following the appropriate procedure to avoid cross contamination from site to site and sample to sample. The sampling equipment should be cleaned before each well sampling, between each sampling, and at the end of each sampling round.

3.7 Monitoring wells should be gauged prior to sampling.

3.8 If possible, the monitoring wells should be sampled starting with the cleanest well and ending with the most contaminated well.

3.9 Wells containing free-phase contaminants should not be sampled.

3.10 When filling out the chain of custody form:
- enter the samples in the order in which they were collected;
- make a note as to the cleaning fluid used to clean the sampling equipment;
- attempt to identify which samples are the most contaminated;
- complete all other requested information.

3.11 The laboratory sample identification label should be filled out with a waterproof pen and firmly affixed to each sample container. Typically, identification labels require that the following information be supplied:
- job name
- job number
- sampler's name
- sample identification
- date sampled and time
- analysis requested

3.12 Acidification is required for samples that will be analyzed by the EPA 624 method. (see Acidification Procedure in this section)

3.13 Acidification is recommended for EPA method 601 and 602 samples to preserve them and increase their holding life. (see Acidification Procedure in this section)

3.14 Field blanks should be taken as part of each sampling round. A field blank consists of a sample of distilled water which has been collected by putting the distilled water into a sampling bailer after the bailer has been cleaned following the procedure used to clean that bailer during the sampling round. The field blank is stored with the samples. It is not analyzed unless requested by the Project Manager. The field blank should not be identified as such to the laboratory.

3.15 Handling of decontaminated equipment:
- Always use "pristine" gloves (latex, solvex, etc.).
- Place decontaminated bailers on clean surface (plastic).
- Do not wipe down bailer with paper towels or cloth.
- Follow decontamination procedure.

3.16 Sample accuracy can be adversely affected by the entrainment of sediment in wells which have not been properly developed. Contaminants adhering to the sediments can be released when samples are acidified for preservation. Therefore, if sediments are present, field filtering of the samples is recommended.

3.17 Chemical changes can take place because the sample was oxidized during sampling. It is critical to avoid oxidation of samples when sampling for volatile organic compounds (VOC). Therefore, take care to insure minimal agitation occurs during sampling.

3.18 All samples should be properly and promptly preserved.

3.19 All samples should be analyzed quickly; arrangements should be made with the testing laboratory to insure prompt analysis is performed within the allowable times for the specific analyses to be done.

3.20 Bailer strings that have contacted water or contaminants should be replaced between each well to avoid contamination from a bailer string which has absorbed contamination. A good practice is to replace the string between wells. Caution: some bailer strings are treated with a fungicide which may be detected in priority pollutant analysis.

3.21 Notify laboratory that samples are being shipped in advance of sampling to insure proper delivery and turnaround.

3.22 On the chain of custody, note what type of decontamination or preservation fluids, chemicals were used.

4.0 ACIDIFICATION PROCEDURE (EPA Methods 601,602, and 624)

4.1 At the start of each sampling round, the amount of acid required to lower a sampling container of water to be sampled to a pH of less than 2 should be determined.

4.2 After removing 3 to 5 well volumes from the first well to be sampled, put 5-10 drops of 50% HCL into a 40 ml sample vial (larger sampling container will require more acid) and fill the vial with water form the well; determine the pH of water in the vial with pH paper; if the pH is too high, repeat the procedure using 15-20 drops of acid in the vial; repeat until the pH of the water in the sample vial is a pH of less than 2 on the pH paper. Note the amount of acid required to lower the pH of the volume of water in the sampling vial. (pH paper should not be placed into sampling container. Pour sample onto pH paper to check for proper pH.)

4.3 Discard the practice acidified sample.

4.4 Once the amount of acid required to reach a pH of <2 is known, the acid can be routinely added to each sample container directly; the water to be analyzed is added to vial or container containing the appropriate amount of acid.

4.5 Note that the amount of acid required is site specific and should be noted on the Chain of Custody form.

4.6 The procedure should be repeated for each site at the start of each sampling round.

4.7 Equipment

- Bailer or other means to remove 3 to 5 well volumes
- Sampling bailer
- Polyethylene squirt bottle of 50% hydrochloric (HCL) acid
- Narrow range pH paper (1.0 - 2.5 pH range)
- Paper towels
- Waterproof pen
- Laboratory sample identification labels
- Cooler with ice
- Chain of custody forms
- Sample containers (usually 40 ml glass vials with teflon faced septums)
- Alconox solution and/or methanol
- Distilled water
- Safety equipment (gloves, etc.)
- Dissolved oxygen meter (sometimes used in limited biorec projects in conjunction with bacteriological testing)

5.0 SURVEYING

5.1 Equipment Handling

- The level/transit is a sensitive, expensive instrument, handle it accordingly. Keep it dry and clean as possible. Never carry the instrument in the back of the truck.
- Never leave the instrument on the tripod without securely attaching it.
- Make sure that the tripod is stable at all times.
- Always setup the tripod and instrument so that it is easily seen.
- Never leave a tripod and instrument unattended when surveying in an area with vehicular traffic. Place protective cones around the survey station.
- Keep an eye on the equipment at all times.
- Keep the survey rod free of dirt and grit.

5.2 Leveling the Instrument

- Center the level and screw it into the tripod.
- Firmly plant the tripod legs.
- Use foot screw to level the instrument. The bubble must be within the setting circle in order for the instrument the be level.
- Rotate the level 360 degrees, checking to be sure that the bubble remains inside the circle at every point.

5.3 Focusing the Cross Hairs and Siting

- To focus the cross hairs, look through the instrument and turn the ring around the eyepiece until the hairs come into focus.
- Relax your eye while looking through the eyepiece.
- Use a sun shade.

5.4 Rod

- Be careful when using a rod around overhead power and utility lines.
- The rod is graduated into hundredths of a foot. The bottom of each black line is an odd hundredth; the top of each black line is an even hundredth.
- When surveying to the rod, the rod should be slowly rocked forward and back to determine the lowest, and most accurate, reading.

5.5 Stadia Surveys

- Readings should be taken at the intersection of the vertical cross hair with the three horizontal cross hairs. (A level survey requires reading only the center cross hair.)

- Distance (D) calculation:

  D = (High Stadia - Low Stadia) x 100

  ex:
  High Stadia = 8.87 D = (8.87 - 8.29) x 100
  Low Stadia = 8.29 D = 58.0

- Check the accuracy of your readings as you survey. An acceptable error is .01 feet difference between calculations per siting.

- Check Readings: high - mid = mid - low

5.6 Bench Marks

- Clearly note the location and type of the bench mark used for each survey. The location should be marked permanently in the field so that it may be reused.

- If an existing bench mark with a known elevation is within a reasonable distance of the site, the surveyors should attempt to use it as the bench mark for the survey. possible existing bench marks are sewer manhole rims, storm drains, USGS (from topo map)

- If there is no known bench mark in the area, a bench mark must be created arbitrarily.

- Use the following guidelines for establishing an arbitrary bench mark:

  a) use permanent physical features such as the corner of a pump island, a cement floor slab, manhole or sewer rim.
  b) assign an elevation to the bench mark; if the nearest 10-foot contour is known, use it as the BM elevation; if the contour elevation is not known, assign an arbitrary elevation.
  c) clearly note the location and elevation of the BM in the field and on all site plans.
  d) DO NOT USE MONITORING OR RECOVERY WELLS AS BENCH MARKS.

5.7 Level Surveys

- When surveying wells, make certain to choose a survey point that can be used when gauging the well; if the top of the PVC casing is greater than 6 inches below the ground surface, do not use it as the survey point, instead use the lip or rim of the protective casing. Clearly note the survey point of each well in the survey notes.

- Obtain the following for each monitoring well survey location:

  a) the elevation of the top of the well casing (T.O.C.);
  b) the elevation of the lip or rim of the protective casing (T.O.R.)

- Permanently mark the survey point with paint or permanent marker.

- Place the rod on the survey point and hold it vertical; move it backwards and forwards to determine the most accurate reading.

- Calculate the elevation from the middle cross hair reading.

- Limit the number of times the instrument must be moved.

- After completing level readings at each set up, shoot back to two or more wells to close the level run.

- In a multiple-station survey, always shoot at least two known points for each station.

- Where there is a significant topographic change across a site, additional survey information will be required in order to document the ground surface elevation differences; this information is critical when drawing cross-sections and in planning trenching and infiltration gallery installations.

- Calculate elevations before moving instrument to determine if there are any irregularities or errors.

5.8 Turning Points

- A TP (turning point) is used when all of the survey points cannot be seen form one instrument position and the instrument must be moved.

- The TP essentially establishes a new bench mark from which a new height of instrument is calculated.

- A TP can be a permanent structure, a PK, the original BM or a well. (A PK is a surveyor's nail driven into the ground/asphalt to create a hub for the rod to rest upon.)

- Complete the following steps to create a TP:

  a) take a FS (foresight) on the TP and record the measurement under the FS column in the field book;
  b) the FS is subtracted from the HI (height of instrument) for the current instrument location to determine the elevation of the TP;
  c) the instrument is then moved to a new location and leveled;
  d) a BS (backsight) reading is taken to the TP and entered in the BS column in the field book;
  e) the BS is added to the TP to determine the new HI elevation;
  f) NOTE: the TP entry in the survey data in the field book will always have 4 entries: BS, FS, HI, and elevation.

5.9 Taping locations

- Use a tape to verify distances that were surveyed with the instrument.

- Obtain three measurements for each location.

- Pull the tape tightly between points being measured.

- Measure dimensions of buildings on site to confirm base maps.

7.0 EXCAVATION AND TRENCH SOIL SAMPLING

7.1 Purpose

Underground Storage Tank (UST) decommissioning requires documentation of soil conditions. If tank closure is accomplished by excavation, removal and destruction of the tanks and lines, collection of representative samples for subsequent analysis is imperative. Utilizing the following procedures enables Groundwater Technology to secure the best possible retrieval of observations and samples.

7.2 Equipment

- Field Book, standard Surveyor's, waterproof, 5" x 7"
- Pencils
- Clipboard
- 6' folding ruler
- 50' cloth or fiberglass tape with weight
- Interface probe
- PID or other organic vapor screening device
- Sampling jars with air-tight Teflon lids, brass liners, 2" dia. x 6" long
- Aluminum foil or Teflon tape
- Bailer
- Rags probe wipers
- Alconox solution, distilled water, and H_2O
- Contract Documents, site plan, site sampling plan (QAPP), Site Safety Plan
- Lumber crayon or waterproof marking pen
- Safety equipment such as hard hat, appropriate footwear, respirator, goggles, ear plugs, gloves
- Copies of maps such as topographic or site vicinity
- Pocket knife
- Camera

7.3 Procedure

There are a number of preparations to be made by the Geologist/ Environmental Scientist before a site investigation begins. Attending to these preparations can increase the efficiency and quality of the work to be accomplished.

Before going into the field, each Geologist/Environmental Scientist should be completely familiar with the long and short term project objectives. He or she should review all of the available information about a site including site geology and the nature of the project. He or she should be familiar with all installation and sampling procedures that will be required.

It is the responsibility of the Project Manager to clearly describe the nature of each project and the amount of and type of work to be performed at a site. It is the responsibility of the Geologist/Environmental Scientist to make certain they understand what they are being asked to find out or do and, if they do not understand, then to ASK QUESTIONS.

The importance of communication and documentation cannot be stressed enough. What is not written down is often lost. What is written down and not pointed out may be inadvertently overlooked.

7.3.1 The principle reason for requiring excavation supervision is to acquire reliable information.

7.3.2 While supervising a tank or piping excavation, the Geologist should always make certain that accurate depth measurements are made by ruler and not by visually ``eyeballing'' the measurements.

7.3.3 Discrepancies between the excavator's statements of depth and the Geologist's should be immediately clarified by remeasurement so that the operator and the Geologist are in agreement.

7.3.4 Note strata changes that occur during excavation. Strata changes can be estimated by observing changes in color, soil-type, or the ease of excavation.

7.3.5 Photographic records of site conditions are an important tool for filling in narrative discussion. Do not hesitate to take pictures of all site activities before, during, and after. Label and record each photograph in your field notes according to procedures similar to section 7.4.1 (b).

7.4 Sample Collection Methods

7.4.1 The following information must be kept during the sampling events:

(a) A sketch of the site must be made which clearly shows all of the sample locations and identifies each location with a unique sample identification code.

(b) Each soil and water sample must be clearly labeled with its sample identification code. A written record must be maintained which includes, but is not limited to: the date, time and location of the sample collection; the name of the person collecting the sample; how the sample was collected; and any unusual or unexpected problems encountered during the sample collection which may have affected the sample integrity.

(c) Formal chain-of-custody records must be maintained for each sample.

7.4.2 If soil samples cannot be safely collected from the excavation, a backhoe may be used to remove a bucket of native soil from each of the sample areas. The soil is to be brought rapidly to the surface where samples are to be immediately taken from the soil in the bucket.

7.4.3 The following procedures must be used for the collection of soil samples from open pits or trenches:

(a) Just prior to collecting each soil sample, approximately three inches of soil must be rapidly scraped away from the surface of the sample location.

(b) To minimize the loss of volatile materials, it is recommended that samples be taken using a driven-tube type sampler. A clean brass or stainless steel tube of at least one inch in diameter and three inches in length may be used for this purpose. The tube should be driven into the soil with a suitable instrument such as a wooden mallet or hammer.

(c) The ends of the sample-filled tube must be immediately covered with clean aluminum foil or Teflon^{R} tape. The foil must be held in place by plastic end caps which are then sealed onto the tube with a suitable tape.

(d) Alternatively, samples may be taken with a minimum amount of disturbance and packed in a clean wide-mouth glass jar leaving as little headspace as possible. The jar must then be immediately sealed with a teflon-lined screw cap.

(e) After the samples are properly sealed, they are to be immediately placed on ice and maintained at a temperature of no greater than 4°C (39°F) until being prepared for analysis by the laboratory. All samples must be analyzed within 14 days of collection.

APPENDIX D
LABORATORY ANALYTICAL REPORTS

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541.383.9310 fax 541.382.7588

IT Corporation - Renton	Project:	Time Oil #2750	Sampled: 6/7/99
555 South Renton Village Place, Ste 700	Project Number:	783336	Received: 6/8/99
Renton, WA 98055	Project Manager:	Jerry Harris	Reported: 6/25/99 11:31

ANALYTICAL REPORT FOR SAMPLES:

Sample Description	Laboratory Sample Number	Sample Matrix	Date Sampled
02SB-07A	B906234-01	Soil	6/7/99
02SB-07B	B906234-02	Soil	6/7/99
02SB-08A	B906234-03	Soil	6/7/99
02SB-08B	B906234-04	Soil	6/7/99
02SB-06A	B906234-05	Soil	6/7/99
02SB-06B	B906234-06	Soil	6/7/99
02SB-01A	B906234-07	Soil	6/7/99
02SB-01B	B906234-08	Soil	6/7/99
02SB-01C	B906234-09	Soil	6/7/99
02SB-01D	B906234-10	Soil	6/7/99
02SB-01E	B906234-11	Soil	6/7/99
02SB-02A	B906234-12	Soil	6/7/99
02SB-02B	B906234-13	Soil	6/7/99
02SB-02C	B906234-14	Soil	6/7/99
02SB-02D	B906234-15	Soil	6/7/99
02SB-05A	B906234-16	Soil	6/7/99
02SB-05B	B906234-17	Soil	6/7/99
02SB-05C	B906234-18	Soil	6/7/99
02SB-04B	B906234-19	Soil	6/7/99
02SB-04C	B906234-20	Soil	6/7/99

North Creek Analytical - Bothell

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Joy B Chang, Project Manager

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IT Corporation - Renton	Project:	Time Oil #2750	Sampled: 6/7/99
555 South Renton Village Place, Ste 700	Project Number:	783336	Received: 6/8/99
Renton, WA 98055	Project Manager:	Jerry Harris	Reported: 6/25/99 11:31

ANALYTICAL REPORT FOR SAMPLES:

Sample Description	Laboratory Sample Number	Sample Matrix	Date Sampled
02SB-03A	B906234-21	Soil	6/7/99
02SB-03B	B906234-22	Soil	6/7/99
02SB-03C	B906234-23	Soil	6/7/99
02SB-03D	B906234-24	Soil	6/7/99
02SB-08H2O	B906234-25	Water	6/7/99
02SB-07H2O	B906234-26	Water	6/7/99
02SB-06H2O	B906234-27	Water	6/7/99
02SB-02H2O	B906234-28	Water	6/7/99
02SB-05H2O	B906234-29	Water	6/7/99
02SB-04H2O	B906234-30	Water	6/7/99
02SB-03H2O	B906234-31	Water	6/7/99

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IT Corporation - Renton	Project:	Time Oil #2750	Sampled: 6/7/99
555 South Renton Village Place, Ste 700	Project Number:	783336	Received: 6/8/99
Renton, WA 98055	Project Manager:	Jerry Harris	Reported: 6/25/99 11:31

Volatile Petroleum Products and BTEX by NWTPH-Gx and EPA 8021B
North Creek Analytical - Bothell

Analyte	Batch Number	Date Prepared	Date Analyzed	Surrogate Limits	Reporting Limit	Result	Units	Notes*
02SB-07A			B906234-01				Soil	
Gasoline Range Hydrocarbons	0690370	6/11/99	6/21/99		5.00	ND	mg/kg dry	
Benzene	"	"	"		0.0500	ND	"	
Toluene	"	"	"		0.0500	ND	"	
Ethylbenzene	"	"	"		0.0500	ND	"	
Xylenes (total)	"	"	"		0.100	**0.134**	"	
Surrogate: 4-BFB (FID)	"	"	"	*50.0-150*		*92.5*	%	
Surrogate: 4-BFB (PID)	"	"	"	*50.0-150*		*94.9*	"	
02SB-07B			B906234-02				Soil	
Gasoline Range Hydrocarbons	0690370	6/11/99	6/21/99		5.00	ND	mg/kg dry	
Benzene	"	"	"		0.0500	ND	"	
Toluene	"	"	"		0.0500	ND	"	
Ethylbenzene	"	"	"		0.0500	ND	"	
Xylenes (total)	"	"	"		0.100	ND	"	
Surrogate: 4-BFB (FID)	"	"	"	*50.0-150*		*85.4*	%	
Surrogate: 4-BFB (PID)	"	"	"	*50.0-150*		*88.5*	"	
02SB-08A			B906234-03				Soil	
Gasoline Range Hydrocarbons	0690370	6/11/99	6/21/99		5.00	72.6	mg/kg dry	1
Benzene	"	"	"		0.0500	ND	"	
Toluene	"	"	"		0.0500	ND	"	
Ethylbenzene	"	"	"		0.0800	ND	"	2
Xylenes (total)	"	"	"		0.570	ND	"	2
Surrogate: 4-BFB (FID)	"	"	"	*50.0-150*		*126*	%	
Surrogate: 4-BFB (PID)	"	"	"	*50.0-150*		*98.5*	"	
02SB-08B			B906234-04				Soil	3
Gasoline Range Hydrocarbons	0690523	6/16/99	6/23/99		5.00	ND	mg/kg dry	
Benzene	"	"	"		0.0500	ND	"	
Toluene	"	"	"		0.0500	ND	"	
Ethylbenzene	"	"	"		0.0500	ND	"	
Xylenes (total)	"	"	"		0.100	ND	"	
Surrogate: 4-BFB (FID)	"	"	"	*50.0-150*		*75.8*	%	
Surrogate: 4-BFB (PID)	"	"	"	*50.0-150*		*92.0*	"	
02SB-06A			B906234-05				Soil	3
Gasoline Range Hydrocarbons	0690523	6/16/99	6/23/99		5.00	ND	mg/kg dry	
Benzene	"	"	"		0.0500	ND	"	

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IT Corporation - Renton	Project:	Time Oil #2750	Sampled: 6/7/99
555 South Renton Village Place, Ste 700	Project Number:	783336	Received: 6/8/99
Renton, WA 98055	Project Manager:	Jerry Harris	Reported: 6/25/99 11:31

Volatile Petroleum Products and BTEX by NWTPH-Gx and EPA 8021B
North Creek Analytical - Bothell

Analyte	Batch Number	Date Prepared	Date Analyzed	Surrogate Limits	Reporting Limit	Result	Units	Notes*
02SB-06A (continued)			B906234-05				Soil	3
Toluene	0690523	6/16/99	6/23/99		0.0500	ND	mg/kg dry	
Ethylbenzene	"	"	"		0.0500	ND	"	
Xylenes (total)	"	"	"		0.100	ND	"	
Surrogate: 4-BFB (FID)	"	"	"	*50.0-150*		*83.8*	%	
Surrogate: 4-BFB (PID)	"	"	"	*50.0-150*		*88.2*	"	
02SB-06B			B906234-06				Soil	3
Gasoline Range Hydrocarbons	0690523	6/16/99	6/23/99		5.00	ND	mg/kg dry	
Benzene	"	"	"		0.0500	ND	"	
Toluene	"	"	"		0.0500	ND	"	
Ethylbenzene	"	"	"		0.0500	ND	"	
Xylenes (total)	"	"	"		0.100	ND	"	
Surrogate: 4-BFB (FID)	"	"	"	*50.0-150*		*78.8*	%	
Surrogate: 4-BFB (PID)	"	"	"	*50.0-150*		*85.6*	"	
02SB-01A			B906234-07				Soil	3
Gasoline Range Hydrocarbons	0690523	6/16/99	6/23/99		5.00	ND	mg/kg dry	
Benzene	"	"	"		0.0500	ND	"	
Toluene	"	"	"		0.0500	ND	"	
Ethylbenzene	"	"	"		0.0500	ND	"	
Xylenes (total)	"	"	"		0.100	ND	"	
Surrogate: 4-BFB (FID)	"	"	"	*50.0-150*		*85.0*	%	
Surrogate: 4-BFB (PID)	"	"	"	*50.0-150*		*90.7*	"	
02SB-01B			B906234-08				Soil	3
Gasoline Range Hydrocarbons	0690523	6/16/99	6/23/99		5.00	ND	mg/kg dry	
Benzene	"	"	"		0.0500	ND	"	
Toluene	"	"	"		0.0500	ND	"	
Ethylbenzene	"	"	"		0.0500	ND	"	
Xylenes (total)	"	"	"		0.100	ND	"	
Surrogate: 4-BFB (FID)	"	"	"	*50.0-150*		*84.6*	%	
Surrogate: 4-BFB (PID)	"	"	"	*50.0-150*		*92.3*	"	
02SB-01C			B906234-09				Soil	3
Gasoline Range Hydrocarbons	0690523	6/16/99	6/23/99		5.00	ND	mg/kg dry	
Benzene	"	"	"		0.0500	ND	"	
Toluene	"	"	"		0.0500	ND	"	
Ethylbenzene	"	"	"		0.0500	ND	"	

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IT Corporation - Renton	Project:	Time Oil #2750	Sampled: 6/7/99
555 South Renton Village Place, Ste 700	Project Number:	783336	Received: 6/8/99
Renton, WA 98055	Project Manager:	Jerry Harris	Reported: 6/25/99 11:31

Volatile Petroleum Products and BTEX by NWTPH-Gx and EPA 8021B
North Creek Analytical - Bothell

Analyte	Batch Number	Date Prepared	Date Analyzed	Surrogate Limits	Reporting Limit	Result	Units	Notes*
02SB-01C (continued)			**B906234-09**				Soil	3
Xylenes (total)	0690523	6/16/99	6/23/99		0.100	ND	mg/kg dry	
Surrogate: 4-BFB (FID)	"	"	"	*50.0-150*		*83.3*	%	
Surrogate: 4-BFB (PID)	"	"	"	*50.0-150*		*94.8*	"	
02SB-01D			**B906234-10**				Soil	3
Gasoline Range Hydrocarbons	0690523	6/16/99	6/23/99		5.00	ND	mg/kg dry	
Benzene	"	"	"		0.0500	ND	"	
Toluene	"	"	"		0.0500	ND	"	
Ethylbenzene	"	"	"		0.0500	ND	"	
Xylenes (total)	"	"	"		0.100	ND	"	
Surrogate: 4-BFB (FID)	"	"	"	*50.0-150*		*88.6*	%	
Surrogate: 4-BFB (PID)	"	"	"	*50.0-150*		*102*	"	
02SB-01E			**B906234-11**				Soil	3
Gasoline Range Hydrocarbons	0690523	6/16/99	6/23/99		5.00	ND	mg/kg dry	
Benzene	"	"	"		0.0500	ND	"	
Toluene	"	"	"		0.0500	**0.0596**	"	
Ethylbenzene	"	"	"		0.0500	ND	"	
Xylenes (total)	"	"	"		0.100	ND	"	
Surrogate: 4-BFB (FID)	"	"	"	*50.0-150*		*89.4*	%	
Surrogate: 4-BFB (PID)	"	"	"	*50.0-150*		*101*	"	
02SB-02A			**B906234-12**				Soil	3
Gasoline Range Hydrocarbons	0690523	6/16/99	6/23/99		5.00	ND	mg/kg dry	
Benzene	"	"	"		0.0500	ND	"	
Toluene	"	"	"		0.0500	ND	"	
Ethylbenzene	"	"	"		0.0500	ND	"	
Xylenes (total)	"	"	"		0.100	ND	"	
Surrogate: 4-BFB (FID)	"	"	"	*50.0-150*		*79.7*	%	
Surrogate: 4-BFB (PID)	"	"	"	*50.0-150*		*91.4*	"	
02SB-02B			**B906234-13**				Soil	3
Gasoline Range Hydrocarbons	0690523	6/16/99	6/23/99		5.00	ND	mg/kg dry	
Benzene	"	"	"		0.0500	ND	"	
Toluene	"	"	"		0.0500	ND	"	
Ethylbenzene	"	"	"		0.0500	ND	"	
Xylenes (total)	"	"	"		0.100	ND	"	
Surrogate: 4-BFB (FID)	"	"	"	*50.0-150*		*80.4*	%	

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IT Corporation - Renton	Project:	Time Oil #2750	Sampled: 6/7/99
555 South Renton Village Place, Ste 700	Project Number:	783336	Received: 6/8/99
Renton, WA 98055	Project Manager:	Jerry Harris	Reported: 6/25/99 11:31

Volatile Petroleum Products and BTEX by NWTPH-Gx and EPA 8021B
North Creek Analytical - Bothell

Analyte	Batch Number	Date Prepared	Date Analyzed	Surrogate Limits	Reporting Limit	Result	Units	Notes*
02SB-02B (continued)			**B906234-13**				**Soil**	**3**
Surrogate: 4-BFB (PID)	*0690523*	*6/16/99*	*6/23/99*	*50.0-150*		*96.5*	*%*	
02SB-02C			**B906234-14**				**Soil**	**3**
Gasoline Range Hydrocarbons	0690523	6/16/99	6/22/99		5.00	ND	mg/kg dry	
Benzene	"	"	"		0.0500	ND	"	
Toluene	"	"	"		0.0500	ND	"	
Ethylbenzene	"	"	"		0.0500	ND	"	
Xylenes (total)	"	"	"		0.100	ND	"	
Surrogate: 4-BFB (FID)	"	"	"	*50.0-150*		*79.3*	*%*	
Surrogate: 4-BFB (PID)	"	"	"	*50.0-150*		*86.2*	"	
02SB-02D			**B906234-15**				**Soil**	**3**
Gasoline Range Hydrocarbons	0690523	6/16/99	6/23/99		5.00	ND	mg/kg dry	
Benzene	"	"	"		0.0500	ND	"	
Toluene	"	"	"		0.0500	ND	"	
Ethylbenzene	"	"	"		0.0500	ND	"	
Xylenes (total)	"	"	"		0.100	ND	"	
Surrogate: 4-BFB (FID)	"	"	"	*50.0-150*		*83.2*	*%*	
Surrogate: 4-BFB (PID)	"	"	"	*50.0-150*		*90.6*	"	
02SB-05A			**B906234-16**				**Soil**	**3**
Gasoline Range Hydrocarbons	0690523	6/16/99	6/23/99		5.00	ND	mg/kg dry	
Benzene	"	"	"		0.0500	ND	"	
Toluene	"	"	"		0.0500	ND	"	
Ethylbenzene	"	"	"		0.0500	ND	"	
Xylenes (total)	"	"	"		0.100	ND	"	
Surrogate: 4-BFB (FID)	"	"	"	*50.0-150*		*85.1*	*%*	
Surrogate: 4-BFB (PID)	"	"	"	*50.0-150*		*92.7*	"	
02SB-05B			**B906234-17**				**Soil**	**3**
Gasoline Range Hydrocarbons	0690523	6/16/99	6/22/99		5.00	ND	mg/kg dry	
Benzene	"	"	"		0.0500	ND	"	
Toluene	"	"	"		0.0500	ND	"	
Ethylbenzene	"	"	"		0.0500	ND	"	
Xylenes (total)	"	"	"		0.100	ND	"	
Surrogate: 4-BFB (FID)	"	"	"	*50.0-150*		*80.0*	*%*	
Surrogate: 4-BFB (PID)	"	"	"	*50.0-150*		*89.2*	"	

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IT Corporation - Renton	Project:	Time Oil #2750	Sampled: 6/7/99
555 South Renton Village Place, Ste 700	Project Number:	783336	Received: 6/8/99
Renton, WA 98055	Project Manager:	Jerry Harris	Reported: 6/25/99 11:31

Volatile Petroleum Products and BTEX by NWTPH-Gx and EPA 8021B
North Creek Analytical - Bothell

Analyte	Batch Number	Date Prepared	Date Analyzed	Surrogate Limits	Reporting Limit	Result	Units	Notes*
02SB-03B (continued)			B906234-22				Soil	3
Toluene	0690523	6/16/99	6/23/99		0.0500	ND	mg/kg dry	
Ethylbenzene	"	"	"		0.0500	ND	"	
Xylenes (total)	"	"	"		0.100	ND	"	
Surrogate: 4-BFB (FID)	"	"	"	*50.0-150*		*74.7*	*%*	
Surrogate: 4-BFB (PID)	"	"	"	*50.0-150*		*99.2*	"	
02SB-03C			B906234-23				Soil	3
Gasoline Range Hydrocarbons	0690523	6/16/99	6/23/99		5.00	ND	mg/kg dry	
Benzene	"	"	"		0.0500	ND	"	
Toluene	"	"	"		0.0500	ND	"	
Ethylbenzene	"	"	"		0.0500	ND	"	
Xylenes (total)	"	"	"		0.100	ND	"	
Surrogate: 4-BFB (FID)	"	"	"	*50.0-150*		*78.6*	*%*	
Surrogate: 4-BFB (PID)	"	"	"	*50.0-150*		*92.7*	"	
02SB-03D			B906234-24				Soil	
Gasoline Range Hydrocarbons	0690565	6/17/99	6/24/99		5.00	ND	mg/kg dry	
Benzene	"	"	"		0.0500	ND	"	
Toluene	"	"	"		0.0500	ND	"	
Ethylbenzene	"	"	"		0.0500	ND	"	
Xylenes (total)	"	"	"		0.100	ND	"	
Surrogate: 4-BFB (FID)	"	"	"	*50.0-150*		*85.1*	*%*	
Surrogate: 4-BFB (PID)	"	"	"	*50.0-150*		*91.6*	"	

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IT Corporation - Renton	Project:	Time Oil #2750	Sampled: 6/7/99
555 South Renton Village Place, Ste 700	Project Number:	783336	Received: 6/8/99
Renton, WA 98055	Project Manager:	Jerry Harris	Reported: 6/25/99 11:31

Semivolatile Petroleum Products by NWTPH-Dx (w/o Acid/Silica Gel Clean-up)
North Creek Analytical - Bothell

Analyte	Batch Number	Date Prepared	Date Analyzed	Surrogate Limits	Reporting Limit	Result	Units	Notes*
02SB-07A			**B906234-01**				Soil	
Diesel Range Hydrocarbons	0690406	6/11/99	6/13/99		10.0	**61.8**	mg/kg dry	
Lube Oil Range Hydrocarbons	"	"	"		25.0	**53.1**	"	
Surrogate: 2-FBP	"	"	"	*50.0-150*		*110*	%	
02SB-07B			**B906234-02**				Soil	
Diesel Range Hydrocarbons	0690406	6/11/99	6/13/99		10.0	ND	mg/kg dry	
Lube Oil Range Hydrocarbons	"	"	"		25.0	ND	"	
Surrogate: 2-FBP	"	"	"	*50.0-150*		*64.0*	%	
02SB-08A			**B906234-03**				Soil	
Diesel Range Hydrocarbons	0690406	6/11/99	6/13/99		10.0	**127**	mg/kg dry	
Lube Oil Range Hydrocarbons	"	"	"		25.0	**428**	"	
Surrogate: 2-FBP	"	"	"	*50.0-150*		*107*	%	
02SB-08B			**B906234-04**				Soil	
Diesel Range Hydrocarbons	0690536	6/16/99	6/17/99		10.0	ND	mg/kg dry	
Lube Oil Range Hydrocarbons	"	"	"		25.0	**38.1**	"	
Surrogate: 2-FBP	"	"	"	*50.0-150*		*69.0*	%	
02SB-06A			**B906234-05**				Soil	
Diesel Range Hydrocarbons	0690536	6/11/99	6/17/99		10.0	ND	mg/kg dry	
Lube Oil Range Hydrocarbons	"	"	"		25.0	ND	"	
Surrogate: 2-FBP	"	"	"	*50.0-150*		*83.7*	%	
02SB-06B			**B906234-06**				Soil	
Diesel Range Hydrocarbons	0690536	6/11/99	6/17/99		10.0	ND	mg/kg dry	
Lube Oil Range Hydrocarbons	"	"	"		25.0	ND	"	
Surrogate: 2-FBP	"	"	"	*50.0-150*		*69.1*	%	
02SB-01A			**B906234-07**				Soil	
Diesel Range Hydrocarbons	0690536	6/11/99	6/18/99		30.0	**540**	mg/kg dry	4
Lube Oil Range Hydrocarbons	"	"	"		75.0	**1320**	"	
Surrogate: 2-FBP	"	"	"	*50.0-150*		*93.7*	%	
02SB-01B			**B906234-08**				Soil	
Diesel Range Hydrocarbons	0690536	6/11/99	6/18/99		30.0	**285**	mg/kg dry	4
Lube Oil Range Hydrocarbons	"	"	"		75.0	**712**	"	
Surrogate: 2-FBP	"	"	"	*50.0-150*		*82.9*	%	

North Creek Analytical - Bothell

**Refer to end of report for text of notes and definitions.*

Joy B Chang, Project Manager

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IT Corporation - Renton	Project:	Time Oil #2750	Sampled: 6/7/99
555 South Renton Village Place, Ste 700	Project Number:	783336	Received: 6/8/99
Renton, WA 98055	Project Manager:	Jerry Harris	Reported: 6/25/99 11:31

Semivolatile Petroleum Products by NWTPH-Dx (w/o Acid/Silica Gel Clean-up)
North Creek Analytical - Bothell

Analyte	Batch Number	Date Prepared	Date Analyzed	Surrogate Limits	Reporting Limit	Result	Units	Notes*
02SB-01C			**B906234-09**				**Soil**	
Diesel Range Hydrocarbons	0690536	6/11/99	6/17/99		10.0	ND	mg/kg dry	
Lube Oil Range Hydrocarbons	"	"	"		25.0	ND	"	
Surrogate: 2-FBP	"	"	"	*50.0-150*		*78.5*	*%*	
02SB-01D			**B906234-10**				**Soil**	
Diesel Range Hydrocarbons	0690536	6/11/99	6/18/99		10.0	ND	mg/kg dry	
Lube Oil Range Hydrocarbons	"	"	"		25.0	**31.2**	"	
Surrogate: 2-FBP	"	"	"	*50.0-150*		*104*	*%*	
02SB-01E			**B906234-11**				**Soil**	
Diesel Range Hydrocarbons	0690536	6/11/99	6/17/99		10.0	ND	mg/kg dry	
Lube Oil Range Hydrocarbons	"	"	"		25.0	ND	"	
Surrogate: 2-FBP	"	"	"	*50.0-150*		*78.2*	*%*	
02SB-02A			**B906234-12**				**Soil**	
Diesel Range Hydrocarbons	0690536	6/11/99	6/17/99		10.0	**14.0**	mg/kg dry	4
Lube Oil Range Hydrocarbons	"	"	"		25.0	**42.7**	"	
Surrogate: 2-FBP	"	"	"	*50.0-150*		*75.2*	*%*	
02SB-02B			**B906234-13**				**Soil**	
Diesel Range Hydrocarbons	0690536	6/11/99	6/17/99		10.0	ND	mg/kg dry	
Lube Oil Range Hydrocarbons	"	"	"		25.0	ND	"	
Surrogate: 2-FBP	"	"	"	*50.0-150*		*90.0*	*%*	
02SB-02C			**B906234-14**				**Soil**	
Diesel Range Hydrocarbons	0690536	6/11/99	6/17/99		10.0	ND	mg/kg dry	
Lube Oil Range Hydrocarbons	"	"	"		25.0	ND	"	
Surrogate: 2-FBP	"	"	"	*50.0-150*		*59.4*	*%*	
02SB-02D			**B906234-15**				**Soil**	
Diesel Range Hydrocarbons	0690536	6/11/99	6/17/99		10.0	ND	mg/kg dry	
Lube Oil Range Hydrocarbons	"	"	"		25.0	ND	"	
Surrogate: 2-FBP	"	"	"	*50.0-150*		*89.4*	*%*	
02SB-05A			**B906234-16**				**Soil**	
Diesel Range Hydrocarbons	0690536	6/11/99	6/17/99		10.0	**17.6**	mg/kg dry	4
Lube Oil Range Hydrocarbons	"	"	"		25.0	**64.5**	"	
Surrogate: 2-FBP	"	"	"	*50.0-150*		*67.9*	*%*	

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IT Corporation - Renton	Project:	Time Oil #2750	Sampled: 6/7/99
555 South Renton Village Place, Ste 700	Project Number:	783336	Received: 6/8/99
Renton, WA 98055	Project Manager:	Jerry Harris	Reported: 6/25/99 11:31

Semivolatile Petroleum Products by NWTPH-Dx (w/o Acid/Silica Gel Clean-up)
North Creek Analytical - Bothell

Analyte	Batch Number	Date Prepared	Date Analyzed	Surrogate Limits	Reporting Limit	Result	Units	Notes*
02SB-05B			B906234-17				Soil	
Diesel Range Hydrocarbons	0690536	6/11/99	6/17/99		10.0	ND	mg/kg dry	
Lube Oil Range Hydrocarbons	"	"	"		25.0	ND	"	
Surrogate: 2-FBP	"	"	"	*50.0-150*		*94.1*	%	
02SB-05C			B906234-18				Soil	
Diesel Range Hydrocarbons	0690536	6/11/99	6/17/99		10.0	ND	mg/kg dry	
Lube Oil Range Hydrocarbons	"	"	"		25.0	ND	"	
Surrogate: 2-FBP	"	"	"	*50.0-150*		*68.6*	%	
02SB-04B			B906234-19				Soil	
Diesel Range Hydrocarbons	0690536	6/16/99	6/17/99		10.0	ND	mg/kg dry	
Lube Oil Range Hydrocarbons	"	"	"		25.0	ND	"	
Surrogate: 2-FBP	"	"	"	*50.0-150*		*90.4*	%	
02SB-04C			B906234-20				Soil	
Diesel Range Hydrocarbons	0690536	6/16/99	6/17/99		10.0	**15.2**	mg/kg dry	4
Lube Oil Range Hydrocarbons	"	"	"		25.0	**62.5**	"	
Surrogate: 2-FBP	"	"	"	*50.0-150*		*76.4*	%	
02SB-03A			B906234-21				Soil	
Diesel Range Hydrocarbons	0690536	6/16/99	6/17/99		10.0	ND	mg/kg dry	
Lube Oil Range Hydrocarbons	"	"	"		25.0	ND	"	
Surrogate: 2-FBP	"	"	"	*50.0-150*		*84.6*	%	
02SB-03B			B906234-22				Soil	
Diesel Range Hydrocarbons	0690536	6/16/99	6/17/99		10.0	ND	mg/kg dry	
Lube Oil Range Hydrocarbons	"	"	"		25.0	ND	"	
Surrogate: 2-FBP	"	"	"	*50.0-150*		*68.9*	%	
02SB-03C			B906234-23				Soil	
Diesel Range Hydrocarbons	0690536	6/16/99	6/17/99		10.0	ND	mg/kg dry	
Lube Oil Range Hydrocarbons	"	"	"		25.0	ND	"	
Surrogate: 2-FBP	"	"	"	*50.0-150*		*92.0*	%	
02SB-03D			B906234-24				Soil	
Diesel Range Hydrocarbons	0690555	6/17/99	6/19/99		10.0	**11.3**	mg/kg dry	4
Lube Oil Range Hydrocarbons	"	"	"		25.0	**38.8**	"	
Surrogate: 2-FBP	"	"	"	*50.0-150*		*71.8*	%	

North Creek Analytical - Bothell

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Joy B Chang, Project Manager

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IT Corporation - Renton	Project:	Time Oil #2750	Sampled: 6/7/99
555 South Renton Village Place, Ste 700	Project Number:	783336	Received: 6/8/99
Renton, WA 98055	Project Manager:	Jerry Harris	Reported: 6/25/99 11:31

Semivolatile Petroleum Products by NWTPH-Dx (w/o Acid/Silica Gel Clean-up)
North Creek Analytical - Bothell

Analyte	Batch Number	Date Prepared	Date Analyzed	Surrogate Limits	Reporting Limit	Result	Units	Notes*
02SB-08H2O			B906234-25				Water	
Diesel Range Hydrocarbons	0690369	6/11/99	6/14/99		0.250	**0.668**	mg/l	
Lube Oil Range Hydrocarbons	"	"	"		0.500	ND	"	
Surrogate: 2-FBP	"	"	"	*50.0-150*		*71.6*	%	
02SB-07H2O			B906234-26				Water	
Diesel Range Hydrocarbons	0690369	6/11/99	6/14/99		0.250	**1.07**	mg/l	
Lube Oil Range Hydrocarbons	"	"	"		0.500	**0.626**	"	
Surrogate: 2-FBP	"	"	"	*50.0-150*		*108*	%	
02SB-06H2O			B906234-27				Water	
Diesel Range Hydrocarbons	0690369	6/11/99	6/14/99		0.250	**0.456**	mg/l	
Lube Oil Range Hydrocarbons	"	"	"		0.500	ND	"	
Surrogate: 2-FBP	"	"	"	*50.0-150*		*72.8*	%	
02SB-02H2O			B906234-28				Water	
Diesel Range Hydrocarbons	0690369	6/11/99	6/14/99		0.250	**3.12**	mg/l	
Lube Oil Range Hydrocarbons	"	"	"		0.500	ND	"	
Surrogate: 2-FBP	"	"	"	*50.0-150*		*117*	%	
02SB-05H2O			B906234-29				Water	
Diesel Range Hydrocarbons	0690369	6/11/99	6/14/99		0.250	**0.865**	mg/l	
Lube Oil Range Hydrocarbons	"	"	"		0.500	ND	"	
Surrogate: 2-FBP	"	"	"	*50.0-150*		*69.9*	%	
02SB-04H2O			B906234-30				Water	
Diesel Range Hydrocarbons	0690369	6/11/99	6/14/99		0.250	**0.867**	mg/l	
Lube Oil Range Hydrocarbons	"	"	"		0.500	**0.503**	"	
Surrogate: 2-FBP	"	"	"	*50.0-150*		*109*	%	
02SB-03H2O			B906234-31				Water	
Diesel Range Hydrocarbons	0690419	6/12/99	6/14/99		0.250	**1.07**	mg/l	5
Lube Oil Range Hydrocarbons	"	"	"		0.500	ND	"	
Surrogate: 2-FBP	"	"	"	*50.0-150*		*87.7*	%	

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IT Corporation - Renton	Project:	Time Oil #2750	Sampled: 6/7/99
555 South Renton Village Place, Ste 700	Project Number:	783336	Received: 6/8/99
Renton, WA 98055	Project Manager:	Jerry Harris	Reported: 6/25/99 11:31

Total Metals by EPA 6000/7000 Series Methods
North Creek Analytical - Bothell

Analyte	Batch Number	Date Prepared	Date Analyzed	Specific Method	Reporting Limit	Result	Units	Notes*
02SB-07A			B906234-01				Soil	
Lead	0690627	6/19/99	6/21/99	EPA 6020	0.500	**7.85**	mg/kg dry	
02SB-07B			B906234-02				Soil	
Lead	0690627	6/19/99	6/21/99	EPA 6020	0.500	**2.40**	mg/kg dry	
02SB-08A			B906234-03				Soil	
Lead	0690627	6/19/99	6/21/99	EPA 6020	0.500	**10.6**	mg/kg dry	
02SB-08B			B906234-04				Soil	
Lead	0690627	6/19/99	6/22/99	EPA 6020	0.500	**3.02**	mg/kg dry	
02SB-06A			B906234-05				Soil	
Lead	0690627	6/19/99	6/22/99	EPA 6020	0.500	**2.78**	mg/kg dry	
02SB-06B			B906234-06				Soil	
Lead	0690627	6/19/99	6/22/99	EPA 6020	0.500	**2.20**	mg/kg dry	
02SB-01A			B906234-07				Soil	
Lead	0690627	6/19/99	6/22/99	EPA 6020	0.500	**11.1**	mg/kg dry	
02SB-01B			B906234-08				Soil	
Lead	0690627	6/19/99	6/22/99	EPA 6020	0.500	**15.1**	mg/kg dry	
02SB-01C			B906234-09				Soil	
Lead	0690627	6/19/99	6/22/99	EPA 6020	0.500	**2.80**	mg/kg dry	
02SB-01D			B906234-10				Soil	
Lead	0690627	6/19/99	6/22/99	EPA 6020	0.500	**6.03**	mg/kg dry	
02SB-01E			B906234-11				Soil	
Lead	0690627	6/19/99	6/22/99	EPA 6020	0.500	**6.18**	mg/kg dry	
02SB-02A			B906234-12				Soil	
Lead	0690627	6/19/99	6/22/99	EPA 6020	0.500	**22.8**	mg/kg dry	
02SB-02B			B906234-13				Soil	
Lead	0690627	6/19/99	6/22/99	EPA 6020	0.500	**5.00**	mg/kg dry	

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IT Corporation - Renton	Project:	Time Oil #2750	Sampled: 6/7/99
555 South Renton Village Place, Ste 700	Project Number:	783336	Received: 6/8/99
Renton, WA 98055	Project Manager:	Jerry Harris	Reported: 6/25/99 11:31

Total Metals by EPA 6000/7000 Series Methods
North Creek Analytical - Bothell

Analyte	Batch Number	Date Prepared	Date Analyzed	Specific Method	Reporting Limit	Result	Units	Notes*
02SB-02C			B906234-14				Soil	
Lead	0690627	6/19/99	6/22/99	EPA 6020	0.500	**2.79**	mg/kg dry	
02SB-02D			B906234-15				Soil	
Lead	0690627	6/19/99	6/22/99	EPA 6020	0.500	**2.29**	mg/kg dry	
02SB-05A			B906234-16				Soil	
Lead	0690627	6/19/99	6/22/99	EPA 6020	0.500	**18.0**	mg/kg dry	
02SB-05B			B906234-17				Soil	
Lead	0690627	6/19/99	6/22/99	EPA 6020	0.500	**3.72**	mg/kg dry	
02SB-05C			B906234-18				Soil	
Lead	0690627	6/19/99	6/22/99	EPA 6020	0.500	**4.23**	mg/kg dry	
02SB-04B			B906234-19				Soil	
Lead	0690627	6/19/99	6/22/99	EPA 6020	0.500	**2.57**	mg/kg dry	
02SB-04C			B906234-20				Soil	
Lead	0690627	6/19/99	6/22/99	EPA 6020	0.500	**2.97**	mg/kg dry	
02SB-03A			B906234-21				Soil	
Lead	0690627	6/19/99	6/22/99	EPA 6020	0.500	**4.49**	mg/kg dry	
02SB-03B			B906234-22				Soil	
Lead	0690627	6/19/99	6/21/99	EPA 6020	0.500	**6.16**	mg/kg dry	
02SB-03C			B906234-23				Soil	
Lead	0690627	6/19/99	6/21/99	EPA 6020	0.500	**2.99**	mg/kg dry	
02SB-03D			B906234-24				Soil	
Lead	0690627	6/19/99	6/22/99	EPA 6020	0.500	**3.50**	mg/kg dry	

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IT Corporation - Renton	Project:	Time Oil #2750	Sampled: 6/7/99
555 South Renton Village Place, Ste 700	Project Number:	783336	Received: 6/8/99
Renton, WA 98055	Project Manager:	Jerry Harris	Reported: 6/25/99 11:31

Dissolved Metals by EPA 6000/7000 Series Methods
North Creek Analytical - Bothell

Analyte	Batch Number	Date Prepared	Date Analyzed	Specific Method	Reporting Limit	Result	Units	Notes*
02SB-08H2O			**B906234-25**				**Water**	
Lead	0690388	6/11/99	6/15/99	EPA 6020	0.00100	ND	mg/l	
02SB-07H2O			**B906234-26**				**Water**	
Lead	0690388	6/11/99	6/15/99	EPA 6020	0.00100	ND	mg/l	
02SB-06H2O			**B906234-27**				**Water**	
Lead	0690388	6/11/99	6/15/99	EPA 6020	0.00100	ND	mg/l	
02SB-05H2O			**B906234-29**				**Water**	
Lead	0690388	6/11/99	6/15/99	EPA 6020	0.00100	**0.00129**	mg/l	
02SB-04H2O			**B906234-30**				**Water**	
Lead	0690388	6/11/99	6/15/99	EPA 6020	0.00100	ND	mg/l	
02SB-03H2O			**B906234-31**				**Water**	
Lead	0690388	6/11/99	6/15/99	EPA 6020	0.00100	ND	mg/l	

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IT Corporation - Renton	Project:	Time Oil #2750	Sampled: 6/7/99
555 South Renton Village Place, Ste 700	Project Number:	783336	Received: 6/8/99
Renton, WA 98055	Project Manager:	Jerry Harris	Reported: 6/25/99 11:31

Gasoline Hydrocarbons per NWTPH-Gx Method and BTEX per EPA Method 8020A
North Creek Analytical - Spokane

Analyte	Batch Number	Date Prepared	Date Analyzed	Surrogate Limits	Reporting Limit	Result	Units	Notes*
02SB-08H2O			B906234-25				Water	
Benzene	0690058	6/17/99	6/18/99		0.500	1.59	ug/l	
Toluene	"	"	"		0.500	1.25	"	
Ethylbenzene	"	"	"		0.500	ND	"	
Xylenes (total)	"	"	"		1.00	2.78	"	
Gasoline Range Hydrocarbons	"	"	"		50.0	128	"	
Surrogate: 4-BFB (FID)	"	"	"	*50.0-150*		*98.0*	%	
Surrogate: 4-BFB (PID)	"	"	"	*53.0-142*		*74.8*	"	
02SB-07H2O			B906234-26				Water	
Benzene	0690058	6/17/99	6/18/99		0.500	ND	ug/l	
Toluene	"	"	"		0.500	ND	"	
Ethylbenzene	"	"	"		0.500	ND	"	
Xylenes (total)	"	"	"		1.00	ND	"	
Gasoline Range Hydrocarbons	"	"	"		50.0	ND	"	
Surrogate: 4-BFB (FID)	"	"	"	*50.0-150*		*87.2*	%	
Surrogate: 4-BFB (PID)	"	"	"	*53.0-142*		*86.0*	"	
02SB-06H2O			B906234-27				Water	
Benzene	0690058	6/17/99	6/18/99		0.500	ND	ug/l	
Toluene	"	"	"		0.500	1.11	"	
Ethylbenzene	"	"	"		0.500	0.585	"	
Xylenes (total)	"	"	"		1.00	4.03	"	
Gasoline Range Hydrocarbons	"	"	"		50.0	103	"	
Surrogate: 4-BFB (FID)	"	"	"	*50.0-150*		*95.2*	%	
Surrogate: 4-BFB (PID)	"	"	"	*53.0-142*		*68.8*	"	
02SB-02H2O			B906234-28				Water	
Benzene	0690058	6/17/99	6/18/99		50.0	214	ug/l	
Toluene	"	"	"		50.0	155	"	
Ethylbenzene	"	"	"		50.0	459	"	
Xylenes (total)	"	"	"		100	1110	"	
Gasoline Range Hydrocarbons	"	"	"		5000	8260	"	
Surrogate: 4-BFB (FID)	"	"	"	*50.0-150*		*104*	%	
Surrogate: 4-BFB (PID)	"	"	"	*53.0-142*		*85.6*	"	
02SB-05H2O			B906234-29				Water	
Benzene	0690058	6/17/99	6/18/99		0.500	19.9	ug/l	
Toluene	"	"	"		0.500	4.18	"	

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**Refer to end of report for text of notes and definitions.*

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IT Corporation - Renton	Project:	Time Oil #2750	Sampled: 6/7/99
555 South Renton Village Place, Ste 700	Project Number:	783336	Received: 6/8/99
Renton, WA 98055	Project Manager:	Jerry Harris	Reported: 6/25/99 11:31

Gasoline Hydrocarbons per NWTPH-Gx Method and BTEX per EPA Method 8020A
North Creek Analytical - Spokane

Analyte	Batch Number	Date Prepared	Date Analyzed	Surrogate Limits	Reporting Limit	Result	Units	Notes*
02SB-05H2O (continued)			B906234-29				Water	
Ethylbenzene	0690058	6/17/99	6/18/99		0.500	19.9	ug/l	
Xylenes (total)	"	"	"		1.00	20.2	"	
Gasoline Range Hydrocarbons	"	"	"		50.0	685	"	
Surrogate: 4-BFB (FID)	"	"	"	*50.0-150*		*NR*	%	*6*
Surrogate: 4-BFB (PID)	"	"	"	*53.0-142*		*122*	"	
02SB-04H2O			B906234-30				Water	
Benzene	0690058	6/17/99	6/18/99		0.500	59.8	ug/l	
Toluene	"	"	"		0.500	2.28	"	
Ethylbenzene	"	"	"		0.500	1.62	"	
Xylenes (total)	"	"	"		1.00	8.18	"	
Gasoline Range Hydrocarbons	"	"	"		50.0	55.6	"	
Surrogate: 4-BFB (FID)	"	"	"	*50.0-150*		*79.2*	%	
Surrogate: 4-BFB (PID)	"	"	"	*53.0-142*		*67.6*	"	
02SB-03H2O			B906234-31				Water	
Benzene	0690058	6/17/99	6/18/99		0.500	6.64	ug/l	
Toluene	"	"	"		0.500	1.36	"	
Ethylbenzene	"	"	"		0.500	0.617	"	
Xylenes (total)	"	"	"		1.00	1.93	"	
Gasoline Range Hydrocarbons	"	"	"		50.0	ND	"	
Surrogate: 4-BFB (FID)	"	"	"	*50.0-150*		*81.2*	%	
Surrogate: 4-BFB (PID)	"	"	"	*53.0-142*		*66.4*	"	

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IT Corporation - Renton	Project:	Time Oil #2750	Sampled: 6/7/99
555 South Renton Village Place, Ste 700	Project Number:	783336	Received: 6/8/99
Renton, WA 98055	Project Manager:	Jerry Harris	Reported: 6/25/99 11:31

Dry Weight Determination
North Creek Analytical - Bothell

Sample Name	Lab ID	Matrix	Result	Units
02SB-07A	B906234-01	Soil	78.7	%
02SB-07B	B906234-02	Soil	76.6	%
02SB-08A	B906234-03	Soil	83.4	%
02SB-08B	B906234-04	Soil	79.8	%
02SB-06A	B906234-05	Soil	80.1	%
02SB-06B	B906234-06	Soil	80.0	%
02SB-01A	B906234-07	Soil	84.5	%
02SB-01B	B906234-08	Soil	88.2	%
02SB-01C	B906234-09	Soil	83.5	%
02SB-01D	B906234-10	Soil	82.9	%
02SB-01E	B906234-11	Soil	81.6	%
02SB-02A	B906234-12	Soil	81.9	%
02SB-02B	B906234-13	Soil	83.4	%
02SB-02C	B906234-14	Soil	78.9	%
02SB-02D	B906234-15	Soil	81.9	%
02SB-05A	B906234-16	Soil	78.5	%
02SB-05B	B906234-17	Soil	80.2	%
02SB-05C	B906234-18	Soil	81.7	%
02SB-04B	B906234-19	Soil	79.6	%

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IT Corporation - Renton	Project:	Time Oil #2750	Sampled: 6/7/99
555 South Renton Village Place, Ste 700	Project Number:	783336	Received: 6/8/99
Renton, WA 98055	Project Manager:	Jerry Harris	Reported: 6/25/99 11:31

Volatile Petroleum Products and BTEX by NWTPH-Gx and EPA 8021B
North Creek Analytical - Bothell

Analyte	Batch Number	Date Prepared	Date Analyzed	Surrogate Limits	Reporting Limit	Result	Units	Notes*
02SB-05C			B906234-18				Soil	3
Gasoline Range Hydrocarbons	0690523	6/16/99	6/23/99		5.00	ND	mg/kg dry	
Benzene	"	"	"		0.0500	ND	"	
Toluene	"	"	"		0.0500	ND	"	
Ethylbenzene	"	"	"		0.0500	ND	"	
Xylenes (total)	"	"	"		0.100	ND	"	
Surrogate: 4-BFB (FID)	"	"	"	*50.0-150*		*81.8*	%	
Surrogate: 4-BFB (PID)	"	"	"	*50.0-150*		*96.5*	"	
02SB-04B			B906234-19				Soil	3
Gasoline Range Hydrocarbons	0690523	6/16/99	6/23/99		5.00	ND	mg/kg dry	
Benzene	"	"	"		0.0500	ND	"	
Toluene	"	"	"		0.0500	ND	"	
Ethylbenzene	"	"	"		0.0500	ND	"	
Xylenes (total)	"	"	"		0.100	ND	"	
Surrogate: 4-BFB (FID)	"	"	"	*50.0-150*		*75.1*	%	
Surrogate: 4-BFB (PID)	"	"	"	*50.0-150*		*91.1*	"	
02SB-04C			B906234-20				Soil	3
Gasoline Range Hydrocarbons	0690523	6/16/99	6/23/99		5.00	ND	mg/kg dry	
Benzene	"	"	"		0.0500	ND	"	
Toluene	"	"	"		0.0500	ND	"	
Ethylbenzene	"	"	"		0.0500	ND	"	
Xylenes (total)	"	"	"		0.100	ND	"	
Surrogate: 4-BFB (FID)	"	"	"	*50.0-150*		*70.2*	%	
Surrogate: 4-BFB (PID)	"	"	"	*50.0-150*		*84.7*	"	
02SB-03A			B906234-21				Soil	3
Gasoline Range Hydrocarbons	0690523	6/16/99	6/23/99		5.00	ND	mg/kg dry	
Benzene	"	"	"		0.0500	ND	"	
Toluene	"	"	"		0.0500	ND	"	
Ethylbenzene	"	"	"		0.0500	ND	"	
Xylenes (total)	"	"	"		0.100	ND	"	
Surrogate: 4-BFB (FID)	"	"	"	*50.0-150*		*74.0*	%	
Surrogate: 4-BFB (PID)	"	"	"	*50.0-150*		*91.9*	"	
02SB-03B			B906234-22				Soil	3
Gasoline Range Hydrocarbons	0690523	6/16/99	6/23/99		5.00	ND	mg/kg dry	
Benzene	"	"	"		0.0500	ND	"	

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IT Corporation - Renton	Project:	Time Oil #2750	Sampled:	6/7/99
555 South Renton Village Place, Ste 700	Project Number:	783336	Received:	6/8/99
Renton, WA 98055	Project Manager:	Jerry Harris	Reported:	6/25/99 11:31

Dry Weight Determination
North Creek Analytical - Bothell

Sample Name	Lab ID	Matrix	Result	Units
02SB-04C	B906234-20	Soil	77.6	%
02SB-03A	B906234-21	Soil	83.2	%
02SB-03B	B906234-22	Soil	81.5	%
02SB-03C	B906234-23	Soil	78.4	%
02SB-03D	B906234-24	Soil	76.2	%

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IT Corporation - Renton	Project:	Time Oil #2750	Sampled: 6/7/99
555 South Renton Village Place, Ste 700	Project Number:	783336	Received: 6/8/99
Renton, WA 98055	Project Manager:	Jerry Harris	Reported: 6/25/99 11:31

Volatile Petroleum Products and BTEX by NWTPH-Gx and EPA 8021B/Quality Control
North Creek Analytical - Bothell

Analyte	Date Analyzed	Spike Level	Sample Result	QC Result	Units	Reporting Limit / Recov. Limits	Recov. %	RPD Limit	RPD %	Notes*
Batch: 0690370	**Date Prepared: 6/11/99**					**Extraction Method: EPA 5030B (MeOH)**				
Blank	**0690370-BLK1**									
Gasoline Range Hydrocarbons	6/20/99			**ND**	mg/kg dry	**5.00**				
Benzene	"			**ND**	"	**0.0500**				
Toluene	"			**ND**	"	**0.0500**				
Ethylbenzene	"			**ND**	"	**0.0500**				
Xylenes (total)	"			**ND**	"	**0.100**				
Surrogate: 4-BFB (FID)	"	*4.00*		*4.06*	"	*50.0-150*	*101*			
Surrogate: 4-BFB (PID)	"	*4.00*		*4.21*	"	*50.0-150*	*105*			
LCS	**0690370-BS1**									
Gasoline Range Hydrocarbons	6/20/99	25.0		23.8	mg/kg dry	70.0-130	95.2			
Surrogate: 4-BFB (FID)	"	*4.00*		*4.20*	"	*50.0-150*	*105*			
Duplicate	**0690370-DUP1**	**B906191-01**								
Gasoline Range Hydrocarbons	6/21/99		5.14	ND	mg/kg dry			50.0		
Surrogate: 4-BFB (FID)	"	*4.92*		*4.15*	"	*50.0-150*	*84.3*			
Duplicate	**0690370-DUP2**	**B906191-08**								
Gasoline Range Hydrocarbons	6/22/99		5.39	ND	mg/kg dry			50.0		
Surrogate: 4-BFB (FID)	"	*4.84*		*3.94*	"	*50.0-150*	*81.4*			
Matrix Spike	**0690370-MS1**	**B906191-07**								
Benzene	6/22/99	0.612	ND	0.499	mg/kg dry	60.0-140	**81.5**			
Toluene	"	0.612	ND	0.497	"	60.0-140	**81.2**			
Ethylbenzene	"	0.612	ND	0.521	"	60.0-140	**85.1**			
Xylenes (total)	"	1.84	ND	1.52	"	60.0-140	**82.6**			
Surrogate: 4-BFB (PID)	"	*4.90*		*4.29*	"	*50.0-150*	*87.6*			
Matrix Spike Dup	**0690370-MSD1**	**B906191-07**								
Benzene	6/22/99	0.612	ND	0.513	mg/kg dry	60.0-140	**83.8**	20.0	2.78	
Toluene	"	0.612	ND	0.499	"	60.0-140	**81.5**	20.0	0.369	
Ethylbenzene	"	0.612	ND	0.516	"	60.0-140	**84.3**	20.0	0.945	
Xylenes (total)	"	1.84	ND	1.53	"	60.0-140	**83.2**	20.0	0.724	
Surrogate: 4-BFB (PID)	"	*4.90*		*4.20*	"	*50.0-150*	*85.7*			
Batch: 0690523	**Date Prepared: 6/16/99**					**Extraction Method: EPA 5030B (MeOH)**				
Blank	**0690523-BLK1**									
Gasoline Range Hydrocarbons	6/23/99			**ND**	mg/kg dry	**5.00**				

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IT Corporation - Renton	Project:	Time Oil #2750	Sampled: 6/7/99
555 South Renton Village Place, Ste 700	Project Number:	783336	Received: 6/8/99
Renton, WA 98055	Project Manager:	Jerry Harris	Reported: 6/25/99 11:31

Volatile Petroleum Products and BTEX by NWTPH-Gx and EPA 8021B/Quality Control
North Creek Analytical - Bothell

Analyte	Date Analyzed	Spike Level	Sample Result	QC Result	Units	Reporting Limit / Recov. Limits	Recov. %	RPD Limit	RPD %	Notes*
Blank (continued)	**0690523-BLK1**									
Benzene	6/23/99			ND	mg/kg dry	0.0500				
Toluene	"			ND	"	0.0500				
Ethylbenzene	"			ND	"	0.0500				
Xylenes (total)	"			ND	"	0.100				
Surrogate: 4-BFB (FID)	"	*4.00*		*3.43*	"	*50.0-150*	*85.8*			
Surrogate: 4-BFB (PID)	"	*4.00*		*4.02*	"	*50.0-150*	*100*			
LCS	**0690523-BS1**									
Gasoline Range Hydrocarbons	6/23/99	25.0		19.7	mg/kg dry	70.0-130	78.8			
Surrogate: 4-BFB (FID)	"	*4.00*		*3.82*	"	*50.0-150*	*95.5*			
Duplicate	**0690523-DUP1**		**B906234-17**							
Gasoline Range Hydrocarbons	6/23/99		ND	ND	mg/kg dry			50.0		
Surrogate: 4-BFB (FID)	"	*4.99*		*3.88*	"	*50.0-150*	*77.8*			
Duplicate	**0690523-DUP2**		**B906234-14**							
Gasoline Range Hydrocarbons	6/23/99		ND	ND	mg/kg dry			50.0		
Surrogate: 4-BFB (FID)	"	*5.07*		*3.76*	"	*50.0-150*	*74.2*			
Matrix Spike	**0690523-MS1**		**B906234-04**							
Benzene	6/23/99	0.626	ND	0.522	mg/kg dry	60.0-140	**83.4**			
Toluene	"	0.626	ND	0.560	"	60.0-140	**89.5**			
Ethylbenzene	"	0.626	ND	0.567	"	60.0-140	**90.6**			
Xylenes (total)	"	1.88	ND	1.69	"	60.0-140	**89.9**			
Surrogate: 4-BFB (PID)	"	*5.01*		*4.56*	"	*50.0-150*	*91.0*			
Matrix Spike Dup	**0690523-MSD1**		**B906234-04**							
Benzene	6/23/99	0.626	ND	0.512	mg/kg dry	60.0-140	**81.8**	20.0	**1.94**	
Toluene	"	0.626	ND	0.542	"	60.0-140	**86.6**	20.0	**3.29**	
Ethylbenzene	"	0.626	ND	0.549	"	60.0-140	**87.7**	20.0	**3.25**	
Xylenes (total)	"	1.88	ND	1.63	"	60.0-140	**86.7**	20.0	**3.62**	
Surrogate: 4-BFB (PID)	"	*5.01*		*4.36*	"	*50.0-150*	*87.0*			

Batch: 0690565 **Date Prepared: 6/17/99** **Extraction Method: EPA 5030B (MeOH)**

Blank	**0690565-BLK1**				
Gasoline Range Hydrocarbons	6/23/99	ND	mg/kg dry	5.00	
Benzene	"	ND	"	0.0500	
Toluene	"	ND	"	0.0500	

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IT Corporation - Renton	Project:	Time Oil #2750	Sampled: 6/7/99
555 South Renton Village Place, Ste 700	Project Number:	783336	Received: 6/8/99
Renton, WA 98055	Project Manager:	Jerry Harris	Reported: 6/25/99 11:31

Volatile Petroleum Products and BTEX by NWTPH-Gx and EPA 8021B/Quality Control
North Creek Analytical - Bothell

Analyte	Date Analyzed	Spike Level	Sample Result	QC Result	Units	Reporting Limit / Recov. Limits	Recov. %	RPD Limit	RPD %	Notes*
Blank (continued)	**0690565-BLK1**									
Ethylbenzene	6/23/99			**ND**	mg/kg dry	**0.0500**				
Xylenes (total)	"			**ND**	"	**0.100**				
Surrogate: 4-BFB (FID)	"	*4.00*		*3.85*	"	*50.0-150*	*96.2*			
Surrogate: 4-BFB (PID)	"	*4.00*		*4.12*	"	*50.0-150*	*103*			
LCS	**0690565-BS1**									
Gasoline Range Hydrocarbons	6/21/99	25.0		20.5	mg/kg dry	70.0-130	82.0			
Surrogate: 4-BFB (FID)	"	*4.00*		*4.00*	"	*50.0-150*	*100*			
Duplicate	**0690565-DUP1**		**B906371-01**							
Gasoline Range Hydrocarbons	6/21/99		ND	ND	mg/kg dry			50.0		
Surrogate: 4-BFB (FID)	"	*4.45*		*4.03*	"	*50.0-150*	*90.6*			
Matrix Spike	**0690565-MS1**		**B906302-05**							
Benzene	6/21/99	0.568	ND	0.443	mg/kg dry	60.0-140	**78.0**			
Toluene	"	0.568	ND	0.471	"	60.0-140	**82.9**			
Ethylbenzene	"	0.568	0.0532	0.481	"	60.0-140	**75.3**			
Xylenes (total)	"	1.70	ND	1.43	"	60.0-140	**84.1**			
Surrogate: 4-BFB (PID)	"	*4.54*		*4.17*	"	*50.0-150*	*91.9*			
Matrix Spike Dup	**0690565-MSD1**		**B906302-05**							
Benzene	6/22/99	0.568	ND	0.451	mg/kg dry	60.0-140	**79.4**	20.0	**1.78**	
Toluene	"	0.568	ND	0.477	"	60.0-140	**84.0**	20.0	**1.32**	
Ethylbenzene	"	0.568	0.0532	0.477	"	60.0-140	**74.6**	20.0	**0.934**	
Xylenes (total)	"	1.70	ND	1.41	"	60.0-140	**82.9**	20.0	**1.44**	
Surrogate: 4-BFB (PID)	"	*4.54*		*4.08*	"	*50.0-150*	*89.9*			

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IT Corporation - Renton	Project:	Time Oil #2750	Sampled: 6/7/99
555 South Renton Village Place, Ste 700	Project Number:	783336	Received: 6/8/99
Renton, WA 98055	Project Manager:	Jerry Harris	Reported: 6/25/99 11:31

Semivolatile Petroleum Products by NWTPH-Dx (w/o Acid/Silica Gel Clean-up)/Quality Control
North Creek Analytical - Bothell

Analyte	Date Analyzed	Spike Level	Sample Result	QC Result	Units	Reporting Limit / Recov. Limits	Recov. %	RPD Limit	RPD %	Notes*
Batch: 0690369	**Date Prepared: 6/11/99**					**Extraction Method: EPA 3520C/600 Series**				
Blank	**0690369-BLK1**									
Diesel Range Hydrocarbons	6/14/99			**ND**	mg/l	**0.250**				
Lube Oil Range Hydrocarbons	"			**ND**	"	**0.500**				
Surrogate: 2-FBP	"	*0.325*		*0.388*	"	*50.0-150*	*119*			
LCS	**0690369-BS1**									
Diesel Range Hydrocarbons	6/13/99	2.00		1.78	mg/l	60.0-140	89.0			
Surrogate: 2-FBP	"	*0.325*		*0.249*	"	*50.0-150*	*76.6*			
LCS Dup	**0690369-BSD1**									
Diesel Range Hydrocarbons	6/14/99	2.00		1.80	mg/l	60.0-140	90.0	40.0	1.12	
Surrogate: 2-FBP	"	*0.325*		*0.342*	"	*50.0-150*	*105*			
Batch: 0690406	**Date Prepared: 6/11/99**					**Extraction Method: EPA 3550B**				
Blank	**0690406-BLK1**									
Diesel Range Hydrocarbons	6/13/99			**ND**	mg/kg dry	**10.0**				
Lube Oil Range Hydrocarbons	"			**ND**	"	**25.0**				
Surrogate: 2-FBP	"	*10.7*		*11.8*	"	*50.0-150*	*110*			
LCS	**0690406-BS1**									
Diesel Range Hydrocarbons	6/13/99	66.7		56.6	mg/kg dry	60.0-140	84.9			
Surrogate: 2-FBP	"	*10.7*		*7.49*	"	*50.0-150*	*70.0*			
Duplicate	**0690406-DUP1**		**B906279-01**							
Diesel Range Hydrocarbons	6/13/99		740	507	mg/kg dry			50.0	**37.4**	
Lube Oil Range Hydrocarbons	"		2730	1520	"			50.0	**56.9**	7
Surrogate: 2-FBP	"	*11.4*		*6.64*	"	*50.0-150*	*58.2*			
Duplicate	**0690406-DUP2**		**B906235-04**							
Diesel Range Hydrocarbons	6/13/99		17.0	13.4	mg/kg dry			50.0	**23.7**	
Lube Oil Range Hydrocarbons	"		37.0	ND	"			50.0		
Surrogate: 2-FBP	"	*13.5*		*9.41*	"	*50.0-150*	*69.7*			
Batch: 0690419	**Date Prepared: 6/12/99**					**Extraction Method: EPA 3520C/600 Series**				
Blank	**0690419-BLK1**									
Diesel Range Hydrocarbons	6/14/99			**ND**	mg/l	**0.250**				
Lube Oil Range Hydrocarbons	"			**ND**	"	**0.500**				
Surrogate: 2-FBP	"	*0.325*		*0.244*	"	*50.0-150*	*75.1*			

North Creek Analytical - Bothell

**Refer to end of report for text of notes and definitions.*

Joy B Chang, Project Manager

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IT Corporation - Renton	Project:	Time Oil #2750	Sampled: 6/7/99
555 South Renton Village Place, Ste 700	Project Number:	783336	Received: 6/8/99
Renton, WA 98055	Project Manager:	Jerry Harris	Reported: 6/25/99 11:31

Semivolatile Petroleum Products by NWTPH-Dx (w/o Acid/Silica Gel Clean-up)/Quality Control
North Creek Analytical - Bothell

Analyte	Date Analyzed	Spike Level	Sample Result	QC Result	Units	Reporting Limit / Recov. Limits	Recov. %	RPD Limit	RPD %	Notes*
LCS	**0690419-BS1**									
Diesel Range Hydrocarbons	6/14/99	2.00		1.66	mg/l	60.0-140	83.0			
Surrogate: 2-FBP	"	*0.325*		*0.334*	"	*50.0-150*	*103*			
LCS Dup	**0690419-BSD1**									
Diesel Range Hydrocarbons	6/14/99	2.00		1.69	mg/l	60.0-140	84.5	40.0	1.79	
Surrogate: 2-FBP	"	*0.325*		*0.257*	"	*50.0-150*	*79.1*			
Batch: 0690536	**Date Prepared: 6/16/99**					**Extraction Method: EPA 3550B**				
Blank	**0690536-BLK1**									
Diesel Range Hydrocarbons	6/17/99			**ND**	mg/kg dry	**10.0**				
Lube Oil Range Hydrocarbons	"			**ND**	"	**25.0**				
Surrogate: 2-FBP	"	*10.8*		*6.86*	"	*50.0-150*	*63.5*			
LCS	**0690536-BS1**									
Diesel Range Hydrocarbons	6/17/99	66.7		55.2	mg/kg dry	60.0-140	82.8			
Surrogate: 2-FBP	"	*10.8*		*9.58*	"	*50.0-150*	*88.7*			
Duplicate	**0690536-DUP1**		**B906234-23**							
Diesel Range Hydrocarbons	6/17/99		ND	12.4	mg/kg dry			50.0		8
Lube Oil Range Hydrocarbons	"		ND	29.0	"			50.0		8
Surrogate: 2-FBP	"	*13.8*		*8.96*	"	*50.0-150*	*64.9*			
Duplicate	**0690536-DUP2**		**B906234-05**							
Diesel Range Hydrocarbons	6/17/99		ND	ND	mg/kg dry			50.0		
Lube Oil Range Hydrocarbons	"		ND	ND	"			50.0		
Surrogate: 2-FBP	"	*13.5*		*12.6*	"	*50.0-150*	*93.3*			
Batch: 0690555	**Date Prepared: 6/17/99**					**Extraction Method: EPA 3550B**				
Blank	**0690555-BLK1**									
Diesel Range Hydrocarbons	6/18/99			**ND**	mg/kg dry	**10.0**				
Lube Oil Range Hydrocarbons	"			**ND**	"	**25.0**				
Surrogate: 2-FBP	"	*10.8*		*6.84*	"	*50.0-150*	*63.3*			
LCS	**0690555-BS1**									
Diesel Range Hydrocarbons	6/18/99	66.7		55.0	mg/kg dry	60.0-140	82.5			
Surrogate: 2-FBP	"	*10.8*		*9.21*	"	*50.0-150*	*85.3*			

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IT Corporation - Renton	Project:	Time Oil #2750	Sampled: 6/7/99
555 South Renton Village Place, Ste 700	Project Number:	783336	Received: 6/8/99
Renton, WA 98055	Project Manager:	Jerry Harris	Reported: 6/25/99 11:31

Semivolatile Petroleum Products by NWTPH-Dx (w/o Acid/Silica Gel Clean-up)/Quality Control
North Creek Analytical - Bothell

Analyte	Date Analyzed	Spike Level	Sample Result	QC Result	Units	Reporting Limit / Recov. Limits	Recov. %	RPD Limit	RPD %	Notes*
Duplicate	**0690555-DUP1**		**B906373-01**							
Diesel Range Hydrocarbons	6/18/99		ND	ND	mg/kg dry			50.0		
Lube Oil Range Hydrocarbons	"		36.9	ND	"			50.0		
Surrogate: 2-FBP	"	*13.6*		*7.64*	"	*50.0-150*	*56.2*			

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IT Corporation - Renton	Project:	Time Oil #2750	Sampled: 6/7/99
555 South Renton Village Place, Ste 700	Project Number:	783336	Received: 6/8/99
Renton, WA 98055	Project Manager:	Jerry Harris	Reported: 6/25/99 11:31

Total Metals by EPA 6000/7000 Series Methods/Quality Control
North Creek Analytical - Bothell

Analyte	Date Analyzed	Spike Level	Sample Result	QC Result	Units	Reporting Limit / Recov. Limits	Recov. %	RPD Limit	RPD %	Notes*
Batch: 0690627	**Date Prepared: 6/19/99**					**Extraction Method: EPA 3050B**				
Blank	**0690627-BLK1**									
Lead	6/21/99			ND	mg/kg dry	0.500				
Blank	**0690627-BLK2**									
Lead	6/21/99			ND	mg/kg dry	0.500				
Blank	**0690627-BLK3**									
Lead	6/22/99			ND	mg/kg dry	0.500				
LCS	**0690627-BS1**									
Lead	6/22/99	25.0		19.9	mg/kg dry	80.0-120	79.6			9
LCS	**0690627-BS2**									
Lead	6/22/99	25.0		20.0	mg/kg dry	80.0-120	80.0			
Matrix Spike	**0690627-MS1**		**B906234-11**							
Lead	6/21/99	29.7	6.18	29.2	mg/kg dry	70.0-130	77.5			
Matrix Spike	**0690627-MS2**		**B906234-15**							
Lead	6/22/99	25.0	2.29	22.1	mg/kg dry	70.0-130	79.2			
Matrix Spike Dup	**0690627-MSD1**		**B906234-11**							
Lead	6/22/99	25.3	6.18	35.6	mg/kg dry	70.0-130	**116**	20.0	39.8	7
Matrix Spike Dup	**0690627-MSD2**		**B906234-15**							
Lead	6/22/99	26.8	2.29	21.8	mg/kg dry	70.0-130	**72.8**	20.0	8.42	

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IT Corporation - Renton	Project:	Time Oil #2750	Sampled: 6/7/99
555 South Renton Village Place, Ste 700	Project Number:	783336	Received: 6/8/99
Renton, WA 98055	Project Manager:	Jerry Harris	Reported: 6/25/99 11:31

Dissolved Metals by EPA 6000/7000 Series Methods/Quality Control
North Creek Analytical - Bothell

Analyte	Date Analyzed	Spike Level	Sample Result	QC Result	Units	Reporting Limit / Recov. Limits	Recov. %	RPD Limit	RPD %	Notes*
Batch: 0690388	**Date Prepared: 6/11/99**					**Extraction Method: EPA 3005A**				
Blank	**0690388-BLK1**									
Lead	6/14/99			**ND**	mg/l	**0.00100**				
LCS	**0690388-BS1**									
Lead	6/14/99	0.200		0.196	mg/l	80.0-120	98.0			
Matrix Spike	**0690388-MS1**		**B906257-01**							
Lead	6/14/99	0.200	ND	0.199	mg/l	75.0-125	**99.5**			
Matrix Spike Dup	**0690388-MSD1**		**B906257-01**							
Lead	6/14/99	0.200	ND	0.196	mg/l	75.0-125	**98.0**	20.0	1.52	

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IT Corporation - Renton	Project:	Time Oil #2750	Sampled: 6/7/99
555 South Renton Village Place, Ste 700	Project Number:	783336	Received: 6/8/99
Renton, WA 98055	Project Manager:	Jerry Harris	Reported: 6/25/99 11:31

Gasoline Hydrocarbons per NWTPH-Gx Method and BTEX per EPA Method 8020A/Quality Control - North Creek Analytical - Spokane

Analyte	Date Analyzed	Spike Level	Sample Result	QC Result	Units	Reporting Limit / Recov. Limits	Recov. %	RPD Limit	RPD %	Notes*
Batch: 0690058	**Date Prepared: 6/17/99**					**Extraction Method: GC Volatiles**				
Blank	**0690058-BLK1**									
Benzene	6/18/99			**ND**	ug/l	**0.500**				
Toluene	"			**ND**	"	**0.500**				
Ethylbenzene	"			**ND**	"	**0.500**				
Xylenes (total)	"			**ND**	"	**1.00**				
Gasoline Range Hydrocarbons	"			**ND**	"	**50.0**				
Surrogate: 4-BFB (FID)	"	*25.0*		*27.1*	"	*50.0-150*	*108*			
Surrogate: 4-BFB (PID)	"	*25.0*		*22.9*	"	*53.0-142*	*91.6*			
LCS	**0690058-BS1**									
Gasoline Range Hydrocarbons	6/18/99	1000		829	ug/l	70.0-150	82.9			
Surrogate: 4-BFB (FID)	"	*25.0*		*32.9*	"	*50.0-150*	*132*			
LCS	**0690058-BS2**									
Benzene	6/18/99	10.0		8.96	ug/l	80.0-120	89.6			
Toluene	"	10.0		10.2	"	80.0-120	102			
Ethylbenzene	"	10.0		8.71	"	80.0-120	87.1			
Xylenes (total)	"	30.0		26.7	"	80.0-120	89.0			
Surrogate: 4-BFB (PID)	"	*25.0*		*22.2*	"	*53.0-142*	*88.8*			
Duplicate	**0690058-DUP1**		**B906234-27**							
Gasoline Range Hydrocarbons	6/18/99		103	82.2	ug/l			60.0	22.5	
Surrogate: 4-BFB (FID)	"	*25.0*		*24.4*	"	*50.0-150*	*97.6*			
Surrogate: 4-BFB (PID)	"	*25.0*		*18.1*	"	*53.0-142*	*72.4*			
Duplicate	**0690058-DUP2**		**S906060-04**							
Gasoline Range Hydrocarbons	6/18/99		ND	ND	ug/l			60.0		
Surrogate: 4-BFB (FID)	"	*25.0*		*22.5*	"	*50.0-150*	*90.0*			
Surrogate: 4-BFB (PID)	"	*25.0*		*18.8*	"	*53.0-142*	*75.2*			
Matrix Spike	**0690058-MS1**		**S906060-04**							
Gasoline Range Hydrocarbons	6/18/99	1000	ND	451	ug/l	70.0-130	**45.1**			10
Surrogate: 4-BFB (FID)	"	*25.0*		*14.2*	"	*50.0-150*	*56.8*			
Matrix Spike	**0690058-MS2**		**S906060-04**							
Benzene	6/18/99	10.0	ND	7.96	ug/l	54.0-143	**79.6**			
Toluene	"	10.0	ND	8.77	"	48.0-145	**87.7**			
Ethylbenzene	"	10.0	0.518	7.64	"	49.0-142	**71.2**			

North Creek Analytical - Bothell

**Refer to end of report for text of notes and definitions.*

Joy B Chang, Project Manager

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IT Corporation - Renton	Project:	Time Oil #2750	Sampled: 6/7/99
555 South Renton Village Place, Ste 700	Project Number:	783336	Received: 6/8/99
Renton, WA 98055	Project Manager:	Jerry Harris	Reported: 6/25/99 11:31

Gasoline Hydrocarbons per NWTPH-Gx Method and BTEX per EPA Method 8020A/Quality Control
North Creek Analytical - Spokane

Analyte	Date Analyzed	Spike Level	Sample Result	QC Result	Units	Reporting Limit Recov. Limits	Recov. %	RPD Limit	RPD %	Notes*
Matrix Spike (continued)	**0690058-MS2**		**S906060-04**							
Xylenes (total)	6/18/99	30.0	2.05	21.9	ug/l	55.0-140	**66.2**			
Surrogate: 4-BFB (PID)	"	*25.0*		*20.2*	"	*53.0-142*	*80.8*			

North Creek Analytical - Bothell

**Refer to end of report for text of notes and definitions.*

Joy B Chang, Project Manager

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IT Corporation - Renton	Project: Time Oil #2750	Sampled: 6/7/99
555 South Renton Village Place, Ste 700	Project Number: 783336	Received: 6/8/99
Renton, WA 98055	Project Manager: Jerry Harris	Reported: 6/25/99 11:31

Notes and Definitions

#	Note
1	The chromatogram for this sample does not resemble a typical gasoline pattern.
2	The reporting limit for this analyte has been raised to account for interference from coeluting organic compounds present in the sample.
3	Samples were extracted within hold time, but due to an extraction anomaly no surrogate was added. Samples were re-extracted outside of hold time and analyzed. The samples were similar for both extracts.
4	Results in the diesel organics range are primarily due to overlap from a heavy oil range product.
5	The sample chromatographic pattern does not resemble the fuel standard used for quantitation.
6	The surrogate recovery for this sample cannot be accurately quantified due to interference from coeluting organic compounds present in the sample.
7	The RPD value for this QC sample is above the established control limit. Review of associated QC indicates the high RPD does not represent an out-of-control condition for the batch.
8	Analyses are not controlled on RPD values from sample concentrations less than 10 times the reporting limit.
9	The spike recovery for this QC sample is outside of established control limits. Review of associated batch QC indicates the recovery for this analyte does not represent an out-of-control condition for the batch.
10	The spike recovery for this QC sample is outside of NCA established control limits. Alternate sources of QC have been used to validate the batch.
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
Recov.	Recovery
RPD	Relative Percent Difference

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CHAIN OF CUSTODY REPORT

Work Order #: B906234

CLIENT: IT Corporation
REPORT TO: Jerry Harris
ADDRESS: 555 S. Renton Village Place #700
Renton, WA 98055
PHONE: 425-228-9645 FAX: 425-228-9793
PROJECT NAME: Time oil 2750
PROJECT NUMBER: 783336
SAMPLED BY: CNS

INVOICE TO: Connie Hofmar
" "
P.O. NUMBER:

TURNAROUND REQUEST in Business Days*
Organic & Inorganic Analyses: [X] STD. 7 5 4 3 2 1 <1
Petroleum Hydrocarbon Analyses: STD. 5 4 3 2 1 <1
OTHER Please Specify
*Turnaround Requests less than standard may incur Rush Charges.

REQUESTED ANALYSES

CLIENT SAMPLE IDENTIFICATION	SAMPLING DATE/TIME	TPH-G	TPH-Dext	BTEX	Lead		MATRIX (W, S, O)	# OF CONT.	COMMENTS	NCA WO ID
Ø25B-Ø7A	6/7/99 11:23	X	X	X	X	B906234-01	Soil	1	NW Method	
Ø25B-Ø7B	11:29	↓	↓	↓	↓	-02	↓	↓	↓	
Ø25B-Ø8A	11:5Ø					-03				
Ø25B-Ø8B	11:58					-04				
Ø25B-Ø6A	12:37					-05				
Ø25B-Ø6B	12:4Ø					-06				
Ø25B-Ø1A	1:39					-07				
Ø25B-Ø1B	1:45					-08				
Ø25B-Ø1C	1:53					-09				
Ø25B-Ø1D	1:56					-10				
Ø25B-Ø1E	2:Ø4					-11				
Ø25B-Ø2A	2:55					-12				
Ø25B-Ø2B	3:Ø1					-13				
Ø25B-Ø2C	3:12					-14				
Ø25B-Ø2D	3:2Ø	↓	↓	↓	↓	-15	↓	↓	↓	

RELINQUISHED BY: Chris N. Storey DATE: 6/7/99 RECEIVED BY: BILL K DATE: 6-8-99
PRINT NAME: Chris N. Storey FIRM: IT Corp. TIME: 9:2Ø PRINT NAME: FIRM: TIME: 14:40
RELINQUISHED BY: BILL K FIRM: NCA DATE: 6-8-99 RECEIVED BY: [signature] DATE: 6/8/99
PRINT NAME: FIRM: TIME: 15:20 PRINT NAME: Frank Tonty FIRM: NCA TIME: 14:45
ADDITIONAL REMARKS: W/O 11.2 TEMP:

PAGE 1 OF 3

COC REV 3/99

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CHAIN OF CUSTODY REPORT Work Order #:

CLIENT: IT Corporation
REPORT TO: Jerry Garcia
ADDRESS: 555 S. Renton Village Place #700
Renton, WA 98055
PHONE: 425-228-9645 FAX: 425-228-9793
PROJECT NAME: Time Oil 2750
PROJECT NUMBER: 783336
SAMPLED BY: CN/S

INVOICE TO: Connie Hofman
" "
P.O. NUMBER:

TURNAROUND REQUEST in Business Days*
Organic & Inorganic Analyses: [X] 10 | 7 | 5 | 4 | 3 | 2 | 1 | < 1 (STD.)
Petroleum Hydrocarbon Analyses: 5 | 4 | 3 | 2 | 1 | < 1 (STD.)
OTHER Please Specify
*Turnaround Requests less than standard may incur Rush Charges.

CLIENT SAMPLE IDENTIFICATION	SAMPLING DATE/TIME	TPH-G	TPH-Dext	BTEX	Lead	MATRIX (W, S, O)	# OF CONT.	COMMENTS	NCA WO ID
Φ25B-Φ5A	6/7/99 3:44	X	X	X	X	So:1	1	NW Methods	9906234-16
Φ25B-Φ5B	3:51								-17
Φ25B-Φ5C	3:58								-18
Φ25B-Φ4 B	4:36								-19
Φ25B-Φ4 C	4:43								-20
Φ25B-Φ3A	5:06								-21
Φ25B-Φ3 B	5:12								-22
Φ25B-Φ3 C	5:20								-23
Φ25B-Φ3 D	5:30								-24
Φ25B-Φ8 H2O	12:26	X	X	X	X	Water	4	Please Filter Lead	-25
Φ25B-Φ7 H2O	12:48						4	Please Filter Lead	-26
Φ25B-Φ6 H2O	1:21						4	Please Filter Lead	-27
Φ25B-Φ2 H2O	3:48						3	Please Filter Lead	-28
Φ25B-Φ5 H2O	4:37				X		4	Please Filter Lead	-29
Φ25B-Φ4 H2O	5:10						4	Please Filter Lead	-30

RELINQUISHED BY: Chris N. Storey DATE: 6/7/99
PRINT NAME: Chris N. Storey FIRM: IT Corp TIME: 9:20
RELINQUISHED BY: BILL K DATE: 6-8-99
PRINT NAME: FIRM: NCA TIME: 15:20

RECEIVED BY: Tony DATE: 6/8/99
PRINT NAME: PRAM TONY FIRM: NCA TIME: 520
RECEIVED BY: DATE:
PRINT NAME: FIRM: TIME:

ADDITIONAL REMARKS: 11.2

TEMP:

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Environmental Laboratory Network
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9 12(nue N ite 10 ell, V 1-95 (425 200 420-
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20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711 (541) 383-9310 FAX 382-7588

CHAIN OF CUSTODY REPORT Work Order #:

CLIENT: IT Corporation
REPORT TO: Jerry Harris
ADDRESS: 555 S. Renton Village PL #700 Renton WA 98055
PHONE: 425-228-9645 FAX: 425-228-9773

INVOICE TO: Connie Hofman
" "
P.O. NUMBER:

PROJECT NAME: Time Oil 2750
PROJECT NUMBER: 783336
SAMPLED BY: CNS

TURNAROUND REQUEST in Business Days*
Organic & Inorganic Analyses: 10 | 7 | 5 | 4 | 3 | 2 | 1 | < 1
STD. Petroleum Hydrocarbon Analyses: 5 | 4 | 3 | 2 | 1 | < 1
STD. OTHER Please Specify
*Turnaround Requests less than standard may incur Rush Charges.

CLIENT SAMPLE IDENTIFICATION	SAMPLING DATE/TIME	TPH-G	TPH-Dext	BTEX	Lead		REQUESTED ANALYSES								MATRIX (W, S, O)	# OF CONT.	COMMENTS	NCA WO ID
.Ø25B-Ø3Hx0	6/7/99 5:57	X	X	X	X		B9060234-31								Water	4	NW Methods Please Filter Lead.	
0.																		
1.																		
2.																		
3.																		
4.																		
5.																		

RELINQUISHED BY: Chris N. Storey DATE: 6/8/99
PRINT NAME: Chris N. Storey FIRM: IT Corp TIME: 9:20
RECEIVED BY: BILL K NCA DATE: 6-8-99
PRINT NAME: FIRM: TIME: 14:45

RELINQUISHED BY: BILL K NCA DATE: 6-8-99
PRINT NAME: FIRM: TIME: 15:20
RECEIVED BY: DATE:
PRINT NAME: FIRM: TIME:

ADDITIONAL REMARKS: W/A 11.2
TEMP:
PAGE 3 OF 3

Request for additional Analyses on samples already in NCA possession

NORTH CREEK ANALYTICAL
Environmental Laboratory Services

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9405 S.W. Nimbus Avenue, Beaverton, OR 97008-7132 (503) 906-9200 FAX 906-9210

CHAIN OF CUSTODY REPORT

Work Order #

REPORT TO: Jerry Harris
ATTENTION:
ADDRESS: IT Corp. 5555 S. Renton Village Place Ste 700 Renton WA 98055
PHONE: 425 228 9645 FAX: 425 228 9793
PROJECT NAME: Time Oil Co Seattle Terminal
PROJECT NUMBER:
SAMPLED BY:

INVOICE TO: Time Oil Co
ATTENTION: Scott Sloan
ADDRESS: 2737 W Commodore Way Seattle WA
P.O. NUMBER:
NCA QUOTE #:

TURNAROUND REQUEST in Business Days *
Organic & Inorganic Analyses: 10 (Standard) 7 5 4 3 2 1 Same Day
Fuels & Hydrocarbon Analyses: 5 (Standard) 3-4 2 1 Same Day
OTHER Specify:
* Turnaround Requests less than standard may incur Rush Charges.

NCA Sample ID prefix: B906191 —

#	CLIENT SAMPLE IDENTIFICATION	SAMPLING DATE/TIME	NCA SAMPLE ID (Laboratory Use Only)	Total lead (EPA 7421)	VOCs (EPA 8260)	Pest/PCBs (EPA 8080)	Total Metals - see comments for TAL	EPH/GC MS SIM	NWTPH-Dx ext with silica gel cleanup	MATRIX (W, S, A, O)	# OF CONTAINERS	COMMENTS
1.	01SB-09B	6/6/99 1045	-6191-11 6/21	X	} already logged in for 6020? Do not run again							
2.	01SB-08B	6/6/99 1156	-6191-31 ↓	X								
3.	02SB-08A	6/7/99 1150	B906234-03 6/15		X	X	X					
4.	03SB-07B	6/7/99 1010	B906235-08 6/15	X				X	run EPH MTCA per Jerry Harris 6/18			FAST APPROACHING HOLD TIME FOR VOCS
5.	03SB-09A	6/7/99 1029	B906235-07	X				X				
6.	03SB-07 H_2O	6/7/99 1120	B906235-10						X	W		
7.	03SB-08 H_2O	6/7/99 1040	B906235-09						X	W		
8.	03SB-09 H_2O	6/7/99 1140	-11 ↓						X	W		
9.												
10.												

RELINQUISHED BY (Signature): [signature] DATE: 6/18/99
PRINT NAME: Gerald W. Harris FIRM: IT CORP TIME:
RECEIVED BY (Signature): DATE:
PRINT NAME: FIRM: TIME:
RELINQUISHED BY (Signature): DATE:
PRINT NAME: FIRM: TIME:
RECEIVED BY (Signature): DATE:
PRINT NAME: FIRM: TIME:

ADDITIONAL REMARKS: (1) Invoice separately by prefix: 01SB-xx on one invoice, 02SB-xx on second; 03SB-xx on third.
(2) Total metals target list is arsenic, barium, cadmium, chromium, lead, mercury, selenium, silver

PAGE 1 OF 1

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Bend 20354 Empire Avenue, Suite E-9, Bend, OR 97708-1883
541.383.9310 fax 541.382.7588

IT Corporation - Renton	Project:	Time Oil #2750	Sampled: 6/7/99
555 South Renton Village Place, Ste 700	Project Number:	783336	Received: 6/8/99
Renton, WA 98055	Project Manager:	Jerry Harris	Reported: 6/30/99 09:27

ANALYTICAL REPORT FOR SAMPLES:

Sample Description	Laboratory Sample Number	Sample Matrix	Date Sampled
02SB-08A	B906234-03	Soil	6/7/99

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IT Corporation - Renton	Project:	Time Oil #2750	Sampled: 6/7/99
555 South Renton Village Place, Ste 700	Project Number:	783336	Received: 6/8/99
Renton, WA 98055	Project Manager:	Jerry Harris	Reported: 6/30/99 09:27

Total Metals by EPA 6000/7000 Series Methods
North Creek Analytical - Bothell

Analyte	Batch Number	Date Prepared	Date Analyzed	Specific Method	Reporting Limit	Result	Units	Notes*
02SB-08A			B906234-03				Soil	
Arsenic	0690738	6/23/99	6/24/99	EPA 6020	0.500	**4.78**	mg/kg dry	
Barium	"	"	"	EPA 6020	5.00	**86.3**	"	
Cadmium	"	"	"	EPA 6020	0.500	ND	"	
Chromium	"	"	"	EPA 6020	0.500	**33.1**	"	
Lead	0690627	6/19/99	6/21/99	EPA 6020	0.500	**10.6**	"	
Selenium	0690738	6/23/99	6/24/99	EPA 6020	0.500	ND	"	
Silver	"	"	"	EPA 6020	0.500	ND	"	
Mercury	0690817	6/24/99	6/25/99	EPA 7471A	0.100	ND	"	

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IT Corporation - Renton	Project:	Time Oil #2750	Sampled: 6/7/99
555 South Renton Village Place, Ste 700	Project Number:	783336	Received: 6/8/99
Renton, WA 98055	Project Manager:	Jerry Harris	Reported: 6/30/99 09:27

Organochlorine Pesticides and PCBs by EPA Method 8081A and 8082
North Creek Analytical - Bothell

Analyte	Batch Number	Date Prepared	Date Analyzed	Surrogate Limits	Reporting Limit	Result	Units	Notes*
02SB-08A			**B906234-03**				Soil	
Aldrin	0690668	6/21/99	6/24/99		1.00	ND	ug/kg dry	
alpha-BHC	"	"	"		0.500	ND	"	
beta-BHC	"	"	"		0.900	ND	"	
delta-BHC	"	"	"		0.600	ND	"	
gamma-BHC (Lindane)	"	"	"		1.00	ND	"	
Chlordane (tech)	"	"	"		1.00	ND	"	
alpha-Chlordane	"	"	"		0.800	ND	"	
gamma-Chlordane	"	"	"		0.700	ND	"	
4,4'-DDD	"	"	"		1.00	ND	"	
4,4'-DDE	"	"	"		1.00	ND	"	
4,4'-DDT	"	"	"		1.00	ND	"	
Dieldrin	"	"	"		2.00	ND	"	
Endosulfan I	"	"	"		1.00	ND	"	
Endosulfan II	"	"	"		2.00	ND	"	
Endosulfan sulfate	"	"	"		1.00	ND	"	
Endrin	"	"	"		2.00	ND	"	
Endrin aldehyde	"	"	"		2.00	ND	"	
Heptachlor	"	"	"		1.00	ND	"	
Heptachlor epoxide	"	"	"		1.00	ND	"	
Methoxychlor	"	"	"		4.00	ND	"	
Toxaphene	"	"	"		50.0	ND	"	
Aroclor 1016	"	"	6/25/99		50.0	ND	"	
Aroclor 1221	"	"	"		50.0	ND	"	
Aroclor 1232	"	"	"		50.0	ND	"	
Aroclor 1242	"	"	"		50.0	ND	"	
Aroclor 1248	"	"	"		50.0	ND	"	
Aroclor 1254	"	"	"		50.0	ND	"	
Aroclor 1260	"	"	"		50.0	ND	"	
Aroclor 1262	"	"	"		50.0	ND	"	
Aroclor 1268	"	"	"		50.0	ND	"	
Surrogate: TCX	"	"	*6/24/99*	*40.0-130*		*48.1*	*%*	

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IT Corporation - Renton	Project:	Time Oil #2750	Sampled: 6/7/99
555 South Renton Village Place, Ste 700	Project Number:	783336	Received: 6/8/99
Renton, WA 98055	Project Manager:	Jerry Harris	Reported: 6/30/99 09:27

Volatile Organic Compounds by EPA Method 8260B
North Creek Analytical - Bothell

Analyte	Batch Number	Date Prepared	Date Analyzed	Surrogate Limits	Reporting Limit	Result	Units	Notes*
02SB-08A			**B906234-03**				**Soil**	
Acetone	0690688	6/21/99	6/21/99		2.00	ND	mg/kg dry	
Benzene	"	"	"		0.100	ND	"	
Bromobenzene	"	"	"		0.100	ND	"	
Bromochloromethane	"	"	"		0.100	ND	"	
Bromodichloromethane	"	"	"		0.100	ND	"	
Bromoform	"	"	"		0.100	ND	"	
Bromomethane	"	"	"		0.100	ND	"	
2-Butanone	"	"	"		1.00	ND	"	
n-Butylbenzene	"	"	"		0.100	ND	"	
sec-Butylbenzene	"	"	"		0.100	ND	"	
tert-Butylbenzene	"	"	"		0.100	ND	"	
Carbon disulfide	"	"	"		0.100	ND	"	
Carbon tetrachloride	"	"	"		0.100	ND	"	
Chlorobenzene	"	"	"		0.100	ND	"	
Chloroethane	"	"	"		0.100	ND	"	
Chloroform	"	"	"		0.100	ND	"	
Chloromethane	"	"	"		0.500	ND	"	
2-Chlorotoluene	"	"	"		0.100	ND	"	
4-Chlorotoluene	"	"	"		0.100	ND	"	
Dibromochloromethane	"	"	"		0.100	ND	"	
1,2-Dibromo-3-chloropropane	"	"	"		0.500	ND	"	
1,2-Dibromoethane	"	"	"		0.100	ND	"	
Dibromomethane	"	"	"		0.100	ND	"	
1,2-Dichlorobenzene	"	"	"		0.100	ND	"	
1,3-Dichlorobenzene	"	"	"		0.100	ND	"	
1,4-Dichlorobenzene	"	"	"		0.100	ND	"	
Dichlorodifluoromethane	"	"	"		0.100	ND	"	
1,1-Dichloroethane	"	"	"		0.100	ND	"	
1,2-Dichloroethane	"	"	"		0.100	ND	"	
1,1-Dichloroethene	"	"	"		0.100	ND	"	
cis-1,2-Dichloroethene	"	"	"		0.100	ND	"	
trans-1,2-Dichloroethene	"	"	"		0.100	ND	"	
1,2-Dichloropropane	"	"	"		0.100	ND	"	
1,3-Dichloropropane	"	"	"		0.100	ND	"	
2,2-Dichloropropane	"	"	"		0.100	ND	"	
1,1-Dichloropropene	"	"	"		0.100	ND	"	
cis-1,3-Dichloropropene	"	"	"		0.100	ND	"	
trans-1,3-Dichloropropene	"	"	"		0.100	ND	"	

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IT Corporation - Renton	Project:	Time Oil #2750	Sampled: 6/7/99
555 South Renton Village Place, Ste 700	Project Number:	783336	Received: 6/8/99
Renton, WA 98055	Project Manager:	Jerry Harris	Reported: 6/30/99 09:27

Volatile Organic Compounds by EPA Method 8260B
North Creek Analytical - Bothell

Analyte	Batch Number	Date Prepared	Date Analyzed	Surrogate Limits	Reporting Limit	Result	Units	Notes*
02SB-08A (continued)			B906234-03				Soil	
Ethylbenzene	0690688	6/21/99	6/21/99		0.100	ND	mg/kg dry	
Hexachlorobutadiene	"	"	"		0.100	ND	"	
2-Hexanone	"	"	"		1.00	ND	"	
Isopropylbenzene	"	"	"		0.100	ND	"	
p-Isopropyltoluene	"	"	"		0.100	ND	"	
Methylene chloride	"	"	"		1.00	ND	"	
4-Methyl-2-pentanone	"	"	"		1.00	ND	"	
Naphthalene	"	"	"		0.100	ND	"	
n-Propylbenzene	"	"	"		0.100	ND	"	
Styrene	"	"	"		0.100	ND	"	
1,1,1,2-Tetrachloroethane	"	"	"		0.100	ND	"	
1,1,2,2-Tetrachloroethane	"	"	"		0.100	ND	"	
Tetrachloroethene	"	"	"		0.100	ND	"	
Toluene	"	"	"		0.100	ND	"	
1,2,3-Trichlorobenzene	"	"	"		0.100	ND	"	
1,2,4-Trichlorobenzene	"	"	"		0.100	ND	"	
1,1,1-Trichloroethane	"	"	"		0.100	ND	"	
1,1,2-Trichloroethane	"	"	"		0.100	ND	"	
Trichloroethene	"	"	"		0.100	ND	"	
Trichlorofluoromethane	"	"	"		0.100	ND	"	
1,2,3-Trichloropropane	"	"	"		0.100	ND	"	
1,2,4-Trimethylbenzene	"	"	"		0.100	**0.102**	"	
1,3,5-Trimethylbenzene	"	"	"		0.100	ND	"	
Vinyl chloride	"	"	"		0.100	ND	"	
m,p-Xylene	"	"	"		0.200	ND	"	
o-Xylene	"	"	"		0.100	ND	"	
Surrogate: 2-Bromopropene	"	"	"	*70.0-130*		*86.2*	*%*	
Surrogate: 1,2-DCA-d4	"	"	"	*70.0-130*		*77.9*	"	
Surrogate: Toluene-d8	"	"	"	*70.0-130*		*83.3*	"	
Surrogate: 4-BFB	"	"	"	*70.0-130*		*82.5*	"	

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IT Corporation - Renton	Project:	Time Oil #2750	Sampled:	6/7/99
555 South Renton Village Place, Ste 700	Project Number:	783336	Received:	6/8/99
Renton, WA 98055	Project Manager:	Jerry Harris	Reported:	6/30/99 09:27

Dry Weight Determination
North Creek Analytical - Bothell

Sample Name	Lab ID	Matrix	Result	Units
02SB-08A	B906234-03	Soil	83.4	%

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IT Corporation - Renton	Project:	Time Oil #2750	Sampled: 6/7/99
555 South Renton Village Place, Ste 700	Project Number:	783336	Received: 6/8/99
Renton, WA 98055	Project Manager:	Jerry Harris	Reported: 6/30/99 09:27

Total Metals by EPA 6000/7000 Series Methods/Quality Control
North Creek Analytical - Bothell

Analyte	Date Analyzed	Spike Level	Sample Result	QC Result	Units	Reporting Limit / Recov. Limits	Recov. %	RPD Limit	RPD %	Notes*
Batch: 0690627	**Date Prepared: 6/19/99**					**Extraction Method: EPA 3050B**				
Blank	**0690627-BLK1**									
Lead	6/21/99			ND	mg/kg dry	0.500				
Blank	**0690627-BLK2**									
Lead	6/21/99			ND	mg/kg dry	0.500				
Blank	**0690627-BLK3**									
Lead	6/22/99			ND	mg/kg dry	0.500				
LCS	**0690627-BS1**									
Lead	6/22/99	25.0		19.9	mg/kg dry	80.0-120	79.6			1
LCS	**0690627-BS2**									
Lead	6/22/99	25.0		20.0	mg/kg dry	80.0-120	80.0			
Matrix Spike	**0690627-MS1**		**B906234-11**							
Lead	6/21/99	29.7	6.18	29.2	mg/kg dry	70.0-130	77.5			
Matrix Spike	**0690627-MS2**		**B906234-15**							
Lead	6/22/99	25.0	2.29	22.1	mg/kg dry	70.0-130	79.2			
Matrix Spike Dup	**0690627-MSD1**		**B906234-11**							
Lead	6/22/99	25.3	6.18	35.6	mg/kg dry	70.0-130	116	20.0	39.8	2
Matrix Spike Dup	**0690627-MSD2**		**B906234-15**							
Lead	6/22/99	26.8	2.29	21.8	mg/kg dry	70.0-130	72.8	20.0	8.4	
Batch: 0690738	**Date Prepared: 6/23/99**					**Extraction Method: EPA 3050B**				
Blank	**0690738-BLK1**									
Arsenic	6/23/99			ND	mg/kg dry	0.500				
Barium	"			ND	"	5.00				
Cadmium	"			ND	"	0.500				
Chromium	"			ND	"	0.500				
Selenium	"			ND	"	0.500				
Silver	"			ND	"	0.500				
LCS	**0690738-BS1**									
Arsenic	6/23/99	25.0		27.4	mg/kg dry	70.0-130	110			

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IT Corporation - Renton	Project:	Time Oil #2750	Sampled: 6/7/99
555 South Renton Village Place, Ste 700	Project Number:	783336	Received: 6/8/99
Renton, WA 98055	Project Manager:	Jerry Harris	Reported: 6/30/99 09:27

Total Metals by EPA 6000/7000 Series Methods/Quality Control
North Creek Analytical - Bothell

Analyte	Date Analyzed	Spike Level	Sample Result	QC Result	Units	Reporting Limit / Recov. Limits	Recov. %	RPD Limit	RPD %	Notes*
LCS (continued)	**0690738-BS1**									
Barium	6/23/99	25.0		27.5	mg/kg dry	80.0-120	110			
Cadmium	"	25.0		26.6	"	70.0-130	106			
Chromium	"	25.0		27.7	"	80.0-120	111			
Selenium	"	25.0		27.5	"	70.0-130	110			
Silver	"	25.0		27.0	"	80.0-120	108			
Matrix Spike	**0690738-MS1**		**B906434-02**							
Arsenic	6/23/99	20.1	3.29	24.2	mg/kg dry	70.0-130	**104**			
Barium	"	20.1	13.3	34.3	"	70.0-130	**104**			
Cadmium	"	20.1	ND	19.8	"	70.0-130	**98.5**			
Chromium	"	20.1	5.83	25.2	"	70.0-130	**96.4**			
Selenium	"	20.1	ND	20.0	"	70.0-130	**99.5**			
Silver	"	20.1	ND	20.0	"	70.0-130	**99.5**			
Matrix Spike Dup	**0690738-MSD1**		**B906434-02**							
Arsenic	6/24/99	20.1	3.29	21.8	mg/kg dry	70.0-130	**92.1**	20.0	**12.1**	
Barium	"	20.1	13.3	36.2	"	70.0-130	**114**	20.0	**9.17**	
Cadmium	"	20.1	ND	21.4	"	70.0-130	**106**	20.0	**7.33**	
Chromium	"	20.1	5.83	31.0	"	70.0-130	**125**	20.0	**25.8**	2
Selenium	"	20.1	ND	20.8	"	70.0-130	**103**	20.0	**3.46**	
Silver	"	20.1	ND	21.0	"	70.0-130	**104**	20.0	**4.42**	
Batch: 0690817	**Date Prepared: 6/24/99**					**Extraction Method: EPA 7471A**				
Blank	**0690817-BLK1**									
Mercury	6/25/99			**ND**	mg/kg dry	**0.100**				
LCS	**0690817-BS1**									
Mercury	6/25/99	1.75		1.47	mg/kg dry	80.0-120	84.0			
Matrix Spike	**0690817-MS1**		**B906434-02**							
Mercury	6/25/99	0.611	ND	0.625	mg/kg dry	80.0-120	**102**			
Matrix Spike Dup	**0690817-MSD1**		**B906434-02**							
Mercury	6/25/99	0.636	ND	0.652	mg/kg dry	80.0-120	**103**	20.0	**0.976**	

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IT Corporation - Renton	Project:	Time Oil #2750	Sampled: 6/7/99
555 South Renton Village Place, Ste 700	Project Number:	783336	Received: 6/8/99
Renton, WA 98055	Project Manager:	Jerry Harris	Reported: 6/30/99 09:27

Organochlorine Pesticides and PCBs by EPA Method 8081A and 8082/Quality Control
North Creek Analytical - Bothell

Analyte	Date Analyzed	Spike Level	Sample Result	QC Result	Units	Reporting Limit / Recov. Limits	Recov. %	RPD Limit	RPD %	Notes*
Batch: 0690668	**Date Prepared: 6/23/99**				**Extraction Method: EPA 3550B**					
Blank	**0690668-BLK2**									
Aldrin	6/24/99			ND	ug/kg dry	1.00				
alpha-BHC	"			ND	"	0.500				
beta-BHC	"			ND	"	0.900				
delta-BHC	"			ND	"	0.600				
gamma-BHC (Lindane)	"			ND	"	1.00				
Chlordane (tech)	"			ND	"	1.00				
alpha-Chlordane	"			ND	"	0.800				
gamma-Chlordane	"			ND	"	0.700				
4,4'-DDD	"			ND	"	1.00				
4,4'-DDE	"			ND	"	1.00				
4,4'-DDT	"			ND	"	1.00				
Dieldrin	"			ND	"	2.00				
Endosulfan I	"			ND	"	1.00				
Endosulfan II	"			ND	"	2.00				
Endosulfan sulfate	"			ND	"	1.00				
Endrin	"			ND	"	2.00				
Endrin aldehyde	"			ND	"	2.00				
Heptachlor	"			ND	"	1.00				
Heptachlor epoxide	"			ND	"	1.00				
Methoxychlor	"			ND	"	4.00				
Toxaphene	"			ND	"	50.0				
Aroclor 1016	6/25/99			ND	"	50.0				
Aroclor 1221	"			ND	"	50.0				
Aroclor 1232	"			ND	"	50.0				
Aroclor 1242	"			ND	"	50.0				
Aroclor 1248	"			ND	"	50.0				
Aroclor 1254	"			ND	"	50.0				
Aroclor 1260	"			ND	"	50.0				
Aroclor 1262	"			ND	"	50.0				
Aroclor 1268	"			ND	"	50.0				
Surrogate: TCX	"	*6.67*		*5.56*	"	*40.0-130*	*83.4*			
LCS	**0690668-BS2**									
Aldrin	6/24/99	8.33		9.03	ug/kg dry	35.0-138	108			
gamma-BHC (Lindane)	"	8.33		8.14	"	44.0-137	97.7			
Heptachlor	"	8.33		7.37	"	40.0-146	88.5			
Aroclor 1260	6/25/99	333		340	"	28.0-132	102			

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**Refer to end of report for text of notes and definitions.*

Joy B Chang, Project Manager

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IT Corporation - Renton	Project:	Time Oil #2750	Sampled: 6/7/99
555 South Renton Village Place, Ste 700	Project Number:	783336	Received: 6/8/99
Renton, WA 98055	Project Manager:	Jerry Harris	Reported: 6/30/99 09:27

Organochlorine Pesticides and PCBs by EPA Method 8081A and 8082/Quality Control
North Creek Analytical - Bothell

Analyte	Date Analyzed	Spike Level	Sample Result	QC Result	Units	Reporting Limit / Recov. Limits	Recov. %	RPD Limit	RPD %	Notes*
LCS (continued)	**0690668-BS2**									
Surrogate: TCX	*6/25/99*	*6.67*		*6.75*	*ug/kg dry*	*40.0-130*	*101*			
Matrix Spike	**0690668-MS2**		**B906500-05**							
Aldrin	6/24/99	8.68	ND	7.71	ug/kg dry	35.0-138	**88.8**			
gamma-BHC (Lindane)	"	8.68	ND	6.93	"	44.0-137	**79.8**			
Heptachlor	"	8.68	ND	7.01	"	40.0-146	**80.8**			
Aroclor 1260	6/25/99	347	ND	357	"	44.0-123	**103**			
Surrogate: TCX	"	*6.94*		*5.92*	"	*40.0-130*	*85.3*			
Matrix Spike Dup	**0690668-MSD2**		**B906500-05**							
Aldrin	6/24/99	8.68	ND	7.90	ug/kg dry	35.0-138	**91.0**	33.0	**2.45**	
gamma-BHC (Lindane)	"	8.68	ND	7.30	"	44.0-137	**84.1**	35.0	**5.25**	
Heptachlor	"	8.68	ND	7.24	"	40.0-146	**83.4**	32.0	**3.17**	
Aroclor 1260	6/25/99	347	ND	381	"	44.0-123	**110**	23.0	**6.57**	
Surrogate: TCX	"	*6.94*		*6.04*	"	*40.0-130*	*87.0*			

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IT Corporation - Renton	Project:	Time Oil #2750	Sampled: 6/7/99
555 South Renton Village Place, Ste 700	Project Number:	783336	Received: 6/8/99
Renton, WA 98055	Project Manager:	Jerry Harris	Reported: 6/30/99 09:27

Volatile Organic Compounds by EPA Method 8260B/Quality Control
North Creek Analytical - Bothell

Analyte	Date Analyzed	Spike Level	Sample Result	QC Result	Units	Reporting Limit / Recov. Limits	Recov. %	RPD Limit	RPD %	Notes*
Batch: 0690688	**Date Prepared: 6/21/99**					**Extraction Method: EPA 5030B [MeOH]**				
Blank	0690688-BLK1									
Acetone	6/21/99			ND	mg/kg dry	2.00				
Benzene	"			ND	"	0.100				
Bromobenzene	"			ND	"	0.100				
Bromochloromethane	"			ND	"	0.100				
Bromodichloromethane	"			ND	"	0.100				
Bromoform	"			ND	"	0.100				
Bromomethane	"			ND	"	0.100				
2-Butanone	"			ND	"	1.00				
n-Butylbenzene	"			ND	"	0.100				
sec-Butylbenzene	"			ND	"	0.100				
tert-Butylbenzene	"			ND	"	0.100				
Carbon disulfide	"			ND	"	0.100				
Carbon tetrachloride	"			ND	"	0.100				
Chlorobenzene	"			ND	"	0.100				
Chloroethane	"			ND	"	0.100				
Chloroform	"			ND	"	0.100				
Chloromethane	"			ND	"	0.500				
2-Chlorotoluene	"			ND	"	0.100				
4-Chlorotoluene	"			ND	"	0.100				
Dibromochloromethane	"			ND	"	0.100				
1,2-Dibromo-3-chloropropane	"			ND	"	0.500				
1,2-Dibromoethane	"			ND	"	0.100				
Dibromomethane	"			ND	"	0.100				
1,2-Dichlorobenzene	"			ND	"	0.100				
1,3-Dichlorobenzene	"			ND	"	0.100				
1,4-Dichlorobenzene	"			ND	"	0.100				
Dichlorodifluoromethane	"			ND	"	0.100				
1,1-Dichloroethane	"			ND	"	0.100				
1,2-Dichloroethane	"			ND	"	0.100				
1,1-Dichloroethene	"			ND	"	0.100				
cis-1,2-Dichloroethene	"			ND	"	0.100				
trans-1,2-Dichloroethene	"			ND	"	0.100				
1,2-Dichloropropane	"			ND	"	0.100				
1,3-Dichloropropane	"			ND	"	0.100				
2,2-Dichloropropane	"			ND	"	0.100				
1,1-Dichloropropene	"			ND	"	0.100				
cis-1,3-Dichloropropene	"			ND	"	0.100				

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**Refer to end of report for text of notes and definitions.*

Joy B Chang, Project Manager

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IT Corporation - Renton	Project:	Time Oil #2750	Sampled: 6/7/99
555 South Renton Village Place, Ste 700	Project Number:	783336	Received: 6/8/99
Renton, WA 98055	Project Manager:	Jerry Harris	Reported: 6/30/99 09:27

Volatile Organic Compounds by EPA Method 8260B/Quality Control
North Creek Analytical - Bothell

Analyte	Date Analyzed	Spike Level	Sample Result	QC Result	Units	Reporting Limit / Recov. Limits	Recov. %	RPD Limit	RPD %	Notes*
Blank (continued)	**0690688-BLK1**									
trans-1,3-Dichloropropene	6/21/99			ND	mg/kg dry	0.100				
Ethylbenzene	"			ND	"	0.100				
Hexachlorobutadiene	"			ND	"	0.100				
2-Hexanone	"			ND	"	1.00				
Isopropylbenzene	"			ND	"	0.100				
p-Isopropyltoluene	"			ND	"	0.100				
Methylene chloride	"			ND	"	1.00				
4-Methyl-2-pentanone	"			ND	"	1.00				
Naphthalene	"			ND	"	0.100				
n-Propylbenzene	"			ND	"	0.100				
Styrene	"			ND	"	0.100				
1,1,1,2-Tetrachloroethane	"			ND	"	0.100				
1,1,2,2-Tetrachloroethane	"			ND	"	0.100				
Tetrachloroethene	"			ND	"	0.100				
Toluene	"			ND	"	0.100				
1,2,3-Trichlorobenzene	"			ND	"	0.100				
1,2,4-Trichlorobenzene	"			ND	"	0.100				
1,1,1-Trichloroethane	"			ND	"	0.100				
1,1,2-Trichloroethane	"			ND	"	0.100				
Trichloroethene	"			ND	"	0.100				
Trichlorofluoromethane	"			ND	"	0.100				
1,2,3-Trichloropropane	"			ND	"	0.100				
1,2,4-Trimethylbenzene	"			ND	"	0.100				
1,3,5-Trimethylbenzene	"			ND	"	0.100				
Vinyl chloride	"			ND	"	0.100				
m,p-Xylene	"			ND	"	0.200				
o-Xylene	"			ND	"	0.100				
Surrogate: 2-Bromopropene	"	*2.00*		*2.14*	"	*70.0-130*	*107*			
Surrogate: 1,2-DCA-d4	"	*2.00*		*1.81*	"	*70.0-130*	*90.5*			
Surrogate: Toluene-d8	"	*2.00*		*2.01*	"	*70.0-130*	*100*			
Surrogate: 4-BFB	"	*2.00*		*1.83*	"	*70.0-130*	*91.5*			
LCS	**0690688-BS1**									
Benzene	6/21/99	1.00		0.987	mg/kg dry	70.0-130	98.7			
Chlorobenzene	"	1.00		1.00	"	70.0-130	100			
1,1-Dichloroethene	"	1.00		0.903	"	70.0-130	90.3			
Toluene	"	1.00		0.963	"	70.0-130	96.3			
Trichloroethene	"	1.00		1.09	"	70.0-130	109			

North Creek Analytical - Bothell

**Refer to end of report for text of notes and definitions.*

Joy B Chang, Project Manager

NORTH CREEK ANALYTICAL
Environmental Laboratory Services

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Request for additional Analyses on samples already in NCA possession

CHAIN OF CUSTODY REPORT

Work Order #

REPORT TO: Jerry Harris
ATTENTION:
ADDRESS: IT Corp. 5555 S. Renton Village Place Ste 700 Renton WA 98055
PHONE: 425 228 9645 FAX: 425 228 9793
PROJECT NAME: Time Oil Co Seattle Terminal
PROJECT NUMBER:
SAMPLED BY:

INVOICE TO: Time Oil Co
ATTENTION: Scott Sloan
ADDRESS: 2737 W Commodore Way Seattle WA
P.O. NUMBER:
NCA QUOTE #:

TURNAROUND REQUEST in Business Days *
Organic & Inorganic Analyses: 10 (Standard) 7 5 4 3 2 1 Same Day
Fuels & Hydrocarbon Analyses: 5 (Standard) 3-4 2 1 Same Day
OTHER Specify:
* Turnaround Requests less than standard may incur Rush Charges.

B906191 —

CLIENT SAMPLE IDENTIFICATION	SAMPLING DATE/TIME	NCA SAMPLE ID (Laboratory Use Only)	Total lead (EPA 7421)	VOCs (EPA 8260)	PAH/PCBs (EPA 8080)	Total Metals - see comments for TAL	EPH/GC MS SIM	& NWTPH-d ext with silica gel cleanup	MATRIX (W, S, A, O)	# OF CONTAINERS	COMMENTS
1. 01SB-09B	6/6/99 1045	-6191-11 4/21	X	} already logged in for 6020? Do not run again							
2. 01SB-08B	6/6/99 1156	-6191-31 ↓	X								
3. 02SB-08A	6/7/99 1150	B906234-03 4/5		X	X	X					
4. 03SB-07B	6/7/99 1010	B906235-08 4/5	X (crossed out)				X ← run EPH/MTCA per Jerry Harris 6/18				FAST APPROACHING HOLD TIME FOR VOCS
5. 03SB-09A	6/9/99 1029	B906235-07					X				
6. 03SB-07 H2O	6/7/99 1120	B906235-10						X	W		
7. 03SB-08 H2O	6/7/99 1040	B906235-09						X	W		
8. 03SB-09 H2O	6/7/99 1140	-11						X	W		
9.											
10.											

RELINQUISHED BY (Signature): [signature] DATE: 6/18/99 RECEIVED BY (Signature): DATE:
PRINT NAME: Gerald W. Harris FIRM: IT CORP TIME: PRINT NAME: FIRM: TIME:
RELINQUISHED BY (Signature): DATE: RECEIVED BY (Signature): DATE:
PRINT NAME: FIRM: TIME: PRINT NAME: FIRM: TIME:

ADDITIONAL REMARKS: (1) Invoice separately by prefix: 01SB-xx on one invoice, 02SB-xx on second; 03SB-xx on third.
(2) Total metals target list is arsenic, barium, cadmium, chromium, lead, mercury, selenium, silver

PAGE 1 OF 1

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IT Corporation - Renton	Project:	Time Oil #2750	Sampled: 6/11/99
555 South Renton Village Place, Ste 700	Project Number:	783336	Received: 6/14/99
Renton, WA 98055	Project Manager:	Jerry Harris	Reported: 6/25/99 13:22

ANALYTICAL REPORT FOR SAMPLES:

Sample Description	Laboratory Sample Number	Sample Matrix	Date Sampled
02SB-09@6-6.5	B906371-01	Soil	6/11/99
02SB-09@20.5-21	B906371-02	Soil	6/11/99
02SB-09@15.5-16	B906371-03	Soil	6/11/99
02SB-09@10-10.5	B906371-04	Soil	6/11/99
02SB-09	B906371-05	Water	6/11/99

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IT Corporation - Renton	Project:	Time Oil #2750	Sampled: 6/11/99
555 South Renton Village Place, Ste 700	Project Number:	783336	Received: 6/14/99
Renton, WA 98055	Project Manager:	Jerry Harris	Reported: 6/25/99 13:22

Volatile Petroleum Products and BTEX by NWTPH-Gx and EPA 8021B
North Creek Analytical - Bothell

Analyte	Batch Number	Date Prepared	Date Analyzed	Surrogate Limits	Reporting Limit	Result	Units	Notes*
02SB-09@6-6.5			**B906371-01**				Soil	
Gasoline Range Hydrocarbons	0690565	6/17/99	6/21/99		5.00	ND	mg/kg dry	
Benzene	"	"	"		0.0500	ND	"	
Toluene	"	"	"		0.0500	ND	"	
Ethylbenzene	"	"	"		0.0500	ND	"	
Xylenes (total)	"	"	"		0.100	ND	"	
Surrogate: 4-BFB (FID)	"	"	"	*50.0-150*		*94.6*	%	
Surrogate: 4-BFB (PID)	"	"	"	*50.0-150*		*98.0*	"	
02SB-09@20.5-21			**B906371-02**				Soil	
Gasoline Range Hydrocarbons	0690565	6/17/99	6/24/99		5.00	ND	mg/kg dry	
Benzene	"	"	"		0.0500	ND	"	
Toluene	"	"	"		0.0500	ND	"	
Ethylbenzene	"	"	"		0.0500	ND	"	
Xylenes (total)	"	"	"		0.100	ND	"	
Surrogate: 4-BFB (FID)	"	"	"	*50.0-150*		*84.2*	%	
Surrogate: 4-BFB (PID)	"	"	"	*50.0-150*		*86.5*	"	
02SB-09@15.5-16			**B906371-03**				Soil	
Gasoline Range Hydrocarbons	0690565	6/17/99	6/24/99		5.00	ND	mg/kg dry	
Benzene	"	"	"		0.0500	ND	"	
Toluene	"	"	"		0.0500	ND	"	
Ethylbenzene	"	"	"		0.0500	ND	"	
Xylenes (total)	"	"	"		0.100	ND	"	
Surrogate: 4-BFB (FID)	"	"	"	*50.0-150*		*91.4*	%	
Surrogate: 4-BFB (PID)	"	"	"	*50.0-150*		*96.7*	"	
02SB-09@10-10.5			**B906371-04**				Soil	
Gasoline Range Hydrocarbons	0690565	6/17/99	6/24/99		5.00	ND	mg/kg dry	
Benzene	"	"	"		0.0500	ND	"	
Toluene	"	"	"		0.0500	**0.0699**	"	
Ethylbenzene	"	"	"		0.0500	ND	"	
Xylenes (total)	"	"	"		0.100	ND	"	
Surrogate: 4-BFB (FID)	"	"	"	*50.0-150*		*86.0*	%	
Surrogate: 4-BFB (PID)	"	"	"	*50.0-150*		*91.5*	"	
02SB-09			**B906371-05**				Water	
Gasoline Range Hydrocarbons	0690659	6/21/99	6/21/99		50.0	**1360**	ug/l	
Benzene	"	"	"		5.00	**639**	"	

North Creek Analytical - Bothell

**Refer to end of report for text of notes and definitions.*

Joy B Chang, Project Manager

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IT Corporation - Renton	Project:	Time Oil #2750	Sampled: 6/11/99
555 South Renton Village Place, Ste 700	Project Number:	783336	Received: 6/14/99
Renton, WA 98055	Project Manager:	Jerry Harris	Reported: 6/25/99 13:22

Volatile Petroleum Products and BTEX by NWTPH-Gx and EPA 8021B
North Creek Analytical - Bothell

Analyte	Batch Number	Date Prepared	Date Analyzed	Surrogate Limits	Reporting Limit	Result	Units	Notes*
02SB-09 (continued)			**B906371-05**				Water	
Toluene	0690659	6/21/99	6/21/99		0.500	**1.89**	ug/l	
Ethylbenzene	"	"	"		0.500	**1.31**	"	
Xylenes (total)	"	"	"		1.00	**9.66**	"	
Surrogate: 4-BFB (FID)	"	"	"	*50.0-150*		*99.0*	%	
Surrogate: 4-BFB (PID)	"	"	"	*50.0-150*		*85.2*	"	

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IT Corporation - Renton	Project:	Time Oil #2750	Sampled: 6/11/99
555 South Renton Village Place, Ste 700	Project Number:	783336	Received: 6/14/99
Renton, WA 98055	Project Manager:	Jerry Harris	Reported: 6/25/99 13:22

Semivolatile Petroleum Products by NWTPH-Dx (w/o Acid/Silica Gel Clean-up)
North Creek Analytical - Bothell

Analyte	Batch Number	Date Prepared	Date Analyzed	Surrogate Limits	Reporting Limit	Result	Units	Notes*
02SB-09@6-6.5			**B906371-01**				**Soil**	
Diesel Range Hydrocarbons	0690555	6/17/99	6/19/99		10.0	ND	mg/kg dry	
Lube Oil Range Hydrocarbons	"	"	"		25.0	ND	"	
Surrogate: 2-FBP	"	"	"	*50.0-150*		*59.8*	%	
02SB-09@20.5-21			**B906371-02**				**Soil**	
Diesel Range Hydrocarbons	0690555	6/17/99	6/19/99		10.0	11.0	mg/kg dry	1
Lube Oil Range Hydrocarbons	"	"	"		25.0	ND	"	
Surrogate: 2-FBP	"	"	"	*50.0-150*		*61.7*	%	
02SB-09@15.5-16			**B906371-03**				**Soil**	
Diesel Range Hydrocarbons	0690555	6/17/99	6/19/99		10.0	ND	mg/kg dry	
Lube Oil Range Hydrocarbons	"	"	"		25.0	ND	"	
Surrogate: 2-FBP	"	"	"	*50.0-150*		*53.0*	%	
02SB-09@10-10.5			**B906371-04**				**Soil**	
Diesel Range Hydrocarbons	0690555	6/17/99	6/19/99		10.0	ND	mg/kg dry	
Lube Oil Range Hydrocarbons	"	"	"		25.0	ND	"	
Surrogate: 2-FBP	"	"	"	*50.0-150*		*71.8*	%	
02SB-09			**B906371-05**				**Water**	
Diesel Range Hydrocarbons	0690596	6/18/99	6/19/99		0.250	**0.617**	mg/l	2
Lube Oil Range Hydrocarbons	"	"	"		0.500	ND	"	
Surrogate: 2-FBP	"	"	"	*50.0-150*		*71.0*	%	

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IT Corporation - Renton	Project:	Time Oil #2750	Sampled:	6/11/99
555 South Renton Village Place, Ste 700	Project Number:	783336	Received:	6/14/99
Renton, WA 98055	Project Manager:	Jerry Harris	Reported:	6/25/99 13:22

Dry Weight Determination
North Creek Analytical - Bothell

Sample Name	Lab ID	Matrix	Result	Units
02SB-09@6-6.5	B906371-01	Soil	89.8	%
02SB-09@20.5-21	B906371-02	Soil	81.9	%
02SB-09@15.5-16	B906371-03	Soil	81.9	%
02SB-09@10-10.5	B906371-04	Soil	82.6	%

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IT Corporation - Renton	Project:	Time Oil #2750	Sampled: 6/11/99
555 South Renton Village Place, Ste 700	Project Number:	783336	Received: 6/14/99
Renton, WA 98055	Project Manager:	Jerry Harris	Reported: 6/25/99 13:22

Volatile Petroleum Products and BTEX by NWTPH-Gx and EPA 8021B/Quality Control
North Creek Analytical - Bothell

Analyte	Date Analyzed	Spike Level	Sample Result	QC Result	Units	Reporting Limit / Recov. Limits	Recov. %	RPD Limit	RPD %	Notes*
Batch: 0690565	**Date Prepared: 6/17/99**					**Extraction Method: EPA 5030B (MeOH)**				
Blank	**0690565-BLK1**									
Gasoline Range Hydrocarbons	6/23/99			ND	mg/kg dry	**5.00**				
Benzene	"			ND	"	**0.0500**				
Toluene	"			ND	"	**0.0500**				
Ethylbenzene	"			ND	"	**0.0500**				
Xylenes (total)	"			ND	"	**0.100**				
Surrogate: 4-BFB (FID)	"	*4.00*		*3.85*	"	*50.0-150*	*96.2*			
Surrogate: 4-BFB (PID)	"	*4.00*		*4.12*	"	*50.0-150*	*103*			
LCS	**0690565-BS1**									
Gasoline Range Hydrocarbons	6/21/99	25.0		20.5	mg/kg dry	70.0-130	82.0			
Surrogate: 4-BFB (FID)	"	*4.00*		*4.00*	"	*50.0-150*	*100*			
Duplicate	**0690565-DUP1**	**B906371-01**								
Gasoline Range Hydrocarbons	6/21/99		ND	ND	mg/kg dry			50.0		
Surrogate: 4-BFB (FID)	"	*4.45*		*4.03*	"	*50.0-150*	*90.6*			
Matrix Spike	**0690565-MS1**	**B906302-05**								
Benzene	6/21/99	0.568	ND	0.443	mg/kg dry	60.0-140	**78.0**			
Toluene	"	0.568	ND	0.471	"	60.0-140	**82.9**			
Ethylbenzene	"	0.568	0.0532	0.481	"	60.0-140	**75.3**			
Xylenes (total)	"	1.70	ND	1.43	"	60.0-140	**84.1**			
Surrogate: 4-BFB (PID)	"	*4.54*		*4.17*	"	*50.0-150*	*91.9*			
Matrix Spike Dup	**0690565-MSD1**	**B906302-05**								
Benzene	6/22/99	0.568	ND	0.451	mg/kg dry	60.0-140	**79.4**	20.0	1.78	
Toluene	"	0.568	ND	0.477	"	60.0-140	**84.0**	20.0	1.32	
Ethylbenzene	"	0.568	0.0532	0.477	"	60.0-140	**74.6**	20.0	0.934	
Xylenes (total)	"	1.70	ND	1.41	"	60.0-140	**82.9**	20.0	1.44	
Surrogate: 4-BFB (PID)	"	*4.54*		*4.08*	"	*50.0-150*	*89.9*			
Batch: 0690659	**Date Prepared: 6/21/99**					**Extraction Method: EPA 5030B (MeOH)**				
Blank	**0690659-BLK1**									
Methyl tert-butyl ether	6/21/99			ND	ug/l	**1.00**				
Gasoline Range Hydrocarbons	"			ND	"	**50.0**				
Benzene	"			ND	"	**0.500**				
Toluene	"			ND	"	**0.500**				
Ethylbenzene	"			ND	"	**0.500**				

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IT Corporation - Renton	Project:	Time Oil #2750	Sampled: 6/7/99
555 South Renton Village Place, Ste 700	Project Number:	783336	Received: 6/8/99
Renton, WA 98055	Project Manager:	Jerry Harris	Reported: 6/30/99 09:27

Volatile Organic Compounds by EPA Method 8260B/Quality Control
North Creek Analytical - Bothell

Analyte	Date Analyzed	Spike Level	Sample Result	QC Result	Units	Reporting Limit / Recov. Limits	Recov. %	RPD Limit	RPD %	Notes*
LCS (continued)	**0690688-BS1**									
Surrogate: 2-Bromopropene	*6/21/99*	*2.00*		*2.13*	*mg/kg dry*	*70.0-130*	*107*			
Surrogate: 1,2-DCA-d4	"	*2.00*		*1.76*	"	*70.0-130*	*88.0*			
Surrogate: Toluene-d8	"	*2.00*		*1.93*	"	*70.0-130*	*96.5*			
Surrogate: 4-BFB	"	*2.00*		*1.80*	"	*70.0-130*	*90.0*			
Matrix Spike	**0690688-MS1**		**B906434-05**							
Benzene	6/21/99	1.06	ND	0.975	mg/kg dry	70.0-130	**92.0**			
Chlorobenzene	"	1.06	ND	1.05	"	70.0-130	**99.1**			
1,1-Dichloroethene	"	1.06	ND	0.805	"	70.0-130	**75.9**			
Toluene	"	1.06	ND	1.00	"	70.0-130	**94.3**			
Trichloroethene	"	1.06	ND	1.04	"	70.0-130	**98.1**			
Surrogate: 2-Bromopropene	"	*2.11*		*2.03*	"	*70.0-130*	*96.2*			
Surrogate: 1,2-DCA-d4	"	*2.11*		*1.77*	"	*70.0-130*	*83.9*			
Surrogate: Toluene-d8	"	*2.11*		*2.03*	"	*70.0-130*	*96.2*			
Surrogate: 4-BFB	"	*2.11*		*1.93*	"	*70.0-130*	*91.5*			
Matrix Spike Dup	**0690688-MSD1**		**B906434-05**							
Benzene	6/21/99	1.06	ND	0.977	mg/kg dry	70.0-130	**92.2**	15.0	**0.217**	
Chlorobenzene	"	1.06	ND	0.995	"	70.0-130	**93.9**	15.0	**5.39**	
1,1-Dichloroethene	"	1.06	ND	0.781	"	70.0-130	**73.7**	15.0	**2.94**	
Toluene	"	1.06	ND	0.972	"	70.0-130	**91.7**	15.0	**2.80**	
Trichloroethene	"	1.06	ND	1.02	"	70.0-130	**96.2**	15.0	**1.96**	
Surrogate: 2-Bromopropene	"	*2.11*		*1.93*	"	*70.0-130*	*91.5*			
Surrogate: 1,2-DCA-d4	"	*2.11*		*1.70*	"	*70.0-130*	*80.6*			
Surrogate: Toluene-d8	"	*2.11*		*2.01*	"	*70.0-130*	*95.3*			
Surrogate: 4-BFB	"	*2.11*		*1.94*	"	*70.0-130*	*91.9*			

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IT Corporation - Renton	Project:	Time Oil #2750	Sampled: 6/7/99
555 South Renton Village Place, Ste 700	Project Number:	783336	Received: 6/8/99
Renton, WA 98055	Project Manager:	Jerry Harris	Reported: 6/30/99 09:27

Notes and Definitions

#	Note
1	The spike recovery for this QC sample is outside of established control limits. Review of associated batch QC indicates the recovery for this analyte does not represent an out-of-control condition for the batch.
2	The RPD value for this QC sample is above the established control limit. Review of associated QC indicates the high RPD does not represent an out-of-control condition for the batch.
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
Recov.	Recovery
RPD	Relative Percent Difference

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IT Corporation - Renton	Project:	Time Oil #2750	Sampled: 6/11/99
555 South Renton Village Place, Ste 700	Project Number:	783336	Received: 6/14/99
Renton, WA 98055	Project Manager:	Jerry Harris	Reported: 6/25/99 13:22

Volatile Petroleum Products and BTEX by NWTPH-Gx and EPA 8021B/Quality Control
North Creek Analytical - Bothell

Analyte	Date Analyzed	Spike Level	Sample Result	QC Result	Units	Reporting Limit / Recov. Limits	Recov. %	RPD Limit	RPD %	Notes*
Blank (continued)	0690659-BLK1									
Xylenes (total)	6/21/99			ND	ug/l	1.00				
Surrogate: 4-BFB (FID)	"	*48.0*		*42.9*	"	*50.0-150*	*89.4*			
Surrogate: 4-BFB (PID)	"	*48.0*		*46.3*	"	*50.0-150*	*96.5*			
LCS	0690659-BS1									
Gasoline Range Hydrocarbons	6/21/99	500		502	ug/l	70.0-130	100			
Surrogate: 4-BFB (FID)	"	*48.0*		*45.3*	"	*50.0-150*	*94.4*			
Duplicate	0690659-DUP1		B906347-01							
Gasoline Range Hydrocarbons	6/22/99		ND	ND	ug/l			25.0		
Surrogate: 4-BFB (FID)	"	*48.0*		*43.5*	"	*50.0-150*	*90.6*			
Duplicate	0690659-DUP2		B906373-05							
Gasoline Range Hydrocarbons	6/22/99		ND	ND	ug/l			25.0		
Surrogate: 4-BFB (FID)	"	*48.0*		*43.3*	"	*50.0-150*	*90.2*			
Matrix Spike	0690659-MS1		B906373-04							
Methyl tert-butyl ether	6/22/99	10.0	ND	14.4	ug/l	70.0-130	**144**			3
Benzene	"	10.0	0.971	10.4	"	70.0-130	**94.3**			
Toluene	"	10.0	ND	9.58	"	70.0-130	**95.8**			
Ethylbenzene	"	10.0	ND	9.83	"	70.0-130	**98.3**			
Xylenes (total)	"	30.0	ND	29.2	"	70.0-130	**97.3**			
Surrogate: 4-BFB (PID)	"	*48.0*		*47.4*	"	*50.0-150*	*98.8*			
Matrix Spike Dup	0690659-MSD1		B906373-04							
Methyl tert-butyl ether	6/22/99	10.0	ND	16.0	ug/l	70.0-130	**160**	15.0	**10.5**	3
Benzene	"	10.0	0.971	11.1	"	70.0-130	**101**	15.0	**6.86**	
Toluene	"	10.0	ND	10.2	"	70.0-130	**102**	15.0	**6.27**	
Ethylbenzene	"	10.0	ND	10.5	"	70.0-130	**105**	15.0	**6.59**	
Xylenes (total)	"	30.0	ND	31.3	"	70.0-130	**104**	15.0	**6.66**	
Surrogate: 4-BFB (PID)	"	*48.0*		*48.2*	"	*50.0-150*	*100*			

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IT Corporation - Renton	Project:	Time Oil #2750	Sampled: 6/11/99
555 South Renton Village Place, Ste 700	Project Number:	783336	Received: 6/14/99
Renton, WA 98055	Project Manager:	Jerry Harris	Reported: 6/25/99 13:22

Semivolatile Petroleum Products by NWTPH-Dx (w/o Acid/Silica Gel Clean-up)/Quality Control
North Creek Analytical - Bothell

Analyte	Date Analyzed	Spike Level	Sample Result	QC Result	Units	Reporting Limit / Recov. Limits	Recov. %	RPD Limit	RPD %	Notes*
Batch: 0690555	**Date Prepared: 6/17/99**					**Extraction Method: EPA 3550B**				
Blank	**0690555-BLK1**									
Diesel Range Hydrocarbons	6/18/99			**ND**	mg/kg dry	**10.0**				
Lube Oil Range Hydrocarbons	"			**ND**	"	**25.0**				
Surrogate: 2-FBP	"	*10.8*		*6.84*	"	*50.0-150*	*63.3*			
LCS	**0690555-BS1**									
Diesel Range Hydrocarbons	6/18/99	66.7		55.0	mg/kg dry	60.0-140	82.5			
Surrogate: 2-FBP	"	*10.8*		*9.21*	"	*50.0-150*	*85.3*			
Duplicate	**0690555-DUP1**		**B906373-01**							
Diesel Range Hydrocarbons	6/18/99		ND	ND	mg/kg dry			50.0		
Lube Oil Range Hydrocarbons	"		36.9	ND	"			50.0		
Surrogate: 2-FBP	"	*13.6*		*7.64*	"	*50.0-150*	*56.2*			
Batch: 0690596	**Date Prepared: 6/18/99**					**Extraction Method: EPA 3520C/600 Series**				
Blank	**0690596-BLK1**									
Diesel Range Hydrocarbons	6/19/99			**ND**	mg/l	**0.250**				
Lube Oil Range Hydrocarbons	"			**ND**	"	**0.500**				
Surrogate: 2-FBP	"	*0.325*		*0.241*	"	*50.0-150*	*74.2*			
LCS	**0690596-BS1**									
Diesel Range Hydrocarbons	6/19/99	2.00		1.73	mg/l	60.0-140	86.5			
Surrogate: 2-FBP	"	*0.325*		*0.240*	"	*50.0-150*	*73.8*			
LCS Dup	**0690596-BSD1**									
Diesel Range Hydrocarbons	6/19/99	2.00		1.78	mg/l	60.0-140	89.0	40.0	2.85	
Surrogate: 2-FBP	"	*0.325*		*0.240*	"	*50.0-150*	*73.8*			

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IT Corporation - Renton	Project:	Time Oil #2750	Sampled: 6/11/99
555 South Renton Village Place, Ste 700	Project Number:	783336	Received: 6/14/99
Renton, WA 98055	Project Manager:	Jerry Harris	Reported: 6/25/99 13:22

Notes and Definitions

#	Note
1	Results in the diesel organics range are primarily due to overlap from a heavy oil range product.
2	The sample chromatographic pattern does not resemble the fuel standard used for quantitation.
3	The spike recovery for this QC sample is outside of established control limits. Review of associated batch QC indicates the recovery for this analyte does not represent an out-of-control condition for the batch.
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
Recov.	Recovery
RPD	Relative Percent Difference

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CHAIN OF CUSTODY REPORT

Work Order #: B906371

CLIENT: Time Oil Co
REPORT TO: Jerry Harris
ADDRESS: 555 S. Renton Village Place Ste 700, Renton WA 98055
PHONE: 425-228-9649 FAX: 425 228 9793
INVOICE TO: Time Oil Co Attn Scott Sloan, 2737 W. Commodore Way, Seattle WA
P.O. NUMBER:
PROJECT NAME: 2750
PROJECT NUMBER:
SAMPLED BY:

TURNAROUND REQUEST in Business Days*
Organic & Inorganic Analyses: 10 (STD.) 7 5 4 3 2 1 <1
Petroleum Hydrocarbon Analyses: [X] 5 (STD.) 4 3 2 1 <1
OTHER Please Specify
*Turnaround Requests less than standard may incur Rush Charges.

CLIENT SAMPLE IDENTIFICATION	SAMPLING DATE/TIME	NWTPH-G	NWTPH-D extended	BTEX										MATRIX (W, S, O)	# OF CONT.	COMMENTS	NCA WO ID
1. 02SB-09@6-6.5	6/11/99 828	X	X	X				B906371			-01			S	1	Note date of collect	
2. 02SB-09@20.5-21	835	X	X	X							-02			S	1		
3. 02SB-09@15.5-16	806	X	X	X							-03			S	1		
4. 02SB-09@10-10.5	823	X	X	X							-04			S	1		
5. 02SB-09	1245	X	X	X							-05			W	3		
6.																	
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11.																	
12.																	
13.																W/O 8.4°C	
14.																	
15.																	

RELINQUISHED BY: [signature] DATE: 6/14/99
PRINT NAME: FIRM: IT TIME:
RECEIVED BY: AA Maier #423 DATE: 6/14/99
PRINT NAME: AA MAIER FIRM: CD&L TIME: 1545
RELINQUISHED BY: [signature] DATE:
PRINT NAME: ~~IT~~ FIRM: ~~IT~~ CD&L TIME:
RECEIVED BY: [signature] DATE: 6/14/99
PRINT NAME: FRANY TONTY FIRM: NCA TIME: 1646

ADDITIONAL REMARKS: Note collection date. Samples in two coolers
TEMP:
PAGE OF

COC REV 3/99

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IT Corporation - Renton	Project:	Time Oil #2750	Sampled: 9/13/99
555 South Renton Village Place, Ste 700	Project Number:	783336	Received: 9/14/99
Renton, WA 98055	Project Manager:	Jerry Harris	Reported: 9/22/99 10:45

ANALYTICAL REPORT FOR SAMPLES:

Sample Description	Laboratory Sample Number	Sample Matrix	Date Sampled
02MW-1A	B909253-01	Soil	9/13/99
02MW-1B	B909253-02	Soil	9/13/99
02MW-1C	B909253-03	Soil	9/13/99
02MW-1D	B909253-04	Soil	9/13/99
02MW-4A	B909253-05	Soil	9/13/99
02MW-4B	B909253-06	Soil	9/13/99
02MW-4C	B909253-07	Soil	9/13/99
02MW-4D	B909253-08	Soil	9/13/99
02MW-4E	B909253-09	Soil	9/13/99
02MW-5A	B909253-10	Soil	9/13/99
02MW-5B	B909253-11	Soil	9/13/99
02MW-5C	B909253-12	Soil	9/13/99
02MW-5D	B909253-13	Soil	9/13/99
02MW-5E	B909253-14	Soil	9/13/99
02MW-5F	B909253-15	Soil	9/13/99
02MW-5G	B909253-16	Soil	9/13/99

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

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IT Corporation - Renton	Project:	Time Oil #2750	Sampled: 9/13/99
555 South Renton Village Place, Ste 700	Project Number:	783336	Received: 9/14/99
Renton, WA 98055	Project Manager:	Jerry Harris	Reported: 9/22/99 10:45

Volatile Petroleum Products and BTEX by NWTPH-Gx and EPA 8021B
North Creek Analytical - Bothell

Analyte	Batch Number	Date Prepared	Date Analyzed	Surrogate Limits	Reporting Limit	Result	Units	Notes*
02MW-1A			B909253-01				Soil	
Gasoline Range Hydrocarbons	0990425	9/14/99	9/15/99		5.00	ND	mg/kg dry	
Benzene	"	"	"		0.0500	ND	"	
Toluene	"	"	"		0.0500	ND	"	
Ethylbenzene	"	"	"		0.0500	ND	"	
Xylenes (total)	"	"	"		0.100	ND	"	
Surrogate: 4-BFB (FID)	"	"	"	*50.0-150*		*82.0*	%	
Surrogate: 4-BFB (PID)	"	"	"	*50.0-150*		*92.4*	"	
02MW-1B			B909253-02				Soil	
Gasoline Range Hydrocarbons	0990425	9/14/99	9/15/99		5.00	ND	mg/kg dry	
Benzene	"	"	"		0.0500	ND	"	
Toluene	"	"	"		0.0500	ND	"	
Ethylbenzene	"	"	"		0.0500	ND	"	
Xylenes (total)	"	"	"		0.100	ND	"	
Surrogate: 4-BFB (FID)	"	"	"	*50.0-150*		*67.6*	%	
Surrogate: 4-BFB (PID)	"	"	"	*50.0-150*		*80.5*	"	
02MW-1C			B909253-03				Soil	
Gasoline Range Hydrocarbons	0990425	9/14/99	9/14/99		5.00	ND	mg/kg dry	
Benzene	"	"	"		0.0500	ND	"	
Toluene	"	"	"		0.0500	ND	"	
Ethylbenzene	"	"	"		0.0500	ND	"	
Xylenes (total)	"	"	"		0.100	ND	"	
Surrogate: 4-BFB (FID)	"	"	"	*50.0-150*		*79.4*	%	
Surrogate: 4-BFB (PID)	"	"	"	*50.0-150*		*92.2*	"	
02MW-1D			B909253-04				Soil	
Gasoline Range Hydrocarbons	0990425	9/14/99	9/15/99		5.00	ND	mg/kg dry	
Benzene	"	"	"		0.0500	ND	"	
Toluene	"	"	"		0.0500	ND	"	
Ethylbenzene	"	"	"		0.0500	ND	"	
Xylenes (total)	"	"	"		0.100	ND	"	
Surrogate: 4-BFB (FID)	"	"	"	*50.0-150*		*80.1*	%	
Surrogate: 4-BFB (PID)	"	"	"	*50.0-150*		*91.8*	"	
02MW-4A			B909253-05				Soil	
Gasoline Range Hydrocarbons	0990425	9/14/99	9/15/99		5.00	ND	mg/kg dry	
Benzene	"	"	"		0.0500	ND	"	

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IT Corporation - Renton	Project:	Time Oil #2750	Sampled: 9/13/99
555 South Renton Village Place, Ste 700	Project Number:	783336	Received: 9/14/99
Renton, WA 98055	Project Manager:	Jerry Harris	Reported: 9/22/99 10:45

Volatile Petroleum Products and BTEX by NWTPH-Gx and EPA 8021B
North Creek Analytical - Bothell

Analyte	Batch Number	Date Prepared	Date Analyzed	Surrogate Limits	Reporting Limit	Result	Units	Notes*
02MW-4A (continued)			**B909253-05**				Soil	
Toluene	0990425	9/14/99	9/15/99		0.0500	ND	mg/kg dry	
Ethylbenzene	"	"	"		0.0500	ND	"	
Xylenes (total)	"	"	"		0.100	ND	"	
Surrogate: 4-BFB (FID)	"	"	"	*50.0-150*		*84.5*	%	
Surrogate: 4-BFB (PID)	"	"	"	*50.0-150*		*95.1*	"	
02MW-4B			**B909253-06**				Soil	
Gasoline Range Hydrocarbons	0990425	9/14/99	9/15/99		5.00	6.88	mg/kg dry	
Benzene	"	"	"		0.0500	ND	"	
Toluene	"	"	"		0.0500	ND	"	
Ethylbenzene	"	"	"		0.0500	ND	"	
Xylenes (total)	"	"	"		0.100	ND	"	
Surrogate: 4-BFB (FID)	"	"	"	*50.0-150*		*82.6*	%	
Surrogate: 4-BFB (PID)	"	"	"	*50.0-150*		*104*	"	
02MW-4C			**B909253-07**				Soil	
Gasoline Range Hydrocarbons	0990425	9/14/99	9/15/99		5.00	ND	mg/kg dry	
Benzene	"	"	"		0.0500	ND	"	
Toluene	"	"	"		0.0500	ND	"	
Ethylbenzene	"	"	"		0.0500	ND	"	
Xylenes (total)	"	"	"		0.100	ND	"	
Surrogate: 4-BFB (FID)	"	"	"	*50.0-150*		*77.0*	%	
Surrogate: 4-BFB (PID)	"	"	"	*50.0-150*		*91.6*	"	
02MW-4D			**B909253-08**				Soil	
Gasoline Range Hydrocarbons	0990425	9/14/99	9/15/99		5.00	ND	mg/kg dry	
Benzene	"	"	"		0.0500	ND	"	
Toluene	"	"	"		0.0500	ND	"	
Ethylbenzene	"	"	"		0.0500	ND	"	
Xylenes (total)	"	"	"		0.100	ND	"	
Surrogate: 4-BFB (FID)	"	"	"	*50.0-150*		*78.2*	%	
Surrogate: 4-BFB (PID)	"	"	"	*50.0-150*		*87.8*	"	
02MW-4E			**B909253-09**				Soil	
Gasoline Range Hydrocarbons	0990425	9/14/99	9/15/99		5.00	ND	mg/kg dry	
Benzene	"	"	"		0.0500	ND	"	
Toluene	"	"	"		0.0500	ND	"	
Ethylbenzene	"	"	"		0.0500	ND	"	

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IT Corporation - Renton	Project:	Time Oil #2750	Sampled: 9/13/99
555 South Renton Village Place, Ste 700	Project Number:	783336	Received: 9/14/99
Renton, WA 98055	Project Manager:	Jerry Harris	Reported: 9/22/99 10:45

Volatile Petroleum Products and BTEX by NWTPH-Gx and EPA 8021B
North Creek Analytical - Bothell

Analyte	Batch Number	Date Prepared	Date Analyzed	Surrogate Limits	Reporting Limit	Result	Units	Notes*
02MW-4E (continued)			B909253-09				Soil	
Xylenes (total)	0990425	9/14/99	9/15/99		0.100	ND	mg/kg dry	
Surrogate: 4-BFB (FID)	"	"	"	*50.0-150*		*77.3*	%	
Surrogate: 4-BFB (PID)	"	"	"	*50.0-150*		*86.6*	"	
02MW-5A			B909253-10				Soil	
Gasoline Range Hydrocarbons	0990425	9/14/99	9/15/99		5.00	ND	mg/kg dry	
Benzene	"	"	"		0.0500	ND	"	
Toluene	"	"	"		0.0500	ND	"	
Ethylbenzene	"	"	"		0.0500	ND	"	
Xylenes (total)	"	"	"		0.100	ND	"	
Surrogate: 4-BFB (FID)	"	"	"	*50.0-150*		*81.2*	%	
Surrogate: 4-BFB (PID)	"	"	"	*50.0-150*		*93.1*	"	
02MW-5B			B909253-11				Soil	
Gasoline Range Hydrocarbons	0990425	9/14/99	9/15/99		5.00	ND	mg/kg dry	
Benzene	"	"	"		0.0500	ND	"	
Toluene	"	"	"		0.0500	ND	"	
Ethylbenzene	"	"	"		0.0500	ND	"	
Xylenes (total)	"	"	"		0.100	ND	"	
Surrogate: 4-BFB (FID)	"	"	"	*50.0-150*		*82.7*	%	
Surrogate: 4-BFB (PID)	"	"	"	*50.0-150*		*94.6*	"	
02MW-5C			B909253-12				Soil	
Gasoline Range Hydrocarbons	0990425	9/14/99	9/15/99		5.00	ND	mg/kg dry	
Benzene	"	"	"		0.0500	ND	"	
Toluene	"	"	"		0.0500	ND	"	
Ethylbenzene	"	"	"		0.0500	ND	"	
Xylenes (total)	"	"	"		0.100	ND	"	
Surrogate: 4-BFB (FID)	"	"	"	*50.0-150*		*81.1*	%	
Surrogate: 4-BFB (PID)	"	"	"	*50.0-150*		*94.0*	"	
02MW-5D			B909253-13				Soil	
Gasoline Range Hydrocarbons	0990425	9/14/99	9/14/99		5.00	ND	mg/kg dry	
Benzene	"	"	"		0.0500	ND	"	
Toluene	"	"	"		0.0500	ND	"	
Ethylbenzene	"	"	"		0.0500	ND	"	
Xylenes (total)	"	"	"		0.100	ND	"	
Surrogate: 4-BFB (FID)	"	"	"	*50.0-150*		*79.3*	%	

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**Refer to end of report for text of notes and definitions.*

Joy B Chang, Project Manager

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IT Corporation - Renton	Project:	Time Oil #2750	Sampled: 9/13/99
155 South Renton Village Place, Ste 700	Project Number:	783336	Received: 9/14/99
Renton, WA 98055	Project Manager:	Jerry Harris	Reported: 9/22/99 10:45

Volatile Petroleum Products and BTEX by NWTPH-Gx and EPA 8021B
North Creek Analytical - Bothell

Analyte	Batch Number	Date Prepared	Date Analyzed	Surrogate Limits	Reporting Limit	Result	Units	Notes*
02MW-5D (continued)			B909253-13				Soil	
Surrogate: 4-BFB (PID)	*0990425*	*9/14/99*	*9/14/99*	*50.0-150*		*94.5*	*%*	
02MW-5E			B909253-14				Soil	
Gasoline Range Hydrocarbons	0990425	9/14/99	9/15/99		5.00	ND	mg/kg dry	
Benzene	"	"	"		0.0500	0.222	"	
Toluene	"	"	"		0.0500	ND	"	
Ethylbenzene	"	"	"		0.0500	ND	"	
Xylenes (total)	"	"	"		0.100	ND	"	
Surrogate: 4-BFB (FID)	"	"	"	*50.0-150*		*82.6*	*%*	
Surrogate: 4-BFB (PID)	"	"	"	*50.0-150*		*90.3*	"	
02MW-5F			B909253-15				Soil	
Gasoline Range Hydrocarbons	0990425	9/14/99	9/15/99		5.00	ND	mg/kg dry	
Benzene	"	"	"		0.0500	ND	"	
Toluene	"	"	"		0.0500	ND	"	
Ethylbenzene	"	"	"		0.0500	ND	"	
Xylenes (total)	"	"	"		0.100	ND	"	
Surrogate: 4-BFB (FID)	"	"	"	*50.0-150*		*73.0*	*%*	
Surrogate: 4-BFB (PID)	"	"	"	*50.0-150*		*81.8*	"	
02MW-5G			B909253-16				Soil	
Gasoline Range Hydrocarbons	0990425	9/14/99	9/15/99		5.00	ND	mg/kg dry	
Benzene	"	"	"		0.0500	ND	"	
Toluene	"	"	"		0.0500	ND	"	
Ethylbenzene	"	"	"		0.0500	ND	"	
Xylenes (total)	"	"	"		0.100	ND	"	
Surrogate: 4-BFB (FID)	"	"	"	*50.0-150*		*78.4*	*%*	
Surrogate: 4-BFB (PID)	"	"	"	*50.0-150*		*88.2*	"	

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IT Corporation - Renton	Project:	Time Oil #2750	Sampled: 9/13/99
555 South Renton Village Place, Ste 700	Project Number:	783336	Received: 9/14/99
Renton, WA 98055	Project Manager:	Jerry Harris	Reported: 9/22/99 10:45

Semivolatile Petroleum Products by NWTPH-Dx (w/o Acid/Silica Gel Clean-up)
North Creek Analytical - Bothell

Analyte	Batch Number	Date Prepared	Date Analyzed	Surrogate Limits	Reporting Limit	Result	Units	Notes*
02MW-1A			B909253-01				Soil	
Diesel Range Hydrocarbons	0990504	9/16/99	9/17/99		10.0	ND	mg/kg dry	
Lube Oil Range Hydrocarbons	"	"	"		25.0	ND	"	
Surrogate: 2-FBP	"	"	"	*50.0-150*		*65.6*	%	
02MW-1B			B909253-02				Soil	
Diesel Range Hydrocarbons	0990504	9/16/99	9/17/99		10.0	ND	mg/kg dry	
Lube Oil Range Hydrocarbons	"	"	"		25.0	ND	"	
Surrogate: 2-FBP	"	"	"	*50.0-150*		*67.5*	%	
02MW-1C			B909253-03				Soil	
Diesel Range Hydrocarbons	0990504	9/16/99	9/17/99		10.0	**10.5**	mg/kg dry	
Lube Oil Range Hydrocarbons	"	"	"		25.0	**27.7**	"	
Surrogate: 2-FBP	"	"	"	*50.0-150*		*62.5*	%	
02MW-1D			B909253-04				Soil	
Diesel Range Hydrocarbons	0990504	9/16/99	9/17/99		10.0	ND	mg/kg dry	
Lube Oil Range Hydrocarbons	"	"	"		25.0	ND	"	
Surrogate: 2-FBP	"	"	"	*50.0-150*		*61.8*	%	
02MW-4A			B909253-05				Soil	
Diesel Range Hydrocarbons	0990504	9/16/99	9/17/99		10.0	ND	mg/kg dry	
Lube Oil Range Hydrocarbons	"	"	"		25.0	ND	"	
Surrogate: 2-FBP	"	"	"	*50.0-150*		*71.3*	%	
02MW-4B			B909253-06				Soil	
Diesel Range Hydrocarbons	0990504	9/16/99	9/17/99		10.0	ND	mg/kg dry	
Lube Oil Range Hydrocarbons	"	"	"		25.0	ND	"	
Surrogate: 2-FBP	"	"	"	*50.0-150*		*76.5*	%	
02MW-4C			B909253-07				Soil	
Diesel Range Hydrocarbons	0990504	9/16/99	9/17/99		10.0	ND	mg/kg dry	
Lube Oil Range Hydrocarbons	"	"	"		25.0	ND	"	
Surrogate: 2-FBP	"	"	"	*50.0-150*		*61.4*	%	
02MW-4D			B909253-08				Soil	
Diesel Range Hydrocarbons	0990504	9/16/99	9/17/99		10.0	ND	mg/kg dry	
Lube Oil Range Hydrocarbons	"	"	"		25.0	ND	"	
Surrogate: 2-FBP	"	"	"	*50.0-150*		*72.3*	%	

North Creek Analytical - Bothell

**Refer to end of report for text of notes and definitions.*

Joy B Chang, Project Manager

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IT Corporation - Renton	Project:	Time Oil #2750	Sampled: 9/13/99
555 South Renton Village Place, Ste 700	Project Number:	783336	Received: 9/14/99
Renton, WA 98055	Project Manager:	Jerry Harris	Reported: 9/22/99 10:45

Semivolatile Petroleum Products by NWTPH-Dx (w/o Acid/Silica Gel Clean-up)
North Creek Analytical - Bothell

Analyte	Batch Number	Date Prepared	Date Analyzed	Surrogate Limits	Reporting Limit	Result	Units	Notes*
02MW-4E			**B909253-09**				Soil	
Diesel Range Hydrocarbons	0990504	9/16/99	9/17/99		10.0	ND	mg/kg dry	
Lube Oil Range Hydrocarbons	"	"	"		25.0	ND	"	
Surrogate: 2-FBP	"	"	"	*50.0-150*		*66.8*	%	
02MW-5A			**B909253-10**				Soil	
Diesel Range Hydrocarbons	0990504	9/16/99	9/17/99		10.0	ND	mg/kg dry	
Lube Oil Range Hydrocarbons	"	"	"		25.0	ND	"	
Surrogate: 2-FBP	"	"	"	*50.0-150*		*80.5*	%	
02MW-5B			**B909253-11**				Soil	
Diesel Range Hydrocarbons	0990504	9/16/99	9/17/99		10.0	ND	mg/kg dry	
Lube Oil Range Hydrocarbons	"	"	"		25.0	ND	"	
Surrogate: 2-FBP	"	"	"	*50.0-150*		*66.2*	%	
02MW-5C			**B909253-12**				Soil	
Diesel Range Hydrocarbons	0990504	9/16/99	9/17/99		10.0	**10.3**	mg/kg dry	
Lube Oil Range Hydrocarbons	"	"	"		25.0	**37.0**	"	
Surrogate: 2-FBP	"	"	"	*50.0-150*		*60.2*	%	
02MW-5D			**B909253-13**				Soil	
Diesel Range Hydrocarbons	0990504	9/16/99	9/17/99		10.0	ND	mg/kg dry	
Lube Oil Range Hydrocarbons	"	"	"		25.0	ND	"	
Surrogate: 2-FBP	"	"	"	*50.0-150*		*80.3*	%	
02MW-5E			**B909253-14**				Soil	
Diesel Range Hydrocarbons	0990504	9/16/99	9/17/99		10.0	ND	mg/kg dry	
Lube Oil Range Hydrocarbons	"	"	"		25.0	ND	"	
Surrogate: 2-FBP	"	"	"	*50.0-150*		*70.6*	%	
02MW-5F			**B909253-15**				Soil	
Diesel Range Hydrocarbons	0990504	9/16/99	9/17/99		10.0	ND	mg/kg dry	
Lube Oil Range Hydrocarbons	"	"	"		25.0	ND	"	
Surrogate: 2-FBP	"	"	"	*50.0-150*		*65.7*	%	
02MW-5G			**B909253-16**				Soil	
Diesel Range Hydrocarbons	0990504	9/16/99	9/17/99		10.0	ND	mg/kg dry	
Lube Oil Range Hydrocarbons	"	"	"		25.0	ND	"	
Surrogate: 2-FBP	"	"	"	*50.0-150*		*66.2*	%	

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IT Corporation - Renton	Project:	Time Oil #2750	Sampled: 9/13/99
555 South Renton Village Place, Ste 700	Project Number:	783336	Received: 9/14/99
Renton, WA 98055	Project Manager:	Jerry Harris	Reported: 9/22/99 10:45

Total Metals by EPA 6000/7000 Series Methods
North Creek Analytical - Bothell

Analyte	Batch Number	Date Prepared	Date Analyzed	Specific Method	Reporting Limit	Result	Units	Notes*
02MW-1A			B909253-01				Soil	
Lead	0990509	9/16/99	9/21/99	EPA 6020	0.500	3.86	mg/kg dry	
02MW-1B			B909253-02				Soil	
Lead	0990509	9/16/99	9/21/99	EPA 6020	0.500	3.59	mg/kg dry	
02MW-1C			B909253-03				Soil	
Lead	0990509	9/16/99	9/21/99	EPA 6020	0.500	1.81	mg/kg dry	
02MW-1D			B909253-04				Soil	
Lead	0990509	9/16/99	9/21/99	EPA 6020	0.500	6.46	mg/kg dry	
02MW-4A			B909253-05				Soil	
Lead	0990509	9/16/99	9/21/99	EPA 6020	0.500	5.04	mg/kg dry	
02MW-4B			B909253-06				Soil	
Lead	0990509	9/16/99	9/21/99	EPA 6020	0.500	7.15	mg/kg dry	
02MW-4C			B909253-07				Soil	
Lead	0990509	9/16/99	9/21/99	EPA 6020	0.500	2.47	mg/kg dry	
02MW-4D			B909253-08				Soil	
Lead	0990509	9/16/99	9/21/99	EPA 6020	0.500	2.26	mg/kg dry	
02MW-4E			B909253-09				Soil	
Lead	0990509	9/16/99	9/21/99	EPA 6020	0.500	6.77	mg/kg dry	
02MW-5A			B909253-10				Soil	
Lead	0990509	9/16/99	9/21/99	EPA 6020	0.500	6.91	mg/kg dry	
02MW-5B			B909253-11				Soil	
Lead	0990509	9/16/99	9/21/99	EPA 6020	0.500	2.82	mg/kg dry	
02MW-5C			B909253-12				Soil	
Lead	0990509	9/16/99	9/21/99	EPA 6020	0.500	6.92	mg/kg dry	
02MW-5D			B909253-13				Soil	
Lead	0990509	9/16/99	9/21/99	EPA 6020	0.500	3.97	mg/kg dry	

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IT Corporation - Renton	Project:	Time Oil #2750	Sampled: 9/13/99
555 South Renton Village Place, Ste 700	Project Number:	783336	Received: 9/14/99
Renton, WA 98055	Project Manager:	Jerry Harris	Reported: 9/22/99 10:45

Total Metals by EPA 6000/7000 Series Methods
North Creek Analytical - Bothell

Analyte	Batch Number	Date Prepared	Date Analyzed	Specific Method	Reporting Limit	Result	Units	Notes*
02MW-5E			B909253-14				Soil	
Lead	0990509	9/16/99	9/21/99	EPA 6020	0.500	1.69	mg/kg dry	
02MW-5F			B909253-15				Soil	
Lead	0990509	9/16/99	9/21/99	EPA 6020	0.500	3.37	mg/kg dry	
02MW-5G			B909253-16				Soil	
Lead	0990509	9/16/99	9/21/99	EPA 6020	0.500	3.46	mg/kg dry	

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IT Corporation - Renton	Project: Time Oil #2750	Sampled: 9/13/99
555 South Renton Village Place, Ste 700	Project Number: 783336	Received: 9/14/99
Renton, WA 98055	Project Manager: Jerry Harris	Reported: 9/22/99 10:45

Dry Weight Determination
North Creek Analytical - Bothell

Sample Name	Lab ID	Matrix	Result	Units
02MW-1A	B909253-01	Soil	85.0	%
02MW-1B	B909253-02	Soil	82.2	%
02MW-1C	B909253-03	Soil	84.7	%
02MW-1D	B909253-04	Soil	77.9	%
02MW-4A	B909253-05	Soil	82.5	%
02MW-4B	B909253-06	Soil	82.7	%
02MW-4C	B909253-07	Soil	82.3	%
02MW-4D	B909253-08	Soil	83.8	%
02MW-4E	B909253-09	Soil	77.7	%
02MW-5A	B909253-10	Soil	83.6	%
02MW-5B	B909253-11	Soil	79.6	%
02MW-5C	B909253-12	Soil	80.3	%
02MW-5D	B909253-13	Soil	81.2	%
02MW-5E	B909253-14	Soil	81.2	%
02MW-5F	B909253-15	Soil	72.0	%
02MW-5G	B909253-16	Soil	80.2	%

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IT Corporation - Renton	Project:	Time Oil #2750	Sampled: 9/13/99
555 South Renton Village Place, Ste 700	Project Number:	783336	Received: 9/14/99
Renton, WA 98055	Project Manager:	Jerry Harris	Reported: 9/22/99 10:45

Volatile Petroleum Products and BTEX by NWTPH-Gx and EPA 8021B/Quality Control
North Creek Analytical - Bothell

Analyte	Date Analyzed	Spike Level	Sample Result	QC Result	Units	Reporting Limit / Recov. Limits	Recov. %	RPD Limit	RPD %	Notes*
Batch: 0990425	**Date Prepared: 9/14/99**					**Extraction Method: EPA 5030B (MeOH)**				
Blank	**0990425-BLK1**									
Gasoline Range Hydrocarbons	9/14/99			ND	mg/kg dry	5.00				
Benzene	"			ND	"	0.0500				
Toluene	"			ND	"	0.0500				
Ethylbenzene	"			ND	"	0.0500				
Xylenes (total)	"			ND	"	0.100				
Surrogate: 4-BFB (FID)	"	*4.00*		*3.70*	"	*50.0-150*	*92.5*			
Surrogate: 4-BFB (PID)	"	*4.00*		*4.31*	"	*50.0-150*	*108*			
LCS	**0990425-BS1**									
Gasoline Range Hydrocarbons	9/14/99	25.0		22.7	mg/kg dry	70.0-130	90.8			
Surrogate: 4-BFB (FID)	"	*4.00*		*3.78*	"	*50.0-150*	*94.5*			
Duplicate	**0990425-DUP1**	**B909253-03**								
Gasoline Range Hydrocarbons	9/15/99		ND	ND	mg/kg dry			50.0		
Surrogate: 4-BFB (FID)	"	*4.72*		*3.57*	"	*50.0-150*	*75.6*			
Duplicate	**0990425-DUP2**	**B909253-13**								
Gasoline Range Hydrocarbons	9/15/99		ND	ND	mg/kg dry			50.0		
Surrogate: 4-BFB (FID)	"	*4.92*		*3.87*	"	*50.0-150*	*78.7*			
Matrix Spike	**0990425-MS1**	**B909253-15**								
Benzene	9/15/99	0.695	ND	0.545	mg/kg dry	60.0-140	**78.4**			
Toluene	"	0.695	ND	0.572	"	60.0-140	**82.3**			
Ethylbenzene	"	0.695	ND	0.599	"	60.0-140	**86.2**			
Xylenes (total)	"	2.08	ND	1.82	"	60.0-140	**87.5**			
Surrogate: 4-BFB (PID)	"	*5.56*		*4.85*	"	*50.0-150*	*87.2*			
Matrix Spike Dup	**0990425-MSD1**	**B909253-15**								
Benzene	9/15/99	0.695	ND	0.539	mg/kg dry	60.0-140	**77.6**	20.0	1.03	
Toluene	"	0.695	ND	0.573	"	60.0-140	**82.4**	20.0	0.121	
Ethylbenzene	"	0.695	ND	0.639	"	60.0-140	**91.9**	20.0	6.40	
Xylenes (total)	"	2.08	ND	1.80	"	60.0-140	**86.5**	20.0	1.15	
Surrogate: 4-BFB (PID)	"	*5.56*		*4.66*	"	*50.0-150*	*83.8*			

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IT Corporation - Renton	Project:	Time Oil #2750	Sampled: 9/13/99
555 South Renton Village Place, Ste 700	Project Number:	783336	Received: 9/14/99
Renton, WA 98055	Project Manager:	Jerry Harris	Reported: 9/22/99 10:45

Semivolatile Petroleum Products by NWTPH-Dx (w/o Acid/Silica Gel Clean-up)/Quality Control
North Creek Analytical - Bothell

Analyte	Date Analyzed	Spike Level	Sample Result	QC Result	Units	Reporting Limit / Recov. Limits	Recov. %	RPD Limit	RPD %	Notes*
Batch: 0990504	**Date Prepared: 9/16/99**					**Extraction Method: EPA 3550B**				
Blank	0990504-BLK1									
Diesel Range Hydrocarbons	9/17/99			ND	mg/kg dry	10.0				
Lube Oil Range Hydrocarbons	"			ND	"	25.0				
Surrogate: 2-FBP	"	*10.7*		*6.81*	"	*50.0-150*	*63.6*			
LCS	0990504-BS1									
Diesel Range Hydrocarbons	9/17/99	66.7		46.5	mg/kg dry	60.0-140	69.7			
Surrogate: 2-FBP	"	*10.7*		*6.91*	"	*50.0-150*	*64.6*			
Duplicate	0990504-DUP1		B909296-02							
Diesel Range Hydrocarbons	9/17/99		18.9	18.3	mg/kg dry			50.0	3.23	
Lube Oil Range Hydrocarbons	"		ND	ND	"			50.0		
Surrogate: 2-FBP	"	*11.4*		*8.07*	"	*50.0-150*	*70.8*			
Duplicate	0990504-DUP2		B909253-07							
Diesel Range Hydrocarbons	9/17/99		ND	ND	mg/kg dry			50.0		
Lube Oil Range Hydrocarbons	"		ND	ND	"			50.0		
Surrogate: 2-FBP	"	*13.0*		*9.26*	"	*50.0-150*	*71.2*			

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IT Corporation - Renton	Project:	Time Oil #2750	Sampled: 9/13/99
555 South Renton Village Place, Ste 700	Project Number:	783336	Received: 9/14/99
Renton, WA 98055	Project Manager:	Jerry Harris	Reported: 9/22/99 10:45

Total Metals by EPA 6000/7000 Series Methods/Quality Control
North Creek Analytical - Bothell

Analyte	Date Analyzed	Spike Level	Sample Result	QC Result	Units	Reporting Limit / Recov. Limits	Recov. %	RPD Limit	RPD %	Notes*
Batch: 0990509	**Date Prepared: 9/16/99**					**Extraction Method: EPA 3050B**				
Blank	**0990509-BLK1**									
Lead	9/21/99			ND	mg/kg dry	0.500				
LCS	**0990509-BS1**									
Lead	9/21/99	25.0		27.2	mg/kg dry	80.0-120	109			
Matrix Spike	**0990509-MS1**		**B909264-01**							
Lead	9/21/99	17.5	6.27	29.8	mg/kg dry	70.0-130	134			
Matrix Spike	**0990509-MS2**		**B909264-01**							
Lead	9/21/99	179	6.27	201	mg/kg dry	70.0-130	109			1
Matrix Spike Dup	**0990509-MSD1**		**B909264-01**							
Lead	9/21/99	17.7	6.27	22.4	mg/kg dry	70.0-130	91.1	20.0	38.1	2

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IT Corporation - Renton	Project:	Time Oil #2750	Sampled: 9/13/99
555 South Renton Village Place, Ste 700	Project Number:	783336	Received: 9/14/99
Renton, WA 98055	Project Manager:	Jerry Harris	Reported: 9/22/99 10:45

Notes and Definitions

#	Note
1	Post-digestion Matrix Spike.
2	Visual examination indicates the RPD and/or matrix spike recovery is outside the control limit due to a non-homogeneous sample matrix.
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
Recov.	Recovery
RPD	Relative Percent Difference

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CHAIN OF CUSTODY REPORT

Work Order #: B909253

CLIENT: IT Corp
REPORT TO: Jerry Harris
ADDRESS: 555 S. Renton Village Pl. #700, Renton, WA 98055
PHONE: 425-228-9645 FAX: 425-228-9793
PROJECT NAME: Time Oil 2750
PROJECT NUMBER: 783336
SAMPLED BY: CNS

INVOICE TO: Connie Hofman
" "
P.O. NUMBER:

TURNAROUND REQUEST In Business Days*
Organic & Inorganic Analyses: 10 | 7 | 5 | 4 | 3 | 2 | 1 | <1 (STD.)
Petroleum Hydrocarbon Analyses: X | 4 | 3 | 2 | 1 | <1 (STD.)
OTHER Please Specify
*Turnaround Requests less than standard may incur Rush Charges

CLIENT SAMPLE IDENTIFICATION	SAMPLING DATE/TIME	TPH-G	TPH-Dext	BTEX	Lead	MATRIX (W, S, O)	# OF CONT.	COMMENTS	NCA WO ID
Ø2MW-1A	9/13/99 7:46	X	X	X	X	S/I	1	B909253 -	01
Ø2MW-1B	7:50							-	02
Ø2MW-1C	7:54							-	03
Ø2MW-1D	8:00							-	04
Ø2MW-4A	8:23							-	05
Ø2MW-4B	9:18							-	06
Ø2MW-4C	9:24							-	07
Ø2MW-4D	9:29							-	08
Ø2MW-4E	9:34							-	09
Ø2MW-5A	10:23							-	10
Ø2MW-5B	10:26							-	11
Ø2MW-5C	10:32							-	12
Ø2MW-5D	10:38							-	13
Ø2MW-5E	10:48							-	14
Ø2MW-5F	10:53							-	15

RELINQUISHED BY: Chris M. Storey — DATE: 9/14/99
PRINT NAME: Chris M. Storey — FIRM: IT Corp — TIME: 9:41
RELINQUISHED BY: — DATE: 9/14/99
PRINT NAME: — FIRM: NCA — TIME: 13:00

RECEIVED BY: Bill Kunhoam — DATE: 9/14/99
PRINT NAME: BILL KUNHOAM — FIRM: NCA — TIME: 13:00
RECEIVED BY: S. Wilden — DATE: 9-14-99
PRINT NAME: S. Wilden — FIRM: NCA — TIME: 1345

ADDITIONAL REMARKS:
CREW MAN
w/o
TEMP: 13.5°C
PAGE OF

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CHAIN OF CUSTODY REPORT

Work Order #: B909253

CLIENT: IT Corp
REPORT TO: Jerry Harris
ADDRESS: 555 S. Renton Village Pl #70, Renton, WA 98055
PHONE: 425-228-9645 FAX: 425-228-9793

INVOICE TO: Connie Hofman
P.O. NUMBER:

PROJECT NAME:
PROJECT NUMBER:
SAMPLED BY:

TURNAROUND REQUEST in Business Days*
Organic & Inorganic Analyses: 10 | 7 | 5 | 4 | 3 | 2 | 1 | < 1
STD. [X]
Petroleum Hydrocarbon Analyses: STD. [X] | 4 | 3 | 2 | 1 | < 1
OTHER — Please Specify
*Turnaround Requests less than standard may incur Rush Charges.

CLIENT SAMPLE IDENTIFICATION	SAMPLING DATE/TIME	TPH-G	TPH-Diesel	BTEX	Lead	MATRIX (W, S, O)	# OF CONT.	COMMENTS	NCA WO ID
@2MW-5G	9/13/99 16:57	X	X	X	X	Soil	1	B909253-	16

RELINQUISHED BY: Chris N. Storey — PRINT NAME: Chris N. Storey — FIRM: IT Corp — DATE: 9/14/99 — TIME: 9:41
RECEIVED BY: Bill Kunihar — PRINT NAME: BILL KUNIHAR — FIRM: NCA — DATE: 9/14/99 — TIME: 13:00
RELINQUISHED BY: — PRINT NAME: — FIRM: NCA — DATE: 9/14/99 — TIME: 13:45
RECEIVED BY: — PRINT NAME: — FIRM: — DATE: — TIME:

ADDITIONAL REMARKS: w/o
TEMP: 13.5°C
PAGE: OF

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IT Corporation - Renton	Project:	Time Oil #2750	Sampled: 9/28/99
555 South Renton Village Place, Ste 700	Project Number:	783336	Received: 9/29/99
Renton, WA 98055	Project Manager:	Jerry Harris	Reported: 10/6/99 15:57

ANALYTICAL REPORT FOR SAMPLES:

Sample Description	Laboratory Sample Number	Sample Matrix	Date Sampled
02-MW-1	B909648-01	Water	9/28/99
02-MW-2	B909648-02	Water	9/28/99
02-MW-3	B909648-03	Water	9/28/99
02-MW-4	B909648-04	Water	9/28/99
02-MW-5	B909648-05	Water	9/28/99

The results in this report apply to the samples analyzed in accordance with the chain of custody document.
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IT Corporation - Renton	Project:	Time Oil #2750	Sampled: 9/28/99
555 South Renton Village Place, Ste 700	Project Number:	783336	Received: 9/29/99
Renton, WA 98055	Project Manager:	Jerry Harris	Reported: 10/6/99 15:57

Volatile Petroleum Products and BTEX by NWTPH-Gx and EPA 8021B
North Creek Analytical - Bothell

Analyte	Batch Number	Date Prepared	Date Analyzed	Surrogate Limits	Reporting Limit	Result	Units	Notes*
02-MW-1			B909648-01				Water	
Gasoline Range Hydrocarbons	1090003	10/1/99	10/1/99		50.0	172	ug/l	
Benzene	"	"	"		0.500	72.9	"	
Toluene	"	"	"		0.500	0.811	"	
Ethylbenzene	"	"	"		0.500	ND	"	
Xylenes (total)	"	"	"		1.00	ND	"	
Surrogate: 4-BFB (FID)	"	"	"	*50.0-150*		*91.7*	%	
Surrogate: 4-BFB (PID)	"	"	"	*50.0-150*		*83.8*	"	
02-MW-2			B909648-02				Water	
Gasoline Range Hydrocarbons	1090003	10/1/99	10/1/99		50.0	ND	ug/l	
Benzene	"	"	"		0.500	ND	"	
Toluene	"	"	"		0.500	ND	"	
Ethylbenzene	"	"	"		0.500	ND	"	
Xylenes (total)	"	"	"		1.00	ND	"	
Surrogate: 4-BFB (FID)	"	"	"	*50.0-150*		*82.9*	%	
Surrogate: 4-BFB (PID)	"	"	"	*50.0-150*		*85.8*	"	
02-MW-3			B909648-03				Water	
Gasoline Range Hydrocarbons	1090003	10/1/99	10/2/99		50.0	160	ug/l	
Benzene	"	"	"		0.500	56.7	"	
Toluene	"	"	"		0.500	1.13	"	
Ethylbenzene	"	"	"		0.500	ND	"	
Xylenes (total)	"	"	"		1.00	1.14	"	
Surrogate: 4-BFB (FID)	"	"	"	*50.0-150*		*91.2*	%	
Surrogate: 4-BFB (PID)	"	"	"	*50.0-150*		*81.7*	"	
02-MW-4			B909648-04				Water	
Gasoline Range Hydrocarbons	1090003	10/1/99	10/2/99		250	3700	ug/l	
Benzene	"	"	"		30.0	ND	"	1
Toluene	"	"	"		2.50	185	"	
Ethylbenzene	"	"	"		2.50	226	"	
Xylenes (total)	"	"	"		5.00	473	"	
Surrogate: 4-BFB (FID)	"	"	"	*50.0-150*		*99.6*	%	
Surrogate: 4-BFB (PID)	"	"	"	*50.0-150*		*94.6*	"	
02-MW-5			B909648-05				Water	
Gasoline Range Hydrocarbons	1090003	10/1/99	10/2/99		50.0	ND	ug/l	
Benzene	"	"	"		0.500	2.84	"	

North Creek Analytical - Bothell

*Refer to end of report for text of notes and definitions.

Joy B Chang, Project Manager

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IT Corporation - Renton	Project:	Time Oil #2750	Sampled: 9/28/99
555 South Renton Village Place, Ste 700	Project Number:	783336	Received: 9/29/99
Renton, WA 98055	Project Manager:	Jerry Harris	Reported: 10/6/99 15:57

Volatile Petroleum Products and BTEX by NWTPH-Gx and EPA 8021B
North Creek Analytical - Bothell

Analyte	Batch Number	Date Prepared	Date Analyzed	Surrogate Limits	Reporting Limit	Result	Units	Notes*
02-MW-5 (continued)			B909648-05				Water	
Toluene	1090003	10/1/99	10/2/99		0.500	ND	ug/l	
Ethylbenzene	"	"	"		0.500	ND	"	
Xylenes (total)	"	"	"		1.00	ND	"	
Surrogate: 4-BFB (FID)	"	"	"	*50.0-150*		*100*	%	
Surrogate: 4-BFB (PID)	"	"	"	*50.0-150*		*90.8*	"	

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IT Corporation - Renton	Project:	Time Oil #2750	Sampled: 9/28/99
555 South Renton Village Place, Ste 700	Project Number:	783336	Received: 9/29/99
Renton, WA 98055	Project Manager:	Jerry Harris	Reported: 10/6/99 15:57

Semivolatile Petroleum Products by NWTPH-Dx with Acid/Silica Gel Clean-up
North Creek Analytical - Bothell

Analyte	Batch Number	Date Prepared	Date Analyzed	Surrogate Limits	Reporting Limit	Result	Units	Notes*
02-MW-1			B909648-01				Water	
Diesel Range Hydrocarbons	1090047	10/2/99	10/4/99		0.250	ND	mg/l	
Lube Oil Range Hydrocarbons	"	"	"		0.500	ND	"	
Surrogate: 2-FBP	"	"	"	*50.0-150*		*52.8*	%	
02-MW-2			B909648-02				Water	
Diesel Range Hydrocarbons	1090047	10/2/99	10/4/99		0.250	ND	mg/l	
Lube Oil Range Hydrocarbons	"	"	"		0.500	ND	"	
Surrogate: 2-FBP	"	"	"	*50.0-150*		*51.8*	%	
02-MW-3			B909648-03				Water	
Diesel Range Hydrocarbons	1090047	10/2/99	10/4/99		0.250	ND	mg/l	
Lube Oil Range Hydrocarbons	"	"	"		0.500	ND	"	
Surrogate: 2-FBP	"	"	"	*50.0-150*		*57.9*	%	
02-MW-4			B909648-04				Water	
Diesel Range Hydrocarbons	1090047	10/2/99	10/4/99		0.250	ND	mg/l	
Lube Oil Range Hydrocarbons	"	"	"		0.500	ND	"	
Surrogate: 2-FBP	"	"	"	*50.0-150*		*53.9*	%	
02-MW-5			B909648-05				Water	
Diesel Range Hydrocarbons	1090047	10/2/99	10/4/99		0.250	ND	mg/l	
Lube Oil Range Hydrocarbons	"	"	"		0.500	ND	"	
Surrogate: 2-FBP	"	"	"	*50.0-150*		*33.2*	%	2

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IT Corporation - Renton	Project:	Time Oil #2750	Sampled: 9/28/99
555 South Renton Village Place, Ste 700	Project Number:	783336	Received: 9/29/99
Renton, WA 98055	Project Manager:	Jerry Harris	Reported: 10/6/99 15:57

Total Metals by EPA 6000/7000 Series Methods
North Creek Analytical - Bothell

Analyte	Batch Number	Date Prepared	Date Analyzed	Specific Method	Reporting Limit	Result	Units	Notes*
02-MW-1			B909648-01				Water	
Lead	1090064	10/3/99	10/4/99	EPA 6020	0.00100	**0.0360**	mg/l	
02-MW-2			B909648-02				Water	
Lead	1090064	10/3/99	10/4/99	EPA 6020	0.00100	**0.133**	mg/l	
02-MW-3			B909648-03				Water	
Lead	1090064	10/3/99	10/4/99	EPA 6020	0.00100	ND	mg/l	
02-MW-4			B909648-04				Water	
Lead	1090064	10/3/99	10/4/99	EPA 6020	0.00100	**0.0359**	mg/l	
02-MW-5			B909648-05				Water	
Lead	1090064	10/3/99	10/4/99	EPA 6020	0.00100	**0.0863**	mg/l	

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IT Corporation - Renton	Project:	Time Oil #2750	Sampled: 9/28/99
555 South Renton Village Place, Ste 700	Project Number:	783336	Received: 9/29/99
Renton, WA 98055	Project Manager:	Jerry Harris	Reported: 10/6/99 15:57

Volatile Petroleum Products and BTEX by NWTPH-Gx and EPA 8021B/Quality Control
North Creek Analytical - Bothell

Analyte	Date Analyzed	Spike Level	Sample Result	QC Result	Units	Reporting Limit / Recov. Limits	Recov. %	RPD Limit	RPD %	Notes*
Batch: 1090003	**Date Prepared: 10/1/99**					**Extraction Method: EPA 5030B (P/T)**				
Blank	**1090003-BLK1**									
Gasoline Range Hydrocarbons	10/1/99			ND	ug/l	50.0				
Benzene	"			ND	"	0.500				
Toluene	"			ND	"	0.500				
Ethylbenzene	"			ND	"	0.500				
Xylenes (total)	"			ND	"	1.00				
Surrogate: 4-BFB (FID)	"	*48.0*		*41.5*	"	*50.0-150*	*86.5*			
Surrogate: 4-BFB (PID)	"	*48.0*		*41.2*	"	*50.0-150*	*85.8*			
Blank	**1090003-BLK2**									
Gasoline Range Hydrocarbons	10/2/99			ND	ug/l	50.0				
Benzene	"			ND	"	0.500				
Toluene	"			ND	"	0.500				
Ethylbenzene	"			ND	"	0.500				
Xylenes (total)	"			ND	"	1.00				
Surrogate: 4-BFB (FID)	"	*48.0*		*43.8*	"	*50.0-150*	*91.2*			
Surrogate: 4-BFB (PID)	"	*48.0*		*41.2*	"	*50.0-150*	*85.8*			
LCS	**1090003-BS1**									
Gasoline Range Hydrocarbons	10/1/99	500		456	ug/l	70.0-130	91.2			
Surrogate: 4-BFB (FID)	"	*48.0*		*45.9*	"	*50.0-150*	*95.6*			
Duplicate	**1090003-DUP1**		**B909613-02**							
Gasoline Range Hydrocarbons	10/2/99		158000	160000	ug/l			25.0	1.26	
Surrogate: 4-BFB (FID)	"	*48.0*		*44.3*	"	*50.0-150*	*92.3*			
Duplicate	**1090003-DUP2**		**B909613-04**							
Gasoline Range Hydrocarbons	10/4/99		244000	242000	ug/l			25.0	0.823	
Surrogate: 4-BFB (FID)	"	*48.0*		*44.1*	"	*50.0-150*	*91.9*			
Matrix Spike	**1090003-MS1**		**B909613-07**							
Benzene	10/4/99	10.0	ND	8.84	ug/l	70.0-130	88.4			
Toluene	"	10.0	ND	9.09	"	70.0-130	90.9			
Ethylbenzene	"	10.0	ND	9.22	"	70.0-130	92.2			
Xylenes (total)	"	30.0	ND	27.8	"	70.0-130	92.7			
Surrogate: 4-BFB (PID)	"	*48.0*		*42.6*	"	*50.0-150*	*88.7*			

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**Refer to end of report for text of notes and definitions.*

Joy B Chang, Project Manager

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IT Corporation - Renton	Project:	Time Oil #2750	Sampled: 9/28/99
555 South Renton Village Place, Ste 700	Project Number:	783336	Received: 9/29/99
Renton, WA 98055	Project Manager:	Jerry Harris	Reported: 10/6/99 15:57

Volatile Petroleum Products and BTEX by NWTPH-Gx and EPA 8021B/Quality Control
North Creek Analytical - Bothell

Analyte	Date Analyzed	Spike Level	Sample Result	QC Result	Units	Reporting Limit / Recov. Limits	Recov. %	RPD Limit	RPD %	Notes*
Matrix Spike Dup	1090003-MSD1		B909613-07							
Benzene	10/4/99	10.0	ND	8.51	ug/l	70.0-130	85.1	15.0	3.80	
Toluene	"	10.0	ND	8.50	"	70.0-130	85.0	15.0	6.71	
Ethylbenzene	"	10.0	ND	8.60	"	70.0-130	86.0	15.0	6.96	
Xylenes (total)	"	30.0	ND	25.8	"	70.0-130	86.0	15.0	7.50	
Surrogate: 4-BFB (PID)	"	*48.0*		*41.6*	"	*50.0-150*	*86.7*			

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IT Corporation - Renton	Project:	Time Oil #2750	Sampled: 9/28/99
555 South Renton Village Place, Ste 700	Project Number:	783336	Received: 9/29/99
Renton, WA 98055	Project Manager:	Jerry Harris	Reported: 10/6/99 15:57

Semivolatile Petroleum Products by NWTPH-Dx with Acid/Silica Gel Clean-up/Quality Control
North Creek Analytical - Bothell

Analyte	Date Analyzed	Spike Level	Sample Result	QC Result	Units	Reporting Limit / Recov. Limits	Recov. %	RPD Limit	RPD %	Notes*
Batch: 1090047	**Date Prepared: 10/2/99**					**Extraction Method: EPA 3520C/600 Series**				
Blank	1090047-BLK1									
Diesel Range Hydrocarbons	10/4/99			ND	mg/l	0.250				
Lube Oil Range Hydrocarbons	"			ND	"	0.500				
Surrogate: 2-FBP	"	*0.320*		*0.202*	"	*50.0-150*	*63.1*			
LCS	1090047-BS1									
Diesel Range Hydrocarbons	10/4/99	2.00		1.15	mg/l	50.0-150	57.5			
Surrogate: 2-FBP	"	*0.320*		*0.169*	"	*50.0-150*	*52.8*			
LCS Dup	1090047-BSD1									
Diesel Range Hydrocarbons	10/4/99	2.00		0.996	mg/l	50.0-150	49.8	50.0	14.4	3
Surrogate: 2-FBP	"	*0.320*		*0.176*	"	*50.0-150*	*55.0*			

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**Refer to end of report for text of notes and definitions.*

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IT Corporation - Renton	Project:	Time Oil #2750	Sampled: 9/28/99
555 South Renton Village Place, Ste 700	Project Number:	783336	Received: 9/29/99
Renton, WA 98055	Project Manager:	Jerry Harris	Reported: 10/6/99 15:57

Total Metals by EPA 6000/7000 Series Methods/Quality Control
North Creek Analytical - Bothell

Analyte	Date Analyzed	Spike Level	Sample Result	QC Result	Units	Reporting Limit / Recov. Limits	Recov. %	RPD Limit	RPD %	Notes*
Batch: 1090064	Date Prepared: 10/3/99					Extraction Method: EPA 3020A				
Blank	1090064-BLK1									
Lead	10/4/99			ND	mg/l	0.00100				
Blank	1090064-BLK2									
Lead	10/4/99			ND	mg/l	0.00100				
LCS	1090064-BS1									
Lead	10/4/99	0.200		0.191	mg/l	80.0-120	95.5			
LCS	1090064-BS2									
Lead	10/4/99	0.200		0.209	mg/l	80.0-120	105			
Matrix Spike	1090064-MS1		B909586-06							
Lead	10/4/99	0.200	ND	0.211	mg/l	75.0-125	105			
Matrix Spike	1090064-MS2		B909648-03							
Lead	10/4/99	0.200	ND	0.213	mg/l	75.0-125	106			
Matrix Spike Dup	1090064-MSD1		B909586-06							
Lead	10/4/99	0.200	ND	0.213	mg/l	75.0-125	106	20.0	0.948	
Matrix Spike Dup	1090064-MSD2		B909648-03							
Lead	10/4/99	0.200	ND	0.209	mg/l	75.0-125	105	20.0	0.948	

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IT Corporation - Renton	Project:	Time Oil #2750	Sampled: 9/28/99
555 South Renton Village Place, Ste 700	Project Number:	783336	Received: 9/29/99
Renton, WA 98055	Project Manager:	Jerry Harris	Reported: 10/6/99 15:57

Notes and Definitions

#	Note
1	The reporting limit for this analyte has been raised to account for interference from coeluting organic compounds present in the sample.
2	Surrogate recovery is below the established control limit, result may be biased low. There was no sample left to perform re-extraction and analysis for confirmation.
3	The spike recovery for this QC sample is outside of established control limits. Review of associated batch QC indicates the recovery for this analyte does not represent an out-of-control condition for the batch.
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
Recov.	Recovery
RPD	Relative Percent Difference

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CHAIN OF CUSTODY REPORT

Work Order #: B909648

CLIENT: Time Oil
REPORT TO: Chris Storey (PM- Jerry Harris)
ADDRESS: 555 S. Renton Village Pl. Ste. 700 Renton, WA 98055-3295
PHONE: 425-228-9695 FAX: 425-228-9793
PROJECT NAME: Time Oil Seattle Terminal
PROJECT NUMBER: 783336
SAMPLED BY: Ryan Ross

INVOICE TO: IT Corporation 555 S. Renton Village Pl. Ste. 700 Renton, WA 98055-3295
P.O. NUMBER: 783336

TURNAROUND REQUEST in Business Days*
Organic & Inorganic Analyses: [■ STD.] 7 5 4 3 2 1 <1
Petroleum Hydrocarbon Analyses: 5 (STD.) 4 3 2 1 <1
OTHER Please Specify
*Turnaround Requests less than standard may incur Rush Charges.

CLIENT SAMPLE IDENTIFICATION	SAMPLING DATE/TIME	TPH-G / BTEX 8020/8015		TPH-D (ext) NWTPH-Dx		TOTAL LEAD 7421	MATRIX (W, S, O)	# OF CONT.	COMMENTS	NCA WO ID
02-MW-1	9-28-99/ 1200	■		■		■	W	4	B909648	-01
02-MW-2	9-28-99/ 1135	■		■		■	W	4	↓	-02
02-MW-3	9-28-99/ 1215	■		■		■	W	4	↓	-03
02-MW-4	9-28-99/ 1115	■		■		■	W	4	↓	-04
02-MW-5	9-28-99/ 1050	■		■		■	W	4	↓	-05

RELINQUISHED BY: [signature] DATE: 9-29-99
PRINT NAME: Ryan Ross FIRM: EMCON/IT TIME:
RECEIVED BY: Cathy Nichols DATE: 9/29/99
PRINT NAME: Cathy Nichols FIRM: NCA TIME: 9:35
RELINQUISHED BY: DATE:
PRINT NAME: FIRM: TIME:
RECEIVED BY: DATE:
PRINT NAME: FIRM: TIME:

ADDITIONAL REMARKS: Use Silica Gel Clean-up for TPH-D Extended

TEMP: [illegible]

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541.383.9310 fax 541.382.7588

IT Corporation - Renton	Project:	Time Oil #2750	Sampled: 9/28/99
555 South Renton Village Place, Ste 700	Project Number:	783336	Received: 9/29/99
Renton, WA 98055	Project Manager:	Jerry Harris	Reported: 10/6/99 15:57

ANALYTICAL REPORT FOR SAMPLES:

Sample Description	Laboratory Sample Number	Sample Matrix	Date Sampled
02-MW-1	B909648-01	Water	9/28/99
02-MW-2	B909648-02	Water	9/28/99
02-MW-3	B909648-03	Water	9/28/99
02-MW-4	B909648-04	Water	9/28/99
02-MW-5	B909648-05	Water	9/28/99

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IT Corporation - Renton	Project:	Time Oil #2750	Sampled: 9/28/99
555 South Renton Village Place, Ste 700	Project Number:	783336	Received: 9/29/99
Renton, WA 98055	Project Manager:	Jerry Harris	Reported: 10/6/99 15:57

Volatile Petroleum Products and BTEX by NWTPH-Gx and EPA 8021B
North Creek Analytical - Bothell

Analyte	Batch Number	Date Prepared	Date Analyzed	Surrogate Limits	Reporting Limit	Result	Units	Notes*
02-MW-1			B909648-01				Water	
Gasoline Range Hydrocarbons	1090003	10/1/99	10/1/99		50.0	172	ug/l	
Benzene	"	"	"		0.500	72.9	"	
Toluene	"	"	"		0.500	0.811	"	
Ethylbenzene	"	"	"		0.500	ND	"	
Xylenes (total)	"	"	"		1.00	ND	"	
Surrogate: 4-BFB (FID)	"	"	"	*50.0-150*		*91.7*	*%*	
Surrogate: 4-BFB (PID)	"	"	"	*50.0-150*		*83.8*	"	
02-MW-2			B909648-02				Water	
Gasoline Range Hydrocarbons	1090003	10/1/99	10/1/99		50.0	ND	ug/l	
Benzene	"	"	"		0.500	ND	"	
Toluene	"	"	"		0.500	ND	"	
Ethylbenzene	"	"	"		0.500	ND	"	
Xylenes (total)	"	"	"		1.00	ND	"	
Surrogate: 4-BFB (FID)	"	"	"	*50.0-150*		*82.9*	*%*	
Surrogate: 4-BFB (PID)	"	"	"	*50.0-150*		*85.8*	"	
02-MW-3			B909648-03				Water	
Gasoline Range Hydrocarbons	1090003	10/1/99	10/2/99		50.0	160	ug/l	
Benzene	"	"	"		0.500	56.7	"	
Toluene	"	"	"		0.500	1.13	"	
Ethylbenzene	"	"	"		0.500	ND	"	
Xylenes (total)	"	"	"		1.00	1.14	"	
Surrogate: 4-BFB (FID)	"	"	"	*50.0-150*		*91.2*	*%*	
Surrogate: 4-BFB (PID)	"	"	"	*50.0-150*		*81.7*	"	
02-MW-4			B909648-04				Water	
Gasoline Range Hydrocarbons	1090003	10/1/99	10/2/99		250	3700	ug/l	
Benzene	"	"	"		30.0	ND	"	I
Toluene	"	"	"		2.50	185	"	
Ethylbenzene	"	"	"		2.50	226	"	
Xylenes (total)	"	"	"		5.00	473	"	
Surrogate: 4-BFB (FID)	"	"	"	*50.0-150*		*99.6*	*%*	
Surrogate: 4-BFB (PID)	"	"	"	*50.0-150*		*94.6*	"	
02-MW-5			B909648-05				Water	
Gasoline Range Hydrocarbons	1090003	10/1/99	10/2/99		50.0	ND	ug/l	
Benzene	"	"	"		0.500	2.84	"	

North Creek Analytical - Bothell

**Refer to end of report for text of notes and definitions.*

Joy B Chang, Project Manager

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IT Corporation - Renton	Project:	Time Oil #2750	Sampled: 9/28/99
555 South Renton Village Place, Ste 700	Project Number:	783336	Received: 9/29/99
Renton, WA 98055	Project Manager:	Jerry Harris	Reported: 10/6/99 15:57

Volatile Petroleum Products and BTEX by NWTPH-Gx and EPA 8021B
North Creek Analytical - Bothell

Analyte	Batch Number	Date Prepared	Date Analyzed	Surrogate Limits	Reporting Limit	Result	Units	Notes*
02-MW-5 (continued)			B909648-05				Water	
Toluene	1090003	10/1/99	10/2/99		0.500	ND	ug/l	
Ethylbenzene	"	"	"		0.500	ND	"	
Xylenes (total)	"	"	"		1.00	ND	"	
Surrogate: 4-BFB (FID)	"	"	"	*50.0-150*		*100*	%	
Surrogate: 4-BFB (PID)	"	"	"	*50.0-150*		*90.8*	"	

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IT Corporation - Renton	Project:	Time Oil #2750	Sampled: 9/28/99
555 South Renton Village Place, Ste 700	Project Number:	783336	Received: 9/29/99
Renton, WA 98055	Project Manager:	Jerry Harris	Reported: 10/6/99 15:57

Semivolatile Petroleum Products by NWTPH-Dx with Acid/Silica Gel Clean-up
North Creek Analytical - Bothell

Analyte	Batch Number	Date Prepared	Date Analyzed	Surrogate Limits	Reporting Limit	Result	Units	Notes*
02-MW-1			B909648-01				Water	
Diesel Range Hydrocarbons	1090047	10/2/99	10/4/99		0.250	ND	mg/l	
Lube Oil Range Hydrocarbons	"	"	"		0.500	ND	"	
Surrogate: 2-FBP	"	"	"	*50.0-150*		*52.8*	%	
02-MW-2			B909648-02				Water	
Diesel Range Hydrocarbons	1090047	10/2/99	10/4/99		0.250	ND	mg/l	
Lube Oil Range Hydrocarbons	"	"	"		0.500	ND	"	
Surrogate: 2-FBP	"	"	"	*50.0-150*		*51.8*	%	
02-MW-3			B909648-03				Water	
Diesel Range Hydrocarbons	1090047	10/2/99	10/4/99		0.250	ND	mg/l	
Lube Oil Range Hydrocarbons	"	"	"		0.500	ND	"	
Surrogate: 2-FBP	"	"	"	*50.0-150*		*57.9*	%	
02-MW-4			B909648-04				Water	
Diesel Range Hydrocarbons	1090047	10/2/99	10/4/99		0.250	ND	mg/l	
Lube Oil Range Hydrocarbons	"	"	"		0.500	ND	"	
Surrogate: 2-FBP	"	"	"	*50.0-150*		*53.9*	%	
02-MW-5			B909648-05				Water	
Diesel Range Hydrocarbons	1090047	10/2/99	10/4/99		0.250	ND	mg/l	
Lube Oil Range Hydrocarbons	"	"	"		0.500	ND	"	
Surrogate: 2-FBP	"	"	"	*50.0-150*		*33.2*	%	*2*

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IT Corporation - Renton	Project:	Time Oil #2750	Sampled: 9/28/99
555 South Renton Village Place, Ste 700	Project Number:	783336	Received: 9/29/99
Renton, WA 98055	Project Manager:	Jerry Harris	Reported: 10/6/99 15:57

Total Metals by EPA 6000/7000 Series Methods
North Creek Analytical - Bothell

Analyte	Batch Number	Date Prepared	Date Analyzed	Specific Method	Reporting Limit	Result	Units	Notes*
02-MW-1			B909648-01				Water	
Lead	1090064	10/3/99	10/4/99	EPA 6020	0.00100	0.0360	mg/l	
02-MW-2			B909648-02				Water	
Lead	1090064	10/3/99	10/4/99	EPA 6020	0.00100	0.133	mg/l	
02-MW-3			B909648-03				Water	
Lead	1090064	10/3/99	10/4/99	EPA 6020	0.00100	ND	mg/l	
02-MW-4			B909648-04				Water	
Lead	1090064	10/3/99	10/4/99	EPA 6020	0.00100	0.0359	mg/l	
02-MW-5			B909648-05				Water	
Lead	1090064	10/3/99	10/4/99	EPA 6020	0.00100	0.0863	mg/l	

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IT Corporation - Renton	Project:	Time Oil #2750	Sampled: 9/28/99
555 South Renton Village Place, Ste 700	Project Number:	783336	Received: 9/29/99
Renton, WA 98055	Project Manager:	Jerry Harris	Reported: 10/6/99 15:57

Volatile Petroleum Products and BTEX by NWTPH-Gx and EPA 8021B/Quality Control
North Creek Analytical - Bothell

Analyte	Date Analyzed	Spike Level	Sample Result	QC Result	Units	Reporting Limit / Recov. Limits	Recov. %	RPD Limit	RPD %	Notes*
Batch: 1090003	Date Prepared: 10/1/99					Extraction Method: EPA 5030B (P/T)				
Blank	1090003-BLK1									
Gasoline Range Hydrocarbons	10/1/99			ND	ug/l	50.0				
Benzene	"			ND	"	0.500				
Toluene	"			ND	"	0.500				
Ethylbenzene	"			ND	"	0.500				
Xylenes (total)	"			ND	"	1.00				
Surrogate: 4-BFB (FID)	"	*48.0*		*41.5*	"	*50.0-150*	*86.5*			
Surrogate: 4-BFB (PID)	"	*48.0*		*41.2*	"	*50.0-150*	*85.8*			
Blank	1090003-BLK2									
Gasoline Range Hydrocarbons	10/2/99			ND	ug/l	50.0				
Benzene	"			ND	"	0.500				
Toluene	"			ND	"	0.500				
Ethylbenzene	"			ND	"	0.500				
Xylenes (total)	"			ND	"	1.00				
Surrogate: 4-BFB (FID)	"	*48.0*		*43.8*	"	*50.0-150*	*91.2*			
Surrogate: 4-BFB (PID)	"	*48.0*		*41.2*	"	*50.0-150*	*85.8*			
LCS	1090003-BS1									
Gasoline Range Hydrocarbons	10/1/99	500		456	ug/l	70.0-130	91.2			
Surrogate: 4-BFB (FID)	"	*48.0*		*45.9*	"	*50.0-150*	*95.6*			
Duplicate	1090003-DUP1		B909613-02							
Gasoline Range Hydrocarbons	10/2/99		158000	160000	ug/l			25.0	1.26	
Surrogate: 4-BFB (FID)	"	*48.0*		*44.3*	"	*50.0-150*	*92.3*			
Duplicate	1090003-DUP2		B909613-04							
Gasoline Range Hydrocarbons	10/4/99		244000	242000	ug/l			25.0	0.823	
Surrogate: 4-BFB (FID)	"	*48.0*		*44.1*	"	*50.0-150*	*91.9*			
Matrix Spike	1090003-MS1		B909613-07							
Benzene	10/4/99	10.0	ND	8.84	ug/l	70.0-130	**88.4**			
Toluene	"	10.0	ND	9.09	"	70.0-130	**90.9**			
Ethylbenzene	"	10.0	ND	9.22	"	70.0-130	**92.2**			
Xylenes (total)	"	30.0	ND	27.8	"	70.0-130	**92.7**			
Surrogate: 4-BFB (PID)	"	*48.0*		*42.6*	"	*50.0-150*	*88.7*			

North Creek Analytical - Bothell

*Refer to end of report for text of notes and definitions.

Joy B Chang, Project Manager

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IT Corporation - Renton	Project:	Time Oil #2750	Sampled: 9/28/99
555 South Renton Village Place, Ste 700	Project Number:	783336	Received: 9/29/99
Renton, WA 98055	Project Manager:	Jerry Harris	Reported: 10/6/99 15:57

Volatile Petroleum Products and BTEX by NWTPH-Gx and EPA 8021B/Quality Control
North Creek Analytical - Bothell

Analyte	Date Analyzed	Spike Level	Sample Result	QC Result	Units	Reporting Limit / Recov. Limits	Recov. %	RPD Limit	RPD %	Notes*
Matrix Spike Dup	1090003-MSD1		B909613-07							
Benzene	10/4/99	10.0	ND	8.51	ug/l	70.0-130	85.1	15.0	3.80	
Toluene	"	10.0	ND	8.50	"	70.0-130	85.0	15.0	6.71	
Ethylbenzene	"	10.0	ND	8.60	"	70.0-130	86.0	15.0	6.96	
Xylenes (total)	"	30.0	ND	25.8	"	70.0-130	86.0	15.0	7.50	
Surrogate: 4-BFB (PID)	"	*48.0*		*41.6*	"	*50.0-150*	*86.7*			

North Creek Analytical - Bothell

**Refer to end of report for text of notes and definitions.*

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IT Corporation - Renton	Project:	Time Oil #2750	Sampled: 9/28/99
555 South Renton Village Place, Ste 700	Project Number:	783336	Received: 9/29/99
Renton, WA 98055	Project Manager:	Jerry Harris	Reported: 10/6/99 15:57

Semivolatile Petroleum Products by NWTPH-Dx with Acid/Silica Gel Clean-up Quality Control - North Creek Analytical - Bothell

Analyte	Date Analyzed	Spike Level	Sample Result	QC Result	Units	Reporting Limit / Recov. Limits	Recov. %	RPD Limit	RPD %	Notes*
Batch: 1090047	**Date Prepared: 10/2/99**					**Extraction Method: EPA 3520C/600 Series**				
Blank	**1090047-BLK1**									
Diesel Range Hydrocarbons	10/4/99			**ND**	mg/l	**0.250**				
Lube Oil Range Hydrocarbons	"			**ND**	"	**0.500**				
Surrogate: 2-FBP	"	*0.320*		*0.202*	"	*50.0-150*	*63.1*			
LCS	**1090047-BS1**									
Diesel Range Hydrocarbons	10/4/99	2.00		1.15	mg/l	50.0-150	57.5			
Surrogate: 2-FBP	"	*0.320*		*0.169*	"	*50.0-150*	*52.8*			
LCS Dup	**1090047-BSD1**									
Diesel Range Hydrocarbons	10/4/99	2.00		0.996	mg/l	50.0-150	49.8	50.0	14.4	3
Surrogate: 2-FBP	"	*0.320*		*0.176*	"	*50.0-150*	*55.0*			

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IT Corporation - Renton	Project:	Time Oil #2750	Sampled: 9/28/99
555 South Renton Village Place, Ste 700	Project Number:	783336	Received: 9/29/99
Renton, WA 98055	Project Manager:	Jerry Harris	Reported: 10/6/99 15:57

Total Metals by EPA 6000/7000 Series Methods/Quality Control
North Creek Analytical - Bothell

Analyte	Date Analyzed	Spike Level	Sample Result	QC Result	Units	Reporting Limit / Recov. Limits	Recov. %	RPD Limit	RPD %	Notes*
Batch: 1090064	**Date Prepared: 10/3/99**					**Extraction Method: EPA 3020A**				
Blank	1090064-BLK1									
Lead	10/4/99			ND	mg/l	0.00100				
Blank	1090064-BLK2									
Lead	10/4/99			ND	mg/l	0.00100				
LCS	1090064-BS1									
Lead	10/4/99	0.200		0.191	mg/l	80.0-120	95.5			
LCS	1090064-BS2									
Lead	10/4/99	0.200		0.209	mg/l	80.0-120	105			
Matrix Spike	1090064-MS1		B909586-06							
Lead	10/4/99	0.200	ND	0.211	mg/l	75.0-125	105			
Matrix Spike	1090064-MS2		B909648-03							
Lead	10/4/99	0.200	ND	0.213	mg/l	75.0-125	106			
Matrix Spike Dup	1090064-MSD1		B909586-06							
Lead	10/4/99	0.200	ND	0.213	mg/l	75.0-125	106	20.0	0.948	
Matrix Spike Dup	1090064-MSD2		B909648-03							
Lead	10/4/99	0.200	ND	0.209	mg/l	75.0-125	105	20.0	0.948	

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IT Corporation - Renton	Project: Time Oil #2750	Sampled: 9/28/99
555 South Renton Village Place, Ste 700	Project Number: 783336	Received: 9/29/99
Renton, WA 98055	Project Manager: Jerry Harris	Reported: 10/6/99 15:57

Notes and Definitions

#	Note
1	The reporting limit for this analyte has been raised to account for interference from coeluting organic compounds present in the sample.
2	Surrogate recovery is below the established control limit, result may be biased low. There was no sample left to perform re-extraction and analysis for confirmation.
3	The spike recovery for this QC sample is outside of established control limits. Review of associated batch QC indicates the recovery for this analyte does not represent an out-of-control condition for the batch.
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
Recov.	Recovery
RPD	Relative Percent Difference

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CHAIN OF CUSTODY REPORT

Work Order #: B909648

CLIENT: Time Oil

REPORT TO: Chris Storey (PM- Jerry Harris)

ADDRESS: 555 S. Renton Village Pl. Ste. 700 Renton, WA 98055-3295

PHONE: 425-228-9695 FAX: 425-228-9793

PROJECT NAME: Time Oil Seattle Terminal

PROJECT NUMBER: 783336

SAMPLED BY: Ryan Ross

INVOICE TO: IT Corporation 555 S. Renton Village Pl. Ste. 700 Renton, WA 98055-3295

P.O. NUMBER: 783336

TURNAROUND REQUEST in Business Days*

Organic & Inorganic Analyses: ■ 7 5 4 3 2 1 <1 (STD.)

Petroleum Hydrocarbon Analyses: 5 4 3 2 1 <1 (STD.)

OTHER Please Specify

*Turnaround Requests less than standard may incur Rush Charges.

REQUESTED ANALYSES

CLIENT SAMPLE IDENTIFICATION	SAMPLING DATE/TIME	TPH-G / BTEX 8020/8015		TPH-D (ext) NWTPH-Dx		Total Lead 7421									MATRIX (W, S, O)	# OF CONT.	COMMENTS	NCA WO ID
02-MW-1	9-28-99/ 1200	■		■		■									W	4	B909648	-01
02-MW-2	9-28-99/ 1135	■		■		■									W	4	↓	-02
02-MW-3	9-28-99/ 1215	■		■		■									W	4	↓	-03
02-MW-4	9-28-99/ 1115	■		■		■									W	4	↓	-04
02-MW-5	9-28-99/ 1050	■		■		■									W	4	↓	-05
0.																		
1.																		
2.																		
3.																		
4.																		
5.																		

RELINQUISHED BY: [signature] DATE: 9-29-99 RECEIVED BY: Cathy Nichols DATE: 9/29/99

PRINT NAME: Ryan Ross FIRM: EMCON/IT TIME: PRINT NAME: Cathy Nichols FIRM: NCA TIME: 1:35

RELINQUISHED BY: DATE: RECEIVED BY: DATE:

PRINT NAME: FIRM: TIME: PRINT NAME: FIRM: TIME:

ADDITIONAL REMARKS: Use Silica Gel clean-up for TPH-D extended

TEMP: [illegible]