August 12, 2003

ECOLOGI





# TIME OIL CO.

2737 WEST COMMODORE WAY P.O. BOX 24447

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

Mr. Norm Hepner Washington State Department of Ecology Central Region 15 West Yakima Avenue Yakima, WA 98902-3387

UST 4/08 ent Report Closed

RE:

Transmittal of UST Removal Site Assessment Report Time Oil Co. Property 01-068; Valley View Market 107 W. Lincoln Avenue; Sunnyside, Washington

Dear Mr. Hepner,

Please find enclosed herewith a copy of the above referenced report produced for Time Oil Co. by GeoEngineers, Inc. The following paragraphs present a brief summary of previous environmental work at the site, a summary of actions undertaken and conditions observed during the recent underground storage tank (UST) removal, our conclusions, and our plans for future work. The enclosed report contains a more detailed description of the project. Please contact me should you require any additional information.

# **Previous Environmental Work:**

Significant soil and groundwater impacts were identified beneath the subject site and neighboring properties during site assessment activities conducted between 1997 and 1999. The site assessment activities identified a large plume of gasoline affected groundwater which emanated from the on-site UST system and extended off-site to the southeast, under South First Street, and beneath a neighboring property owned by Washington Hills Cellars (WHC). Remedial pilot testing activities conducted in 1999 determined that dual phase extraction (DPE) would be a suitable technology to remediate soil and groundwater impacts beneath the site. The remedial test data was used to develop a Cleanup Action Plan (CAP) for installation and operation of a DPE system to address both on-site and off-site impacts.

A dual-phase extraction soil and groundwater remediation system was installed at the site between May and July 2000. The remediation system commenced full-time operation in early August 2000. The remediation system configuration and operating parameters have been discussed in detail in several previously submitted groundwater monitoring and operation & maintenance reports. Operation of the DPE system has resulted in nearly complete removal of free product accumulations and significant reductions in dissolved-phase groundwater contaminant concentrations over the past three years. With the recent completion of several remediation system enhancements we expect that remedial progress will accelerate over the upcoming quarters.

Time Oil Co. discontinued retail fuel sales at the site in early 2003 and the UST system was removed in April 2003. Information contained within the following paragraphs and enclosed report documents the UST decommissioning activities and environmental excavation work that followed. Please refer to the enclosed report for a more detailed description of the work.

# **UST Decommissioning:**

Two gasoline USTs, one dispenser island, and all corresponding product piping were removed from the site between April 15 and 17, 2003. The former UST and dispenser island locations are shown on Figure 2 of

the enclosed report. Each of the USTs displayed signs of minor pitting and scaling; however, no signs of advanced corrosion or tank failure were observed. All product lines removed from the excavation appeared to be in good condition. Field screening indicated the presence of hydrocarbon affected soil located near the UST fill ports and dispenser island. Thus, impacted soil was excavated from beneath the former UST system location prior to the collection of confirmation soil samples. Approximately 524 tons of petroleum impacted soil was excavated from beneath the site. The remedial excavation measured approximately 45 feet by 25 feet and was 23 feet deep at it's deepest point. The impacted soil was transported to Remtech Remediation Technologies, Inc.'s facility in Spokane, Washington for treatment by thermal desorbtion.

A total of seventeen soil samples were collected from the limits of the remedial excavation. The dimensions of the remedial excavation and soil sampling locations are shown on Figure 2 of the enclosed report. All recovered soil samples were analyzed for gasoline range petroleum hydrocarbons (GRPH); benzene, toluene, ethylbenzene, and total xylenes (BTEX), ethylene dibromide (EDB), ethylene dichloride (EDC), naphthalene, and methyl t-butyl ether (MTBE).

With the exception of 0.0031 mg/kg of toluene detected in a bottom sample collected from a depth of 23 feet below ground surface, none of the target analytes were detected in soil samples collected from the limits of the remedial excavation. The detected toluene concentration is significantly below it's State of Washington Model Toxics Control Act (MTCA) Method A Cleanup Level – Soil (Soil Cleanup Level).

# **Conclusions:**

Analytical testing of soil samples collected from the limits of the remedial excavation indicates that petroleum hydrocarbons were either not detected, or detected at concentrations below Soil Cleanup Levels, in all soil samples collected. These results indicate that the remedial excavation and in-situ remedial measures underway at the site since 2000 appear to have been successful in remediating soils beneath the former UST location.

# **Future Work:**

Significant groundwater impacts remain present beneath the site. Thus, the in-situ DPE remediation system will continue to operate for the foreseeable future. As noted above, we expect that remedial progress will accelerate due to several recently completed remediation system enhancements.

Quarterly groundwater monitoring and remediation system operation & maintenance activities will continue. Results of groundwater monitoring events conducted in April and July 2003 will be presented in forthcoming reports. The next groundwater monitoring event is scheduled for October 2003.

If you have any questions or comments concerning this letter, the report, or the information contained within either, please call me at (206) 286-6457.

Sincerely, Time Oil Co.

Scott B. Sloan, R.G., L.Hg.

Sr. Environmental Project Manager

Encl: "UST Removal Site Assessment" Report, July 29, 2003

cc: Mr. Bruce Williams – GeoEngineers, Inc. (w/o enclosure)



# UST 4108 - Closed

Report
UST Removal Site Assessment
Time Oil Property 01-068
107 West Lincoln
Sunnyside, Washington

July 29, 2003

For Time Oil Co.

GeoEngineers

File No. 1957-063-03



Consulting Engineers and Geoscientists

July 29, 2003

Time Oil Co. 2737 West Commodore Way Seattle, Washington 98199-1233

Attention: Scott Sloan

Report
UST Removal Site Assessment
Time Oil Property 01-068
107 West Lincoln
Sunnyside, Washington
File No. 1957-063-03

# INTRODUCTION

This report summarizes our observations during the removal of two underground storage tanks (USTs), a fuel dispenser island, and associated piping, and presents soil sampling results conducted at Time Oil Co. Property 01-068 (site). The site is located at 107 West Lincoln in Sunnyside, Washington, as shown on Vicinity Map, Figure 1. Key site features, including buildings, former site fueling equipment locations, and approximate sample locations are shown on Site and Exploration Map, Figure 2. The UST removal and sampling activities were conducted from April 15 through April 17, 2003.

# SITE BACKGROUND

Time Oil operated an underground storage tank (UST) system at the subject site since 1972 under a Special Purpose Agreement. Two gasoline USTs and a fuel dispenser island were installed in 1972 and were located in the north-northeast portion of the site.

Petroleum-impacted soil was encountered in 1996 during cathodic protection installation. In 1997, Time Oil Co. authorized site assessment activities including: a drive point assessment on-site and in First Street (east of the site); installation of eight groundwater monitoring wells (MW-1 through MW-8); soil and groundwater sampling and analysis; aquifer and soil vapor extraction (SVE) testing; and a limited sensitive receptor survey. Results of the assessment

GeoEngineers, Inc.

523 East 2nd Avenue

Spokane, WA 99202

Telephone (509) 363-3125

Fax (509) 363-3126

activities indicated: soil and groundwater beneath the site and east of the site were impacted with gasoline-range petroleum hydrocarbons (GRPH); groundwater flowed towards the southeast; liquid-phase hydrocarbons (LPH) were observed in several wells/drivepoints; SVE appeared to be a viable option to remediate vadose-zone soil; and use of the shallow aquifer within 0.5 miles of the site was limited to resource protection wells.

In August 1997, an SVE system was installed on-site. The SVE system consisted of underground piping connected to four on-site wells manifolded to a treatment compound located on the south side of the convenience store. A regenerative blower withdrew soil vapors from the four wells and directed the vapors through activated carbon scrub canisters. The remedial system operated until July 1998.

In 1998, Time Oil Co. authorized continued site assessment activities focused on the Washington Hills Cellars (WHC) property located east of First Street. In July and August 1998, several temporary well points (B-1 through B-11) and four additional groundwater monitoring wells (MW-9 through MW-12) were installed on the WHC property located east of the subject site. Soil and groundwater sampling was completed as part of the exploration activities. Results of the additional assessment activities indicated the gasoline plume in groundwater extended beneath the property and the downgradient extent of soil and groundwater contamination was identified.

On April 13 and 14, 1999, five additional 2-inch-diameter monitoring wells (MW-13 through MW-16 and SW-1) were installed. Wells MW-13, MW-14, and MW-15 are located on the WHC property, and MW-16 and SW-1 are located on the subject site. On May 1 and 2, 2000, two additional 2-inch-diameter monitoring wells (MW-17 and MW-18) and four, 4-inch-diameter recovery wells (RW-2 through RW-5) were installed on the WHC property; two 4-inch-diameter recovery wells (RW-6 and RW-7) were installed on First Avenue; and one 4-inch-diameter recovery well (RW-1) was installed on the subject property.

In May 2000, a bioslurp remedial system was installed at the site utilizing recovery wells RW-1 through RW-7 and monitoring wells MW-4, MW-5, and MW-9. The remediation system equipment is located on the WHC property within a locked remediation shed and fenced enclosure. The bioslurp remediation system was tested for operation on July 10, 2000, and began continuous operation on August 8, 2000.

Groundwater monitoring has been conducted at the site on a quarterly basis since March 1997. Prior to remedial system startup, LPH was observed in wells MW-4, MW-5, MW-6, MW-9, MW-13, RW-1, RW-2, RW-3, and RW-4. LPH thickness has ranged from a trace (iridescent sheen) to 3.11 feet (MW-6, 10/10/00). Petroleum hydrocarbons in groundwater samples in excess of Model Toxics Control Act (MTCA) Method A cleanup levels historically have been limited to wells MW-3, MW-14, MW-15, and MW-16, excluding wells with LPH. Following remedial startup, LPH has not been detected in remedial wells, and the thickness of LPH in monitoring well MW-6 has been reduced to approximately 0.10 feet. Monitoring well MW-6 has been purged during every site visit to remove petroleum-impacted groundwater.

The date of initial reporting of suspected or confirmed product release is unknown. The presence of the on-site monitoring well network since 1997 suggests that a suspected or confirmed release was reported to the Washington State Department of Ecology (Ecology) by Time Oil at or before that time. The Ecology site identification number is 004109. Time Oil is in the process of discontinuing the Special Purpose Agreement; hence, existing USTs and associated distribution equipment were scheduled to be removed in April 2003. We understand that the current quarterly groundwater monitoring schedule and remediation system operation and maintenance activities are expected to continue pending groundwater quality trends.

# **PROJECT UNDERSTANDING**

The purpose of our services was to document site conditions with respect to potential petroleum hydrocarbon impact following removal of the USTs and associated fueling equipment. Results of our activities can be utilized to document UST closure and to assist in the identification of potential hydrocarbon impacts.

# SCOPE OF SERVICES

Our activities included preparing a health and safety plan, observing UST removal, assessing potential petroleum-hydrocarbon impacts to soil, and providing UST closure documentation. Our services were performed in general accordance with the terms and conditions outlined in our environmental services contract between Time Oil Co. and GeoEngineers dated April 4, 2003. Our scope of services included the following:

- 1. Prepare a health and safety plan for GeoEngineers' field representatives to conduct UST removal observation and sampling activities.
- 2. Contact the one-call utility locating service prior to excavation of the USTs, dispenser island, and associated piping.
- 3. Observe removal of two USTs, fuel dispenser island, and product lines. Maintain a daily log of UST removal activities; documenting the condition of the tanks, fuel dispensers and product lines; and record soil conditions encountered.
- **4.** Field screen soil for the potential presence of petroleum hydrocarbons using visual observations, water sheen tests, and/or headspace vapor testing.
- 5. Prepare a scaled site plan showing approximate locations of UST system components and soil and water samples.
- 6. Collect soil samples from: beneath the USTs, the UST excavation sidewalls, beneath the product line excavation, beneath the fuel dispenser island, clean fill stockpile, and the stockpile of petroleum-impacted soil.
- 7. Submit selected soil samples to North Creek Analytical (NCA) in Bothell, Washington for chemical analysis of gasoline-range petroleum hydrocarbons (GRPH) by Northwest Method NWTPH-Gx and aromatic compounds benzene, toluene, ethylbenzene and total xylenes (BTEX) by Environmental Protection Agency (EPA) Method 8021B or 8260B. Additionally,

submit selected soil samples to be analyzed for EDB, EDC, MTBE, naphthalene by EPA Method 8260B and lead by EPA Method 6020.

- 8. Compile and complete UST closure documentation.
- Arrange and document petroleum-impacted soil transport activities with Pacific Environmental Services (PESCO) and off-site treatment activities with RemTech in Spokane, Washington.
- 10. Prepare a written report summarizing our field observations, analytical test results, and conclusions.

# SITE CONDITIONS AND ACTIVITIES

# SURFACE CONDITIONS

Time Oil Company Property No. 01-068 is located at 107 West Lincoln Avenue in Sunnyside, Washington. Two underground storage tanks (USTs) and product dispensers were located in the northern portion of the property. A convenience store and associated paved parking area occupy the remainder of the site. The ground surface at the site is paved with asphalt. The USTs were covered with concrete prior to their removal. The former locations of USTs and other site features are included in Figure 2.

# SUBSURFACE CONDITIONS

Upon our arrival at the site on April 15, 2003, the pavement over the USTs, portions of the fuel dispenser lines, and fuel dispenser pumps and islands had been removed by PESCO using a track-mounted excavator and rubber tire backhoe. Concrete and asphalt debris was removed from the site prior to excavation activities.

We observed the native soil on the sides of the UST and dispensing island excavations during the removal operations. The exposed soil generally consisted of a loose, brown fine sand with silt. No groundwater was encountered in the excavations. Native, undisturbed soil was encountered from a depth of 1-foot to the bottom of the excavations at approximately 13 feet below ground service (bgs) in the UST excavation and approximately 23 feet bgs in the dispenser island excavation.

# **UST REMOVAL ACTIVITIES**

Two USTs were located in the northern portion of the site. The single-wall steel tanks stored supreme unleaded, and regular unleaded gasoline. The regular unleaded gasoline tank (Tank # 316) was approximately 30-feet-long, 8-feet-diameter and had a capacity of approximately 12,000 gallons. The supreme unleaded fuel tank (Tank # 5) was approximately 20-feet-long and 8-feet in diameter and had a capacity of approximately 8,000 gallons.

PESCO excavated the surface material from the top of the tanks and removed portions of the product and vent lines prior to our arrival on April 15, 2003. PESCO performed the tank cleaning activities. On April 15, 2003, we observed PESCO inert and remove the two USTs using a track-mounted excavator under the supervision of the Sunnyside Fire Inspector. Both

USTs appeared to be in good condition and no discernable holes were observed. The USTs were loaded onto a flatbed trailer and transported by Mountain Oil to their facility in Walla Walla, Washington for destruction. UST closure documentation and tank destruction certificates are attached in Appendix A.

Field screening indicated the presence of petroleum-impacted soil near the southeast end of the 12,000 gallon UST and the dispensing island area. Field screening consisted of visual observation and headspace vapor measurements and was conducted during soil excavation to aid in identifying hydrocarbon-impacted soil. Attempts were then made to excavate areas of apparently petroleum-impacted soil. Soil excavated from the UST and dispensing island areas was stockpiled separately from the clean backfill material. Approximately 524 tons of soil were transported to RemTech in Spokane, Washington, for treatment by thermal desorption.

# SOIL SAMPLING ACTIVITIES

Following soil excavation, two composite samples of the imported backfill material (Backfill-1 and Backfill-2) were collected and submitted for laboratory analysis of NWTPH-Gx. Analytical results of the sample collected from the backfill material were below the MTCA Method A cleanup levels; therefore, the material was used as fill. The backfill was placed in the excavation in 18-inch lifts and compacted utilizing a double drum rolling compactor.

Six stockpile samples (P-1 through P-6) were collected from the hydrocarbon-impacted soil removed from the UST and dispensing island excavations. The profile samples were submitted for analysis of GRPH by NWTPH-Gx, BETX by EPA Method 8021B, and lead by EPA Method 6020. Seventeen soil samples were collected from bottom and sidewalls of the excavation and submitted for chemical analysis. Soil sample locations in the UST and fuel dispensing island locations are shown on Figure 2. Soil sampling procedures are included as Appendix B.

# SOIL ANALYTICAL RESULTS

Analytical results for soil profile samples P-1, P-2, P-5 and P-6 indicated the presence of one or more compounds exceeding MTCA Method A cleanup levels. Analytical results for all backfill and confirmation soil samples indicated that GRPH, BETX, naphthalene and MTBE were either not detected or detected at concentrations below applicable MTCA Method A cleanup levels. Results of soil sample analyses are presented in Table 1. A review of the analytical data quality and analytical certificates are included in Appendix C.

# CONCLUSIONS

Two USTs and associated fuel dispensing and product lines were removed from the site in April 2003. Field observations and analytical data from the UST removal activities conducted in April 2003 indicate the site meets the MTCA Method A cleanup criteria. No groundwater was encountered during site excavation activities.

Time Oil Company July 29, 2003 Page 6

# **LIMITATIONS**

We have prepared this report for use by the Time Oil Co., for the UST Removal and Site Assessment of Time Oil Property 01-068 in Sunnyside, Washington.

Within the limitations of scope, schedule and budget, our services have been executed in accordance with generally accepted environmental science practices in this area at the time this report was prepared. No warranty or other conditions, express or implied, should be understood.

We appreciate the opportunity to provide these services to Time Oil Co. Please call if you have questions regarding this report.

Respectfully submitted,

GeoEngineers, Inc.

Mark B. Engdahl Staff Geologist

Bruce D. Williams

Associate

EAH: MBE: tlm

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### Attachments

Figure 1 – Vicinity Map

Figure 2 – Site and Exploration Map

Table 1 - Summary of Chemical Analytical Results - Soil

Attachment A – UST Closure Documentation, Destruction Certificates and Soil Disposal Scale Logs

Attachment B – Soil Sampling Procedures

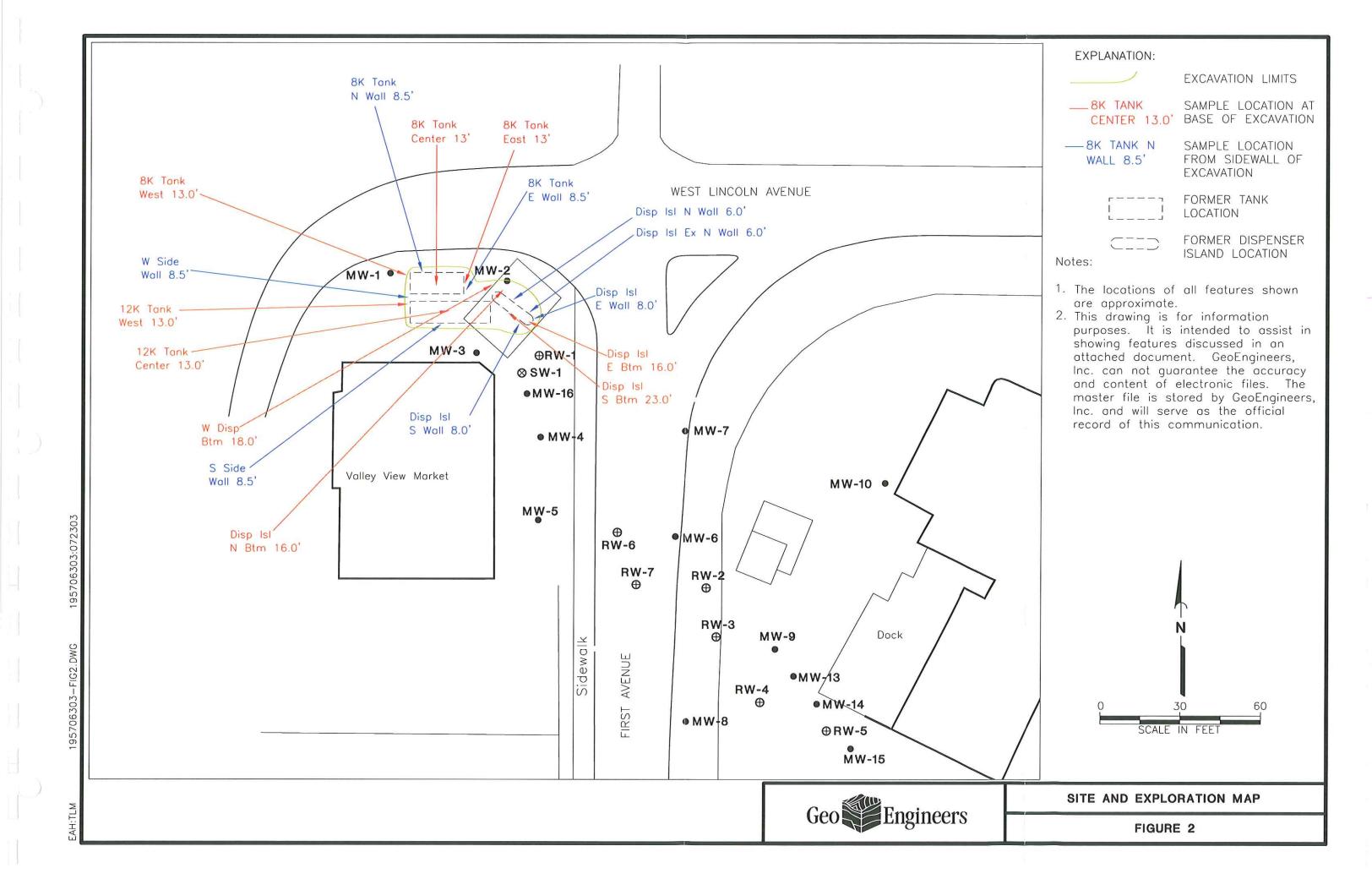
Attachment C - Chemical Analytical Data

Reference; All Topo Maps "Suunyside and Grandview, WA"



**VICINITY MAP** 

FIGURE 1



# TABLE 1

# SUMMARY OF CHEMICAL ANALYTICAL RESULTS - SOIL<sup>1</sup> TIME OIL COMPANY PROPERTY 01-068 SUNNYSIDE, WASHINGTON

LEAD <sup>7</sup>	(mg/kg)	9.48	33.8	12.6	12.5	18.2	9.69	ı	ı	ı	ı	I	ı	ı	E	ı	ı	ı	ı	ı	1	1	1	ı	1	1	250
METHYL TERT- BUTYL ETHER <sup>6</sup>	(mg/kg)	-	L	-		I	1	1	ı	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	0.00904	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	0.1
NAPH- THALENE <sup>6</sup>	(mg/kg)	1	1	1	-	-	1	ı	ı	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	വ
EDC	(mg/kg)	ı	Ē	1	1	1	1	1	1	<0.00125	<0.00125	<0.00125	<0.00125	<0.00125	<0.00125	<0.00125	<0.00125	<0.00125	<0.00125	<0.00125	<0.00125	<0.00125	<0.00125	<0.00125	<0.00125	<0.00125	N/L <sup>10</sup>
EDB4	(mg/kg)	ŀ	<b>L</b>	1	1	1	1	1	1	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	0.005
TOTAL XYLENES <sup>3</sup>	(mg/kg)	1,180	929	2.82	0.454	239	738	<0.100	<0.100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	6
ETHYL- BENZENE <sup>3</sup>	(mg/kg)	52.5	49.7	0.235	<0.0500	15.4	54	<0.0500	<0.0500	<0.00400	<0.00400	<0.00400	<0.00400	<0.00400	<0.00400	<0.00400	<0.00400	<0.00400	<0.00400	<0.00400	<0.00400	<0.00400	<0.00400	<0.00400	<0.00400	<0.00400	9
TOLUENE <sup>3</sup>	(mg/kg)	72.6	45.4	0.275	<0.0500	45.2	85.1	<0.0500	<0.0500	<0.00150	<0.00150	<0.00150	<0.00150	<0.00150	<0.00150	<0.00150	<0.00150	<0.00150	<0.00150	<0.00150	<0.00150	<0.00150	<0.00150	<0.00150	0.00311	<0.00150	7
BENZENE <sup>3</sup>	(mg/kg)	<0.600	<0.300	<0.0300	<0.0300	0.468	<0.600	<0.0300	<0.0300	<0.00150	<0.00150	<0.00150	<0.00150	<0.00150	<0.00150	<0.00150	<0.00150	<0.00150	<0.00150	<0.00150	<0.00150	<0.00150	<0.00150	<0.00150	<0.00150	<0.00150	0.03
GRPH <sup>2</sup>	(mg/kg)	11,600	8,620	35.9	6.14	1,300	4,070	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	100/30 <sup>9</sup>
DATE	SAMPLED	4/15/2003	4/15/2003	4/15/2003	4/15/2003	4/16/2003	4/16/2003	4/15/2003	4/15/2003	4/15/2003	4/15/2003	4/15/2003	4/15/2003	4/15/2003	4/15/2003	4/15/2003	4/15/2003	4/16/2003	4/16/2003	4/16/2003	4/16/2003	4/16/2003	4/16/2003	4/16/2003	4/16/2003	4/16/2003	rels
SAMPLE	NUMBER	P-1	P-2	P-3	P-4	P-5	P-6	Backfill-1	Backfill-2	8 K Tank Center 13'	8 K Tank West 13'	8 K Tank East 13'	8 K Tank N Wall 8.5'	S. Side Wall 8.5'	12 K Tank Center 13'	W Side Wall 8.5'	12 K Tank West 13'	8 K Tank E Wall 8.5'	Disp Isl N Wall 6.0'	Disp Isl Ex N Wall 10.0'	Disp Isl E Wall 8.0'	Disp Isl S Wall 8.0'	Disp Isl E Btm 16.0'	Disp Isl N Btm 16.0'	Disp Isl S Btm 23.0'	W Disp Btm 18.0	MTCA <sup>8</sup> Method A cleanup levels

# TABLE 1

# Notes:

- 1. Chemical analyses conducted by North Creek Analytical of Bothell, Washington.
- GRPH = Gasoline-range petroleum hydrocarbons by Northwest Method NWTPH-Gx.
- Benzene, toluene, ethylbenzene, and total xylenes as analyzed by EPA Method 8021B or 8260B.
  - EDB = 1,2-Dibromoethane as analyzed by EPA Method 8260B.
- EDC = 1,2-Dichloroethane as analyzed by EPA Method 8260B.
- Methyl tert-butyl ether and Naphthalene analyzed by EPA 8260B.
- Lead analyzed by EPA 6020.
- MTCA = Washington State, Model Toxics Control Act, Method A Cleanup levels
- 9. 100 mg/kg when benzene is not present and 30 mg/kg when benzene is present.
- 10. N/L = Not Listed

Bold indicates analyte detection above cleanup criteria.

mg/kg = milligrams per kilogram.

-- = not analyzed

# ATTACHMENT A

# **ATTACHMENT A**

UST CLOSURE DOCUMENTATION, DESTRUCTION CERTIFICATES AND SOIL DISPOSAL SCALE LOGS



# UNDERGROUND STORAGE TANK Site Check/Site Assessment Checklist

FOR	OFFICE USE ONLY
Site #:	
Owner #: _	

# INSTRUCTIONS

When a release has not been confirmed and reported, this Site Check/Site Assessment Checklist must be completed and signed by a person certified by IFCI or a Washington registered professional engineer who is competent, by means of examination, experience, or education, to perform site assessments. The results of the site check or site assessment must be included with this checklist. This form must be submitted to Ecology at the address shown below within 30 days after completion of the site check/site assessment.

<u>SITE INFORMATION:</u> Include the Ecology site ID number if the tanks are registered with Ecology. This number may be found on the tank owner's invoice or tank permit.

<u>TANK INFORMATION:</u> Please list all tanks for which the site check or site assessment is being conducted. Use the owner's tank ID numbers if available, and indicate tank capacity and substance stored.

REASON FOR CONDUCTING SITE CHECK/SITE ASSESSMENT: Please check the appropriate item.

**CHECKLIST**: Please initial each item in the appropriate box.

<u>SITE ASSESSOR INFORMATION</u>: This information must be signed by the registered site assessor who is responsible for conducting the site check/site assessment.

Underground Storage Tank Section Department of Ecology PO Box 47655 Olympia WA 98504-7655

SITE INFORMATION		, 10
	C2 8-21	-03
te ID Number (Available	from Ecology if the tanks are registered): 60 4/09	4108
Site/Business Name: Un	lley View Market	
Site Address: 107 W		Telephone: (50) 837-38/7
Symyside	Street	
City	₩A State	9 8 9 4 4 Zip Code
	s	p
TANK INFORMATION	¥ ====================================	, , , , , , , , , , , , , , , , , , ,
Tank ID No.	Tank Capacity	Substance Stored
5	8,000 Gallon	Ca Soline
316	The second secon	Casoline
	12,000 Gallon	Casoline
108		
. '		
REASON FOR CONDUCT	TING SITE CHECK/SITE ASSESSMENT	
Check one:		*
Investigate suspec	cted release due to on-site environmental contamination.	
Investigate suspec	cted release due to off-site environmental contamination.	
Extend temporary	closure of UST system for more than 12 months.	
UST system under	rgoing change-in-service.	
X^_ UST system perma	anently closed with tank removed.	
Abandoned tank of		6
Required by Ecolo	gy or delegated agency for UST system closed before 12	2/22/88.
Other (describe): _		

CHECKLIST		0
Each item of the following checklist shall be initialed by the person registered with the Department of Ecology whose signature appears below.	YES	NO
1. The location of the UST site is shown on a vicinity map.	ME	•
A brief summary of information obtained during the site inspection is provided.     (see Section 3.2 in site assessment guidance)	ME	-
3. A summary of UST system data is provided. (see Section 3.1.)	ME	
4. The soils characteristics at the UST site are described. (see Section 5.2)	ME	
5. Is there any apparent groundwater in the tank excavation?	MIC	mE
6. A brief description of the surrounding land use is provided. (see Section 3.1)	ME	1110
7. Information has been provided indicating the number and types of samples collected, methods used to collect and analyze the samples, and the name and address of the laboratory used to perform the analyses.	ME	
8. A sketch or sketches showing the following items is provided:	1.0	
- location and ID number for all field samples collected	ME	
- groundwater samples distinguished from soil samples (if applicable)		
- samples collected from stockpiled excavated soil	NA	
- tank and piping locations and limits of excavation pit	ME	
- adjacent structures and streets	ME	
- approximate locations of any on-site and nearby utilities	ME	
9. If sampling procedures different from those specified in the guidance were used, has justification for using these alternative sampling procedures been provided? (see Section 3.4)	NA	
10. A table is provided showing laboratory results for each sample collected including; sample ID number, constituents analyzed for and corresponding concentration, analytical method and detection limit for that method.	ME	- 1
11. Any factors that may have compromised the quality of the data or validity of the results are described.	ME	
	11.2	
<ol> <li>The results of this site check/site assessment indicate that a confirmed release of a regulated substance has occurred.</li> </ol>	ME	
SITE ASSESSOR INFORMATION  Mark English  Person registered with Ecology  Business Addresses (2.3) (2.3)	11	5
Business Address: 523 E 2nd Ave Telephone: ()		
$\frac{\text{Office WA}}{\text{City}} = \frac{\text{WA}}{\text{State}} = \frac{9920}{7 \text{in Code}}$	2	
I hereby certify that I have been in responsible charge of performing the site check/site assessment described above. I submitting false information are subject to penalties under Chapter 173.360 WAC.	Persons	
4/28/03 Manh Signature of Person Registered with Ecology	4	



# UNDERGROUND STORAGE TANK Closure and Site Assessment Notice

Carana	ou an discount for the				
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****	Contract See	*****	20,000		7

See back of form for instructions

W.			Please ✓ the ar  Temporary  Tank Closur	□ Change	-In- 🗓 Permanent	Site Check/
	Site Info	rmation		ζ	Owner Information of the ed	one Assessment
(Available from Ecolog	98168651 y If the tanks are regis	tered)	UST		Time Oil Company	
Site/Business Na	me Valley V	iew Market			2737 W. Commodos	
Site Address	107 W. L	incoln			P.O. Box 24447	
City/State	Sunnyside	≥, WA	Clty/s	State	P.O. Box Seattle, WA	
Zip Code 9894	14 Teleph	one (509) 837-38			Telephone (206)	285-2400
Service Company	ನಾಹ s	Tank Closure	/Change-In-S	ervice Com		
ervisor's Sig	1	CUSICK (	Decor	nmissioning Cer	rtification No. 104466	53–26
Address		8th Avenue ghts, WA 99001	P.O. Box	Вох 639		
City	AMERICA TIET	Stone	To coo		Telephone (_509)_2	44-4898
		ineers - Bruce	Williams			
Address	523 E.	2nd Avenue	20.			_ *
City	Spokane	WA 99202 State	P.O. Bor Zip Code		Telephone (509_)36	3–3125
Tank ID	Closure Date	ank Informati	On Tank Capacity		at the Tim	ation Present e of Closure
1	4-15-03	Removal	8,000	Substance St Gasoline	ored 🔣 🔲 Yes No	
22	4-15-03	Removal .	12,000	Gasoline	Check unknow	
					sample results	have not yet been
			-		<u> </u>	
					If contamination release been re appropriate reg	
receive this docume	ont la na ana	-				

1205 North 11th P.O. Box 2216 Walla Walla, WA 99362-0362 FAX: (509) 529-9064



Phone (509) 527-3400 WA 800-572-8900 Out of State 800-541-7808

4-21-2003

PACIFIC ENVIRONMENTAL SERVICES COMPANY 8585 Highway 20 PO Box 2049 Port Townsend, Wa. 98368-0239

Phone: 1-800-222-9219
Fax: 1-509-244-4690

Attn: Bill

Re: TANK DISPOSAL

This is to certify that 1-8,000 gallon & 1-12,000 tanks were removed from Time Oil's facility located at 107 W. Lincoln, Sunnyside, Wa. on April 15, 2003. These tanks were hauled to Walla Walla, Washington, cleaned & recycled to scrap.

Sincerely,

Roger Dillon Sales Manager

# REMTECH

SCALE LOG

Contract	NIC
Continact	140

MARK

Dale 4-16 + 2003

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TRUCK NO.	GROSS WEIGHT	TARE WEIGHT	NET WEIGHT
T#23	54760	25260	29500
P#23	45320	12360	32960
T# 17	43060	24140	18920
P# 17	28940	11280	17660
T#3	50820	24200	26620
P# 3	43880	12900	30980
T# 20	47280	23560	23720
P# 20	43460	13220	30240
1#15	48740	24280	24460
PH 15	48540	12680	358W
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COMMENTS	
TIME OTE	PCC
GEO-ENGINEERS	
	SUNNYSIDE, WA.
OTAL NO. OF TRUCKS	ATTENDANT BRUCE HAVENS

TOTAL NET WEIGHT 270,920 SIGNATURE Bruce Standard

# REMTECH

SCALE LOG

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Date 4-17 -- 2003

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TRUCK NO.	GROSS WEIGHT	TARE WEIGHT	NET WEIGHT -
T# 15	55820	24420	31400
P#15	46060	12720	33340
F# 16	54380	25640	28740
PH 16	48340	12640	35700
# 18	56520	24780	31740
Bt 18	48920	12800	36120
# 23	51800	24820	26980
Pi 23	42460	12380	30080
#3	51280	23940	27340
P# 3	41660	13220	28440
14 20	47500	23800	23700
P# 20	40900	12560	28340
T# 8	54800	28100	26700
A 8	36460	11860	24600
THE 6	49120	23480	25640
P#6	38440	12300	26140
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TOTAL NO. OF TRUCKS	ATTENDANT BRUCE HAVENS
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# REMITECH

SCALE LOG

Contract	Nic
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Date 4-21 + 2003

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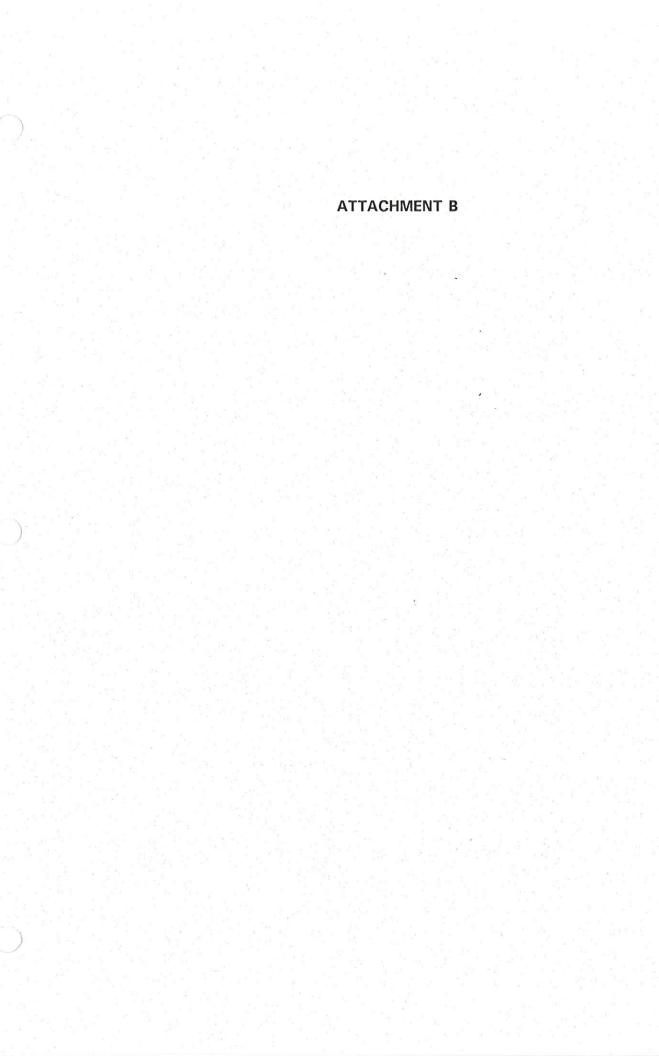
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TOTAL NO. OF TRUCKS	ATTENDANT BRUCE HAVEUS
OTAL NET WEIGHT _55,320	SIGNATURE RAUCE Harris

# REMTECH

# SCALE LOG

Contract No.	03-007	Sher	<sup>3</sup> 1	.cd			Dale_4-22	200 بنن <u>ہ</u> 200
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TRUCK NO.	GROSS WEIGHT	TARE WEIGI-TI	NET WEIGHT		TRUCK NO.	GROSS WEIGHT	TARE WEIGHT	NET WEIGHT
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# ATTACHMENT B

# SOIL SAMPLING PROCEDURES

A geologist from our staff selected the soil sample locations and documented site conditions encountered during the UST removal activities.

Discrete soil samples were obtained from the limits of the excavation and from the soil stockpiles. Soil samples were obtained directly from the excavation or stockpile using clean, new, disposable nitrile gloves or were obtained with the aid of the contractor's excavation equipment. Samples retrieved with the contractor's equipment were obtained from the center of the excavator bucket. New nitrile gloves were used before each sample collection. The samples were obtained from 1 foot below the surface of the soil stockpile.

Field screening was performed on a portion of each soil sample. The remaining portion of each soil sample selected for chemical analysis was transferred to sample jars provided by the laboratory. The sample jars were filled completely to minimize headspace. The samples were placed in a cooler with blue ice and packing material for transportation to the laboratory.

# FIELD SCREENING OF SOIL SAMPLES

Soil samples obtained from the excavations and stockpiles were screened in the field for evidence of petroleum-related impact using (1) visual observation, and (2) headspace vapor screening with a PhotoVac photoionization detector (PID).

Visual screening consists of evaluating the soil for stains indicative of petroleum-related contamination. Visual screening is generally more effective when contamination is related to heavy petroleum hydrocarbons such as motor oil or when hydrocarbon concentrations are high. Headspace vapor screening is a more sensitive method that has been effective in detecting contamination at concentrations less than regulatory cleanup guidelines.

Headspace vapor screening involves placing a soil sample in a plastic sample bag. Air is captured in the bag and the bag is shaken to expose the soil to the air trapped in the bag. The probe of a PhotoVac PID sample tube is inserted in the bag and the PID measures the concentration of combustible vapor in the air removed from the sample headspace. The PID measures vapor concentrations in parts per million (ppm) and is calibrated to isobutylene. The PID quantification range is between 0 and 2,000 ppm.

Field screening results are site-specific and vary with soil type, soil moisture content, temperature and type of contaminant.

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		ATTACHMENT C
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# ATTACHMENT C

# CHEMICAL ANALYTICAL DATA

# SAMPLES

Chain-of-custody procedures were followed during the transport of the field samples to the accredited analytical laboratory. Soil samples were held in cold storage pending extraction and/or analysis. The analytical results and quality control records are included in this appendix.

# ANALYTICAL DATA REVIEW

The laboratory maintains an internal quality assurance/quality control (QA/QC) program as documented in its laboratory quality assurance manual. The laboratory uses a combination of blanks, surrogate recoveries, duplicates, matrix spike recoveries, matrix spike duplicate recoveries, blank spike recoveries and blank spike duplicate recoveries to evaluate the analytical results. The laboratory also uses data quality goals for individual chemicals or groups of chemicals based on the long-term performance of the test methods. The data quality goals were included in the laboratory reports. The laboratory compared each group of samples with the existing data quality goals and noted any exceptions in the laboratory report. Any data quality exceptions documented by the accredited laboratory were reviewed by GeoEngineers and are addressed in the data quality exception section of this appendix.

# DATA QUALITY EXCEPTION SUMMARY

The laboratory noted the following data quality exceptions:

# Soil Sample Results

- The primary and secondary surrogate recoveries for samples P-1, P-2 and P-6 were not available due to the dilution required from high analyte concentrations and/or matrix interference.
- The primary surrogate recovery for sample P-5 could not be accurately quantified due to interference from coeluting compounds.
- The secondary surrogate recovery for sample P-5 was outside of established control limits due to matrix interference.
- The spike recovery for benzene in the matrix spike duplicate (3D16024-MSD1) was outside of established control limits; however, a review of the associated batch QC indicates the recovery does not represent an out-of-control condition for the batch.

Based on our data quality review, it is our opinion that the analytical data are of acceptable quality for their intended use.



 Seattle
 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244

 425.420.9200 fax 425.420.9210

 Spokane
 East 11115 Monlgomery, Suite B, Spokane, WA 99206-4776

509.924.9200 fax 509.924.9290

Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132 503.906.9200 fax 503.906.9210

Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711 541.383.9310 fax 541.382.7588

Anchorage 3209 Denali Street, Anchorage, AK 99503 907.334.9200 fax 907.334.9210

17 April 2003

Mark Engdahl Geo Engineers - Spokane 523 East 2nd Spokane, WA/USA 99202 RE: Time Oil-Sunnyside

Enclosed are the results of analyses for samples received by the laboratory on 04/16/03 09:00. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Amar Gill Project Manager



Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244 425.420.9200 fax 425.420.9210

Spokane East 11115 Montgomery, Suite B, Spokane, WA 99206-4776

509.924.9200 fax 509.924.9290

Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132

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Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711 541.383.9310 fax 541.382.7588

Anchorage 3209 Denali Street, Anchorage, AK 99503 907.334.9200 fox 907.334.0210

Geo Engineers - Spokane

523 East 2nd

Spokane WA/USA, 99202

Project: Time Oil-Sunnyside

Project Number: 19063-003-01

Project Manager: Mark Engdahl

Reported:

04/17/03 15:30

# ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
P-1	B3D0346-01	Soil	04/15/03 08:00	04/16/03 09:00
P-2	B3D0346-02	Soil	04/15/03 08:30	04/16/03 09:00
P-3	B3D0346-03	Soil	04/15/03 09:15	04/16/03 09:00
P-4	B3D0346-04	Soil	04/15/03 09:30	04/16/03 09:00
Backfill-1	B3D0346-05	Soil	04/15/03 08:45	04/16/03 09:00
Backfill-2	B3D0346-06	Soil	04/15/03 09:00	04/16/03 09:00

North Creek Analytical - Bothell



Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244 425.420.9200 fax 425.420.9210

Spokane East 11115 Montgomery, Suite B, Spokane, WA 99206-4776 509.924.9200 fax 509.924.9290

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541.383.9310 fax 541.382.7588 Anchorage 3209 Denali Street, Anchorage, AK 99503

907 334 9200 fax 907 334 9210

Geo Engineers - Spokane

523 East 2nd

Spokane WA/USA, 99202

Project: Time Oil-Sunnyside

Project Number: 19063-003-01 Project Manager: Mark Engdahl

Reported:

04/17/03 15:30

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
P-1 (B3D0346-01) Soil Sampled: 04/15	5/03 08:00	Received: 04	/16/03 09:00						
Gasoline Range Hydrocarbons	11600	100	mg/kg dry	20	3D16024	04/16/03	04/16/03	NWTPH-Gx/8021B	
Benzene	ND	0.600	п		11	11	Ħ	11	
Toluene	72.6	1.00	U	n	11	11	100	n	
Ethylbenzene	52.5	1.00	u.	31	11	II.	u	n	
Xylenes (total)	1180	10.0		100	U	•	04/16/03	"	
Surrogate: 4-BFB (FID)	%	59-125			"	"	04/16/03	"	S-01
Surrogate: 4-BFB (PID)	%	64-125			n	"	"	"	S-01
P-2 (B3D0346-02) Soil Sampled: 04/15	/03 08:30	Received: 04	/16/03 09:00			a			
Gasoline Range Hydrocarbons	8620	500	mg/kg dry	100	3D16024	04/16/03	04/16/03	NWTPH-Gx/8021B	
Benzene	ND	0.300	"	10	11	11	04/16/03	"	
Toluene	45.4	0.500	0.1	, ,			11	11.	
r dbenzene	49.7	0.500	n	"	u	ü	11	п	
nes (total)	676	10.0	11	100	"	"	04/16/03		
Surrogate: 4-BFB (FID)	%	59-125			"	"	"	n	S-01
Surrogate: 4-BFB (PID)	%	64-125			"	"	04/16/03	"	S-01
P-3 (B3D0346-03) Soil Sampled: 04/15	/03 09:15	Received: 04/	16/03 09:00		2%				7. 65
Gasoline Range Hydrocarbons	35.9	5.00	mg/kg dry	1	3D16024	04/16/03	04/16/03	NWTPH-Gx/8021B	
Benzene	ND	0.0300	ų	n	n .	11	II.	"	
Γoluene	0.275	0.0500	n	11	"	11	n:	н	1/2
Ethylbenzene	0.235	0.0500		311	11		11	n	
Xylenes (total)	2.82	0.100	11	н	ü	n	n	п	
Surrogate: 4-BFB (FID)	94.3 %	59-125			"	"	"	n .	
Surrogate: 4-BFB (PID)	102 %	64-125			"	111	"	"	
Y .									

North Creek Analytical - Bothell



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Spokane East 11115 Montgomery, Suite B, Spokane, WA 99206-4776 509.924.9200 fax 509.924.9290

Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132

503.906.9200 fax 503.906.9210

Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711 541.383.9310 fax 541.382.7588

Anchorage 3209 Denali Street, Anchorage, AK 99503 907.334.9200 fax 907.334.9210

Geo Engineers - Spokane

Project: Time Oil-Sunnyside

523 East 2nd

Project Number: 19063-003-01

Reported:

Spokane WA/USA, 99202

Project Manager: Mark Engdahl

04/17/03 15:30

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

Analyte	\$ 100.	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
P-4 (B3D0346-04) Soil	Sampled: 04/1	15/03 09:30	Received: 04	/16/03 09:00	f),	34				
Gasoline Range Hydroca	rbons	6.14	5.00	mg/kg dry	1	3D16024	04/16/03	04/16/03	NWTPH-Gx/8021B	
Benzene		ND	0.0300	11	**			10	n	
Toluene		ND	0.0500	n	11	11	ŭ	310	11	
Ethylbenzene		ND	0.0500	111	**	**	n.	n	11	
Xylenes (total)		0.454	0.100	"	"	и ,	n		п	
Surrogate: 4-BFB (FID)		79.7 %	59-125			"	"	"	an an	8
Surrogate: 4-BFB (PID)		91.2 %	64-125			"	. "	"	n	
Backfill-1 (B3D0346-05)	Soil Sample	d: 04/15/03 (	8:45 Receiv	ed: 04/16/03	09:00					
Gasoline Range Hydrocarb	oons	ND	5.00	mg/kg dry	1	3D16024	04/16/03	04/16/03	NWTPH-Gx/8021B	
Benzene		ND	0.0300		11	) u	. "	310	m.	
Toluene		ND	0.0500	TT.	n		"	u	u u	
Ethylbenzene		ND	0.0500	11	n	11	Ü	11		ā
Xylenes (total)		ND	0.100	11	"	1113	n	11/2	11	
Surrogate: 4-BFB (FID)		74.2 %	59-125	ighter of a figure of a		"	n.	n	"	
Surrogate: 4-BFB (PID)		87.1 %	64-125			"	"	"		
Backfill-2 (B3D0346-06)	Soil Sample	d: 04/15/03 0	9:00 Receiv	ed: 04/16/03	09:00		5 X			
Gasoline Range Hydrocarb	ons	ND	5.00	mg/kg dry	1	3D16024	04/16/03	04/16/03	NWTPH-Gx/8021B	
Benzene		ND	0.0300	11	n n	n	11	n	11	
Toluene		ND	0.0500	"	n	"	Ü	n	**	
Ethylbenzene		ND	0.0500	11	"	11	**		и	
Xylenes (total)		ND	0.100	u	n n	n	U	n	. 11	
Surrogate: 4-BFB (FID)		74.8 %	59-125			"	n	"	"	
Surrogate: 4-BFB (PID)		94.6 %	64-125			"	"		: <i>II</i> .	

North Creek Analytical - Bothell



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Geo Engineers - Spokane

523 East 2nd

Project: Time Oil-Sunnyside

Reported:

Spokane WA/USA, 99202

Project Number: 19063-003-01 Project Manager: Mark Engdahl

04/17/03 15:30

# Total Metals by EPA 6000/7000 Series Methods

# North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
P-1 (B3D0346-01) Soil	Sampled: 04/15/03 08:00	Received: 04	/16/03 09:00		y.			in an	a a
Lead	9.48	0.500	mg/kg dry	1	3D16034	04/16/03	04/17/03	EPA 6020	- Y
P-2 (B3D0346-02) Soil	Sampled: 04/15/03 08:30	Received: 04	16/03 09:00				di		
Lead	33.8	0.500	mg/kg dry	1	3D16034	04/16/03	04/17/03	EPA 6020	
P-3 (B3D0346-03) Soil	Sampled: 04/15/03 09:15	Received: 04	16/03 09:00				¥		
Lead	12.6	0.500	mg/kg dry	1	3D16034	04/16/03	04/17/03	EPA 6020	#II
P-4 (B3D0346-04) Soil	Sampled: 04/15/03 09:30	Received: 04/	16/03 09:00						
Lead	12.5	0.500	mg/kg dry	1	3D16034	04/16/03	04/17/03	EPA 6020	

th 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.

Amar Gill, Project Manager

North Creek Analytical, Inc. **Environmental Laboratory Network**  Page 4 of 10



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Geo Engineers - Spokane

523 East 2nd

Spokane WA/USA, 99202

Project: Time Oil-Sunnyside

Project Number: 19063-003-01

Project Manager: Mark Engdahl

Reported:

04/17/03 15:30

# Physical Parameters by APHA/ASTM/EPA Methods North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		1000000	NEWSTREE			Pareu			Tioles
P-1 (B3D0346-01) Soil	Sampled: 04/15/03 08:00	Received: 04	/16/03 09:00					17	11
Dry Weight	84.9	1.00	%	1	3D16025	04/16/03	04/16/03	BSOPSPL003R07	
P-2 (B3D0346-02) Soil	Sampled: 04/15/03 08:30	Received: 04	/16/03 09:00						
Dry Weight	74.7	1.00	%	1	3D16025	04/16/03	04/16/03	BSOPSPL003R07	
P-3 (B3D0346-03) Soil	Sampled: 04/15/03 09:15	Received: 04	/16/03 09:00	===	A				
Dry Weight	78.1	1.00	%	1	3D16025	04/16/03	04/16/03	BSOPSPL003R07	
P-4 (B3D0346-04) Soil	Sampled: 04/15/03 09:30	Received: 04	/16/03 09:00	30 19					
Dry Weight	77.9	1.00	%	1	3D16025	. 04/16/03	04/16/03	BSOPSPL003R07	
Backfill-1 (B3D0346-05	) Soil Sampled: 04/15/03 (	8:45 Receiv	ed: 04/16/03	09:00					
Dry Weight	79.4	1.00	%	1	3D16025	04/16/03	04/16/03	BSOPSPL003R07	
Backfill-2 (B3D0346-06	) Soil Sampled: 04/15/03 (	9:00 Receiv	ed: 04/16/03	09:00					
Dry Weight	82.7	1.00	%	1	3D16025	04/16/03	04/16/03	BSOPSPL003R07	

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Spokane East 11115 Montgomery, Suite B, Spokane, WA 99206-4776 509.924.9200 fax 509.924.9290

Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132

503.906.9200 fax 503.906.9210 Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711

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907 334 9200 fax 907 334 9210

Geo Engineers - Spokane

523 East 2nd

Spokane WA/USA, 99202

Project: Time Oil-Sunnyside

Project Number: 19063-003-01

Project Manager: Mark Engdahl

Reported:

04/17/03 15:30

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD	N
Data Data Data Data Data Data Data Data				Level	Result	70REC	Limits	RPD	Limit	Notes
Batch 3D16024: Prepared 04/16/03	Using I	EPA 5030E	3 (MeOH)							
Blank (3D16024-BLK1)										
Gasoline Range Hydrocarbons	ND	5.00	mg/kg							
Benzene	ND	0.0300	n			ē				
Toluene	ND	0.0500	00							
Ethylbenzene	ND	0.0500	"							
Xylenes (total)	ND	0.100	316							
Surrogate: 4-BFB (FID)	3.75		n	4.00		93.8	59-125			
Surrogate: 4-BFB (PID)	4.35		n	4.00		109	64-125			
LCS (3D16024-BS1)										
Gasoline Range Hydrocarbons	26.5	5.00	mg/kg	27.5		96.4	80-120		-	
Benzene	0.377	0.0300	"	0.400		94.2	80-120			
ne	1.93	0.0500	и	1.86		104	80-120			
oenzene, oenzene	0.515	0.0500	"	0.435		118	80-120		701	
(In the Control of th	2.50	0.100	n .	2.10		119	80-120			
'urrogate: 4-BFB (FID)	4.38		"	4.00		110	59-125			
urrogate: 4-BFB (PID)	4.38		n	4.00		110	64-125			
CS Dup (3D16024-BSD1)										
Sasoline Range Hydrocarbons	26.1	5.00	mg/kg	27.5		94.9	80-120	1.52	40	
Benzene	0.370	0.0300	"	0.400		92.5	80-120	1.87	40	
'oluene	1.90	0.0500	Ü	1.86		102	80-120	1.57	40	
thylbenzene	0.507	0.0500		0.435		117	80-120	1.57	40	
ylenes (total)	2.46	0.100	**	2.10		117	80-120	1.61	40	
urrogate: 4-BFB (FID)	4.35	- 15 To	"	4.00		109	59-125	****		
urrogate: 4-BFB (PID)	4.39		""	4.00		110	64-125			
Iatrix Spike (3D16024-MS1)					Source: B					
asoline Range Hydrocarbons	36.9	5.00	mg/kg dry	35.3	6.14	87.1	53-120			
enzene	0.384	0.0300	III BY KG CITY	0.513	ND	74.9	71-119			
oluene	2.14	0.0500	11	2.38	0.0424	88.1	57-108			
thylbenzene	0.594	0.0500		0.558	0.0250	102	72-114			
ylenes (total)	3.34	0.100	и	2.70	0.454	107	68-112			
urrogate: 4-BFB (FID)	4.43		"	5.13	465-350 E	86.4	59-125			
	0.00			0.10		00.4	JY-12J			

North Creek Analytical - Bothell

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509.924.9200 fax 509.924.9290 Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132

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Geo Engineers - Spokane

523 East 2nd

Spokane WA/USA, 99202

Project: Time Oil-Sunnyside

Spike

Project Number: 19063-003-01

Project Manager: Mark Engdahl

Reported:

04/17/03 15:30

RPD

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

Reporting

Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch 3D16024: Prepared 04/16/03	Using E	PA 5030B	(МеОН)							1.00
Matrix Spike Dup (3D16024-MSD1)	ā.				Source: B	3D0346-0	04			1 5
Gasoline Range Hydrocarbons	33.2	5.00	mg/kg dry	35.3	6.14	76.7	53-120	10.6	40	
Benzene	0.334	0.0300	11	0.513	ND	65.1	71-119	13.9	40	Q-01
Toluene	1.89	0.0500	W.	2.38	0.0424	77.6	57-108	12.4	40	~
Ethylbenzene	0.531	0.0500	m S	0.558	0.0250	90.7 .	72-114	11.2	40	
Xylenes (total)	3.05	0.100	20	2.70	0.454	96.1	68-112	9.08	40	
Surrogate: 4-BFB (FID)	4.86		"	5.13		94.7	59-125			
Surrogate: 4-BFB (PID)	5.29	4.0	"	5.13		103	64-125			

North Creek Analytical - Bothell



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 fax 425.420.9210

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509.924.9200 fax 509.924.9290

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503.906.9200 fax 503.906.9210

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Geo Engineers - Spokane

Project: Time Oil-Sunnyside

523 East 2nd Spokane WA/USA, 99202

Project Number: 19063-003-01 Project Manager: Mark Engdahl

Reported:

04/17/03 15:30

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

		Reporting				Source		%REC		RPD		
Analyte		Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes	
Batch 3D16034:	Prepared 04/16/03	Using EPA 3050B				*						
Blank (3D16034-BI	LK1)							))			12.	
Lead		ND	0.500	mg/kg		4						
LCS (3D16034-BS1	1)											
Lead		38.8	0.500	mg/kg	40.4		96.0	80-120		12		
LCS Dup (3D16034	4-BSD1)											
Lead		41.5	0.500	mg/kg	42.6		97.4	80-120	6.72	20		
Matrix Spike (3D16				Source: B3D0346-01								
Lead		55.3	0.500	mg/kg dry	49.1	9.48	93.3	62-137		12		
Matrix Spike Dup (3D16034-MSD1)					Source: B3D0346-01							
Lead	500/10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 / 10.5 /	52.8	0.500	mg/kg dry	48.1	9.48	90.1	62-137	4.63	30		
r Spike (3D1603	4-PS1)		Source: B3D0346-01									
Lead	10	69.6	0.500	mg/kg dry	62.7	9.48	95.9	75-125			*	

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509.924.9200 fax 509.924.9290

Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132

503.906.9200 fax 503.906.9210

Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711 541.383.9310 fax 541.382.7588

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Geo Engineers - Spokane

523 East 2nd

Spokane WA/USA, 99202

Project: Time Oil-Sunnyside

Project Number: 19063-003-01

Project Manager: Mark Engdahl

Reported:

04/17/03 15:30

#### Physical Parameters by APHA/ASTM/EPA Methods - Quality Control North Creek Analytical - Bothell

	a.		Reporting		Spike	Source		%REC		RPD	
Analyte	-	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch 3D16025:	Prepared 04/16/03	Using Dr	y Weight				Li Ti			t/	

Blank (3D16025-BLK1)

Dry Weight

1.00

100

9/6

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Amar Gill, Project Manager

North Creek Analytical, Inc.
Environmental Laboratory Network

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509.924.9200 fax 509.924.9290

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Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711

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Geo Engineers - Spokane

523 East 2nd

S-01

Project: Time Oil-Sunnyside

Project Number: 19063-003-01

Reported:

Spokane WA/USA, 99202

Project Manager: Mark Engdahl

.04/17/03 15:30

#### **Notes and Definitions**

The spike recovery for this QC sample is outside of established control limits. Review of associated batch QC indicates the Q-01 recovery for this analyte does not represent an out-of-control condition for the batch.

The surrogate recovery for this sample is not available due to sample dilution required from high analyte concentration and/or

matrix interferences.

Analyte DETECTED

ND Analyte NOT DETECTED at or above the reporting limit

NR Not Reported

Sample results reported on a dry weight basis dry

RPD Relative Percent Difference

North Creek Analytical - Bothell

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North Creek Analytical, Inc. Environmental Laboratory Network Page 10 of 10



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FAX 906-9210 U174-074 VWJ FAX 924-9290 FAX 382-7588 (541) 383-9310 (509) 924-9200 UU24-U2+ (C2+) (503) 906-9200

> Work Order #: CHAIN OF CUSTODY REPORT

NCA WO DATE: 4/12/22 03 9 <1 TIME: 050" А O OF TURNAROUND REQUEST in Business Days\* \*Turnaround Reguests less than standard may incur Rush Charges <1 DATE: TIME: 850034p 5 4 3 2 COMMENTS Organic & Inorganic Analyses Petroleum Hydrocarbon Analyse Please Specify TEMP: B3:00346 7 OTHER CONT. 4 3 # OF 7 s FIRM: (W, S, O) MATRIX 91 S Athal Scott Stoam INVOICETO: The O'I Co RECEIVED BY: RECEIVED BY: REQUESTED ANALYSES PRINT NAME: PRINT NAME: DATE: 4/15/03 P.O. NUMBER: TIME: 1460 DATE: TIME: REPORT TO: May K Engdahl
ADDRESS: 523 F 2nd Ave Spokent, WA
99202 FAX: 378-3126 0060 FIRM: 5480 0830 0830 2160 0800 DATE/TIME SAMPLING 4/15/03 415/03 PHONE: 509-363-3125 PROJECT NUMBER: 19063 - 22-3 PROJECT NAME: Sunys; do SAMPLED BY: Maule G CLIENT SAMPLE IDENTIFICATION ADDITIONAL REMARKS: RELINQUISHED BY: RELINQUISHED BY: PRINT NAME: PRINT NAME: 1-0 P-2 COC REV 3/99 5-3 CLIENT: 14. 10. 12. 13.



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Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132

503.906.9200 fax 503.906.9210

Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711 541.383.9310 fax 541.382.7588

Anchorage 3209 Denali Street, Anchorage, AK 99503 907.334.9200 fax 907.334.9210

21 April 2003

Mark Engdahl Geo Engineers - Spokane 523 East 2nd Spokane, WA/USA 99202 RE: Time Oil-Sunnyside

Enclosed are the results of analyses for samples received by the laboratory on 04/18/03 09:00. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Amar Gill

Project Manager



Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711

541.383.9310 fax 541.382.7588

Anchorage 3209 Denali Street, Anchorage, AK 99503

907.334.9200 fax 907.334.9210

Geo Engineers - Spokane

523 East 2nd

Spokane WA/USA, 99202

Project: Time Oil-Sunnyside

Project Number: 19063-003-01

Project Manager: Mark Engdahl

Reported:

04/21/03 18:03

#### ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
P-5	B3D0422-01	Soil	04/16/03 13:30	04/18/03 09:00
P-6	B3D0422-02	Soil	04/16/03 15:30	04/18/03 09:00



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503.906.9200 fax 503.906.9210

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Geo Engineers - Spokane

523 East 2nd

Spokane WA/USA, 99202

Project: Time Oil-Sunnyside

Project Number: 19063-003-01

Project Manager: Mark Engdahl

Reported:

04/21/03 18:03

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

Analyte	D 14	Reporting	** **	D.11				10.	Varie
Allalyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
P-5 (B3D0422-01) Soil Sampled: 04	/16/03 13:30	Received: 04	/18/03 09:00						
Gasoline Range Hydrocarbons	1300	20.0	mg/kg dry	4	3D18002	04/18/03	04/18/03	NWTPH-Gx/8021B	
Benzene	0.468	0.120	11	**	.00	: n:	11		
Toluene	45.2	1.00	11	20	n	. "	04/18/03		
Ethylbenzene	15.4	0.200	Ħ	4	.0		04/18/03	n i	
Xylenes (total)	239	2.00	n	20	3110		04/18/03	п	
Surrogate: 4-BFB (FID)	%	59-125	121	¥	n	".	04/18/03	n	S-02
Surrogate: 4-BFB (PID)	126 %	64-125		9 e (e)	"	"	"	"	S-04
P-6 (B3D0422-02) Soil Sampled: 04	/16/03 15:30	Received: 04	/18/03 09:00						
Gasoline Range Hydrocarbons	4070	100	mg/kg dry	20 .	3D18002	04/18/03	04/18/03	NWTPH-Gx/8021B	
Benzene	ND	0.600	n	u.	u	u u	11	u	
Гoluene	85.1	1.00	n	"	11	n	"	_e ##	
vlbenzene	54.0	1.00	#	**	11	α	11	m.	
enes (total)	738	10.0	u u	100	10	u	04/21/03	n	
Surrogate: 4-BFB (FID)	%	59-125			"	n	04/18/03	· n	S-0.
Surrogate: 4-BFB (PID)	%	64-125			<i>II</i> 2	n	"	<b>u</b>	S-0

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Geo Engineers - Spokane

523 East 2nd

Spokane WA/USA, 99202

Project: Time Oil-Sunnyside

Project Number: 19063-003-01

Project Manager: Mark Engdahl

Reported:

04/21/03 18:03

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

7 - 14		Reporting							
Analyte	Resul	t Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
P-5 (B3D0422-01) Soil	Sampled: 04/16/03 13:30	Received: 04	/18/03 09:00		9 -			1	
Lead	18.2	0.500	mg/kg dry	1	3D18018	04/18/03	04/20/03	EPA 6020	
P-6 (B3D0422-02) Soil	Sampled: 04/16/03 15:30	Received: 04	/18/03 09:00						
Lead	9.69	0.500	mg/kg dry	1	3D18018	04/18/03	04/20/03	EPA 6020	

North Creek Analytical - Bothell

Amar Gill, Project Manager

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Geo Engineers - Spokane

523 East 2nd

Spokane WA/USA, 99202

Project: Time Oil-Sunnyside

Project Number: 19063-003-01

Project Manager: Mark Engdahl

Reported:

04/21/03 18:03

# Physical Parameters by APHA/ASTM/EPA Methods

North Creek Analytical - Bothell

	÷1	Reporting					-		
Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
P-5 (B3D0422-01) Soil	Sampled: 04/16/03 13:30	Received: 04/	18/03 09:00				55		
Dry Weight	86.1	1.00	%	1	3D18019	04/18/03	04/19/03	BSOPSPL003R07	
P-6 (B3D0422-02) Soil	Sampled: 04/16/03 15:30	Received: 04/	18/03 09:00		*1		12	30	
Dry Weight	80.7	1.00	%	1	3D18019	04/18/03	04/19/03	BSOPSPL003R07	

Narth Creek Analytical - Bothell



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503.906.9200 fax 503.906.9210

Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711

541.383.9310 fax 541.382.7588 Anchorage 3209 Denali Street, Anchorage, AK 99503 907,334,9200 fax 907,334,9210

Geo Engineers - Spokane

523 East 2nd

Spokane WA/USA, 99202

Project: Time Oil-Sunnyside

Project Number: 19063-003-01

Project Manager: Mark Engdahl

Reported:

04/21/03 18:03

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

	£5	Reporting		Spike	Source	20	%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch 3D18002: Prepared 04/1	8/03 Using E	PA 5030E	В (МеОН)					5.7		
Blank (3D18002-BLK1)			2.						82	
Gasoline Range Hydrocarbons	ND	5.00	mg/kg				13.7			
Benzene	ND	0.0300	11							
Toluene	ND	0.0500	н							
Ethylbenzene	ND	0.0500	n							
Xylenes (total)	ND	0.100	, m							
Surrogate: 4-BFB (FID)	3.90		"	4.00		97.5	59-125			
Surrogate: 4-BFB (PID)	4.06	ŧ	"	4.00	8	102	64-125			
LCS (3D18002-BS1)				32						
Gasoline Range Hydrocarbons	26.3	5.00	mg/kg	27.5		95.6	80-120			
Benzene	0.354	0.0300	, u	0.400		88.5	80-120			
Toluene	1.96	0.0500	. "	1.86		105	80-120			
Ethylbenzene	0.508	0.0500	31	0.435		117	80-120			
Kylenes (total)	2.42	0.100	310	2.10		115	80-120			
urrogate: 4-BFB (FID)	3.95		"	4.00	7.	98.8	59-125			
Surrogate: 4-BFB (PID)	3.83		n	4.00		95.8	64-125			
LCS Dup (3D18002-BSD1)										
Gasoline Range Hydrocarbons	25.5	5.00	mg/kg	27.5		92.7	80-120	3.09	40	
Benzene	0.330	0.0300	II.	0.400		82.5	80-120	7.02	40	
Toluene _	1.88	0.0500	11	1.86	8	101	80-120	4.17	40	
Ethylbenzene	0.490	0.0500	m .	0.435		113	80-120	3.61	40	
(ylenes (total)	2.33	0.100	n i	2.10		111	80-120	3.79	40	
Surrogate: 4-BFB (FID)	4.02		11	4.00		100	59-125			
urrogate: 4-BFB (PID)	3.85		"	4.00		96.2	64-125			
Matrix Spike (3D18002-MS1)			1*		Source: B	3D0360-0	13			
Gasoline Range Hydrocarbons	26.4	5.00	mg/kg dry	29.8	0.371	87.3	53-120			
Benzene	0.348	0.0300	"	0.434	ND	80.2	71-119			
oluene	2.00	0.0500	ï	2.01	0.00663	99.2	57-108			
thylbenzene	0.526	0.0500	E 0	0.471	ND	112	72-114			
(ylenes (total)	2.49	0.100	ű	2.28	ND	109	68-112			
urrogate: 4-BFB (FID)	4.01		"	4.34		92.4	59-125			
'urrogate: 4-BFB (PID)	3.95		"	4.34		91.0	64-125			

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.

Amar Gill, Project Manager

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503.906.9200 fax 503.906.9210

-Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711

541.383.9310 fax 541.382.7588

Anchorage 3209 Denali Street, Anchorage, AK 99503 907.334.9200 fax 907.334.9210

Geo Engineers - Spokane

523 East 2nd

Spokane WA/USA, 99202

Project: Time Oil-Sunnyside

Project Number: 19063-003-01

Project Manager: Mark Engdahl

Reported:

04/21/03 18:03

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 3D18002: Prepared 04/18/03	Using E	PA 5030B	(MeOH)							
Matrix Spike Dup (3D18002-MSD1)			(47)		Source: B	3D0360-	03			
Gasoline Range Hydrocarbons	25.8	5.00	mg/kg dry	29.8	0.371	85.3	53-120	2.30	40	
Benzene	0.343	0.0300	H.	0.434	ND	79.0	71-119	1.45	40	
Toluene	1.98	0.0500		2.01	0.00663	98.2	57-108	1.01	40	
Ethylbenzene	0.539	0.0500	ii.	0.471	ND	114	72-114	2.44	40	
Xylenes (total)	2.46	0.100	.11%	2.28	ND	108	68-112	1.21	40	
Surrogate: 4-BFB (FID)	4.07		. ,	4.34	10	93.8	59-125			
Surrogate: 4-BFB (PID)	3.96		"	4.34		91.2	64-125			

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Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132

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Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711

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Anchorage 3209 Denali Street, Anchorage, AK 99503 907.334.9200 fax 907.334.9210

Geo Engineers - Spokane

523 East 2nd

Spokane WA/USA, 99202

Project: Time Oil-Sunnyside

Project Number: 19063-003-01

Project Manager: Mark Engdahl

Reported:

04/21/03 18:03

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

			Reporting		Spike	Source		%REC		RPD	
Analyte		Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch 3D18018:	Prepared 04/18/03	Using El	PA 3050B	1.1	3		m I				
Blank (3D18018-BI	LK1)				1)			2			
Lead	3*	ND	0.500	mg/kg						7.	
LCS (3D18018-BS1	1)										
Lead		40.6	0.500	mg/kg	40.8		99.5	80-120	1		2
LCS Dup (3D18018	B-BSD1)						4.7	0.5			
Lead		40.0	0.500	mg/kg	40.0	3 8	100	80-120	1.49	20	
Matrix Spike (3D18	8018-MS1)					Source: B	3D0382-	58			
Lead	D.	64.2	0.500	mg/kg dry	49.5	17.1	95.2	62-137			
Matrix Spike Dup (	(3D18018-MSD1)					Source: B	3D0382-	58			
Lead		71.6	0.500	mg/kg dry	50.6	17.1	108	62-137	10.9	30	9
Post Spike (3D1801	8-PS1)					Source: B	3D0382-	58			
Lead		127	0.500	mg/kg dry	114	17.1	96.4	75-125			

North Creek Analytical - Bothell

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509.924.9200 fax 509.924.9290

Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132

503.906.9200 fax 503.906.9210

Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711 541.383.9310 fax 541.382.7588

Anchorage 3209 Denali Street, Anchorage, AK 99503 907.334.9200 fax 907.334.9210

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523 East 2nd

Spokane WA/USA, 99202

Project: Time Oil-Sunnyside

Project Number: 19063-003-01

Project Manager: Mark Engdahl

Reported:

04/21/03 18:03

# Physical Parameters by APHA/ASTM/EPA Methods - Quality Control North Creek Analytical - Bothell

Analyte	£ .	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 3D18019:	Prepared 04/18/03	Using D	y Weight					1.0	7,	E h	
Blank (3D18019-BI	LK1)	·									
Dry Weight		90.8	1.00	0/							

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ne East 11115 Montgomery, Suite B, Spokane, WA 99206-4776

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Geo Engineers - Spokane

523 East 2nd

S-02

Spokane WA/USA, 99202

Project: Time Oil-Sunnyside

Project Number: 19063-003-01

Project Manager: Mark Engdahl

Reported:

04/21/03 18:03

#### **Notes and Definitions**

S-01 The surrogate recovery for this sample is not available due to sample dilution required from high analyte concentration and/or matrix interferences.

The surrogate recovery for this sample cannot be accurately quantified due to interference from coeluting organic compounds present in the sample.

S-04 The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.

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

RPD Relative Percent Difference

North Creek Analytical - Bothell

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Amar Gill, Project Manager

North Creek Analytical, Inc. Environmental Laboratory Network

Page 9 of 9

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CHAIN OF CUSTODY REPORT

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0176-... LA. .... 074 (c... 74x 924-9290 AX 906-9210 FAX 382-7588 (503) 906-9200

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541.383.9310 fax 541.382.7588

Anchorage 3209 Denali Street, Anchorage, AK 99503

907.334.9200 fax 907.334.9210

23 April 2003

Mark Engdahl Geo Engineers - Spokane 523 East 2nd Spokane, WA/USA 99202

RE: Time Oil-Sunnyside

Enclosed are the results of analyses for samples received by the laboratory on 04/16/03 09:40. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Amar Gill

Project Manager



425.420.9200 fax 425.420.9210

Spokane East 11115 Montgomery, Suite B, Spokane, WA 99206-4776 509.924.9200 fax 509.924.9290

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541.383.9310 fax 541.382.7588

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Geo Engineers - Spokane

523 East 2nd

Spokane WA/USA, 99202

Project: Time Oil-Sunnyside

Project Number: 19063-003-01

Project Manager: Mark Engdahl

Reported:

04/23/03 15:57

#### ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
8 K Tank Center 13'	B3D0372-01	Soil	04/15/03 11:30	04/16/03 09:40
8 K Tank West 13'	B3D0372-02	Soil	04/15/03 11:50	04/16/03 09:40
8 K Tank East 13'	B3D0372-03	Soil	04/15/03 12:00	04/16/03 09:40
8 K Tank N Wall 8.5'	B3D0372-04	Soil	04/15/03 11:40	04/16/03 09:40

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Amar Gill, Project Manager

North Creek Analytical, Inc. **Environmental Laboratory Network** 

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Geo Engineers - Spokane

523 East 2nd

Spokane WA/USA, 99202

Project: Time Oil-Sunnyside

Project Number: 19063-003-01

Project Manager: Mark Engdahl

Reported:

04/23/03 15:57

### Volatile Petroleum Products by NWTPH-Gx North Creek Analytical - Bothell

¥		Reporting							
Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
8 K Tank Center 13' (B3D0372-01) Soil	Sampled:	04/15/03 11:	30 Receive	d: 04/16/0	3 09:40	/!		į.	
Gasoline Range Hydrocarbons	ND	5.00	mg/kg dry	1	3D18002	04/18/03	04/18/03	NWTPH-Gx	
Surrogate: 4-BFB (FID)	76.9 %	59-125		.5) <del>(</del> 5)	"	"	"	""	
8 K Tank West 13' (B3D0372-02) Soil	Sampled: 04	1/15/03 11:50	Received:	04/16/03	09:40	38			
Gasoline Range Hydrocarbons	ND	5.00	mg/kg dry	1	3D18002	04/18/03	04/18/03	NWTPH-Gx	
Surrogate: 4-BFB (FID)	78.6 %	59-125	(1)		n	"	"	и	
8 K Tank East 13' (B3D0372-03) Soil	Sampled: 04	/15/03 12:00	Received:	04/16/03 0	9:40				
Gasoline Range Hydrocarbons	ND	5.00	mg/kg dry	1	3D18002	04/18/03	04/18/03	NWTPH-Gx	
Surrogate: 4-BFB (FID)	78.9 %	59-125	7015		"		"	n	
8 K Tank N Wall 8.5' (B3D0372-04) Soi	l Sampled:	04/15/03 11:	40 Receive	d: 04/16/0	3 09:40				
Gasoline Range Hydrocarbons	ND	5.00	mg/kg dry	1	3D18002	04/18/03	04/18/03	NWTPH-Gx	
Surrogate: 4-BFB (FID)	74.8 %	59-125			"	"	"	"	

North Creek Analytical - Bothell



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Anchorage 3209 Denali Street, Anchorage, AK 99503 907 334 9200 fax 907 334 9210

Geo Engineers - Spokane

523 East 2nd

Spokane WA/USA, 99202

Project: Time Oil-Sunnyside

Project Number: 19063-003-01

Project Manager: Mark Engdahl

Reported:

04/23/03 15:57

# Volatile Organic Compounds (Special List) per EPA Method 8260B (Low Soil Method) North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
K Tank Center 13' (B3D0372-01) Soil	Sampled:	04/15/03 11:	30 Receive	d: 04/16/0	3 09:40		2	2	ŭ
Benzene	ND	0.00150	mg/kg dry	1	3D21051	04/21/03	04/21/03	EPA 8260B	
1,2-Dibromoethane (EDB)	ND	0.00500	. 11	n n	n	u	m .	n	
,2-Dichloroethane	ND	0.00125	n	9		ii ii	u	n	
Lithylbenzene	ND	0.00400	n.	ï		.11	s m: 5	n	
Naphthalene	ND	0.00500	11	11	g	n	**	n	
oluene	ND	0.00150	"	11	ii .	11	n .	п	
otal Xylenes	ND	0.0100	n	u	"	TH.	u I		
Methyl tert-butyl ether	ND	0.00100	n:	n	и		n - ·		
'urrogate: 1,2-DCA-d4	106 %	60-140			n	"	"	"	2
'urrogate: Toluene-d8	99.6 %	60-140			"	"	"	<i>n</i>	
Surrogate: 4-BFB	92.6 %	60-140			"	n	H.	"	
"ank West 13' (B3D0372-02) Soil	Sampled: 04	1/15/03 11:50	Received:	04/16/03	09:40				
Jeene	ND	0.00150	mg/kg dry	1	3D21051	04/21/03	04/21/03	EPA 8260B	
1,2-Dibromoethane (EDB)	ND	0.00500	Ü	- 11	"	311	II	u u	
,2-Dichloroethane	ND	0.00125	"	ш	n	11	n ·	11	
thylbenzene	ND	0.00400	u u			11	ñ	11	
Naphthalene	ND	0.00500	n	11	311	311	g g	n.	
oluene	ND	0.00150	-11	11	11	11	ıı	ii i	
otal Xylenes	ND	0.0100	u	11	"	•	"	u i	
Methyl tert-butyl ether	ND	0.00100	n	3115	ir.	n	<u>u</u>	ij	
Turrogate: 1,2-DCA-d4	94.8 %	60-140			"	"	"	"	
urrogate: Toluene-d8	101 %	60-140			"	"	"	,,	
Surrogate: 4-BFB	91.2 %	60-140			"	"	"	"	

Creek Analytical - Bothell



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509.924.9200 fax 509.924.9290 Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132

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541.383.9310 fax 541.382.7588

Anchorage 3209 Denali Street, Anchorage, AK 99503 907 334 9200 fax 907 334 9210

Geo Engineers - Spokane

523 East 2nd Spokane WA/USA, 99202 Project: Time Oil-Sunnyside

Project Number: 19063-003-01

Project Manager: Mark Engdahl

Reported: 04/23/03 15:57

#### Volatile Organic Compounds (Special List) per EPA Method 8260B (Low Soil Method) North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
8 K Tank East 13' (B3D0372-03) Soil	Sampled: 04	/15/03 12:00	Received:	04/16/03 (	09:40				
Benzene	ND	0.00150	mg/kg dry	1	3D21051	04/21/03	04/21/03	EPA 8260B	
1,2-Dibromoethane (EDB)	ND	0.00500	11	n	n	n	11	n	
1,2-Dichloroethane	ND	0.00125		3115	11	n	11		
Ethylbenzene	ND	0.00400	и	11	n	<b>n</b> - 22	n	11	2
Naphthalene	ND	0.00500		п	n	u .	3 <b>H</b> S	**	
Toluene	ND	0.00150	an an	.11	11			n .	
Total Xylenes	ND	0.0100	11	n	11	11	11	n	
Methyl tert-butyl ether	ND	0.00100	ıı	п	л	**	ж.	- 11	
Surrogate: 1,2-DCA-d4	102 %	60-140			"	n	"	"	
Surrogate: Toluene-d8	101 %	60-140			"	"	"	"	
Surrogate: 4-BFB	92.4 %	60-140			"	n	"	"	
8 K Tank N Wall 8.5' (B3D0372-04) Soi	l Sampled:	04/15/03 11:	40 Receiv	ed: 04/16/0	03 09:40				1
Benzene	ND	0.00150	mg/kg dry	1	3D21051	04/21/03	04/21/03	EPA 8260B	
1,2-Dibromoethane (EDB)	ND	0.00500	u	11	n	u u		n	
1,2-Dichloroethane	ND	0.00125	II	н	H.	n	11	.10:	
Ethylbenzene	ND	0.00400	п	н	u	u.	" .	u	* =
Naphthalene	ND	0.00500	n	и	11	ű		n	
Toluene	ND	0.00150	н	**	11.	**	311.5	.10	
Total Xylenes	ND	0.0100	п	"	n	"	"	n	
Methyl tert-butyl ether	ND	0.00100	ж	11	11	u	"	n	
Surrogate: 1,2-DCA-d4	101 %	60-140			"	n.	"	n	
Surrogate: Toluene-d8	100 %	60-140			n	"	"	n	
Surrogate: 4-BFB	91.8 %	60-140			n	u	"	"	

North Creek Analytical - Bothell



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541.383.9310 fax 541.382.7588

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Geo Engineers - Spokane

523 East 2nd

Spokane WA/USA, 99202

Project: Time Oil-Sunnyside

Project Number: 19063-003-01

Project Manager: Mark Engdahl

Reported:

04/23/03 15:57

## Physical Parameters by APHA/ASTM/EPA Methods North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
8 K Tank Center 13' (B3D0372-01) Soil	Sampled: 0	4/15/03 11:3	0 Receiv	ed: 04/16/0:	3 09:40				
Dry Weight	75.8	1.00	%	1	3D20007	04/20/03	04/21/03	BSOPSPL003R07	· · · · · · · · · · · · · · · · · · ·
8 K Tank West 13' (B3D0372-02) Soil	Sampled: 04/	15/03 11:50	Received	l: 04/16/03 (	09:40				
Dry Weight	73.7	1.00	%	1	3D20007	04/20/03	04/21/03	BSOPSPL003R07	
8 K Tank East 13' (B3D0372-03) Soil S	Sampled: 04/1	5/03 12:00	Received:	04/16/03 0	9:40		#2 S4	11	
Dry Weight	74.6	1.00	%	1	3D20007	04/20/03	04/21/03	BSOPSPL003R07	
8 K Tank N Wall 8.5' (B3D0372-04) Soil	Sampled: (	4/15/03 11:4	0 Receiv	ed: 04/16/0	3 09:40	18 			æ
Dry Weight	77.7	1.00	%	1	3D20007	04/20/03	04/21/03	BSOPSPL003R07	

th Creek Analytical - Bothell



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Spokane East 11115 Montgomery, Suite B, Spokane, WA 99206-4776
509.924.9200 fax 509.924.9290

Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132

503.906.9200 fax 503.906.9210 Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711

541.383.9310 fax 541.382.7588

Anchorage 3209 Denali Street, Anchorage, AK 99503

907.334.9200 fax 907.334.9210

Geo Engineers - Spokane

523 East 2nd

Spokane WA/USA, 99202

Project: Time Oil-Sunnyside

Project Number: 19063-003-01 Project Manager: Mark Engdahl Reported:

04/23/03 15:57

### Volatile Petroleum Products by NWTPH-Gx - Quality Control North Creek Analytical - Bothell

		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch 3D18002: Prepared 04/18/03	Using E	PA 5030B	(MeOH)							
Blank (3D18002-BLK1)										
Gasoline Range Hydrocarbons	ND	5.00	mg/kg							
Surrogate: 4-BFB (FID)	3.90		"	4.00		97.5	59-125			
LCS (3D18002-BS1)		(6)								
Gasoline Range Hydrocarbons	26.3	5.00	mg/kg	27.5		95.6	80-120			
Surrogate: 4-BFB (FID)	3.95		"	4.00		. 98.8	59-125			
LCS Dup (3D18002-BSD1)					en 8	×	.# .#	4		
Gasoline Range Hydrocarbons	25.5	5.00	mg/kg	27.5	•0	92.7	80-120	3.09	40	
Surrogate: 4-BFB (FID)	4.02		. "	4.00	-	100	59-125	195 5	2"	
Matrix Spike (3D18002-MS1)					Source: B	3D0360-0	03			
Gasoline Range Hydrocarbons	26.4	5.00	mg/kg dry	29.8	0.371	87.3	53-120			
Surrogate: 4-BFB (FID)	4.01		"	4.34		92.4	59-125			
Matrix Spike Dup (3D18002-MSD1)					Source: B	3D0360-0	03			
Gasoline Range Hydrocarbons	25.8	5.00	mg/kg dry	29.8	0.371	85.3	53-120	2.30	40	
Surrogate: 4-BFB (FID)	4.07		"	4.34		93.8	59-125			

North Creek Analytical - Bothell

Amar Gill, Project Manager



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Spokane East 11115 Montgomery, Suite B, Spokane, WA 99206-4776

509.924.9200 fax 509.924.9290

Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132 503.906.9200 fax 503.906.9210 Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711 541.383.9310 fax 541.382.7588

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Geo Engineers - Spokane

Project: Time Oil-Sunnyside

523 East 2nd

Project Number: 19063-003-01

Reported:

Spokane WA/USA, 99202

Project Manager: Mark Engdahl

04/23/03 15:57

# Volatile Organic Compounds (Special List) per EPA Method 8260B (Low Soil Method) - Quality Control North Creek Analytical - Bothell

Analyte	*	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 3D21051:	Prepared 04/21/03	Using I	EPA 5035M								
Blank (3D21051-BL	K1)										
n-Hexane	2	ND	0.00100	mg/kg	5)				- 0 - 10 - 10 - 10 - 10 - 10 - 10 - 10		The state
Benzene		ND	0.00150	11							
Chlorobenzene		ND	0.00200	n						-5 ;	
1,2-Dibromoethane (ED	DB)	ND	0.00500	11							
1,2-Dichloroethane		ND	0.00125	n							
1,1-Dichloroethene		ND	0.00300						83		
Ethylbenzene		ND	0.00400	TI .		io:					
Naphthalene	**	ND	0.00500	.11							
Toluene		ND	0.00150	10							
Trichloroethene		ND	0.00250	11							
Total Xylenes		ND	0.0100	II .	35.5						
thyl tert-butyl ether		ND	0.00100	ũ							
Surrogate: 1,2-DCA-d4		0.0425		"	0.0400		106	60-140			
Surrogate: Toluene-d8		0.0394		"	0.0400		98.5	60-140			
Surrogate: 4-BFB		0.0387		"	0.0400		96.8	60-140			
LCS (3D21051-BS1)											
Benzene		0.0212	0.00150	mg/kg	0.0200	e	106	70-130			
Chlorobenzene	£	0.0207	0.00200	п	0.0200		104	70-130			
1,1-Dichloroethene		0.0250	0.00300	u .	0.0200		125	70-130			
Ethylbenzene		0.0211	0.00400	11	0.0200		106	70-130			
Toluene		0.0208	0.00150	n	0.0200		104	70-130			
Trichloroethene		0.0205	0.00250	11	0.0200		102	70-130		~	
Surrogate: 1,2-DCA-d4		0.0365		n.	0.0400		91.2	60-140			
Surrogate: Toluene-d8		0.0409		" .	0.0400		102	60-140			
Surrogate: 4-BFB		0.0371		"	0.0400		92.8	60-140			
LCS Dup (3D21051-I	BSD1)										
Benzene		0.0204	0.00150	mg/kg	0.0200		102	70-130	3.85	30	
Chlorobenzene		0.0198	0.00200	ii.	0.0200		99.0	70-130	4.44	30	
1,1-Dichloroethene		0.0247	0.00300	n	0.0200		124	70-130	1.21	30	
Ethylbenzene		0.0212	0.00400	ш	0.0200		106	70-130	0.473	30	
Toluene		0.0206	0.00150	"	0.0200		103	70-130	0.966	30	
Trichloroethene		0.0203	0.00250	e tt	0.0200		102	70-130	0.980	30	
Surrogate: 1,2-DCA-d4		0.0332		"	0.0400		83.0	60-140	5.		
10 11 14	1 D d H										

th 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.

Amar Gill, Project Manager

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Spokane East 11115 Montgomery, Suite B, Spokane, WA 99206-4776 509.924.9200 fax 509.924.9290

Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132 503.906.9200 fax 503.906.9210

Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711

541.383.9310 fax 541.382.7588

Anchorage 3209 Denali Street, Anchorage, AK 99503 907.334.9200 fax 907.334.9210

Geo Engineers - Spokane

523 East 2nd

Project: Time Oil-Sunnyside

Project Number: 19063-003-01

Reported:

Spokane WA/USA, 99202

Project Manager: Mark Engdahl

04/23/03 15:57

## Volatile Organic Compounds (Special List) per EPA Method 8260B (Low Soil Method) - Quality Control North Creek Analytical - Bothell

S			Reporting		Spike	Source		%REC		RPD	
Analyte		Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch 3D21051:	Prepared 04/21/03	Using E	PA 5035N	1							
LCS Dup (3D21051-	-BSD1)										
Surrogate: Toluene-d8		0.0424		mg/kg	0.0400	4.9	106	60-140			
Surrogate: 4-BFB		0.0368		n .	0.0400		92.0	60-140			
Matrix Spike (3D21)	051-MS1)					Source: B	3D0190-	01		9	
Benzene	R	0.0230	0.00150	mg/kg dry	0.0214	ND	107	60-140			
Chlorobenzene		0.0214	0.00200	U.	0.0214	ND	100	60-140			
1,1-Dichloroethene		0.0274	0.00300	11	0.0214	ND	128	60-140			
Ethylbenzene	¥	0.0230	0.00400	31.5	0.0214	ND	107	60-140			
Toluene		0.0221	0.00150	n.	0.0214	ND	103	60-140			
Trichloroethene		0.0228	0.00250	100	0.0214	ND	107	60-140			
Surrogate: 1,2-DCA-d4		0.0418		"	0.0427		97.9	60-140	15		
Surrogate: Toluene-d8		0.0436		n	0.0427		102	60-140			
Surrogate: 4-BFB		0.0392		"	0.0427	10	91.8	60-140			
Matrix Spike Dup (3	D21051-MSD1)				1	Source: B	3D0190-0	)1			
Benzene	25	0.0246	0.00150	mg/kg dry	0.0214	ND	115	60-140	6.72	30	
Chlorobenzene		0.0228	0.00200	11	0.0214	ND	107	60-140	6.33	30	
1,1-Dichloroethene		0.0292	0.00300	н	0.0214	ND	136	60-140	6.36	30	
Ethylbenzene		0.0232	0.00400	11	0.0214	ND	108	60-140	0.866	30	
Γoluene		0.0229	0.00150	311	0.0214	ND	107	60-140	3.56	30	
Trichloroethene		0.0238	0.00250	n n	0.0214	ND	111	60-140	4.29	30	
Surrogate: 1,2-DCA-d4		0.0476		"	0.0427		111	60-140			
Surrogate: Toluene-d8		0.0419		"	0.0427	247	98.1	60-140			
Surrogate: 4-BFB		0.0404		"	0.0427		94.6	60-140			

North Creek Analytical - Bothell



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Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132 503.906.9200 fax 503.906.9210

Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711

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Geo Engineers - Spokane Project: Time Oil-Sunnyside

523 East 2nd Spokane WA/USA, 99202 Project Number: 19063-003-01

Project Manager: Mark Engdahl

Reported:

04/23/03 15:57

# Physical Parameters by APHA/ASTM/EPA Methods - Quality Control North Creek Analytical - Bothell

Analyte	€ \$	Result	Reporting	TT 1.	Spike	Source	5 3 _ D	%REC		RPD	
Allalyte		Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch 3D20007:	Prepared 04/20/03	Using Dr	y Weight								
Blank (3D20007-BI	LK1)				N						
Dry Weight		100	1.00	%							

th Creek Analytical - Bothell

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Amar Gill, Project Manager

North Creek Analytical, Inc. **Environmental Laboratory Network**  Page 9 of 10



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Geo Engineers - Spokane

523 East 2nd

Spokane WA/USA, 99202

Project: Time Oil-Sunnyside

Project Number: 19063-003-01

Project Manager: Mark Engdahl

Reported:

04/23/03 15:57

#### **Notes and Definitions**

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

RPD

Relative Percent Difference

North Creek Analytical - Bothell

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V127-02+ 324-9290 FAX 906-9210 FAX 382-7588 (541) 383-9310 ひひみくつひょし (しょて) (509) 924-9200 (503) 906-9200

NCA WO 33 5 di < 1 Õ А TURNAROUND REQUEST in Business Days\* \*Turnaround Requests less than standord may incur Rush Charges. <1 B3D0372 Petroleum Hydrocarbon Analyses 5 4 3 2 COMMENTS Please Specify Organic & Inorganic Analyses B3D03 OTHER CONT. # OF N 10 7 (W, S, O) MATRIX Work Order #: 5 Ath! Satt Slean INVOICE TO: TIME O'I C ▼ REQUESTED ANALYSES CHAIN OF CUSTODY REPORT X 4 Y K P.O. NUMBER: 4 K V Spokene, WA 99202 × FAX: 363-3126 1 x 2-HALMIN × 1200 4/15/03 1130 4.8/ Tank NW. 118,5/4/15/03 1140 1150 DATE/TIME SAMPLING PROJECT NUMBER: 19063-003-6 Fredal ADDRESS: 523 F 2nd ALL REPORT TO: Man & Engolal CLIENT: GO FUS, LATEY S PHONE: 504-363- 3125 PROJECT NAME: SQUUYS, OC SKTan-Centralia 3.84 Tank Fast 13' SAMPLED BY: Maule 2. 8 Kran / West 13 IDENTIFICATION CLIENT SAMPLE 15. 10. Ξ 12 13. 14.

DATE: 4/6/23 TIME: 0400

FIRM: XX

275/2

RECEIVED BY:

DATE:4/15/03

TIME: 1400

FIRM: CALL

RELINQUISHED BY: Mad

PRINT NAME: My V RELINQUISHED BY: PRINT NAME:

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02 May 2003

Mark Engdahl Geo Engineers - Spokane 523 East 2nd Spokane, WA/USA 99202

RE: Time Oil-Sunnyside

Enclosed are the results of analyses for samples received by the laboratory on 04/18/03 09:00. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A

Amar Gill Project Manager



 Seattle
 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244

 425.420.9200 fax 425.420.9210

 Spokane
 East 11115 Monlgornery, Suite B, Spokane, WA 99206-4776

509.924.9200 fax 509.924.9290

Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132 503.906.9200 fax 503.906.9210

Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711 541.383.9310 fax 541.382.7588

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Geo Engineers - Spokane

523 East 2nd

Spokane WA/USA, 99202

Project: Time Oil-Sunnyside

Project Number: 19063-003-01

Project Manager: Mark Engdahl

Reported:

05/02/03 10:34

#### ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
S.Side Wall 8.5'	B3D0424-01	Soil	04/15/03 14:40	04/18/03 09:00
12 K Tank Center 13'	B3D0424-02	Soil	04/15/03 14:30	04/18/03 09:00
W Side Wall 8.5'	B3D0424-03	Soil	04/15/03 14:20	04/18/03 09:00
12 K Tank West 13'	B3D0424-04	Soil	04/15/03 14:10	04/18/03 09:00
8 K Tank EWall 8.5'	B3D0424-05	Soil	04/16/03 08:00	04/18/03 09:00
Disp Isl N Wall 6.0'	B3D0424-06	Soil	04/16/03 08:10	04/18/03 09:00
Disp Isl Ex N Wall 10.0'	B3D0424-07	Soil	04/16/03 08:20	04/18/03 09:00
Disp Isl E Wall 8.0'	B3D0424-08	Soil	04/16/03 11:00	04/18/03 09:00
Disp Isl S Wall 8.0'	B3D0424-09	Soil	04/16/03 12:40	04/18/03 09:00
Disp Isl E Btm 16.0'	B3D0424-10	Soil	04/16/03 13:00	04/18/03 09:00
Disp Isl N Btm 16.0'	B3D0424-11	Soil	04/16/03 14:10	04/18/03 09:00
Pisp Isl S Btm 23.0'	B3D0424-12	Soil	04/16/03 14:20	04/18/03 09:00
W Disp Btm 18.0'	B3D0424-14	Soil	04/16/03 15:00	04/18/03 09:00
		130,0.90	0 10/05 15.00	04110105 05.00

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509.924.9200 fax 509.924.9290

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Geo Engineers - Spokane

523 East 2nd

Spokane WA/USA, 99202

Project: Time Oil-Sunnyside

Project Number: 19063-003-01 Project Manager: Mark Engdahl Reported:

05/02/03 10:34

# Volatile Petroleum Products by NWTPH-Gx North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
S.Side Wall 8.5' (B3D0424-01) Soil	Sampled: 04/1	5/03 14:40	Received: 04	/18/03 09:	00	*			
Gasoline Range Hydrocarbons	ND	5.00	mg/kg dry	1	3D22004	04/22/03	04/23/03	NWTPH-Gx	
Surrogate: 4-BFB (FID)	77.1 %	59-125			"	"	"	. "	
12 K Tank Center 13' (B3D0424-02)	Soil Sampled	: 04/15/03 1	4:30 Receiv	ed: 04/18/	03 09:00				
Gasoline Range Hydrocarbons	ND	5.00	mg/kg dry	1	3D22004	04/22/03	04/23/03	NWTPH-Gx	
Surrogate: 4-BFB (FID)	75.5 %	59-125		*	n.	11	"	. "	
W Side Wall 8.5' (B3D0424-03) Soil	Sampled: 04/	15/03 14:20	Received: 0	4/18/03 09	:00	3	\$0.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00 \$1.00		
Gasoline Range Hydrocarbons	ND	5.00	mg/kg dry	1	3D22004	04/22/03	04/23/03	NWTPH-Gx	
Surrogate: 4-BFB (FID)	80.3 %	59-125			"	"	"	"	
12 K Tank West 13' (B3D0424-04) So	oil Sampled: (	04/15/03 14:	10 Received	: 04/18/03	09:00				
Gasoline Range Hydrocarbons	ND	5.00	mg/kg dry	1	3D22004	04/22/03	04/23/03	NWTPH-Gx	1
Surrogate: 4-BFB (FID)	73.8 %	59-125			"	. "	n	11	
8 K Tank EWall 8.5' (B3D0424-05) S	oil Sampled:	04/16/03 08:	00 Received	1: 04/18/03	09:00				
Gasoline Range Hydrocarbons	ND	5.00	mg/kg dry	1	3D22004	04/22/03	04/23/03	NWTPH-Gx	
Surrogate: 4-BFB (FID)	75.5 %	59-125			"	"	"	n ·	
Disp Isl N Wall 6.0' (B3D0424-06) Soi	l Sampled: 0	4/16/03 08:1	0 Received:	04/18/03	09:00				
Gasoline Range Hydrocarbons	ND	5.00	mg/kg dry		3D22004	04/22/03	04/23/03	NWTPH-Gx	
Surrogate: 4-BFB (FID)	84.5 %	59-125		4	"	"	"	"	•
Disp Isl Ex N Wall 10.0' (B3D0424-07	) Soil Sample	ed: 04/16/03	08:20 Recei	ved: 04/18	3/03 09:00				
Gasoline Range Hydrocarbons	ND	5.00	mg/kg dry	- W	3D22004	04/22/03	04/23/03	NWTPH-Gx	
Surrogate: 4-BFB (FID)	80.3 %	59-125			"	"	"	"	

North Creek Analytical - Bothell



Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244 425.420.9200 fax 425.420.9210

Spokane East 11115 Montgomery, Suite B, Spokane, WA 99206-4776 509.924.9200 fax 509.924.9290

Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132 503.906.9200 fax 503.906.9210

Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711

541.383.9310 fax 541.382.7588 Anchorage 3209 Denali Street, Anchorage, AK 99503

907.334.9200 fax 907.334.9210

Geo Engineers - Spokane

523 East 2nd

Spokane WA/USA, 99202

Project: Time Oil-Sunnyside

Project Number: 19063-003-01 Project Manager: Mark Engdahl

Reported: 05/02/03 10:34

# Volatile Petroleum Products by NWTPH-Gx North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Disp Isl E Wall 8.0' (B3D0424-08) Soil	Sampled:	04/16/03 11:0	00 Received	: 04/18/03	09:00	8			
Gasoline Range Hydrocarbons	ND	5.00	mg/kg dry	1	3D22004	04/22/03	04/23/03	NWTPH-Gx	
Surrogate: 4-BFB (FID)	74.5 %	59-125	(%)		"	n	-,,	"	
Disp Isl S Wall 8.0' (B3D0424-09) Soil	Sampled: (	04/16/03 12:4	0 Received	04/18/03	09:00				
Gasoline Range Hydrocarbons	ND	5.00	mg/kg dry	1	3D22004	04/22/03	04/23/03	NWTPH-Gx	111
Surrogate: 4-BFB (FID)	80.4 %	59-125			"	"	"	"	-
Disp Isl E Btm 16.0' (B3D0424-10) Soil	Sampled:	04/16/03 13:0	00 Received	: 04/18/03	09:00				
Gasoline Range Hydrocarbons	ND	5.00	mg/kg dry	1	3D22004	04/22/03	04/24/03	NWTPH-Gx	
Surrogate: 4-BFB (FID)	80.0 %	59-125				"	"	"	
Disp Isl N Btm 16.0' (B3D0424-11) Soil	Sampled:	04/16/03 14:1	10 Received	: 04/18/03	09:00				
Gasoline Range Hydrocarbons	ND	5.00	mg/kg dry	1	3D22004	04/22/03	04/24/03	NWTPH-Gx	
rrogate: 4-BFB (FID)	77.5 %	59-125			n.	"	"	"	
Disp Isl S Btm 23.0' (B3D0424-12) Soil	Sampled: (	04/16/03 14:2	0 Received:	04/18/03	09:00				
Gasoline Range Hydrocarbons	ND	5.00	mg/kg dry	-	3D22004	04/22/03	04/24/03	NWTPH-Gx	
Surrogate: 4-BFB (FID)	78.7 %	59-125			"	"	"	"	(0)
W Disp Btm 18.0' (B3D0424-14) Soil S	ampled: 04/	16/03 15:00	Received: 0	4/18/03 09	:00				
Gasoline Range Hydrocarbons	ND	5.00	mg/kg dry		3D22004	04/22/03	04/24/03	NWTPH-Gx	
Surrogate: 4-BFB (FID)	75.2 %	59-125			"	,,	"	n n	

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Amar Gill, Project Manager



425.420.9200 fax 425.420.9210

Spokane East 11115 Montgomery, Suite B, Spokane, WA 99206-4776 509.924.9200 fax 509.924.9290

Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132 503.906.9200 fax 503.906.9210

Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711

541.383.9310 fax 541.382.7588

Anchorage 3209 Denali Street, Anchorage, AK 99503 907 334 9200 fax 907 334 9210

Geo Engineers - Spokane

523 East 2nd

Spokane WA/USA, 99202

Project: Time Oil-Sunnyside

Project Number: 19063-003-01

Project Manager: Mark Engdahl

Reported:

05/02/03 10:34

### Volatile Organic Compounds (Special List) per EPA Method 8260B (Low Soil Method) North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
S.Side Wall 8.5' (B3D0424-01) Soil S	ampled: 04/1	5/03 14:40	Received: 04	/18/03 09:	00			1)	
Benzene	ND	0.00150	mg/kg dry	. 1	3D25005	04/24/03	04/25/03	EPA 8260B	
1,2-Dibromoethane (EDB)	ND	0.00500	11	u	w		11		
1,2-Dichloroethane	ND	0.00125	n .		"	u		iii -	
Ethylbenzene	ND	0.00400	n	п	:10	310	311.		*
Naphthalene	ND	0.00500	n	n	11		. 11		
Toluene	ND	0.00150		11	n	n.	п	11	
Total Xylenes	ND	0.0100	n	111	и,	n.	n	**	
Methyl tert-butyl ether	ND	0.00100	n		11	11		it	(4)
Surrogate: 1,2-DCA-d4	93.5 %	60-140	8		"	"	"	"	
Surrogate: Toluene-d8	98.7 %	60-140			"	n	"	"	
Surrogate: 4-BFB	101 %	60-140			"	"	"	"	
12 K Tank Center 13' (B3D0424-02) So	oil Sampled	: 04/15/03 14	:30 Receive	ed: 04/18/0	03 09:00				
Benzene	ND	0.00150	mg/kg dry	1	3D25005	04/24/03	04/25/03	EPA 8260B	
1,2-Dibromoethane (EDB)	ND	0.00500	n	11		311	100		
1,2-Dichloroethane	ND	0.00125	n ==	2	n n	11	ij	n .	
Ethylbenzene	ND	0.00400	n	u	"	"	ñ	110	
Naphthalene	ND	0.00500	ű	11.	**	11	<u> </u>	u	
Toluene	ND	0.00150	u	"		- и	<u> </u>	***	
Total Xylenes	ND	0.0100	"	**	**	II .	ii	HCO.	
Methyl tert-butyl ether	ND	0.00100	off	. m	u	н	Tig.	"	
Surrogate: 1,2-DCA-d4	79.7 %	60-140			"	n	"	"	
Surrogate: Toluene-d8	102 %	60-140			"	"	n	"	
Surrogate: 4-BFB	101 %	60-140			"	"	"	n.	

North Creek Analytical - Bothell



425.420.9200 fax 425.420.9210

Spokane East 11115 Montgomery, Suite B, Spokane, WA 99206-4776 509.924.9200 fax 509.924.9290

Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132

503.906.9200 fax 503.906.9210

Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711 541.383.9310 fax 541.382.7588

Anchorage 3209 Denali Street, Anchorage, AK 99503 907.334.9200 fax 907.334.9210

Geo Engineers - Spokane

523 East 2nd

Spokane WA/USA, 99202

Project: Time Oil-Sunnyside

Project Number: 19063-003-01

Project Manager: Mark Engdahl

Reported:

05/02/03 10:34

# Volatile Organic Compounds (Special List) per EPA Method 8260B (Low Soil Method) North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
W Side Wall 8.5' (B3D0424-03) Soil	Sampled: 04/	15/03 14:20	Received: 0	4/18/03 09	0:00				
Benzene	ND	0.00150	mg/kg dry	1	3D25005	04/24/03	04/25/03	EPA 8260B	
1,2-Dibromoethane (EDB)	ND	0.00500	"	11	"	"	U4/25/U5	BFA 8200B	
1,2-Dichloroethane	ND	0.00125	tr .	0	n			2) II	
Ethylbenzene	ND	0.00400	•	**	0	ж	11	"	
Naphthalene	ND	0.00500	11	≘11.	11	11	11	,	
Toluene	ND	0.00150	311	11		u	-11:	"	21
Total Xylenes	ND	0.0100	"		SHE	H.		u	
Methyl tert-butyl ether	ND	0.00100	"	n	11	11	11		
Surrogate: 1,2-DCA-d4	84.1 %	60-140			"	"	"	"	
Surrogate: Toluene-d8	102 %	60-140			"	11	"	"	
Surrogate: 4-BFB	103 %	60-140			211.	"	,,	,,	
K Tank West 13' (B3D0424-04) So	il Sampled: (	04/15/03 14:1	0 Received	: 04/18/03	09:00				
enzene	ND	0.00150	mg/kg dry	1	3D25005	04/24/03	04/25/03	EPA 8260B	
1,2-Dibromoethane (EDB)	ND	0.00500	"	11	"	11	"	EI A 8200B	
1,2-Dichloroethane	ND	0.00125	u	291		n	n n	"	
Ethylbenzene	ND	0.00400	g FH	п	ii .		n n	11	
Naphthalene	ND	0.00500	II	11	Ü		11	"	
Toluene	ND	0.00150	n .	:n:	н	п	11	ii	
Total Xylenes	ND	0.0100	H 12	н			11	er.	
Methyl tert-butyl ether	ND	0.00100	11	ii.	11	11	"	n	
Surrogate: 1,2-DCA-d4	99.4 %	60-140			"	"	"	"	
Surrogate: Toluene-d8	98.3 %	60-140			n	"	"	"	
Surrogate: 4-BFB	102 %	60-140			"	,,	"	u	

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Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244 425.420.9200 fax 425.420.9210

Spokane East 11115 Montgomery, Suite B, Spokane, WA 99206-4776

509.924.9200 fax 509.924.9290

Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132

503.906.9200 fax 503.906.9210

Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711

541.383.9310 fax 541.382.7588 Anchorage 3209 Denali Street, Anchorage, AK 99503 907.334.9200 fax 907.334.9210

Geo Engineers - Spokane

523 East 2nd

Spokane WA/USA, 99202

Project: Time Oil-Sunnyside

Project Number: 19063-003-01 Project Manager: Mark Engdahl Reported:

05/02/03 10:34

# Volatile Organic Compounds (Special List) per EPA Method 8260B (Low Soil Method) North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
8 K Tank EWall 8.5' (B3D0424-05) Soil	Sampled:	04/16/03 08:0	00 Receive	d: 04/18/0	3 09:00				
Benzene	ND	0.00150	mg/kg dry	1	3D25005	04/24/03	04/25/03	EPA 8260B	
1,2-Dibromoethane (EDB)	ND	0.00500	it .	311	·u		n	11	
1,2-Dichloroethane	ND	0.00125	11	••	н	11	11	n	
Ethylbenzene	ND	0.00400	u	11	.11	ű.	3110	u	
Naphthalene	ND	0.00500	п		п	u	. "	ii.	
Toluene	ND	0.00150	11	n	**	11	11	m.	
Total Xylenes	ND	0.0100		"	. 11	"	an:	n	
Methyl tert-butyl ether	ND	0.00100	11:	ju:	u	u.	n	11	
Surrogate: 1,2-DCA-d4	102 %	60-140	******		"	"	"	"	-
Surrogate: Toluene-d8	97.1 %	60-140			n	· ·	n	"	
Surrogate: 4-BFB	99.8 %	60-140			"	Ü	"	"	
Disp Isl N Wall 6.0' (B3D0424-06) Soil	Sampled: 0	4/16/03 08:10	Received	04/18/03	09:00				
Benzene	ND	0.00150	mg/kg dry	1	3D25014	04/25/03	04/25/03	EPA 8260B	
1,2-Dibromoethane (EDB)	ND	0.00500	"		ii '	jii	0	"	
1,2-Dichloroethane	ND	0.00125	u	11	u u	и	11	11	
Ethylbenzene	ND	0.00400	311.	"	· W	n	"		
Naphthalene	ND	0.00500	u	II	11	п	u	**	
Toluene	ND	0.00150	n.	11	11	n	"		
rotal Xylenes	ND	0.0100	11	n	11	"		ñ	
Methyl tert-butyl ether	ND	0.00100	· n	n.	11	11	211.	TI TI	
Surrogate: 1,2-DCA-d4	90.4 %	60-140			11	11	"	"	
Surrogate: Toluene-d8	99.6 %	60-140			n	"	"	, i	
Surrogate: 4-BFB	101 %	60-140			"	"	"	"	

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425.420.9200 fax 425.420.9210

Spokane East 11115 Montgomery, Suite B, Spokane, WA 99206-4776 509.924.9200 fax 509.924.9290

Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132 503.906.9200 fax 503.906.9210

Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711

541.383.9310 fax 541.382.7588

Anchorage 3209 Denali Street, Anchorage, AK 99503 907 334 9200 fax 907 334 9210

Geo Engineers - Spokane

523 East 2nd

Spokane WA/USA, 99202

Project: Time Oil-Sunnyside

Project Number: 19063-003-01

Project Manager: Mark Engdahl

Reported:

05/02/03 10:34

# Volatile Organic Compounds (Special List) per EPA Method 8260B (Low Soil Method) North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Disp Isl Ex N Wall 10.0' (B3D0424-07)	Soil Samp	led: 04/16/03	08:20 Rece	eived: 04/1	8/03 09:0	0	) <u>\$</u>		
Benzene	ND	0.00150	mg/kg dry	1	3D25014	04/25/03	04/25/03	EPA 8260B	
1,2-Dibromoethane (EDB)	ND	0.00500	11	0	11	U	11	11	
1,2-Dichloroethane	ND	0.00125	11	**	n e	ng.	n n	"	
Ethylbenzene	ND	0.00400	2	"	n	u	ñ	n:	
Naphthalene	ND	0.00500	11	11	<del>-</del> <del>-</del> <del>-</del> <del>-</del> <del>-</del> <del>-</del> <del>-</del> <del>-</del> <del>-</del>	.11	"		
Toluene	ND	0.00150	"	n	n	u	11	n	
Total Xylenes	ND	0.0100	"	i	11		n	n ×	
Methyl tert-butyl ether	0.00904	0.00100	II .	н	n.	u,			
Surrogate: 1,2-DCA-d4	99.0 %	60-140			, ,,	"	"	"	
Surrogate: Toluene-d8	98.0 %	60-140			"	"	"	"	
Surrogate: 4-BFB	109 %	60-140			"	"	"	"	
'sp Isl E Wall 8.0' (B3D0424-08) Soil	Sampled: 0	4/16/03 11:0	0 Received:	04/18/03	09:00				
nzene	ND	0.00150	mg/kg dry	1	3D29046	04/29/03	04/29/03	EPA 8260B	
1,2-Dibromoethane (EDB)	ND	0.00500	11	п	11	11	"	"	
1,2-Dichloroethane	ND	0.00125	n	11	11	ii	H:	10.	
Ethylbenzene	ND	0.00400	ii ii		11:	11	п	II .	
Naphthalene	ND	0.00500	"	tt	u ·	ü	**	"	
Toluene	ND	0.00150	п	u	"	ш	"	11	
Total Xylenes	ND	0.0100	II .	i n	n i	**	11	0	
Methyl tert-butyl ether	ND	0.00100	11	11	n n	11	"	u .	
Surrogate: 1,2-DCA-d4	92.9 %	60-140			"	"	"	"	
Surrogate: Toluene-d8	99.0 %	60-140			n	:#	"	<i>u</i>	
Surrogate: 4-BFB	96.9 %	60-140			"	"	"	"	

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425.420.9200 fax 425.420.9210

Spokane East 11115 Montgomery, Suite B, Spokane, WA 99206-4776

509.924.9200 fax 509.924.9290

Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132 503.906.9200 fax 503.906.9210

Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711

541.383.9310 fax 541.382.7588

Anchorage 3209 Denali Street, Anchorage, AK 99503 907.334.9200 fax 907.334.9210

Geo Engineers - Spokane

523 East 2nd

Spokane WA/USA, 99202

Project: Time Oil-Sunnyside

Project Number: 19063-003-01

Project Manager: Mark Engdahl

Reported:

05/02/03 10:34

# Volatile Organic Compounds (Special List) per EPA Method 8260B (Low Soil Method) North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method		Notes
Disp Isl S Wall 8.0' (B3D0424-09) Soil	Sampled: 0	4/16/03 12:4	Received:	04/18/03	09:00					
Benzene	ND	0.00150	mg/kg dry	1	3D29046	04/29/03	04/29/03	EPA 8260B		
1,2-Dibromoethane (EDB)	ND	0.00500	n .		11	30 %		n		
1,2-Dichloroethane	ND	0.00125	H:	11/2	u	11	n	n		
Ethylbenzene	ND	0.00400	n	n	n	"	. 11	<b>∆\$\$</b> €		
Naphthalene	ND	0.00500	11	n		m.	110	n n		
Toluene	ND	0.00150	11:	"	u ,		m	W.	15	
Total Xylenes	ND	0.0100	u.	ü	"	ü	n.	w		
Methyl tert-butyl ether	ND	0.00100	n	÷π	. 11	"	**	11		
Surrogate: 1,2-DCA-d4	100 %	60-140			"	"	"	"		Mary 1
Surrogate: Toluene-d8	97.5 %	60-140			"	"	"	"		
Surrogate: 4-BFB	95.8 %	60-140			"	n	"	n.		
Disp Isl E Btm 16.0' (B3D0424-10) Soil	Sampled: (	04/16/03 13:0	0 Received	: 04/18/03	09:00					16
Benzene	ND	0.00150	mg/kg dry	1	3D29046	04/29/03	04/29/03	EPA 8260B		
1,2-Dibromoethane (EDB)	ND	0.00500	11	"			II .	"		
,2-Dichloroethane	ND	0.00125	"	u	11	"	OH.	n		
Ethylbenzene	ND	0.00400	"	tr:	n			in.		
Naphthalene	ND	0.00500	11	11	"	и		30.		
Toluene	ND	0.00150		11	,,	н	II.	u		
Total Xylenes	ND	0.0100	11 2	11	0.	"	11			
Methyl tert-butyl ether	ND	0.00100	n		11	,,	11	5 <b>1</b> 16		
Surrogate: 1,2-DCA-d4	107 %	60-140			"	"	"	"		
Surrogate: Toluene-d8	95.9 %	60-140			,,,	"	"	n		
'urrogate: 4-BFB	96.5 %	60-140			"	<i>"</i> .	"	"		

North Creek Analytical - Bothell



Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244 425.420.9200 fax 425.420.9210

Spokane East 11115 Montgomery, Suite B, Spokane, WA 99206-4776 509.924.9200 fax 509.924.9290

Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132 503.906.9200 fax 503.906.9210

Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711

541.383.9310 fax 541.382.7588

Anchorage 3209 Denali Street, Anchorage, AK 99503 907 334 9200 fax 907 334 9210

Geo Engineers - Spokane

523 East 2nd

Spokane WA/USA, 99202

Project: Time Oil-Sunnyside

Project Number: 19063-003-01

Project Manager: Mark Engdahl

Reported:

05/02/03 10:34

# Volatile Organic Compounds (Special List) per EPA Method 8260B (Low Soil Method) North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Disp Isl N Btm 16.0' (B3D0424-11) So	il Sampled:	04/16/03 14:	10 Receive	d: 04/18/0	3 09:00				
Benzene	ND	0.00150	mg/kg dry	1	3D29046	04/29/03	04/29/03	EPA 8260B	
1,2-Dibromoethane (EDB)	ND	0.00500	11	n	"	"	"	LI A 8200D	
1,2-Dichloroethane	ND	0.00125	m	31	in .	11	11	ii 22	
Ethylbenzene	ND	0.00400	311	u		ii.	u	-11	2
Naphthalene	ND	0.00500			11	11	н	n a	
Toluene	ND	0.00150	n	31.2	11		n .		7//
Total Xylenes	ND	0.0100	1113		,,	11		"	
Methyl tert-butyl ether	ND	0.00100		11	п	п	11	"	
Surrogate: 1,2-DCA-d4	93.3 %	60-140			"	"	n	"	-
Surrogate: Toluene-d8	97.9 %	60-140				,,	"	,,	
Surrogate: 4-BFB	98.1 %	60-140			"	"	"	"	
Visp Isl S Btm 23.0' (B3D0424-12) Soil	Sampled:	04/16/03 14:2	0 Received	: 04/18/03	09:00				
enzene	ND	0.00150	mg/kg dry	1	3D23008	04/22/03	04/22/03	EPA 8260B	
1,2-Dibromoethane (EDB)	ND	0.00500	11	n	11	11	11	II 11 0200B	
1,2-Dichloroethane	ND	0.00125			11	310	0 -	11	
Ethylbenzene	ND	0.00400		311	11	11	н	"	
Naphthalene	ND	0.00500	n	n		11	111	e.	
Toluene	0.00311	0.00150	n	u	:11:	н	11	11	
Total Xylenes	ND	0.0100	ii .	и	11		ш		
Methyl tert-butyl ether	ND	0.00100	11	11	n .	316	311	Tr .	
Surrogate: 1,2-DCA-d4	108 %	60-140			"	"	"	"	-
'urrogate: Toluene-d8	108 %	60-140			"	" -	"	"	4
'urrogate: 4-BFB	97.2 %	60-140			,,,	"	"	,,	

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Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132 503.906.9200 fax 503.906.9210

Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711

541.383.9310 fax 541.382.7588

Anchorage 3209 Denali Street, Anchorage, AK 99503

907.334.9200 fax 907.334.9210

Geo Engineers - Spokane

523 East 2nd

Spokane WA/USA, 99202

Project: Time Oil-Sunnyside

Project Number: 19063-003-01 Project Manager: Mark Engdahl

Reported:

05/02/03 10:34

#### Volatile Organic Compounds (Special List) per EPA Method 8260B (Low Soil Method) North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
W Disp Btm 18.0' (B3D0424-14) Soil	Sampled: 04	/16/03 15:00	Received:	04/18/03 0	9:00		91		
Benzene	ND	0.00150	mg/kg dry	1	3D23008	04/22/03	04/22/03	EPA 8260B	
1,2-Dibromoethane (EDB)	ND	0.00500	"	n	n		11	"	
1,2-Dichloroethane	ND	0.00125	'n	118	u	22	п	n	
Ethylbenzene	ND	0.00400	"	11	"	ï	n .	311.	
Naphthalene	ND	0.00500	n	n	11	"	n .	TE.	
Toluene	ND	0.00150	11	n	n		11	. "	
Total Xylenes	ND	0.0100	11	11	11	"	u .	51 JHT	
Methyl tert-butyl ether	ND	0.00100		"		"11	"	e 00	
Surrogate: 1,2-DCA-d4	113 %	60-140			"	,,	"	"	
Surrogate: Toluene-d8	106 %	60-140			"	"	11	"	
Surrogate: 4-BFB	100 %	60-140			ü	"	"	"	

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Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132 503.906.9200 fax 503.906.9210

Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711

541.383.9310 fax 541.382.7588

Anchorage 3209 Denali Street, Anchorage, AK 99503 907 334 9200 fax 907 334 9210

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Spokane WA/USA, 99202

Project: Time Oil-Sunnyside

Project Number: 19063-003-01

Project Manager: Mark Engdahl

Reported:

05/02/03 10:34

# Physical Parameters by APHA/ASTM/EPA Methods North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	**	<b>D</b> ".		Decorate the	W 25		
	Kesuit	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
S.Side Wall 8.5' (B3D0424-01) Soil S	ampled: 04/15	5/03 14:40 F	Received:	04/18/03 09:	:00				
Dry Weight	76.2	1.00	%	1	3D22026	04/22/03	04/23/03	BSOPSPL003R07	
12 K Tank Center 13' (B3D0424-02) S	oil Sampled:	04/15/03 14	:30 Rece	ived: 04/18/	03 09:00				
Dry Weight	73.7	1.00	%	1	3D22026	04/22/03	04/23/03	BSOPSPL003R07	
W Side Wall 8.5' (B3D0424-03) Soil	Sampled: 04/1	5/03 14:20	Received:	04/18/03 09	:00				
Dry Weight	73.0	1.00	%	1	3D22026	04/22/03	04/23/03	BSOPSPL003R07	
12 K Tank West 13' (B3D0424-04) Soil	Sampled: 0	4/15/03 14:10	Receive	ed: 04/18/03	09:00				
Dry Weight	74.9	1.00	%	1	3D22026	04/22/03	04/23/03	BSOPSPL003R07	
8 K Tank EWall 8.5' (B3D0424-05) Soi	l Sampled: 0	4/16/03 08:0	0 Receiv	ed: 04/18/03	3 09:00				
Dry Weight	83.1	1.00	%	1	3D22026	04/22/03	04/23/03	BSOPSPL003R07	
Pisp Isl N Wall 6.0' (B3D0424-06) Soil	Sampled: 04	/16/03 08:10	Receive	d: 04/18/03	09:00				
y Weight	87.2	1.00	%	1	3D22026	04/22/03	04/23/03	BSOPSPL003R07	
Disp Isl Ex N Wall 10.0' (B3D0424-07)	Soil Sample	d: 04/16/03 0	8:20 Rec	eived: 04/18	8/03 09:00	1			
Dry Weight	78.1	1.00	%	1	3D22026	04/22/03	04/23/03	BSOPSPL003R07	
Disp Isl E Wall 8.0' (B3D0424-08) Soil	Sampled: 04/	/16/03 11:00	Received	l: 04/18/03 (	09:00				
Dry Weight	81.4	1.00	%	1	3D22026	04/22/03	04/23/03	BSOPSPL003R07	
Disp Isl S Wall 8.0' (B3D0424-09) Soil	Sampled: 04/	16/03 12:40	Received	: 04/18/03 0	9:00				
Dry Weight	83.6	1.00	%	1	3D22026	04/22/03	04/23/03	BSOPSPL003R07	

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509.924.9200 fax 509.924.9290

Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132

503.906.9200 fax 503.906.9210 Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711

541.383.9310 fax 541.382.7588

Anchorage 3209 Denali Street, Anchorage, AK 99503 907 334 9200 fax 907 334 9210

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Spokane WA/USA, 99202

Project: Time Oil-Sunnyside

Project Number: 19063-003-01

Project Manager: Mark Engdahl

Reported:

05/02/03 10:34

#### Physical Parameters by APHA/ASTM/EPA Methods North Creek Analytical - Bothell

**		Reporting							
Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Disp Isl E Btm 16.0' (B3D0424-10) Soi	Sampled: 04	/16/03 13:00	Receive	d: 04/18/03	3 09:00				
Dry Weight	74.6	1.00	%	1	3D22026	04/22/03	04/23/03	BSOPSPL003R07	
Disp Isl N Btm 16.0' (B3D0424-11) Soi	Sampled: 04	/16/03 14:10	Receive	d: 04/18/03	3 09:00				
Dry Weight	76.8	1.00	%	1	3D22026	04/22/03	04/23/03	BSOPSPL003R07	
Disp Isl S Btm 23.0' (B3D0424-12) Soil	Sampled: 04/	16/03 14:20	Received	1: 04/18/03	09:00				
Dry Weight	75.4	1.00	%	1	3D22026	04/22/03	04/23/03	BSOPSPL003R07	
W Disp Btm 18.0' (B3D0424-14) Soil	Sampled: 04/16	/03 15:00 R	eceived:	04/18/03 09	9:00				
Dry Weight	78.6	1.00	%	1	3D22026	04/22/03	04/23/03	BSOPSPL003R07	

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Spokane East 11115 Montgomery, Suite B, Spokane, WA 99206-4776 509.924.9200 fax 509.924.9290

Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132 503.906.9200 fax 503.906.9210

Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711 541.383.9310 fax 541.382.7588

Anchorage 3209 Denali Street, Anchorage, AK 99503 907.334.9200 fax 907.334.9210

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Spokane WA/USA, 99202

Project: Time Oil-Sunnyside

Project Number: 19063-003-01

Project Manager: Mark Engdahl

Reported:

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# Volatile Petroleum Products by NWTPH-Gx - Quality Control North Creek Analytical - Bothell

Analyte	Result	Reporting Limit		Spike Level	Source	0/DEC	%REC	222	RPD	
Patch 2D22004. P				Level	Result	%REC	Limits	RPD	Limit	Notes
Batch 3D22004: Prepared 04/22/03	Using E	PA 50301	B (MeOH)	ti .						
Blank (3D22004-BLK1)										
Gasoline Range Hydrocarbons	ND	5.00	mg/kg		-					
Surrogate: 4-BFB (FID)	3.72		"	4.00		93.0	59-125	-		
LCS (3D22004-BS1)									a a	
Gasoline Range Hydrocarbons	25.1	5.00	mg/kg	27.5		91.3	80-120		-	
Surrogate: 4-BFB (FID)	3.91		"	4.00		97.8	59-125			
LCS Dup (3D22004-BSD1)				# B	29					
Gasoline Range Hydrocarbons	25.1	5.00	mg/kg	27.5		91.3	80-120	0.00	40	
Surrogate: 4-BFB (FID)	3.92		"	4.00		98.0	59-125		10	
Matrix Spike (3D22004-MS1)					Cauras, D					
soline Range Hydrocarbons	26.3	5.00	mg/kg dry	36.1	Source: B: 0.654	71.0	53-120			
Surrogate: 4-BFB (FID)	3.83		"	5.25	0.00 1	73.0	59-125			
Matrix Spike Dup (3D22004-MSD1)					C D					
Gasoline Range Hydrocarbons	24.2	5.00	mg/kg dry	36.1	Source: B3 0.654	65.2	53-120	8.32	40	
urrogate: 4-BFB (FID)	4.23	E/23838/W	"	5.25	0.034	80.6		0.32	40	

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503.906.9200 fax 503.906.9210 Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711

541.383.9310 fax 541.382.7588

Anchorage 3209 Denali Street, Anchorage, AK 99503

907 334 9200 fax 907 334 9210

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Spokane WA/USA, 99202

Project: Time Oil-Sunnyside

Project Number: 19063-003-01

Project Manager: Mark Engdahl

Reported:

05/02/03 10:34

#### Volatile Organic Compounds (Special List) per EPA Method 8260B (Low Soil Method) - Quality Control North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 3D23008: Prepared 04/22/03		EPA 5035M	-	Bover	Result	701000	Lillits	KFD	Limit	Notes
Blank (3D23008-BLK1)	Caring 1	21 A 3033NI							a	
Benzene	ND	0.00150	mg/kg						-	
Chlorobenzene	ND	0.00130	mg/kg							
1,2-Dibromoethane (EDB)	ND	0.00500								
1,2-Dichloroethane	ND	0.00300	115							
1,1-Dichloroethene	ND	0.00300	11							
Ethylbenzene	ND	0.00400	"							
Naphthalene	ND	0.00500	11							
Toluene	ND	0.00300	n							
Trichloroethene	ND	0.00150	"							
Total Xylenes	ND	0.0100	п							
Methyl tert-butyl ether	ND	0.00100	11			2				
Surrogate: 1,2-DCA-d4	0.0440		"	0.0400		110	60-140		*	
Surrogate: Toluene-d8	0.0423		"	0.0400		106	60-140			
Surrogate: 4-BFB	0.0391		"	0.0400		97.8	60-140			
LCS (3D23008-BS1)										
Benzene	0.0183	0.00150	mg/kg	0.0200		91.5	70-130			
Chlorobenzene	0.0182	0.00200	"	0.0200		91.0	70-130			
,1-Dichloroethene	0.0205	0.00300	116	0.0200		102	70-130			
Ethylbenzene	0.0181	0.00400	11	0.0200		90.5	70-130			
Coluene	0.0181	0.00150	Ü	0.0200		90.5	70-130			
richloroethene	0.0174	0.00250	"	0.0200		87.0	70-130			
'urrogate: 1,2-DCA-d4	0.0411		"	0.0400		103	60-140			
urrogate: Toluene-d8	0.0437		,,,	0.0400		109	60-140			
urrogate: 4-BFB	0.0402		"	0.0400		100	60-140			
CS Dup (3D23008-BSD1)										
enzene	0.0216	0.00150	mg/kg	0.0200	*	108	70-130	16.5	30	
hlorobenzene	0.0209	0.00200	"	0.0200		104	70-130	13.8	30	
1-Dichloroethene	0.0246	0.00300		0.0200		123	70-130	18.2	30	
thylbenzene	0.0206	0.00400	H	0.0200		103	70-130	12.9	30	
oluene	0.0206	0.00150	п	0.0200		103	70-130			
richloroethene	0.0207	0.00250	II.	0.0200		103	70-130	12.9 17.3	30 30	
	0.0485	- 11 11 11 11 11 11 11 11 11 11 11 11 11	"	0.0400				ر.،،	<i>3</i> 0	-1007
	0.0421		"	0.0400		121	60-140			

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541.383.9310 fax 541.382.7588

Anchorage 3209 Denali Street, Anchorage, AK 99503

907 334 9200 fax 907 334 9210

Geo Engineers - Spokane

523 East 2nd

Spokane WA/USA, 99202

Project: Time Oil-Sunnyside

Project Number: 19063-003-01

Project Manager: Mark Engdahl

Reported:

05/02/03 10:34

# Volatile Organic Compounds (Special List) per EPA Method 8260B (Low Soil Method) - Quality Control North Creek Analytical - Bothell

Analyte		Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC	nnn	RPD	
Batch 3D23008:	Duanauad 04/22/02			Oints	Level	Result	%REC	Limits	RPD	Limit	Notes
	Prepared 04/22/03	Using I	EPA 5035M								
LCS Dup (3D23008	B-BSD1)										
Surrogate: 4-BFB		0.0389		mg/kg	0.0400		97.2	60-140			
Batch 3D25005:	Prepared 04/24/03	Using E	EPA 5035M								
Blank (3D25005-BL	LK1)			u*)							
Benzene		ND	0.00150	mg/kg							
Chlorobenzene		ND	0.00200	"				240			
1,2-Dibromoethane (ED	OB)	ND	0.00500	9							
1,2-Dichloroethane		ND	0.00125	ñ							
1,1-Dichloroethene		ND	0.00300	11							
Ethylbenzene		ND	0.00400	ni.							
\taphthalene		ND	0.00500	11							
luene		ND	0.00150								
Total Xylenes		ND	0.0100	n							
Methyl tert-butyl ether		ND	0.00100	H							
Surrogate: 1,2-DCA-d4		0.0365		"	0.0400		91.2	60-140			
Surrogate: Toluene-d8	A)	0.0398		"	0.0400		99.5	60-140			
Surrogate: 4-BFB		0.0398		"	0.0400		99.5	60-140			
LCS (3D25005-BS1)											
Benzene		0.0206	0.00150	mg/kg	0.0200		103	70-130			
Chlorobenzene		0.0203	0.00200	"	0.0200		103	70-130			
,1-Dichloroethene		0.0209	0.00300	n	0.0200		104	70-130			
Ethylbenzene		0.0199	0.00400	11	0.0200		99.5	70-130			
'oluene		0.0195	0.00150	115	0.0200		97.5	70-130			
urrogate: 1,2-DCA-d4		0.0437		"	0.0400			- 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1			-
urrogate: Toluene-d8		0.0393		n .	0.0400		98.2	60-140			
urrogate: 4-BFB		0.0399		"	0.0400		99.8	60-140 60-140			

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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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Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132

503.906.9200 fax 503.906.9210

Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711

541.383.9310 fax 541.382.7588

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907 334 9200 fax 907 334 9210

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Spokane WA/USA, 99202

Project: Time Oil-Sunnyside

Project Number: 19063-003-01

Reported: Project Manager: Mark Engdahl 05/02/03 10:34

Volatile Organic Compounds (Special List) per EPA Method 8260B (Low Soil Method) - Quality Control North Creek Analytical - Bothell

*			Reporting		Spike	Source		%REC		RPD	
Analyte	11 2	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch 3D25005: Prepar	red 04/24/03	Using 1	EPA 5035N	1							
LCS Dup (3D25005-BSD1)		gi									
Benzene		0.0187	0.00150	mg/kg	0.0200		93.5	70-130	9.67	30	
Chlorobenzene		0.0188	0.00200	u	0.0200		94.0	70-130	7.67	30	₽
1,1-Dichloroethene		0.0189	0.00300	111	0.0200		94.5	70-130	10.1	30	
Ethylbenzene	*	0.0182	0.00400		0.0200		91.0	70-130	8.92	30	
Toluene		0.0179	0.00150	'n	0.0200		89.5	70-130	8.56	30	
Surrogate: 1,2-DCA-d4		0.0412		п	0.0400		103	60-140	× 100		
Surrogate: Toluene-d8		0.0393		<i>"H</i>	0.0400	8	98.2	60-140			
Surrogate: 4-BFB		0.0398		"	0.0400	11	99.5	60-140			
Matrix Spike (3D25005-MS1	)					Source: B	3D0522-2	22			
Benzene		0.0214	0.00150	mg/kg dry	0.0216	ND	99.1	60-140			
Chlorobenzene		0.0206	0.00200	11	0.0216	ND	95.4	60-140			
1,1-Dichloroethene		0.0214	0.00300	11.5	0.0216	ND	99.1	60-140			
Ethylbenzene	9	0.0212	0.00400	"	0.0216	ND	98.1	60-140			
Toluene	)	0.0207	0.00150	Ü	0.0216	ND	95.8	60-140			
Surrogate: 1,2-DCA-d4		0.0421		"	0.0432		97.5	60-140	2		
Surrogate: Toluene-d8		0.0433		#	0.0432		100	60-140			
Surrogate: 4-BFB		0.0431		"	0.0432		99.8	60-140			
Matrix Spike Dup (3D25005-	MSD1)				5	Source: B3	3D0522-2	2			
Benzene	(	0.0226	0.00150	mg/kg dry	0.0216	ND	105	60-140	5.45	30	
Chlorobenzene	(	0.0218	0.00200	"	0.0216	ND	101	60-140	5.66	30	
,1-Dichloroethene	(	0.0225	0.00300		0.0216	ND	104	60-140	5.01	30	
Ethylbenzene	(	0.0222	0.00400	"	0.0216	ND	103	60-140	4.61	30	
Toluene .	(	0.0216	0.00150	"	0.0216	ND	100	60-140	4.26	30	
Surrogate: 1,2-DCA-d4	0	0.0416		11	0.0432		96.3	60-140	- AND COMMON		
Surrogate: Toluene-d8	0	0.0430		2 W	0.0432		99.5	60-140			
Surrogate: 4-BFB	0	0.0430		"	0.0432		99.5	60-140			

North Creek Analytical - Bothell



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Spokane East 11115 Montgomery, Suite B, Spokane, WA 99206-4776 509.924.9200 fax 509.924.9290

Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132 503.906.9200 fax 503.906.9210

Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711

541.383.9310 fax 541.382.7588 Anchorage 3209 Denali Street, Anchorage, AK 99503

907 334 9200 fax 907 334 9210

Geo Engineers - Spokane

523 East 2nd

Spokane WA/USA, 99202

Project: Time Oil-Sunnyside

Project Number: 19063-003-01

Project Manager: Mark Engdahl

Reported:

05/02/03 10:34

# Volatile Organic Compounds (Special List) per EPA Method 8260B (Low Soil Method) - Quality Control North Creek Analytical - Bothell

Analyte		Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 3D25014	: Prepared 04/25/03	Using 1	EPA 5035M				- JURGE	Linns	INI D	LIIII	Notes
Blank (3D25014-											
Benzene		ND	0.00150	mg/kg						-	
Chlorobenzene		ND	0.00200	" III MA							
1,2-Dibromoethane (	EDB)	ND	0.00500	n							
1,2-Dichloroethane		ND	0.00125	n							
1,1-Dichloroethene		ND	0.00300	T OR							
Ethylbenzene		ND	0.00400	11							
Naphthalene		ND	0.00500	11							
Toluene		ND	0.00150	31		-					
Trichloroethene		ND	0.00250	11							
Total Xylenes		ND	0.0100	n							
Methyl tert-butyl ethe	er	ND	0.00100	"							
rogate: 1,2-DCA-	d4	0.0405		"	0.0400		101	60-140			
Surrogate: Toluene-a	78	0.0391		"	0.0400		97.8	60-140			
Surrogate: 4-BFB		0.0406		ii	0.0400		102	60-140			
LCS (3D25014-BS	1)							30 170			
Acetone		0.117	0.0300	mg/kg	0.100		117	70-130			
Benzene		0.0217	0.00150	"	0.0200		108	70-130			
2-Butanone		0.104	0.0150	H	0.100		104	70-130			
Carbon disulfide		0.0211	0.00300	110	0.0200		106	70-130			
Chlorobenzene		0.0212	0.00200	п	0.0200		106	70-130			
1,1-Dichloroethane		0.0213	0.00200	11	0.0200		106	70-130			
1,1-Dichloroethene		0.0220	0.00300	0	0.0200		110	70-130			
cis-1,2-Dichloroethene	•	0.0217	0.00300	ū	0.0200		108	70-130			
Ethylbenzene		0.0209	0.00400	II	0.0200		104	70-130			
4-Methyl-2-pentanone		0.121	0.0200	u	0.100		121	70-130			
Tetrachloroethene		0.0221	0.00200	11	0.0200		110	70-130			
Toluene		0.0205	0.00150	Tr.	0.0200		102	70-130			
1,1,1-Trichloroethane	Á	0.0217	0.00250		0.0200		108	70-130			
Trichloroethene		0.0217	0.00250	u	0.0200		108	70-130		2	
Surrogate: 1,2-DCA-d-	4	0.0430		n	0.0400		108	60-140			
Surrogate: Toluene-d8		0.0392		n	0.0400		98.0	60-140			
Surrogate: 4-BFB		0.0401		"	0.0400		100	60-140			
										8	

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Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132 503.906.9200 fax 503.906.9210

Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711

541.383.9310 fax 541.382.7588

Anchorage 3209 Denali Street, Anchorage, AK 99503 907.334.9200 fax 907.334.9210

Geo Engineers - Spokane

523 East 2nd

Spokane WA/USA, 99202

Project: Time Oil-Sunnyside

Project Number: 19063-003-01

Reported: Project Manager: Mark Engdahl 05/02/03 10:34

### Volatile Organic Compounds (Special List) per EPA Method 8260B (Low Soil Method) - Quality Control North Creek Analytical - Bothell

			Reporting		Spike	Source		%REC		RPD	
Analyte		Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch 3D25014:	Prepared 04/25/03	Using I	EPA 5035M	Ī							
LCS Dup (3D25014	-BSD1)										
Acetone	¥	0.0951	0.0300	mg/kg	0.100		95.1	70-130	20.7	30	
Benzene		0.0220	0.00150	31	0.0200		110	70-130	1.37	30	
2-Butanone		0.0895	0.0150	THE STATE OF THE S	0.100		89.5	70-130	15.0	30	
Carbon disulfide		0.0211	0.00300	п	0.0200		106	70-130	0.00	30	4
Chlorobenzene		0.0213	0.00200	11	0.0200		106	70-130	0.471	30	
1,1-Dichloroethane		0.0213	0.00200	11	0.0200		106	70-130	.0.00	30	
1,1-Dichloroethene		0.0220	0.00300	n	0.0200		110	70-130	0.00	30	
cis-1,2-Dichloroethene		0.0211	0.00300	11	0.0200		106	70-130	2.80	30	
Ethylbenzene		0.0216	0.00400		0.0200		108	70-130	3.29	30	
4-Methyl-2-pentanone		0.102	0.0200	n	0.100		102	70-130	17.0	30	
Tetrachloroethene		0.0229	0.00200	II	0.0200		114	70-130	3.56	30	
Toluene		0.0210	0.00150	ü	0.0200		105	70-130	2.41	30	
1,1,1-Trichloroethane		0.0214	0.00250	· III	0.0200		107	70-130	1.39	30	
Trichloroethene		0.0222	0.00250	TH .	0.0200		111	70-130	2.28	30	
Surrogate: 1,2-DCA-d4		0.0392		"	0.0400		98.0	60-140			
Surrogate: Toluene-d8		0.0398		"	0.0400		99.5	60-140			
Surrogate: 4-BFB		0.0403		"	0.0400		101	60-140			
Batch 3D29046:	Prepared 04/29/03	Using E	PA 5035								
Blank (3D29046-BL)	K1)										
Acetone		ND	0.0300	mg/kg							
Benzene		ND	0.00150	"							
Bromochloromethane		ND	0.00500	**							
Bromodichloromethane		ND	0.00500								
Bromoform		ND	0.00500	11							
Bromomethane		ND	0.0100	u u							
2-Butanone		ND	0.0150	a							
n-Butylbenzene		ND	0.00500	11							
sec-Butylbenzene		ND	0.00500	ıı							
tert-Butylbenzene		ND	0.00500								
Carbon disulfide		ND	0.00300	ш							
Carbon tetrachloride	RI N	ND	0.00500								
Chlorobenzene	2	ND	0.00200	10							
Chloroethane		ND	0.00500	300							

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Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711

541.383.9310 fax 541.382.7588

Anchorage 3209 Denali Street, Anchorage, AK 99503 907.334.9200 fax 907.334.9210

Geo Engineers - Spokane

523 East 2nd

Spokane WA/USA, 99202

Project: Time Oil-Sunnyside

Project Number: 19063-003-01

Project Manager: Mark Engdahl

Reported:

05/02/03 10:34

#### Volatile Organic Compounds (Special List) per EPA Method 8260B (Low Soil Method) - Quality Control North Creek Analytical - Bothell

Analyte		Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 3D29046:	Prepared 04/29/03	Using 1	EPA 5035								
Blank (3D29046-BL	.K1)						R				
Chloroform		ND	0.00250	mg/kg			9				
Chloromethane		ND	0.0100	"	2]						
2-Chlorotoluene		ND	0.00500	:: ŭ							
4-Chlorotoluene		ND	0.00500	u u							
Dibromochloromethane		ND	0.00500	n ·							11 12
1,2-Dibromo-3-chloropi	ropane	ND	0.0100	ü							
1,2-Dibromoethane (ED	OB)	ND	0.00500	u							
Dibromomethane		ND	0.00500	11							
1,2-Dichlorobenzene		ND	0.00500	111							
1,3-Dichlorobenzene		ND	0.00500								
1,4-Dichlorobenzene		ND	0.00500	11							
chlorodifluoromethan	e	ND	0.00500	ш							
1,1-Dichloroethane		ND	0.00200	"							
1,2-Dichloroethane	1.00	ND	0.00125	11.							
1,1-Dichloroethene		ND	0.00300	n.							
cis-1,2-Dichloroethene		ND	0.00300	Ü	(E)						
trans-1,2-Dichloroethene	357	ND	0.00250	"							
1,2-Dichloropropane		ND	0.00500	ш							
1,3-Dichloropropane		ND	0.00500	11							
2,2-Dichloropropane		ND	0.0100	n							
1,1-Dichloropropene		ND	0.00500	H.							
cis-1,3-Dichloropropene		ND	0.00500	311							
trans-1,3-Dichloropropen	ie .	ND	0.00125	11							
Ethylbenzene		ND	0.00400	H.							
Hexachlorobutadiene		ND	0.00500	н							
2-Hexanone		ND	0.0200	11							
Isopropylbenzene		ND	0.00500	п							
p-Isopropyltoluene		ND	0.00500	U							
Methylene chloride		ND	0.00350	"							
4-Methyl-2-pentanone		ND	0.0200	11							
Naphthalene	(6.0)	ND	0.00500	"							
n-Propylbenzene		ND	0.00500	и							
Styrene		ND	0.00100	311							
1,1,1,2-Tetrachloroethane		ND	0.00500	30			٠				

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Amar Gill, Project Manager

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Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132

503.906.9200 fax 503.906.9210

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Anchorage 3209 Denali Street, Anchorage, AK 99503 907.334.9200 fax 907.334.9210

Geo Engineers - Spokane

Spokane WA/USA, 99202

Project: Time Oil-Sunnyside

523 East 2nd

Project Number: 19063-003-01

Project Manager: Mark Engdahl

Reported: 05/02/03 10:34

#### Volatile Organic Compounds (Special List) per EPA Method 8260B (Low Soil Method) - Quality Control North Creek Analytical - Bothell

Analyte	2	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 3D29046: I	Prepared 04/29/03	Using I	EPA 5035							,	
Blank (3D29046-BLK	1)					*		8 1 8	167		
1,1,2,2-Tetrachloroethane		ND	0.00500	mg/kg							
Tetrachloroethene		ND	0.00200	"							
Toluene	i a	ND	0.00150	n							
1,2,3-Trichlorobenzene		ND	0.00500	11							
1,2,4-Trichlorobenzene	27	ND	0.00500	11					*		
1,1,1-Trichloroethane		ND	0.00250	11							
1,1,2-Trichloroethane		ND	0.00125					***			
Trichloroethene		ND	0.00250	n	50						
Trichlorofluoromethane		ND	0.00500	11							
1,2,3-Trichloropropane		ND	0.00500	n							
1,2,4-Trimethylbenzene		ND	0.00500	n							
1,3,5-Trimethylbenzene		ND	0.00500								
Vinyl chloride		ND	0.00250								
Total Xylenes		ND	0.0100	ü							
Methyl tert-butyl ether		ND	0.00100	u.							
Surrogate: 1,2-DCA-d4		0.0374		"	0.0400		93.5	60-140			7
Surrogate: Toluene-d8		0.0391		"	0.0400		97.8	60-140			
Surrogate: 4-BFB		0.0392		"	0.0400		98.0	60-140			
LCS (3D29046-BS1)											
Acetone		0.0916	0.0300	mg/kg	0.100		91.6	70-130			
Benzene		0.0227	0.00150	N.	0.0200		114	70-130			
2-Butanone		0.0855	0.0150	u	0.100		85.5	70-130			
Carbon disulfide		0.0223	0.00300	11	0.0200		112	70-130			
Chlorobenzene		0.0222	0.00200	11	0.0200		111	70-130			
1,1-Dichloroethane		0.0224	0.00200	10	0.0200	121	112	70-130			
,1-Dichloroethene		0.0233	0.00300	"	0.0200		116	70-130			
cis-1,2-Dichloroethene		0.0220	0.00300	n	0.0200		110	70-130			
Ethylbenzene		0.0228	0.00400	Ü	0.0200		114	70-130			
-Methyl-2-pentanone		0.0940	0.0200	ii.	0.100		94.0	70-130			
Tetrachloroethene		0.0242	0.00200	Ü	0.0200		121	70-130			
Toluene		0.0221	0.00150	11	0.0200		110	70-130			
,1,1-Trichloroethane		0.0226	0.00250	Ü - e	0.0200		113	70-130			
richloroethene		0.0226	0.00250	iii	0.0200		113	70-130			

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Anchorage 3209 Denali Street, Anchorage, AK 99503

907 334 9200 fax 907 334 9210

Geo Engineers - Spokane

523 East 2nd

Spokane WA/USA, 99202

Project: Time Oil-Sunnyside

Project Number: 19063-003-01

Project Manager: Mark Engdahl

Reported:

05/02/03 10:34

# Volatile Organic Compounds (Special List) per EPA Method 8260B (Low Soil Method) - Quality Control North Creek Analytical - Bothell

Analyte	Result	Reporting Limit		Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 3D29046: Prepared 04	1/29/03 Using I	EPA 5035					~.mio	T. D	Limit	ivotes
LCS (3D29046-BS1)										
Surrogate: 1,2-DCA-d4	0.0362		mg/kg	0.0400		90.5	60.140			
Surrogate: Toluene-d8	0.0397		"	0.0400		99.3	60-140 60-140			
Surrogate: 4-BFB	0.0389		# 5	0.0400		97.2	60-140			*
LCS Dup (3D29046-BSD1)						e <sup>63</sup>	1 4			
Acetone	0.0955	0.0300	mg/kg	0.100		. 95.5	70-130	4.17	30	
Benzene	0.0202	0.00150	"	0.0200		101	70-130	11.7		
2-Butanone	0.0930	0.0150	11	0.100		93.0	70-130	8.40	30	
Carbon disulfide	0.0192	0.00300	10	0.0200		96.0	70-130		30	
Chlorobenzene	0.0203	0.00200	310	0.0200		102	70-130	14.9	30	
1,1-Dichloroethane	0.0200	0.00200		0.0200		102	70-130	8.94	30	
1-Dichloroethene	0.0202	0.00300	"	0.0200		101		11.3	30	
.s-1,2-Dichloroethene	0.0200	0.00300	n	0.0200		100	70-130	14.3	30	
Ethylbenzene	0.0203	0.00400	u	0.0200		100	70-130	9.52	30	
4-Methyl-2-pentanone	0.105	0.0200	ा	0.100		102	70-130	11.6	30	
Tetrachloroethene	0.0209	0.00200	"	0.0200			70-130	11.1	30	
Toluene	0.0199	0.00150	"	0.0200		104	70-130	14.6	30	
1,1,1-Trichloroethane	0.0201	0.00250	11	0.0200		99.5 100	70-130	10.5	30	
Trichloroethene	0.0203	0.00250	и .	0.0200		102	70-130 70-130	11.7	30	
Surrogate: 1,2-DCA-d4	0.0376		n	0.0400		2000		10.7	30	
Surrogate: Toluene-d8	0.0395		"	0.0400		94.0 98.8	60-140 60-140			
Surrogate: 4-BFB	0.0371		"	0.0400		92.8	60-140			
Matrix Spike (3D29046-MS1)					Sanuas, Di					
Acetone	0.0874	0.0300	mg/kg wet	0.100	0.0156	71.8	555 15			
Benzene	0.0223	0.00150	" II	0.0200	0.0136 ND	112	60-140			
2-Butanone	0.0901	0.0150	11	0.100	ND	90.1	60-140			
Carbon disulfide	0.0226	0.00300	THE .	0.0200	ND	113	60-140			
Chlorobenzene	0.0223	0.00200	**	0.0200	ND	112	60-140 60-140			
1,1-Dichloroethane	0.0226	0.00200	"	0.0200	ND	112				
1,1-Dichloroethene	0.0235	0.00300	11	0.0200	ND	113	60-140 60-140			
cis-1,2-Dichloroethene	0.0224	0.00300		0.0200	ND	112				
Ethylbenzene	0.0229	0.00400	ű.	0.0200	ND	114	60-140 60-140			
4-Methyl-2-pentanone	0.0984	0.0200	н	0.100	ND	98.4	60-140			
Tetrachloroethene	0.0237	0.00200	Ü	0.0200	ND	118	60-140			

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Anchorage 3209 Denali Street, Anchorage, AK 99503 907.334.9200 fax 907.334.9210

Geo Engineers - Spokane

Project: Time Oil-Sunnyside

523 East 2nd

Project Number: 19063-003-01

Spokane WA/USA, 99202

Project Manager: Mark Engdahl

Reported: 05/02/03 10:34

#### Volatile Organic Compounds (Special List) per EPA Method 8260B (Low Soil Method) - Quality Control North Creek Analytical - Bothell

Analyte		Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 3D29046:	Prepared 04/29/03	Using E	EPA 5035		2.00			211110	M D	Dillit	110103
Matrix Spike (3D290		8				Source: B	3D0626	01			
Toluene		0.0221	0.00150	mg/kg wet	0.0200	0.00112	105	60-140			
1,1,1-Trichloroethane		0.0228	0.00250	III MA TICE	0.0200	ND	114	60-140			
Trichloroethene		0.0226	0.00250	н	0.0200	ND	113	60-140			
Surrogate: 1,2-DCA-d4		0.0370		"	0.0400		92.5	60-140	k.		
Surrogate: Toluene-d8		0.0397		"	0.0400		99.3	60-140	÷		
Surrogate: 4-BFB		0.0393		"	0.0400		98.2	60-140			
Matrix Spike Dup (3)	D29046-MSD1)					Source: B	3D0626-	01			
Acetone		0.0877	0.0300	mg/kg wet	0.100	0.0156	72.1	60-140	0.343	30	***************************************
Benzene	8	0.0220	0.00150	11	0.0200	ND	110	60-140	1.35	30	
2-Butanone		0.0914	0.0150	n.	0.100	ND	91.4	60-140	1.43	30	
Carbon disulfide		0.0220	0.00300	Ü	0.0200	ND	110	60-140	2.69	30	
Chlorobenzene		0.0215	0.00200	" "	0.0200	ND	108	60-140	3.65	30	
1,1-Dichloroethane		0.0222	0.00200	11	0.0200	ND	111	60-140	1.79	30	
1,1-Dichloroethene		0.0230	0.00300	n	0.0200	ND	115	60-140	2.15	30	
cis-1,2-Dichloroethene		0.0218	0.00300	п	0.0200	ND	109	60-140	2.71	30	
Ethylbenzene		0.0218	0.00400	n	0.0200	ND	109	60-140	4.92	30	
4-Methyl-2-pentanone	<del></del>	0.101	0.0200	n	0.100	ND	101	60-140	2.61	30	
Tetrachloroethene		0.0230	0.00200	11	0.0200	ND	115	60-140	3.00	30	
Toluene		0.0215	0.00150	ú	0.0200	0.00112	102	60-140	2.75	30	
1,1,1-Trichloroethane		0.0223	0.00250	311.0	0.0200	ND	112	60-140	2.22	30	
Trichloroethene		0.0221	0.00250	n)	0.0200	ND	110	60-140	2.24	30	
Surrogate: 1,2-DCA-d4		0.0380		"	0.0400		95.0	60-140			
Surrogate: Toluene-d8	*	0.0395		"	0.0400		98.8	60-140			
Surrogate: 4-BFB		0.0398		"	0.0400		99.5	60-140			

North Creek Analytical - Bothell



425.420.9200 fax 425.420.9210

Spokane East 11115 Montgomery, Suite B, Spokane, WA 99206-4776

509.924.9200 fax 509.924.9290

Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132 503.906.9200 fax 503.906.9210

Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711 541.383.9310 fax 541.382.7588

Anchorage 3209 Denali Street, Anchorage, AK 99503

907 334 9200 fax 907 334 9210

Geo Engineers - Spokane

523 East 2nd

Spokane WA/USA, 99202

Project: Time Oil-Sunnyside

Project Number: 19063-003-01

Project Manager: Mark Engdahl

Reported:

05/02/03 10:34

#### Physical Parameters by APHA/ASTM/EPA Methods - Quality Control North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 3D22026: Prep	pared 04/22/03 Using	Dry Weight	t							AN - 550-00-70-005
Blank (3D22026-BLK1)										
Dry Weight	100	1.00	%	*						

rth 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.

Amar Gill, Project Manager

North Creek Analytical, Inc. **Environmental Laboratory Network**  Page 23 of 24



425.420.9200 fax 425.420.9210

Spokane East 11115 Montgomery, Suite B, Spokane, WA 99206-4776

509.924.9200 fax 509.924.9290

Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132

503.906.9200 fax 503.906.9210

Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711

541.383.9310 fax 541.382.7588

Anchorage 3209 Denali Street, Anchorage, AK 99503 907 334 9200 fax 907 334 9210

Geo Engineers - Spokane

Project: Time Oil-Sunnyside

523 East 2nd

Project Number: 19063-003-01

Spokane WA/USA, 99202

Project Manager: Mark Engdahl

Reported:

05/02/03 10:34

#### **Notes and Definitions**

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

RPD

Relative Percent Difference

North Creek Analytical - Bothell

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Amar Gill, Project Manager

North Creek Analytical, Inc. **Environmental Laboratory Network**  Page 24 of 24



11 120 INUIUI CIEEK FKWY IN, DUITE 4UU, BOTHELL, WA Y8U11-8244 East 11115 Montgomery, Suite B, Spokane, WA 99206-4776 9405 S.W. Nimbus Avenue, Beaverton, OR 97008-7132 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711

X 420-9210 AX 924-9290 FAX 906-9210 FAX 382-7588 (541) 383-9310 (509) 924-9200 (503) 906-9200 (4.22) 4.20-9.200

CHAIN OF CUSTODY REPORT

NCA WO DATE: 4/15/ >3 00. 3 OCT 10 < 1 TURNAROUND REQUEST in Business Days\* \*Turnaround:Requests less than standard may incur Rush Charges. ٦ <1 TIME: DATE: TIME: 二 Petroleum Hydrocarbon Analyses 4 3 2 ٦ COMMENTS PSENT Z Please Specify Organic & Inorganic Analyses TEMP: 7 B300424 3 OTHER w 4 Y CONT. # OF 2 FIRM: SO FIRM: (W, S, O) MATRIX Work Order #: 10 5 Lor analysis, Call Prior to enally zing Mth. Scott Slorn ج آ T'ne 01/6 REQUESTED ANALYSES RECEIVED BY: RECEIVED BY: PRINT NAME: PRINT NAME: × X X DATE: 4/17/03 P.O. NUMBER INVOICE TO: TIME: 1400 TIME: X Spokane, WIA STOOL X FAX: 363-3/26 Y L 9-HOLMIN × 1500 1420 0/4/0 0280 1240 FIRM: 1430 0180 100 1426 0800 1300 1410 1440 SAMPLING DATE/TIME SAMPLED BY: MANUTEGOS JAK PROJECT NUMBER: 19063-003-0 REPORT TO: Maily Engolol ADDRESS: 523 & 2nd 4ve 4/15/03 5. 8 K Tank EWII 2,5 4/16/03 4. 12 KTank west 13' 7/15/03 CLIENT: Geo Engineus PHONE: 509-363-3125 PROJECT NAME: Sunnys'ol 12/5/de Wall 8.5" 12. Disp 55 58 58 tm 23.0 9. DISP FS 1 5 Well 8,0 10. Disp Is | 15 Blog 16.0 11. 0)5p Je / N Shu 19.0 8. Nigo IsI E Wall RIC 6. Disp IS / Nugl 6.0 2. 12kTank Center 13 7. Disp Est Ex NWall 100 W Disp Btm 18" S, Side Wall 8,5' RELINQUISHED BY: MM 13.12 K Frak E Bton, CLIENT SAMPLE IDENTIFICATION ADDITIONAL REMARKS PRINT NAME: MAN RELINQUISHED BY: PRINT NAME: COC REV 3/99