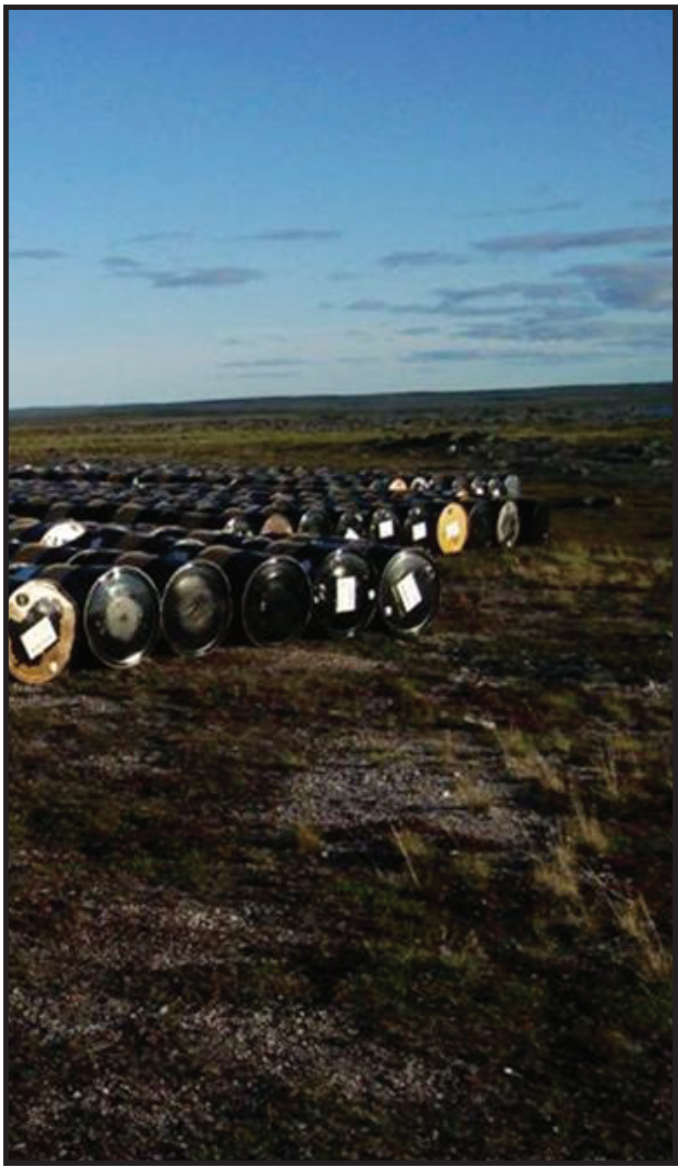
STARFIELD RESOURCES INC.

Starfield Resources Inc.
Ferguson Lake Project
Nunavut, Canada

Hydrocarbon Contamination Assessment at Ferguson Lake Camp



Prepared by:

Rescan™ Environmental Services Ltd.
Vancouver / Yellowknife

May 2007

EXECUTIVE SUMMARY

Executive Summary

The Ferguson Lake Project is a copper, nickel, cobalt, platinum, and palladium prospect currently being explored by Starfield Resources Inc. It is located on the western shores of Ferguson Lake, 240 kilometres west of Rankin Inlet and 180 kilometres south of Baker Lake, between Yathkyed and Kaminuriak Lakes. The old camp is located primarily on bedrock with shallow soils in depressions.

The types of fuel and lubricants that are stored on the camp site consist of JET-B, P-50 diesel motive, gasoline, propane, and an assortment of hydraulic oils and motor oils. JET-B is used for the purposes of helicopter refuelling and heating purposes. All JET-B products are contained in 205 L drums. P-50 diesel motive is used for heating purposes and the powering of generators, pumps, and other related heavy equipment. It is stored in pre-inspected barrels that previously contained sealed JET-B. Gasoline is for the purposes fuelling ski-doos. Propane is used for heating and cooking purposes. Oils and lubricants are used on the heavy equipment.

To identify which areas around the Ferguson Camp require reclamation due to potential hydrocarbon contamination, soils were sampled adjacent to ten areas that were most susceptible to contamination. The results were compared to British Columbia Contaminated Site Regulations (BC CSR) and Canadian Council of Ministers of the Environment's (CCME) standards for petroleum hydrocarbon concentrations in soils.

Seven of ten sites exceeded BC CSR industrial park/residence limits for light extractable petroleum hydrocarbons. Nine sites exceeded park/residence limits for heavy extractable petroleum hydrocarbons, and five sites exceeded the industrial limits for heavy extractable petroleum hydrocarbons.

All of the sites exceeded CCME limits for Canadian Wide Standards (CWS) Fraction 2 of the park/residence limits and eight exceeded industrial limits. Nine of ten sites were exceeded within the park/residence limit for CWS Fraction 3 and industrial limits were exceeded for eight of the ten sites.

This preliminary assessment suggests that soil contamination has occurred at various locations around the property. The most contaminated sites are the tractor shed, the shop and the fuel storage area at the airstrip.

ABBREVIATIONS

Abbreviations

Northwest Territories	(NWT)
petroleum hydrocarbons	(PHC)
British Columbia Contaminated Site Regulations	(BC CSR)
volatile petroleum hydrocarbon	(VPH)
equivalent carbon number	(ECN)
extractable petroleum hydrocarbon	(EPH)
light and heavy extractable petroleum hydrocarbons	(LEPH and HEPH)
polycyclic aromatic hydrocarbon	(PAH)
Canadian Council of Ministers of the Environment	(CCME)
Canada wide standards	(CWS)
CWS Fraction 1	(F1)
CWS Fraction 2	(F2)
CWS Fraction 3	(F3)

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1. INTRODUCTION

1. Introduction

Contaminated sites pose a threat to human health and the environment. Management practices that allow for quick identification, assessment, and remediation are important in containing the contaminant(s) and rehabilitating the site.

The Canadian Council of Ministers of the Environment (CCME) (1999) and the British Columbia Contaminated Site Regulations (BC CSR) have produced standards for assessing contaminated sites. These documents were reviewed and a preliminary assessment was carried out to assess the potential for contamination at the existing Ferguson Lake old camp and airstrip.

1.1 Location

The Ferguson Lake Project is a copper, nickel, cobalt, platinum, and palladium prospect currently being explored by Starfield Resources Inc. It is located on the western shores of Ferguson Lake, 240 kilometres west of Rankin Inlet and 180 kilometres south of Baker Lake, between Yathkyed and Kaminuriak Lakes.

The Ferguson old camp and airstrip are located on bedrock outcropping with soils in depressional areas (Plate 1.1-1). Vegetation consists of mosses, lichens, dwarf birch, alder, Labrador tea, and an assortment of low groundcover. Migratory wildlife such as caribou, Arctic fox, Arctic hare, ptarmigan, and an assortment of wild birds are also found in the area between May and October.

Access to the property is via fixed-wing aircraft or helicopter out of Rankin Inlet and/or Baker Lake. Access overland is limited to winter months. The camp consist of a number of sheds, storage buildings, Quonset huts, fuel barrel storage areas, and a runway with a coarse rock base.

1.2 Fuel and Lubricants on Site

The types of fuel and lubricants stored on the camp site consist of JET-B, P-50 diesel motive, gasoline, propane, and an assortment of hydraulic oils and motor oils. JET-B is helicopter fuel and is also used for heating purposes. All JET-B products are contained in 205 litre drums. P-50 diesel motive is also used for heating purposes and powering generators, pumps, and other related heavy equipment. It is stored in pre-inspected barrels that previously contained sealed JET-B fuel. Gasoline is used for the ski-doos and propane is used for heating and cooking purposes. Oils and lubricants are used on the heavy equipment.

1.3 Petroleum Hydrocarbons

Petroleum hydrocarbons (PHCs) are a mixture of organic compounds found in and derived from geological substances such as oil, bitumen, and coal. Petroleum products released into the environment, such as crude oil and jet fuel, typically contain thousands of compounds in varying proportions. They are composed predominantly of carbon and hydrogen with minor amounts of nitrogen, sulphur, and oxygen. Petroleum hydrocarbon contamination in soils varies with the

petroleum source, soil type, composition, degree of processing (crude, blended, or refined), and the extent of weathering caused by exposure to the environment.

Plate 1.1-1. Camp location on bedrock outcropping.

Identifying specific hydrocarbons is based on the number of carbon atoms each substance contains, up to 34 carbon atoms. Natural gas contains between two and six carbon atoms, diesel and furnace oil contain between nine and 21, and grease may contain anywhere between 18 and 34 carbon atoms. Analysis of petroleum products using the volatile petroleum hydrocarbon (VPH) variable (equivalent carbon number [ECN]: C6-C10) captures the majority of most unweathered gasolines, mineral spirits, and paint thinners. Based on the BC Contaminated Site Regulations, petroleum products that are predominantly captured with the extractable petroleum hydrocarbon (EPH) variable (ECN: C10-C32) include most diesel fuels, lubricating oils, greases, hydraulic oils, and waxes. Many petroleum products contain components within both the VPH and EPH variable ranges (*e.g.*, kerosenes, jet fuel, and weathered gasolines). The C10-C19 compounds include diesel oil, furnace oil, jet fuels, kerosenes, and gasolines (Appendix 1). The C19-C32 compounds include lubricating oils, greases, waxes, asphalts, and heavy fuels. BC CSR uses the EPH variables as precursors to calculate the light and heavy extractable petroleum hydrocarbons (LEPH and HEPH). Specified polycyclic aromatic hydrocarbon (PAH) results are subtracted from EPH concentrations to arrive at LEPH and HEPH. Samples, however, were not analysed for PAH.

Comparable federal Canadian Council of Ministers of the Environment (CCME) Canada wide standards (CWS) are the F1 (C6-C10), F2 (C10-C16), and F3 (C16-C34) compounds.

2. METHODS

2. Methods

2.1 Sampling

Soils were sampled in ten areas that were most susceptible to contamination (Figure 1.1-1). These included the storage shed for the tractor (both the back and near the front), the machine shop, the new and old incinerators, under the fuel tank at Hut 7, fresh and older spills in the helicopter fuel storage areas near the airstrip, and two on the airstrip (Plates 2.1-1 to 2.1-9).

To avoid cross contamination, a clean plastic scoop was used for each sample collected. Samples were placed into glass jars and sent to ALS Environmental Services in Vancouver, British Columbia. All analytical methodologies and certificates of analysis are provided in Appendix 2.

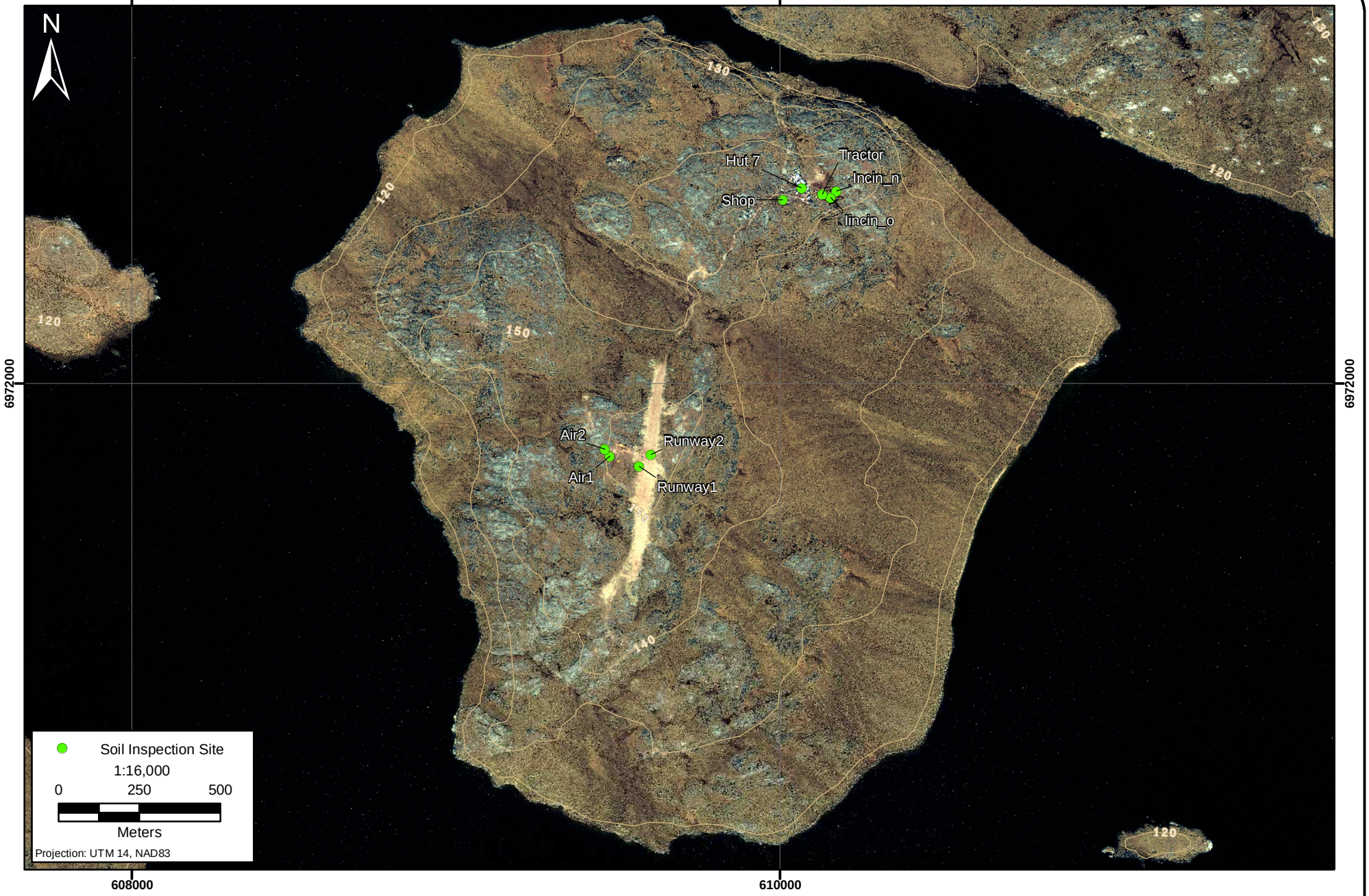
2.2 Laboratory Analysis

All samples met the 14 day holding time limit required for hydrocarbon analysis.

For this preliminary study, the samples were assessed for extractable petroleum hydrocarbons in the C10-C19 and C19-C32 ranges. The C6-C10 hydrocarbons were not tested due to their volatility. The shed housing the tractor and the machine shop were specifically tested for oil and grease in addition to the C10-C19 and C19-C32 hydrocarbons. Results were compared to the CCME CWS and BC CSR to assess potential PHC contamination in soil samples. There are no CCME or BC CSR criteria for oil and grease.

Plate 2.1-1. Contaminated ground sampled in tractor shed (Tractor Back).

Plate 2.1-2. Contaminated ground sampled in tractor shed (Tractor Front).



Ferguson Lake Old Camp and Airstrip - Contaminated Site Inspection Locations

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FIGURE 1.1-1

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Plate 2.1-3. Contaminated ground sampled in machine shed (Shop).

Plate 2.1-4. New incinerator (Incineration New).

Plate 2.1-5 Old incinerator (Incineration Old).

Plate 2.1-6 Typical view of fuel tank mounted outside of huts (Hut 7).

Plate 2.1-7. Helicopter fuel barrels (Airstrip 1).

Plate 2.1-8. Fresh fuel leak from barrel (Airstrip 2).

Plate 2.1-9. Contaminated ground on airstrip (Runway 1).

3. RESULTS AND DISCUSSION

3. Results and Discussion

Chromatograms created by ALS environmental services illustrate the petroleum hydrocarbons associated with each sample location (Appendix 3). The results of the laboratory analysis indicate that the residential and industrial CCME standards were exceeded for the C10 to C19 hydrocarbon range for all sites except the samples collected on the runway (Table 3.1-1, Figure 3.1-1).

This indicates that the sites were contaminated with a potential range of hydrocarbons including diesel fuel, jet fuel, furnace oil, kerosene, and gasoline. The spills in the vicinity of the helicopter fuel storage barrels have the highest amount of these hydrocarbons, as expected, as jet fuels fall into this carbon range. The samples were collected at locations with obvious leaks from the barrels as indicated by dark spots on the soil surface. Contamination of the soils in the fuel barrel storage area is likely spotty and localized as not all barrels leak all of the time.

The soils collected in the vicinity of the old incinerator had a substantially greater amount of these compounds compared to the new incinerator. This may be related to the fact that the old incinerator was placed directly on the soil surface such that burned products could have spilled onto the surface around the incinerator, particularly around the bottom opening (Plate 2.1-5). The new incinerator has been lined with a base and surface covers have been placed around it which likely limit the amount of spillage of waste materials. As well, the new incinerator has a more advanced design which likely reduces the amount of spillage. Further, the new incinerator has been in operation for a shorter period of time which also would have resulted in less spillage.

As expected, the soil sample collected under the fuel barrel at hut 7 (Plate 2.1-6) also exceeded the standards as spillage likely occurs during tank filling and possibly at hose joints and openings. This suggests that there may be contamination under all of the fuel barrels mounted on the side of the huts and where fuel barrels are stored (Plate 2.1-7).

Some contamination with C10 to C19 hydrocarbons occurred in the machine shop which has a dirt floor (Plate 2.1-3). The least amount of contamination by these types of hydrocarbons occurred where the soils were collected in areas that were discolored in the storage shed for the tractor/grader and the runway.

The soils sampled generally exceeded the residential and industrial CCME standards for the products in the range of C19 to C32 (Table 3.1-1, Figure 3.1-2), which are considered the heavy hydrocarbons. These hydrocarbons include lubricating oils, grease, and heavy fuels. The sample labelled Runway 2 did not exceed the residential or industrial standards. The sample collected at the new incinerator exceeded the residential standards but not the CCME industrial standards. This is likely a reflection of the age and design of the new incinerator. It appears that products containing roughly an equal amount of both heavy and light hydrocarbons are burned at both incinerators but higher contamination occurs at the old incinerator.

Table 3.1-1
CCME Criteria for Hydrocarbon Contamination

Sample ID	TRACTOR-BACK	TRACTOR-FRONT	SHOP	INCIN N (NEW)	INCIN O (OLD)	HUT 7	AIR 1 (FRESH, NEW) HF	AIR 2 (OLDER, SPILL) HF2	RUNAWAY 1	RUNAWAY 2
Extractable Hydrocarbons										
EPH 10-19	**830**	**4,690**	**10,100**	**1,120**	**14,400**	**12,700**	**112,000**	**81,100**	**<200**	**<200**
EPH 19-32	**27,600**	**52,200**	**34,900**	**1,520**	**15,200**	**1,770**	**3,940**	**7,800**	**18,500**	**<200**
Extractables										
Oil and Grease	41,000	111,000	70,400	-	-	-	-	-	-	-

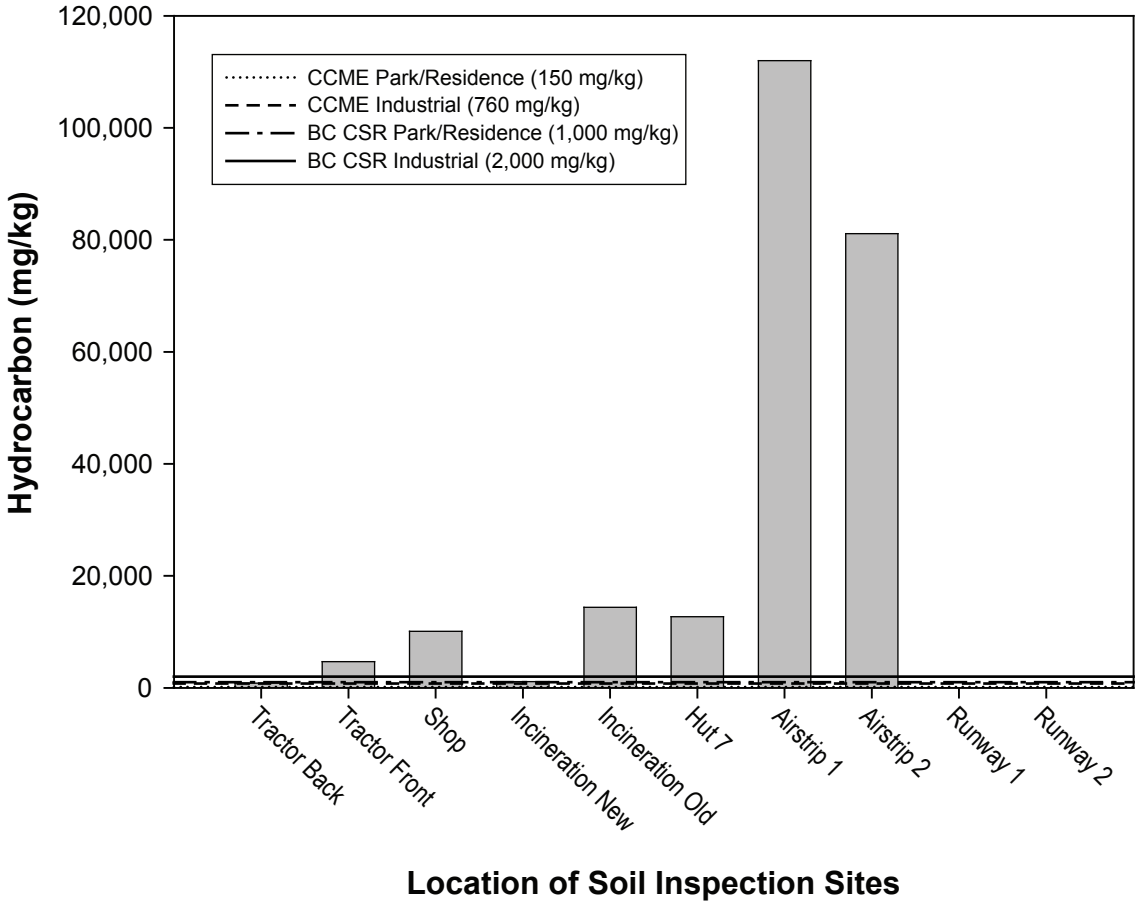
All values in mg/kg

< = value below detection limit

Park/Residence guideline = 150mg/kg

Samples were not analysed for CWS F1 6-10

Value	**CWS F2 has been exceeded for Park/Residence guideline of 150 mg/kg.**
Value	**CWS F2 has been exceeded for Industrial (760 mg/kg) or both specified CCME guidelines.**
Value	**CWS F3 has been exceeded for Park/Residence guideline of 400 mg/kg.**
Value	**CWS F3 has been exceeded for Industrial (1700 mg/kg) or both specified CCME guidelines.**



Comparison of Extractable Petroleum Hydrocarbons (EPH 10-19) from Soil Samples of Ferguson Lake Camp to CCME and BC CSR Guidelines

FIGURE 3.1-1

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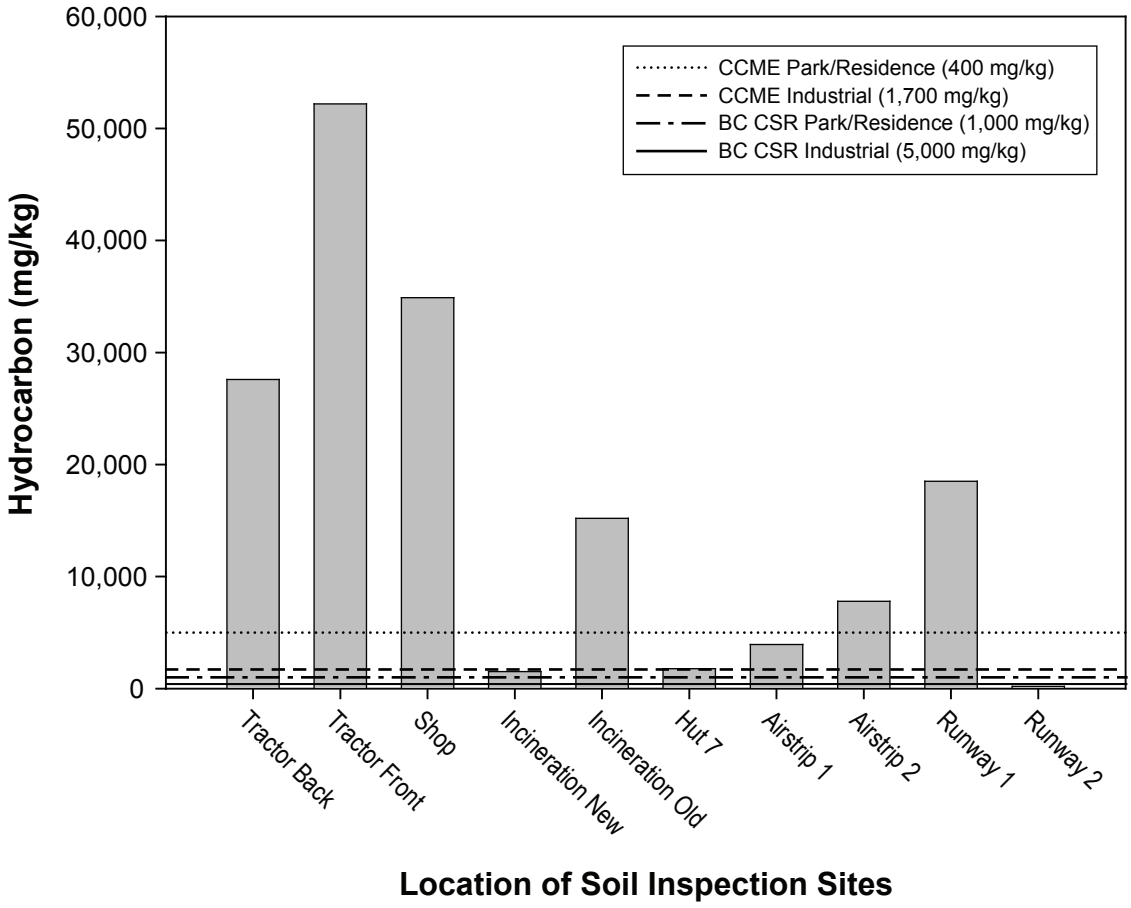

Comparison of Extractable Petroleum Hydrocarbons (EPH 19-32) from Soil Samples of Ferguson Lake Camp to CCME and BC CSR Guidelines

FIGURE 3.1-2

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Table 3.1-2
BC CSR Criteria for Hydrocarbon Contamination

Sample ID	TRACTOR-BACK	TRACTOR-FRONT	SHOP	INCIN N (NEW)	INCIN O (OLD)	HUT 7	AIR 1 (FRESH, NEW) HF	AIR 2 (OLDER, SPILL) HF2	RUNAWAY 1	RUNAWAY 2
Extractable Hydrocarbons										
EPH 10-19	**830**	**4,690**	**10,100**	**1,120**	**14,400**	**12,700**	**112,000**	**81,100**	**<200**	**<200**
EPH 19-32	**27,600**	**52,200**	**34,900**	**1,520**	**15,200**	**1,770**	**3,940**	**7,800**	**18,500**	**<200**
Extractables										
Oil and Grease	41,000	111,000	70,400	-	-	-	-	-	-	-

All values in mg/kg.

< = value below detection limit.

Samples were not analysed for volatile petroleum hydrocarbons (VPH 6-10).

Value	**Britsh Columbia Standards for LEPH 10-19, has been exceeded for Park/Residence guideline of 1000 mg/kg.**
Value	**Britsh Columbia Standards for LEPH 10-19, has been exceeded for Industrial (2000 mg/kg) or both specified CSR guidelines.**
Value	**Britsh Columbia Standards for HEPH 19-32, has been exceeded for Park/Residence guideline of 1000 mg/kg.**
Value	**Britsh Columbia Standards for HEPH 19-32, has been exceeded for industrial (5000 mg/kg) or both specified CSR guidelines.**

The soil collected along the stained portion of the runway (Runway 1), was fairly high in the C19–C32 range of compounds. This is likely from the oils and grease used to lubricate the airplane engines and other plane parts.

The soils collected from the discoloured spots in the tractor shed were high in the heavier hydrocarbons (C19-C32), indicating the spills are likely from grease and lubricating oils used on the tractor/grader. A high amount of these hydrocarbons were also found in the machine shop.

The BC CSR standards were not exceeded to the same extent as those of the CCME, as the BC CSR criteria are less stringent. Even though the BC criteria are less stringent, the soils at all of the sites exceeded the residential and industrial standards for the C10 to C19 hydrocarbon range of products, except those collected along the runway and at the back of the tractor shed (Table 3.1-2, Figure 3.1-1).

The industrial BC CSR standards for compounds between C19 and C32 were exceeded at five sites: both tractor sites, the Shop, Airstrip 2 and Runway 1 (Table 3.1-2). The residential standards were exceeded at all sites except one site on the runway (Runway 2).

Oil and grease were found in the soils samples collected in the tractor/grader shed and machine shop, as expected, due to the nature of the activities associated with machine workings.

The most contaminated sites were the tractor sites, the shop, and the airstrip sites. The least contaminated sites were the incinerators, the hut, and the runway.

This preliminary assessment suggests that soil contamination has occurred at various locations around the property and further action is needed to remediate the site. A detailed assessment of the soils cannot be carried out until all structures, equipment, *etc*., are removed from the site.

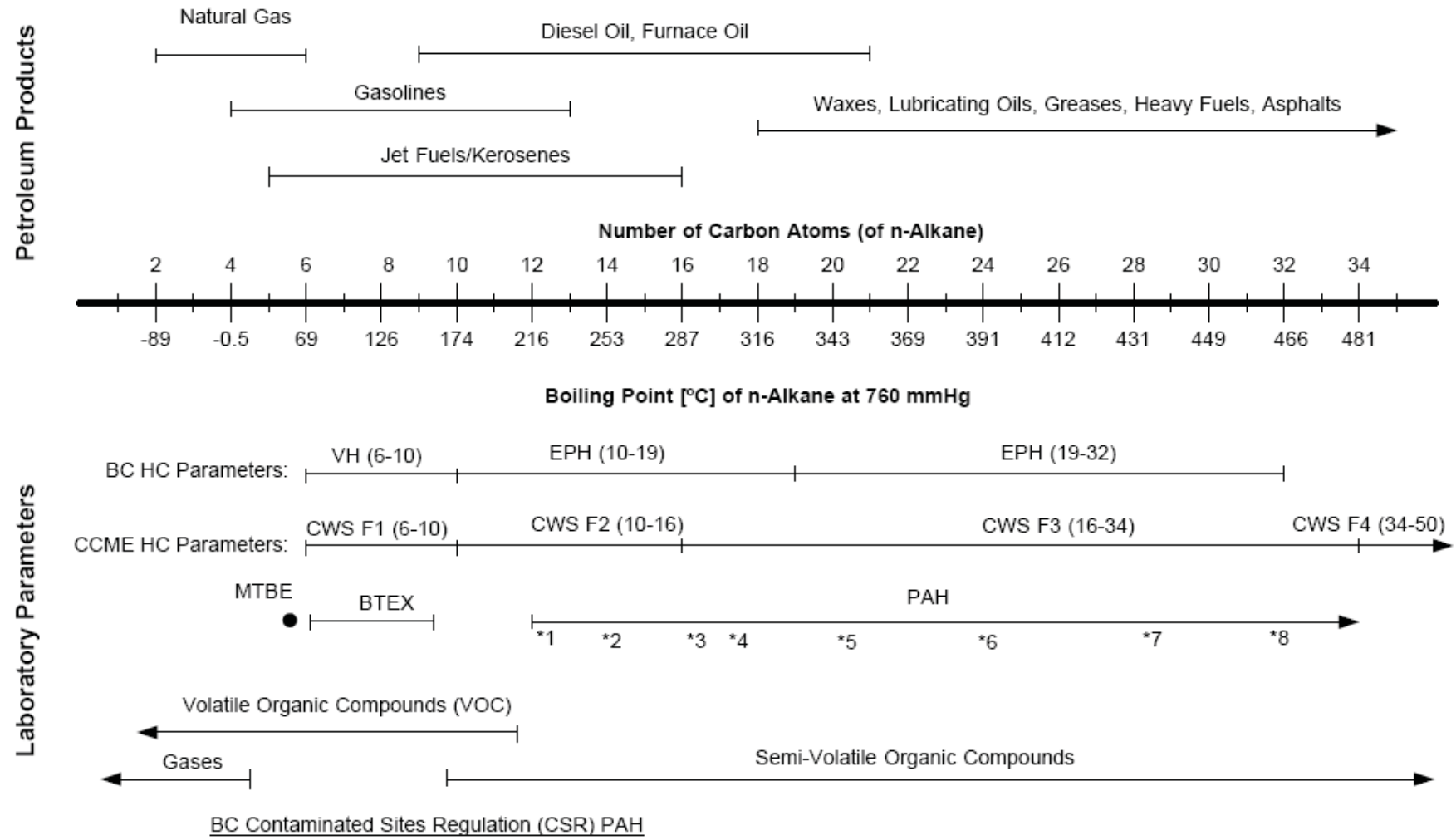
REFERENCES

References

Canadian Council of Ministers of the Environment. 1999. Canadian Soil Quality Guidelines for the Protection of Environmental and Human Health: Guidance Manual for Developing Site-Specific Soil Quality Remediation Objectives for Contaminated Sites in Canada. The National Contaminated Sites Remediation Program. Excerpt from publication No. 1299. Pg. 1-30. Accessed on October 10, 2006 at: http://www.ccme.ca/assets/pdf/sqg_site_sp_guidance.pdf

APPENDIX 1
PETROLEUM HYDROCARBON PRODUCTS AND ASSOCIATED LABORATORY VARIABLES

Appendix 1
Petroleum Hydrocarbon Products and Associated Laboratory Parameters



BC Contaminated Sites Regulation (CSR) PAH

*1 = Naphthalene
*2 = Acenaphthene
*3 = Fluorene
*4 = Phenanthrene, Anthracene, Acridine
*5 = Fluoranthene, Pyrene
*6 = Benz(a)anthracene
*7 = Benzo(b & k)fluoranthene, Benzo(a)pyrene
*8 = Dibenz(a,h)anthracene, Indeno(1,2,3-cd)pyrene

REV 03 05 07

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APPENDIX 2
CERTIFICATE OF ANALYSIS AND LABORATORY METHODOLOGY

ALS Environmental

CERTIFICATE OF ANALYSIS

Date:	August 25, 2006
ALS File No.	Z1160
Report On:	577-7 Ferguson Lake Soil Analysis
Report To:	**Rescan Environmental Services** Sixth Floor 1111 West Hastings Street Vancouver, BC V6E 2J3
Attention:	**Dr. Susan Ames**
Received:	August 15, 2006

ALS ENVIRONMENTAL
per:

Amber Springer, B.Sc. - Senior Account Manager
Jerry Holzbecher, B.Sc. - Account Manager

File No. Z1160

RESULTS OF ANALYSIS - Sediment/Soil

Sample ID	TRACTOR-BACK	TRACTOR-FRONT	SHOP	INCIN N (NEW)	INCIN O (OLD)
Sample Date	06-08-10	06-08-10	06-08-10	06-08-10	06-08-10
ALS ID	*1*	*2*	*3*	*4*	*5*
Physical Tests					
Moisture %	1.56	1.83	7.83	65.9	50.2
Extractable Hydrocarbons					
EPH10-19	830	4690	10100	1120	14400
EPH19-32	27600	52200	34900	1520	15200
Extractables					
Oil and Grease	41000	111000	70400	-	-

Results are expressed as milligrams per dry kilogram except where noted.
< = Less than the detection limit indicated.
EPH = Extractable Petroleum Hydrocarbons.

File No. Z1160

RESULTS OF ANALYSIS - Sediment/Soil

Sample ID	HUT 7	AIR 1 (FRESH, NEW)	AIR 2 (OLDER, SPILL)	RUNAWAY 1	RUNAWAY 2
Sample Date	06-08-10	06-08-11	06-08-11	06-08-11	06-08-11
ALS ID	*6*	*7*	*8*	*9*	*10*
Physical Tests					
Moisture %	4.71	17.6	30.2	0.45	2.36
Extractable Hydrocarbons					
EPH10-19	12700	112000	81100	<200	<200
EPH19-32	1770	3940	7800	18500	<200

Results are expressed as milligrams per dry kilogram except where noted.
< = Less than the detection limit indicated.
EPH = Extractable Petroleum Hydrocarbons.

Appendix 1 - METHODOLOGY

Outlines of the methodologies utilized for the analysis of the samples submitted are as follows

Moisture in Sediment/Soil

Method Revised and Replaced: 2006 09 11

Extractable Hydrocarbons in Sediment/Soil

This analysis is carried out in accordance with the British Columbia Ministry of Environment, Lands and Parks (BCMELP) Analytical Method for Contaminated Sites "Extractable Petroleum Hydrocarbons in Solids by GC/FID, Version 2.1 July 1999". The procedure uses an automated system (Accelerated Solvent Extractor - ASE) to extract a subsample of the sediment/soil with a 1:1 mixture of hexane and acetone at high temperature and pressure. The extract is then solvent exchanged to toluene or kept in hexane/acetone and analyzed by capillary column gas chromatography with flame ionization detection (GC/FID). EPH results include Polycyclic Aromatic Hydrocarbons (PAH) and are therefore not equivalent to Light and Heavy Extractable Petroleum Hydrocarbons (LEPH/HEPH).

Recommended Holding Time:
Sample: 14 days Extract: 40 days
Reference: BCMELP

Laboratory Location: ALS Environmental, Vancouver

Oil & Grease in Solids

This analysis is carried out using procedures adapted from "British Columbia Laboratory Manual - 2003 Edition: Oil and Grease, and Oil and Grease (Mineral) in Solids by Hexane Extraction". The procedure involves an extraction of a subsample of the solid with 1:1 hexane:acetone by Accelerated Solvent Extraction (ASE). This extract is then evaporated to dryness, and the residue weighed to determine Oil and Grease.

Recommended Holding Time:
Sample: 14 days Extract: N/A
Reference: BCWLAP

Laboratory Location: ALS Environmental, Vancouver

Results contained within this certificate relate only to the samples as submitted.

End of Report

APPENDIX 3
HYDROCARBON DISTRIBUTION CHROMATOGRAMS

ALS Environmental - Hydrocarbon Distribution Report

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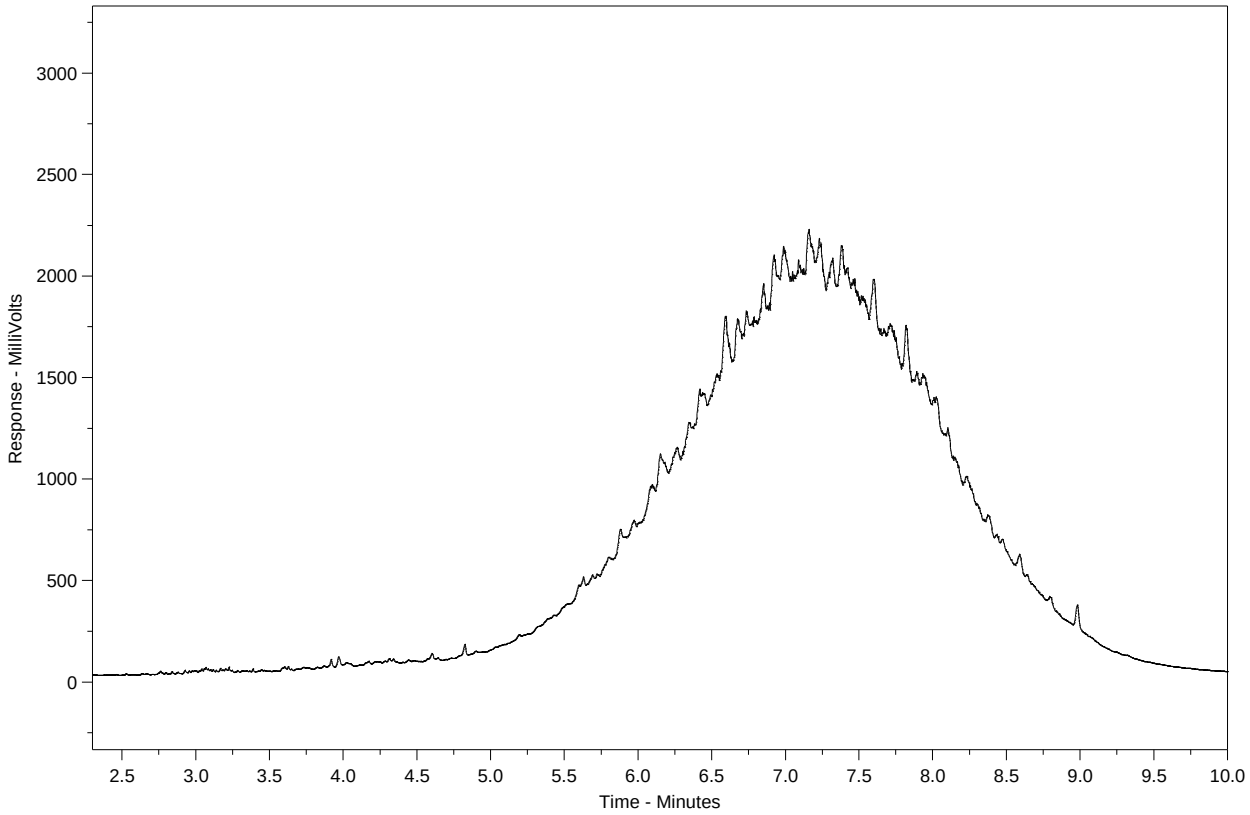

|---nC10----------nC19----------nC32----Surrogate----------|

<-------Gasoline------| |----------Heavy Oils---------->
<----------Diesel----------|

Sample Amount = 10.4 (g or mL) Dilution Factor = 50.0

The Hydrocarbon Distribution Report is intended to assist you in characterizing hydrocarbon products that may be present in your sample. For further interpretation, a current library of reference products is available upon request.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products, and three n-alkane hydrocarbon marker compounds. Depending on the amount of hydrocarbons present in the sample, a C36 surrogate compound may be visible. Surrogate compounds are added to all samples as a component of quality control.

Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor, and the response scale at the left.

ALS Environmental - Hydrocarbon Distribution Report

Client Sample ID:
ALS Sample ID: **Z1160-T--2**
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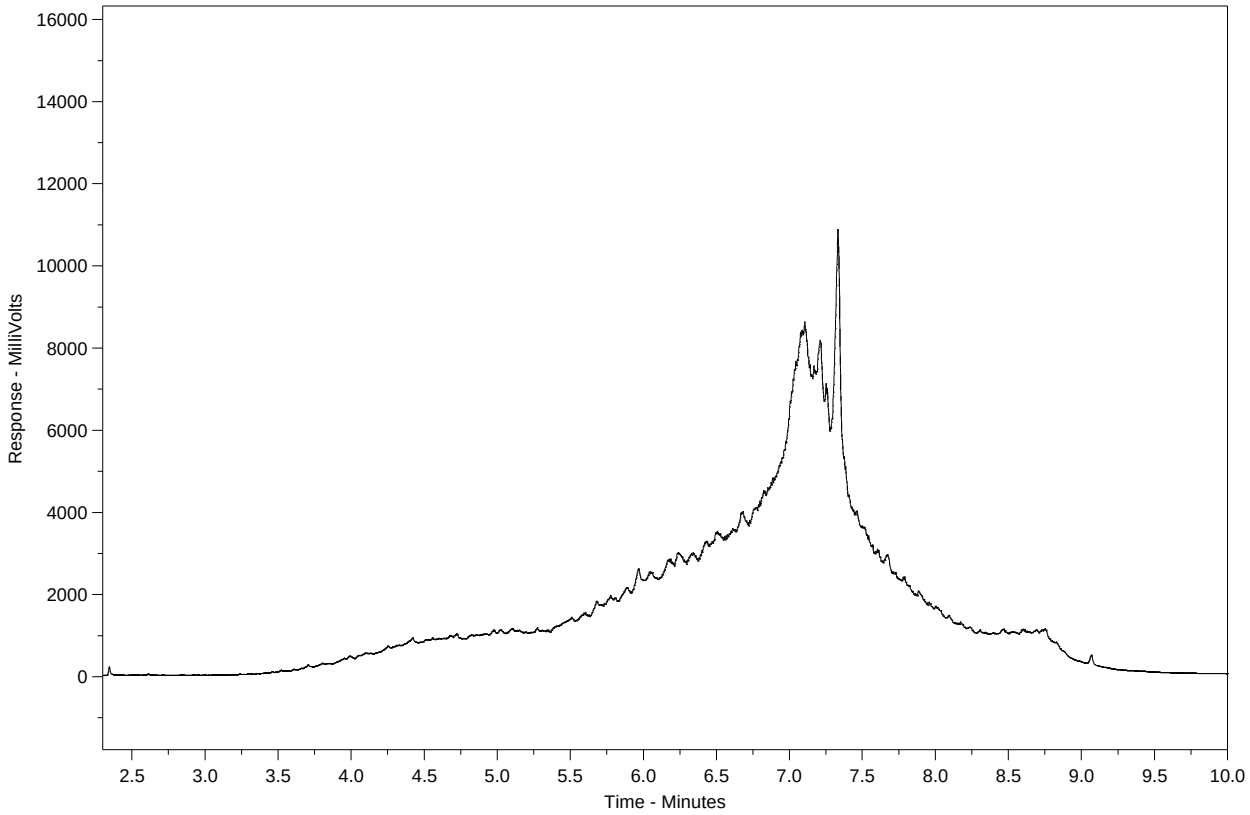

|---nC10----------nC19----------nC32----Surrogate----------|

<-------Gasoline------| |----------Heavy Oils---------->
<----------Diesel----------|

Sample Amount = 10.3 (g or mL) Dilution Factor = 50.0

The Hydrocarbon Distribution Report is intended to assist you in characterizing hydrocarbon products that may be present in your sample. For further interpretation, a current library of reference products is available upon request.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products, and three n-alkane hydrocarbon marker compounds. Depending on the amount of hydrocarbons present in the sample, a C36 surrogate compound may be visible. Surrogate compounds are added to all samples as a component of quality control.

Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor, and the response scale at the left.

ALS Environmental - Hydrocarbon Distribution Report

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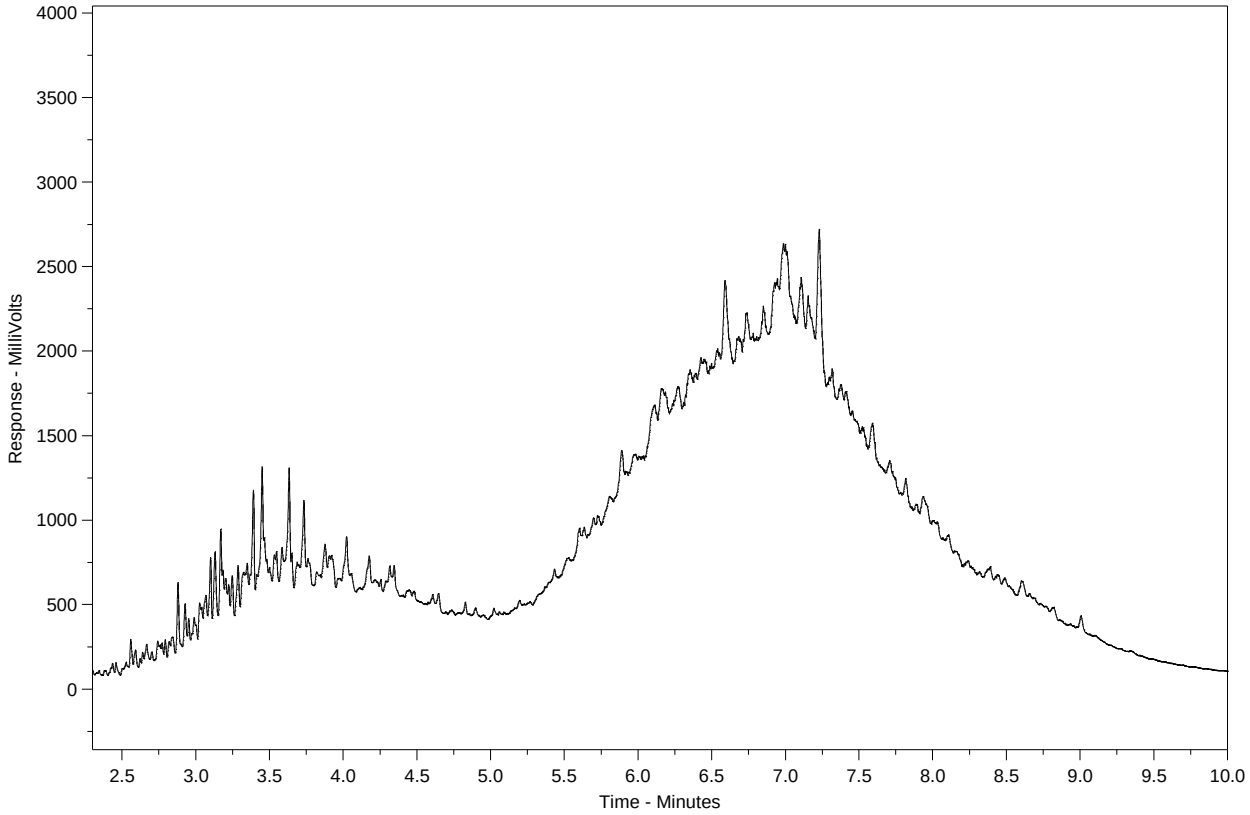

|---nC10----------nC19----------nC32----Surrogate----------|

<-------Gasoline------| |----------Heavy Oils---------->
<----------Diesel----------|

Sample Amount = 9.6 (g or mL) Dilution Factor = 50.0

The Hydrocarbon Distribution Report is intended to assist you in characterizing hydrocarbon products that may be present in your sample. For further interpretation, a current library of reference products is available upon request.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products, and three n-alkane hydrocarbon marker compounds. Depending on the amount of hydrocarbons present in the sample, a C36 surrogate compound may be visible. Surrogate compounds are added to all samples as a component of quality control.

Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor, and the response scale at the left.

ALS Environmental - Hydrocarbon Distribution Report

Client Sample ID:
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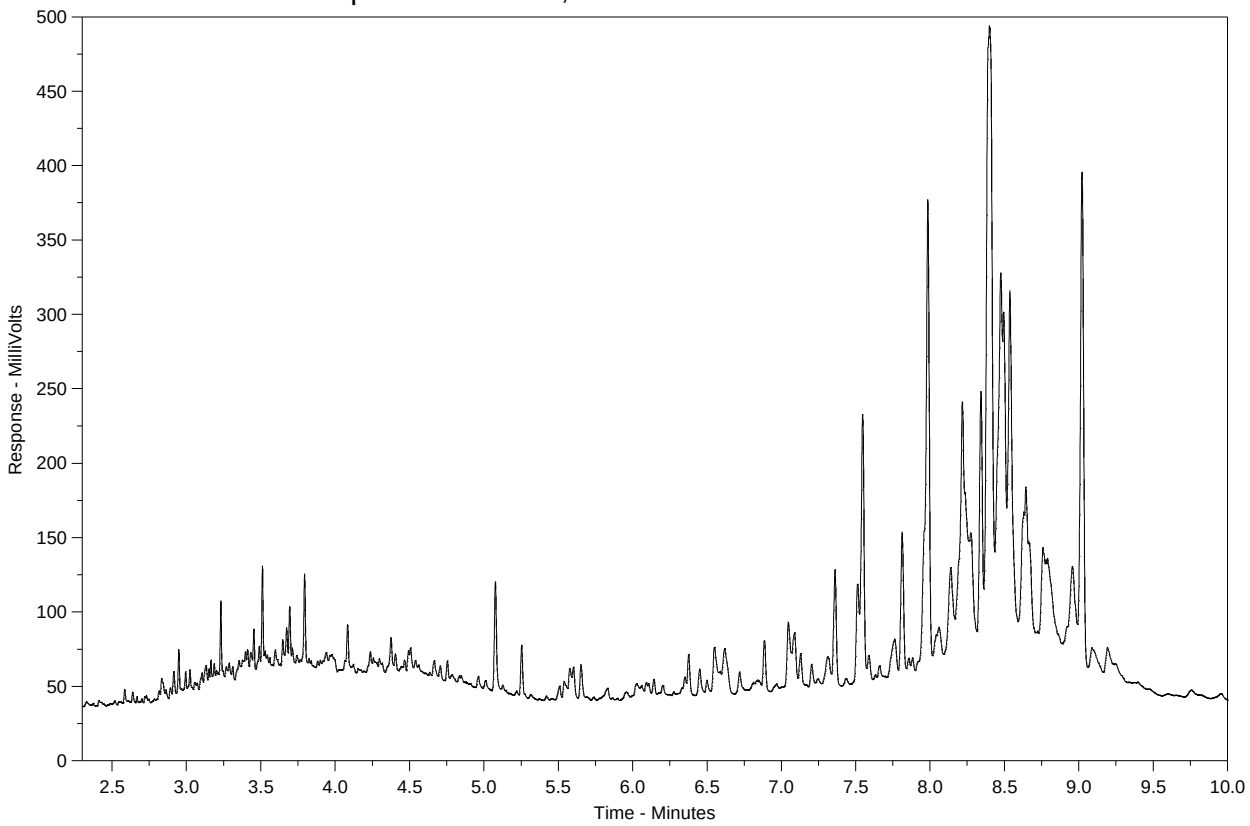


|---nC10----------nC19----------nC32----Surrogate----------|

<-------Gasoline------| |----------Heavy Oils----------->
<----------Diesel----------|

Sample Amount = 3.5 (g or mL) Dilution Factor = 50.0

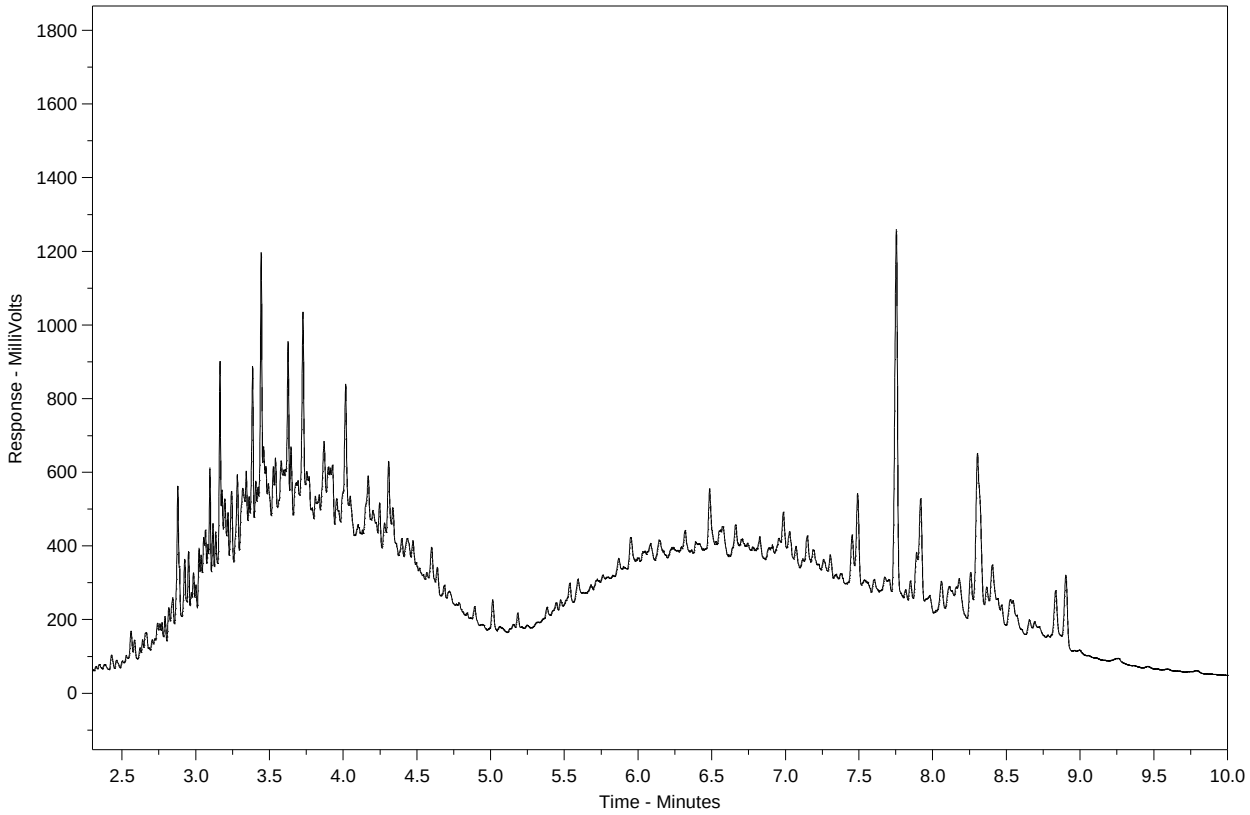
The Hydrocarbon Distribution Report is intended to assist you in characterizing hydrocarbon products that may be present in your sample. For further interpretation, a current library of reference products is available upon request.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products, and three n-alkane hydrocarbon marker compounds. Depending on the amount of hydrocarbons present in the sample, a C36 surrogate compound may be visible. Surrogate compounds are added to all samples as a component of quality control.

Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor, and the response scale at the left.

ALS Environmental - Hydrocarbon Distribution Report

Client Sample ID:
ALS Sample ID: **Z1160-T--5**
File Name: I:\Chrom\gc21\data\gc21_21augB.0018.RAW
Run Information: Acquired on GC 21, 21/08/2006 11:38:56 PM



|---nC10----------nC19----------nC32----Surrogate----------|

<-------Gasoline------| |----------Heavy Oils---------->
<----------Diesel----------|

Sample Amount = 4.7 (g or mL) Dilution Factor = 1.0

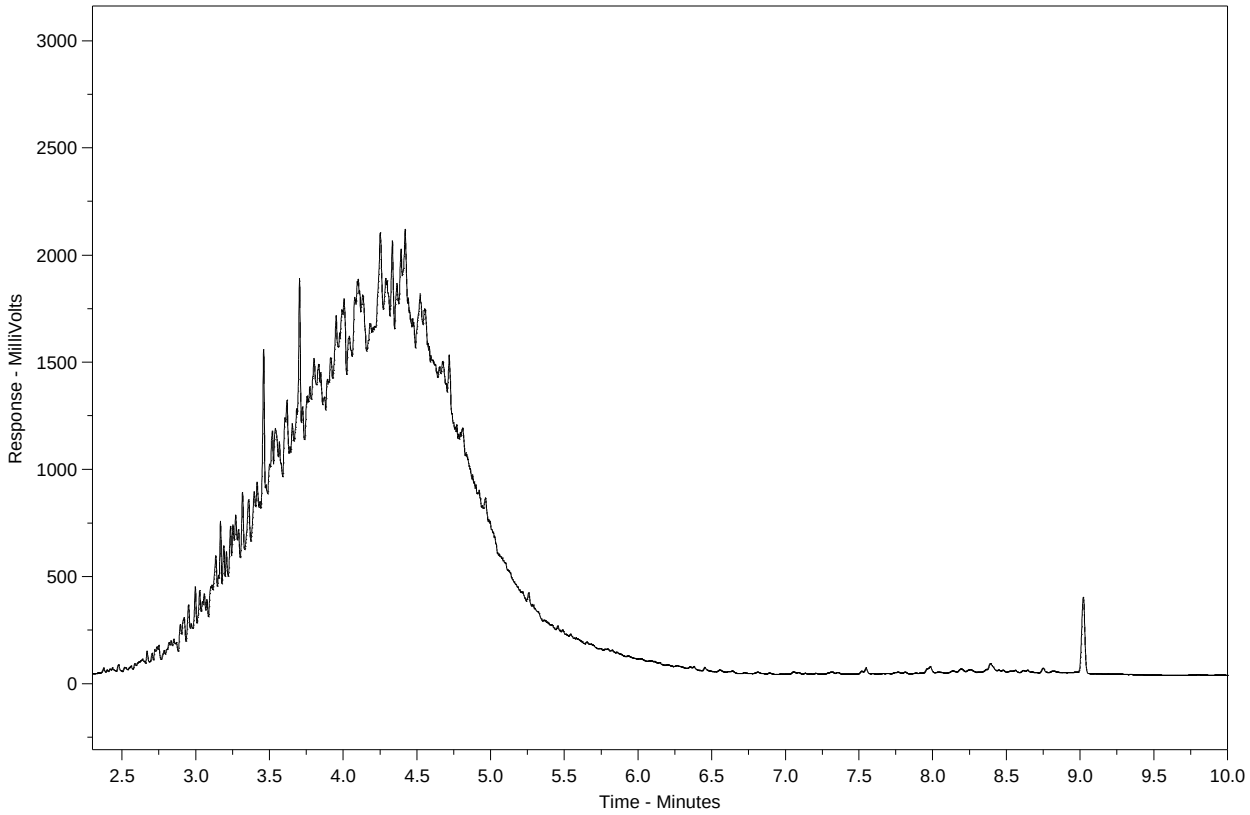
The Hydrocarbon Distribution Report is intended to assist you in characterizing hydrocarbon products that may be present in your sample. For further interpretation, a current library of reference products is available upon request.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products, and three n-alkane hydrocarbon marker compounds. Depending on the amount of hydrocarbons present in the sample, a C36 surrogate compound may be visible. Surrogate compounds are added to all samples as a component of quality control.

Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor, and the response scale at the left.

ALS Environmental - Hydrocarbon Distribution Report

Client Sample ID:
ALS Sample ID: **Z1160-T--6**
File Name: I:\Chrom\gc21\data\gc21_17augA.0031.RAW
Run Information: Acquired on GC 21, 8/18/2006 1:27:42 PM



|---nC10----------nC19----------nC32----Surrogate----------|

<-------Gasoline------| |----------Heavy Oils----------->
<----------Diesel----------|

Sample Amount = 10.7 (g or mL) Dilution Factor = 50.0

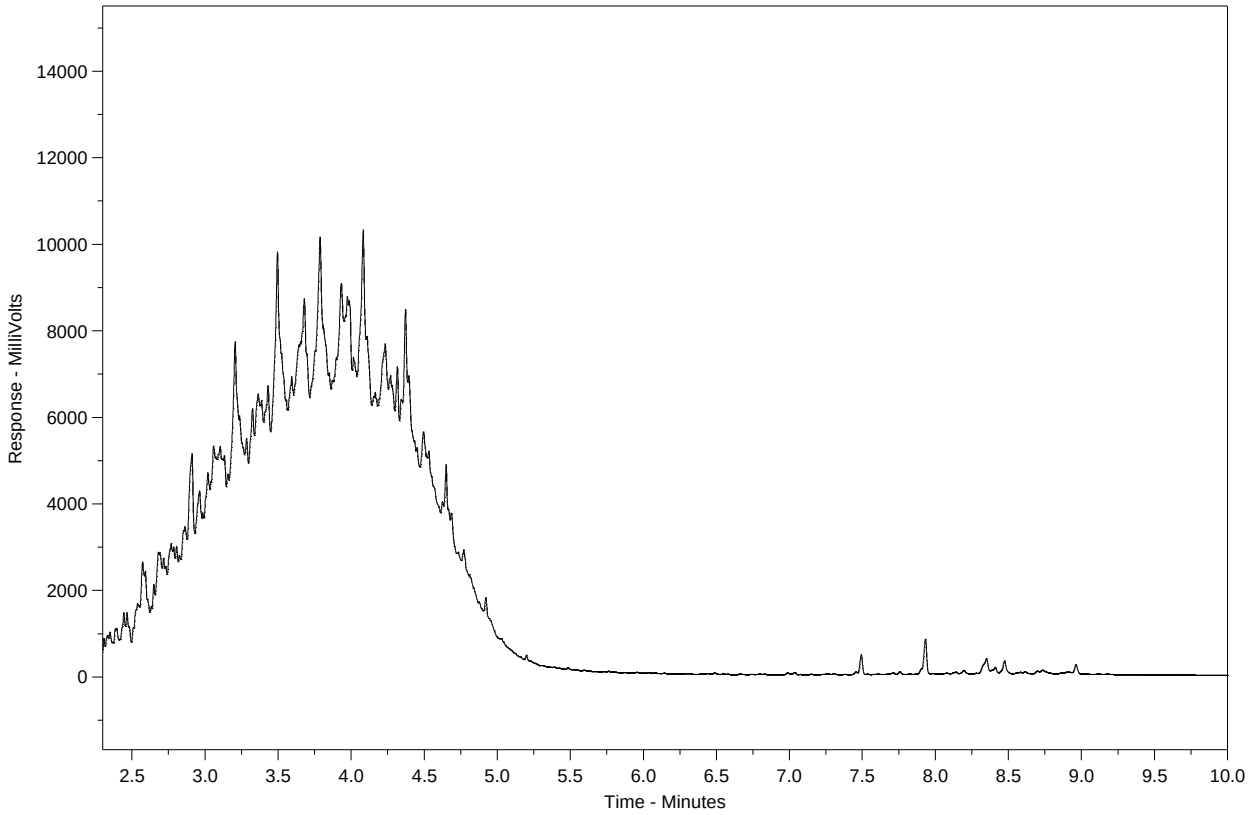
The Hydrocarbon Distribution Report is intended to assist you in characterizing hydrocarbon products that may be present in your sample. For further interpretation, a current library of reference products is available upon request.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products, and three n-alkane hydrocarbon marker compounds. Depending on the amount of hydrocarbons present in the sample, a C36 surrogate compound may be visible. Surrogate compounds are added to all samples as a component of quality control.

Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor, and the response scale at the left.

ALS Environmental - Hydrocarbon Distribution Report

Client Sample ID:
ALS Sample ID: **Z1160-T--7**
File Name: I:\Chrom\gc21\data\gc21_17augB.0030.RAW
Run Information: Acquired on GC 21, 8/18/2006 1:02:44 PM



|---nC10----------nC19----------nC32----Surrogate----------|

<-------Gasoline------| |----------Heavy Oils---------->
<----------Diesel----------|

Sample Amount = 8.7 (g or mL) Dilution Factor = 50.0

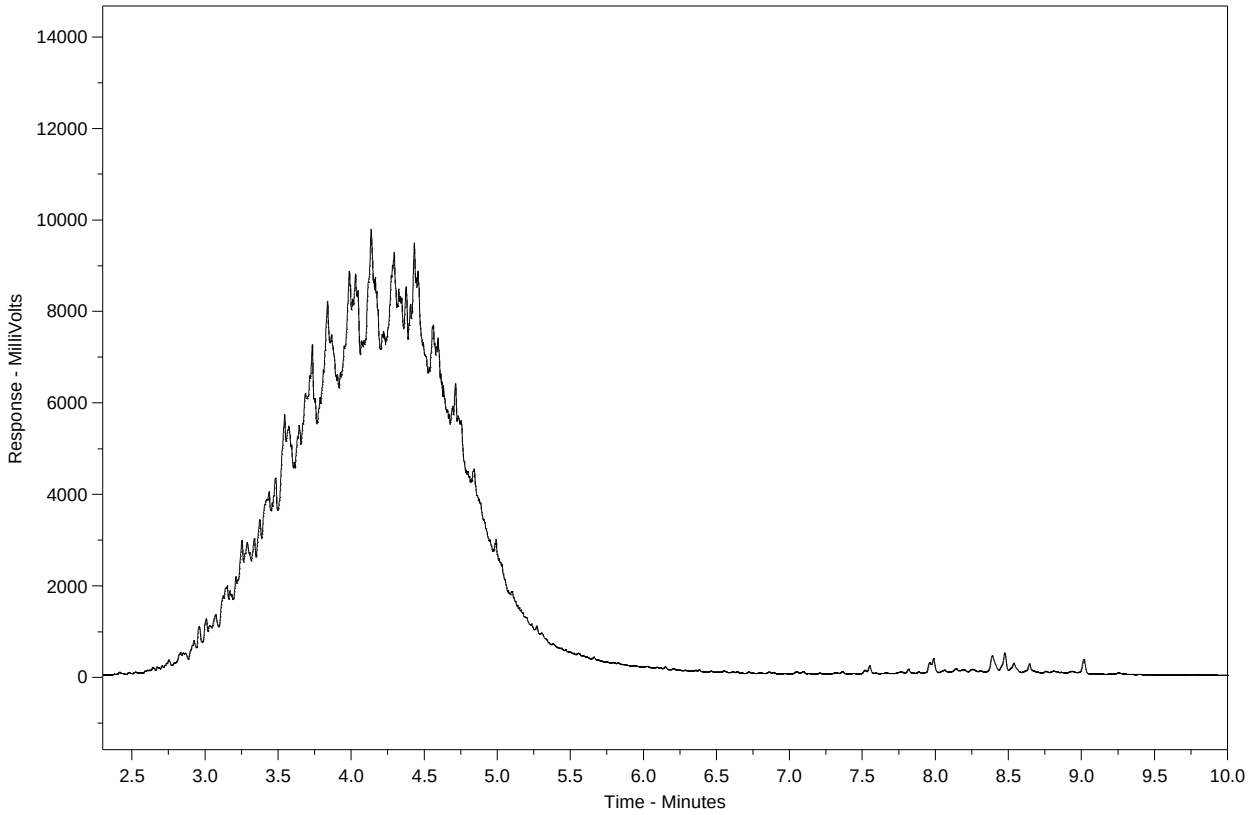
The Hydrocarbon Distribution Report is intended to assist you in characterizing hydrocarbon products that may be present in your sample. For further interpretation, a current library of reference products is available upon request.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products, and three n-alkane hydrocarbon marker compounds. Depending on the amount of hydrocarbons present in the sample, a C36 surrogate compound may be visible. Surrogate compounds are added to all samples as a component of quality control.

Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor, and the response scale at the left.

ALS Environmental - Hydrocarbon Distribution Report

Client Sample ID:
ALS Sample ID: **Z1160-T--8**
File Name: I:\Chrom\gc21\data\gc21_17augA.0032.RAW
Run Information: Acquired on GC 21, 8/18/2006 1:51:42 PM



|---nC10----------nC19----------nC32----Surrogate----------|

<-------Gasoline------| |----------Heavy Oils---------->
<----------Diesel----------|

Sample Amount = 7.4 (g or mL) Dilution Factor = 50.0

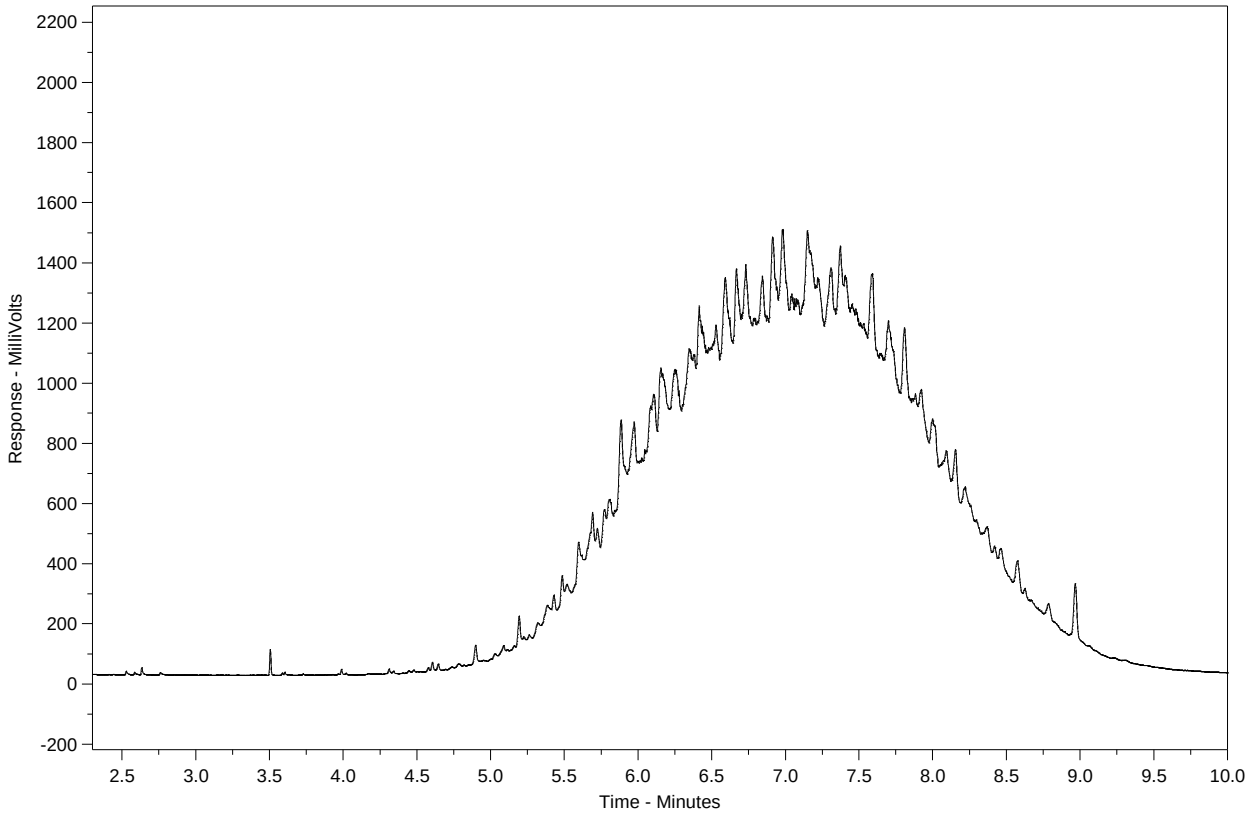
The Hydrocarbon Distribution Report is intended to assist you in characterizing hydrocarbon products that may be present in your sample. For further interpretation, a current library of reference products is available upon request.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products, and three n-alkane hydrocarbon marker compounds. Depending on the amount of hydrocarbons present in the sample, a C36 surrogate compound may be visible. Surrogate compounds are added to all samples as a component of quality control.

Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor, and the response scale at the left.

ALS Environmental - Hydrocarbon Distribution Report

Client Sample ID:
ALS Sample ID: **Z1160-T--9**
File Name: I:\Chrom\gc21\data\gc21_17augB.0031.RAW
Run Information: Acquired on GC 21, 8/18/2006 1:27:42 PM



|---nC10----------nC19----------nC32----Surrogate----------|

<-------Gasoline------| |----------Heavy Oils---------->
<----------Diesel----------|

Sample Amount = 11.0 (g or mL) Dilution Factor = 50.0

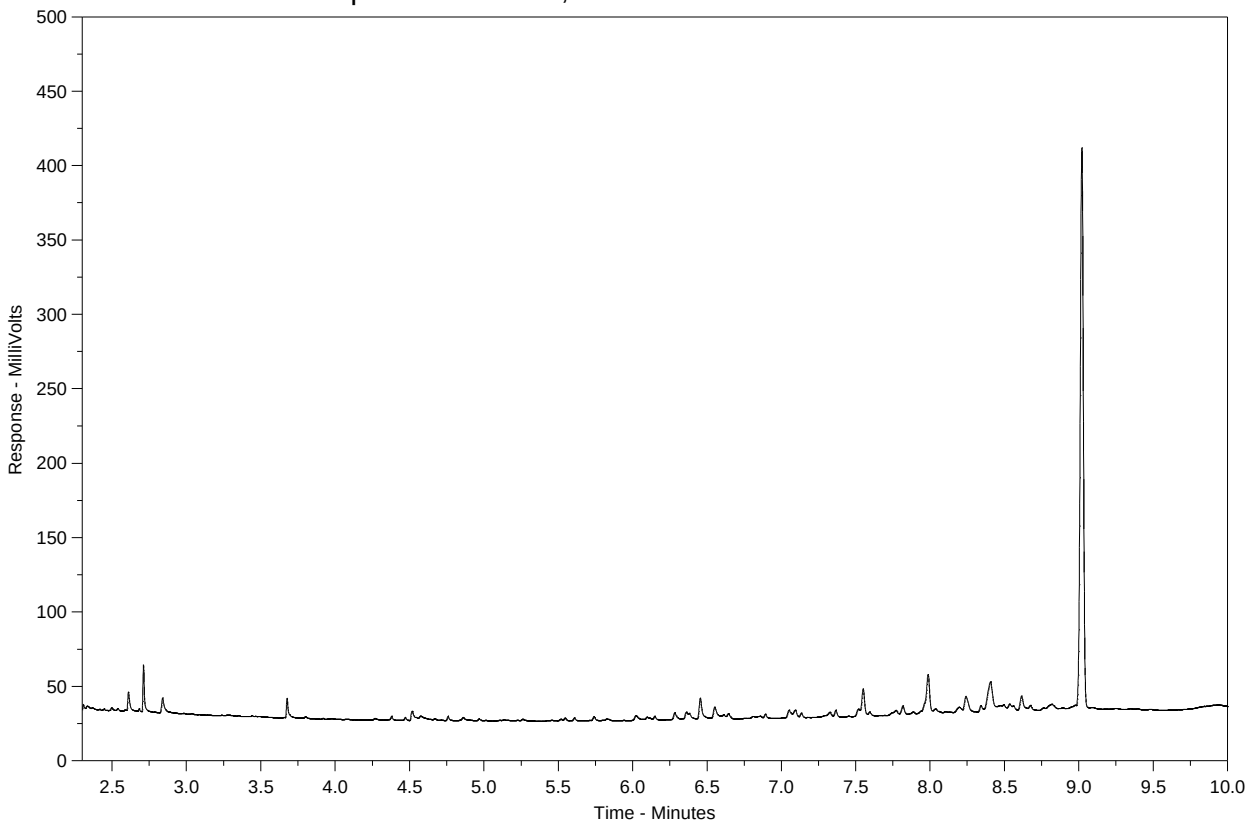
The Hydrocarbon Distribution Report is intended to assist you in characterizing hydrocarbon products that may be present in your sample. For further interpretation, a current library of reference products is available upon request.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products, and three n-alkane hydrocarbon marker compounds. Depending on the amount of hydrocarbons present in the sample, a C36 surrogate compound may be visible. Surrogate compounds are added to all samples as a component of quality control.

Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor, and the response scale at the left.

ALS Environmental - Hydrocarbon Distribution Report

Client Sample ID:
ALS Sample ID: **Z1160-T--10**
File Name: I:\Chrom\gc21\data\gc21_17augA.0033.RAW
Run Information: Acquired on GC 21, 8/18/2006 2:16:07 PM



|---nC10----------nC19----------nC32----Surrogate----------|

<-------Gasoline------| |----------Heavy Oils---------->
<----------Diesel----------|

Sample Amount = 11.0 (g or mL) Dilution Factor = 50.0

The Hydrocarbon Distribution Report is intended to assist you in characterizing hydrocarbon products that may be present in your sample. For further interpretation, a current library of reference products is available upon request.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products, and three n-alkane hydrocarbon marker compounds. Depending on the amount of hydrocarbons present in the sample, a C36 surrogate compound may be visible. Surrogate compounds are added to all samples as a component of quality control.

Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor, and the response scale at the left.