DELTA Geophysics Inc.

GEOPHYSICAL INVESTIGATION REPORT

SITE LOCATION:

145 Wolcott Street
Brooklyn, New York 11231

PREPARED FOR:

P.W. Grosser Consulting

630 Johnson Avenue, Suite 7
Bohemia, New York 11716

PREPARED BY:

Dylan Morgenweck
Delta Geophysics Inc.
738 Front Street
Catasauqua, PA18032

October 10, 2017

Delta Geophysics, Inc. (Delta) is pleased to provide the results of the geophysical survey conducted at 145 Wolcott Street Brooklyn, New York 11231.

1.0 INTRODUCTION

On October 10, 2017 Delta Geophysics personnel performed a limited geophysical investigation at 145 Wolcott Street Brooklyn, New York 11231. The area of interest included a commercial property. During the time of the survey, subsurface conditions were unknown; surface conditions consisted of asphalt and concrete.

2.0 SCOPE OF WORK

The objective of this survey was to investigate the subsurface for anomalies consistent with underground storage tanks (USTs) and/or former excavations. A secondary objective was to locate and mark all underground utilities within the survey area.

3.0 METHODOLOGY

Selection of survey equipment is dependent upon site conditions and project objectives. For this project the technician utilized the following equipment to survey the area of concern:

- Geophysical Survey Systems Inc. SIR-3000 cart-mounted Ground Penetrating Radar (GPR) unit with a 400 Mhz antenna.
- Radiodetection RD7000 precision utility locator.
- Fisher M-Scope TW-6 pipe and cable locator.

Ground penetrating radar (commonly called GPR) is a geophysical method that has been developed over the past thirty years for shallow, high-resolution, subsurface investigations of the earth. GPR uses high frequency pulsed electromagnetic waves (generally 10 MHz to 1,000 MHz) to acquire subsurface information. Energy is propagated downward into the ground and is reflected back to the surface from boundaries at which there are electrical property contrasts. GPR is a method that is commonly used for environmental, engineering, archeological, and other shallow investigations.

The GSSI SIR-3000 GPR can accept a wide variety of antennas which provide various depths of penetration and levels of resolution. The 400 MHz antenna can achieve depths of penetration up to about 20 feet, but this depth may be greatly reduced due to site-specific conditions. Signal penetration decreases with increased soil conductivity. Conductive materials attenuate or absorb the GPR signal. As depth increases the return signal becomes weaker. Penetration is the greatest in unsaturated sands and fine gravels. Clayey, highly saline or saturated soils, areas covered by steel reinforced concrete, foundry slag, of other highly conductive materials significantly reduces GPR depth of penetration.

The 400MHz antenna was configured to transmit to a depth of approximately 10 feet below the subsurface, but actual signal penetration was limited to approximately 1-3 feet below ground surface (bgs). The limiting factor was signal attenuation from near surface soils.
The RD7000 precision utility locator uses radio emission to trace the location of metal bearing utilities. This radio emission can be active or passive. Active tracing requires the attachment of a radio transmitter to the utility, passive tracing uses radio emissions that are present on the utility. Underground electrical utilities typically emit radio signals that this device can detect.

The TW-6 is designed to find pipes, cables and other metallic objects such as underground storage tanks. One surveyor can carry both the transmitter and receiver together, making it ideally suited for exploration type searches of ferrous metal masses. Metal detectors of this type operate by generating a magnetic field at the transmitter which causes metallic objects in the subsurface to generate a secondary magnetic field. The induced secondary field is detected by the receiver, which generates an audible tone equal to the strength of the secondary field.

4.0 SURVEY FINDINGS

All accessible areas within the specified location were examined during this survey. The area was surveyed with the TW-6 and GPR for potential anomalous features, and then also surveyed with the RD7000 for potential subsurface utilities. Delta personnel detected seven metallic anomalies, a soil anomaly, and utilities during the survey. The following sections detail the findings of the geophysical investigation.

Metallic Anomaly #1

Delta utilized the TW-6 to detect a metallic anomaly in the southeastern portion of the property. GPR transects imaged a disturbed area potentially consistent with subsurface debris. The anomaly measures approximately 10 feet wide, however due to parked cars, the width could not be determined. The anomaly was marked on site with pink paint.

Metallic Anomaly #2

Delta utilized the TW-6 to detect a metallic anomaly in the southeastern portion of the property. GPR transects imaged a flat object, potentially consistent with a buried metal plate. The anomaly measures approximately 8 feet wide and 8 feet long. The anomaly was marked on site with pink paint.

Metallic Anomaly #3

Delta utilized the TW-6 to detect a metallic anomaly in the southeastern portion of the property. The anomaly is potentially consistent with subsurface debris due to a relatively disturbed GPR image of the area. The anomaly measures approximately 7.5 feet long and 3.5 feet wide. The anomaly was marked on site with pink paint.

Metallic Anomaly #4

Delta utilized the TW-6 to detect a metallic anomaly in the southeastern portion of the property. GPR transects imaged an irregularly shaped flat object, potentially consistent with a buried metal plate. The anomaly measures approximately 16 feet wide and ranges from approximately 12 and 14.5 feet long. The anomaly was marked on site with pink paint.

Metallic Anomaly #5

Delta utilized the TW-6 to detect a metallic anomaly in the southeastern portion of the property. GPR transects imaged a disturbed area potentially consistent with subsurface debris. The anomaly measures approximately 4 feet wide, and 5 feet long. The anomaly was marked on site with pink paint.

Metallic Anomaly #6

Delta utilized the TW-6 to detect a metallic anomaly in the southeastern portion of the property. GPR transects imaged a disturbed area potentially consistent with buried reinforced concrete. The anomaly measures approximately 9.5 feet wide, and 15 feet long. The anomaly was marked on site with pink paint.

Metallic Anomaly #7

Delta utilized the TW-6 to detect a metallic anomaly in the northwestern portion of the property. GPR transects imaged a disturbed area potentially consistent with buried reinforced concrete. The anomaly measures approximately 13.5 feet wide, and 16.5 feet long. The anomaly was marked on site with pink paint.

Soil Anomaly

Delta utilized the GPR to detect a soil anomaly in the northwestern portion of the property. GPR transects imaged a trench-like variation in soil density adjacent to the tar-expelling area of the parking lot. The anomaly is potentially associated with the tar expulsion visually observed on site. The anomaly measures approximately 11 feet long. The anomaly was marked on site with pink paint.

Utility Survey

Delta performed a utility survey throughout survey location. The following utilities were identified: natural gas, electric, sanitary sewer, storm sewer, water, and unknown utilities. All utilities were marked onsite with appropriate colors, unknown utilities were marked in pink.

Site maps (D101017) are included with all located subsurface features.

5.0 SURVEY LIMITATIONS0

GPR depth of penetration was limited to approximately 1-3 feet bgs. The limiting factor was due to conductive soils. The TW-6 was not able to be utilized within close proximity to the parked cars, metal fencing, building, or large metallic debris piles. TW-6 was unable to be utilized over areas of reinforced concrete. Reinforced concrete severely attenuated GPR signal penetration.

6.0 WARRANTIES AND DISCLAIMER

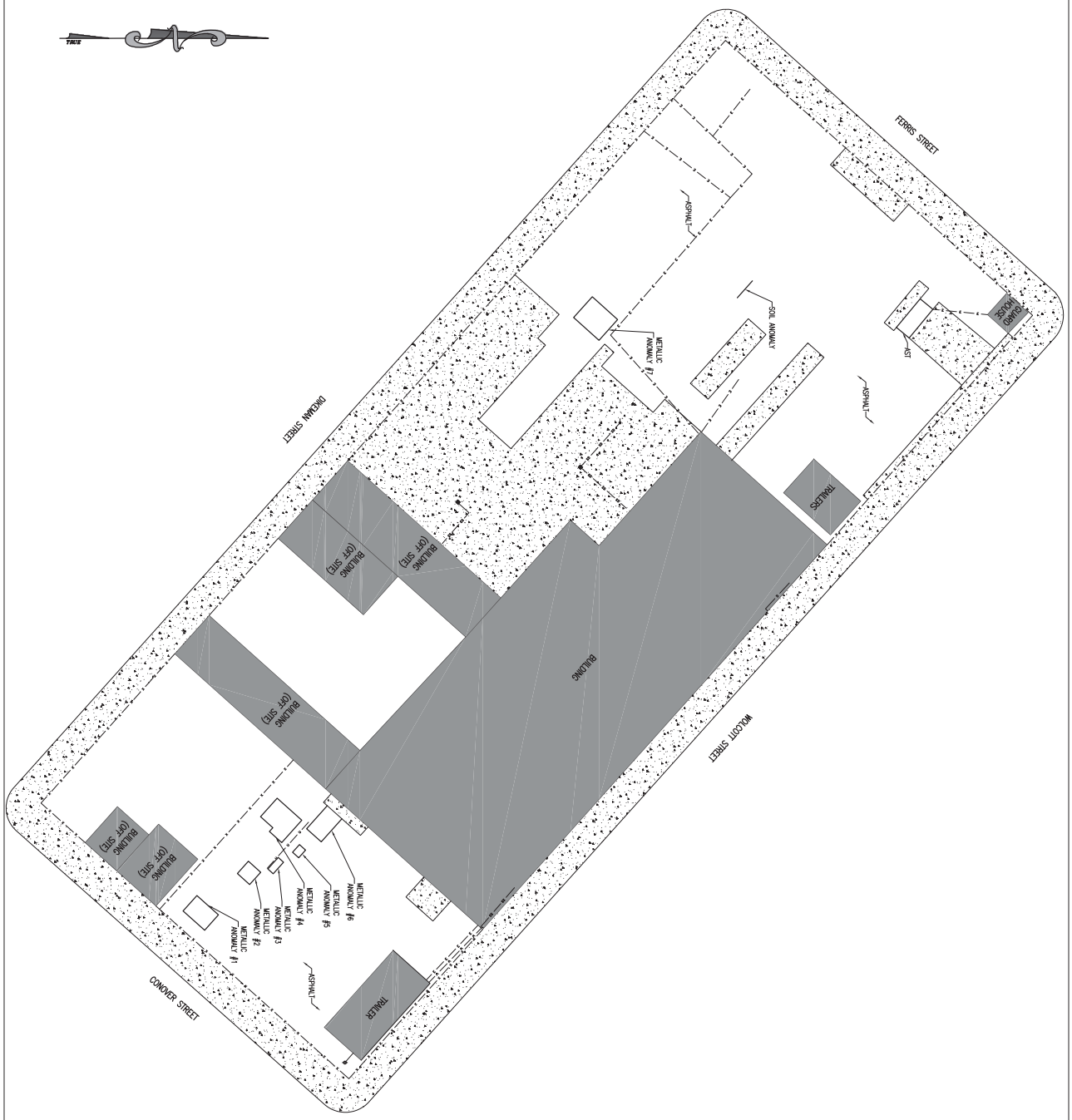
As with any geophysical method, it must be stressed that caution be used during any excavation or intrusive testing in proximity to any anomalies indicated in this report. In addition, the absence of detected signatures does not preclude the possibility that targets may exist. To the extent the client desires more definitive conclusions than are warranted by the currently available facts; it is specifically Delta's intent that the conclusions stated herein will be intended as guidance.

This report is based upon the application of scientific principles and professional judgment to certain facts with resultant subjective interpretations. Professional judgments expressed herein are based on the facts currently available within the limit or scope of work, budget and schedule. Delta represents that the services were performed in a manner consistent with currently accepted professional practices employed by geophysical/geological consultants under similar

circumstances. No other representations to Client, express or implied, and no warranty or guarantee is included or intended in this agreement, or in any report, document, or otherwise.

This report was prepared pursuant to the contract Delta has with the Client. That contractual relationship included an exchange of information about the property that was unique and between Delta and its client and serves as the basis upon which this report was prepared. Because of the importance of the understandings between Delta and its client, reliance or any use of this report by anyone other than the Client, for whom it was prepared, is prohibited and therefore not foreseeable to Delta.

Reliance or use by any such third party without explicit authorization in the report does not make said third party a third party beneficiary to Delta's contract with the Client. Any such unauthorized reliance on or use of this report, including any of its information or conclusions, will be at the third party's risk. For the same reasons, no warranties or representations, expressed or implied in this report, are made to any such third party.



NOTES:

This site plan was produced from data positioned by differential GPS measurments collected in the field. Due to the errors normally present in DGPS data, this document is not intended or represented to be of survey precision. Caution should be used in all field measurments based on this site plan.

As with any geophysical method, it must be stressed that caution be used during any excavation or intrusive testing in proximity of any anomalies indicated in this document The absence of detected signatures does not preclude the possibility that targets exist. The geophysical data and results presented in this site plan are based upon the application of scientific principles and professional judgements to certain facts with resultant subjective interpretations. Professional judgements expressed herein are based on the facts currently available within the limits of the existing data, scope of work, budget, and schedule.

Reliance or use by any such third party without explicit authorization in the document does not make said third party a third party beneficiary to Delta's contract with the client. Any such unauthorized reliance on or use of this document, including any of its information or conclusions, will be at the third party's risk. For the same reasons, no warranties or representations, expressed or implied in this document, are made to any such third party.

0 25 50 100 150

GRAPHIC SCALE IN FEET

LEGEND

- UTILITY VALVE COVER
- UTILITY POLE
- STORM SEWER INLET
- ELECTRIC
- NATURAL GAS
- SANITARY SEWER
- STORM SEWER
- WATER
- UNKNOWN UTILITY
- FENCE

DATE	10/10/17
SCALE	1'' = 50'
DWG NO.	101017
SHT NO.	1 OF 1
PROJECT.	

GEOPHYSICAL INVESTIGATION
145 WOLCOTT STREET BROOKLYN, NEW YORK 11231
FOR
P.W. GROSSER CONSULTING

DELTA Geophysics Inc.
738 Front Street, Catasauqua, PA 18032
Phone: (610) 231-73012

ATTACHMENT B

Photograph #1 – Northern parking lot looking south east.

Photograph #2 – Tar-like substance seeping through the asphalt parking lot.

ATTACHMENT C

ANALYTICAL REPORT

Lab Number:	L1736928
Client:	P. W. Grosser 630 Johnson Avenue Suite 7 Bohemia, NY 11716
ATTN:	Kris Almskog
Phone:	(631) 589-6353
Project Name:	Not Specified
Project Number:	IOV1701
Report Date:	10/26/17

Certifications & Approvals: MA (M-MA086), NH NELAP (2064), NJ NELAP (MA935), CT (PH-0574), IL (200077), ME (MA00086), MD (348), NY (11148), NC (25700/666), PA (68-03671), RI (LAO00065), TX (T104704476), VT (VT-0935), VA (460195), USDA (Permit #P330-14-00197).

320 Forbes Boulevard, Mansfield, MA 02048-1806
508-822-9300 (Fax) 508-822-3288 800-624-9220 - www.alphalab.com

Project Name: Not Specified
Project Number: IOV1701

Lab Number: L1736928
Report Date: 10/26/17

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L1736928-01	TAR SAMPLE 01	SOLID	Not Specified	10/10/17 12:45	10/12/17

Project Name: Not Specified
Project Number: IOV1701

Lab Number: L1736928
Report Date: 10/26/17

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively. When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. All specific QC information is also incorporated in the Data Usability format of our Data Merger tool where it can be reviewed along with any associated usability implications. Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances the specific failure is not narrated but noted in the associated QC table. The information is also incorporated in the Data Usability format of our Data Merger tool where it can be reviewed along with any associated usability implications.

Please see the associated ADEx data file for a comparison of laboratory reporting limits that were achieved with the regulatory Numerical Standards requested on the Chain of Custody.

HOLD POLICY
For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Client Service Representative and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Client Services at 800-624-9220 with any questions.

Project Name:	Not Specified	**Lab Number:**	L1736928
Project Number:	IOV1701	**Report Date:**	10/26/17

Case Narrative (continued)

Report Submission

All non-detect (ND) or estimated concentrations (J-qualified) have been quantitated to the limit noted in the MDL column.

Petroleum Hydrocarbon Identification by GC-FID

L1736928-01

Total Petroleum Hydrocarbons (TPH) by GC/FID

The sample was extracted and then analyzed using a gas chromatograph equipped with a flame ionization detector (GC/FID). The temperature program and associated experimental conditions were optimized to obtain maximum resolution in an eighty minute chromatographic run representative of hydrocarbons in the n-Octane (C8) to n-Tetracontane (C40) range. Qualitative evaluation of the sample was conducted by reviewing the sample chromatogram in conjunction with a chromatogram of a normal alkane series generated with the same chromatographic conditions. Chromatograms of hydrocarbon reference materials obtained from our library of 74 reference standards were also utilized to provide the best possible sample match. Quantitative determination of the sample hydrocarbon concentration was performed in accordance with EPA Method 8015M. The sample total hydrocarbon concentration and all associated quality control data are included in the report.

The following qualitative information is based on a tentative interpretation of chromatographic pattern recognition and boiling point ranges:

Total Petroleum Hydrocarbon Identification

L1736928-01 contains hydrocarbons eluting in the range of n-Octane (C8) to after the elution of n-Tetracontane (C40).

Based on the data generated, L1736928-01 contains material eluting in the low, mid and high molecular weight ranges of the chromatogram. The material present is similar to a coal tar / Fuel #6 type product with some early eluting alkanes.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature: Susan E O'Neil Susan O' Neil

Title: Technical Director/Representative Date: 10/26/17

ORGANICS

PETROLEUM HYDROCARBONS

Project Name: Not Specified
Project Number: IOV1701

Lab Number: L1736928
Report Date: 10/26/17

SAMPLE RESULTS

Lab ID: L1736928-01
Client ID: TAR SAMPLE 01
Sample Location: Not Specified

Matrix: Solid
Analytical Method: 1,8015D(M)
Analytical Date: 10/25/17 07:50
Analyst: WR
Percent Solids: Results reported on an 'AS RECEIVED' basis.

Date Collected: 10/10/17 12:45
Date Received: 10/12/17
Field Prep: Not Specified
Extraction Method: EPA 3580A
Extraction Date: 10/24/17 06:11
Cleanup Method: - - - -
Cleanup Date: 10/24/17

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Petroleum Hydrocarbon Identification by GC-FID - Mansfield Lab						
Total Petroleum Hydrocarbons (C9-C44)	190000		mg/kg	3800	1900	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
o-Terphenyl	99		50-130
d50-Tetracosane	116		50-130

Project Name: Not Specified
Project Number: IOV1701

Lab Number: L1736928
Report Date: 10/26/17

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8015D(M)
Analytical Date: 10/24/17 18:39
Analyst: WR

Extraction Method: EPA 3580A
Extraction Date: 10/24/17 06:11
Cleanup Method: - - - -
Cleanup Date: 10/24/17

Parameter	Result	Qualifier	Units	RL	MDL
Petroleum Hydrocarbon Identification by GC-FID - Mansfield Lab for sample(s): 01 Batch: WG1055502-1					
Total Petroleum Hydrocarbons (C9-C44)	ND		mg/kg	660	330.

Surrogate	%Recovery	Qualifier	Acceptance Criteria
o-Terphenyl	99		50-130
d50-Tetracosane	97		50-130

Lab Control Sample Analysis

Batch Quality Control

Project Name: Not Specified
Project Number: IOV1701

Lab Number: L1736928
Report Date: 10/26/17

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Petroleum Hydrocarbon Identification by GC-FID - Mansfield Lab Associated sample(s): 01 Batch: WG1055502-2 WG1055502-3								
Nonane (C9)	100		98		50-130	2		30
Decane (C10)	99		98		50-130	1		30
Dodecane (C12)	101		100		50-130	1		30
Tetradecane (C14)	102		101		50-130	1		30
Hexadecane (C16)	108		107		50-130	1		30
Octadecane (C18)	108		108		50-130	0		30
Nonadecane (C19)	104		104		50-130	0		30
Eicosane (C20)	104		104		50-130	0		30
Docosane (C22)	103		103		50-130	0		30
Tetracosane (C24)	103		103		50-130	0		30
Hexacosane (C26)	101		102		50-130	1		30
Octacosane (C28)	100		101		50-130	1		30
Triacontane (C30)	99		100		50-130	1		30
Hexatriacontane (C36)	93		96		50-130	3		30

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
o-Terphenyl	98		98		50-130
d50-Tetracosane	96		96		50-130

Serial_No:10261716:25

Project Name: Not Specified
Project Number: IOV1701

Lab Number: L1736928
Report Date: 10/26/17

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Cooler Information

Cooler	***Custody Seal***
A	Absent

Container Information

Container ID	***Container Type***	***Cooler***	***Initial pH***	***Final pH***	***Temp deg C***	***Pres***	***Seal***	***Frozen Date/Time***	***Analysis(*)***
L1736928-01A	Glass 250ml/8oz unpreserved	A	NA		3.9	Y	Absent		A2-PHI(14)

*Values in parentheses indicate holding time in days

Project Name: Not Specified
Project Number: IOV1701
Lab Number: L1736928
Report Date: 10/26/17

GLOSSARY

Acronyms

EDL - Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).

EPA - Environmental Protection Agency.

LCS - Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.

LCSD - Laboratory Control Sample Duplicate: Refer to LCS.

LFB - Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.

MDL - Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.

MS - Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available.

MSD - Matrix Spike Sample Duplicate: Refer to MS.

NA - Not Applicable.

NC - Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.

NDPA/DPA - N-Nitrosodiphenylamine/Diphenylamine.

NI - Not Ignitable.

NP - Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.

RL - Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.

RPD - Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.

SRM - Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.

STLP - Semi-dynamic Tank Leaching Procedure per EPA Method 1315.

TIC - Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

Footnotes

1 - The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

Terms

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Final pH: As it pertains to Sample Receipt & Container Information section of the report, Final pH reflects pH of container determined after adjustment at the laboratory, if applicable. If no adjustment required, value reflects Initial pH.

Frozen Date/Time: With respect to Volatile Organics in soil, Frozen Date/Time reflects the date/time at which associated Reagent Water-preserved vials were initially frozen. Note: If frozen date/time is beyond 48 hours from sample collection, value will be reflected in 'bold'.

Initial pH: As it pertains to Sample Receipt & Container Information section of the report, Initial pH reflects pH of container determined upon receipt, if applicable.

Total: With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

Data Qualifiers

A - Spectra identified as "Aldol Condensation Product".

B - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related

Report Format: DU Report with 'J' Qualifiers

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Data Qualifiers

projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).

C - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.

D - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.

E - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.

G - The concentration may be biased high due to matrix interferences (i.e, co-elution) with non-target compound(s). The result should be considered estimated.

H - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.

I - The lower value for the two columns has been reported due to obvious interference.

M - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.

NJ - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.

P - The RPD between the results for the two columns exceeds the method-specified criteria.

Q - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)

R - Analytical results are from sample re-analysis.

RE - Analytical results are from sample re-extraction.

S - Analytical results are from modified screening analysis.

J - Estimated value. The Target analyte concentration is below the quantitation limit (RL), but above the Method Detection Limit (MDL) or Estimated Detection Limit (EDL) for SPME-related analyses. This represents an estimated concentration for Tentatively Identified Compounds (TICs).

ND - Not detected at the method detection limit (MDL) for the sample, or estimated detection limit (EDL) for SPME-related analyses.

Report Format: DU Report with 'J' Qualifiers

REFERENCES

1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - IV, 2007.

LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.

Certification Information

The following analytes are not included in our Primary NELAP Scope of Accreditation:

Westborough Facility
EPA 624: m/p-xylene, o-xylene
EPA 8260C: NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), Methyl methacrylate, 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.
EPA 8270D: NPW: Dimethylnaphthalene,1,4-Diphenylhydrazine; SCM: Dimethylnaphthalene,1,4-Diphenylhydrazine.
EPA 300: DW: Bromide
EPA 6860: NPW and SCM: Perchlorate
EPA 9010: NPW and SCM: Amenable Cyanide Distillation
EPA 9012B: NPW: Total Cyanide
EPA 9050A: NPW: Specific Conductance
SM3500: NPW: Ferrous Iron
SM4500: NPW: Amenable Cyanide, Dissolved Oxygen; SCM: Total Phosphorus, TKN, NO2, NO3.
SM5310C: DW: Dissolved Organic Carbon

Mansfield Facility
SM 2540D: TSS
EPA 3005A NPW
EPA 8082A: NPW: PCB: 1, 5, 31, 87,101, 110, 141, 151, 153, 180, 183, 187.
EPA TO-15: Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene, 3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.
Biological Tissue Matrix: EPA 3050B

The following analytes are included in our Massachusetts DEP Scope of Accreditation

Westborough Facility:

Drinking Water
EPA 300.0: Nitrate-N, Fluoride, Sulfate; **EPA 353.2**: Nitrate-N, Nitrite-N; **SM4500NO3-F**: Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500Cl-D, SM2320B, SM2540C, SM4500H-B**
EPA 332: Perchlorate; **EPA 524.2:** THMs and VOCs; **EPA 504.1:** EDB, DBCP.
Microbiology: **SM9215B; SM9223-P/A, SM9223B-Colilert-QT,SM9222D**.

Non-Potable Water
SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH, **EPA 350.1**: Ammonia-N, **LACHAT 10-107-06-1-B**: Ammonia-N, **SM4500NO3-F, EPA 353.2**: Nitrate-N**, EPA 351.1, SM4500P-E, SM4500P-B, E, SM4500SO4-E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D.**
EPA 624: Volatile Halocarbons & Aromatics,
EPA 608: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs
EPA 625: SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045**: PCB-Oil.
Microbiology: **SM9223B-Colilert-QT; Enterolert-QT, SM9221E.**

Mansfield Facility:

Drinking Water
EPA 200.7: Ba, Be, Cd, Cr, Cu, Ni, Na, Ca. **EPA 200.8:** Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Ni, Se, TL. **EPA 245.1** Hg.

Non-Potable Water
EPA 200.7: Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, TL, Ti, V, Zn.
EPA 200.8: Al, Sb, As, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn.
EPA 245.1 Hg.
SM2340B

For a complete listing of analytes and methods, please contact your Alpha Project Manager.

Serial_No:10261716:25

NEW YORK CHAIN OF CUSTODY

ALPHA ANALYTICAL

Westborough, MA 01581
8 Walkup Dr.
TEL: 508-898-9220
FAX: 508-898-9193

Mansfield, MA 02048
320 Forbes Blvd
TEL: 508-822-9300
FAX: 508-822-3288

Service Centers
Mahwah, NJ 07430: 35 Whitney Rd, Suite 5
Albany, NY 12205: 14 Walker Way
Tonawanda, NY 14150: 275 Cooper Ave, Suite 105

Page of

Date Rec'd in Lab: 10/13/17

ALPHA Job #: L1736928

Client Information
Client: PWGC
Address:
Phone:
Fax:
Email: KRISA@PWGROSSER.COM

Project Information
Project Name:
Project Location:
Project # IOV1701
(Use Project name as Project #) ☐
Project Manager: Kris Almskog
ALPHAQuote #:

Turn-Around Time
Standard ☒ Due Date:
Rush (only if pre approved) ☐ # of Days:

Deliverables
☐ ASP-A ☐ ASP-B
☐ EQuIS (1 File) ☐ EQuIS (4 File)
☐ Other

Regulatory Requirement
☐ NY TOGS ☐ NY Part 375
☐ AWQ Standards ☐ NY CP-51
☐ NY Restricted Use ☐ Other
☐ NY Unrestricted Use
☐ NYC Sewer Discharge

Billing Information
☐ Same as Client Info
PO #

Disposal Site Information
Please identify below location of applicable disposal facilities.
Disposal Facility:
☐ NJ ☐ NY
☐ Other:

These samples have been previously analyzed by Alpha ☐

Other project specific requirements/comments:
Please run fingerprint. Is this MGP coal tar? Is it a heating oil fuel?

Please specify Metals or TAL.

ANALYSIS
Fingerprint?

Sample Filtration
☐ Done
☐ Lab to do
Preservation
☐ Lab to do
(Please Specify below)

Total Bottle

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	Fingerprint?	Sample Specific Comments
36928.01	Tar Sample 01	10-10-17	1245	SG	KEA	X	

Preservative Code:
A = None
B = HCl
C = HNO_3
D = H_2SO_4
E = NaOH
F = MeOH
G = $NaHSO_4$
H = $Na_2S_2O_3$
K/E = Zn Ac/NaOH
O = Other

Container Code
P = Plastic
A = Amber Glass
V = Vial
G = Glass
B = Bacteria Cup
C = Cube
O = Other
E = Encore
D = BOD Bottle

Westboro: Certification No: MA935
Mansfield: Certification No: MA015

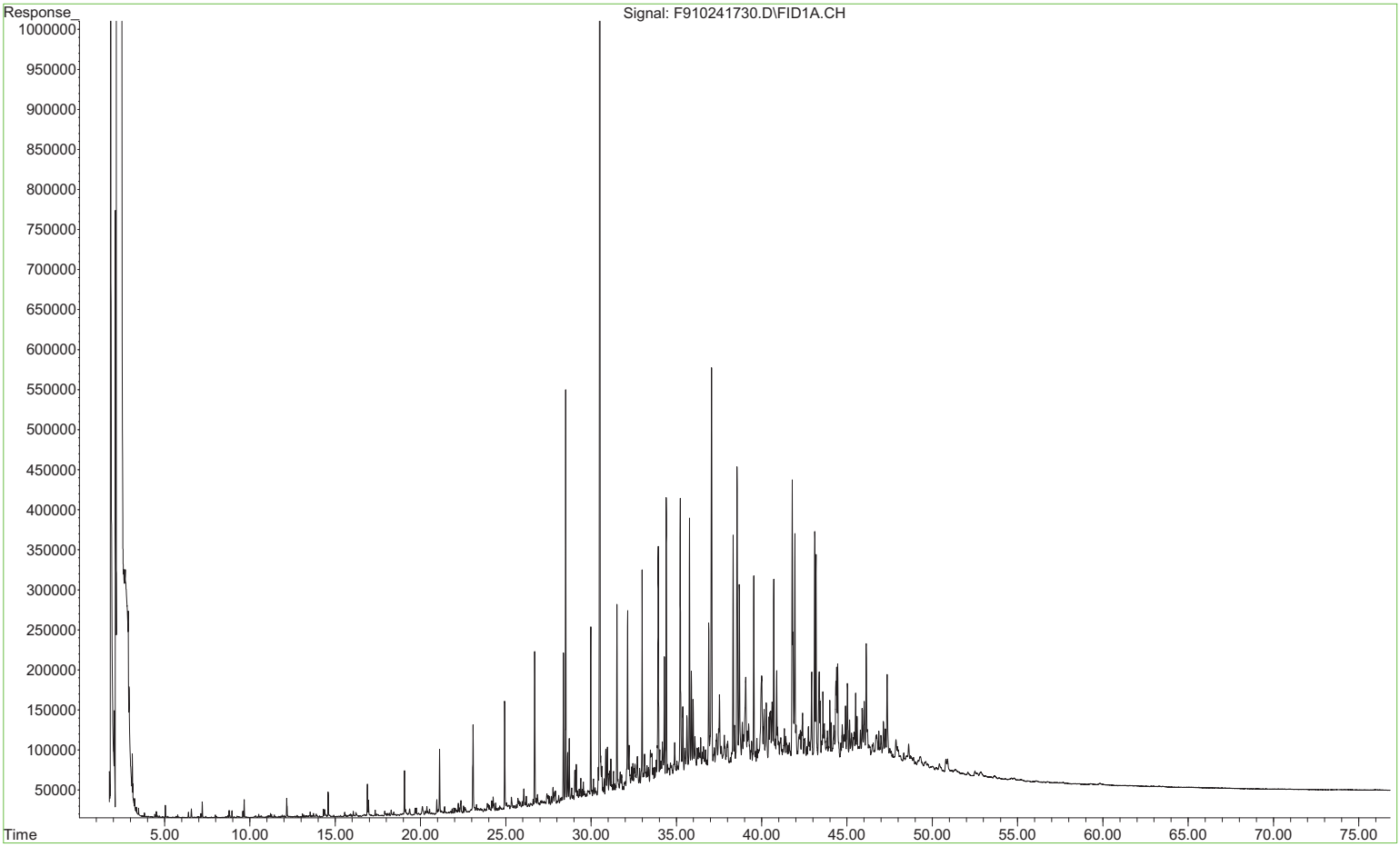
Container Type	8oz												
Preservative	none												

Relinquished By:	Date/Time	Received By:	Date/Time
	10-12-17 1200		10/12/17 1516
	10/12/17 1830		10/12/17
	10/12/17 2230		10/12/17 2234
	10/13/17 0530		10/13/17 05:30

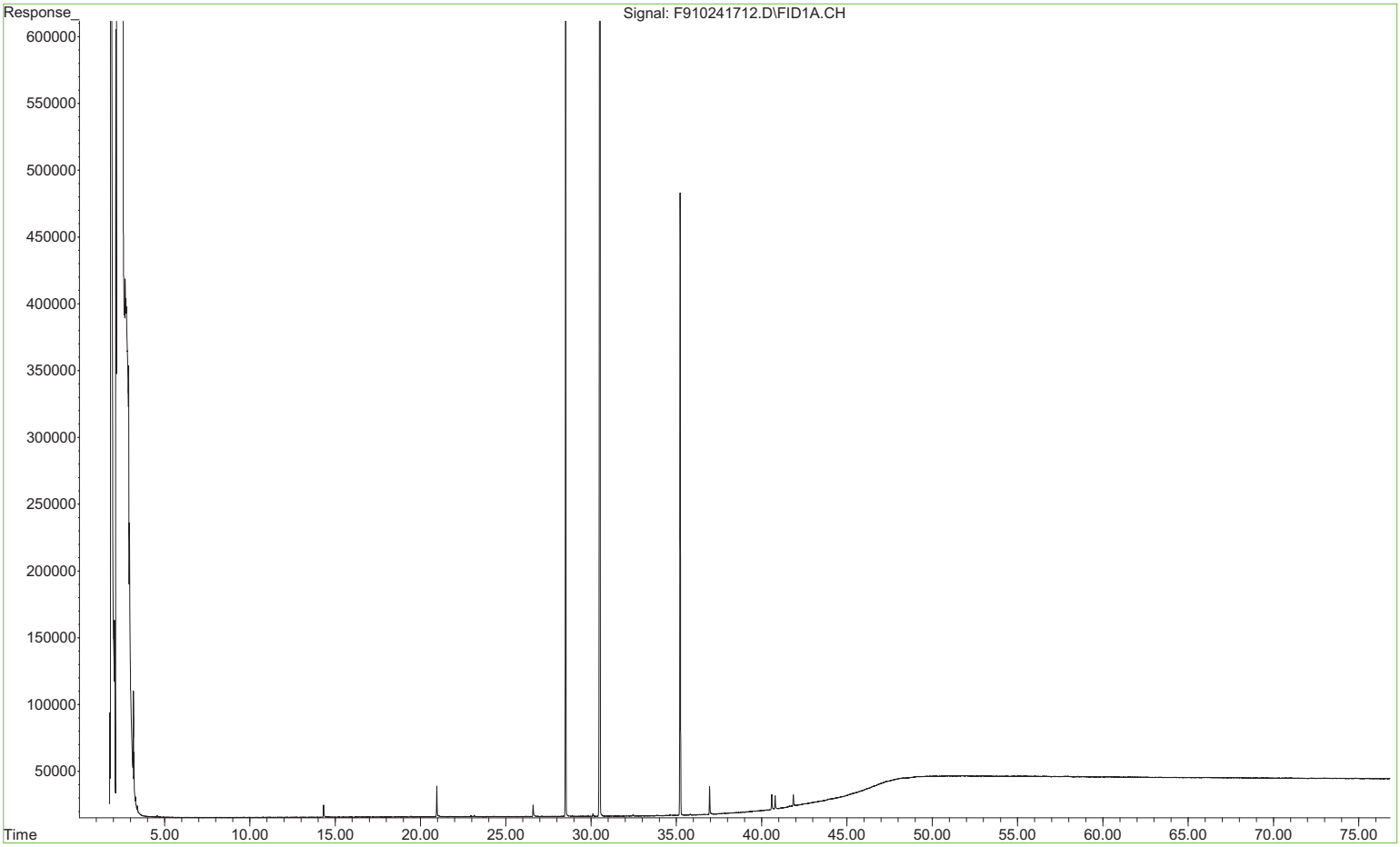
Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. BY EXECUTING THIS COC, THE CLIENT HAS READ AND AGREES TO BE BOUND BY ALPHA'S TERMS & CONDITIONS. (See reverse side.)

GC-FID Chromatogram

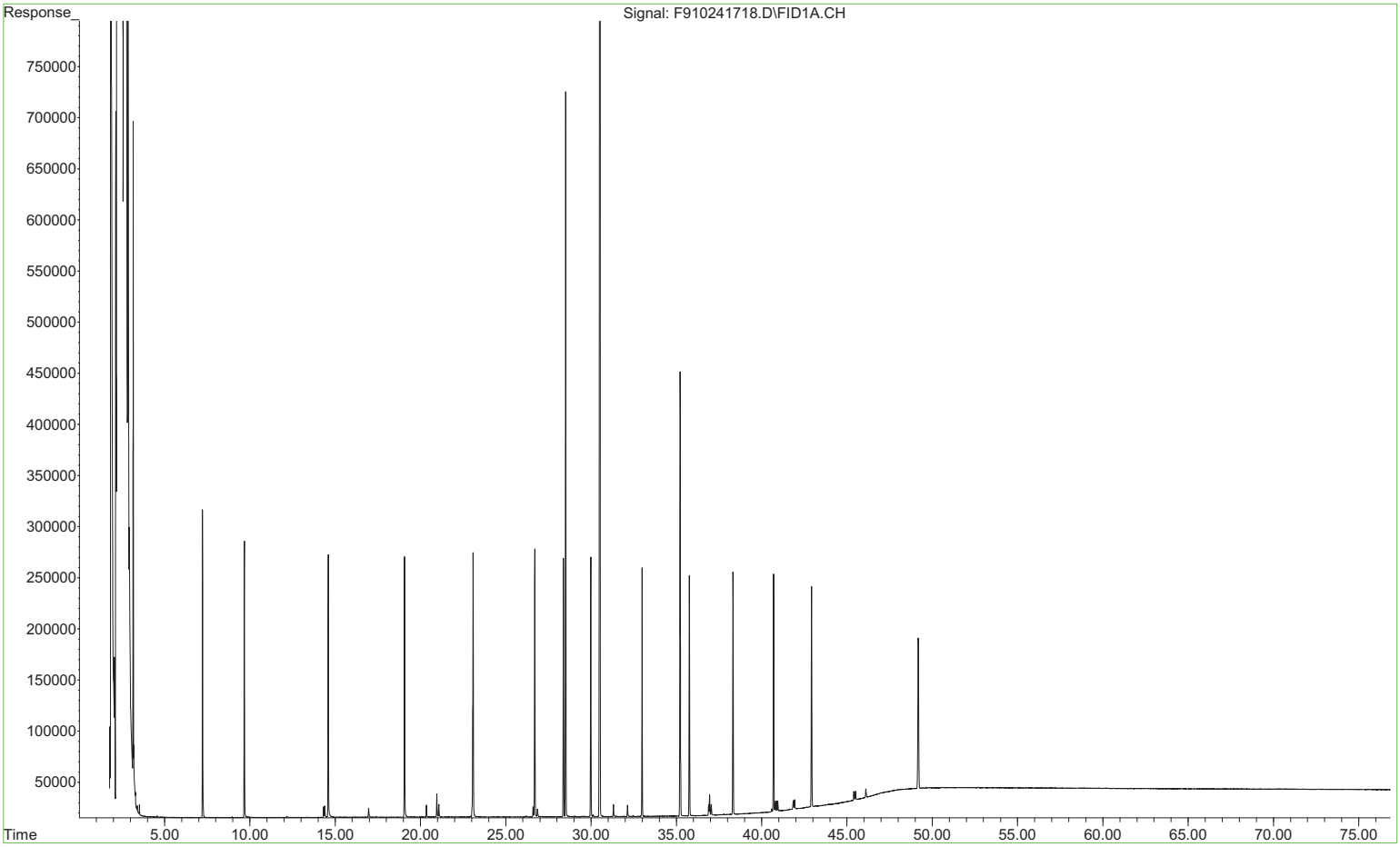
File :O:\Forensics\Data\FID9\2017\OCT\OCT24\F910241730.D
Operator : FID9:WR
Acquired : 25 Oct 2017 7:50 am using AcqMethod FID9A.M
Instrument : FID 9
Sample : L1736928-01
Misc Info : WG1055795,WG1055502,ICAL13819
ALS Vial : 15



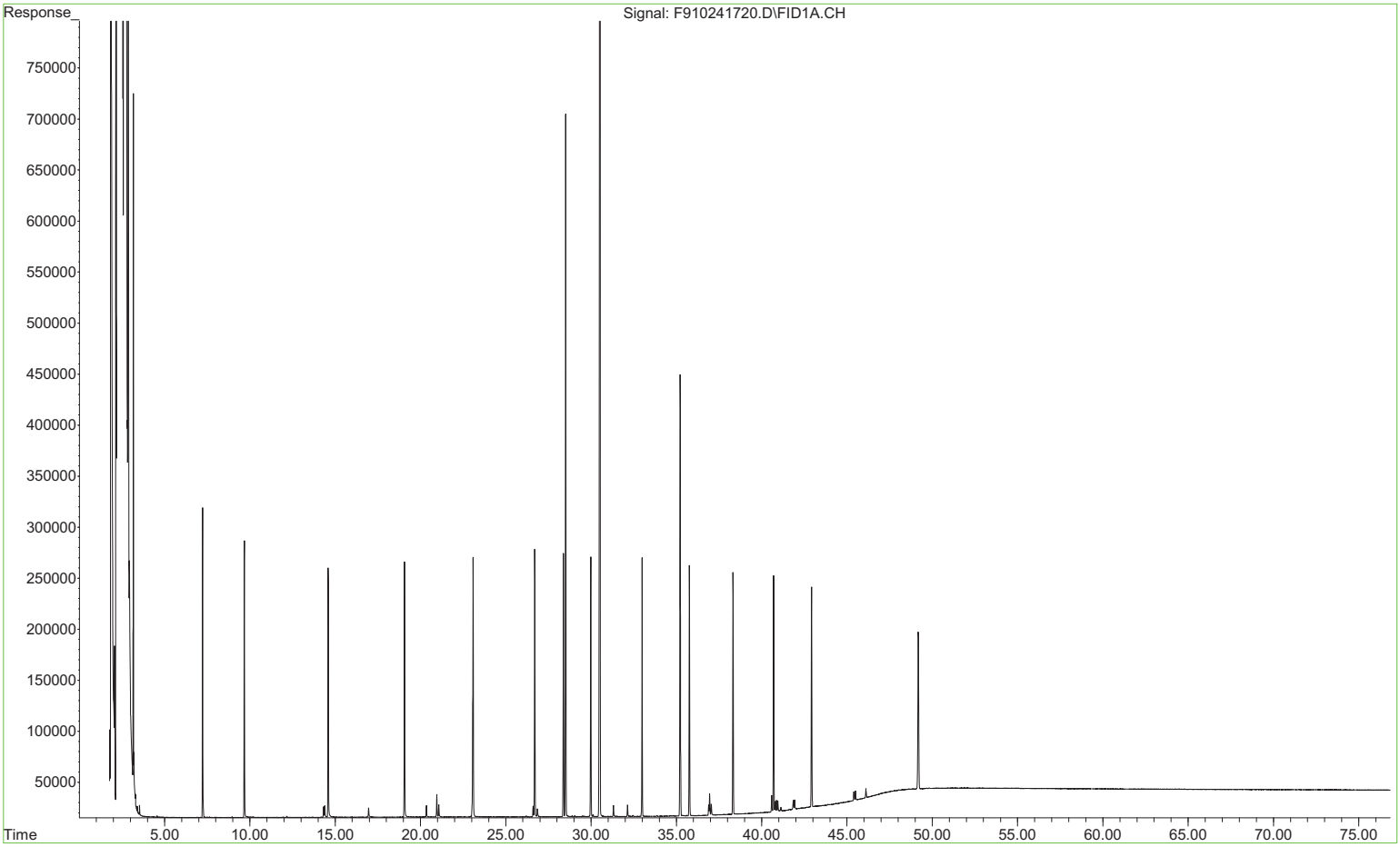
File :O:\Forensics\Data\FID9\2017\OCT\OCT24\F910241712.D
Operator : FID9:WR
Acquired : 24 Oct 2017 6:39 pm using AcqMethod FID9A.M
Instrument : FID 9
Sample : WG1055502-1 (Method Blank)
Misc Info : WG1055795,WG1055502,ICAL13819
ALS Vial : 6



File :O:\Forensics\Data\FID9\2017\OCT\OCT24\F910241718.D
Operator : FID9:WR
Acquired : 24 Oct 2017 11:03 pm using AcqMethod FID9A.M
Instrument : FID 9
Sample : WG1055502-2 (Laboratory Control Sample)
Misc Info : WG1055795,WG1055502,ICAL13819
ALS Vial : 9



File :O:\Forensics\Data\FID9\2017\OCT\OCT24\F910241720.D
Operator : FID9:WR
Acquired : 25 Oct 2017 12:31 am using AcqMethod FID9A.M
Instrument : FID 9
Sample : WG1055502-3 (Laboratory Control Sample Duplic
Misc Info : WG1055795,WG1055502,ICAL13819
ALS Vial : 10



Petroleum Reference Standards

Data Path : O:\Forensics\Data\FID9\2017\OCT\OCT24\
Data File : F910241704.D
Signal(s) : FID1A.CH
Acq On : 24 Oct 2017 12:47 pm
Operator : FID9:WR
Sample : Alkane Reference Standard (C8 - C40)
Misc : WG1055795,FRAZ07 50ug/ml
ALS Vial : 2 Sample Multiplier: 1

Integration File: SHCINT2.E
Quant Time: Oct 26 10:09:22 2017
Quant Method : O:\Forensics\Data\FID9\2017\OCT\OCT24\HC9052317F.M
Quant Title : FID Forensics
QLast Update : Thu Oct 26 10:01:40 2017
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1.0
Signal Phase : Rtx-5MS
Signal Info : 0.25mm

Sub List : CCAL - CCAL

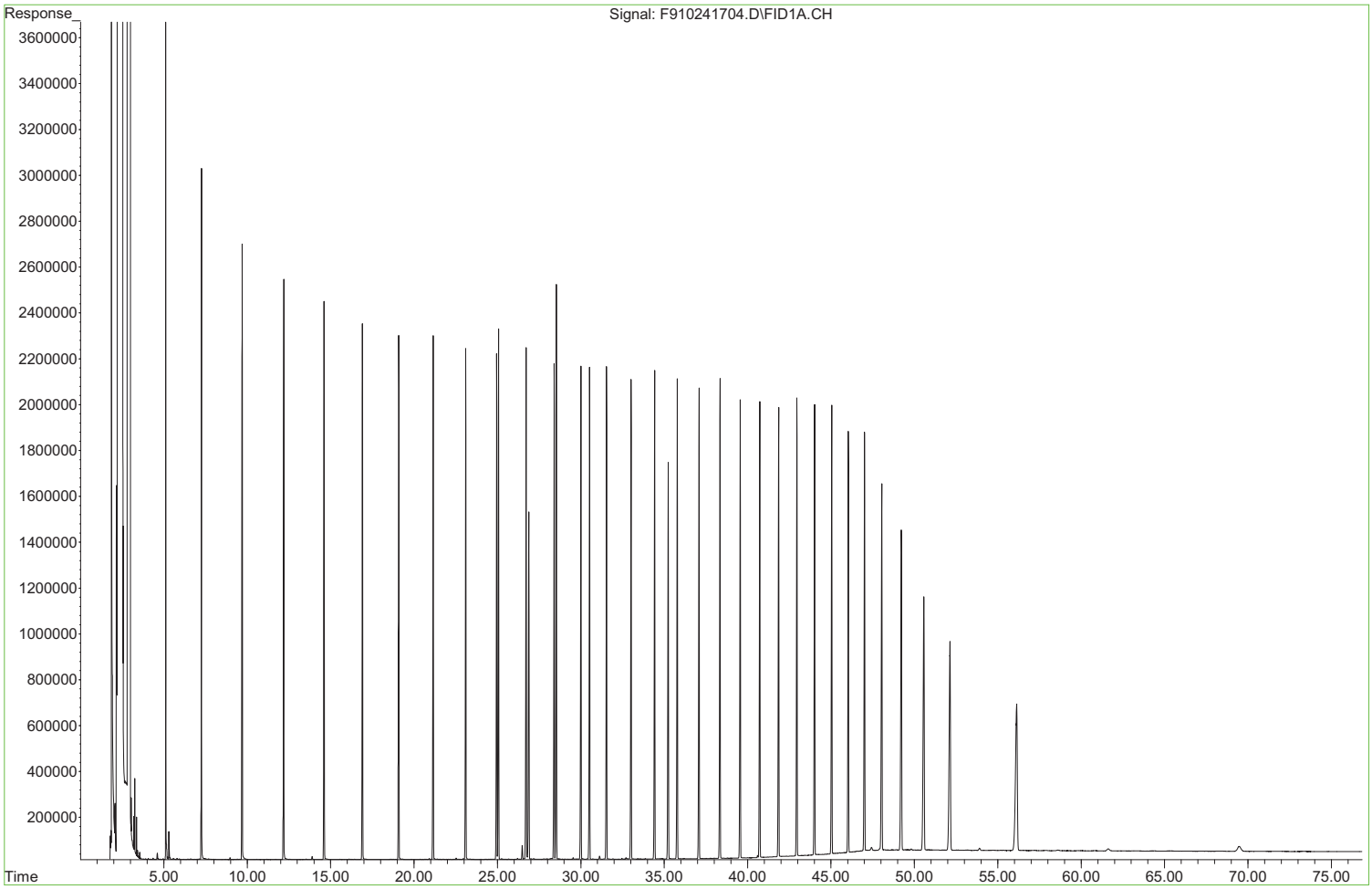
	Compound	R.T.	Response	Conc Units
	Internal Standards			
1) I	5-alpha-androstane	30.523	50014400	50.000 ug/mL M4
	System Monitoring Compounds			
19) s	ortho-terphenyl	28.531	55894896	51.484 ug/mL M4
Spiked Amount	50.000 Range 50 - 130		Recovery = 102.97%	
24) s	d50-Tetracosane	35.237	45848238	52.126 ug/mL M4
Spiked Amount	50.000 Range 50 - 130		Recovery = 104.25%	
	Target Compounds			
2) t	n-Octane (C8)	5.114	44611685	51.730 ug/mL M4
3) t	n-Nonane (C9)	7.250	45657934	49.629 ug/mL M4
4) t	n-Decane (C10)	9.693	47154749	50.126 ug/mL M4
5) t	n-Undecane (C11)	12.187	47684057	50.027 ug/mL M4
6) t	n-Dodecane (C12)	14.603	48402348	50.380 ug/mL M4
7) t	n-Tridecane (C13)	16.905	48548315	50.333 ug/mL M4
9) t	n-Tetradecane (C14)	19.082	49006208	50.268 ug/mL M4
11) t	n-Pentadecane (C15)	21.144	49816940	51.026 ug/mL M4
12) t	n-Hexadecane (C16)	23.098	49684215	50.512 ug/mL M4
14) t	n-Heptadecane (C17)	24.954	49725764	50.857 ug/mL M4
15) t	Pristane	25.064	50152335	50.303 ug/mL M4
16) t	n-Octadecane (C18)	26.717	50352397	50.952 ug/mL M4
17) t	Phytane	26.879	44041225	49.360 ug/mL M4
18) t	n-Nonadecane (C19)	28.400	49982889	50.654 ug/mL M4
20) t	n-Eicosane (C20)	30.005	49568920	50.093 ug/mL M4
21) t	n-Heneicosane (C21)	31.540	49823349	49.065 ug/mL M4
22) t	n-Docosane (C22)	33.012	50149253	50.056 ug/mL M4
23) t	n-Tricosane (C23)	34.424	50403151	50.107 ug/mL M4
25) t	n-Tetracosane (C24)	35.782	50485590	49.915 ug/mL M4
26) t	n-Pentacosane (C25)	37.087	50034767	49.987 ug/mL M4
27) t	n-Hexacosane (C26)	38.345	51171396	50.745 ug/mL M4
28) t	n-Heptacosane (C27)	39.558	50721834	51.726 ug/mL M4
29) t	n-Octacosane (C28)	40.728	50653717	49.651 ug/mL M4
30) t	n-Nonacosane (C29)	41.861	51037929	50.449 ug/mL M4
31) t	n-Triacontane (C30)	42.956	51218144	51.101 ug/mL M4
32) t	n-Hentriacontane (C31)	44.013	51334493	50.969 ug/mL M4
33) t	n-Dotriacontane (C32)	45.044	51745276	51.965 ug/mL M4
34) t	n-Tritriacontane (C33)	46.040	48760889	49.428 ug/mL M4
35) t	n-tetratriacontane (C34)	47.011	50652821	49.609 ug/mL M4
36) t	n-Pentatriacontane (C35)	48.046	50592654	51.216 ug/mL M4
37) t	n-Hexatriacontane (C36)	49.218	51469630	49.184 ug/mL M4
38) t	n-Heptatriacontane (C37)	50.567	49738678	50.549 ug/mL M4
39) t	n-Octatriacontane (C38)	52.134	48142234	45.664 ug/mL M4
41) t	n-Tetracontane (C40)	56.136	49065929	50.130 ug/mL M4

SemiQuant Compounds - Not Calibrated on this Instrument

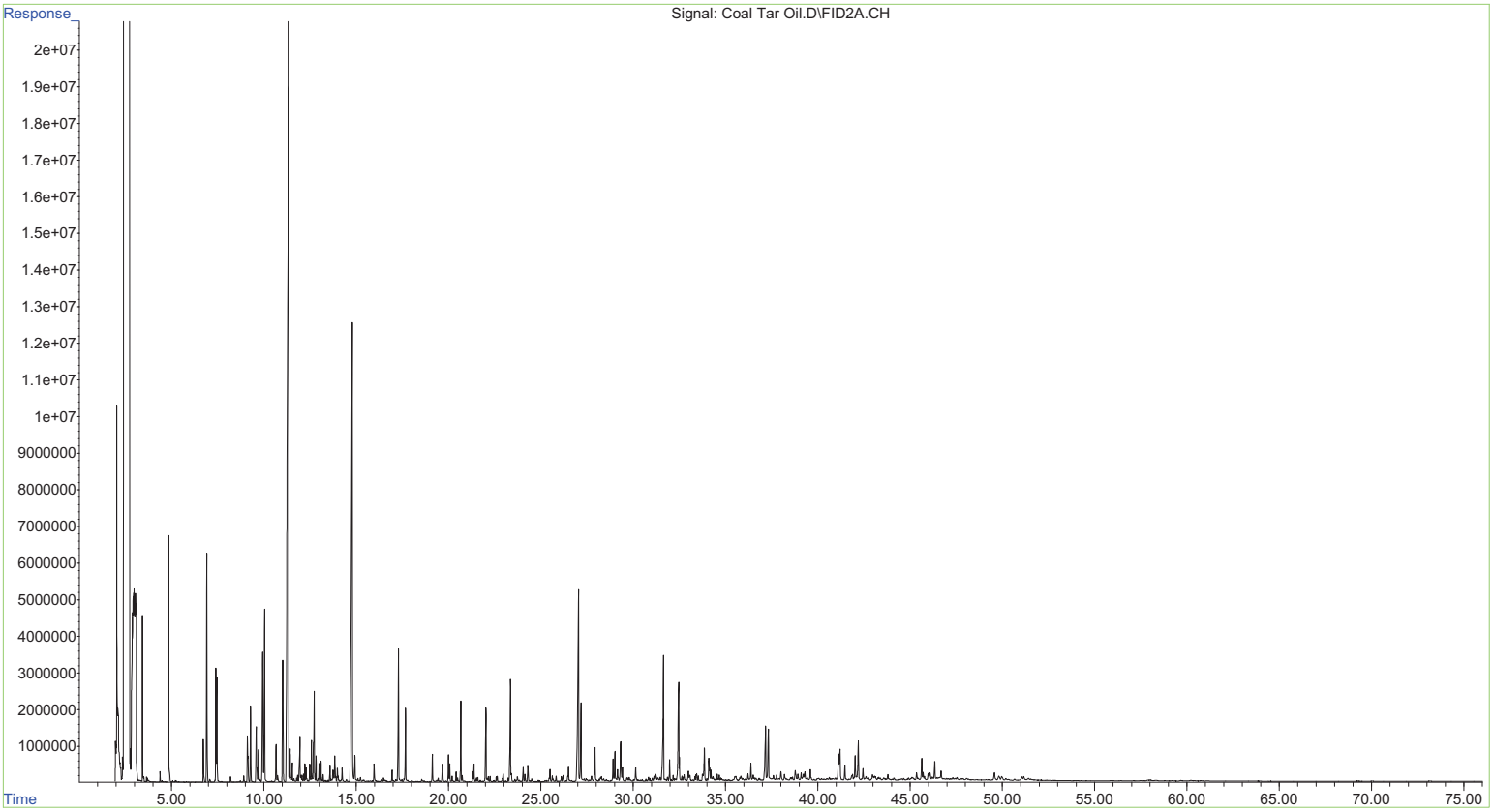
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\FID9\2017\OCT\OCT24\
Data File : F910241704.D
Operator : FID9:WR
Acquired : 24 Oct 2017 12:47 pm using AcqMethod FID9A.M
Instrument: FID 9
Sample : Alkane Reference Standard (C8 - C40)
Misc Info : WG1055795,FRAZ07 50ug/ml
ALS Vial : 2



```
File       :O:\Forensics\Data\LIBRARY\Hydrocarbon Reference Standards\Co
...         al Tar Oil.D
Operator  : DMP
Instrument :   PAH2
Acquired  : 08 Aug 2013   6:49 pm using AcqMethod FRNC2A.M
Sample    : Coal Tar Oil
Misc Info : Chem Service Pz-123 (F031908K)
```



File :O:\Forensics\LIBRARY\Hydrocarbon Reference Standards\Fuel Oi
... l #6.D
Operator : PAH2:AC
Instrument : PAH 2
Acquired : 22 Nov 2011 7:50 am using AcqMethod FRNC2AF.M
Sample : FUEL OIL #6
Misc Info : 1X F042710F