SINCE 1881

FROEHLING & ROBERTSON, INC.
Engineering Stability Since 1881

310 Hubert Street
Raleigh, North Carolina 27603-2302
T 919.828.3441 I F 919.828.5751
NC License #F-0266

November 3, 2017 (revised February 5, 2018)

North Carolina Department of Transportation
Geotechnical Engineering Unit
1020 Birch Ridge Drive
Raleigh, North Carolina 27610

Attn.: Mr. Gordon Box, L.G.
GeoEnvironmental Project Manager

Re: State Project: R-2530B
WBS Element: 34446.1.6
NC 24-27 from Bird Road in Albemarle to West of the Pee Dee River

Subject: **Preliminary Site Assessment**
Parcel #053 – Annie G. Dennis Rev. Liv. Trust (Midway Salvage)
2302 East Main Street
Albemarle, North Carolina
F&R Project #66V-0092

Dear Mr. Box:

Froehling and Robertson, Inc. (F&R) has completed the authorized Preliminary Site Assessment at the Annie G. Dennis Rev. Liv. Trust property located in Albemarle, North Carolina. The work was performed in general accordance with F&R's Proposal No. 1866-00132, dated June 14, 2017 (and revised June 22, 2017). Notice to Proceed was issued to F&R on July 6, 2017. This report documents our field activities, presents the results of laboratory analysis and provides estimated quantities of petroleum impacted soils.

Please do not hesitate to contact us if you should have any questions regarding this report.

Sincerely,

FROEHLING & ROBERTSON, INC.

DocuSigned by:
4DB7F275EBFD410...

DocuSigned by:
Benjamin A. Whitley
E425D6E8C23845B...

NORTH CAROLINA PROFESSIONAL SEAL 038743 ENGINEER BENJAMIN A. WHITLEY

Clint E. Sorrell
Environmental Scientist

Benjamin A. Whitley, P.E.
GeoEnvironmental Services Manager

FROEHLING & ROBERTSON, INC.

PRELIMINARY SITE ASSESSMENT

Annie G. Dennis Rev. Liv. Trust (Parcel #053)
Midway Salvage
2302 East Main Street
Albemarle, North Carolina
State Project: R-2530B
WBS Element: 34446.1.6
F&R Project #66V-0092

November 3, 2017 (revised February 5, 2018)

Prepared for:

North Carolina Department of Transportation
Geotechnical Engineering Unit
1020 Birch Ridge Drive
Raleigh, NC 27610

310 Hubert Street Raleigh, North Carolina 27603 919.828.3441

TABLE OF CONTENTS

PAGE

1.0 INTRODUCTION 1

2.0 GEOPHYSICAL SURVEY.....2

3.0 SITE ASSESSMENT ACTIVITIES 2

4.0 SUBSURFACE CONDITIONS 3

5.0 ANALYTICAL RESULTS 4

6.0 CONCLUSIONS AND RECOMMENDATIONS.....7

7.0 LIMITATIONS 8

APPENDIX I FIGURE No. 1 – Topographic Map
FIGURE No. 2 – Site Vicinity Map
FIGURE No. 3 – Laboratory Results & Boring Location Plan

APPENDIX II GEOPHYSICAL REPORT PREPARED BY PYRAMID

APPENDIX III SITE PHOTOS

APPENDIX IV GEOPROBE LOGS

APPENDIX V LABORATORY ANALYTICAL RESULTS

Preliminary Site Assessment Report
Annie G. Dennis Rev. Liv. Trust Property (Parcel #053)
Albemarle, Stanly County, North Carolina
F&R Project No. 66V-0092

1.0 Introduction

Froehling and Robertson, Inc. (F&R) has prepared this Preliminary Site Assessment (PSA) Report to document soil assessment activities performed at the Annie G. Dennis Rev. Liv. Trust Property addressed as 2302 East Main Street, in Albemarle, Stanly County, North Carolina. The site is located on the southeast quadrant of the East Main Street and Anderson Church Road intersection as shown in Appendix I, Figures 1 and 2. As indicated in the Request for Technical and Cost Proposal (RFTCP), this parcel is the first of two parcels that are the location of Midway Salvage. The site operates as an existing discount grocery and resale shop (Midway Salvage). According to the NCDEQ Underground Storage Tank (UST) Section Registry, the site has been assigned Facility ID # 0-008715, with an installation date of 1968 and a closure date of 1991. The location of the former tank bed was not observed. The site has been assigned NCDEQ Incident # 8537, which was reported in 1991, and closed out in 2003. Several monitoring wells are located on the site.

According to the NCDOT within their RFTCP, acquisition of right-of-way is necessary for the proposed NC 24-27 design. As such, the NCDOT requested a PSA be performed to assess the possibility of encountering petroleum impacted soil from known or unknown USTs, and to locate USTs that may exist within proposed easements and right-of-way at the project site.

The PSA was performed in general accordance with F&R's Proposal No. 1866-00132, dated June 14, 2017 (and revised June 22, 2017) with Notice to Proceed issued to F&R by the NCDOT on July 6, 2017. The purpose of this report is to document field activities, present the results of laboratory analysis, and provide estimated quantities of petroleum impacted soils.

The site predominantly consists of cleared land with an asphalt paved parking lot on the northwestern portion of the property. The site is bordered to the north by East Main Street; to the south by cleared land and scattered residential development; to the east by Midway Salvage; and to the west by Anderson Road. F&R notes that the eastern adjacent property is addressed as 2302 East Main Street and identified as Parcel 054 by NCDOT. Access to the site is gained from East Main Street to the north and Anderson Road to the west.

2.0 Geophysical Survey

Prior to F&R's soil assessment activities, Pyramid Environmental & Engineering, P.C. (Pyramid) conducted a geophysical survey to locate suspect metal underground storage tanks (USTs). The geophysical work was conducted from July 24 to July 25, 2017, and was performed within the proposed right-of-way and proposed utility easement (PUE) of East Main Street.

The geophysical investigation consisted of electromagnetic (EM) induction surveys using a Geonics EM61 instrument. The EM61 data was collected along parallel survey lines spaced approximately 5 feet apart. Ground-penetrating radar (GPR) investigations of selected EM61 anomalies were investigated using a Geophysical Survey Systems UtilityScan DF unit equipped with a dual frequency 300/800 MHz antenna. The data was reviewed in the field to evaluate the possible presence of USTs and later transferred to a desktop computer for further review. Isolated EM anomalies were identified on the site, including reinforced pipe, reinforced concrete, and an AC unit. In addition, one probable metallic UST was identified on the property boundary, just west of the adjacent site structure (Midway Salvage). The GPR data suggest that the top of the probable UST is approximately 1.5 feet below ground surface (bgs). Pyramid estimated the probable UST is 6 feet in diameter and 8 feet long, which is approximately 1,700 gallons in size.

Based on the EM and GPR geophysical data collected at the site, Pyramid observed one anomaly that was interpreted to be the results of a probable metallic UST. The complete geophysical report is attached as Appendix II.

3.0 Site Assessment Activities

F&R visited the site on August 14, 2017 to perform the Preliminary Site Assessment. The assessment consisted of advancing 9 borings into the soils at the project site using direct-push technology (GeoProbe). The boring locations were determined by F&R staff based on the results of the geophysical survey, site features and proposed construction activities. Six of the borings (B-1 through B-6) were advanced on the western portion of the site, adjacent to Anderson Road. In addition, three borings (Borings P054 B-4 through P054 B-6) were advanced during the investigation of the UST on NCDOT Parcel 054. These borings were advanced just west of the adjacent site structure (Midway Salvage), and adjacent to the probable metallic UST. F&R attempted to advance the borings adjacent to Anderson Road (B-1 through B-6) to the proposed depth of 10 feet bgs and the borings adjacent to the UST (P054 B-4 through P054 B-6) to the proposed depth of 12 feet bgs. However, Borings B-1 through B-6 were terminated at depths ranging from 5.5 to 9 feet bgs, and Borings P054 B-4 through P054 B-6 were terminated at 4 feet

bgs where GeoProbe refusal was encountered. Photos detailing existing site features are attached as Appendix III and boring locations are depicted in Figure 3 of this report.

Soil sample cores from the borings were collected in disposable, 4-foot long acetate sleeves. The soil samples were visually/manually classified and screened in the field using a calibrated photo-ionization detector (PID) for evidence of petroleum hydrocarbons. Evaluation of VOC concentrations were performed using a calibrated MiniRae 3000 PID which produces results in parts per million (ppm). A representative soil sample was collected from two foot sections of each sleeve and placed in a re-sealable plastic bag. The vapors were then allowed to equilibrate in the headspace of the bag for approximately ten minutes prior to measurement with the PID. The measurements were collected by placing the probe tip into the headspace of the bag. PID measurements can be found in the GeoProbe Logs in Appendix IV, as well as in Table 1 in Section 5.0 below.

Generally, the soil sample in each boring which exhibited the highest PID concentration was submitted for laboratory analysis for diesel range organics (DRO), gasoline range organics (GRO), Total BTEX (benzene, toluene, ethylbenzene and xylenes), 16 PAHs (polycyclic aromatic hydrocarbons) and BaP (Benzo(a)pyrene) by Ultraviolet Fluorescence (UVF) technology (RedLab QED Hydrocarbon Analyzer).

The samples were collected in laboratory-supplied sample containers, placed in a cooler with ice, and shipped via UPS to RedLab in Wilmington, North Carolina following standard chain-of custody procedures.

Due to concerns associated with the historical use of the site as an auto salvage facility, F&R collected soil samples for laboratory analysis of RCRA 8 Metals (arsenic, barium, cadmium, chromium, lead, mercury, selenium and silver) and Volatile Organic Compounds (VOCs). These soil samples were collected from the 0 to 2 feet bgs sample from each boring. The samples were collected in laboratory-supplied sample containers, placed in a cooler with ice, and transferred to ENCO Laboratories in Cary, North Carolina following standard chain-of custody procedures.

4.0 Subsurface Conditions

As indicated in the attached GeoProbe Logs (Appendix IV), subsurface conditions from existing ground surface to boring termination primarily included various layers of dry-moist-wet, orange-brown-gray silty sandy clay; dry, brown silty clay with stone; dry, brown-tan silt; dry, brown silty fine-medium sand; and dry, red-orange-brown-tan silt with gravel. F&R attempted to advance the borings adjacent to Anderson Road (B-1 through B-6) to the proposed depth of 10 feet bgs

and the borings adjacent to the UST (P054 B-4 through P054 B-6) to the proposed depth of 12 feet bgs. However, Borings B-1 through B-6 were terminated at depths ranging from 5.5 to 9 feet bgs, and Boring P054 B-4 through P054 B-6 were terminated at 4 feet bgs where GeoProbe refusal was encountered in interbedded layers of dense silt and clay with stone and gravel.

PID readings generally did not exceed 5.6 ppm, and petroleum odors and/or groundwater were not observed during field screening or sample collection activities.

5.0 Analytical Results

As shown in the following table, petroleum hydrocarbons identified as GRO were detected in the soil sample at one boring location advanced at the site (P054 B-6), at a depth from 2 to 4 feet bgs. The laboratory results indicate that the GRO concentration was detected at a concentration of 1.3 mg/kg, which is below the NCDEQ Action Level of 50 mg/kg.

Petroleum hydrocarbons identified as DRO were detected in the soil samples at three boring locations advanced at the site (B-1, B-4, and P054 B-4), at depths from 0 to 2 foot bgs (B-4) to 4 to 6 foot bgs (B-1). The laboratory results indicate that the DRO concentrations ranged from 0.99 mg/kg (P054 B-4) to 20.1 mg/kg (B-1), which are below the NCDEQ Action Level of 100 mg/kg.

The laboratory analytical results indicate concentrations of the sum of 16 EPA PAHs above the method detection limit, but below the total NCDEQ Action Level of 9,068.816 mg/kg at Borings B-1 and B-4. The soil analytical results are summarized in Table 1 below. The laboratory analytical results can also be found in the attached Appendix V of this report.

Table 1
Soil Sampling Analytical Results (UVF)

Sample ID	Sample Date	Sample Depth (ft bgs)	PID Reading (ppm)	GRO (mg/kg)	DRO (mg/kg)	TPH (mg/kg)	Total BTEX (mg/kg)	Total Aromatics (mg/kg)	16 EPA PAHs (mg/kg)	BaP (mg/kg)
B-1	8/14/17	4-6	5.6	<0.58	20.1	20.1	<0.58	20	1.1	0.062
B-2		2-4	5.2	<0.58	<0.58	<0.58	<0.58	<0.12	<0.19	<0.023
B-3		2-4	4.0	<0.58	<0.58	<0.58	<0.58	<0.12	<0.19	<0.023
B-4		0-2	5.5	<0.51	7.3	7.3	<0.51	4	0.2	<0.021
B-5		8-9	5.0	<0.52	<0.52	<0.52	<0.52	<0.1	<0.17	<0.021
B-6		6-8	4.4	<0.35	<0.35	0.17	<0.35	0.17	<0.11	<0.14
P054 B-4		2-4	2.1	<0.58	0.99	0.99	<0.58	0.98	<0.19	<0.023
P054 B-5		2-4	1.7	<0.56	<0.56	<0.56	<0.56	<0.11	<0.18	<0.023
P054 B-6		2-4	3.0	1.3	<0.48	1.3	<0.48	<0.1	<0.15	<0.019
NCDEQ Action Level				**50**	**100**	**NSE**	**13.8056**	**NSE**	**9,068.816**	**0.088**

Concentrations shown in bold exceed the NCDEQ Action Level as outlined in the NCDEQ, DWM, UST Section Guidelines

ppm = parts per million
GRO = Gasoline Range Organics
DRO = Diesel Range Organics
TPH = Total Petroleum Hydrocarbons
BTEX = Benzene, Toluene, Ethylbenzene and Xylenes
NSE = No Standard Exists

As shown in Table 2, laboratory analysis detected several RCRA 8 Metals (arsenic, barium, cadmium, chromium, lead, and mercury) at concentrations above the laboratory method detection limit. The laboratory results indicate that the arsenic concentrations ranged from 2.41 mg/kg (B-2) to 13.5 mg/kg (B-5), which are above the NCDEQ Inactive Hazardous Sites Branch (IHSB) Residential Preliminary Soil Remediation Goal (PSRG) level of 0.68 mg/kg. The remaining metals were below their respective NCDEQ IHSB Residential PSRG. The soil analytical results for RCRA-8 metals are summarized in Table 2 below.

Table 2
Soil Sampling Analytical Results (RCRA-8 Metals)

Sample ID	Sample Date	Sample Depth (ft bgs)	Arsenic (mg/kg)	Barium (mg/kg)	Cadmium (mg/kg)	Chromium (mg/kg)	Lead (mg/kg)	Mercury (mg/kg)
B-1	8/14/17	0-2	**5.18**	33.0	ND	17.3	17.5	0.0324
B-2		0-2	**2.41**	30.4	ND	5.74	10.1	ND
B-3		0-2	**2.54**	33.3	ND	7.37	9.13	0.0278
B-4		0-2	**3.59**	29.6	ND	9.98	13.6	0.0808
B-5		0-2	**2.14**	24.6	ND	7.92	6.82	0.017 J
B-6		0-2	**4.16**	69.1	0.132	15.6	15.1	0.0308
NCDEQ IHSB Residential PSRG			**0.68**	**3,100**	**14.0**	**23,000**	**400***	**2.3**
NCDEQ IHSB Industrial PSRG			**3.0**	**47,000**	**200**	**100,000**	**800***	**3.1**

Concentrations shown in bold exceed the NCDEQ IHSB Residential PSRG as outlined in the NCDEQ Inactive Hazardous Sites Section Guidelines

*Residential and Industrial PSRGs are not available for Lead. Therefore, Lead concentrations are compared to Residential and Industrial EPA Regional Screening Levels (RSLs)

J = The reported value is between the laboratory method detection limit (MDL) and the laboratory method reporting limit (MRL), adjusted for actual sample preparation data and moisture content, where applicable.

In addition, Chloroform was detected at concentrations ranging from 0.0019 mg/kg (B-1) to 0.012 mg/kg (B-3) from 0 to 2 feet bgs, which are below the NCDEQ Inactive Hazardous Sites Branch (IHSB) Residential Preliminary Soil Remediation Goal (PSRG) level of 0.34 mg/kg. The soil analytical results for VOCs are summarized in Table 2 below.

Table 3
Soil Sampling Analytical Results (VOCs)

Sample ID	Sample Date	Sample Depth (ft bgs)	Chloroform (mg/kg)
B-1	8/14/17	0-2	0.0019
B-3		0-2	0.012
NCDEQ IHSB Residential PSRG			**0.34**
NCDEQ IHSB Industrial PSRG			**1.5**

6.0 Conclusions and Recommendations

F&R conducted a PSA at the Annie G. Dennis Rev. Liv. Trust Property addressed as 2302 East Main Street, in Albemarle, Stanly County, North Carolina. A geophysical investigation was performed by Pyramid Environmental & Engineering to investigate the presence and location of USTs in the proposed easements and right-of-way. Based on the results of the geophysical survey, it was determined that a probable metallic UST was located on the eastern property boundary, just west of the adjacent site structure (Midway Salvage). F&R recommends USTs removed from the site be properly managed and disposed of in accordance with NCDEQ rules and regulations.

Nine GeoProbe borings were advanced during the assessment within the proposed right-of-way, where grading activities and storm drain utilities are proposed in association with the NC 24-27 improvements. Based on the results of laboratory testing and observed PID readings, petroleum impacted soils were detected in the vicinity of boring locations B-1, B-4, P054 B-4 and P054 B-6. Laboratory analysis detected concentrations of DRO at Borings B-1, B-4, and P054 B-4 and GRO at Boring P054 B-6; however, the concentrations of these compounds were below the NCDEQ Action Levels of 100 mg/kg DRO and 50 mg/kg GRO.

Several metals were detected above laboratory MDL in the soil samples submitted for laboratory analysis of RCRA-8 Metals, including arsenic, barium, cadmium, chromium, lead, and mercury. Arsenic was detected at a concentration ranging from 2.14 to 5.18 mg/kg, and was the only metal analyzed during this investigation that exceeded its NCDEQ IHSB Residential PSRG (0.68 mg/kg). According to the USGS Publication *Geochemical and Mineralogical Data for Soils of the Conterminous United States: U.S. Geological Survey Data Series 801* (Smith, D.B., Cannon, W.F., Woodruff, L.G., Solano, Federico, Kilburn, J.E., and Fey, D.L., 2013), arsenic may be naturally occurring in the Stanly County region, at a concentration ranging from 1.2 to 14.2 mg/kg. Therefore, the detection of arsenic is not considered a concern with respect to the project site or proposed construction activities.

Chloroform were detected in Borings B-1 and B-3 from 0 to 2 feet bgs. However, the concentrations were below the NCDEQ IHSB Residential PSRG level of 0.34 mg/kg.

It should be noted that a delineation of the soil contamination was not performed, as this was not included in the proposed scope of work. The above conclusions are based on interpretations of soil analytical results, PID readings and our experience with petroleum UST releases.

In addition, GeoProbe refusal was encountered adjacent to the probable UST at a depth of 4 feet bgs. Based on the geophysical survey, the bottom of the UST is estimated to be 7.5 bgs.

Therefore, F&R cannot preclude the possibility that an undetected release has occurred from the probable UST at a depth below that of the GeoProbe refusal depth.

7.0 Limitations

These services have been performed, under authorization of the North Carolina Department of Transportation for specific application on this project. These services have been performed in accordance with generally accepted environmental and hydrogeological practices. No other warranty, expressed or implied is made. As with any subsurface investigation, actual conditions exist only at the precise locations from which samples were taken. Certain inferences are based on the results of sampling and related testing to form a professional opinion of conditions in areas beyond those from which samples were taken. Our conclusions and recommendations are based upon information provided to us by others, our sampling and testing results and our site observations. We have not verified the completeness or accuracy of the information provided by others, unless otherwise noted. Our observations are based upon conditions readily visible at the site at the time of our site visits.

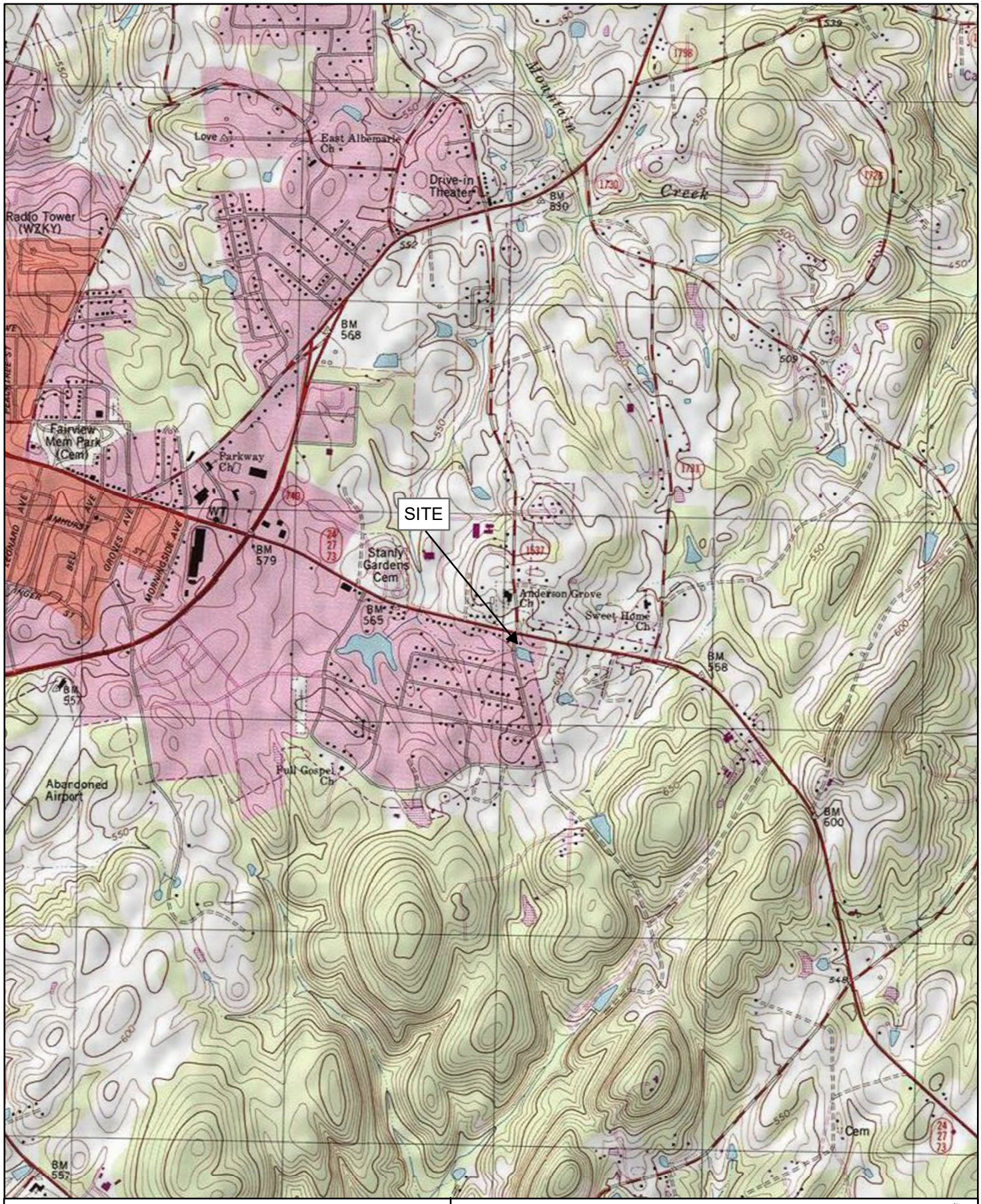
Froehling & Robertson, Inc. by virtue of providing the services described in this report, does not assume the responsibility of the person(s) in charge of the site, or otherwise undertake responsibility for reporting to any local, state or federal public agencies any conditions at the site that may present a potential danger to public health, safety or the environment. In areas that require notification of local, state, or federal public agencies as required by law, it is the Client's responsibility to so notify.

APPENDIX I

Figure No. 1 – TOPOGRAPHIC MAP

Figure No. 2 – SITE VICINITY MAP

Figure No. 3 – LABORATORY RESULTS & BORING LOCATION PLAN



SITE TOPOGRAPHIC MAP

0 1,000 2,000 4,000 6,000 Feet

SINCE F&R 1881

FROEHLING & ROBERTSON, INC.
Engineering Stability Since 1881
310 Hubert Street
Raleigh, North Carolina 27603-2302 I USA
T 919.828.3441 I F 919.828.5751

Client:	NCDOT
Project:	R-2530B PSAs
Location:	Parcel #053, Albemarle, NC
F&R Project No.:	66V-0092 — 2302 East Main Street - Albemarle, North Carolina
Data:	USGS 2013
Date:	October 2017 (Revised Feb. 5, 2018) — Scale: 1:24,000 — 1 inch = 2,000 feet

Disclaimer: F&R makes no warranties or guarantees regarding the accuracy or completeness of geographic features shown on this map. Spatial accuracy of measurement provided by source agencies can be obtained by contacting F&R.

FIGURE No.: 1

SITE VICINITY MAP

0 100 200 400 600 Feet

N

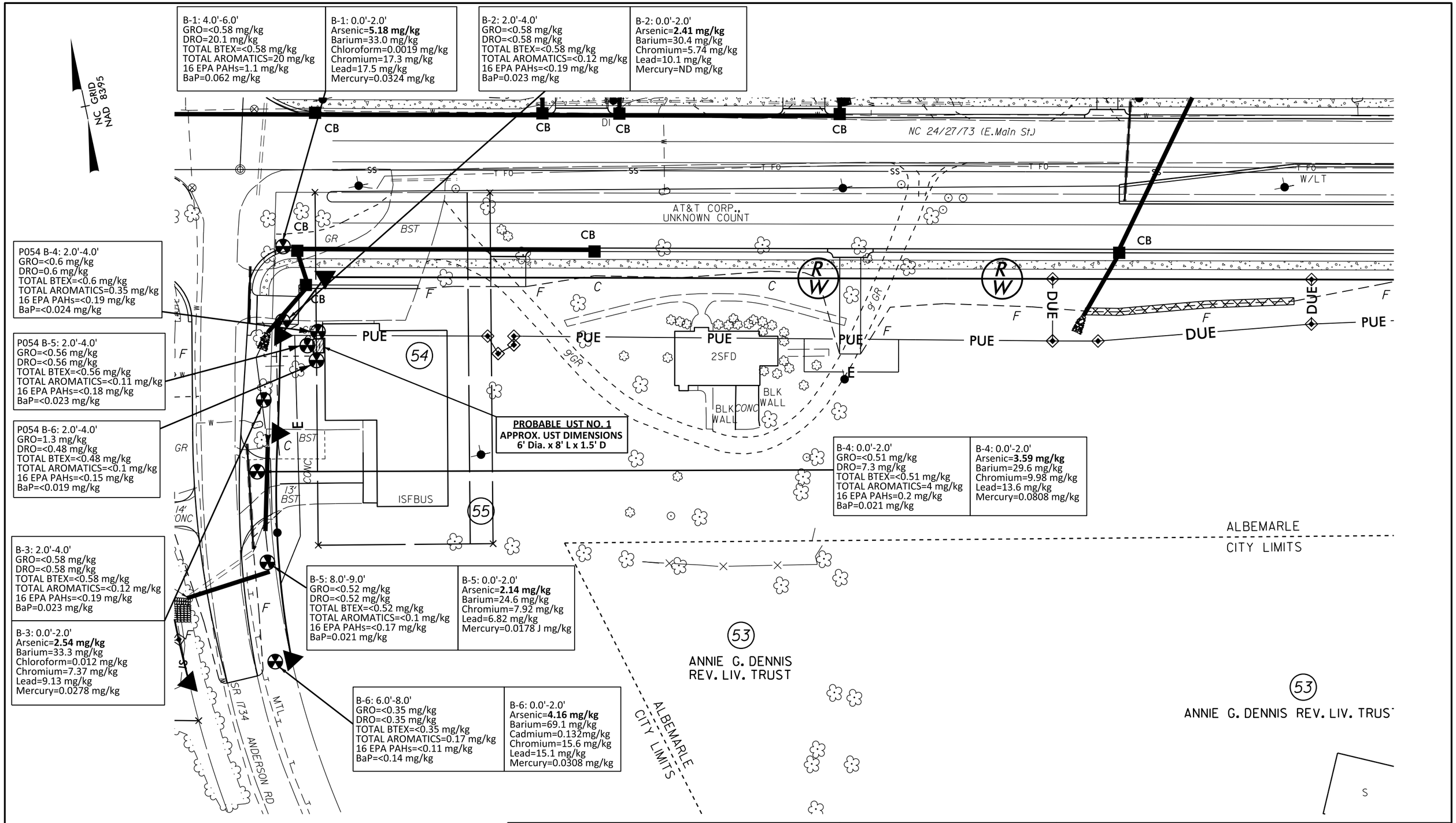
SINCE F&R 1881

FROEHLING & ROBERTSON, INC.
Engineering Stability Since 1881
310 Hubert Street
Raleigh, North Carolina 27603-2302 I USA
T 919.828.3441 I F 919.828.5751

Client:	NCDOT
Project:	R-2530B PSAs
Location:	Parcel #053, Albemarle, NC
F&R Project No.:	66V-0092 2302 East Main Street - Albemarle, North Carolina
Data:	ArcMap Imagery
Date:	October 2017 (Revised Feb. 5, 2018) Scale: 1:2,400 1 inch = 200 feet

Disclaimer: F&R makes no warranties or guarantees regarding the accuracy or completeness of geographic features shown on this map. Spatial accuracy of measurement provided by source agencies can be obtained by contacting F&R.

FIGURE No.: 2



SINCE 1881

FROEHLING & ROBERTSON, INC.

Engineering Stability Since 1881

310 Hubert Street
Raleigh, North Carolina 27603-2302 | USA
T 919.828.3441 | F 919.828.5751
www.fandr.com

LEGEND

Approximate Geoprobe Boring Location

Sample data shown in bold exceed either the NCDEQ (UST Section) Action Level or the NCDEQ IHSB unrestricted use PSRG

LABORATORY RESULTS & BORING LOCATION PLAN

CLIENT: NCDOT		
PROJECT: R-2530B PSAs		
LOCATION: Albemarle, NC Parcel #053, 2302 East Main Street		
F&R PROJECT No.: 66V-0092		FIGURE No.: 3
DRAWN BY: T. T. Walker	CHECKED BY: B. Whitley, P.E.	
DATE: February 2018	SCALE: 1"=50'	

APPENDIX II

GEOPHYSICAL REPORT PREPARED BY PYRAMID

PYRAMID GEOPHYSICAL SERVICES
(PROJECT 2017-203)

GEOPHYSICAL SURVEY

METALLIC UST INVESTIGATION:
PARCEL 053
NCDOT PROJECT R-2530B

2302 E. MAIN STREET, ALBEMARLE, NC

SEPTEMBER 1, 2017

Report prepared for: Benjamin Whitley, P.E.
Froehling and Robertson
310 Hubert Street
Raleigh, North Carolina 27603

Prepared by: _____
Eric C. Cross, P.G.
NC License #2181

Reviewed by: _____
Douglas A. Canavello, P.G.
NC License #1066

503 INDUSTRIAL AVENUE, GREENSBORO, NC 27406
P: 336.335.3174 F: 336.691.0648
C257: GEOLOGY C1251: ENGINEERING

GEOPHYSICAL INVESTIGATION REPORT
Parcel 053 – 2302 E. Main Street
Albemarle, Stanly County, North Carolina

Table of Contents

Executive Summary 1
Introduction 2
Field Methodology 2
Discussion of Results 3
Summary and Conclusions 5
Limitations 6

Figures

Figure 1 – Parcel 053 Geophysical Survey Boundaries and Site Photographs
Figure 2 – Parcel 053 EM61 Results Contour Map
Figure 3 – Parcel 053 GPR Transect Locations and Images
Figure 4 – Parcel 053 Location and Size of Probable UST
Figure 5 – Overlay of Geophysical Survey Boundaries and Location of Probable UST on NCDOT Engineering Plans

LIST OF ACRONYMS

CADD .....Computer Assisted Drafting and Design
DF .....Dual Frequency
EM.....Electromagnetic
GPR.....Ground Penetrating Radar
GPS .....Global Positioning System
NCDOT.....North Carolina Department of Transportation
ROW .....Right-of-Way
UST .....Underground Storage Tank

EXECUTIVE SUMMARY

Project Description: Pyramid Environmental conducted a geophysical investigation for Froehling and Robertson, Inc. (F&R) at Parcel 053, located at 2302 E. Main Street, Albemarle, NC. The survey was part of a North Carolina Department of Transportation (NCDOT) Right-of-Way (ROW) investigation (NCDOT Project R-2530B). F&R directed Pyramid as to the geophysical survey boundaries at the project site, which were designed to extend from the existing edge of pavement to the proposed ROW lines and/or easement lines within the property, whichever distance was greater. Conducted from July 24-25, 2017, the geophysical investigation was performed to determine if unknown, metallic underground storage tanks (USTs) were present beneath the survey area.

Geophysical Results: The geophysical investigation consisted of an electromagnetic (EM) induction-metal detection and ground penetrating radar (GPR) surveys. A total of four EM anomalies were identified. Two of the EM anomalies were directly attributed to visible cultural features at the ground surface. One EM feature at the northwest corner of the building was associated with unknown buried metal, and was investigated further by GPR. Additionally, a concrete drive/ramp at the southwest side of the survey area was suspected to contain metal reinforcement, and was investigated by GPR.

GPR performed at the EM feature at the northwest corner of the building provided evidence of an isolated hyperbolic reflector and discreet lateral reflector that are characteristic of a UST. The combined geophysical data resulted in this feature being classified as one probable metallic UST (center point 1656619.72, 582411.56 North Carolina State Plane NAD83, feet). The probable metallic UST was approximately 8 feet long and 6 feet wide at a depth of approximately 1.5 feet below the ground surface. GPR also verified the presence of metal reinforcement within the concrete drive/ramp at the southwest portion of the survey area.

Collectively, the geophysical data recorded evidence of one probable metallic UST at Parcel 053.

INTRODUCTION

Pyramid Environmental conducted a geophysical investigation for Froehling and Robertson, Inc. (F&R) at Parcel 053, located at 2302 E. Main Street, Albemarle, NC. The survey was part of a North Carolina Department of Transportation (NCDOT) Right-of-Way (ROW) investigation (NCDOT Project R-2530B). F&R directed Pyramid as to the geophysical survey boundaries at the project site, which were designed to extend from the existing edge of pavement to the proposed ROW lines and/or easement lines within the property, whichever distance was greater. Conducted from July 24-25, 2017, the geophysical investigation was performed to determine if unknown, metallic underground storage tanks (USTs) were present beneath the survey area.

The site included a commercial building surrounded by an asphalt parking area and grass medians. An aerial photograph showing the survey area boundaries and ground-level photographs are shown in **Figure 1**.

FIELD METHODOLOGY

The geophysical investigation consisted of an electromagnetic (EM) induction-metal detection and ground penetrating radar (GPR) surveys. Pyramid collected the EM data using a Geonics EM61 metal detector integrated with a Trimble AG-114 GPS antenna. The integrated GPS system allows the location of the instrument to be recorded in real-time during data collection, resulting in an EM data set that is geo-referenced and can be overlain on aerial photographs and CADD drawings. A boundary grid was established around the perimeter of the site with marks every 10 feet to maintain orientation of the instrument throughout the survey and assure complete coverage of the area.

According to the instrument specifications, the EM61 can detect a metal drum down to a maximum depth of approximately 8 feet. Smaller objects (1-foot or less in size) can be detected to a maximum depth of 4 to 5 feet. The EM61 data were digitally collected at approximately 0.8-foot intervals along north-south trending or east-west trending,

generally parallel survey lines, spaced five feet apart. The data were downloaded to a computer and reviewed in the field and office using the Geonics NAV61 and Surfer for Windows Version 14.0 software programs.

GPR data were acquired across select EM anomalies on July 24, 2017, using a Geophysical Survey Systems, Inc. (GSSI) UtilityScan DF unit equipped with a dual frequency 300/800 MHz antenna. Data were collected both in reconnaissance fashion as well as along formal transect lines across EM features. The GPR data were viewed in real-time using a vertical scan of 512 samples, at a rate of 48 scans per second. GPR data were viewed down to a maximum depth of approximately 6 feet, based on dielectric constants calculated by the DF unit in the field during the reconnaissance scans. GPR transects across specific anomalies were saved to the hard drive of the DF unit for post-processing and figure generation.

Pyramid's classifications of USTs for the purposes of this report are based directly on the geophysical UST ratings provided by the NCDOT. These ratings are as follows:

Geophysical Surveys for Underground Storage Tanks on NCDOT Projects

High Confidence	Intermediate Confidence	Low Confidence	No Confidence
Known UST Active tank - spatial location, orientation, and approximate depth determined by geophysics.	**Probable UST** Sufficient geophysical data from both magnetic and radar surveys that is characteristic of a tank. Interpretation may be supported by physical evidence such as fill/vent pipe, metal cover plate, asphalt/concrete patch, etc.	**Possible UST** Sufficient geophysical data from either magnetic or radar surveys that is characteristic of a tank. Additional data is not sufficient enough to confirm or deny the presence of a UST.	Anomaly noted but not characteristic of a UST. Should be noted in the text and may be called out in the figures at the geophysicist's discretion.

DISCUSSION OF RESULTS

Discussion of EM Results

A contour plot of the EM61 results obtained across the survey area at the property is presented in **Figure 2**. Each EM anomaly is numbered for reference in the figure. The

following table presents the list of EM anomalies and the cause of the metallic response, if known:

LIST OF METALLIC ANOMALIES IDENTIFIED BY EM SURVEY

Metallic Anomaly #	Cause of Anomaly	Investigated with GPR
1	Reinforced pipe	
2	Reinforced concrete	✓
3	AC unit	
4	**One probable UST**	✓

Two of the EM anomalies were directly attributed to visible cultural features (a concrete-reinforced pipe and an AC unit). However, one high-amplitude EM feature was observed at the northwest corner of the building (Anomaly 4) that was associated with unknown buried metal. This feature was investigated further by GPR. Additionally, a high-amplitude EM feature was observed at the location of a concrete drive/ramp leading to the southwest portion of the building. This concrete was suspected to contain metal reinforcement, and was also investigated by GPR.

Discussion of GPR Results

Figure 3 presents the locations of the formal GPR transects performed at the property, as well as the transect images. A total of four GPR transects were performed at the site. GPR Transects 1-2 were performed across the concrete drive/ramp (EM Anomaly 2) at the southwest portion of the survey area. These transects verified the presence of metal reinforcement within the concrete. No additional structures such as USTs were observed to underlie the reinforcement.

GPR Transects 3-4 were performed across EM Anomaly 4 at the northwest building corner. These transects showed an isolated hyperbolic reflector and a discreet lateral reflector that are characteristic of a metal UST. The combined EM and GPR data result in this feature being classified as one probable UST (center point 1656619.72, 582411.56 North Carolina State Plane NAD83, feet). The probable UST was approximately 8 feet long and 6 feet wide at a depth of approximately 1.5 feet below the ground surface. **Figure 4** presents the

location of the probable UST on an aerial photograph along with a ground-level photograph.

Collectively, the geophysical data recorded evidence of one probable metallic UST at Parcel 053.

Figure 5 provides the location of the probable UST and an overlay of the geophysical survey area onto the NCDOT MicroStation engineering plans (proposed ROW and easements) for reference.

SUMMARY & CONCLUSIONS

Pyramid's evaluation of the EM61 and GPR data collected at Parcel 053 in Albemarle, North Carolina, provides the following summary and conclusions:

- The EM61 and GPR surveys provided reliable results for the detection of metallic USTs within the accessible portions of the geophysical survey area.
- Two of the EM anomalies were directly attributed to visible cultural features at the ground surface.
- One EM feature at the northwest corner of the building was associated with unknown buried metal, and was investigated further by GPR. Additionally, a concrete drive/ramp at the southwest side of the survey area was suspected to contain metal reinforcement, and was investigated by GPR.
- GPR provided evidence of an isolated hyperbolic reflector and discreet lateral reflector that are characteristic of a UST. The combined geophysical data resulted in this feature being classified as one probable metallic UST (center point 1656619.72, 582411.56 North Carolina State Plane NAD83, feet).
- The probable metallic UST was approximately 8 feet long and 6 feet wide at a depth of approximately 1.5 feet below the ground surface.
- GPR also verified the presence of metal reinforcement within the concrete drive/ramp at the southwest portion of the survey area.

- Collectively, the geophysical data recorded evidence of one probable metallic UST at Parcel 053.

LIMITATIONS

Geophysical surveys have been performed and this report was prepared for F&R in accordance with generally accepted guidelines for EM61 and GPR surveys. It is generally recognized that the results of the EM61 and GPR surveys are non-unique and may not represent actual subsurface conditions. The EM61 and GPR results obtained for this project have not conclusively determined the definitive presence or absence of metallic USTs, but the evidence collected is sufficient to result in the conclusions made in this report. Additionally, it should be understood that areas containing extensive vegetation, reinforced concrete, or other restrictions to the accessibility of the geophysical instruments could not be fully investigated.

N↑

APPROXIMATE BOUNDARIES OF GEOPHYSICAL SURVEY AREA

View of Survey Area
(Facing Approximately West)

View of Survey Area
(Facing Approximately South)

TITLE PARCEL 053 - GEOPHYSICAL SURVEY BOUNDARIES AND SITE PHOTOGRAPHS	
PROJECT PARCEL 053 ALBEMARLE, NORTH CAROLINA NCDOT PROJECT R-2530B	
PYRAMID GEOPHYSICS 503 INDUSTRIAL AVENUE GREENSBORO, NC 27460 (336) 335-3174 (p) (336) 691-0648 (f) License # C1251 Eng. / License # C257 Geology	
DATE 8/24/2017	CLIENT FROEHLING & ROBERTSON
PYRAMID PROJECT #: 2017-203	**FIGURE 1**

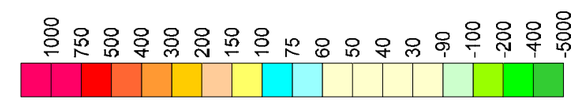
N↑

EM61 METAL DETECTION RESULTS

EVIDENCE OF ONE PROBABLE METALLIC UST OBSERVED.

The contour plot shows the differential results of the EM61 instrument in millivolts (mV). The differential results focus on larger metallic objects such as USTs and drums. The EM61 data were collected on July 24, 2017, using a Geonics EM61 instrument. Verification GPR data were collected on July 25, 2017, using a GSSI UtilityScan DF unit with a dual frequency 300/800 MHz antenna.

EM61 Metal Detection Response (millivolts)



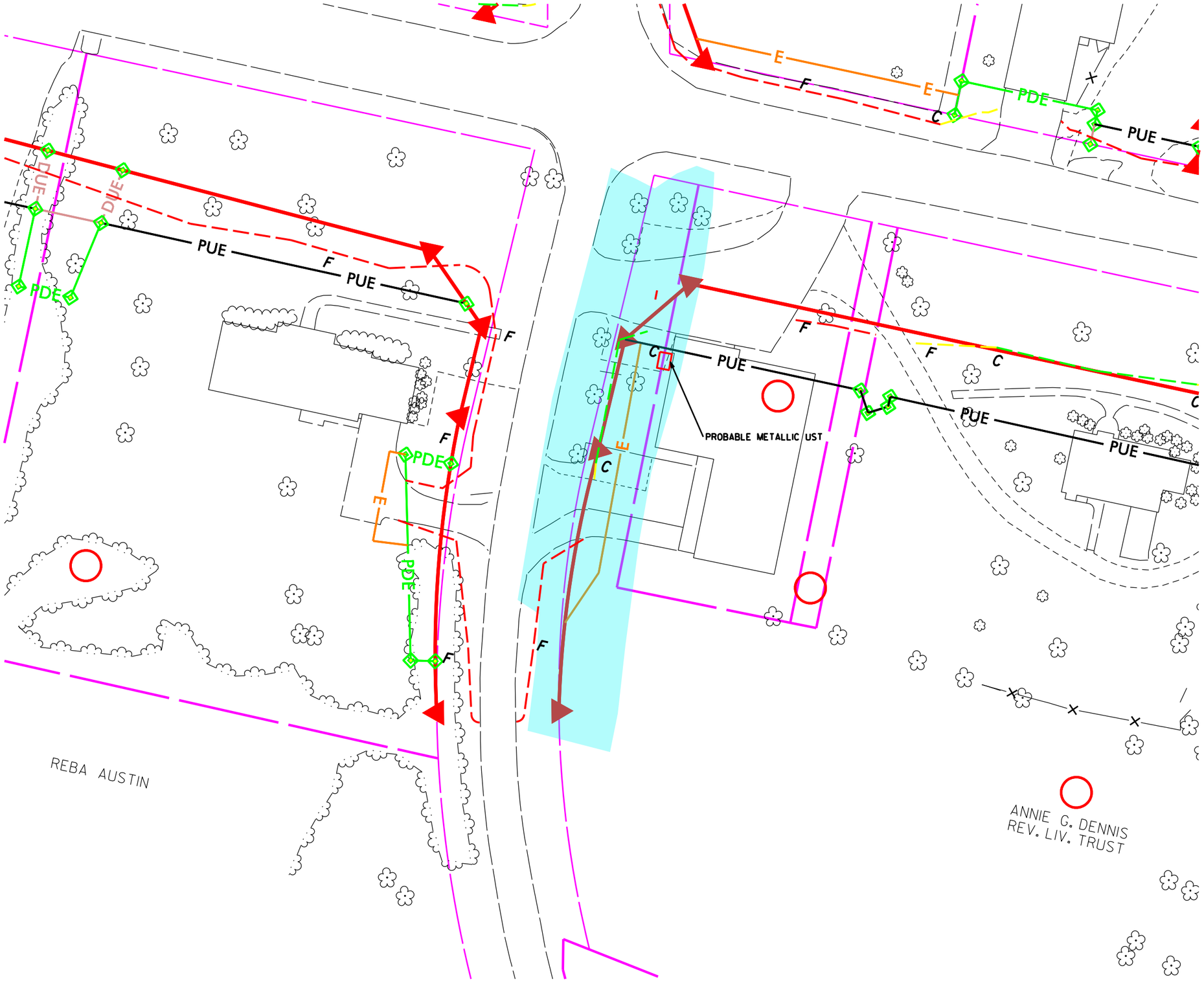
TITLE	PARCEL 053 - EM61 RESULTS CONTOUR MAP
PROJECT	PARCEL 053 ALBEMARLE, NORTH CAROLINA NCDOT PROJECT R-2530B
PYRAMID GEOPHYSICS	503 INDUSTRIAL AVENUE GREENSBORO, NC 27460 (336) 335-3174 (p) (336) 691-0648 (f) License # C1251 Eng. / License # C257 Geology
DATE 8/24/2017	CLIENT FROEHLING & ROBERTSON
PYRAMID PROJECT #: 2017-203	**FIGURE 2**

N↑

LOCATION OF PROBABLE METALLIC UST

View of Probable UST #1
Facing Approximately South

TITLE	PARCEL 053 - LOCATION AND SIZE OF PROBABLE UST
PROJECT	PARCEL 053 ALBEMARLE, NORTH CAROLINA NCDOT PROJECT R-2530B
PYRAMID GEOPHYSICS	503 INDUSTRIAL AVENUE GREENSBORO, NC 27460 (336) 335-3174 (p) (336) 691-0648 (f) License # C1251 Eng. / License # C257 Geology
DATE 8/3/2017	CLIENT FROEHLING & ROBERTSON
PYRAMID PROJECT #: 2017-203	**FIGURE 4**



LEGEND

- EXISTING ROW
- EXISTING PROPERTY BOUNDARY
- PROPOSED ROW LINE
- TEMPORARY CONSTRUCTION EASEMENT
- PROPOSED PERMANENT DRAINAGE
- PROPOSED PERMANENT UTILITY
- PROPOSED SS CUT LINE
- PROPOSED SS FILL LINE
- GEOPHYSICAL SURVEY AREA
- PROBABLE METALLIC UST

0 25 50
FEET

N

TITLE OVERLAY OF GEOPHYSICAL SURVEY BOUNDARIES AND LOCATION OF PROBABLE UST ON NCDOT ENGINEERING PLANS

PROJECT
PARCEL 53
ALBEMARLE, NORTH CAROLINA
NCDOT PROJECT R-2530B

PYRAMID GEOPHYSICS
503 INDUSTRIAL AVENUE
GREENSBORO, NC 27406
336.335.3174 (p) 336.691.0648 (f)
License # C1251 Eng. / #C257 Geology

DATE: 8-24-17	REVISION NO. 0
PYRAMID PROJECT NO. 2017-203	FIGURE NO. 5

APPENDIX III

SITE PHOTOS

Photo #1: Boring locations B-1 and B-2, facing south.

Photo #2: Boring locations B-3 and B-4, facing north.

Photo #3: Boring locations B-5 and B-6, facing south.

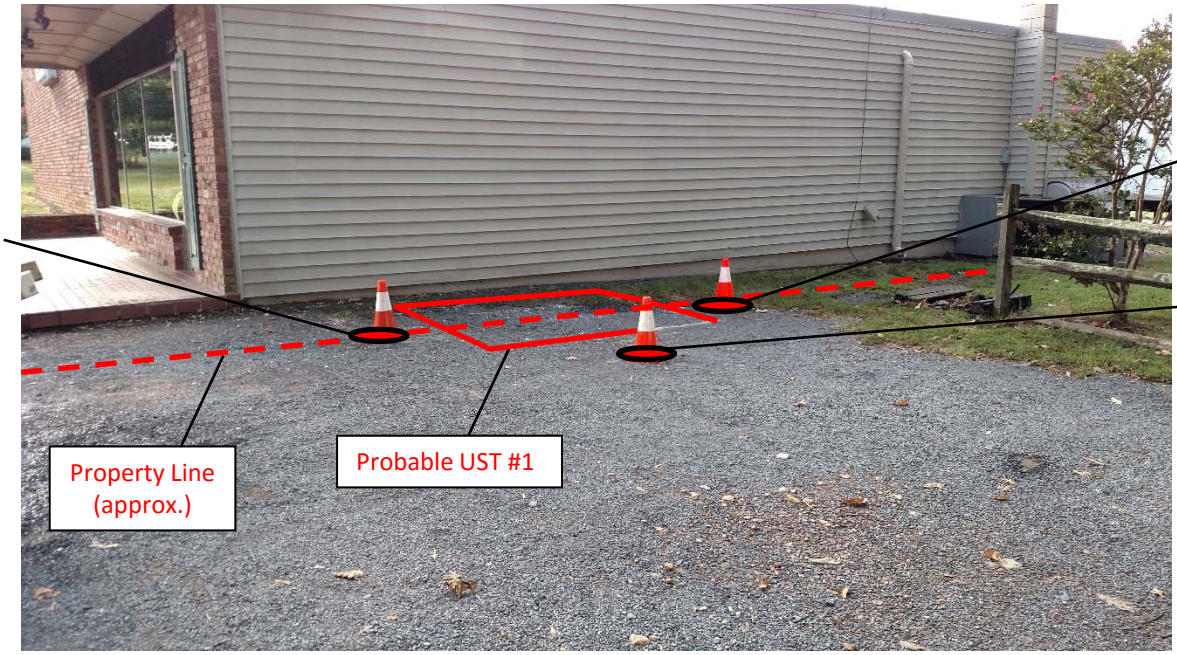


Photo #4: Boring locations P054 B-4 through P054 B-6 and a probable UST located just west of the adjacent site structure, facing southeast.

APPENDIX IV

GEOPROBE LOGS

FROEHLING & ROBERTSON, INC.

GEOPROBE LOG

Boring: P053 B-1 (1 of 1)

Project No: 66V-0092
Client: NCDOT
Project: R2530B PSAs
City/State: ALBEMARLE, NC

Elevation: EXISTING
Total Depth: 6.0'
Boring Location: SEE BORING LOCATION PLAN

Drilling Method: DIRECT PUSH
Hammer Type: Automatic
Date Drilled: 8/14/17
Driller: REGIONAL PROBING

Elevation	Depth	Description of Materials (Classification)	*Sample Depth (feet)	PID (ppm)	Remarks
		Dry Brown Tan Silt			One sample collected for laboratory analysis (4.0-6.0) No petroleum odors observed.
	2.0		2.0	5.1	
	4.0		4.0	5.1	
	6.0	Geoprobe Boring Terminated by Direct Push Refusal at 8 feet.	6.0	5.6	

FROEHLING & ROBERTSON, INC.

GEOPROBE LOG

Boring: P053 B-2 (1 of 1)

Project No: 66V-0092
Client: NCDOT
Project: R2530B PSAs
City/State: ALBEMARLE, NC

Elevation: EXISTING
Total Depth: 6.0'
Boring Location: SEE BORING LOCATION PLAN

Drilling Method: DIRECT PUSH
Hammer Type: Automatic
Date Drilled: 8/14/17
Driller: REGIONAL PROBING

Elevation	Depth	Description of Materials (Classification)	*Sample Depth (feet)	PID (ppm)	Remarks
		Dry Tan Brown Silt with Gravel			One sample collected for laboratory analysis (2.0-4.0) No petroleum odors observed.
	2.0		2.0	4.2	
	4.0		4.0	5.2	
	6.0	Geoprobe Boring Terminated by Direct Push Refusal at 6 feet.	6.0	4.1	

FROEHLING & ROBERTSON, INC.

GEOPROBE LOG

Boring: P053 B-3 (1 of 1)

Project No: 66V-0092
Client: NCDOT
Project: R2530B PSAs
City/State: ALBEMARLE, NC

Elevation: EXISTING
Total Depth: 5.5'
Boring Location: SEE BORING LOCATION PLAN

Drilling Method: DIRECT PUSH
Hammer Type: Automatic
Date Drilled: 8/14/17
Driller: REGIONAL PROBING

Elevation	Depth	Description of Materials (Classification)	*Sample Depth (feet)	PID (ppm)	Remarks
		Dry Brown Silt with Gravel			One sample collected for laboratory analysis (2.0-4.0) No petroleum odors observed.
	2.0		2.0	3.8	
	4.0		4.0	4.0	
	5.5	Geoprobe Boring Terminated by Direct Push Refusal at 5.5 feet.	5.5	3.6	

GEOPROBE_LOG BORING LOGS - COPY.GPJ F&R.GDT 10/30/17

FROEHLING & ROBERTSON, INC.

GEOPROBE LOG

Boring: P053 B-4 (1 of 1)

Project No: 66V-0092
Client: NCDOT
Project: R2530B PSAs
City/State: ALBEMARLE, NC

Elevation: EXISTING
Total Depth: 8.5'
Boring Location: SEE BORING LOCATION PLAN

Drilling Method: DIRECT PUSH
Hammer Type: Automatic
Date Drilled: 8/14/17
Driller: REGIONAL PROBING

Elevation	Depth	Description of Materials (Classification)	*Sample Depth (feet)	PID (ppm)	Remarks
		Moist Brown Silty Clay			One sample collected for laboratory analysis (0.0-2.0) No petroleum odors observed.
	2.0		2.0	5.5	
	4.0	Dry Tan Silt	4.0	5.0	
	6.0		6.0	2.1	
	8.5	Geoprobe Boring Terminated by Direct Push Refusal at 8.5 feet.	8.5	3.5	

GEOPROBE_LOG BORING LOGS - COPY.GPJ F&R.GDT 10/30/17

FROEHLING & ROBERTSON, INC.

GEOPROBE LOG

Boring: P053 B-5 (1 of 1)

Project No: 66V-0092
Client: NCDOT
Project: R2530B PSAs
City/State: ALBEMARLE, NC

Elevation: EXISTING
Total Depth: 9.0'
Boring Location: SEE BORING LOCATION PLAN

Drilling Method: DIRECT PUSH
Hammer Type: Automatic
Date Drilled: 8/14/17
Driller: REGIONAL PROBING

Elevation	Depth	Description of Materials (Classification)	*Sample Depth (feet)	PID (ppm)	Remarks
		Dry Gray Orange Silty Clay			One sample collected for laboratory analysis (8.0-9.0) No petroleum odors observed.
	2.0	Moist Orange Brown Silty Clay	2.0	3.6	
	4.0		4.0	4.2	
	6.0	Moist Orange Gray Silty Clay	6.0	4.3	
	8.0	Dry Orange Red Silt with Stone	8.0	3.0	
	9.0	Geoprobe Boring Terminated by Direct Push Refusal at 9 feet.	9.0	5.0	

GEOPROBE_LOG BORING LOGS - COPY.GPJ F&R.GDT 10/30/17

FROEHLING & ROBERTSON, INC.

GEOPROBE LOG

Boring: P053 B-6 (1 of 1)

Project No: 66V-0092
Client: NCDOT
Project: R2530B PSAs
City/State: ALBEMARLE, NC

Elevation: EXISTING
Total Depth: 8.0'
Boring Location: SEE BORING LOCATION PLAN

Drilling Method: DIRECT PUSH
Hammer Type: Automatic
Date Drilled: 8/14/17
Driller: REGIONAL PROBING

Elevation	Depth	Description of Materials (Classification)	*Sample Depth (feet)	PID (ppm)	Remarks
		Moist Brown Silty Clay			One sample collected for laboratory analysis (6.0-8.0) No petroleum odors observed.
	2.0		2.0	3.7	
	4.0	Wet Brown Silty Clay	4.0	3.7	
	6.0	Wet Tan Silty Clay	6.0	3.1	
	8.0	Geoprobe Boring Terminated by Direct Push Refusal at 8 feet.	8.0	4.4	

FROEHLING & ROBERTSON, INC.

GEOPROBE LOG

Boring: P054 B-4 (1 of 1)

Project No: 66V-0092
Client: NCDOT
Project: R2530B PSAs
City/State: ALBEMARLE, NC

Elevation: EXISTING
Total Depth: 4.0'
Boring Location: SEE BORING LOCATION PLAN

Drilling Method: DIRECT PUSH
Hammer Type: Automatic
Date Drilled: 8/15/17
Driller: REGIONAL PROBING

Elevation	Depth	Description of Materials (Classification)	*Sample Depth (feet)	PID (ppm)	Remarks
		Dry Brown Silty Fine to Medium Sand with Rock			One sample collected for laboratory analysis (2.0-4.0) No petroleum odors observed.
	2.0	Dry Brown Silty Clay with Stone	2.0	1.4	
	4.0	Geoprobe Boring Terminated by Direct Push Refusal at 4 feet.	4.0	2.1	

FROEHLING & ROBERTSON, INC.

GEOPROBE LOG

Boring: P054 B-5 (1 of 1)

Project No: 66V-0092
Client: NCDOT
Project: R2530B PSAs
City/State: ALBEMARLE, NC

Elevation: EXISTING
Total Depth: 4.0'
Boring Location: SEE BORING LOCATION PLAN

Drilling Method: DIRECT PUSH
Hammer Type: Automatic
Date Drilled: 8/15/17
Driller: REGIONAL PROBING

Elevation	Depth	Description of Materials (Classification)	*Sample Depth (feet)	PID (ppm)	Remarks
		Dry Brown Silty Fine to Medium Sand			One sample collected for laboratory analysis (2.0-4.0). No petroleum odors observed.
	2.0	Dry Brown Silty Clay with Stone	2.0	1.7	
	4.0	Geoprobe Boring Terminated by Direct Push Refusal at 4 feet.	4.0	1.7	

GEOPROBE_LOG BORING LOGS - COPY.GPJ F&R.GDT 10/30/17

FROEHLING & ROBERTSON, INC.

GEOPROBE LOG

Boring: P054 B-6 (1 of 1)

Project No: 66V-0092
Client: NCDOT
Project: R2530B PSAs
City/State: ALBEMARLE, NC

Elevation: EXISTING
Total Depth: 4.0'
Boring Location: SEE BORING LOCATION PLAN

Drilling Method: DIRECT PUSH
Hammer Type: Automatic
Date Drilled: 8/15/17
Driller: REGIONAL PROBING

Elevation	Depth	Description of Materials (Classification)	*Sample Depth (feet)	PID (ppm)	Remarks
		Dry Brown Silty Fine to Medium Sand			One sample collected for laboratory analysis (2.0-4.0) No petroleum odors observed.
	2.0	Dry Brown Silty Clay with Stone	2.0	2.8	
	4.0	Geoprobe Boring Terminated by Direct Push Refusal at 4 feet.	4.0	3.0	

APPENDIX V

LABORATORY ANALYTICAL RESULTS

QED

QROS

Hydrocarbon Analysis Results

Client: F & R
Address: 310 HUBERT ST
RALEIGH, NC 27604

Samples taken Thursday, August 17, 2017
Samples extracted Thursday, August 17, 2017
Samples analysed Friday, August 18, 2017

Contact: BEN WHITLEY

Operator PANTESCO

Project: NCDOT-R2530B-P053

U00904

Matrix	Sample ID	Dilution used	BTEX (C6 - C9)	GRO (C5 - C10)	DRO (C10 - C35)	TPH (C5 - C35)	Total Aromatics (C10-C35)	16 EPA PAHs	BaP	% Ratios			HC Fingerprint Match
										C5 - C10	C10 - C18	C18	
s	P053-B6 (6-8)	14.1	<0.35	<0.35	<0.35	0.17	0.17	<0.11	<0.014	0	67.6	32.4	Residual HC,(P)
s	P053-B5 (8-9)	20.9	<0.52	<0.52	<0.52	<0.52	<0.1	<0.17	<0.021	0	0	0	PHC not detected,(P)
s	P053-B4 (0-2)	20.6	<0.51	<0.51	7.3	7.3	4	0.2	<0.021	0	72.1	27.9	V.Deg.PHC 92.1%,(FCM)
s	P053-B3 (2-4)	23.3	<0.58	<0.58	<0.58	<0.58	<0.12	<0.19	<0.023	0	0	100	Residual HC
s	P053-B2 (2-4)	23.3	<0.58	<0.58	<0.58	<0.58	<0.12	<0.19	<0.023	0	0	0	PHC not detected,(BO)
s	P053-B1 (4-6)	23.3	<0.58	<0.58	20.1	20.1	20	1.1	0.062	0	63.1	36.9	V.Deg.PHC 69%,(FCM),(BO),(P)

Initial Calibrator QC check OK

Final FCM QC Check OK 100 %

Concentration values in mg/kg for soil samples and mg/L for water samples. Soil values uncorrected for moisture or stone content. Fingerprints provide a tentative hydrocarbon identification.

Abbreviations :- FCM = Results calculated using Fundamental Calibration Mode : % = confidence of hydrocarbon identification : (PFM) = Poor Fingerprint Match : (T) = Turbid : (P) = Particulate detected

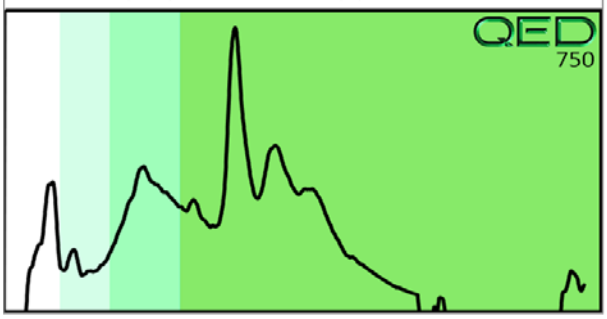
B = Blank Drift : (SBS)/(LBS) = Site Specific or Library Background Subtraction applied to result : (BO) = Background Organics detected : (OCR) = Outside cal range : (M) = Modifed Result.

% Ratios estimated aromatic carbon number proportions : HC = Hydrocarbon : PHC = Petroleum HC : FP = Fingerprint only. **Data generated by HC-1 Analyser**

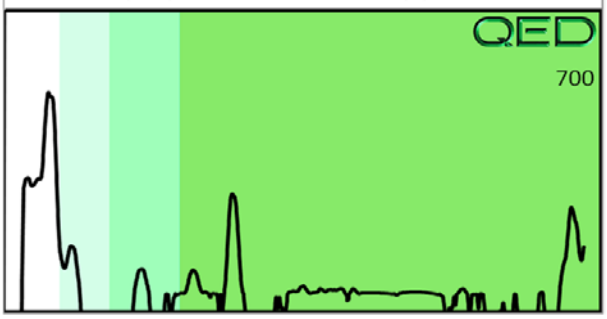
QED Hydrocarbon Fingerprints

Project: NCDOT-R2530B-P046 Friday, August 18, 2017

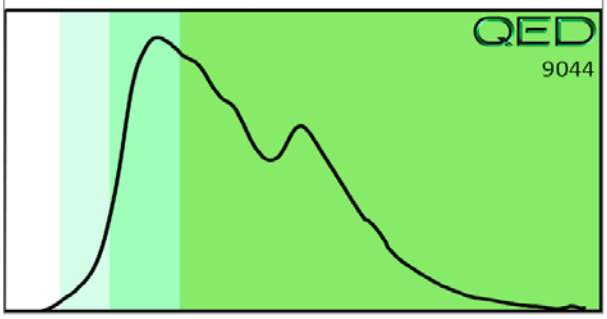
P053-B6 (6-8) : Residual HC,(P)



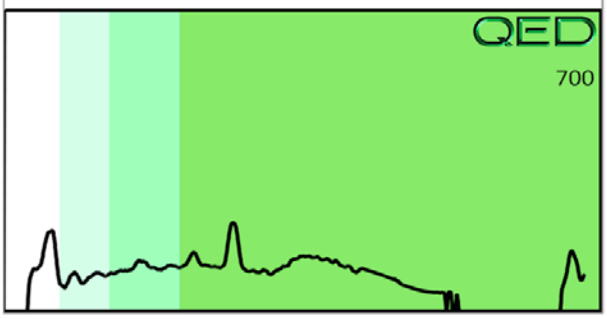
P053-B5 (8-9) : PHC not detected,(P)



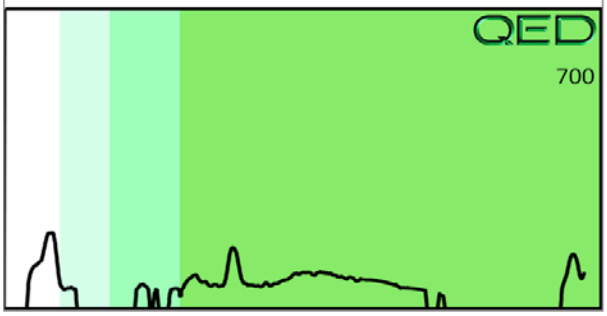
P053-B4 (0-2) : V.Deg.PHC 92.1%,(FCM)



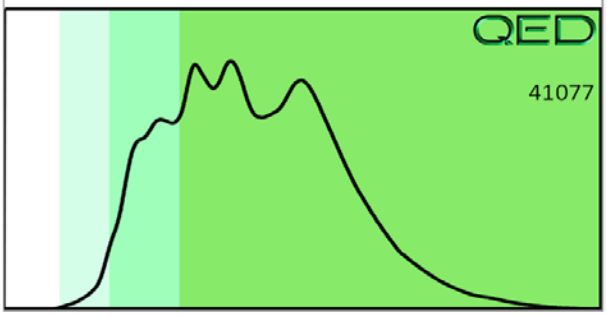
P053-B3 (2-4) : Residual HC



P053-B2 (2-4) : PHC not detected,(BO)



P053-B1 (4-6) : V.Deg.PHC 69%,(FCM),(BO),(P)



ENCO Laboratories

Accurate. Timely. Responsive. Innovative.

102-A Woodwinds Industrial Court
Cary NC, 27511
Phone: 919.467.3090 FAX: 919.467.3515

Wednesday, September 6, 2017
Froehling and Robertson (FR004)
Attn: Ben Whitley
310 Hubert Street
Raleigh, NC 27603

RE: Laboratory Results for
Project Number: 66V-0092, Project Name/Desc: NCDOT PSAs
ENCO Workorder(s): CA11841

Dear Ben Whitley,

Enclosed is a copy of your laboratory report for test samples received by our laboratory on Thursday, August 17, 2017.

Unless otherwise noted in an attached project narrative, all samples were received in acceptable condition and processed in accordance with the referenced methods/procedures. Results for these procedures apply only to the samples as submitted.

The analytical results contained in this report are in compliance with NELAC standards, except as noted in the project narrative. This report shall not be reproduced except in full, without the written approval of the Laboratory.

This report contains only those analyses performed by Environmental Conservation Laboratories. Unless otherwise noted, all analyses were performed at ENCO Cary. Data from outside organizations will be reported under separate cover.

If you have any questions or require further information, please do not hesitate to contact me.

Sincerely,

Chuck Smith

Project Manager

Enclosure(s)

PROJECT NARRATIVE

Client: Froehling and Robertson (FR004)
Project: NCDOT PSAs
Lab ID: CA11841

Overview

Environmental Conservation Laboratories, Inc. (ENCO) analyzed all submitted samples in accordance with the methods referenced in the laboratory report. Any particular difficulties encountered during sample handling by ENCO are discussed in the QC Remarks section below.

Quality Control Samples

The spike recovery was outside acceptance limits for the MS and/or MSD (QM-07). The batch was accepted based on an acceptable LCS recovery.

The post-digestion spike did not meet method requiements due to confirmed matrix effects (QM-08).

Preceision between duplicate matrix spikes of the same sample was outside acceptance limits (QM- 11).

The RPD value for the sample duplicate or MS/MSD was outside acceptance limits (QR-05).

Quality Control Remarks

The surrogate recovery was outside acceptance limits (QS-03).

Sample PO78-HA1 has two method 8260 analyses reported due to sample inhomogeneity (QM-15). The sample was originally analyzed at 1X but due an Acetone concentration that exceeded the calibration range it was analyzed at a 133X dilution. Due to the non-homgenous nature of soil, Acetone was not detected in the dilution. Both analyses are reported.

The 8260 analyses of samples PO53-B1 and B2 were conducted outside the method holding time (Q-01).

Other Comments

The analytical data presented in this report are consistent with the methods as referenced in the analytical report. Any exceptions or deviations are noted in the QC remarks section of this narrative or in the Flags/Notes and Definitions section of the report.

Released By:
Environmental Conservation Laboratories, Inc.

Chuck Smith
Project Manager

This report relates only to the sample as received by the laboratory, and may only be reproduced in full.

www.encolabs.com

SAMPLE SUMMARY/LABORATORY CHRONICLE

Client ID: PO78-B4 **Lab ID: CA11841-01** **Sampled: 08/15/17 14:15** **Received: 08/17/17 11:00**

Parameter	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 6010D	02/11/18	08/17/17 12:14	08/23/17 14:31
EPA 7471B	09/12/17	08/24/17 08:08	08/25/17 09:20
EPA 8260B	08/29/17	08/25/17 11:35	08/28/17 14:21

Client ID: PO78-B1 **Lab ID: CA11841-02** **Sampled: 08/15/17 14:45** **Received: 08/17/17 11:00**

Parameter	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 6010D	02/11/18	08/17/17 12:14	08/23/17 14:42
EPA 7471B	09/12/17	08/24/17 08:08	08/25/17 09:30
EPA 8260B	08/29/17	08/25/17 11:35	08/28/17 14:51

Client ID: PO78-B2 **Lab ID: CA11841-03** **Sampled: 08/15/17 14:55** **Received: 08/17/17 11:00**

Parameter	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 6010D	02/11/18	08/17/17 12:14	08/23/17 14:45
EPA 7471B	09/12/17	08/24/17 08:08	08/25/17 09:32
EPA 8260B	08/29/17	08/25/17 11:35	08/28/17 15:22

Client ID: PO78-B3 **Lab ID: CA11841-04** **Sampled: 08/15/17 15:05** **Received: 08/17/17 11:00**

Parameter	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 6010D	02/11/18	08/17/17 12:14	08/23/17 14:47
EPA 7471B	09/12/17	08/24/17 08:08	08/25/17 09:34
EPA 8260B	08/29/17	08/25/17 11:35	08/28/17 15:53

Client ID: PO79-B3 **Lab ID: CA11841-05** **Sampled: 08/15/17 15:50** **Received: 08/17/17 11:00**

Parameter	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 6010D	02/11/18	08/17/17 12:14	08/23/17 14:49
EPA 7471B	09/12/17	08/24/17 08:08	08/25/17 09:41
EPA 8260B	08/29/17	08/25/17 11:35	08/28/17 16:24

Client ID: PO79-B7 **Lab ID: CA11841-06** **Sampled: 08/15/17 16:10** **Received: 08/17/17 11:00**

Parameter	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 6010D	02/11/18	08/17/17 12:14	08/23/17 14:51
EPA 7471B	09/12/17	08/24/17 08:08	08/25/17 09:43
EPA 8260B	08/29/17	08/25/17 11:35	08/28/17 16:55

Client ID: PO79-B9 **Lab ID: CA11841-07** **Sampled: 08/15/17 16:25** **Received: 08/17/17 11:00**

Parameter	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 6010D	02/11/18	08/17/17 12:14	08/23/17 15:01
EPA 7471B	09/12/17	08/24/17 08:08	08/25/17 09:45
EPA 8260B	08/29/17	08/25/17 11:35	08/28/17 17:25

Client ID: PO79-B5 **Lab ID: CA11841-08** **Sampled: 08/15/17 16:40** **Received: 08/17/17 11:00**

Parameter	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 6010D	02/11/18	08/17/17 12:14	08/23/17 15:03
EPA 7471B	09/12/17	08/24/17 08:08	08/25/17 09:47
EPA 8260B	08/29/17	08/23/17 07:33	08/23/17 16:10

Client ID: PO79-B8 **Lab ID: CA11841-09** **Sampled: 08/16/17 08:45** **Received: 08/17/17 11:00**

Parameter	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 6010D	02/12/18	08/17/17 12:14	08/23/17 15:06
EPA 7471B	09/13/17	08/24/17 08:08	08/25/17 09:49
EPA 8260B	08/30/17	08/23/17 07:33	08/23/17 16:41

Client ID: PO79-B6 **Lab ID: CA11841-10** **Sampled: 08/16/17 09:00** **Received: 08/17/17 11:00**

Parameter	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 6010D	02/12/18	08/17/17 12:14	08/23/17 15:08
EPA 7471B	09/13/17	08/24/17 08:08	08/25/17 09:51
EPA 8260B	08/30/17	08/23/17 07:33	08/23/17 17:11

This report relates only to the sample as received by the laboratory, and may only be reproduced in full.

www.encolabs.com

SAMPLE SUMMARY/LABORATORY CHRONICLE

Client ID: PO79-B4 **Lab ID: CA11841-11** **Sampled: 08/16/17 09:20** **Received: 08/17/17 11:00**

Parameter	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 6010D	02/12/18	08/17/17 12:14	08/23/17 15:10
EPA 7471B	09/13/17	08/24/17 08:08	08/25/17 09:53
EPA 8260B	08/30/17	08/23/17 07:33	08/23/17 17:42

Client ID: PO79-B2 **Lab ID: CA11841-12** **Sampled: 08/16/17 09:35** **Received: 08/17/17 11:00**

Parameter	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 6010D	02/12/18	08/17/17 12:14	08/23/17 15:13
EPA 7471B	09/13/17	08/24/17 08:08	08/25/17 09:55
EPA 8260B	08/30/17	08/23/17 07:33	08/23/17 18:13

Client ID: PO79-B1 **Lab ID: CA11841-13** **Sampled: 08/16/17 09:45** **Received: 08/17/17 11:00**

Parameter	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 6010D	02/12/18	08/17/17 12:14	08/23/17 15:15
EPA 7471B	09/13/17	08/24/17 08:08	08/25/17 09:57
EPA 8260B	08/30/17	08/23/17 07:33	08/23/17 18:44

Client ID: PO78-B5 **Lab ID: CA11841-14** **Sampled: 08/16/17 10:00** **Received: 08/17/17 11:00**

Parameter	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 6010D	02/12/18	08/17/17 12:14	08/23/17 15:17
EPA 7471B	09/13/17	08/24/17 08:08	08/25/17 09:59
EPA 8260B	08/30/17	08/23/17 07:33	08/23/17 19:15

Client ID: PO78-HA1 **Lab ID: CA11841-15** **Sampled: 08/16/17 10:45** **Received: 08/17/17 11:00**

Parameter	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 6010D	02/12/18	08/17/17 12:14	08/23/17 15:19
EPA 7471B	09/13/17	08/24/17 08:08	08/25/17 10:04
EPA 8260B	08/30/17	08/23/17 07:33	08/23/17 19:45

Client ID: PO78-HA1 **Lab ID: CA11841-15RE1** **Sampled: 08/16/17 10:45** **Received: 08/17/17 11:00**

Parameter	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260B	08/30/17	08/29/17 15:07	08/29/17 19:51

Client ID: PO78-HA2 **Lab ID: CA11841-16** **Sampled: 08/16/17 11:00** **Received: 08/17/17 11:00**

Parameter	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 6010D	02/12/18	08/17/17 12:14	08/23/17 15:22
EPA 7471B	09/13/17	08/24/17 08:08	08/25/17 10:06
EPA 8260B	08/30/17	08/23/17 07:33	08/23/17 20:16

Client ID: PO53-B6 **Lab ID: CA11841-17** **Sampled: 08/14/17 15:10** **Received: 08/17/17 11:00**

Parameter	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 6010D	02/10/18	08/17/17 12:14	08/23/17 15:38
EPA 7471B	09/11/17	08/24/17 08:08	08/25/17 10:08
EPA 8260B	08/28/17	08/23/17 07:33	08/23/17 20:47

Client ID: PO53-B5 **Lab ID: CA11841-18** **Sampled: 08/14/17 15:30** **Received: 08/17/17 11:00**

Parameter	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 6010D	02/10/18	08/17/17 12:14	08/23/17 15:40
EPA 7471B	09/11/17	08/24/17 08:08	08/25/17 10:11
EPA 8260B	08/28/17	08/23/17 07:33	08/23/17 21:18

Client ID: PO53-B4 **Lab ID: CA11841-19** **Sampled: 08/14/17 15:54** **Received: 08/17/17 11:00**

Parameter	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 6010D	02/10/18	08/17/17 12:18	08/24/17 11:24
EPA 7471B	09/11/17	08/24/17 08:13	08/25/17 10:22
EPA 8260B	08/28/17	08/23/17 07:33	08/23/17 21:48

This report relates only to the sample as received by the laboratory, and may only be reproduced in full.

www.encolabs.com

SAMPLE SUMMARY/LABORATORY CHRONICLE

Client ID: PO53-B3 **Lab ID: CA11841-20** **Sampled: 08/14/17 16:00** **Received: 08/17/17 11:00**

Parameter	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 6010D	02/10/18	08/17/17 12:18	08/24/17 11:49
EPA 7471B	09/11/17	08/24/17 08:13	08/25/17 11:07
EPA 8260B	08/28/17	08/25/17 11:35	08/28/17 17:56

Client ID: PO53-B2 **Lab ID: CA11841-21** **Sampled: 08/14/17 16:45** **Received: 08/17/17 11:00**

Parameter	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 6010D	02/10/18	08/17/17 12:18	08/24/17 11:51
EPA 7471B	09/11/17	08/24/17 08:13	08/25/17 11:10

Client ID: PO53-B2 **Lab ID: CA11841-21RE1** **Sampled: 08/14/17 16:45** **Received: 08/17/17 11:00**

Parameter	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260B	08/28/17	09/05/17 12:07	09/05/17 21:39

Client ID: PO53-B1 **Lab ID: CA11841-22** **Sampled: 08/14/17 16:15** **Received: 08/17/17 11:00**

Parameter	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 6010D	02/10/18	08/17/17 12:18	08/24/17 11:53
EPA 7471B	09/11/17	08/24/17 08:13	08/25/17 11:12
EPA 8260B	08/28/17	08/29/17 00:49	08/29/17 14:22

Client ID: PO54-B1 **Lab ID: CA11841-23** **Sampled: 08/15/17 09:25** **Received: 08/17/17 11:00**

Parameter	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 6010D	02/11/18	08/17/17 12:18	08/24/17 11:55
EPA 7471B	09/12/17	08/24/17 08:13	08/25/17 11:14
EPA 8260B	08/29/17	08/25/17 11:35	08/28/17 18:27

Client ID: PO54-B2 **Lab ID: CA11841-24** **Sampled: 08/15/17 09:40** **Received: 08/17/17 11:00**

Parameter	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 6010D	02/11/18	08/17/17 12:18	08/24/17 11:57
EPA 7471B	09/12/17	08/24/17 08:13	08/25/17 11:17
EPA 8260B	08/29/17	08/25/17 11:35	08/28/17 18:58

Client ID: PO54-B3 **Lab ID: CA11841-25** **Sampled: 08/15/17 09:55** **Received: 08/17/17 11:00**

Parameter	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 6010D	02/11/18	08/17/17 12:18	08/24/17 11:59
EPA 7471B	09/12/17	08/24/17 08:13	08/25/17 11:23
EPA 8260B	08/29/17	08/25/17 11:35	08/28/17 19:37

Client ID: Trip Blank **Lab ID: CA11841-26** **Sampled: 08/14/17 15:10** **Received: 08/17/17 11:00**

Parameter	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260B	08/28/17	08/19/17 12:21	08/19/17 23:00

This report relates only to the sample as received by the laboratory, and may only be reproduced in full.

SAMPLE DETECTION SUMMARY

Client ID: PO78-B4 **Lab ID: CA11841-01**

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
Arsenic - Total	6.52		0.370	0.578	mg/kg dry	EPA 6010D	
Barium - Total	43.1		0.116	0.578	mg/kg dry	EPA 6010D	
Cadmium - Total	0.195		0.0111	0.0578	mg/kg dry	EPA 6010D	
Chromium - Total	146		0.116	0.578	mg/kg dry	EPA 6010D	
Lead - Total	42.6		0.139	0.578	mg/kg dry	EPA 6010D	
Mercury - Total	0.0250	J	0.0162	0.0278	mg/kg dry	EPA 7471B	
Silver - Total	3.17		0.116	0.578	mg/kg dry	EPA 6010D	

Client ID: PO78-B1 **Lab ID: CA11841-02**

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
Arsenic - Total	8.42		0.377	0.588	mg/kg dry	EPA 6010D	
Barium - Total	42.7		0.118	0.588	mg/kg dry	EPA 6010D	
Cadmium - Total	0.146		0.0113	0.0588	mg/kg dry	EPA 6010D	
Chromium - Total	43.8		0.118	0.588	mg/kg dry	EPA 6010D	
Lead - Total	66.0		0.141	0.588	mg/kg dry	EPA 6010D	
Mercury - Total	0.0465		0.0165	0.0282	mg/kg dry	EPA 7471B	

Client ID: PO78-B2 **Lab ID: CA11841-03**

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
Arsenic - Total	7.47		0.364	0.568	mg/kg dry	EPA 6010D	
Barium - Total	33.3		0.114	0.568	mg/kg dry	EPA 6010D	
Cadmium - Total	0.0950		0.0109	0.0568	mg/kg dry	EPA 6010D	
Chromium - Total	20.4		0.114	0.568	mg/kg dry	EPA 6010D	
Lead - Total	34.0		0.136	0.568	mg/kg dry	EPA 6010D	
Mercury - Total	0.0239	J	0.0159	0.0273	mg/kg dry	EPA 7471B	

Client ID: PO78-B3 **Lab ID: CA11841-04**

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
2-Butanone	0.0028	J	0.0011	0.0070	mg/kg dry	EPA 8260B	
Acetone	0.48		0.020	0.028	mg/kg dry	EPA 8260B	
Arsenic - Total	14.9		0.364	0.569	mg/kg dry	EPA 6010D	
Barium - Total	31.1		0.114	0.569	mg/kg dry	EPA 6010D	
Cadmium - Total	0.382		0.0109	0.0569	mg/kg dry	EPA 6010D	
Chromium - Total	67.4		0.114	0.569	mg/kg dry	EPA 6010D	
Lead - Total	163		0.137	0.569	mg/kg dry	EPA 6010D	
Mercury - Total	0.0251	J	0.0159	0.0273	mg/kg dry	EPA 7471B	

Client ID: PO79-B3 **Lab ID: CA11841-05**

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
Arsenic - Total	1.47		0.369	0.577	mg/kg dry	EPA 6010D	
Barium - Total	36.6		0.115	0.577	mg/kg dry	EPA 6010D	
Cadmium - Total	0.497		0.0111	0.0577	mg/kg dry	EPA 6010D	
Chromium - Total	148		0.115	0.577	mg/kg dry	EPA 6010D	
Lead - Total	16.0		0.138	0.577	mg/kg dry	EPA 6010D	
Mercury - Total	0.0191	J	0.0162	0.0277	mg/kg dry	EPA 7471B	
Silver - Total	2.43		0.115	0.577	mg/kg dry	EPA 6010D	

Client ID: PO79-B7 **Lab ID: CA11841-06**

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
Arsenic - Total	7.33		0.383	0.599	mg/kg dry	EPA 6010D	
Barium - Total	28.1		0.120	0.599	mg/kg dry	EPA 6010D	
Cadmium - Total	0.437		0.0115	0.0599	mg/kg dry	EPA 6010D	
Chromium - Total	227		0.120	0.599	mg/kg dry	EPA 6010D	
Lead - Total	22.3		0.144	0.599	mg/kg dry	EPA 6010D	
Mercury - Total	0.0213	J	0.0144	0.0246	mg/kg dry	EPA 7471B	
Silver - Total	4.04		0.120	0.599	mg/kg dry	EPA 6010D	

This report relates only to the sample as received by the laboratory, and may only be reproduced in full.

SAMPLE DETECTION SUMMARY

Client ID: PO79-B9 **Lab ID: CA11841-07**

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
Arsenic - Total	8.55		0.363	0.568	mg/kg dry	EPA 6010D	
Barium - Total	49.1		0.114	0.568	mg/kg dry	EPA 6010D	
Cadmium - Total	0.247		0.0109	0.0568	mg/kg dry	EPA 6010D	
Chromium - Total	172		0.114	0.568	mg/kg dry	EPA 6010D	
Lead - Total	32.0		0.136	0.568	mg/kg dry	EPA 6010D	
Mercury - Total	0.0371		0.0159	0.0273	mg/kg dry	EPA 7471B	
Silver - Total	2.68		0.114	0.568	mg/kg dry	EPA 6010D	

Client ID: PO79-B5 **Lab ID: CA11841-08**

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
Arsenic - Total	9.31		0.359	0.561	mg/kg dry	EPA 6010D	
Barium - Total	64.6		0.112	0.561	mg/kg dry	EPA 6010D	
Cadmium - Total	2.27		0.0108	0.0561	mg/kg dry	EPA 6010D	
Chromium - Total	117		0.112	0.561	mg/kg dry	EPA 6010D	
Lead - Total	275		0.135	0.561	mg/kg dry	EPA 6010D	
Mercury - Total	0.0294		0.0143	0.0245	mg/kg dry	EPA 7471B	
Silver - Total	1.89		0.112	0.561	mg/kg dry	EPA 6010D	

Client ID: PO79-B8 **Lab ID: CA11841-09**

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
Arsenic - Total	8.51		0.367	0.573	mg/kg dry	EPA 6010D	
Barium - Total	67.1		0.115	0.573	mg/kg dry	EPA 6010D	
Cadmium - Total	1.23		0.0110	0.0573	mg/kg dry	EPA 6010D	
Chromium - Total	87.5		0.115	0.573	mg/kg dry	EPA 6010D	
Lead - Total	96.4		0.137	0.573	mg/kg dry	EPA 6010D	
Mercury - Total	0.0212	J	0.0146	0.0250	mg/kg dry	EPA 7471B	
Silver - Total	1.60		0.115	0.573	mg/kg dry	EPA 6010D	

Client ID: PO79-B6 **Lab ID: CA11841-10**

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
Arsenic - Total	8.35		0.374	0.585	mg/kg dry	EPA 6010D	
Barium - Total	42.0		0.117	0.585	mg/kg dry	EPA 6010D	
Cadmium - Total	1.96		0.0112	0.0585	mg/kg dry	EPA 6010D	
Chromium - Total	182		0.117	0.585	mg/kg dry	EPA 6010D	
Lead - Total	209		0.140	0.585	mg/kg dry	EPA 6010D	
Mercury - Total	0.0257	J	0.0164	0.0281	mg/kg dry	EPA 7471B	
Methylene Chloride	0.0018	J	0.00085	0.0023	mg/kg dry	EPA 8260B	
Silver - Total	3.70		0.117	0.585	mg/kg dry	EPA 6010D	

Client ID: PO79-B4 **Lab ID: CA11841-11**

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
Acetone	0.015	J	0.015	0.022	mg/kg dry	EPA 8260B	
Arsenic - Total	3.40		0.348	0.543	mg/kg dry	EPA 6010D	
Barium - Total	48.5		0.109	0.543	mg/kg dry	EPA 6010D	
Cadmium - Total	3.86		0.0104	0.0543	mg/kg dry	EPA 6010D	
Chromium - Total	141		0.109	0.543	mg/kg dry	EPA 6010D	
Lead - Total	113		0.130	0.543	mg/kg dry	EPA 6010D	
Mercury - Total	0.0350		0.0138	0.0237	mg/kg dry	EPA 7471B	
Silver - Total	2.75		0.109	0.543	mg/kg dry	EPA 6010D	

Client ID: PO79-B2 **Lab ID: CA11841-12**

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
Arsenic - Total	8.56		0.364	0.568	mg/kg dry	EPA 6010D	
Barium - Total	45.1		0.114	0.568	mg/kg dry	EPA 6010D	
Cadmium - Total	1.51		0.0109	0.0568	mg/kg dry	EPA 6010D	
Chromium - Total	171		0.114	0.568	mg/kg dry	EPA 6010D	
Lead - Total	154		0.136	0.568	mg/kg dry	EPA 6010D	
Mercury - Total	0.0515		0.0159	0.0273	mg/kg dry	EPA 7471B	
Silver - Total	3.85		0.114	0.568	mg/kg dry	EPA 6010D	

This report relates only to the sample as received by the laboratory, and may only be reproduced in full.

SAMPLE DETECTION SUMMARY

Client ID: PO79-B1 **Lab ID: CA11841-13**

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
2-Butanone	0.0012	J	0.00091	0.0058	mg/kg dry	EPA 8260B	
Acetone	0.021	J	0.016	0.023	mg/kg dry	EPA 8260B	
Arsenic - Total	3.20		0.373	0.582	mg/kg dry	EPA 6010D	
Barium - Total	60.8		0.116	0.582	mg/kg dry	EPA 6010D	
Cadmium - Total	0.333		0.0112	0.0582	mg/kg dry	EPA 6010D	
Chromium - Total	64.9		0.116	0.582	mg/kg dry	EPA 6010D	
Lead - Total	16.7		0.140	0.582	mg/kg dry	EPA 6010D	
Mercury - Total	0.0231	J	0.0163	0.0279	mg/kg dry	EPA 7471B	
Silver - Total	1.04		0.116	0.582	mg/kg dry	EPA 6010D	

Client ID: PO78-B5 **Lab ID: CA11841-14**

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
2-Butanone	0.0023	J	0.00086	0.0055	mg/kg dry	EPA 8260B	
Acetone	0.067		0.016	0.022	mg/kg dry	EPA 8260B	
Arsenic - Total	4.24		0.355	0.554	mg/kg dry	EPA 6010D	
Barium - Total	34.9		0.111	0.554	mg/kg dry	EPA 6010D	
Cadmium - Total	0.284		0.0106	0.0554	mg/kg dry	EPA 6010D	
Chromium - Total	66.8		0.111	0.554	mg/kg dry	EPA 6010D	
Lead - Total	21.3		0.133	0.554	mg/kg dry	EPA 6010D	
Mercury - Total	0.0217	J	0.0155	0.0266	mg/kg dry	EPA 7471B	
Silver - Total	1.07		0.111	0.554	mg/kg dry	EPA 6010D	

Client ID: PO78-HA1 **Lab ID: CA11841-15**

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
2-Butanone	0.011		0.0010	0.0066	mg/kg dry	EPA 8260B	QM-15
4-Isopropyltoluene	0.080		0.00021	0.0013	mg/kg dry	EPA 8260B	QM-15
Acetone	0.69	E	0.018	0.026	mg/kg dry	EPA 8260B	QM-15
Arsenic - Total	9.38		0.344	0.537	mg/kg dry	EPA 6010D	
Barium - Total	46.8		0.107	0.537	mg/kg dry	EPA 6010D	
Cadmium - Total	0.253		0.0103	0.0537	mg/kg dry	EPA 6010D	
Chromium - Total	31.2		0.107	0.537	mg/kg dry	EPA 6010D	
Lead - Total	25.7		0.129	0.537	mg/kg dry	EPA 6010D	
Mercury - Total	0.0843		0.0150	0.0258	mg/kg dry	EPA 7471B	
Styrene	0.11		0.0013	0.0013	mg/kg dry	EPA 8260B	QM-15
Toluene	0.00059	J	0.00032	0.0013	mg/kg dry	EPA 8260B	QM-15

Client ID: PO78-HA2 **Lab ID: CA11841-16**

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
2-Butanone	0.0067		0.00091	0.0058	mg/kg dry	EPA 8260B	
2-Chlorotoluene	0.0014		0.00021	0.0012	mg/kg dry	EPA 8260B	
4-Isopropyltoluene	0.016		0.00019	0.0012	mg/kg dry	EPA 8260B	
Acetone	0.35		0.016	0.023	mg/kg dry	EPA 8260B	
Arsenic - Total	6.70		0.372	0.582	mg/kg dry	EPA 6010D	
Barium - Total	47.1		0.116	0.582	mg/kg dry	EPA 6010D	
Cadmium - Total	0.0625		0.0112	0.0582	mg/kg dry	EPA 6010D	
Chromium - Total	23.4		0.116	0.582	mg/kg dry	EPA 6010D	
Lead - Total	26.3		0.140	0.582	mg/kg dry	EPA 6010D	
Mercury - Total	0.139		0.0163	0.0279	mg/kg dry	EPA 7471B	
Styrene	0.0074		0.0011	0.0012	mg/kg dry	EPA 8260B	

Client ID: PO53-B6 **Lab ID: CA11841-17**

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
Arsenic - Total	4.16		0.409	0.638	mg/kg dry	EPA 6010D	
Barium - Total	69.1		0.128	0.638	mg/kg dry	EPA 6010D	
Cadmium - Total	0.132		0.0123	0.0638	mg/kg dry	EPA 6010D	
Chromium - Total	15.6		0.128	0.638	mg/kg dry	EPA 6010D	
Lead - Total	15.1		0.153	0.638	mg/kg dry	EPA 6010D	
Mercury - Total	0.0308		0.0179	0.0306	mg/kg dry	EPA 7471B	

This report relates only to the sample as received by the laboratory, and may only be reproduced in full.

SAMPLE DETECTION SUMMARY

Client ID: PO53-B5 **Lab ID: CA11841-18**

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
Arsenic - Total	2.14		0.379	0.593	mg/kg dry	EPA 6010D	
Barium - Total	24.6		0.119	0.593	mg/kg dry	EPA 6010D	
Chromium - Total	7.92		0.119	0.593	mg/kg dry	EPA 6010D	
Lead - Total	6.82		0.142	0.593	mg/kg dry	EPA 6010D	
Mercury - Total	0.0178	J	0.0166	0.0284	mg/kg dry	EPA 7471B	

Client ID: PO53-B4 **Lab ID: CA11841-19**

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
Arsenic - Total	3.59		0.370	0.579	mg/kg dry	EPA 6010D	
Barium - Total	29.6		0.116	0.579	mg/kg dry	EPA 6010D	
Chromium - Total	9.98		0.116	0.579	mg/kg dry	EPA 6010D	
Lead - Total	13.6		0.139	0.579	mg/kg dry	EPA 6010D	
Mercury - Total	0.0808		0.0162	0.0278	mg/kg dry	EPA 7471B	

Client ID: PO53-B3 **Lab ID: CA11841-20**

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
Arsenic - Total	2.54		0.334	0.522	mg/kg dry	EPA 6010D	
Barium - Total	33.3		0.104	0.522	mg/kg dry	EPA 6010D	
Chloroform	0.012		0.00019	0.0010	mg/kg dry	EPA 8260B	
Chromium - Total	7.37		0.104	0.522	mg/kg dry	EPA 6010D	
Lead - Total	9.13		0.125	0.522	mg/kg dry	EPA 6010D	
Mercury - Total	0.0278		0.0125	0.0215	mg/kg dry	EPA 7471B	

Client ID: PO53-B2 **Lab ID: CA11841-21**

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
Arsenic - Total	2.41		0.350	0.547	mg/kg dry	EPA 6010D	
Barium - Total	30.4		0.109	0.547	mg/kg dry	EPA 6010D	
Chromium - Total	5.74		0.109	0.547	mg/kg dry	EPA 6010D	
Lead - Total	10.1		0.131	0.547	mg/kg dry	EPA 6010D	

Client ID: PO53-B1 **Lab ID: CA11841-22**

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
Arsenic - Total	5.18		0.352	0.549	mg/kg dry	EPA 6010D	
Barium - Total	33.0		0.110	0.549	mg/kg dry	EPA 6010D	
Chloroform	0.0019		0.00020	0.0011	mg/kg dry	EPA 8260B	Q-01
Chromium - Total	17.3		0.110	0.549	mg/kg dry	EPA 6010D	
Lead - Total	17.5		0.132	0.549	mg/kg dry	EPA 6010D	
Mercury - Total	0.0324		0.0154	0.0264	mg/kg dry	EPA 7471B	

Client ID: PO54-B1 **Lab ID: CA11841-23**

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
2-Butanone	0.0041	J	0.00084	0.0054	mg/kg dry	EPA 8260B	
Acetone	0.15		0.015	0.022	mg/kg dry	EPA 8260B	
Arsenic - Total	2.24		0.345	0.539	mg/kg dry	EPA 6010D	
Barium - Total	31.6		0.108	0.539	mg/kg dry	EPA 6010D	
Chromium - Total	7.72		0.108	0.539	mg/kg dry	EPA 6010D	
Lead - Total	9.11		0.129	0.539	mg/kg dry	EPA 6010D	
Mercury - Total	0.0194	J	0.0151	0.0259	mg/kg dry	EPA 7471B	

Client ID: PO54-B2 **Lab ID: CA11841-24**

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
2-Butanone	0.0011	J	0.00084	0.0054	mg/kg dry	EPA 8260B	
Arsenic - Total	2.04		0.344	0.537	mg/kg dry	EPA 6010D	
Barium - Total	34.4		0.107	0.537	mg/kg dry	EPA 6010D	
Chromium - Total	8.97		0.107	0.537	mg/kg dry	EPA 6010D	
Lead - Total	8.29		0.129	0.537	mg/kg dry	EPA 6010D	
Mercury - Total	0.0372		0.0137	0.0234	mg/kg dry	EPA 7471B	

This report relates only to the sample as received by the laboratory, and may only be reproduced in full.

www.encolabs.com

SAMPLE DETECTION SUMMARY

Client ID: PO54-B3 **Lab ID:** CA11841-25

Analyte	Results	Flag	MDL	PQL	Units	Method	Notes
Arsenic - Total	3.05		0.373	0.583	mg/kg dry	EPA 6010D	
Barium - Total	24.1		0.117	0.583	mg/kg dry	EPA 6010D	
Chromium - Total	14.2		0.117	0.583	mg/kg dry	EPA 6010D	
Lead - Total	6.54		0.140	0.583	mg/kg dry	EPA 6010D	
Mercury - Total	0.0257	J	0.0163	0.0280	mg/kg dry	EPA 7471B	

This report relates only to the sample as received by the laboratory, and may only be reproduced in full.

www.encolabs.com

ANALYTICAL RESULTS

Description: PO78-B4	**Lab Sample ID:** CA11841-01	**Received:** 08/17/17 11:00
Matrix: Soil	**Sampled:** 08/15/17 14:15	**Work Order:** CA11841
Project: NCDOT PSAs	**Sampled By:** Client	**% Solids:** 86.45

Volatile Organic Compounds by GCMS

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1,2-Tetrachloroethane [630-20-6]^	0.00017	U	mg/kg dry	1	0.00017	0.0010	7H25021	EPA 8260B	08/28/17 14:21	MRK	
1,1,1-Trichloroethane [71-55-6]^	0.00026	U	mg/kg dry	1	0.00026	0.0010	7H25021	EPA 8260B	08/28/17 14:21	MRK	
1,1,2,2-Tetrachloroethane [79-34-5]^	0.00021	U	mg/kg dry	1	0.00021	0.0010	7H25021	EPA 8260B	08/28/17 14:21	MRK	
1,1,2-Trichloroethane [79-00-5]^	0.00026	U	mg/kg dry	1	0.00026	0.0010	7H25021	EPA 8260B	08/28/17 14:21	MRK	
1,1-Dichloroethane [75-34-3]^	0.00026	U	mg/kg dry	1	0.00026	0.0010	7H25021	EPA 8260B	08/28/17 14:21	MRK	
1,1-Dichloroethene [75-35-4]^	0.00031	U	mg/kg dry	1	0.00031	0.0010	7H25021	EPA 8260B	08/28/17 14:21	MRK	
1,1-Dichloropropene [563-58-6]^	0.00017	U	mg/kg dry	1	0.00017	0.0010	7H25021	EPA 8260B	08/28/17 14:21	MRK	
1,2,3-Trichlorobenzene [87-61-6]^	0.00029	U	mg/kg dry	1	0.00029	0.0010	7H25021	EPA 8260B	08/28/17 14:21	MRK	
1,2,3-Trichloropropane [96-18-4]^	0.00067	U	mg/kg dry	1	0.00067	0.0010	7H25021	EPA 8260B	08/28/17 14:21	MRK	
1,2,4-Trichlorobenzene [120-82-1]^	0.00028	U	mg/kg dry	1	0.00028	0.0010	7H25021	EPA 8260B	08/28/17 14:21	MRK	
1,2,4-Trimethylbenzene [95-63-6]^	0.00018	U	mg/kg dry	1	0.00018	0.0010	7H25021	EPA 8260B	08/28/17 14:21	MRK	
1,2-Dibromo-3-chloropropane [96-12-8]^	0.00082	U	mg/kg dry	1	0.00082	0.0010	7H25021	EPA 8260B	08/28/17 14:21	MRK	
1,2-Dibromoethane [106-93-4]^	0.00048	U	mg/kg dry	1	0.00048	0.0010	7H25021	EPA 8260B	08/28/17 14:21	MRK	
1,2-Dichlorobenzene [95-50-1]^	0.00028	U	mg/kg dry	1	0.00028	0.0010	7H25021	EPA 8260B	08/28/17 14:21	MRK	
1,2-Dichloroethane [107-06-2]^	0.00043	U	mg/kg dry	1	0.00043	0.0010	7H25021	EPA 8260B	08/28/17 14:21	MRK	
1,2-Dichloropropane [78-87-5]^	0.00027	U	mg/kg dry	1	0.00027	0.0010	7H25021	EPA 8260B	08/28/17 14:21	MRK	
1,3,5-Trimethylbenzene [108-67-8]^	0.00021	U	mg/kg dry	1	0.00021	0.0010	7H25021	EPA 8260B	08/28/17 14:21	MRK	
1,3-Dichlorobenzene [541-73-1]^	0.00023	U	mg/kg dry	1	0.00023	0.0010	7H25021	EPA 8260B	08/28/17 14:21	MRK	
1,3-Dichloropropane [142-28-9]^	0.00030	U	mg/kg dry	1	0.00030	0.0010	7H25021	EPA 8260B	08/28/17 14:21	MRK	
1,4-Dichlorobenzene [106-46-7]^	0.00021	U	mg/kg dry	1	0.00021	0.0010	7H25021	EPA 8260B	08/28/17 14:21	MRK	
2,2-Dichloropropane [594-20-7]^	0.00024	U	mg/kg dry	1	0.00024	0.0010	7H25021	EPA 8260B	08/28/17 14:21	MRK	
2-Butanone [78-93-3]^	0.00081	U	mg/kg dry	1	0.00081	0.0052	7H25021	EPA 8260B	08/28/17 14:21	MRK	
2-Chloroethyl Vinyl Ether [110-75-8]^	0.00017	U	mg/kg dry	1	0.00017	0.0052	7H25021	EPA 8260B	08/28/17 14:21	MRK	
2-Chlorotoluene [95-49-8]^	0.00019	U	mg/kg dry	1	0.00019	0.0010	7H25021	EPA 8260B	08/28/17 14:21	MRK	
2-Hexanone [591-78-6]^	0.00078	U	mg/kg dry	1	0.00078	0.0052	7H25021	EPA 8260B	08/28/17 14:21	MRK	
4-Chlorotoluene [106-43-4]^	0.00027	U	mg/kg dry	1	0.00027	0.0010	7H25021	EPA 8260B	08/28/17 14:21	MRK	
4-Isopropyltoluene [99-87-6]^	0.00017	U	mg/kg dry	1	0.00017	0.0010	7H25021	EPA 8260B	08/28/17 14:21	MRK	
4-Methyl-2-pentanone [108-10-1]^	0.00060	U	mg/kg dry	1	0.00060	0.0052	7H25021	EPA 8260B	08/28/17 14:21	MRK	
Acetone [67-64-1]^	0.015	U	mg/kg dry	1	0.015	0.021	7H25021	EPA 8260B	08/28/17 14:21	MRK	
Benzene [71-43-2]^	0.00018	U	mg/kg dry	1	0.00018	0.0010	7H25021	EPA 8260B	08/28/17 14:21	MRK	
Bromobenzene [108-86-1]^	0.00023	U	mg/kg dry	1	0.00023	0.0010	7H25021	EPA 8260B	08/28/17 14:21	MRK	
Bromochloromethane [74-97-5]^	0.00043	U	mg/kg dry	1	0.00043	0.0010	7H25021	EPA 8260B	08/28/17 14:21	MRK	
Bromodichloromethane [75-27-4]^	0.00025	U	mg/kg dry	1	0.00025	0.0010	7H25021	EPA 8260B	08/28/17 14:21	MRK	
Bromoform [75-25-2]^	0.00047	U	mg/kg dry	1	0.00047	0.0010	7H25021	EPA 8260B	08/28/17 14:21	MRK	
Bromomethane [74-83-9]^	0.00033	U	mg/kg dry	1	0.00033	0.0010	7H25021	EPA 8260B	08/28/17 14:21	MRK	
Carbon disulfide [75-15-0]^	0.00041	U	mg/kg dry	1	0.00041	0.0052	7H25021	EPA 8260B	08/28/17 14:21	MRK	
Carbon Tetrachloride [56-23-5]^	0.00023	U	mg/kg dry	1	0.00023	0.0010	7H25021	EPA 8260B	08/28/17 14:21	MRK	
Chlorobenzene [108-90-7]^	0.00018	U	mg/kg dry	1	0.00018	0.0010	7H25021	EPA 8260B	08/28/17 14:21	MRK	
Chloroethane [75-00-3]^	0.00026	U	mg/kg dry	1	0.00026	0.0010	7H25021	EPA 8260B	08/28/17 14:21	MRK	
Chloroform [67-66-3]^	0.00019	U	mg/kg dry	1	0.00019	0.0010	7H25021	EPA 8260B	08/28/17 14:21	MRK	
Chloromethane [74-87-3]^	0.00022	U	mg/kg dry	1	0.00022	0.0010	7H25021	EPA 8260B	08/28/17 14:21	MRK	
cis-1,2-Dichloroethene [156-59-2]^	0.00024	U	mg/kg dry	1	0.00024	0.0010	7H25021	EPA 8260B	08/28/17 14:21	MRK	
cis-1,3-Dichloropropene [10061-01-5]^	0.00018	U	mg/kg dry	1	0.00018	0.0010	7H25021	EPA 8260B	08/28/17 14:21	MRK	
Dibromochloromethane [124-48-1]^	0.00037	U	mg/kg dry	1	0.00037	0.0010	7H25021	EPA 8260B	08/28/17 14:21	MRK	
Dibromomethane [74-95-3]^	0.00034	U	mg/kg dry	1	0.00034	0.0010	7H25021	EPA 8260B	08/28/17 14:21	MRK	
Dichlorodifluoromethane [75-71-8]^	0.00047	U	mg/kg dry	1	0.00047	0.0010	7H25021	EPA 8260B	08/28/17 14:21	MRK	
Ethylbenzene [100-41-4]^	0.00021	U	mg/kg dry	1	0.00021	0.0010	7H25021	EPA 8260B	08/28/17 14:21	MRK	

This report relates only to the sample as received by the laboratory, and may only be reproduced in full.

www.encolabs.com

ANALYTICAL RESULTS

Description: PO78-B4	**Lab Sample ID:** CA11841-01	**Received:** 08/17/17 11:00
Matrix: Soil	**Sampled:** 08/15/17 14:15	**Work Order:** CA11841
Project: NCDOT PSAs	**Sampled By:** Client	**% Solids:** 86.45

Volatile Organic Compounds by GCMS

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
Hexachlorobutadiene [87-68-3]^	0.00037	U	mg/kg dry	1	0.00037	0.0010	7H25021	EPA 8260B	08/28/17 14:21	MRK	
Isopropylbenzene [98-82-8]^	0.00016	U	mg/kg dry	1	0.00016	0.0010	7H25021	EPA 8260B	08/28/17 14:21	MRK	
m,p-Xylenes [108-38-3/106-42-3]^	0.00039	U	mg/kg dry	1	0.00039	0.0021	7H25021	EPA 8260B	08/28/17 14:21	MRK	
Methylene Chloride [75-09-2]^	0.00076	U	mg/kg dry	1	0.00076	0.0021	7H25021	EPA 8260B	08/28/17 14:21	MRK	
Methyl-tert-Butyl Ether [1634-04-4]^	0.00031	U	mg/kg dry	1	0.00031	0.0010	7H25021	EPA 8260B	08/28/17 14:21	MRK	
Naphthalene [91-20-3]^	0.00028	U	mg/kg dry	1	0.00028	0.0010	7H25021	EPA 8260B	08/28/17 14:21	MRK	
n-Butyl Benzene [104-51-8]^	0.00014	U	mg/kg dry	1	0.00014	0.0010	7H25021	EPA 8260B	08/28/17 14:21	MRK	
n-Propyl Benzene [103-65-1]^	0.00019	U	mg/kg dry	1	0.00019	0.0010	7H25021	EPA 8260B	08/28/17 14:21	MRK	
o-Xylene [95-47-6]^	0.00023	U	mg/kg dry	1	0.00023	0.0010	7H25021	EPA 8260B	08/28/17 14:21	MRK	
sec-Butylbenzene [135-98-8]^	0.00099	U	mg/kg dry	1	0.00099	0.0010	7H25021	EPA 8260B	08/28/17 14:21	MRK	
Styrene [100-42-5]^	0.0010	U	mg/kg dry	1	0.0010	0.0010	7H25021	EPA 8260B	08/28/17 14:21	MRK	
tert-Butylbenzene [98-06-6]^	0.00018	U	mg/kg dry	1	0.00018	0.0010	7H25021	EPA 8260B	08/28/17 14:21	MRK	
Tetrachloroethene [127-18-4]^	0.00029	U	mg/kg dry	1	0.00029	0.0010	7H25021	EPA 8260B	08/28/17 14:21	MRK	
Toluene [108-88-3]^	0.00025	U	mg/kg dry	1	0.00025	0.0010	7H25021	EPA 8260B	08/28/17 14:21	MRK	
trans-1,2-Dichloroethene [156-60-5]^	0.00039	U	mg/kg dry	1	0.00039	0.0010	7H25021	EPA 8260B	08/28/17 14:21	MRK	
trans-1,3-Dichloropropene [10061-02-6]^	0.00041	U	mg/kg dry	1	0.00041	0.0010	7H25021	EPA 8260B	08/28/17 14:21	MRK	
Trichloroethene [79-01-6]^	0.00033	U	mg/kg dry	1	0.00033	0.0010	7H25021	EPA 8260B	08/28/17 14:21	MRK	
Trichlorofluoromethane [75-69-4]^	0.00027	U	mg/kg dry	1	0.00027	0.0010	7H25021	EPA 8260B	08/28/17 14:21	MRK	
Vinyl chloride [75-01-4]^	0.00025	U	mg/kg dry	1	0.00025	0.0010	7H25021	EPA 8260B	08/28/17 14:21	MRK	
Xylenes (Total) [1330-20-7]^	0.00058	U	mg/kg dry	1	0.00058	0.0031	7H25021	EPA 8260B	08/28/17 14:21	MRK	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes
4-Bromofluorobenzene	*52*	*1*	*50.0*	*105 %*	*50-127*	*7H25021*	*EPA 8260B*	*08/28/17 14:21*	*MRK*	
Dibromofluoromethane	*54*	*1*	*50.0*	*108 %*	*52-128*	*7H25021*	*EPA 8260B*	*08/28/17 14:21*	*MRK*	
Toluene-d8	*55*	*1*	*50.0*	*110 %*	*57-124*	*7H25021*	*EPA 8260B*	*08/28/17 14:21*	*MRK*	

Metals by EPA 6000/7000 Series Methods

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
Arsenic [7440-38-2]^	**6.52**		mg/kg dry	1	0.370	0.578	7H17028	EPA 6010D	08/23/17 14:31	JMV	
Barium [7440-39-3]^	**43.1**		mg/kg dry	1	0.116	0.578	7H17028	EPA 6010D	08/23/17 14:31	JMV	
Cadmium [7440-43-9]^	**0.195**		mg/kg dry	1	0.0111	0.0578	7H17028	EPA 6010D	08/23/17 14:31	JMV	
Chromium [7440-47-3]^	**146**		mg/kg dry	1	0.116	0.578	7H17028	EPA 6010D	08/23/17 14:31	JMV	
Lead [7439-92-1]^	**42.6**		mg/kg dry	1	0.139	0.578	7H17028	EPA 6010D	08/23/17 14:31	JMV	
Mercury [7439-97-6]^	**0.0250**	J	mg/kg dry	1	0.0162	0.0278	7H24004	EPA 7471B	08/25/17 09:20	CMK	
Selenium [7782-49-2]^	0.474	U	mg/kg dry	1	0.474	0.578	7H17028	EPA 6010D	08/23/17 14:31	JMV	
Silver [7440-22-4]^	**3.17**		mg/kg dry	1	0.116	0.578	7H17028	EPA 6010D	08/23/17 14:31	JMV	

This report relates only to the sample as received by the laboratory, and may only be reproduced in full.

www.encolabs.com

ANALYTICAL RESULTS

Description: PO78-B1	**Lab Sample ID:** CA11841-02	**Received:** 08/17/17 11:00
Matrix: Soil	**Sampled:** 08/15/17 14:45	**Work Order:** CA11841
Project: NCDOT PSAs	**Sampled By:** Client	**% Solids:** 84.97

Volatile Organic Compounds by GCMS

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1,2-Tetrachloroethane [630-20-6]^	0.00019	U	mg/kg dry	1	0.00019	0.0012	7H25021	EPA 8260B	08/28/17 14:51	MRK	
1,1,1-Trichloroethane [71-55-6]^	0.00029	U	mg/kg dry	1	0.00029	0.0012	7H25021	EPA 8260B	08/28/17 14:51	MRK	
1,1,2,2-Tetrachloroethane [79-34-5]^	0.00024	U	mg/kg dry	1	0.00024	0.0012	7H25021	EPA 8260B	08/28/17 14:51	MRK	
1,1,2-Trichloroethane [79-00-5]^	0.00029	U	mg/kg dry	1	0.00029	0.0012	7H25021	EPA 8260B	08/28/17 14:51	MRK	
1,1-Dichloroethane [75-34-3]^	0.00029	U	mg/kg dry	1	0.00029	0.0012	7H25021	EPA 8260B	08/28/17 14:51	MRK	
1,1-Dichloroethene [75-35-4]^	0.00035	U	mg/kg dry	1	0.00035	0.0012	7H25021	EPA 8260B	08/28/17 14:51	MRK	
1,1-Dichloropropene [563-58-6]^	0.00019	U	mg/kg dry	1	0.00019	0.0012	7H25021	EPA 8260B	08/28/17 14:51	MRK	
1,2,3-Trichlorobenzene [87-61-6]^	0.00033	U	mg/kg dry	1	0.00033	0.0012	7H25021	EPA 8260B	08/28/17 14:51	MRK	
1,2,3-Trichloropropane [96-18-4]^	0.00075	U	mg/kg dry	1	0.00075	0.0012	7H25021	EPA 8260B	08/28/17 14:51	MRK	
1,2,4-Trichlorobenzene [120-82-1]^	0.00032	U	mg/kg dry	1	0.00032	0.0012	7H25021	EPA 8260B	08/28/17 14:51	MRK	
1,2,4-Trimethylbenzene [95-63-6]^	0.00020	U	mg/kg dry	1	0.00020	0.0012	7H25021	EPA 8260B	08/28/17 14:51	MRK	
1,2-Dibromo-3-chloropropane [96-12-8]^	0.00093	U	mg/kg dry	1	0.00093	0.0012	7H25021	EPA 8260B	08/28/17 14:51	MRK	
1,2-Dibromoethane [106-93-4]^	0.00054	U	mg/kg dry	1	0.00054	0.0012	7H25021	EPA 8260B	08/28/17 14:51	MRK	
1,2-Dichlorobenzene [95-50-1]^	0.00032	U	mg/kg dry	1	0.00032	0.0012	7H25021	EPA 8260B	08/28/17 14:51	MRK	
1,2-Dichloroethane [107-06-2]^	0.00048	U	mg/kg dry	1	0.00048	0.0012	7H25021	EPA 8260B	08/28/17 14:51	MRK	
1,2-Dichloropropane [78-87-5]^	0.00031	U	mg/kg dry	1	0.00031	0.0012	7H25021	EPA 8260B	08/28/17 14:51	MRK	
1,3,5-Trimethylbenzene [108-67-8]^	0.00024	U	mg/kg dry	1	0.00024	0.0012	7H25021	EPA 8260B	08/28/17 14:51	MRK	
1,3-Dichlorobenzene [541-73-1]^	0.00026	U	mg/kg dry	1	0.00026	0.0012	7H25021	EPA 8260B	08/28/17 14:51	MRK	
1,3-Dichloropropane [142-28-9]^	0.00034	U	mg/kg dry	1	0.00034	0.0012	7H25021	EPA 8260B	08/28/17 14:51	MRK	
1,4-Dichlorobenzene [106-46-7]^	0.00024	U	mg/kg dry	1	0.00024	0.0012	7H25021	EPA 8260B	08/28/17 14:51	MRK	
2,2-Dichloropropane [594-20-7]^	0.00027	U	mg/kg dry	1	0.00027	0.0012	7H25021	EPA 8260B	08/28/17 14:51	MRK	
2-Butanone [78-93-3]^	0.00092	U	mg/kg dry	1	0.00092	0.0059	7H25021	EPA 8260B	08/28/17 14:51	MRK	
2-Chloroethyl Vinyl Ether [110-75-8]^	0.00019	U	mg/kg dry	1	0.00019	0.0059	7H25021	EPA 8260B	08/28/17 14:51	MRK	
2-Chlorotoluene [95-49-8]^	0.00021	U	mg/kg dry	1	0.00021	0.0012	7H25021	EPA 8260B	08/28/17 14:51	MRK	
2-Hexanone [591-78-6]^	0.00088	U	mg/kg dry	1	0.00088	0.0059	7H25021	EPA 8260B	08/28/17 14:51	MRK	
4-Chlorotoluene [106-43-4]^	0.00031	U	mg/kg dry	1	0.00031	0.0012	7H25021	EPA 8260B	08/28/17 14:51	MRK	
4-Isopropyltoluene [99-87-6]^	0.00019	U	mg/kg dry	1	0.00019	0.0012	7H25021	EPA 8260B	08/28/17 14:51	MRK	
4-Methyl-2-pentanone [108-10-1]^	0.00067	U	mg/kg dry	1	0.00067	0.0059	7H25021	EPA 8260B	08/28/17 14:51	MRK	
Acetone [67-64-1]^	0.016	U	mg/kg dry	1	0.016	0.024	7H25021	EPA 8260B	08/28/17 14:51	MRK	
Benzene [71-43-2]^	0.00020	U	mg/kg dry	1	0.00020	0.0012	7H25021	EPA 8260B	08/28/17 14:51	MRK	
Bromobenzene [108-86-1]^	0.00026	U	mg/kg dry	1	0.00026	0.0012	7H25021	EPA 8260B	08/28/17 14:51	MRK	
Bromochloromethane [74-97-5]^	0.00048	U	mg/kg dry	1	0.00048	0.0012	7H25021	EPA 8260B	08/28/17 14:51	MRK	
Bromodichloromethane [75-27-4]^	0.00028	U	mg/kg dry	1	0.00028	0.0012	7H25021	EPA 8260B	08/28/17 14:51	MRK	
Bromoform [75-25-2]^	0.00053	U	mg/kg dry	1	0.00053	0.0012	7H25021	EPA 8260B	08/28/17 14:51	MRK	
Bromomethane [74-83-9]^	0.00038	U	mg/kg dry	1	0.00038	0.0012	7H25021	EPA 8260B	08/28/17 14:51	MRK	
Carbon disulfide [75-15-0]^	0.00046	U	mg/kg dry	1	0.00046	0.0059	7H25021	EPA 8260B	08/28/17 14:51	MRK	
Carbon Tetrachloride [56-23-5]^	0.00026	U	mg/kg dry	1	0.00026	0.0012	7H25021	EPA 8260B	08/28/17 14:51	MRK	
Chlorobenzene [108-90-7]^	0.00020	U	mg/kg dry	1	0.00020	0.0012	7H25021	EPA 8260B	08/28/17 14:51	MRK	
Chloroethane [75-00-3]^	0.00029	U	mg/kg dry	1	0.00029	0.0012	7H25021	EPA 8260B	08/28/17 14:51	MRK	
Chloroform [67-66-3]^	0.00021	U	mg/kg dry	1	0.00021	0.0012	7H25021	EPA 8260B	08/28/17 14:51	MRK	
Chloromethane [74-87-3]^	0.00025	U	mg/kg dry	1	0.00025	0.0012	7H25021	EPA 8260B	08/28/17 14:51	MRK	
cis-1,2-Dichloroethene [156-59-2]^	0.00027	U	mg/kg dry	1	0.00027	0.0012	7H25021	EPA 8260B	08/28/17 14:51	MRK	
cis-1,3-Dichloropropene [10061-01-5]^	0.00020	U	mg/kg dry	1	0.00020	0.0012	7H25021	EPA 8260B	08/28/17 14:51	MRK	
Dibromochloromethane [124-48-1]^	0.00041	U	mg/kg dry	1	0.00041	0.0012	7H25021	EPA 8260B	08/28/17 14:51	MRK	
Dibromomethane [74-95-3]^	0.00039	U	mg/kg dry	1	0.00039	0.0012	7H25021	EPA 8260B	08/28/17 14:51	MRK	
Dichlorodifluoromethane [75-71-8]^	0.00053	U	mg/kg dry	1	0.00053	0.0012	7H25021	EPA 8260B	08/28/17 14:51	MRK	
Ethylbenzene [100-41-4]^	0.00024	U	mg/kg dry	1	0.00024	0.0012	7H25021	EPA 8260B	08/28/17 14:51	MRK	

This report relates only to the sample as received by the laboratory, and may only be reproduced in full.

www.encolabs.com

ANALYTICAL RESULTS

Description: PO78-B1	**Lab Sample ID:** CA11841-02	**Received:** 08/17/17 11:00
Matrix: Soil	**Sampled:** 08/15/17 14:45	**Work Order:** CA11841
Project: NCDOT PSAs	**Sampled By:** Client	**% Solids:** 84.97

Volatile Organic Compounds by GCMS

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
Hexachlorobutadiene [87-68-3]^	0.00041	U	mg/kg dry	1	0.00041	0.0012	7H25021	EPA 8260B	08/28/17 14:51	MRK	
Isopropylbenzene [98-82-8]^	0.00018	U	mg/kg dry	1	0.00018	0.0012	7H25021	EPA 8260B	08/28/17 14:51	MRK	
m,p-Xylenes [108-38-3/106-42-3]^	0.00044	U	mg/kg dry	1	0.00044	0.0024	7H25021	EPA 8260B	08/28/17 14:51	MRK	
Methylene Chloride [75-09-2]^	0.00086	U	mg/kg dry	1	0.00086	0.0024	7H25021	EPA 8260B	08/28/17 14:51	MRK	
Methyl-tert-Butyl Ether [1634-04-4]^	0.00035	U	mg/kg dry	1	0.00035	0.0012	7H25021	EPA 8260B	08/28/17 14:51	MRK	
Naphthalene [91-20-3]^	0.00032	U	mg/kg dry	1	0.00032	0.0012	7H25021	EPA 8260B	08/28/17 14:51	MRK	
n-Butyl Benzene [104-51-8]^	0.00015	U	mg/kg dry	1	0.00015	0.0012	7H25021	EPA 8260B	08/28/17 14:51	MRK	
n-Propyl Benzene [103-65-1]^	0.00021	U	mg/kg dry	1	0.00021	0.0012	7H25021	EPA 8260B	08/28/17 14:51	MRK	
o-Xylene [95-47-6]^	0.00026	U	mg/kg dry	1	0.00026	0.0012	7H25021	EPA 8260B	08/28/17 14:51	MRK	
sec-Butylbenzene [135-98-8]^	0.0011	U	mg/kg dry	1	0.0011	0.0012	7H25021	EPA 8260B	08/28/17 14:51	MRK	
Styrene [100-42-5]^	0.0012	U	mg/kg dry	1	0.0012	0.0012	7H25021	EPA 8260B	08/28/17 14:51	MRK	
tert-Butylbenzene [98-06-6]^	0.00020	U	mg/kg dry	1	0.00020	0.0012	7H25021	EPA 8260B	08/28/17 14:51	MRK	
Tetrachloroethene [127-18-4]^	0.00033	U	mg/kg dry	1	0.00033	0.0012	7H25021	EPA 8260B	08/28/17 14:51	MRK	
Toluene [108-88-3]^	0.00028	U	mg/kg dry	1	0.00028	0.0012	7H25021	EPA 8260B	08/28/17 14:51	MRK	
trans-1,2-Dichloroethene [156-60-5]^	0.00044	U	mg/kg dry	1	0.00044	0.0012	7H25021	EPA 8260B	08/28/17 14:51	MRK	
trans-1,3-Dichloropropene [10061-02-6]^	0.00046	U	mg/kg dry	1	0.00046	0.0012	7H25021	EPA 8260B	08/28/17 14:51	MRK	
Trichloroethene [79-01-6]^	0.00038	U	mg/kg dry	1	0.00038	0.0012	7H25021	EPA 8260B	08/28/17 14:51	MRK	
Trichlorofluoromethane [75-69-4]^	0.00031	U	mg/kg dry	1	0.00031	0.0012	7H25021	EPA 8260B	08/28/17 14:51	MRK	
Vinyl chloride [75-01-4]^	0.00028	U	mg/kg dry	1	0.00028	0.0012	7H25021	EPA 8260B	08/28/17 14:51	MRK	
Xylenes (Total) [1330-20-7]^	0.00066	U	mg/kg dry	1	0.00066	0.0035	7H25021	EPA 8260B	08/28/17 14:51	MRK	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes
4-Bromofluorobenzene	*52*	*1*	*50.0*	*105 %*	*50-127*	*7H25021*	*EPA 8260B*	*08/28/17 14:51*	*MRK*	
Dibromofluoromethane	*54*	*1*	*50.0*	*108 %*	*52-128*	*7H25021*	*EPA 8260B*	*08/28/17 14:51*	*MRK*	
Toluene-d8	*55*	*1*	*50.0*	*109 %*	*57-124*	*7H25021*	*EPA 8260B*	*08/28/17 14:51*	*MRK*	

Metals by EPA 6000/7000 Series Methods

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
Arsenic [7440-38-2]^	**8.42**		mg/kg dry	1	0.377	0.588	7H17028	EPA 6010D	08/23/17 14:42	JMV	
Barium [7440-39-3]^	**42.7**		mg/kg dry	1	0.118	0.588	7H17028	EPA 6010D	08/23/17 14:42	JMV	
Cadmium [7440-43-9]^	**0.146**		mg/kg dry	1	0.0113	0.0588	7H17028	EPA 6010D	08/23/17 14:42	JMV	
Chromium [7440-47-3]^	**43.8**		mg/kg dry	1	0.118	0.588	7H17028	EPA 6010D	08/23/17 14:42	JMV	
Lead [7439-92-1]^	**66.0**		mg/kg dry	1	0.141	0.588	7H17028	EPA 6010D	08/23/17 14:42	JMV	
Mercury [7439-97-6]^	**0.0465**		mg/kg dry	1	0.0165	0.0282	7H24004	EPA 7471B	08/25/17 09:30	CMK	
Selenium [7782-49-2]^	0.483	U	mg/kg dry	1	0.483	0.588	7H17028	EPA 6010D	08/23/17 14:42	JMV	
Silver [7440-22-4]^	0.118	U	mg/kg dry	1	0.118	0.588	7H17028	EPA 6010D	08/23/17 14:42	JMV	

This report relates only to the sample as received by the laboratory, and may only be reproduced in full.

www.encolabs.com

ANALYTICAL RESULTS

Description: PO78-B2	**Lab Sample ID:** CA11841-03	**Received:** 08/17/17 11:00
Matrix: Soil	**Sampled:** 08/15/17 14:55	**Work Order:** CA11841
Project: NCDOT PSAs	**Sampled By:** Client	**% Solids:** 87.97

Volatile Organic Compounds by GCMS

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1,2-Tetrachloroethane [630-20-6]^	0.00018	U	mg/kg dry	1	0.00018	0.0011	7H25021	EPA 8260B	08/28/17 15:22	MRK	
1,1,1-Trichloroethane [71-55-6]^	0.00028	U	mg/kg dry	1	0.00028	0.0011	7H25021	EPA 8260B	08/28/17 15:22	MRK	
1,1,2,2-Tetrachloroethane [79-34-5]^	0.00023	U	mg/kg dry	1	0.00023	0.0011	7H25021	EPA 8260B	08/28/17 15:22	MRK	
1,1,2-Trichloroethane [79-00-5]^	0.00028	U	mg/kg dry	1	0.00028	0.0011	7H25021	EPA 8260B	08/28/17 15:22	MRK	
1,1-Dichloroethane [75-34-3]^	0.00028	U	mg/kg dry	1	0.00028	0.0011	7H25021	EPA 8260B	08/28/17 15:22	MRK	
1,1-Dichloroethene [75-35-4]^	0.00034	U	mg/kg dry	1	0.00034	0.0011	7H25021	EPA 8260B	08/28/17 15:22	MRK	
1,1-Dichloropropene [563-58-6]^	0.00018	U	mg/kg dry	1	0.00018	0.0011	7H25021	EPA 8260B	08/28/17 15:22	MRK	
1,2,3-Trichlorobenzene [87-61-6]^	0.00032	U	mg/kg dry	1	0.00032	0.0011	7H25021	EPA 8260B	08/28/17 15:22	MRK	
1,2,3-Trichloropropane [96-18-4]^	0.00073	U	mg/kg dry	1	0.00073	0.0011	7H25021	EPA 8260B	08/28/17 15:22	MRK	
1,2,4-Trichlorobenzene [120-82-1]^	0.00031	U	mg/kg dry	1	0.00031	0.0011	7H25021	EPA 8260B	08/28/17 15:22	MRK	
1,2,4-Trimethylbenzene [95-63-6]^	0.00019	U	mg/kg dry	1	0.00019	0.0011	7H25021	EPA 8260B	08/28/17 15:22	MRK	
1,2-Dibromo-3-chloropropane [96-12-8]^	0.00090	U	mg/kg dry	1	0.00090	0.0011	7H25021	EPA 8260B	08/28/17 15:22	MRK	
1,2-Dibromoethane [106-93-4]^	0.00052	U	mg/kg dry	1	0.00052	0.0011	7H25021	EPA 8260B	08/28/17 15:22	MRK	
1,2-Dichlorobenzene [95-50-1]^	0.00031	U	mg/kg dry	1	0.00031	0.0011	7H25021	EPA 8260B	08/28/17 15:22	MRK	
1,2-Dichloroethane [107-06-2]^	0.00047	U	mg/kg dry	1	0.00047	0.0011	7H25021	EPA 8260B	08/28/17 15:22	MRK	
1,2-Dichloropropane [78-87-5]^	0.00030	U	mg/kg dry	1	0.00030	0.0011	7H25021	EPA 8260B	08/28/17 15:22	MRK	
1,3,5-Trimethylbenzene [108-67-8]^	0.00023	U	mg/kg dry	1	0.00023	0.0011	7H25021	EPA 8260B	08/28/17 15:22	MRK	
1,3-Dichlorobenzene [541-73-1]^	0.00025	U	mg/kg dry	1	0.00025	0.0011	7H25021	EPA 8260B	08/28/17 15:22	MRK	
1,3-Dichloropropane [142-28-9]^	0.00033	U	mg/kg dry	1	0.00033	0.0011	7H25021	EPA 8260B	08/28/17 15:22	MRK	
1,4-Dichlorobenzene [106-46-7]^	0.00023	U	mg/kg dry	1	0.00023	0.0011	7H25021	EPA 8260B	08/28/17 15:22	MRK	
2,2-Dichloropropane [594-20-7]^	0.00026	U	mg/kg dry	1	0.00026	0.0011	7H25021	EPA 8260B	08/28/17 15:22	MRK	
2-Butanone [78-93-3]^	0.00089	U	mg/kg dry	1	0.00089	0.0057	7H25021	EPA 8260B	08/28/17 15:22	MRK	
2-Chloroethyl Vinyl Ether [110-75-8]^	0.00018	U	mg/kg dry	1	0.00018	0.0057	7H25021	EPA 8260B	08/28/17 15:22	MRK	
2-Chlorotoluene [95-49-8]^	0.00020	U	mg/kg dry	1	0.00020	0.0011	7H25021	EPA 8260B	08/28/17 15:22	MRK	
2-Hexanone [591-78-6]^	0.00085	U	mg/kg dry	1	0.00085	0.0057	7H25021	EPA 8260B	08/28/17 15:22	MRK	
4-Chlorotoluene [106-43-4]^	0.00030	U	mg/kg dry	1	0.00030	0.0011	7H25021	EPA 8260B	08/28/17 15:22	MRK	
4-Isopropyltoluene [99-87-6]^	0.00018	U	mg/kg dry	1	0.00018	0.0011	7H25021	EPA 8260B	08/28/17 15:22	MRK	
4-Methyl-2-pentanone [108-10-1]^	0.00065	U	mg/kg dry	1	0.00065	0.0057	7H25021	EPA 8260B	08/28/17 15:22	MRK	
Acetone [67-64-1]^	0.016	U	mg/kg dry	1	0.016	0.023	7H25021	EPA 8260B	08/28/17 15:22	MRK	
Benzene [71-43-2]^	0.00019	U	mg/kg dry	1	0.00019	0.0011	7H25021	EPA 8260B	08/28/17 15:22	MRK	
Bromobenzene [108-86-1]^	0.00025	U	mg/kg dry	1	0.00025	0.0011	7H25021	EPA 8260B	08/28/17 15:22	MRK	
Bromochloromethane [74-97-5]^	0.00047	U	mg/kg dry	1	0.00047	0.0011	7H25021	EPA 8260B	08/28/17 15:22	MRK	
Bromodichloromethane [75-27-4]^	0.00027	U	mg/kg dry	1	0.00027	0.0011	7H25021	EPA 8260B	08/28/17 15:22	MRK	
Bromoform [75-25-2]^	0.00051	U	mg/kg dry	1	0.00051	0.0011	7H25021	EPA 8260B	08/28/17 15:22	MRK	
Bromomethane [74-83-9]^	0.00036	U	mg/kg dry	1	0.00036	0.0011	7H25021	EPA 8260B	08/28/17 15:22	MRK	
Carbon disulfide [75-15-0]^	0.00044	U	mg/kg dry	1	0.00044	0.0057	7H25021	EPA 8260B	08/28/17 15:22	MRK	
Carbon Tetrachloride [56-23-5]^	0.00025	U	mg/kg dry	1	0.00025	0.0011	7H25021	EPA 8260B	08/28/17 15:22	MRK	
Chlorobenzene [108-90-7]^	0.00019	U	mg/kg dry	1	0.00019	0.0011	7H25021	EPA 8260B	08/28/17 15:22	MRK	
Chloroethane [75-00-3]^	0.00028	U	mg/kg dry	1	0.00028	0.0011	7H25021	EPA 8260B	08/28/17 15:22	MRK	
Chloroform [67-66-3]^	0.00020	U	mg/kg dry	1	0.00020	0.0011	7H25021	EPA 8260B	08/28/17 15:22	MRK	
Chloromethane [74-87-3]^	0.00024	U	mg/kg dry	1	0.00024	0.0011	7H25021	EPA 8260B	08/28/17 15:22	MRK	
cis-1,2-Dichloroethene [156-59-2]^	0.00026	U	mg/kg dry	1	0.00026	0.0011	7H25021	EPA 8260B	08/28/17 15:22	MRK	
cis-1,3-Dichloropropene [10061-01-5]^	0.00019	U	mg/kg dry	1	0.00019	0.0011	7H25021	EPA 8260B	08/28/17 15:22	MRK	
Dibromochloromethane [124-48-1]^	0.00040	U	mg/kg dry	1	0.00040	0.0011	7H25021	EPA 8260B	08/28/17 15:22	MRK	
Dibromomethane [74-95-3]^	0.00038	U	mg/kg dry	1	0.00038	0.0011	7H25021	EPA 8260B	08/28/17 15:22	MRK	
Dichlorodifluoromethane [75-71-8]^	0.00051	U	mg/kg dry	1	0.00051	0.0011	7H25021	EPA 8260B	08/28/17 15:22	MRK	
Ethylbenzene [100-41-4]^	0.00023	U	mg/kg dry	1	0.00023	0.0011	7H25021	EPA 8260B	08/28/17 15:22	MRK	

This report relates only to the sample as received by the laboratory, and may only be reproduced in full.

www.encolabs.com

ANALYTICAL RESULTS

Description: PO78-B2	**Lab Sample ID:** CA11841-03	**Received:** 08/17/17 11:00
Matrix: Soil	**Sampled:** 08/15/17 14:55	**Work Order:** CA11841
Project: NCDOT PSAs	**Sampled By:** Client	**% Solids:** 87.97

Volatile Organic Compounds by GCMS

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
Hexachlorobutadiene [87-68-3]^	0.00040	U	mg/kg dry	1	0.00040	0.0011	7H25021	EPA 8260B	08/28/17 15:22	MRK	
Isopropylbenzene [98-82-8]^	0.00017	U	mg/kg dry	1	0.00017	0.0011	7H25021	EPA 8260B	08/28/17 15:22	MRK	
m,p-Xylenes [108-38-3/106-42-3]^	0.00042	U	mg/kg dry	1	0.00042	0.0023	7H25021	EPA 8260B	08/28/17 15:22	MRK	
Methylene Chloride [75-09-2]^	0.00083	U	mg/kg dry	1	0.00083	0.0023	7H25021	EPA 8260B	08/28/17 15:22	MRK	
Methyl-tert-Butyl Ether [1634-04-4]^	0.00034	U	mg/kg dry	1	0.00034	0.0011	7H25021	EPA 8260B	08/28/17 15:22	MRK	
Naphthalene [91-20-3]^	0.00031	U	mg/kg dry	1	0.00031	0.0011	7H25021	EPA 8260B	08/28/17 15:22	MRK	
n-Butyl Benzene [104-51-8]^	0.00015	U	mg/kg dry	1	0.00015	0.0011	7H25021	EPA 8260B	08/28/17 15:22	MRK	
n-Propyl Benzene [103-65-1]^	0.00020	U	mg/kg dry	1	0.00020	0.0011	7H25021	EPA 8260B	08/28/17 15:22	MRK	
o-Xylene [95-47-6]^	0.00025	U	mg/kg dry	1	0.00025	0.0011	7H25021	EPA 8260B	08/28/17 15:22	MRK	
sec-Butylbenzene [135-98-8]^	0.0011	U	mg/kg dry	1	0.0011	0.0011	7H25021	EPA 8260B	08/28/17 15:22	MRK	
Styrene [100-42-5]^	0.0011	U	mg/kg dry	1	0.0011	0.0011	7H25021	EPA 8260B	08/28/17 15:22	MRK	
tert-Butylbenzene [98-06-6]^	0.00019	U	mg/kg dry	1	0.00019	0.0011	7H25021	EPA 8260B	08/28/17 15:22	MRK	
Tetrachloroethene [127-18-4]^	0.00032	U	mg/kg dry	1	0.00032	0.0011	7H25021	EPA 8260B	08/28/17 15:22	MRK	
Toluene [108-88-3]^	0.00027	U	mg/kg dry	1	0.00027	0.0011	7H25021	EPA 8260B	08/28/17 15:22	MRK	
trans-1,2-Dichloroethene [156-60-5]^	0.00042	U	mg/kg dry	1	0.00042	0.0011	7H25021	EPA 8260B	08/28/17 15:22	MRK	
trans-1,3-Dichloropropene [10061-02-6]^	0.00044	U	mg/kg dry	1	0.00044	0.0011	7H25021	EPA 8260B	08/28/17 15:22	MRK	
Trichloroethene [79-01-6]^	0.00036	U	mg/kg dry	1	0.00036	0.0011	7H25021	EPA 8260B	08/28/17 15:22	MRK	
Trichlorofluoromethane [75-69-4]^	0.00030	U	mg/kg dry	1	0.00030	0.0011	7H25021	EPA 8260B	08/28/17 15:22	MRK	
Vinyl chloride [75-01-4]^	0.00027	U	mg/kg dry	1	0.00027	0.0011	7H25021	EPA 8260B	08/28/17 15:22	MRK	
Xylenes (Total) [1330-20-7]^	0.00064	U	mg/kg dry	1	0.00064	0.0034	7H25021	EPA 8260B	08/28/17 15:22	MRK	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes
4-Bromofluorobenzene	*51*	*1*	*50.0*	*102 %*	*50-127*	*7H25021*	*EPA 8260B*	*08/28/17 15:22*	*MRK*	
Dibromofluoromethane	*55*	*1*	*50.0*	*110 %*	*52-128*	*7H25021*	*EPA 8260B*	*08/28/17 15:22*	*MRK*	
Toluene-d8	*55*	*1*	*50.0*	*109 %*	*57-124*	*7H25021*	*EPA 8260B*	*08/28/17 15:22*	*MRK*	

Metals by EPA 6000/7000 Series Methods

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
Arsenic [7440-38-2]^	**7.47**		mg/kg dry	1	0.364	0.568	7H17028	EPA 6010D	08/23/17 14:45	JMV	
Barium [7440-39-3]^	**33.3**		mg/kg dry	1	0.114	0.568	7H17028	EPA 6010D	08/23/17 14:45	JMV	
Cadmium [7440-43-9]^	**0.0950**		mg/kg dry	1	0.0109	0.0568	7H17028	EPA 6010D	08/23/17 14:45	JMV	
Chromium [7440-47-3]^	**20.4**		mg/kg dry	1	0.114	0.568	7H17028	EPA 6010D	08/23/17 14:45	JMV	
Lead [7439-92-1]^	**34.0**		mg/kg dry	1	0.136	0.568	7H17028	EPA 6010D	08/23/17 14:45	JMV	
Mercury [7439-97-6]^	**0.0239**	J	mg/kg dry	1	0.0159	0.0273	7H24004	EPA 7471B	08/25/17 09:32	CMK	
Selenium [7782-49-2]^	0.466	U	mg/kg dry	1	0.466	0.568	7H17028	EPA 6010D	08/23/17 14:45	JMV	
Silver [7440-22-4]^	0.114	U	mg/kg dry	1	0.114	0.568	7H17028	EPA 6010D	08/23/17 14:45	JMV	

This report relates only to the sample as received by the laboratory, and may only be reproduced in full.

www.encolabs.com

ANALYTICAL RESULTS

Description: PO78-B3	**Lab Sample ID:** CA11841-04	**Received:** 08/17/17 11:00
Matrix: Soil	**Sampled:** 08/15/17 15:05	**Work Order:** CA11841
Project: NCDOT PSAs	**Sampled By:** Client	**% Solids:** 87.80

Volatile Organic Compounds by GCMS

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1,2-Tetrachloroethane [630-20-6]^	0.00022	U	mg/kg dry	1.23	0.00022	0.0014	7H25021	EPA 8260B	08/28/17 15:53	MRK	
1,1,1-Trichloroethane [71-55-6]^	0.00035	U	mg/kg dry	1.23	0.00035	0.0014	7H25021	EPA 8260B	08/28/17 15:53	MRK	
1,1,2,2-Tetrachloroethane [79-34-5]^	0.00028	U	mg/kg dry	1.23	0.00028	0.0014	7H25021	EPA 8260B	08/28/17 15:53	MRK	
1,1,2-Trichloroethane [79-00-5]^	0.00035	U	mg/kg dry	1.23	0.00035	0.0014	7H25021	EPA 8260B	08/28/17 15:53	MRK	
1,1-Dichloroethane [75-34-3]^	0.00035	U	mg/kg dry	1.23	0.00035	0.0014	7H25021	EPA 8260B	08/28/17 15:53	MRK	
1,1-Dichloroethene [75-35-4]^	0.00042	U	mg/kg dry	1.23	0.00042	0.0014	7H25021	EPA 8260B	08/28/17 15:53	MRK	
1,1-Dichloropropene [563-58-6]^	0.00022	U	mg/kg dry	1.23	0.00022	0.0014	7H25021	EPA 8260B	08/28/17 15:53	MRK	
1,2,3-Trichlorobenzene [87-61-6]^	0.00039	U	mg/kg dry	1.23	0.00039	0.0014	7H25021	EPA 8260B	08/28/17 15:53	MRK	
1,2,3-Trichloropropane [96-18-4]^	0.00090	U	mg/kg dry	1.23	0.00090	0.0014	7H25021	EPA 8260B	08/28/17 15:53	MRK	
1,2,4-Trichlorobenzene [120-82-1]^	0.00038	U	mg/kg dry	1.23	0.00038	0.0014	7H25021	EPA 8260B	08/28/17 15:53	MRK	
1,2,4-Trimethylbenzene [95-63-6]^	0.00024	U	mg/kg dry	1.23	0.00024	0.0014	7H25021	EPA 8260B	08/28/17 15:53	MRK	
1,2-Dibromo-3-chloropropane [96-12-8]^	0.0011	U	mg/kg dry	1.23	0.0011	0.0014	7H25021	EPA 8260B	08/28/17 15:53	MRK	
1,2-Dibromoethane [106-93-4]^	0.00065	U	mg/kg dry	1.23	0.00065	0.0014	7H25021	EPA 8260B	08/28/17 15:53	MRK	
1,2-Dichlorobenzene [95-50-1]^	0.00038	U	mg/kg dry	1.23	0.00038	0.0014	7H25021	EPA 8260B	08/28/17 15:53	MRK	
1,2-Dichloroethane [107-06-2]^	0.00058	U	mg/kg dry	1.23	0.00058	0.0014	7H25021	EPA 8260B	08/28/17 15:53	MRK	
1,2-Dichloropropane [78-87-5]^	0.00036	U	mg/kg dry	1.23	0.00036	0.0014	7H25021	EPA 8260B	08/28/17 15:53	MRK	
1,3,5-Trimethylbenzene [108-67-8]^	0.00028	U	mg/kg dry	1.23	0.00028	0.0014	7H25021	EPA 8260B	08/28/17 15:53	MRK	
1,3-Dichlorobenzene [541-73-1]^	0.00031	U	mg/kg dry	1.23	0.00031	0.0014	7H25021	EPA 8260B	08/28/17 15:53	MRK	
1,3-Dichloropropane [142-28-9]^	0.00041	U	mg/kg dry	1.23	0.00041	0.0014	7H25021	EPA 8260B	08/28/17 15:53	MRK	
1,4-Dichlorobenzene [106-46-7]^	0.00028	U	mg/kg dry	1.23	0.00028	0.0014	7H25021	EPA 8260B	08/28/17 15:53	MRK	
2,2-Dichloropropane [594-20-7]^	0.00032	U	mg/kg dry	1.23	0.00032	0.0014	7H25021	EPA 8260B	08/28/17 15:53	MRK	
2-Butanone [78-93-3]^	**0.0028**	J	mg/kg dry	1.23	0.0011	0.0070	7H25021	EPA 8260B	08/28/17 15:53	MRK	
2-Chloroethyl Vinyl Ether [110-75-8]^	0.00022	U	mg/kg dry	1.23	0.00022	0.0070	7H25021	EPA 8260B	08/28/17 15:53	MRK	
2-Chlorotoluene [95-49-8]^	0.00025	U	mg/kg dry	1.23	0.00025	0.0014	7H25021	EPA 8260B	08/28/17 15:53	MRK	
2-Hexanone [591-78-6]^	0.0011	U	mg/kg dry	1.23	0.0011	0.0070	7H25021	EPA 8260B	08/28/17 15:53	MRK	
4-Chlorotoluene [106-43-4]^	0.00036	U	mg/kg dry	1.23	0.00036	0.0014	7H25021	EPA 8260B	08/28/17 15:53	MRK	
4-Isopropyltoluene [99-87-6]^	0.00022	U	mg/kg dry	1.23	0.00022	0.0014	7H25021	EPA 8260B	08/28/17 15:53	MRK	
4-Methyl-2-pentanone [108-10-1]^	0.00080	U	mg/kg dry	1.23	0.00080	0.0070	7H25021	EPA 8260B	08/28/17 15:53	MRK	
Acetone [67-64-1]^	**0.48**		mg/kg dry	1.23	0.020	0.028	7H25021	EPA 8260B	08/28/17 15:53	MRK	
Benzene [71-43-2]^	0.00024	U	mg/kg dry	1.23	0.00024	0.0014	7H25021	EPA 8260B	08/28/17 15:53	MRK	
Bromobenzene [108-86-1]^	0.00031	U	mg/kg dry	1.23	0.00031	0.0014	7H25021	EPA 8260B	08/28/17 15:53	MRK	
Bromochloromethane [74-97-5]^	0.00058	U	mg/kg dry	1.23	0.00058	0.0014	7H25021	EPA 8260B	08/28/17 15:53	MRK	
Bromodichloromethane [75-27-4]^	0.00034	U	mg/kg dry	1.23	0.00034	0.0014	7H25021	EPA 8260B	08/28/17 15:53	MRK	
Bromoform [75-25-2]^	0.00063	U	mg/kg dry	1.23	0.00063	0.0014	7H25021	EPA 8260B	08/28/17 15:53	MRK	
Bromomethane [74-83-9]^	0.00045	U	mg/kg dry	1.23	0.00045	0.0014	7H25021	EPA 8260B	08/28/17 15:53	MRK	
Carbon disulfide [75-15-0]^	0.00055	U	mg/kg dry	1.23	0.00055	0.0070	7H25021	EPA 8260B	08/28/17 15:53	MRK	
Carbon Tetrachloride [56-23-5]^	0.00031	U	mg/kg dry	1.23	0.00031	0.0014	7H25021	EPA 8260B	08/28/17 15:53	MRK	
Chlorobenzene [108-90-7]^	0.00024	U	mg/kg dry	1.23	0.00024	0.0014	7H25021	EPA 8260B	08/28/17 15:53	MRK	
Chloroethane [75-00-3]^	0.00035	U	mg/kg dry	1.23	0.00035	0.0014	7H25021	EPA 8260B	08/28/17 15:53	MRK	
Chloroform [67-66-3]^	0.00025	U	mg/kg dry	1.23	0.00025	0.0014	7H25021	EPA 8260B	08/28/17 15:53	MRK	
Chloromethane [74-87-3]^	0.00029	U	mg/kg dry	1.23	0.00029	0.0014	7H25021	EPA 8260B	08/28/17 15:53	MRK	
cis-1,2-Dichloroethene [156-59-2]^	0.00032	U	mg/kg dry	1.23	0.00032	0.0014	7H25021	EPA 8260B	08/28/17 15:53	MRK	
cis-1,3-Dichloropropene [10061-01-5]^	0.00024	U	mg/kg dry	1.23	0.00024	0.0014	7H25021	EPA 8260B	08/28/17 15:53	MRK	
Dibromochloromethane [124-48-1]^	0.00049	U	mg/kg dry	1.23	0.00049	0.0014	7H25021	EPA 8260B	08/28/17 15:53	MRK	
Dibromomethane [74-95-3]^	0.00046	U	mg/kg dry	1.23	0.00046	0.0014	7H25021	EPA 8260B	08/28/17 15:53	MRK	
Dichlorodifluoromethane [75-71-8]^	0.00063	U	mg/kg dry	1.23	0.00063	0.0014	7H25021	EPA 8260B	08/28/17 15:53	MRK	
Ethylbenzene [100-41-4]^	0.00028	U	mg/kg dry	1.23	0.00028	0.0014	7H25021	EPA 8260B	08/28/17 15:53	MRK	

This report relates only to the sample as received by the laboratory, and may only be reproduced in full.

www.encolabs.com

ANALYTICAL RESULTS

Description: PO78-B3	**Lab Sample ID:** CA11841-04	**Received:** 08/17/17 11:00
Matrix: Soil	**Sampled:** 08/15/17 15:05	**Work Order:** CA11841
Project: NCDOT PSAs	**Sampled By:** Client	**% Solids:** 87.80

Volatile Organic Compounds by GCMS

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
Hexachlorobutadiene [87-68-3]^	0.00049	U	mg/kg dry	1.23	0.00049	0.0014	7H25021	EPA 8260B	08/28/17 15:53	MRK	
Isopropylbenzene [98-82-8]^	0.00021	U	mg/kg dry	1.23	0.00021	0.0014	7H25021	EPA 8260B	08/28/17 15:53	MRK	
m,p-Xylenes [108-38-3/106-42-3]^	0.00052	U	mg/kg dry	1.23	0.00052	0.0028	7H25021	EPA 8260B	08/28/17 15:53	MRK	
Methylene Chloride [75-09-2]^	0.0010	U	mg/kg dry	1.23	0.0010	0.0028	7H25021	EPA 8260B	08/28/17 15:53	MRK	
Methyl-tert-Butyl Ether [1634-04-4]^	0.00042	U	mg/kg dry	1.23	0.00042	0.0014	7H25021	EPA 8260B	08/28/17 15:53	MRK	
Naphthalene [91-20-3]^	0.00038	U	mg/kg dry	1.23	0.00038	0.0014	7H25021	EPA 8260B	08/28/17 15:53	MRK	
n-Butyl Benzene [104-51-8]^	0.00018	U	mg/kg dry	1.23	0.00018	0.0014	7H25021	EPA 8260B	08/28/17 15:53	MRK	
n-Propyl Benzene [103-65-1]^	0.00025	U	mg/kg dry	1.23	0.00025	0.0014	7H25021	EPA 8260B	08/28/17 15:53	MRK	
o-Xylene [95-47-6]^	0.00031	U	mg/kg dry	1.23	0.00031	0.0014	7H25021	EPA 8260B	08/28/17 15:53	MRK	
sec-Butylbenzene [135-98-8]^	0.0013	U	mg/kg dry	1.23	0.0013	0.0014	7H25021	EPA 8260B	08/28/17 15:53	MRK	
Styrene [100-42-5]^	0.0014	U	mg/kg dry	1.23	0.0014	0.0014	7H25021	EPA 8260B	08/28/17 15:53	MRK	
tert-Butylbenzene [98-06-6]^	0.00024	U	mg/kg dry	1.23	0.00024	0.0014	7H25021	EPA 8260B	08/28/17 15:53	MRK	
Tetrachloroethene [127-18-4]^	0.00039	U	mg/kg dry	1.23	0.00039	0.0014	7H25021	EPA 8260B	08/28/17 15:53	MRK	
Toluene [108-88-3]^	0.00034	U	mg/kg dry	1.23	0.00034	0.0014	7H25021	EPA 8260B	08/28/17 15:53	MRK	
trans-1,2-Dichloroethene [156-60-5]^	0.00052	U	mg/kg dry	1.23	0.00052	0.0014	7H25021	EPA 8260B	08/28/17 15:53	MRK	
trans-1,3-Dichloropropene [10061-02-6]^	0.00055	U	mg/kg dry	1.23	0.00055	0.0014	7H25021	EPA 8260B	08/28/17 15:53	MRK	
Trichloroethene [79-01-6]^	0.00045	U	mg/kg dry	1.23	0.00045	0.0014	7H25021	EPA 8260B	08/28/17 15:53	MRK	
Trichlorofluoromethane [75-69-4]^	0.00036	U	mg/kg dry	1.23	0.00036	0.0014	7H25021	EPA 8260B	08/28/17 15:53	MRK	
Vinyl chloride [75-01-4]^	0.00034	U	mg/kg dry	1.23	0.00034	0.0014	7H25021	EPA 8260B	08/28/17 15:53	MRK	
Xylenes (Total) [1330-20-7]^	0.00079	U	mg/kg dry	1.23	0.00079	0.0042	7H25021	EPA 8260B	08/28/17 15:53	MRK	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes
4-Bromofluorobenzene	*53*	*1.23*	*50.0*	*107 %*	*50-127*	*7H25021*	*EPA 8260B*	*08/28/17 15:53*	*MRK*	
Dibromofluoromethane	*57*	*1.23*	*50.0*	*113 %*	*52-128*	*7H25021*	*EPA 8260B*	*08/28/17 15:53*	*MRK*	
Toluene-d8	*54*	*1.23*	*50.0*	*109 %*	*57-124*	*7H25021*	*EPA 8260B*	*08/28/17 15:53*	*MRK*	

Metals by EPA 6000/7000 Series Methods

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
Arsenic [7440-38-2]^	**14.9**		mg/kg dry	1	0.364	0.569	7H17028	EPA 6010D	08/23/17 14:47	JMV	
Barium [7440-39-3]^	**31.1**		mg/kg dry	1	0.114	0.569	7H17028	EPA 6010D	08/23/17 14:47	JMV	
Cadmium [7440-43-9]^	**0.382**		mg/kg dry	1	0.0109	0.0569	7H17028	EPA 6010D	08/23/17 14:47	JMV	
Chromium [7440-47-3]^	**67.4**		mg/kg dry	1	0.114	0.569	7H17028	EPA 6010D	08/23/17 14:47	JMV	
Lead [7439-92-1]^	**163**		mg/kg dry	1	0.137	0.569	7H17028	EPA 6010D	08/23/17 14:47	JMV	
Mercury [7439-97-6]^	**0.0251**	J	mg/kg dry	1	0.0159	0.0273	7H24004	EPA 7471B	08/25/17 09:34	CMK	
Selenium [7782-49-2]^	0.467	U	mg/kg dry	1	0.467	0.569	7H17028	EPA 6010D	08/23/17 14:47	JMV	
Silver [7440-22-4]^	0.114	U	mg/kg dry	1	0.114	0.569	7H17028	EPA 6010D	08/23/17 14:47	JMV	

This report relates only to the sample as received by the laboratory, and may only be reproduced in full.

www.encolabs.com

ANALYTICAL RESULTS

Description: PO79-B3	**Lab Sample ID:** CA11841-05	**Received:** 08/17/17 11:00
Matrix: Soil	**Sampled:** 08/15/17 15:50	**Work Order:** CA11841
Project: NCDOT PSAs	**Sampled By:** Client	**% Solids:** 86.69

Volatile Organic Compounds by GCMS

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1,2-Tetrachloroethane [630-20-6]^	0.00017	U	mg/kg dry	1	0.00017	0.0010	7H25021	EPA 8260B	08/28/17 16:24	MRK	
1,1,1-Trichloroethane [71-55-6]^	0.00026	U	mg/kg dry	1	0.00026	0.0010	7H25021	EPA 8260B	08/28/17 16:24	MRK	
1,1,2,2-Tetrachloroethane [79-34-5]^	0.00021	U	mg/kg dry	1	0.00021	0.0010	7H25021	EPA 8260B	08/28/17 16:24	MRK	
1,1,2-Trichloroethane [79-00-5]^	0.00026	U	mg/kg dry	1	0.00026	0.0010	7H25021	EPA 8260B	08/28/17 16:24	MRK	
1,1-Dichloroethane [75-34-3]^	0.00026	U	mg/kg dry	1	0.00026	0.0010	7H25021	EPA 8260B	08/28/17 16:24	MRK	
1,1-Dichloroethene [75-35-4]^	0.00031	U	mg/kg dry	1	0.00031	0.0010	7H25021	EPA 8260B	08/28/17 16:24	MRK	
1,1-Dichloropropene [563-58-6]^	0.00017	U	mg/kg dry	1	0.00017	0.0010	7H25021	EPA 8260B	08/28/17 16:24	MRK	
1,2,3-Trichlorobenzene [87-61-6]^	0.00029	U	mg/kg dry	1	0.00029	0.0010	7H25021	EPA 8260B	08/28/17 16:24	MRK	
1,2,3-Trichloropropane [96-18-4]^	0.00067	U	mg/kg dry	1	0.00067	0.0010	7H25021	EPA 8260B	08/28/17 16:24	MRK	
1,2,4-Trichlorobenzene [120-82-1]^	0.00028	U	mg/kg dry	1	0.00028	0.0010	7H25021	EPA 8260B	08/28/17 16:24	MRK	
1,2,4-Trimethylbenzene [95-63-6]^	0.00018	U	mg/kg dry	1	0.00018	0.0010	7H25021	EPA 8260B	08/28/17 16:24	MRK	
1,2-Dibromo-3-chloropropane [96-12-8]^	0.00083	U	mg/kg dry	1	0.00083	0.0010	7H25021	EPA 8260B	08/28/17 16:24	MRK	
1,2-Dibromoethane [106-93-4]^	0.00048	U	mg/kg dry	1	0.00048	0.0010	7H25021	EPA 8260B	08/28/17 16:24	MRK	
1,2-Dichlorobenzene [95-50-1]^	0.00028	U	mg/kg dry	1	0.00028	0.0010	7H25021	EPA 8260B	08/28/17 16:24	MRK	
1,2-Dichloroethane [107-06-2]^	0.00043	U	mg/kg dry	1	0.00043	0.0010	7H25021	EPA 8260B	08/28/17 16:24	MRK	
1,2-Dichloropropane [78-87-5]^	0.00027	U	mg/kg dry	1	0.00027	0.0010	7H25021	EPA 8260B	08/28/17 16:24	MRK	
1,3,5-Trimethylbenzene [108-67-8]^	0.00021	U	mg/kg dry	1	0.00021	0.0010	7H25021	EPA 8260B	08/28/17 16:24	MRK	
1,3-Dichlorobenzene [541-73-1]^	0.00023	U	mg/kg dry	1	0.00023	0.0010	7H25021	EPA 8260B	08/28/17 16:24	MRK	
1,3-Dichloropropane [142-28-9]^	0.00030	U	mg/kg dry	1	0.00030	0.0010	7H25021	EPA 8260B	08/28/17 16:24	MRK	
1,4-Dichlorobenzene [106-46-7]^	0.00021	U	mg/kg dry	1	0.00021	0.0010	7H25021	EPA 8260B	08/28/17 16:24	MRK	
2,2-Dichloropropane [594-20-7]^	0.00024	U	mg/kg dry	1	0.00024	0.0010	7H25021	EPA 8260B	08/28/17 16:24	MRK	
2-Butanone [78-93-3]^	0.00082	U	mg/kg dry	1	0.00082	0.0052	7H25021	EPA 8260B	08/28/17 16:24	MRK	
2-Chloroethyl Vinyl Ether [110-75-8]^	0.00017	U	mg/kg dry	1	0.00017	0.0052	7H25021	EPA 8260B	08/28/17 16:24	MRK	
2-Chlorotoluene [95-49-8]^	0.00019	U	mg/kg dry	1	0.00019	0.0010	7H25021	EPA 8260B	08/28/17 16:24	MRK	
2-Hexanone [591-78-6]^	0.00078	U	mg/kg dry	1	0.00078	0.0052	7H25021	EPA 8260B	08/28/17 16:24	MRK	
4-Chlorotoluene [106-43-4]^	0.00027	U	mg/kg dry	1	0.00027	0.0010	7H25021	EPA 8260B	08/28/17 16:24	MRK	
4-Isopropyltoluene [99-87-6]^	0.00017	U	mg/kg dry	1	0.00017	0.0010	7H25021	EPA 8260B	08/28/17 16:24	MRK	
4-Methyl-2-pentanone [108-10-1]^	0.00060	U	mg/kg dry	1	0.00060	0.0052	7H25021	EPA 8260B	08/28/17 16:24	MRK	
Acetone [67-64-1]^	0.015	U	mg/kg dry	1	0.015	0.021	7H25021	EPA 8260B	08/28/17 16:24	MRK	
Benzene [71-43-2]^	0.00018	U	mg/kg dry	1	0.00018	0.0010	7H25021	EPA 8260B	08/28/17 16:24	MRK	
Bromobenzene [108-86-1]^	0.00023	U	mg/kg dry	1	0.00023	0.0010	7H25021	EPA 8260B	08/28/17 16:24	MRK	
Bromochloromethane [74-97-5]^	0.00043	U	mg/kg dry	1	0.00043	0.0010	7H25021	EPA 8260B	08/28/17 16:24	MRK	
Bromodichloromethane [75-27-4]^	0.00025	U	mg/kg dry	1	0.00025	0.0010	7H25021	EPA 8260B	08/28/17 16:24	MRK	
Bromoform [75-25-2]^	0.00047	U	mg/kg dry	1	0.00047	0.0010	7H25021	EPA 8260B	08/28/17 16:24	MRK	
Bromomethane [74-83-9]^	0.00033	U	mg/kg dry	1	0.00033	0.0010	7H25021	EPA 8260B	08/28/17 16:24	MRK	
Carbon disulfide [75-15-0]^	0.00041	U	mg/kg dry	1	0.00041	0.0052	7H25021	EPA 8260B	08/28/17 16:24	MRK	
Carbon Tetrachloride [56-23-5]^	0.00023	U	mg/kg dry	1	0.00023	0.0010	7H25021	EPA 8260B	08/28/17 16:24	MRK	
Chlorobenzene [108-90-7]^	0.00018	U	mg/kg dry	1	0.00018	0.0010	7H25021	EPA 8260B	08/28/17 16:24	MRK	
Chloroethane [75-00-3]^	0.00026	U	mg/kg dry	1	0.00026	0.0010	7H25021	EPA 8260B	08/28/17 16:24	MRK	
Chloroform [67-66-3]^	0.00019	U	mg/kg dry	1	0.00019	0.0010	7H25021	EPA 8260B	08/28/17 16:24	MRK	
Chloromethane [74-87-3]^	0.00022	U	mg/kg dry	1	0.00022	0.0010	7H25021	EPA 8260B	08/28/17 16:24	MRK	
cis-1,2-Dichloroethene [156-59-2]^	0.00024	U	mg/kg dry	1	0.00024	0.0010	7H25021	EPA 8260B	08/28/17 16:24	MRK	
cis-1,3-Dichloropropene [10061-01-5]^	0.00018	U	mg/kg dry	1	0.00018	0.0010	7H25021	EPA 8260B	08/28/17 16:24	MRK	
Dibromochloromethane [124-48-1]^	0.00037	U	mg/kg dry	1	0.00037	0.0010	7H25021	EPA 8260B	08/28/17 16:24	MRK	
Dibromomethane [74-95-3]^	0.00034	U	mg/kg dry	1	0.00034	0.0010	7H25021	EPA 8260B	08/28/17 16:24	MRK	
Dichlorodifluoromethane [75-71-8]^	0.00047	U	mg/kg dry	1	0.00047	0.0010	7H25021	EPA 8260B	08/28/17 16:24	MRK	
Ethylbenzene [100-41-4]^	0.00021	U	mg/kg dry	1	0.00021	0.0010	7H25021	EPA 8260B	08/28/17 16:24	MRK	

This report relates only to the sample as received by the laboratory, and may only be reproduced in full.

www.encolabs.com

ANALYTICAL RESULTS

Description: PO79-B3	**Lab Sample ID:** CA11841-05	**Received:** 08/17/17 11:00
Matrix: Soil	**Sampled:** 08/15/17 15:50	**Work Order:** CA11841
Project: NCDOT PSAs	**Sampled By:** Client	**% Solids:** 86.69

Volatile Organic Compounds by GCMS

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
Hexachlorobutadiene [87-68-3]^	0.00037	U	mg/kg dry	1	0.00037	0.0010	7H25021	EPA 8260B	08/28/17 16:24	MRK	
Isopropylbenzene [98-82-8]^	0.00016	U	mg/kg dry	1	0.00016	0.0010	7H25021	EPA 8260B	08/28/17 16:24	MRK	
m,p-Xylenes [108-38-3/106-42-3]^	0.00039	U	mg/kg dry	1	0.00039	0.0021	7H25021	EPA 8260B	08/28/17 16:24	MRK	
Methylene Chloride [75-09-2]^	0.00076	U	mg/kg dry	1	0.00076	0.0021	7H25021	EPA 8260B	08/28/17 16:24	MRK	
Methyl-tert-Butyl Ether [1634-04-4]^	0.00031	U	mg/kg dry	1	0.00031	0.0010	7H25021	EPA 8260B	08/28/17 16:24	MRK	
Naphthalene [91-20-3]^	0.00028	U	mg/kg dry	1	0.00028	0.0010	7H25021	EPA 8260B	08/28/17 16:24	MRK	
n-Butyl Benzene [104-51-8]^	0.00014	U	mg/kg dry	1	0.00014	0.0010	7H25021	EPA 8260B	08/28/17 16:24	MRK	
n-Propyl Benzene [103-65-1]^	0.00019	U	mg/kg dry	1	0.00019	0.0010	7H25021	EPA 8260B	08/28/17 16:24	MRK	
o-Xylene [95-47-6]^	0.00023	U	mg/kg dry	1	0.00023	0.0010	7H25021	EPA 8260B	08/28/17 16:24	MRK	
sec-Butylbenzene [135-98-8]^	0.00099	U	mg/kg dry	1	0.00099	0.0010	7H25021	EPA 8260B	08/28/17 16:24	MRK	
Styrene [100-42-5]^	0.0010	U	mg/kg dry	1	0.0010	0.0010	7H25021	EPA 8260B	08/28/17 16:24	MRK	
tert-Butylbenzene [98-06-6]^	0.00018	U	mg/kg dry	1	0.00018	0.0010	7H25021	EPA 8260B	08/28/17 16:24	MRK	
Tetrachloroethene [127-18-4]^	0.00029	U	mg/kg dry	1	0.00029	0.0010	7H25021	EPA 8260B	08/28/17 16:24	MRK	
Toluene [108-88-3]^	0.00025	U	mg/kg dry	1	0.00025	0.0010	7H25021	EPA 8260B	08/28/17 16:24	MRK	
trans-1,2-Dichloroethene [156-60-5]^	0.00039	U	mg/kg dry	1	0.00039	0.0010	7H25021	EPA 8260B	08/28/17 16:24	MRK	
trans-1,3-Dichloropropene [10061-02-6]^	0.00041	U	mg/kg dry	1	0.00041	0.0010	7H25021	EPA 8260B	08/28/17 16:24	MRK	
Trichloroethene [79-01-6]^	0.00033	U	mg/kg dry	1	0.00033	0.0010	7H25021	EPA 8260B	08/28/17 16:24	MRK	
Trichlorofluoromethane [75-69-4]^	0.00027	U	mg/kg dry	1	0.00027	0.0010	7H25021	EPA 8260B	08/28/17 16:24	MRK	
Vinyl chloride [75-01-4]^	0.00025	U	mg/kg dry	1	0.00025	0.0010	7H25021	EPA 8260B	08/28/17 16:24	MRK	
Xylenes (Total) [1330-20-7]^	0.00059	U	mg/kg dry	1	0.00059	0.0031	7H25021	EPA 8260B	08/28/17 16:24	MRK	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes
4-Bromofluorobenzene	*53*	*1*	*50.0*	*107 %*	*50-127*	*7H25021*	*EPA 8260B*	*08/28/17 16:24*	*MRK*	
Dibromofluoromethane	*55*	*1*	*50.0*	*111 %*	*52-128*	*7H25021*	*EPA 8260B*	*08/28/17 16:24*	*MRK*	
Toluene-d8	*55*	*1*	*50.0*	*109 %*	*57-124*	*7H25021*	*EPA 8260B*	*08/28/17 16:24*	*MRK*	

Metals by EPA 6000/7000 Series Methods

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
Arsenic [7440-38-2]^	**1.47**		mg/kg dry	1	0.369	0.577	7H17028	EPA 6010D	08/23/17 14:49	JMV	
Barium [7440-39-3]^	**36.6**		mg/kg dry	1	0.115	0.577	7H17028	EPA 6010D	08/23/17 14:49	JMV	
Cadmium [7440-43-9]^	**0.497**		mg/kg dry	1	0.0111	0.0577	7H17028	EPA 6010D	08/23/17 14:49	JMV	
Chromium [7440-47-3]^	**148**		mg/kg dry	1	0.115	0.577	7H17028	EPA 6010D	08/23/17 14:49	JMV	
Lead [7439-92-1]^	**16.0**		mg/kg dry	1	0.138	0.577	7H17028	EPA 6010D	08/23/17 14:49	JMV	
Mercury [7439-97-6]^	**0.0191**	J	mg/kg dry	1	0.0162	0.0277	7H24004	EPA 7471B	08/25/17 09:41	CMK	
Selenium [7782-49-2]^	0.473	U	mg/kg dry	1	0.473	0.577	7H17028	EPA 6010D	08/23/17 14:49	JMV	
Silver [7440-22-4]^	**2.43**		mg/kg dry	1	0.115	0.577	7H17028	EPA 6010D	08/23/17 14:49	JMV	

This report relates only to the sample as received by the laboratory, and may only be reproduced in full.

www.encolabs.com

ANALYTICAL RESULTS

Description: PO79-B7	**Lab Sample ID:** CA11841-06	**Received:** 08/17/17 11:00
Matrix: Soil	**Sampled:** 08/15/17 16:10	**Work Order:** CA11841
Project: NCDOT PSAs	**Sampled By:** Client	**% Solids:** 83.53

Volatile Organic Compounds by GCMS

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1,2-Tetrachloroethane [630-20-6]^	0.00016	U	mg/kg dry	0.852	0.00016	0.0010	7H25021	EPA 8260B	08/28/17 16:55	MRK	
1,1,1-Trichloroethane [71-55-6]^	0.00025	U	mg/kg dry	0.852	0.00025	0.0010	7H25021	EPA 8260B	08/28/17 16:55	MRK	
1,1,2,2-Tetrachloroethane [79-34-5]^	0.00020	U	mg/kg dry	0.852	0.00020	0.0010	7H25021	EPA 8260B	08/28/17 16:55	MRK	
1,1,2-Trichloroethane [79-00-5]^	0.00025	U	mg/kg dry	0.852	0.00025	0.0010	7H25021	EPA 8260B	08/28/17 16:55	MRK	
1,1-Dichloroethane [75-34-3]^	0.00025	U	mg/kg dry	0.852	0.00025	0.0010	7H25021	EPA 8260B	08/28/17 16:55	MRK	
1,1-Dichloroethene [75-35-4]^	0.00031	U	mg/kg dry	0.852	0.00031	0.0010	7H25021	EPA 8260B	08/28/17 16:55	MRK	
1,1-Dichloropropene [563-58-6]^	0.00016	U	mg/kg dry	0.852	0.00016	0.0010	7H25021	EPA 8260B	08/28/17 16:55	MRK	
1,2,3-Trichlorobenzene [87-61-6]^	0.00029	U	mg/kg dry	0.852	0.00029	0.0010	7H25021	EPA 8260B	08/28/17 16:55	MRK	
1,2,3-Trichloropropane [96-18-4]^	0.00065	U	mg/kg dry	0.852	0.00065	0.0010	7H25021	EPA 8260B	08/28/17 16:55	MRK	
1,2,4-Trichlorobenzene [120-82-1]^	0.00028	U	mg/kg dry	0.852	0.00028	0.0010	7H25021	EPA 8260B	08/28/17 16:55	MRK	
1,2,4-Trimethylbenzene [95-63-6]^	0.00017	U	mg/kg dry	0.852	0.00017	0.0010	7H25021	EPA 8260B	08/28/17 16:55	MRK	
1,2-Dibromo-3-chloropropane [96-12-8]^	0.00081	U	mg/kg dry	0.852	0.00081	0.0010	7H25021	EPA 8260B	08/28/17 16:55	MRK	
1,2-Dibromoethane [106-93-4]^	0.00047	U	mg/kg dry	0.852	0.00047	0.0010	7H25021	EPA 8260B	08/28/17 16:55	MRK	
1,2-Dichlorobenzene [95-50-1]^	0.00028	U	mg/kg dry	0.852	0.00028	0.0010	7H25021	EPA 8260B	08/28/17 16:55	MRK	
1,2-Dichloroethane [107-06-2]^	0.00042	U	mg/kg dry	0.852	0.00042	0.0010	7H25021	EPA 8260B	08/28/17 16:55	MRK	
1,2-Dichloropropane [78-87-5]^	0.00027	U	mg/kg dry	0.852	0.00027	0.0010	7H25021	EPA 8260B	08/28/17 16:55	MRK	
1,3,5-Trimethylbenzene [108-67-8]^	0.00020	U	mg/kg dry	0.852	0.00020	0.0010	7H25021	EPA 8260B	08/28/17 16:55	MRK	
1,3-Dichlorobenzene [541-73-1]^	0.00022	U	mg/kg dry	0.852	0.00022	0.0010	7H25021	EPA 8260B	08/28/17 16:55	MRK	
1,3-Dichloropropane [142-28-9]^	0.00030	U	mg/kg dry	0.852	0.00030	0.0010	7H25021	EPA 8260B	08/28/17 16:55	MRK	
1,4-Dichlorobenzene [106-46-7]^	0.00020	U	mg/kg dry	0.852	0.00020	0.0010	7H25021	EPA 8260B	08/28/17 16:55	MRK	
2,2-Dichloropropane [594-20-7]^	0.00023	U	mg/kg dry	0.852	0.00023	0.0010	7H25021	EPA 8260B	08/28/17 16:55	MRK	
2-Butanone [78-93-3]^	0.00080	U	mg/kg dry	0.852	0.00080	0.0051	7H25021	EPA 8260B	08/28/17 16:55	MRK	
2-Chloroethyl Vinyl Ether [110-75-8]^	0.00016	U	mg/kg dry	0.852	0.00016	0.0051	7H25021	EPA 8260B	08/28/17 16:55	MRK	
2-Chlorotoluene [95-49-8]^	0.00018	U	mg/kg dry	0.852	0.00018	0.0010	7H25021	EPA 8260B	08/28/17 16:55	MRK	
2-Hexanone [591-78-6]^	0.00076	U	mg/kg dry	0.852	0.00076	0.0051	7H25021	EPA 8260B	08/28/17 16:55	MRK	
4-Chlorotoluene [106-43-4]^	0.00027	U	mg/kg dry	0.852	0.00027	0.0010	7H25021	EPA 8260B	08/28/17 16:55	MRK	
4-Isopropyltoluene [99-87-6]^	0.00016	U	mg/kg dry	0.852	0.00016	0.0010	7H25021	EPA 8260B	08/28/17 16:55	MRK	
4-Methyl-2-pentanone [108-10-1]^	0.00058	U	mg/kg dry	0.852	0.00058	0.0051	7H25021	EPA 8260B	08/28/17 16:55	MRK	
Acetone [67-64-1]^	0.014	U	mg/kg dry	0.852	0.014	0.020	7H25021	EPA 8260B	08/28/17 16:55	MRK	
Benzene [71-43-2]^	0.00017	U	mg/kg dry	0.852	0.00017	0.0010	7H25021	EPA 8260B	08/28/17 16:55	MRK	
Bromobenzene [108-86-1]^	0.00022	U	mg/kg dry	0.852	0.00022	0.0010	7H25021	EPA 8260B	08/28/17 16:55	MRK	
Bromochloromethane [74-97-5]^	0.00042	U	mg/kg dry	0.852	0.00042	0.0010	7H25021	EPA 8260B	08/28/17 16:55	MRK	
Bromodichloromethane [75-27-4]^	0.00024	U	mg/kg dry	0.852	0.00024	0.0010	7H25021	EPA 8260B	08/28/17 16:55	MRK	
Bromoform [75-25-2]^	0.00046	U	mg/kg dry	0.852	0.00046	0.0010	7H25021	EPA 8260B	08/28/17 16:55	MRK	
Bromomethane [74-83-9]^	0.00033	U	mg/kg dry	0.852	0.00033	0.0010	7H25021	EPA 8260B	08/28/17 16:55	MRK	
Carbon disulfide [75-15-0]^	0.00040	U	mg/kg dry	0.852	0.00040	0.0051	7H25021	EPA 8260B	08/28/17 16:55	MRK	
Carbon Tetrachloride [56-23-5]^	0.00022	U	mg/kg dry	0.852	0.00022	0.0010	7H25021	EPA 8260B	08/28/17 16:55	MRK	
Chlorobenzene [108-90-7]^	0.00017	U	mg/kg dry	0.852	0.00017	0.0010	7H25021	EPA 8260B	08/28/17 16:55	MRK	
Chloroethane [75-00-3]^	0.00025	U	mg/kg dry	0.852	0.00025	0.0010	7H25021	EPA 8260B	08/28/17 16:55	MRK	
Chloroform [67-66-3]^	0.00018	U	mg/kg dry	0.852	0.00018	0.0010	7H25021	EPA 8260B	08/28/17 16:55	MRK	
Chloromethane [74-87-3]^	0.00021	U	mg/kg dry	0.852	0.00021	0.0010	7H25021	EPA 8260B	08/28/17 16:55	MRK	
cis-1,2-Dichloroethene [156-59-2]^	0.00023	U	mg/kg dry	0.852	0.00023	0.0010	7H25021	EPA 8260B	08/28/17 16:55	MRK	
cis-1,3-Dichloropropene [10061-01-5]^	0.00017	U	mg/kg dry	0.852	0.00017	0.0010	7H25021	EPA 8260B	08/28/17 16:55	MRK	
Dibromochloromethane [124-48-1]^	0.00036	U	mg/kg dry	0.852	0.00036	0.0010	7H25021	EPA 8260B	08/28/17 16:55	MRK	
Dibromomethane [74-95-3]^	0.00034	U	mg/kg dry	0.852	0.00034	0.0010	7H25021	EPA 8260B	08/28/17 16:55	MRK	
Dichlorodifluoromethane [75-71-8]^	0.00046	U	mg/kg dry	0.852	0.00046	0.0010	7H25021	EPA 8260B	08/28/17 16:55	MRK	
Ethylbenzene [100-41-4]^	0.00020	U	mg/kg dry	0.852	0.00020	0.0010	7H25021	EPA 8260B	08/28/17 16:55	MRK	

This report relates only to the sample as received by the laboratory, and may only be reproduced in full.

www.encolabs.com

ANALYTICAL RESULTS

Description: PO79-B7	**Lab Sample ID:** CA11841-06	**Received:** 08/17/17 11:00
Matrix: Soil	**Sampled:** 08/15/17 16:10	**Work Order:** CA11841
Project: NCDOT PSAs	**Sampled By:** Client	**% Solids:** 83.53

Volatile Organic Compounds by GCMS

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
Hexachlorobutadiene [87-68-3]^	0.00036	U	mg/kg dry	0.852	0.00036	0.0010	7H25021	EPA 8260B	08/28/17 16:55	MRK	
Isopropylbenzene [98-82-8]^	0.00015	U	mg/kg dry	0.852	0.00015	0.0010	7H25021	EPA 8260B	08/28/17 16:55	MRK	
m,p-Xylenes [108-38-3/106-42-3]^	0.00038	U	mg/kg dry	0.852	0.00038	0.0020	7H25021	EPA 8260B	08/28/17 16:55	MRK	
Methylene Chloride [75-09-2]^	0.00074	U	mg/kg dry	0.852	0.00074	0.0020	7H25021	EPA 8260B	08/28/17 16:55	MRK	
Methyl-tert-Butyl Ether [1634-04-4]^	0.00031	U	mg/kg dry	0.852	0.00031	0.0010	7H25021	EPA 8260B	08/28/17 16:55	MRK	
Naphthalene [91-20-3]^	0.00028	U	mg/kg dry	0.852	0.00028	0.0010	7H25021	EPA 8260B	08/28/17 16:55	MRK	
n-Butyl Benzene [104-51-8]^	0.00013	U	mg/kg dry	0.852	0.00013	0.0010	7H25021	EPA 8260B	08/28/17 16:55	MRK	
n-Propyl Benzene [103-65-1]^	0.00018	U	mg/kg dry	0.852	0.00018	0.0010	7H25021	EPA 8260B	08/28/17 16:55	MRK	
o-Xylene [95-47-6]^	0.00022	U	mg/kg dry	0.852	0.00022	0.0010	7H25021	EPA 8260B	08/28/17 16:55	MRK	
sec-Butylbenzene [135-98-8]^	0.00097	U	mg/kg dry	0.852	0.00097	0.0010	7H25021	EPA 8260B	08/28/17 16:55	MRK	
Styrene [100-42-5]^	0.0010	U	mg/kg dry	0.852	0.0010	0.0010	7H25021	EPA 8260B	08/28/17 16:55	MRK	
tert-Butylbenzene [98-06-6]^	0.00017	U	mg/kg dry	0.852	0.00017	0.0010	7H25021	EPA 8260B	08/28/17 16:55	MRK	
Tetrachloroethene [127-18-4]^	0.00029	U	mg/kg dry	0.852	0.00029	0.0010	7H25021	EPA 8260B	08/28/17 16:55	MRK	
Toluene [108-88-3]^	0.00024	U	mg/kg dry	0.852	0.00024	0.0010	7H25021	EPA 8260B	08/28/17 16:55	MRK	
trans-1,2-Dichloroethene [156-60-5]^	0.00038	U	mg/kg dry	0.852	0.00038	0.0010	7H25021	EPA 8260B	08/28/17 16:55	MRK	
trans-1,3-Dichloropropene [10061-02-6]^	0.00040	U	mg/kg dry	0.852	0.00040	0.0010	7H25021	EPA 8260B	08/28/17 16:55	MRK	
Trichloroethene [79-01-6]^	0.00033	U	mg/kg dry	0.852	0.00033	0.0010	7H25021	EPA 8260B	08/28/17 16:55	MRK	
Trichlorofluoromethane [75-69-4]^	0.00027	U	mg/kg dry	0.852	0.00027	0.0010	7H25021	EPA 8260B	08/28/17 16:55	MRK	
Vinyl chloride [75-01-4]^	0.00024	U	mg/kg dry	0.852	0.00024	0.0010	7H25021	EPA 8260B	08/28/17 16:55	MRK	
Xylenes (Total) [1330-20-7]^	0.00057	U	mg/kg dry	0.852	0.00057	0.0031	7H25021	EPA 8260B	08/28/17 16:55	MRK	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes
4-Bromofluorobenzene	*53*	*0.852*	*50.0*	*106 %*	*50-127*	*7H25021*	*EPA 8260B*	*08/28/17 16:55*	*MRK*	
Dibromofluoromethane	*55*	*0.852*	*50.0*	*110 %*	*52-128*	*7H25021*	*EPA 8260B*	*08/28/17 16:55*	*MRK*	
Toluene-d8	*56*	*0.852*	*50.0*	*111 %*	*57-124*	*7H25021*	*EPA 8260B*	*08/28/17 16:55*	*MRK*	

Metals by EPA 6000/7000 Series Methods

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
Arsenic [7440-38-2]^	**7.33**		mg/kg dry	1	0.383	0.599	7H17028	EPA 6010D	08/23/17 14:51	JMV	
Barium [7440-39-3]^	**28.1**		mg/kg dry	1	0.120	0.599	7H17028	EPA 6010D	08/23/17 14:51	JMV	
Cadmium [7440-43-9]^	**0.437**		mg/kg dry	1	0.0115	0.0599	7H17028	EPA 6010D	08/23/17 14:51	JMV	
Chromium [7440-47-3]^	**227**		mg/kg dry	1	0.120	0.599	7H17028	EPA 6010D	08/23/17 14:51	JMV	
Lead [7439-92-1]^	**22.3**		mg/kg dry	1	0.144	0.599	7H17028	EPA 6010D	08/23/17 14:51	JMV	
Mercury [7439-97-6]^	**0.0213**	J	mg/kg dry	0.857	0.0144	0.0246	7H24004	EPA 7471B	08/25/17 09:43	CMK	
Selenium [7782-49-2]^	0.491	U	mg/kg dry	1	0.491	0.599	7H17028	EPA 6010D	08/23/17 14:51	JMV	
Silver [7440-22-4]^	**4.04**		mg/kg dry	1	0.120	0.599	7H17028	EPA 6010D	08/23/17 14:51	JMV	

This report relates only to the sample as received by the laboratory, and may only be reproduced in full.

www.encolabs.com

ANALYTICAL RESULTS

Description: PO79-B9	**Lab Sample ID:** CA11841-07	**Received:** 08/17/17 11:00
Matrix: Soil	**Sampled:** 08/15/17 16:25	**Work Order:** CA11841
Project: NCDOT PSAs	**Sampled By:** Client	**% Solids:** 88.04

Volatile Organic Compounds by GCMS

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1,2-Tetrachloroethane [630-20-6]^	0.00018	U	mg/kg dry	1	0.00018	0.0011	7H25021	EPA 8260B	08/28/17 17:25	MRK	
1,1,1-Trichloroethane [71-55-6]^	0.00028	U	mg/kg dry	1	0.00028	0.0011	7H25021	EPA 8260B	08/28/17 17:25	MRK	
1,1,2,2-Tetrachloroethane [79-34-5]^	0.00023	U	mg/kg dry	1	0.00023	0.0011	7H25021	EPA 8260B	08/28/17 17:25	MRK	
1,1,2-Trichloroethane [79-00-5]^	0.00028	U	mg/kg dry	1	0.00028	0.0011	7H25021	EPA 8260B	08/28/17 17:25	MRK	
1,1-Dichloroethane [75-34-3]^	0.00028	U	mg/kg dry	1	0.00028	0.0011	7H25021	EPA 8260B	08/28/17 17:25	MRK	
1,1-Dichloroethene [75-35-4]^	0.00034	U	mg/kg dry	1	0.00034	0.0011	7H25021	EPA 8260B	08/28/17 17:25	MRK	
1,1-Dichloropropene [563-58-6]^	0.00018	U	mg/kg dry	1	0.00018	0.0011	7H25021	EPA 8260B	08/28/17 17:25	MRK	
1,2,3-Trichlorobenzene [87-61-6]^	0.00032	U	mg/kg dry	1	0.00032	0.0011	7H25021	EPA 8260B	08/28/17 17:25	MRK	
1,2,3-Trichloropropane [96-18-4]^	0.00073	U	mg/kg dry	1	0.00073	0.0011	7H25021	EPA 8260B	08/28/17 17:25	MRK	
1,2,4-Trichlorobenzene [120-82-1]^	0.00031	U	mg/kg dry	1	0.00031	0.0011	7H25021	EPA 8260B	08/28/17 17:25	MRK	
1,2,4-Trimethylbenzene [95-63-6]^	0.00019	U	mg/kg dry	1	0.00019	0.0011	7H25021	EPA 8260B	08/28/17 17:25	MRK	
1,2-Dibromo-3-chloropropane [96-12-8]^	0.00090	U	mg/kg dry	1	0.00090	0.0011	7H25021	EPA 8260B	08/28/17 17:25	MRK	
1,2-Dibromoethane [106-93-4]^	0.00052	U	mg/kg dry	1	0.00052	0.0011	7H25021	EPA 8260B	08/28/17 17:25	MRK	
1,2-Dichlorobenzene [95-50-1]^	0.00031	U	mg/kg dry	1	0.00031	0.0011	7H25021	EPA 8260B	08/28/17 17:25	MRK	
1,2-Dichloroethane [107-06-2]^	0.00047	U	mg/kg dry	1	0.00047	0.0011	7H25021	EPA 8260B	08/28/17 17:25	MRK	
1,2-Dichloropropane [78-87-5]^	0.00030	U	mg/kg dry	1	0.00030	0.0011	7H25021	EPA 8260B	08/28/17 17:25	MRK	
1,3,5-Trimethylbenzene [108-67-8]^	0.00023	U	mg/kg dry	1	0.00023	0.0011	7H25021	EPA 8260B	08/28/17 17:25	MRK	
1,3-Dichlorobenzene [541-73-1]^	0.00025	U	mg/kg dry	1	0.00025	0.0011	7H25021	EPA 8260B	08/28/17 17:25	MRK	
1,3-Dichloropropane [142-28-9]^	0.00033	U	mg/kg dry	1	0.00033	0.0011	7H25021	EPA 8260B	08/28/17 17:25	MRK	
1,4-Dichlorobenzene [106-46-7]^	0.00023	U	mg/kg dry	1	0.00023	0.0011	7H25021	EPA 8260B	08/28/17 17:25	MRK	
2,2-Dichloropropane [594-20-7]^	0.00026	U	mg/kg dry	1	0.00026	0.0011	7H25021	EPA 8260B	08/28/17 17:25	MRK	
2-Butanone [78-93-3]^	0.00089	U	mg/kg dry	1	0.00089	0.0057	7H25021	EPA 8260B	08/28/17 17:25	MRK	
2-Chloroethyl Vinyl Ether [110-75-8]^	0.00018	U	mg/kg dry	1	0.00018	0.0057	7H25021	EPA 8260B	08/28/17 17:25	MRK	
2-Chlorotoluene [95-49-8]^	0.00020	U	mg/kg dry	1	0.00020	0.0011	7H25021	EPA 8260B	08/28/17 17:25	MRK	
2-Hexanone [591-78-6]^	0.00085	U	mg/kg dry	1	0.00085	0.0057	7H25021	EPA 8260B	08/28/17 17:25	MRK	
4-Chlorotoluene [106-43-4]^	0.00030	U	mg/kg dry	1	0.00030	0.0011	7H25021	EPA 8260B	08/28/17 17:25	MRK	
4-Isopropyltoluene [99-87-6]^	0.00018	U	mg/kg dry	1	0.00018	0.0011	7H25021	EPA 8260B	08/28/17 17:25	MRK	
4-Methyl-2-pentanone [108-10-1]^	0.00065	U	mg/kg dry	1	0.00065	0.0057	7H25021	EPA 8260B	08/28/17 17:25	MRK	
Acetone [67-64-1]^	0.016	U	mg/kg dry	1	0.016	0.023	7H25021	EPA 8260B	08/28/17 17:25	MRK	
Benzene [71-43-2]^	0.00019	U	mg/kg dry	1	0.00019	0.0011	7H25021	EPA 8260B	08/28/17 17:25	MRK	
Bromobenzene [108-86-1]^	0.00025	U	mg/kg dry	1	0.00025	0.0011	7H25021	EPA 8260B	08/28/17 17:25	MRK	
Bromochloromethane [74-97-5]^	0.00047	U	mg/kg dry	1	0.00047	0.0011	7H25021	EPA 8260B	08/28/17 17:25	MRK	
Bromodichloromethane [75-27-4]^	0.00027	U	mg/kg dry	1	0.00027	0.0011	7H25021	EPA 8260B	08/28/17 17:25	MRK	
Bromoform [75-25-2]^	0.00051	U	mg/kg dry	1	0.00051	0.0011	7H25021	EPA 8260B	08/28/17 17:25	MRK	
Bromomethane [74-83-9]^	0.00036	U	mg/kg dry	1	0.00036	0.0011	7H25021	EPA 8260B	08/28/17 17:25	MRK	
Carbon disulfide [75-15-0]^	0.00044	U	mg/kg dry	1	0.00044	0.0057	7H25021	EPA 8260B	08/28/17 17:25	MRK	
Carbon Tetrachloride [56-23-5]^	0.00025	U	mg/kg dry	1	0.00025	0.0011	7H25021	EPA 8260B	08/28/17 17:25	MRK	
Chlorobenzene [108-90-7]^	0.00019	U	mg/kg dry	1	0.00019	0.0011	7H25021	EPA 8260B	08/28/17 17:25	MRK	
Chloroethane [75-00-3]^	0.00028	U	mg/kg dry	1	0.00028	0.0011	7H25021	EPA 8260B	08/28/17 17:25	MRK	
Chloroform [67-66-3]^	0.00020	U	mg/kg dry	1	0.00020	0.0011	7H25021	EPA 8260B	08/28/17 17:25	MRK	
Chloromethane [74-87-3]^	0.00024	U	mg/kg dry	1	0.00024	0.0011	7H25021	EPA 8260B	08/28/17 17:25	MRK	
cis-1,2-Dichloroethene [156-59-2]^	0.00026	U	mg/kg dry	1	0.00026	0.0011	7H25021	EPA 8260B	08/28/17 17:25	MRK	
cis-1,3-Dichloropropene [10061-01-5]^	0.00019	U	mg/kg dry	1	0.00019	0.0011	7H25021	EPA 8260B	08/28/17 17:25	MRK	
Dibromochloromethane [124-48-1]^	0.00040	U	mg/kg dry	1	0.00040	0.0011	7H25021	EPA 8260B	08/28/17 17:25	MRK	
Dibromomethane [74-95-3]^	0.00037	U	mg/kg dry	1	0.00037	0.0011	7H25021	EPA 8260B	08/28/17 17:25	MRK	
Dichlorodifluoromethane [75-71-8]^	0.00051	U	mg/kg dry	1	0.00051	0.0011	7H25021	EPA 8260B	08/28/17 17:25	MRK	
Ethylbenzene [100-41-4]^	0.00023	U	mg/kg dry	1	0.00023	0.0011	7H25021	EPA 8260B	08/28/17 17:25	MRK	

This report relates only to the sample as received by the laboratory, and may only be reproduced in full.

www.encolabs.com

ANALYTICAL RESULTS

Description: PO79-B9	**Lab Sample ID:** CA11841-07	**Received:** 08/17/17 11:00
Matrix: Soil	**Sampled:** 08/15/17 16:25	**Work Order:** CA11841
Project: NCDOT PSAs	**Sampled By:** Client	**% Solids:** 88.04

Volatile Organic Compounds by GCMS

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
Hexachlorobutadiene [87-68-3]^	0.00040	U	mg/kg dry	1	0.00040	0.0011	7H25021	EPA 8260B	08/28/17 17:25	MRK	
Isopropylbenzene [98-82-8]^	0.00017	U	mg/kg dry	1	0.00017	0.0011	7H25021	EPA 8260B	08/28/17 17:25	MRK	
m,p-Xylenes [108-38-3/106-42-3]^	0.00042	U	mg/kg dry	1	0.00042	0.0023	7H25021	EPA 8260B	08/28/17 17:25	MRK	
Methylene Chloride [75-09-2]^	0.00083	U	mg/kg dry	1	0.00083	0.0023	7H25021	EPA 8260B	08/28/17 17:25	MRK	
Methyl-tert-Butyl Ether [1634-04-4]^	0.00034	U	mg/kg dry	1	0.00034	0.0011	7H25021	EPA 8260B	08/28/17 17:25	MRK	
Naphthalene [91-20-3]^	0.00031	U	mg/kg dry	1	0.00031	0.0011	7H25021	EPA 8260B	08/28/17 17:25	MRK	
n-Butyl Benzene [104-51-8]^	0.00015	U	mg/kg dry	1	0.00015	0.0011	7H25021	EPA 8260B	08/28/17 17:25	MRK	
n-Propyl Benzene [103-65-1]^	0.00020	U	mg/kg dry	1	0.00020	0.0011	7H25021	EPA 8260B	08/28/17 17:25	MRK	
o-Xylene [95-47-6]^	0.00025	U	mg/kg dry	1	0.00025	0.0011	7H25021	EPA 8260B	08/28/17 17:25	MRK	
sec-Butylbenzene [135-98-8]^	0.0011	U	mg/kg dry	1	0.0011	0.0011	7H25021	EPA 8260B	08/28/17 17:25	MRK	
Styrene [100-42-5]^	0.0011	U	mg/kg dry	1	0.0011	0.0011	7H25021	EPA 8260B	08/28/17 17:25	MRK	
tert-Butylbenzene [98-06-6]^	0.00019	U	mg/kg dry	1	0.00019	0.0011	7H25021	EPA 8260B	08/28/17 17:25	MRK	
Tetrachloroethene [127-18-4]^	0.00032	U	mg/kg dry	1	0.00032	0.0011	7H25021	EPA 8260B	08/28/17 17:25	MRK	
Toluene [108-88-3]^	0.00027	U	mg/kg dry	1	0.00027	0.0011	7H25021	EPA 8260B	08/28/17 17:25	MRK	
trans-1,2-Dichloroethene [156-60-5]^	0.00042	U	mg/kg dry	1	0.00042	0.0011	7H25021	EPA 8260B	08/28/17 17:25	MRK	
trans-1,3-Dichloropropene [10061-02-6]^	0.00044	U	mg/kg dry	1	0.00044	0.0011	7H25021	EPA 8260B	08/28/17 17:25	MRK	
Trichloroethene [79-01-6]^	0.00036	U	mg/kg dry	1	0.00036	0.0011	7H25021	EPA 8260B	08/28/17 17:25	MRK	
Trichlorofluoromethane [75-69-4]^	0.00030	U	mg/kg dry	1	0.00030	0.0011	7H25021	EPA 8260B	08/28/17 17:25	MRK	
Vinyl chloride [75-01-4]^	0.00027	U	mg/kg dry	1	0.00027	0.0011	7H25021	EPA 8260B	08/28/17 17:25	MRK	
Xylenes (Total) [1330-20-7]^	0.00064	U	mg/kg dry	1	0.00064	0.0034	7H25021	EPA 8260B	08/28/17 17:25	MRK	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes
4-Bromofluorobenzene	*53*	*1*	*50.0*	*106 %*	*50-127*	*7H25021*	*EPA 8260B*	*08/28/17 17:25*	*MRK*	
Dibromofluoromethane	*57*	*1*	*50.0*	*115 %*	*52-128*	*7H25021*	*EPA 8260B*	*08/28/17 17:25*	*MRK*	
Toluene-d8	*55*	*1*	*50.0*	*110 %*	*57-124*	*7H25021*	*EPA 8260B*	*08/28/17 17:25*	*MRK*	

Metals by EPA 6000/7000 Series Methods

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
Arsenic [7440-38-2]^	**8.55**		mg/kg dry	1	0.363	0.568	7H17028	EPA 6010D	08/23/17 15:01	JMV	
Barium [7440-39-3]^	**49.1**		mg/kg dry	1	0.114	0.568	7H17028	EPA 6010D	08/23/17 15:01	JMV	
Cadmium [7440-43-9]^	**0.247**		mg/kg dry	1	0.0109	0.0568	7H17028	EPA 6010D	08/23/17 15:01	JMV	
Chromium [7440-47-3]^	**172**		mg/kg dry	1	0.114	0.568	7H17028	EPA 6010D	08/23/17 15:01	JMV	
Lead [7439-92-1]^	**32.0**		mg/kg dry	1	0.136	0.568	7H17028	EPA 6010D	08/23/17 15:01	JMV	
Mercury [7439-97-6]^	**0.0371**		mg/kg dry	1	0.0159	0.0273	7H24004	EPA 7471B	08/25/17 09:45	CMK	
Selenium [7782-49-2]^	0.466	U	mg/kg dry	1	0.466	0.568	7H17028	EPA 6010D	08/23/17 15:01	JMV	
Silver [7440-22-4]^	**2.68**		mg/kg dry	1	0.114	0.568	7H17028	EPA 6010D	08/23/17 15:01	JMV	

This report relates only to the sample as received by the laboratory, and may only be reproduced in full.

www.encolabs.com

ANALYTICAL RESULTS

Description: PO79-B5	**Lab Sample ID:** CA11841-08	**Received:** 08/17/17 11:00
Matrix: Soil	**Sampled:** 08/15/17 16:40	**Work Order:** CA11841
Project: NCDOT PSAs	**Sampled By:** Client	**% Solids:** 89.12

Volatile Organic Compounds by GCMS

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1,2-Tetrachloroethane [630-20-6]^	0.00018	U	mg/kg dry	1	0.00018	0.0011	7H23004	EPA 8260B	08/23/17 16:10	MRK	
1,1,1-Trichloroethane [71-55-6]^	0.00028	U	mg/kg dry	1	0.00028	0.0011	7H23004	EPA 8260B	08/23/17 16:10	MRK	
1,1,2,2-Tetrachloroethane [79-34-5]^	0.00022	U	mg/kg dry	1	0.00022	0.0011	7H23004	EPA 8260B	08/23/17 16:10	MRK	
1,1,2-Trichloroethane [79-00-5]^	0.00028	U	mg/kg dry	1	0.00028	0.0011	7H23004	EPA 8260B	08/23/17 16:10	MRK	
1,1-Dichloroethane [75-34-3]^	0.00028	U	mg/kg dry	1	0.00028	0.0011	7H23004	EPA 8260B	08/23/17 16:10	MRK	
1,1-Dichloroethene [75-35-4]^	0.00034	U	mg/kg dry	1	0.00034	0.0011	7H23004	EPA 8260B	08/23/17 16:10	MRK	
1,1-Dichloropropene [563-58-6]^	0.00018	U	mg/kg dry	1	0.00018	0.0011	7H23004	EPA 8260B	08/23/17 16:10	MRK	
1,2,3-Trichlorobenzene [87-61-6]^	0.00031	U	mg/kg dry	1	0.00031	0.0011	7H23004	EPA 8260B	08/23/17 16:10	MRK	
1,2,3-Trichloropropane [96-18-4]^	0.00072	U	mg/kg dry	1	0.00072	0.0011	7H23004	EPA 8260B	08/23/17 16:10	MRK	
1,2,4-Trichlorobenzene [120-82-1]^	0.00030	U	mg/kg dry	1	0.00030	0.0011	7H23004	EPA 8260B	08/23/17 16:10	MRK	
1,2,4-Trimethylbenzene [95-63-6]^	0.00019	U	mg/kg dry	1	0.00019	0.0011	7H23004	EPA 8260B	08/23/17 16:10	MRK	
1,2-Dibromo-3-chloropropane [96-12-8]^	0.00089	U	mg/kg dry	1	0.00089	0.0011	7H23004	EPA 8260B	08/23/17 16:10	MRK	
1,2-Dibromoethane [106-93-4]^	0.00052	U	mg/kg dry	1	0.00052	0.0011	7H23004	EPA 8260B	08/23/17 16:10	MRK	
1,2-Dichlorobenzene [95-50-1]^	0.00030	U	mg/kg dry	1	0.00030	0.0011	7H23004	EPA 8260B	08/23/17 16:10	MRK	
1,2-Dichloroethane [107-06-2]^	0.00046	U	mg/kg dry	1	0.00046	0.0011	7H23004	EPA 8260B	08/23/17 16:10	MRK	
1,2-Dichloropropane [78-87-5]^	0.00029	U	mg/kg dry	1	0.00029	0.0011	7H23004	EPA 8260B	08/23/17 16:10	MRK	
1,3,5-Trimethylbenzene [108-67-8]^	0.00022	U	mg/kg dry	1	0.00022	0.0011	7H23004	EPA 8260B	08/23/17 16:10	MRK	
1,3-Dichlorobenzene [541-73-1]^	0.00025	U	mg/kg dry	1	0.00025	0.0011	7H23004	EPA 8260B	08/23/17 16:10	MRK	
1,3-Dichloropropane [142-28-9]^	0.00033	U	mg/kg dry	1	0.00033	0.0011	7H23004	EPA 8260B	08/23/17 16:10	MRK	
1,4-Dichlorobenzene [106-46-7]^	0.00022	U	mg/kg dry	1	0.00022	0.0011	7H23004	EPA 8260B	08/23/17 16:10	MRK	
2,2-Dichloropropane [594-20-7]^	0.00026	U	mg/kg dry	1	0.00026	0.0011	7H23004	EPA 8260B	08/23/17 16:10	MRK	
2-Butanone [78-93-3]^	0.00088	U	mg/kg dry	1	0.00088	0.0056	7H23004	EPA 8260B	08/23/17 16:10	MRK	
2-Chloroethyl Vinyl Ether [110-75-8]^	0.00018	U	mg/kg dry	1	0.00018	0.0056	7H23004	EPA 8260B	08/23/17 16:10	MRK	
2-Chlorotoluene [95-49-8]^	0.00020	U	mg/kg dry	1	0.00020	0.0011	7H23004	EPA 8260B	08/23/17 16:10	MRK	
2-Hexanone [591-78-6]^	0.00084	U	mg/kg dry	1	0.00084	0.0056	7H23004	EPA 8260B	08/23/17 16:10	MRK	
4-Chlorotoluene [106-43-4]^	0.00029	U	mg/kg dry	1	0.00029	0.0011	7H23004	EPA 8260B	08/23/17 16:10	MRK	
4-Isopropyltoluene [99-87-6]^	0.00018	U	mg/kg dry	1	0.00018	0.0011	7H23004	EPA 8260B	08/23/17 16:10	MRK	
4-Methyl-2-pentanone [108-10-1]^	0.00064	U	mg/kg dry	1	0.00064	0.0056	7H23004	EPA 8260B	08/23/17 16:10	MRK	
Acetone [67-64-1]^	0.016	U	mg/kg dry	1	0.016	0.022	7H23004	EPA 8260B	08/23/17 16:10	MRK	
Benzene [71-43-2]^	0.00019	U	mg/kg dry	1	0.00019	0.0011	7H23004	EPA 8260B	08/23/17 16:10	MRK	
Bromobenzene [108-86-1]^	0.00025	U	mg/kg dry	1	0.00025	0.0011	7H23004	EPA 8260B	08/23/17 16:10	MRK	
Bromochloromethane [74-97-5]^	0.00046	U	mg/kg dry	1	0.00046	0.0011	7H23004	EPA 8260B	08/23/17 16:10	MRK	
Bromodichloromethane [75-27-4]^	0.00027	U	mg/kg dry	1	0.00027	0.0011	7H23004	EPA 8260B	08/23/17 16:10	MRK	
Bromoform [75-25-2]^	0.00050	U	mg/kg dry	1	0.00050	0.0011	7H23004	EPA 8260B	08/23/17 16:10	MRK	
Bromomethane [74-83-9]^	0.00036	U	mg/kg dry	1	0.00036	0.0011	7H23004	EPA 8260B	08/23/17 16:10	MRK	
Carbon disulfide [75-15-0]^	0.00044	U	mg/kg dry	1	0.00044	0.0056	7H23004	EPA 8260B	08/23/17 16:10	MRK	
Carbon Tetrachloride [56-23-5]^	0.00025	U	mg/kg dry	1	0.00025	0.0011	7H23004	EPA 8260B	08/23/17 16:10	MRK	
Chlorobenzene [108-90-7]^	0.00019	U	mg/kg dry	1	0.00019	0.0011	7H23004	EPA 8260B	08/23/17 16:10	MRK	
Chloroethane [75-00-3]^	0.00028	U	mg/kg dry	1	0.00028	0.0011	7H23004	EPA 8260B	08/23/17 16:10	MRK	
Chloroform [67-66-3]^	0.00020	U	mg/kg dry	1	0.00020	0.0011	7H23004	EPA 8260B	08/23/17 16:10	MRK	
Chloromethane [74-87-3]^	0.00024	U	mg/kg dry	1	0.00024	0.0011	7H23004	EPA 8260B	08/23/17 16:10	MRK	
cis-1,2-Dichloroethene [156-59-2]^	0.00026	U	mg/kg dry	1	0.00026	0.0011	7H23004	EPA 8260B	08/23/17 16:10	MRK	
cis-1,3-Dichloropropene [10061-01-5]^	0.00019	U	mg/kg dry	1	0.00019	0.0011	7H23004	EPA 8260B	08/23/17 16:10	MRK	
Dibromochloromethane [124-48-1]^	0.00039	U	mg/kg dry	1	0.00039	0.0011	7H23004	EPA 8260B	08/23/17 16:10	MRK	
Dibromomethane [74-95-3]^	0.00037	U	mg/kg dry	1	0.00037	0.0011	7H23004	EPA 8260B	08/23/17 16:10	MRK	
Dichlorodifluoromethane [75-71-8]^	0.00050	U	mg/kg dry	1	0.00050	0.0011	7H23004	EPA 8260B	08/23/17 16:10	MRK	
Ethylbenzene [100-41-4]^	0.00022	U	mg/kg dry	1	0.00022	0.0011	7H23004	EPA 8260B	08/23/17 16:10	MRK	

This report relates only to the sample as received by the laboratory, and may only be reproduced in full.

www.encolabs.com

ANALYTICAL RESULTS

Description: PO79-B5	**Lab Sample ID:** CA11841-08	**Received:** 08/17/17 11:00
Matrix: Soil	**Sampled:** 08/15/17 16:40	**Work Order:** CA11841
Project: NCDOT PSAs	**Sampled By:** Client	**% Solids:** 89.12

Volatile Organic Compounds by GCMS

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
Hexachlorobutadiene [87-68-3]^	0.00039	U	mg/kg dry	1	0.00039	0.0011	7H23004	EPA 8260B	08/23/17 16:10	MRK	
Isopropylbenzene [98-82-8]^	0.00017	U	mg/kg dry	1	0.00017	0.0011	7H23004	EPA 8260B	08/23/17 16:10	MRK	
m,p-Xylenes [108-38-3/106-42-3]^	0.00042	U	mg/kg dry	1	0.00042	0.0022	7H23004	EPA 8260B	08/23/17 16:10	MRK	
Methylene Chloride [75-09-2]^	0.00082	U	mg/kg dry	1	0.00082	0.0022	7H23004	EPA 8260B	08/23/17 16:10	MRK	
Methyl-tert-Butyl Ether [1634-04-4]^	0.00034	U	mg/kg dry	1	0.00034	0.0011	7H23004	EPA 8260B	08/23/17 16:10	MRK	
Naphthalene [91-20-3]^	0.00030	U	mg/kg dry	1	0.00030	0.0011	7H23004	EPA 8260B	08/23/17 16:10	MRK	
n-Butyl Benzene [104-51-8]^	0.00015	U	mg/kg dry	1	0.00015	0.0011	7H23004	EPA 8260B	08/23/17 16:10	MRK	
n-Propyl Benzene [103-65-1]^	0.00020	U	mg/kg dry	1	0.00020	0.0011	7H23004	EPA 8260B	08/23/17 16:10	MRK	
o-Xylene [95-47-6]^	0.00025	U	mg/kg dry	1	0.00025	0.0011	7H23004	EPA 8260B	08/23/17 16:10	MRK	
sec-Butylbenzene [135-98-8]^	0.0011	U	mg/kg dry	1	0.0011	0.0011	7H23004	EPA 8260B	08/23/17 16:10	MRK	
Styrene [100-42-5]^	0.0011	U	mg/kg dry	1	0.0011	0.0011	7H23004	EPA 8260B	08/23/17 16:10	MRK	
tert-Butylbenzene [98-06-6]^	0.00019	U	mg/kg dry	1	0.00019	0.0011	7H23004	EPA 8260B	08/23/17 16:10	MRK	
Tetrachloroethene [127-18-4]^	0.00031	U	mg/kg dry	1	0.00031	0.0011	7H23004	EPA 8260B	08/23/17 16:10	MRK	
Toluene [108-88-3]^	0.00027	U	mg/kg dry	1	0.00027	0.0011	7H23004	EPA 8260B	08/23/17 16:10	MRK	
trans-1,2-Dichloroethene [156-60-5]^	0.00042	U	mg/kg dry	1	0.00042	0.0011	7H23004	EPA 8260B	08/23/17 16:10	MRK	
trans-1,3-Dichloropropene [10061-02-6]^	0.00044	U	mg/kg dry	1	0.00044	0.0011	7H23004	EPA 8260B	08/23/17 16:10	MRK	
Trichloroethene [79-01-6]^	0.00036	U	mg/kg dry	1	0.00036	0.0011	7H23004	EPA 8260B	08/23/17 16:10	MRK	
Trichlorofluoromethane [75-69-4]^	0.00029	U	mg/kg dry	1	0.00029	0.0011	7H23004	EPA 8260B	08/23/17 16:10	MRK	
Vinyl chloride [75-01-4]^	0.00027	U	mg/kg dry	1	0.00027	0.0011	7H23004	EPA 8260B	08/23/17 16:10	MRK	
Xylenes (Total) [1330-20-7]^	0.00063	U	mg/kg dry	1	0.00063	0.0034	7H23004	EPA 8260B	08/23/17 16:10	MRK	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes
4-Bromofluorobenzene	*51*	*1*	*50.0*	*102 %*	*50-127*	*7H23004*	*EPA 8260B*	*08/23/17 16:10*	*MRK*	
Dibromofluoromethane	*53*	*1*	*50.0*	*107 %*	*52-128*	*7H23004*	*EPA 8260B*	*08/23/17 16:10*	*MRK*	
Toluene-d8	*55*	*1*	*50.0*	*110 %*	*57-124*	*7H23004*	*EPA 8260B*	*08/23/17 16:10*	*MRK*	

Metals by EPA 6000/7000 Series Methods

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
Arsenic [7440-38-2]^	**9.31**		mg/kg dry	1	0.359	0.561	7H17028	EPA 6010D	08/23/17 15:03	JMV	
Barium [7440-39-3]^	**64.6**		mg/kg dry	1	0.112	0.561	7H17028	EPA 6010D	08/23/17 15:03	JMV	
Cadmium [7440-43-9]^	**2.27**		mg/kg dry	1	0.0108	0.0561	7H17028	EPA 6010D	08/23/17 15:03	JMV	
Chromium [7440-47-3]^	**117**		mg/kg dry	1	0.112	0.561	7H17028	EPA 6010D	08/23/17 15:03	JMV	
Lead [7439-92-1]^	**275**		mg/kg dry	1	0.135	0.561	7H17028	EPA 6010D	08/23/17 15:03	JMV	
Mercury [7439-97-6]^	**0.0294**		mg/kg dry	1	0.0143	0.0245	7H24004	EPA 7471B	08/25/17 09:47	CMK	
Selenium [7782-49-2]^	0.460	U	mg/kg dry	1	0.460	0.561	7H17028	EPA 6010D	08/23/17 15:03	JMV	
Silver [7440-22-4]^	**1.89**		mg/kg dry	1	0.112	0.561	7H17028	EPA 6010D	08/23/17 15:03	JMV	

This report relates only to the sample as received by the laboratory, and may only be reproduced in full.

www.encolabs.com

ANALYTICAL RESULTS

Description: PO79-B8	**Lab Sample ID:** CA11841-09	**Received:** 08/17/17 11:00
Matrix: Soil	**Sampled:** 08/16/17 08:45	**Work Order:** CA11841
Project: NCDOT PSAs	**Sampled By:** Client	**% Solids:** 87.28

Volatile Organic Compounds by GCMS

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1,2-Tetrachloroethane [630-20-6]^	0.00022	U	mg/kg dry	1.18	0.00022	0.0014	7H23004	EPA 8260B	08/23/17 16:41	MRK	
1,1,1-Trichloroethane [71-55-6]^	0.00034	U	mg/kg dry	1.18	0.00034	0.0014	7H23004	EPA 8260B	08/23/17 16:41	MRK	
1,1,2,2-Tetrachloroethane [79-34-5]^	0.00027	U	mg/kg dry	1.18	0.00027	0.0014	7H23004	EPA 8260B	08/23/17 16:41	MRK	
1,1,2-Trichloroethane [79-00-5]^	0.00034	U	mg/kg dry	1.18	0.00034	0.0014	7H23004	EPA 8260B	08/23/17 16:41	MRK	
1,1-Dichloroethane [75-34-3]^	0.00034	U	mg/kg dry	1.18	0.00034	0.0014	7H23004	EPA 8260B	08/23/17 16:41	MRK	
1,1-Dichloroethene [75-35-4]^	0.00041	U	mg/kg dry	1.18	0.00041	0.0014	7H23004	EPA 8260B	08/23/17 16:41	MRK	
1,1-Dichloropropene [563-58-6]^	0.00022	U	mg/kg dry	1.18	0.00022	0.0014	7H23004	EPA 8260B	08/23/17 16:41	MRK	
1,2,3-Trichlorobenzene [87-61-6]^	0.00038	U	mg/kg dry	1.18	0.00038	0.0014	7H23004	EPA 8260B	08/23/17 16:41	MRK	
1,2,3-Trichloropropane [96-18-4]^	0.00086	U	mg/kg dry	1.18	0.00086	0.0014	7H23004	EPA 8260B	08/23/17 16:41	MRK	
1,2,4-Trichlorobenzene [120-82-1]^	0.00036	U	mg/kg dry	1.18	0.00036	0.0014	7H23004	EPA 8260B	08/23/17 16:41	MRK	
1,2,4-Trimethylbenzene [95-63-6]^	0.00023	U	mg/kg dry	1.18	0.00023	0.0014	7H23004	EPA 8260B	08/23/17 16:41	MRK	
1,2-Dibromo-3-chloropropane [96-12-8]^	0.0011	U	mg/kg dry	1.18	0.0011	0.0014	7H23004	EPA 8260B	08/23/17 16:41	MRK	
1,2-Dibromoethane [106-93-4]^	0.00062	U	mg/kg dry	1.18	0.00062	0.0014	7H23004	EPA 8260B	08/23/17 16:41	MRK	
1,2-Dichlorobenzene [95-50-1]^	0.00036	U	mg/kg dry	1.18	0.00036	0.0014	7H23004	EPA 8260B	08/23/17 16:41	MRK	
1,2-Dichloroethane [107-06-2]^	0.00055	U	mg/kg dry	1.18	0.00055	0.0014	7H23004	EPA 8260B	08/23/17 16:41	MRK	
1,2-Dichloropropane [78-87-5]^	0.00035	U	mg/kg dry	1.18	0.00035	0.0014	7H23004	EPA 8260B	08/23/17 16:41	MRK	
1,3,5-Trimethylbenzene [108-67-8]^	0.00027	U	mg/kg dry	1.18	0.00027	0.0014	7H23004	EPA 8260B	08/23/17 16:41	MRK	
1,3-Dichlorobenzene [541-73-1]^	0.00030	U	mg/kg dry	1.18	0.00030	0.0014	7H23004	EPA 8260B	08/23/17 16:41	MRK	
1,3-Dichloropropane [142-28-9]^	0.00039	U	mg/kg dry	1.18	0.00039	0.0014	7H23004	EPA 8260B	08/23/17 16:41	MRK	
1,4-Dichlorobenzene [106-46-7]^	0.00027	U	mg/kg dry	1.18	0.00027	0.0014	7H23004	EPA 8260B	08/23/17 16:41	MRK	
2,2-Dichloropropane [594-20-7]^	0.00031	U	mg/kg dry	1.18	0.00031	0.0014	7H23004	EPA 8260B	08/23/17 16:41	MRK	
2-Butanone [78-93-3]^	0.0011	U	mg/kg dry	1.18	0.0011	0.0068	7H23004	EPA 8260B	08/23/17 16:41	MRK	
2-Chloroethyl Vinyl Ether [110-75-8]^	0.00022	U	mg/kg dry	1.18	0.00022	0.0068	7H23004	EPA 8260B	08/23/17 16:41	MRK	
2-Chlorotoluene [95-49-8]^	0.00024	U	mg/kg dry	1.18	0.00024	0.0014	7H23004	EPA 8260B	08/23/17 16:41	MRK	
2-Hexanone [591-78-6]^	0.0010	U	mg/kg dry	1.18	0.0010	0.0068	7H23004	EPA 8260B	08/23/17 16:41	MRK	
4-Chlorotoluene [106-43-4]^	0.00035	U	mg/kg dry	1.18	0.00035	0.0014	7H23004	EPA 8260B	08/23/17 16:41	MRK	
4-Isopropyltoluene [99-87-6]^	0.00022	U	mg/kg dry	1.18	0.00022	0.0014	7H23004	EPA 8260B	08/23/17 16:41	MRK	
4-Methyl-2-pentanone [108-10-1]^	0.00077	U	mg/kg dry	1.18	0.00077	0.0068	7H23004	EPA 8260B	08/23/17 16:41	MRK	
Acetone [67-64-1]^	0.019	U	mg/kg dry	1.18	0.019	0.027	7H23004	EPA 8260B	08/23/17 16:41	MRK	
Benzene [71-43-2]^	0.00023	U	mg/kg dry	1.18	0.00023	0.0014	7H23004	EPA 8260B	08/23/17 16:41	MRK	
Bromobenzene [108-86-1]^	0.00030	U	mg/kg dry	1.18	0.00030	0.0014	7H23004	EPA 8260B	08/23/17 16:41	MRK	
Bromochloromethane [74-97-5]^	0.00055	U	mg/kg dry	1.18	0.00055	0.0014	7H23004	EPA 8260B	08/23/17 16:41	MRK	
Bromodichloromethane [75-27-4]^	0.00032	U	mg/kg dry	1.18	0.00032	0.0014	7H23004	EPA 8260B	08/23/17 16:41	MRK	
Bromoform [75-25-2]^	0.00061	U	mg/kg dry	1.18	0.00061	0.0014	7H23004	EPA 8260B	08/23/17 16:41	MRK	
Bromomethane [74-83-9]^	0.00043	U	mg/kg dry	1.18	0.00043	0.0014	7H23004	EPA 8260B	08/23/17 16:41	MRK	
Carbon disulfide [75-15-0]^	0.00053	U	mg/kg dry	1.18	0.00053	0.0068	7H23004	EPA 8260B	08/23/17 16:41	MRK	
Carbon Tetrachloride [56-23-5]^	0.00030	U	mg/kg dry	1.18	0.00030	0.0014	7H23004	EPA 8260B	08/23/17 16:41	MRK	
Chlorobenzene [108-90-7]^	0.00023	U	mg/kg dry	1.18	0.00023	0.0014	7H23004	EPA 8260B	08/23/17 16:41	MRK	
Chloroethane [75-00-3]^	0.00034	U	mg/kg dry	1.18	0.00034	0.0014	7H23004	EPA 8260B	08/23/17 16:41	MRK	
Chloroform [67-66-3]^	0.00024	U	mg/kg dry	1.18	0.00024	0.0014	7H23004	EPA 8260B	08/23/17 16:41	MRK	
Chloromethane [74-87-3]^	0.00028	U	mg/kg dry	1.18	0.00028	0.0014	7H23004	EPA 8260B	08/23/17 16:41	MRK	
cis-1,2-Dichloroethene [156-59-2]^	0.00031	U	mg/kg dry	1.18	0.00031	0.0014	7H23004	EPA 8260B	08/23/17 16:41	MRK	
cis-1,3-Dichloropropene [10061-01-5]^	0.00023	U	mg/kg dry	1.18	0.00023	0.0014	7H23004	EPA 8260B	08/23/17 16:41	MRK	
Dibromochloromethane [124-48-1]^	0.00047	U	mg/kg dry	1.18	0.00047	0.0014	7H23004	EPA 8260B	08/23/17 16:41	MRK	
Dibromomethane [74-95-3]^	0.00045	U	mg/kg dry	1.18	0.00045	0.0014	7H23004	EPA 8260B	08/23/17 16:41	MRK	
Dichlorodifluoromethane [75-71-8]^	0.00061	U	mg/kg dry	1.18	0.00061	0.0014	7H23004	EPA 8260B	08/23/17 16:41	MRK	
Ethylbenzene [100-41-4]^	0.00027	U	mg/kg dry	1.18	0.00027	0.0014	7H23004	EPA 8260B	08/23/17 16:41	MRK	

This report relates only to the sample as received by the laboratory, and may only be reproduced in full.

www.encolabs.com

ANALYTICAL RESULTS

Description: PO79-B8	**Lab Sample ID:** CA11841-09	**Received:** 08/17/17 11:00
Matrix: Soil	**Sampled:** 08/16/17 08:45	**Work Order:** CA11841
Project: NCDOT PSAs	**Sampled By:** Client	**% Solids:** 87.28

Volatile Organic Compounds by GCMS

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
Hexachlorobutadiene [87-68-3]^	0.00047	U	mg/kg dry	1.18	0.00047	0.0014	7H23004	EPA 8260B	08/23/17 16:41	MRK	
Isopropylbenzene [98-82-8]^	0.00020	U	mg/kg dry	1.18	0.00020	0.0014	7H23004	EPA 8260B	08/23/17 16:41	MRK	
m,p-Xylenes [108-38-3/106-42-3]^	0.00050	U	mg/kg dry	1.18	0.00050	0.0027	7H23004	EPA 8260B	08/23/17 16:41	MRK	
Methylene Chloride [75-09-2]^	0.00099	U	mg/kg dry	1.18	0.00099	0.0027	7H23004	EPA 8260B	08/23/17 16:41	MRK	
Methyl-tert-Butyl Ether [1634-04-4]^	0.00041	U	mg/kg dry	1.18	0.00041	0.0014	7H23004	EPA 8260B	08/23/17 16:41	MRK	
Naphthalene [91-20-3]^	0.00036	U	mg/kg dry	1.18	0.00036	0.0014	7H23004	EPA 8260B	08/23/17 16:41	MRK	
n-Butyl Benzene [104-51-8]^	0.00018	U	mg/kg dry	1.18	0.00018	0.0014	7H23004	EPA 8260B	08/23/17 16:41	MRK	
n-Propyl Benzene [103-65-1]^	0.00024	U	mg/kg dry	1.18	0.00024	0.0014	7H23004	EPA 8260B	08/23/17 16:41	MRK	
o-Xylene [95-47-6]^	0.00030	U	mg/kg dry	1.18	0.00030	0.0014	7H23004	EPA 8260B	08/23/17 16:41	MRK	
sec-Butylbenzene [135-98-8]^	0.0013	U	mg/kg dry	1.18	0.0013	0.0014	7H23004	EPA 8260B	08/23/17 16:41	MRK	
Styrene [100-42-5]^	0.0013	U	mg/kg dry	1.18	0.0013	0.0014	7H23004	EPA 8260B	08/23/17 16:41	MRK	
tert-Butylbenzene [98-06-6]^	0.00023	U	mg/kg dry	1.18	0.00023	0.0014	7H23004	EPA 8260B	08/23/17 16:41	MRK	
Tetrachloroethene [127-18-4]^	0.00038	U	mg/kg dry	1.18	0.00038	0.0014	7H23004	EPA 8260B	08/23/17 16:41	MRK	
Toluene [108-88-3]^	0.00032	U	mg/kg dry	1.18	0.00032	0.0014	7H23004	EPA 8260B	08/23/17 16:41	MRK	
trans-1,2-Dichloroethene [156-60-5]^	0.00050	U	mg/kg dry	1.18	0.00050	0.0014	7H23004	EPA 8260B	08/23/17 16:41	MRK	
trans-1,3-Dichloropropene [10061-02-6]^	0.00053	U	mg/kg dry	1.18	0.00053	0.0014	7H23004	EPA 8260B	08/23/17 16:41	MRK	
Trichloroethene [79-01-6]^	0.00043	U	mg/kg dry	1.18	0.00043	0.0014	7H23004	EPA 8260B	08/23/17 16:41	MRK	
Trichlorofluoromethane [75-69-4]^	0.00035	U	mg/kg dry	1.18	0.00035	0.0014	7H23004	EPA 8260B	08/23/17 16:41	MRK	
Vinyl chloride [75-01-4]^	0.00032	U	mg/kg dry	1.18	0.00032	0.0014	7H23004	EPA 8260B	08/23/17 16:41	MRK	
Xylenes (Total) [1330-20-7]^	0.00076	U	mg/kg dry	1.18	0.00076	0.0041	7H23004	EPA 8260B	08/23/17 16:41	MRK	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes
4-Bromofluorobenzene	*52*	*1.18*	*50.0*	*105 %*	*50-127*	*7H23004*	*EPA 8260B*	*08/23/17 16:41*	*MRK*	
Dibromofluoromethane	*53*	*1.18*	*50.0*	*106 %*	*52-128*	*7H23004*	*EPA 8260B*	*08/23/17 16:41*	*MRK*	
Toluene-d8	*57*	*1.18*	*50.0*	*114 %*	*57-124*	*7H23004*	*EPA 8260B*	*08/23/17 16:41*	*MRK*	

Metals by EPA 6000/7000 Series Methods

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
Arsenic [7440-38-2]^	**8.51**		mg/kg dry	1	0.367	0.573	7H17028	EPA 6010D	08/23/17 15:06	JMV	
Barium [7440-39-3]^	**67.1**		mg/kg dry	1	0.115	0.573	7H17028	EPA 6010D	08/23/17 15:06	JMV	
Cadmium [7440-43-9]^	**1.23**		mg/kg dry	1	0.0110	0.0573	7H17028	EPA 6010D	08/23/17 15:06	JMV	
Chromium [7440-47-3]^	**87.5**		mg/kg dry	1	0.115	0.573	7H17028	EPA 6010D	08/23/17 15:06	JMV	
Lead [7439-92-1]^	**96.4**		mg/kg dry	1	0.137	0.573	7H17028	EPA 6010D	08/23/17 15:06	JMV	
Mercury [7439-97-6]^	**0.0212**	J	mg/kg dry	1	0.0146	0.0250	7H24004	EPA 7471B	08/25/17 09:49	CMK	
Selenium [7782-49-2]^	0.470	U	mg/kg dry	1	0.470	0.573	7H17028	EPA 6010D	08/23/17 15:06	JMV	
Silver [7440-22-4]^	**1.60**		mg/kg dry	1	0.115	0.573	7H17028	EPA 6010D	08/23/17 15:06	JMV	

This report relates only to the sample as received by the laboratory, and may only be reproduced in full.

www.encolabs.com

ANALYTICAL RESULTS

Description: PO79-B6	**Lab Sample ID:** CA11841-10	**Received:** 08/17/17 11:00
Matrix: Soil	**Sampled:** 08/16/17 09:00	**Work Order:** CA11841
Project: NCDOT PSAs	**Sampled By:** Client	**% Solids:** 85.46

Volatile Organic Compounds by GCMS

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1,2-Tetrachloroethane [630-20-6]^	0.00019	U	mg/kg dry	1	0.00019	0.0012	7H23004	EPA 8260B	08/23/17 17:11	MRK	
1,1,1-Trichloroethane [71-55-6]^	0.00029	U	mg/kg dry	1	0.00029	0.0012	7H23004	EPA 8260B	08/23/17 17:11	MRK	
1,1,2,2-Tetrachloroethane [79-34-5]^	0.00023	U	mg/kg dry	1	0.00023	0.0012	7H23004	EPA 8260B	08/23/17 17:11	MRK	
1,1,2-Trichloroethane [79-00-5]^	0.00029	U	mg/kg dry	1	0.00029	0.0012	7H23004	EPA 8260B	08/23/17 17:11	MRK	
1,1-Dichloroethane [75-34-3]^	0.00029	U	mg/kg dry	1	0.00029	0.0012	7H23004	EPA 8260B	08/23/17 17:11	MRK	
1,1-Dichloroethene [75-35-4]^	0.00035	U	mg/kg dry	1	0.00035	0.0012	7H23004	EPA 8260B	08/23/17 17:11	MRK	
1,1-Dichloropropene [563-58-6]^	0.00019	U	mg/kg dry	1	0.00019	0.0012	7H23004	EPA 8260B	08/23/17 17:11	MRK	
1,2,3-Trichlorobenzene [87-61-6]^	0.00033	U	mg/kg dry	1	0.00033	0.0012	7H23004	EPA 8260B	08/23/17 17:11	MRK	
1,2,3-Trichloropropane [96-18-4]^	0.00075	U	mg/kg dry	1	0.00075	0.0012	7H23004	EPA 8260B	08/23/17 17:11	MRK	
1,2,4-Trichlorobenzene [120-82-1]^	0.00032	U	mg/kg dry	1	0.00032	0.0012	7H23004	EPA 8260B	08/23/17 17:11	MRK	
1,2,4-Trimethylbenzene [95-63-6]^	0.00020	U	mg/kg dry	1	0.00020	0.0012	7H23004	EPA 8260B	08/23/17 17:11	MRK	
1,2-Dibromo-3-chloropropane [96-12-8]^	0.00092	U	mg/kg dry	1	0.00092	0.0012	7H23004	EPA 8260B	08/23/17 17:11	MRK	
1,2-Dibromoethane [106-93-4]^	0.00054	U	mg/kg dry	1	0.00054	0.0012	7H23004	EPA 8260B	08/23/17 17:11	MRK	
1,2-Dichlorobenzene [95-50-1]^	0.00032	U	mg/kg dry	1	0.00032	0.0012	7H23004	EPA 8260B	08/23/17 17:11	MRK	
1,2-Dichloroethane [107-06-2]^	0.00048	U	mg/kg dry	1	0.00048	0.0012	7H23004	EPA 8260B	08/23/17 17:11	MRK	
1,2-Dichloropropane [78-87-5]^	0.00030	U	mg/kg dry	1	0.00030	0.0012	7H23004	EPA 8260B	08/23/17 17:11	MRK	
1,3,5-Trimethylbenzene [108-67-8]^	0.00023	U	mg/kg dry	1	0.00023	0.0012	7H23004	EPA 8260B	08/23/17 17:11	MRK	
1,3-Dichlorobenzene [541-73-1]^	0.00026	U	mg/kg dry	1	0.00026	0.0012	7H23004	EPA 8260B	08/23/17 17:11	MRK	
1,3-Dichloropropane [142-28-9]^	0.00034	U	mg/kg dry	1	0.00034	0.0012	7H23004	EPA 8260B	08/23/17 17:11	MRK	
1,4-Dichlorobenzene [106-46-7]^	0.00023	U	mg/kg dry	1	0.00023	0.0012	7H23004	EPA 8260B	08/23/17 17:11	MRK	
2,2-Dichloropropane [594-20-7]^	0.00027	U	mg/kg dry	1	0.00027	0.0012	7H23004	EPA 8260B	08/23/17 17:11	MRK	
2-Butanone [78-93-3]^	0.00091	U	mg/kg dry	1	0.00091	0.0059	7H23004	EPA 8260B	08/23/17 17:11	MRK	
2-Chloroethyl Vinyl Ether [110-75-8]^	0.00019	U	mg/kg dry	1	0.00019	0.0059	7H23004	EPA 8260B	08/23/17 17:11	MRK	
2-Chlorotoluene [95-49-8]^	0.00021	U	mg/kg dry	1	0.00021	0.0012	7H23004	EPA 8260B	08/23/17 17:11	MRK	
2-Hexanone [591-78-6]^	0.00088	U	mg/kg dry	1	0.00088	0.0059	7H23004	EPA 8260B	08/23/17 17:11	MRK	
4-Chlorotoluene [106-43-4]^	0.00030	U	mg/kg dry	1	0.00030	0.0012	7H23004	EPA 8260B	08/23/17 17:11	MRK	
4-Isopropyltoluene [99-87-6]^	0.00019	U	mg/kg dry	1	0.00019	0.0012	7H23004	EPA 8260B	08/23/17 17:11	MRK	
4-Methyl-2-pentanone [108-10-1]^	0.00067	U	mg/kg dry	1	0.00067	0.0059	7H23004	EPA 8260B	08/23/17 17:11	MRK	
Acetone [67-64-1]^	0.016	U	mg/kg dry	1	0.016	0.023	7H23004	EPA 8260B	08/23/17 17:11	MRK	
Benzene [71-43-2]^	0.00020	U	mg/kg dry	1	0.00020	0.0012	7H23004	EPA 8260B	08/23/17 17:11	MRK	
Bromobenzene [108-86-1]^	0.00026	U	mg/kg dry	1	0.00026	0.0012	7H23004	EPA 8260B	08/23/17 17:11	MRK	
Bromochloromethane [74-97-5]^	0.00048	U	mg/kg dry	1	0.00048	0.0012	7H23004	EPA 8260B	08/23/17 17:11	MRK	
Bromodichloromethane [75-27-4]^	0.00028	U	mg/kg dry	1	0.00028	0.0012	7H23004	EPA 8260B	08/23/17 17:11	MRK	
Bromoform [75-25-2]^	0.00053	U	mg/kg dry	1	0.00053	0.0012	7H23004	EPA 8260B	08/23/17 17:11	MRK	
Bromomethane [74-83-9]^	0.00037	U	mg/kg dry	1	0.00037	0.0012	7H23004	EPA 8260B	08/23/17 17:11	MRK	
Carbon disulfide [75-15-0]^	0.00046	U	mg/kg dry	1	0.00046	0.0059	7H23004	EPA 8260B	08/23/17 17:11	MRK	
Carbon Tetrachloride [56-23-5]^	0.00026	U	mg/kg dry	1	0.00026	0.0012	7H23004	EPA 8260B	08/23/17 17:11	MRK	
Chlorobenzene [108-90-7]^	0.00020	U	mg/kg dry	1	0.00020	0.0012	7H23004	EPA 8260B	08/23/17 17:11	MRK	
Chloroethane [75-00-3]^	0.00029	U	mg/kg dry	1	0.00029	0.0012	7H23004	EPA 8260B	08/23/17 17:11	MRK	
Chloroform [67-66-3]^	0.00021	U	mg/kg dry	1	0.00021	0.0012	7H23004	EPA 8260B	08/23/17 17:11	MRK	
Chloromethane [74-87-3]^	0.00025	U	mg/kg dry	1	0.00025	0.0012	7H23004	EPA 8260B	08/23/17 17:11	MRK	
cis-1,2-Dichloroethene [156-59-2]^	0.00027	U	mg/kg dry	1	0.00027	0.0012	7H23004	EPA 8260B	08/23/17 17:11	MRK	
cis-1,3-Dichloropropene [10061-01-5]^	0.00020	U	mg/kg dry	1	0.00020	0.0012	7H23004	EPA 8260B	08/23/17 17:11	MRK	
Dibromochloromethane [124-48-1]^	0.00041	U	mg/kg dry	1	0.00041	0.0012	7H23004	EPA 8260B	08/23/17 17:11	MRK	
Dibromomethane [74-95-3]^	0.00039	U	mg/kg dry	1	0.00039	0.0012	7H23004	EPA 8260B	08/23/17 17:11	MRK	
Dichlorodifluoromethane [75-71-8]^	0.00053	U	mg/kg dry	1	0.00053	0.0012	7H23004	EPA 8260B	08/23/17 17:11	MRK	
Ethylbenzene [100-41-4]^	0.00023	U	mg/kg dry	1	0.00023	0.0012	7H23004	EPA 8260B	08/23/17 17:11	MRK	

This report relates only to the sample as received by the laboratory, and may only be reproduced in full.

www.encolabs.com

ANALYTICAL RESULTS

Description: PO79-B6	**Lab Sample ID:** CA11841-10	**Received:** 08/17/17 11:00
Matrix: Soil	**Sampled:** 08/16/17 09:00	**Work Order:** CA11841
Project: NCDOT PSAs	**Sampled By:** Client	**% Solids:** 85.46

Volatile Organic Compounds by GCMS

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
Hexachlorobutadiene [87-68-3]^	0.00041	U	mg/kg dry	1	0.00041	0.0012	7H23004	EPA 8260B	08/23/17 17:11	MRK	
Isopropylbenzene [98-82-8]^	0.00018	U	mg/kg dry	1	0.00018	0.0012	7H23004	EPA 8260B	08/23/17 17:11	MRK	
m,p-Xylenes [108-38-3/106-42-3]^	0.00043	U	mg/kg dry	1	0.00043	0.0023	7H23004	EPA 8260B	08/23/17 17:11	MRK	
Methylene Chloride [75-09-2]^	**0.0018**	J	mg/kg dry	1	0.00085	0.0023	7H23004	EPA 8260B	08/23/17 17:11	MRK	
Methyl-tert-Butyl Ether [1634-04-4]^	0.00035	U	mg/kg dry	1	0.00035	0.0012	7H23004	EPA 8260B	08/23/17 17:11	MRK	
Naphthalene [91-20-3]^	0.00032	U	mg/kg dry	1	0.00032	0.0012	7H23004	EPA 8260B	08/23/17 17:11	MRK	
n-Butyl Benzene [104-51-8]^	0.00015	U	mg/kg dry	1	0.00015	0.0012	7H23004	EPA 8260B	08/23/17 17:11	MRK	
n-Propyl Benzene [103-65-1]^	0.00021	U	mg/kg dry	1	0.00021	0.0012	7H23004	EPA 8260B	08/23/17 17:11	MRK	
o-Xylene [95-47-6]^	0.00026	U	mg/kg dry	1	0.00026	0.0012	7H23004	EPA 8260B	08/23/17 17:11	MRK	
sec-Butylbenzene [135-98-8]^	0.0011	U	mg/kg dry	1	0.0011	0.0012	7H23004	EPA 8260B	08/23/17 17:11	MRK	
Styrene [100-42-5]^	0.0011	U	mg/kg dry	1	0.0011	0.0012	7H23004	EPA 8260B	08/23/17 17:11	MRK	
tert-Butylbenzene [98-06-6]^	0.00020	U	mg/kg dry	1	0.00020	0.0012	7H23004	EPA 8260B	08/23/17 17:11	MRK	
Tetrachloroethene [127-18-4]^	0.00033	U	mg/kg dry	1	0.00033	0.0012	7H23004	EPA 8260B	08/23/17 17:11	MRK	
Toluene [108-88-3]^	0.00028	U	mg/kg dry	1	0.00028	0.0012	7H23004	EPA 8260B	08/23/17 17:11	MRK	
trans-1,2-Dichloroethene [156-60-5]^	0.00043	U	mg/kg dry	1	0.00043	0.0012	7H23004	EPA 8260B	08/23/17 17:11	MRK	
trans-1,3-Dichloropropene [10061-02-6]^	0.00046	U	mg/kg dry	1	0.00046	0.0012	7H23004	EPA 8260B	08/23/17 17:11	MRK	
Trichloroethene [79-01-6]^	0.00037	U	mg/kg dry	1	0.00037	0.0012	7H23004	EPA 8260B	08/23/17 17:11	MRK	
Trichlorofluoromethane [75-69-4]^	0.00030	U	mg/kg dry	1	0.00030	0.0012	7H23004	EPA 8260B	08/23/17 17:11	MRK	
Vinyl chloride [75-01-4]^	0.00028	U	mg/kg dry	1	0.00028	0.0012	7H23004	EPA 8260B	08/23/17 17:11	MRK	
Xylenes (Total) [1330-20-7]^	0.00066	U	mg/kg dry	1	0.00066	0.0035	7H23004	EPA 8260B	08/23/17 17:11	MRK	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes
4-Bromofluorobenzene	*52*	*1*	*50.0*	*105 %*	*50-127*	*7H23004*	*EPA 8260B*	*08/23/17 17:11*	*MRK*	
Dibromofluoromethane	*54*	*1*	*50.0*	*109 %*	*52-128*	*7H23004*	*EPA 8260B*	*08/23/17 17:11*	*MRK*	
Toluene-d8	*55*	*1*	*50.0*	*109 %*	*57-124*	*7H23004*	*EPA 8260B*	*08/23/17 17:11*	*MRK*	

Metals by EPA 6000/7000 Series Methods

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
Arsenic [7440-38-2]^	**8.35**		mg/kg dry	1	0.374	0.585	7H17028	EPA 6010D	08/23/17 15:08	JMV	
Barium [7440-39-3]^	**42.0**		mg/kg dry	1	0.117	0.585	7H17028	EPA 6010D	08/23/17 15:08	JMV	
Cadmium [7440-43-9]^	**1.96**		mg/kg dry	1	0.0112	0.0585	7H17028	EPA 6010D	08/23/17 15:08	JMV	
Chromium [7440-47-3]^	**182**		mg/kg dry	1	0.117	0.585	7H17028	EPA 6010D	08/23/17 15:08	JMV	
Lead [7439-92-1]^	**209**		mg/kg dry	1	0.140	0.585	7H17028	EPA 6010D	08/23/17 15:08	JMV	
Mercury [7439-97-6]^	**0.0257**	J	mg/kg dry	1	0.0164	0.0281	7H24004	EPA 7471B	08/25/17 09:51	CMK	
Selenium [7782-49-2]^	0.480	U	mg/kg dry	1	0.480	0.585	7H17028	EPA 6010D	08/23/17 15:08	JMV	
Silver [7440-22-4]^	**3.70**		mg/kg dry	1	0.117	0.585	7H17028	EPA 6010D	08/23/17 15:08	JMV	

This report relates only to the sample as received by the laboratory, and may only be reproduced in full.

www.encolabs.com

ANALYTICAL RESULTS

Description: PO79-B4	**Lab Sample ID:** CA11841-11	**Received:** 08/17/17 11:00
Matrix: Soil	**Sampled:** 08/16/17 09:20	**Work Order:** CA11841
Project: NCDOT PSAs	**Sampled By:** Client	**% Solids:** 92.02

Volatile Organic Compounds by GCMS

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1,2-Tetrachloroethane [630-20-6]^	0.00017	U	mg/kg dry	1	0.00017	0.0011	7H23004	EPA 8260B	08/23/17 17:42	MRK	
1,1,1-Trichloroethane [71-55-6]^	0.00027	U	mg/kg dry	1	0.00027	0.0011	7H23004	EPA 8260B	08/23/17 17:42	MRK	
1,1,2,2-Tetrachloroethane [79-34-5]^	0.00022	U	mg/kg dry	1	0.00022	0.0011	7H23004	EPA 8260B	08/23/17 17:42	MRK	
1,1,2-Trichloroethane [79-00-5]^	0.00027	U	mg/kg dry	1	0.00027	0.0011	7H23004	EPA 8260B	08/23/17 17:42	MRK	
1,1-Dichloroethane [75-34-3]^	0.00027	U	mg/kg dry	1	0.00027	0.0011	7H23004	EPA 8260B	08/23/17 17:42	MRK	
1,1-Dichloroethene [75-35-4]^	0.00033	U	mg/kg dry	1	0.00033	0.0011	7H23004	EPA 8260B	08/23/17 17:42	MRK	
1,1-Dichloropropene [563-58-6]^	0.00017	U	mg/kg dry	1	0.00017	0.0011	7H23004	EPA 8260B	08/23/17 17:42	MRK	
1,2,3-Trichlorobenzene [87-61-6]^	0.00030	U	mg/kg dry	1	0.00030	0.0011	7H23004	EPA 8260B	08/23/17 17:42	MRK	
1,2,3-Trichloropropane [96-18-4]^	0.00070	U	mg/kg dry	1	0.00070	0.0011	7H23004	EPA 8260B	08/23/17 17:42	MRK	
1,2,4-Trichlorobenzene [120-82-1]^	0.00029	U	mg/kg dry	1	0.00029	0.0011	7H23004	EPA 8260B	08/23/17 17:42	MRK	
1,2,4-Trimethylbenzene [95-63-6]^	0.00018	U	mg/kg dry	1	0.00018	0.0011	7H23004	EPA 8260B	08/23/17 17:42	MRK	
1,2-Dibromo-3-chloropropane [96-12-8]^	0.00086	U	mg/kg dry	1	0.00086	0.0011	7H23004	EPA 8260B	08/23/17 17:42	MRK	
1,2-Dibromoethane [106-93-4]^	0.00050	U	mg/kg dry	1	0.00050	0.0011	7H23004	EPA 8260B	08/23/17 17:42	MRK	
1,2-Dichlorobenzene [95-50-1]^	0.00029	U	mg/kg dry	1	0.00029	0.0011	7H23004	EPA 8260B	08/23/17 17:42	MRK	
1,2-Dichloroethane [107-06-2]^	0.00045	U	mg/kg dry	1	0.00045	0.0011	7H23004	EPA 8260B	08/23/17 17:42	MRK	
1,2-Dichloropropane [78-87-5]^	0.00028	U	mg/kg dry	1	0.00028	0.0011	7H23004	EPA 8260B	08/23/17 17:42	MRK	
1,3,5-Trimethylbenzene [108-67-8]^	0.00022	U	mg/kg dry	1	0.00022	0.0011	7H23004	EPA 8260B	08/23/17 17:42	MRK	
1,3-Dichlorobenzene [541-73-1]^	0.00024	U	mg/kg dry	1	0.00024	0.0011	7H23004	EPA 8260B	08/23/17 17:42	MRK	
1,3-Dichloropropane [142-28-9]^	0.00032	U	mg/kg dry	1	0.00032	0.0011	7H23004	EPA 8260B	08/23/17 17:42	MRK	
1,4-Dichlorobenzene [106-46-7]^	0.00022	U	mg/kg dry	1	0.00022	0.0011	7H23004	EPA 8260B	08/23/17 17:42	MRK	
2,2-Dichloropropane [594-20-7]^	0.00025	U	mg/kg dry	1	0.00025	0.0011	7H23004	EPA 8260B	08/23/17 17:42	MRK	
2-Butanone [78-93-3]^	0.00085	U	mg/kg dry	1	0.00085	0.0054	7H23004	EPA 8260B	08/23/17 17:42	MRK	
2-Chloroethyl Vinyl Ether [110-75-8]^	0.00017	U	mg/kg dry	1	0.00017	0.0054	7H23004	EPA 8260B	08/23/17 17:42	MRK	
2-Chlorotoluene [95-49-8]^	0.00020	U	mg/kg dry	1	0.00020	0.0011	7H23004	EPA 8260B	08/23/17 17:42	MRK	
2-Hexanone [591-78-6]^	0.00082	U	mg/kg dry	1	0.00082	0.0054	7H23004	EPA 8260B	08/23/17 17:42	MRK	
4-Chlorotoluene [106-43-4]^	0.00028	U	mg/kg dry	1	0.00028	0.0011	7H23004	EPA 8260B	08/23/17 17:42	MRK	
4-Isopropyltoluene [99-87-6]^	0.00017	U	mg/kg dry	1	0.00017	0.0011	7H23004	EPA 8260B	08/23/17 17:42	MRK	
4-Methyl-2-pentanone [108-10-1]^	0.00062	U	mg/kg dry	1	0.00062	0.0054	7H23004	EPA 8260B	08/23/17 17:42	MRK	
Acetone [67-64-1]^	**0.015**	J	mg/kg dry	1	0.015	0.022	7H23004	EPA 8260B	08/23/17 17:42	MRK	
Benzene [71-43-2]^	0.00018	U	mg/kg dry	1	0.00018	0.0011	7H23004	EPA 8260B	08/23/17 17:42	MRK	
Bromobenzene [108-86-1]^	0.00024	U	mg/kg dry	1	0.00024	0.0011	7H23004	EPA 8260B	08/23/17 17:42	MRK	
Bromochloromethane [74-97-5]^	0.00045	U	mg/kg dry	1	0.00045	0.0011	7H23004	EPA 8260B	08/23/17 17:42	MRK	
Bromodichloromethane [75-27-4]^	0.00026	U	mg/kg dry	1	0.00026	0.0011	7H23004	EPA 8260B	08/23/17 17:42	MRK	
Bromoform [75-25-2]^	0.00049	U	mg/kg dry	1	0.00049	0.0011	7H23004	EPA 8260B	08/23/17 17:42	MRK	
Bromomethane [74-83-9]^	0.00035	U	mg/kg dry	1	0.00035	0.0011	7H23004	EPA 8260B	08/23/17 17:42	MRK	
Carbon disulfide [75-15-0]^	0.00042	U	mg/kg dry	1	0.00042	0.0054	7H23004	EPA 8260B	08/23/17 17:42	MRK	
Carbon Tetrachloride [56-23-5]^	0.00024	U	mg/kg dry	1	0.00024	0.0011	7H23004	EPA 8260B	08/23/17 17:42	MRK	
Chlorobenzene [108-90-7]^	0.00018	U	mg/kg dry	1	0.00018	0.0011	7H23004	EPA 8260B	08/23/17 17:42	MRK	
Chloroethane [75-00-3]^	0.00027	U	mg/kg dry	1	0.00027	0.0011	7H23004	EPA 8260B	08/23/17 17:42	MRK	
Chloroform [67-66-3]^	0.00020	U	mg/kg dry	1	0.00020	0.0011	7H23004	EPA 8260B	08/23/17 17:42	MRK	
Chloromethane [74-87-3]^	0.00023	U	mg/kg dry	1	0.00023	0.0011	7H23004	EPA 8260B	08/23/17 17:42	MRK	
cis-1,2-Dichloroethene [156-59-2]^	0.00025	U	mg/kg dry	1	0.00025	0.0011	7H23004	EPA 8260B	08/23/17 17:42	MRK	
cis-1,3-Dichloropropene [10061-01-5]^	0.00018	U	mg/kg dry	1	0.00018	0.0011	7H23004	EPA 8260B	08/23/17 17:42	MRK	
Dibromochloromethane [124-48-1]^	0.00038	U	mg/kg dry	1	0.00038	0.0011	7H23004	EPA 8260B	08/23/17 17:42	MRK	
Dibromomethane [74-95-3]^	0.00036	U	mg/kg dry	1	0.00036	0.0011	7H23004	EPA 8260B	08/23/17 17:42	MRK	
Dichlorodifluoromethane [75-71-8]^	0.00049	U	mg/kg dry	1	0.00049	0.0011	7H23004	EPA 8260B	08/23/17 17:42	MRK	
Ethylbenzene [100-41-4]^	0.00022	U	mg/kg dry	1	0.00022	0.0011	7H23004	EPA 8260B	08/23/17 17:42	MRK	

This report relates only to the sample as received by the laboratory, and may only be reproduced in full.

www.encolabs.com

ANALYTICAL RESULTS

Description: PO79-B4	**Lab Sample ID:** CA11841-11	**Received:** 08/17/17 11:00
Matrix: Soil	**Sampled:** 08/16/17 09:20	**Work Order:** CA11841
Project: NCDOT PSAs	**Sampled By:** Client	**% Solids:** 92.02

Volatile Organic Compounds by GCMS

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
Hexachlorobutadiene [87-68-3]^	0.00038	U	mg/kg dry	1	0.00038	0.0011	7H23004	EPA 8260B	08/23/17 17:42	MRK	
Isopropylbenzene [98-82-8]^	0.00016	U	mg/kg dry	1	0.00016	0.0011	7H23004	EPA 8260B	08/23/17 17:42	MRK	
m,p-Xylenes [108-38-3/106-42-3]^	0.00040	U	mg/kg dry	1	0.00040	0.0022	7H23004	EPA 8260B	08/23/17 17:42	MRK	
Methylene Chloride [75-09-2]^	0.00079	U	mg/kg dry	1	0.00079	0.0022	7H23004	EPA 8260B	08/23/17 17:42	MRK	
Methyl-tert-Butyl Ether [1634-04-4]^	0.00033	U	mg/kg dry	1	0.00033	0.0011	7H23004	EPA 8260B	08/23/17 17:42	MRK	
Naphthalene [91-20-3]^	0.00029	U	mg/kg dry	1	0.00029	0.0011	7H23004	EPA 8260B	08/23/17 17:42	MRK	
n-Butyl Benzene [104-51-8]^	0.00014	U	mg/kg dry	1	0.00014	0.0011	7H23004	EPA 8260B	08/23/17 17:42	MRK	
n-Propyl Benzene [103-65-1]^	0.00020	U	mg/kg dry	1	0.00020	0.0011	7H23004	EPA 8260B	08/23/17 17:42	MRK	
o-Xylene [95-47-6]^	0.00024	U	mg/kg dry	1	0.00024	0.0011	7H23004	EPA 8260B	08/23/17 17:42	MRK	
sec-Butylbenzene [135-98-8]^	0.0010	U	mg/kg dry	1	0.0010	0.0011	7H23004	EPA 8260B	08/23/17 17:42	MRK	
Styrene [100-42-5]^	0.0011	U	mg/kg dry	1	0.0011	0.0011	7H23004	EPA 8260B	08/23/17 17:42	MRK	
tert-Butylbenzene [98-06-6]^	0.00018	U	mg/kg dry	1	0.00018	0.0011	7H23004	EPA 8260B	08/23/17 17:42	MRK	
Tetrachloroethene [127-18-4]^	0.00030	U	mg/kg dry	1	0.00030	0.0011	7H23004	EPA 8260B	08/23/17 17:42	MRK	
Toluene [108-88-3]^	0.00026	U	mg/kg dry	1	0.00026	0.0011	7H23004	EPA 8260B	08/23/17 17:42	MRK	
trans-1,2-Dichloroethene [156-60-5]^	0.00040	U	mg/kg dry	1	0.00040	0.0011	7H23004	EPA 8260B	08/23/17 17:42	MRK	
trans-1,3-Dichloropropene [10061-02-6]^	0.00042	U	mg/kg dry	1	0.00042	0.0011	7H23004	EPA 8260B	08/23/17 17:42	MRK	
Trichloroethene [79-01-6]^	0.00035	U	mg/kg dry	1	0.00035	0.0011	7H23004	EPA 8260B	08/23/17 17:42	MRK	
Trichlorofluoromethane [75-69-4]^	0.00028	U	mg/kg dry	1	0.00028	0.0011	7H23004	EPA 8260B	08/23/17 17:42	MRK	
Vinyl chloride [75-01-4]^	0.00026	U	mg/kg dry	1	0.00026	0.0011	7H23004	EPA 8260B	08/23/17 17:42	MRK	
Xylenes (Total) [1330-20-7]^	0.00061	U	mg/kg dry	1	0.00061	0.0033	7H23004	EPA 8260B	08/23/17 17:42	MRK	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes
4-Bromofluorobenzene	*52*	*1*	*50.0*	*105 %*	*50-127*	*7H23004*	*EPA 8260B*	*08/23/17 17:42*	*MRK*	
Dibromofluoromethane	*54*	*1*	*50.0*	*108 %*	*52-128*	*7H23004*	*EPA 8260B*	*08/23/17 17:42*	*MRK*	
Toluene-d8	*54*	*1*	*50.0*	*108 %*	*57-124*	*7H23004*	*EPA 8260B*	*08/23/17 17:42*	*MRK*	

Metals by EPA 6000/7000 Series Methods

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
Arsenic [7440-38-2]^	**3.40**		mg/kg dry	1	0.348	0.543	7H17028	EPA 6010D	08/23/17 15:10	JMV	
Barium [7440-39-3]^	**48.5**		mg/kg dry	1	0.109	0.543	7H17028	EPA 6010D	08/23/17 15:10	JMV	
Cadmium [7440-43-9]^	**3.86**		mg/kg dry	1	0.0104	0.0543	7H17028	EPA 6010D	08/23/17 15:10	JMV	
Chromium [7440-47-3]^	**141**		mg/kg dry	1	0.109	0.543	7H17028	EPA 6010D	08/23/17 15:10	JMV	
Lead [7439-92-1]^	**113**		mg/kg dry	1	0.130	0.543	7H17028	EPA 6010D	08/23/17 15:10	JMV	
Mercury [7439-97-6]^	**0.0350**		mg/kg dry	1	0.0138	0.0237	7H24004	EPA 7471B	08/25/17 09:53	CMK	
Selenium [7782-49-2]^	0.446	U	mg/kg dry	1	0.446	0.543	7H17028	EPA 6010D	08/23/17 15:10	JMV	
Silver [7440-22-4]^	**2.75**		mg/kg dry	1	0.109	0.543	7H17028	EPA 6010D	08/23/17 15:10	JMV	

This report relates only to the sample as received by the laboratory, and may only be reproduced in full.

www.encolabs.com

ANALYTICAL RESULTS

Description: PO79-B2	**Lab Sample ID:** CA11841-12	**Received:** 08/17/17 11:00
Matrix: Soil	**Sampled:** 08/16/17 09:35	**Work Order:** CA11841
Project: NCDOT PSAs	**Sampled By:** Client	**% Solids:** 88.02

Volatile Organic Compounds by GCMS

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1,2-Tetrachloroethane [630-20-6]^	0.00018	U	mg/kg dry	1	0.00018	0.0011	7H23004	EPA 8260B	08/23/17 18:13	MRK	
1,1,1-Trichloroethane [71-55-6]^	0.00028	U	mg/kg dry	1	0.00028	0.0011	7H23004	EPA 8260B	08/23/17 18:13	MRK	
1,1,2,2-Tetrachloroethane [79-34-5]^	0.00023	U	mg/kg dry	1	0.00023	0.0011	7H23004	EPA 8260B	08/23/17 18:13	MRK	
1,1,2-Trichloroethane [79-00-5]^	0.00028	U	mg/kg dry	1	0.00028	0.0011	7H23004	EPA 8260B	08/23/17 18:13	MRK	
1,1-Dichloroethane [75-34-3]^	0.00028	U	mg/kg dry	1	0.00028	0.0011	7H23004	EPA 8260B	08/23/17 18:13	MRK	
1,1-Dichloroethene [75-35-4]^	0.00034	U	mg/kg dry	1	0.00034	0.0011	7H23004	EPA 8260B	08/23/17 18:13	MRK	
1,1-Dichloropropene [563-58-6]^	0.00018	U	mg/kg dry	1	0.00018	0.0011	7H23004	EPA 8260B	08/23/17 18:13	MRK	
1,2,3-Trichlorobenzene [87-61-6]^	0.00032	U	mg/kg dry	1	0.00032	0.0011	7H23004	EPA 8260B	08/23/17 18:13	MRK	
1,2,3-Trichloropropane [96-18-4]^	0.00073	U	mg/kg dry	1	0.00073	0.0011	7H23004	EPA 8260B	08/23/17 18:13	MRK	
1,2,4-Trichlorobenzene [120-82-1]^	0.00031	U	mg/kg dry	1	0.00031	0.0011	7H23004	EPA 8260B	08/23/17 18:13	MRK	
1,2,4-Trimethylbenzene [95-63-6]^	0.00019	U	mg/kg dry	1	0.00019	0.0011	7H23004	EPA 8260B	08/23/17 18:13	MRK	
1,2-Dibromo-3-chloropropane [96-12-8]^	0.00090	U	mg/kg dry	1	0.00090	0.0011	7H23004	EPA 8260B	08/23/17 18:13	MRK	
1,2-Dibromoethane [106-93-4]^	0.00052	U	mg/kg dry	1	0.00052	0.0011	7H23004	EPA 8260B	08/23/17 18:13	MRK	
1,2-Dichlorobenzene [95-50-1]^	0.00031	U	mg/kg dry	1	0.00031	0.0011	7H23004	EPA 8260B	08/23/17 18:13	MRK	
1,2-Dichloroethane [107-06-2]^	0.00047	U	mg/kg dry	1	0.00047	0.0011	7H23004	EPA 8260B	08/23/17 18:13	MRK	
1,2-Dichloropropane [78-87-5]^	0.00030	U	mg/kg dry	1	0.00030	0.0011	7H23004	EPA 8260B	08/23/17 18:13	MRK	
1,3,5-Trimethylbenzene [108-67-8]^	0.00023	U	mg/kg dry	1	0.00023	0.0011	7H23004	EPA 8260B	08/23/17 18:13	MRK	
1,3-Dichlorobenzene [541-73-1]^	0.00025	U	mg/kg dry	1	0.00025	0.0011	7H23004	EPA 8260B	08/23/17 18:13	MRK	
1,3-Dichloropropane [142-28-9]^	0.00033	U	mg/kg dry	1	0.00033	0.0011	7H23004	EPA 8260B	08/23/17 18:13	MRK	
1,4-Dichlorobenzene [106-46-7]^	0.00023	U	mg/kg dry	1	0.00023	0.0011	7H23004	EPA 8260B	08/23/17 18:13	MRK	
2,2-Dichloropropane [594-20-7]^	0.00026	U	mg/kg dry	1	0.00026	0.0011	7H23004	EPA 8260B	08/23/17 18:13	MRK	
2-Butanone [78-93-3]^	0.00089	U	mg/kg dry	1	0.00089	0.0057	7H23004	EPA 8260B	08/23/17 18:13	MRK	
2-Chloroethyl Vinyl Ether [110-75-8]^	0.00018	U	mg/kg dry	1	0.00018	0.0057	7H23004	EPA 8260B	08/23/17 18:13	MRK	
2-Chlorotoluene [95-49-8]^	0.00020	U	mg/kg dry	1	0.00020	0.0011	7H23004	EPA 8260B	08/23/17 18:13	MRK	
2-Hexanone [591-78-6]^	0.00085	U	mg/kg dry	1	0.00085	0.0057	7H23004	EPA 8260B	08/23/17 18:13	MRK	
4-Chlorotoluene [106-43-4]^	0.00030	U	mg/kg dry	1	0.00030	0.0011	7H23004	EPA 8260B	08/23/17 18:13	MRK	
4-Isopropyltoluene [99-87-6]^	0.00018	U	mg/kg dry	1	0.00018	0.0011	7H23004	EPA 8260B	08/23/17 18:13	MRK	
4-Methyl-2-pentanone [108-10-1]^	0.00065	U	mg/kg dry	1	0.00065	0.0057	7H23004	EPA 8260B	08/23/17 18:13	MRK	
Acetone [67-64-1]^	0.016	U	mg/kg dry	1	0.016	0.023	7H23004	EPA 8260B	08/23/17 18:13	MRK	
Benzene [71-43-2]^	0.00019	U	mg/kg dry	1	0.00019	0.0011	7H23004	EPA 8260B	08/23/17 18:13	MRK	
Bromobenzene [108-86-1]^	0.00025	U	mg/kg dry	1	0.00025	0.0011	7H23004	EPA 8260B	08/23/17 18:13	MRK	
Bromochloromethane [74-97-5]^	0.00047	U	mg/kg dry	1	0.00047	0.0011	7H23004	EPA 8260B	08/23/17 18:13	MRK	
Bromodichloromethane [75-27-4]^	0.00027	U	mg/kg dry	1	0.00027	0.0011	7H23004	EPA 8260B	08/23/17 18:13	MRK	
Bromoform [75-25-2]^	0.00051	U	mg/kg dry	1	0.00051	0.0011	7H23004	EPA 8260B	08/23/17 18:13	MRK	
Bromomethane [74-83-9]^	0.00036	U	mg/kg dry	1	0.00036	0.0011	7H23004	EPA 8260B	08/23/17 18:13	MRK	
Carbon disulfide [75-15-0]^	0.00044	U	mg/kg dry	1	0.00044	0.0057	7H23004	EPA 8260B	08/23/17 18:13	MRK	
Carbon Tetrachloride [56-23-5]^	0.00025	U	mg/kg dry	1	0.00025	0.0011	7H23004	EPA 8260B	08/23/17 18:13	MRK	
Chlorobenzene [108-90-7]^	0.00019	U	mg/kg dry	1	0.00019	0.0011	7H23004	EPA 8260B	08/23/17 18:13	MRK	
Chloroethane [75-00-3]^	0.00028	U	mg/kg dry	1	0.00028	0.0011	7H23004	EPA 8260B	08/23/17 18:13	MRK	
Chloroform [67-66-3]^	0.00020	U	mg/kg dry	1	0.00020	0.0011	7H23004	EPA 8260B	08/23/17 18:13	MRK	
Chloromethane [74-87-3]^	0.00024	U	mg/kg dry	1	0.00024	0.0011	7H23004	EPA 8260B	08/23/17 18:13	MRK	
cis-1,2-Dichloroethene [156-59-2]^	0.00026	U	mg/kg dry	1	0.00026	0.0011	7H23004	EPA 8260B	08/23/17 18:13	MRK	
cis-1,3-Dichloropropene [10061-01-5]^	0.00019	U	mg/kg dry	1	0.00019	0.0011	7H23004	EPA 8260B	08/23/17 18:13	MRK	
Dibromochloromethane [124-48-1]^	0.00040	U	mg/kg dry	1	0.00040	0.0011	7H23004	EPA 8260B	08/23/17 18:13	MRK	
Dibromomethane [74-95-3]^	0.00037	U	mg/kg dry	1	0.00037	0.0011	7H23004	EPA 8260B	08/23/17 18:13	MRK	
Dichlorodifluoromethane [75-71-8]^	0.00051	U	mg/kg dry	1	0.00051	0.0011	7H23004	EPA 8260B	08/23/17 18:13	MRK	
Ethylbenzene [100-41-4]^	0.00023	U	mg/kg dry	1	0.00023	0.0011	7H23004	EPA 8260B	08/23/17 18:13	MRK	

This report relates only to the sample as received by the laboratory, and may only be reproduced in full.

www.encolabs.com

ANALYTICAL RESULTS

Description: PO79-B2	**Lab Sample ID:** CA11841-12	**Received:** 08/17/17 11:00
Matrix: Soil	**Sampled:** 08/16/17 09:35	**Work Order:** CA11841
Project: NCDOT PSAs	**Sampled By:** Client	**% Solids:** 88.02

Volatile Organic Compounds by GCMS

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
Hexachlorobutadiene [87-68-3]^	0.00040	U	mg/kg dry	1	0.00040	0.0011	7H23004	EPA 8260B	08/23/17 18:13	MRK	
Isopropylbenzene [98-82-8]^	0.00017	U	mg/kg dry	1	0.00017	0.0011	7H23004	EPA 8260B	08/23/17 18:13	MRK	
m,p-Xylenes [108-38-3/106-42-3]^	0.00042	U	mg/kg dry	1	0.00042	0.0023	7H23004	EPA 8260B	08/23/17 18:13	MRK	
Methylene Chloride [75-09-2]^	0.00083	U	mg/kg dry	1	0.00083	0.0023	7H23004	EPA 8260B	08/23/17 18:13	MRK	
Methyl-tert-Butyl Ether [1634-04-4]^	0.00034	U	mg/kg dry	1	0.00034	0.0011	7H23004	EPA 8260B	08/23/17 18:13	MRK	
Naphthalene [91-20-3]^	0.00031	U	mg/kg dry	1	0.00031	0.0011	7H23004	EPA 8260B	08/23/17 18:13	MRK	
n-Butyl Benzene [104-51-8]^	0.00015	U	mg/kg dry	1	0.00015	0.0011	7H23004	EPA 8260B	08/23/17 18:13	MRK	
n-Propyl Benzene [103-65-1]^	0.00020	U	mg/kg dry	1	0.00020	0.0011	7H23004	EPA 8260B	08/23/17 18:13	MRK	
o-Xylene [95-47-6]^	0.00025	U	mg/kg dry	1	0.00025	0.0011	7H23004	EPA 8260B	08/23/17 18:13	MRK	
sec-Butylbenzene [135-98-8]^	0.0011	U	mg/kg dry	1	0.0011	0.0011	7H23004	EPA 8260B	08/23/17 18:13	MRK	
Styrene [100-42-5]^	0.0011	U	mg/kg dry	1	0.0011	0.0011	7H23004	EPA 8260B	08/23/17 18:13	MRK	
tert-Butylbenzene [98-06-6]^	0.00019	U	mg/kg dry	1	0.00019	0.0011	7H23004	EPA 8260B	08/23/17 18:13	MRK	
Tetrachloroethene [127-18-4]^	0.00032	U	mg/kg dry	1	0.00032	0.0011	7H23004	EPA 8260B	08/23/17 18:13	MRK	
Toluene [108-88-3]^	0.00027	U	mg/kg dry	1	0.00027	0.0011	7H23004	EPA 8260B	08/23/17 18:13	MRK	
trans-1,2-Dichloroethene [156-60-5]^	0.00042	U	mg/kg dry	1	0.00042	0.0011	7H23004	EPA 8260B	08/23/17 18:13	MRK	
trans-1,3-Dichloropropene [10061-02-6]^	0.00044	U	mg/kg dry	1	0.00044	0.0011	7H23004	EPA 8260B	08/23/17 18:13	MRK	
Trichloroethene [79-01-6]^	0.00036	U	mg/kg dry	1	0.00036	0.0011	7H23004	EPA 8260B	08/23/17 18:13	MRK	
Trichlorofluoromethane [75-69-4]^	0.00030	U	mg/kg dry	1	0.00030	0.0011	7H23004	EPA 8260B	08/23/17 18:13	MRK	
Vinyl chloride [75-01-4]^	0.00027	U	mg/kg dry	1	0.00027	0.0011	7H23004	EPA 8260B	08/23/17 18:13	MRK	
Xylenes (Total) [1330-20-7]^	0.00064	U	mg/kg dry	1	0.00064	0.0034	7H23004	EPA 8260B	08/23/17 18:13	MRK	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes
4-Bromofluorobenzene	*52*	*1*	*50.0*	*104 %*	*50-127*	*7H23004*	*EPA 8260B*	*08/23/17 18:13*	*MRK*	
Dibromofluoromethane	*55*	*1*	*50.0*	*110 %*	*52-128*	*7H23004*	*EPA 8260B*	*08/23/17 18:13*	*MRK*	
Toluene-d8	*56*	*1*	*50.0*	*111 %*	*57-124*	*7H23004*	*EPA 8260B*	*08/23/17 18:13*	*MRK*	

Metals by EPA 6000/7000 Series Methods

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
Arsenic [7440-38-2]^	**8.56**		mg/kg dry	1	0.364	0.568	7H17028	EPA 6010D	08/23/17 15:13	JMV	
Barium [7440-39-3]^	**45.1**		mg/kg dry	1	0.114	0.568	7H17028	EPA 6010D	08/23/17 15:13	JMV	
Cadmium [7440-43-9]^	**1.51**		mg/kg dry	1	0.0109	0.0568	7H17028	EPA 6010D	08/23/17 15:13	JMV	
Chromium [7440-47-3]^	**171**		mg/kg dry	1	0.114	0.568	7H17028	EPA 6010D	08/23/17 15:13	JMV	
Lead [7439-92-1]^	**154**		mg/kg dry	1	0.136	0.568	7H17028	EPA 6010D	08/23/17 15:13	JMV	
Mercury [7439-97-6]^	**0.0515**		mg/kg dry	1	0.0159	0.0273	7H24004	EPA 7471B	08/25/17 09:55	CMK	
Selenium [7782-49-2]^	0.466	U	mg/kg dry	1	0.466	0.568	7H17028	EPA 6010D	08/23/17 15:13	JMV	
Silver [7440-22-4]^	**3.85**		mg/kg dry	1	0.114	0.568	7H17028	EPA 6010D	08/23/17 15:13	JMV	

This report relates only to the sample as received by the laboratory, and may only be reproduced in full.

www.encolabs.com

ANALYTICAL RESULTS

Description: PO79-B1	**Lab Sample ID:** CA11841-13	**Received:** 08/17/17 11:00
Matrix: Soil	**Sampled:** 08/16/17 09:45	**Work Order:** CA11841
Project: NCDOT PSAs	**Sampled By:** Client	**% Solids:** 85.87

Volatile Organic Compounds by GCMS

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1,2-Tetrachloroethane [630-20-6]^	0.00019	U	mg/kg dry	1	0.00019	0.0012	7H23004	EPA 8260B	08/23/17 18:44	MRK	
1,1,1-Trichloroethane [71-55-6]^	0.00029	U	mg/kg dry	1	0.00029	0.0012	7H23004	EPA 8260B	08/23/17 18:44	MRK	
1,1,2,2-Tetrachloroethane [79-34-5]^	0.00023	U	mg/kg dry	1	0.00023	0.0012	7H23004	EPA 8260B	08/23/17 18:44	MRK	
1,1,2-Trichloroethane [79-00-5]^	0.00029	U	mg/kg dry	1	0.00029	0.0012	7H23004	EPA 8260B	08/23/17 18:44	MRK	
1,1-Dichloroethane [75-34-3]^	0.00029	U	mg/kg dry	1	0.00029	0.0012	7H23004	EPA 8260B	08/23/17 18:44	MRK	
1,1-Dichloroethene [75-35-4]^	0.00035	U	mg/kg dry	1	0.00035	0.0012	7H23004	EPA 8260B	08/23/17 18:44	MRK	
1,1-Dichloropropene [563-58-6]^	0.00019	U	mg/kg dry	1	0.00019	0.0012	7H23004	EPA 8260B	08/23/17 18:44	MRK	
1,2,3-Trichlorobenzene [87-61-6]^	0.00033	U	mg/kg dry	1	0.00033	0.0012	7H23004	EPA 8260B	08/23/17 18:44	MRK	
1,2,3-Trichloropropane [96-18-4]^	0.00075	U	mg/kg dry	1	0.00075	0.0012	7H23004	EPA 8260B	08/23/17 18:44	MRK	
1,2,4-Trichlorobenzene [120-82-1]^	0.00031	U	mg/kg dry	1	0.00031	0.0012	7H23004	EPA 8260B	08/23/17 18:44	MRK	
1,2,4-Trimethylbenzene [95-63-6]^	0.00020	U	mg/kg dry	1	0.00020	0.0012	7H23004	EPA 8260B	08/23/17 18:44	MRK	
1,2-Dibromo-3-chloropropane [96-12-8]^	0.00092	U	mg/kg dry	1	0.00092	0.0012	7H23004	EPA 8260B	08/23/17 18:44	MRK	
1,2-Dibromoethane [106-93-4]^	0.00054	U	mg/kg dry	1	0.00054	0.0012	7H23004	EPA 8260B	08/23/17 18:44	MRK	
1,2-Dichlorobenzene [95-50-1]^	0.00031	U	mg/kg dry	1	0.00031	0.0012	7H23004	EPA 8260B	08/23/17 18:44	MRK	
1,2-Dichloroethane [107-06-2]^	0.00048	U	mg/kg dry	1	0.00048	0.0012	7H23004	EPA 8260B	08/23/17 18:44	MRK	
1,2-Dichloropropane [78-87-5]^	0.00030	U	mg/kg dry	1	0.00030	0.0012	7H23004	EPA 8260B	08/23/17 18:44	MRK	
1,3,5-Trimethylbenzene [108-67-8]^	0.00023	U	mg/kg dry	1	0.00023	0.0012	7H23004	EPA 8260B	08/23/17 18:44	MRK	
1,3-Dichlorobenzene [541-73-1]^	0.00026	U	mg/kg dry	1	0.00026	0.0012	7H23004	EPA 8260B	08/23/17 18:44	MRK	
1,3-Dichloropropane [142-28-9]^	0.00034	U	mg/kg dry	1	0.00034	0.0012	7H23004	EPA 8260B	08/23/17 18:44	MRK	
1,4-Dichlorobenzene [106-46-7]^	0.00023	U	mg/kg dry	1	0.00023	0.0012	7H23004	EPA 8260B	08/23/17 18:44	MRK	
2,2-Dichloropropane [594-20-7]^	0.00027	U	mg/kg dry	1	0.00027	0.0012	7H23004	EPA 8260B	08/23/17 18:44	MRK	
2-Butanone [78-93-3]^	**0.0012**	J	mg/kg dry	1	0.00091	0.0058	7H23004	EPA 8260B	08/23/17 18:44	MRK	
2-Chloroethyl Vinyl Ether [110-75-8]^	0.00019	U	mg/kg dry	1	0.00019	0.0058	7H23004	EPA 8260B	08/23/17 18:44	MRK	
2-Chlorotoluene [95-49-8]^	0.00021	U	mg/kg dry	1	0.00021	0.0012	7H23004	EPA 8260B	08/23/17 18:44	MRK	
2-Hexanone [591-78-6]^	0.00087	U	mg/kg dry	1	0.00087	0.0058	7H23004	EPA 8260B	08/23/17 18:44	MRK	
4-Chlorotoluene [106-43-4]^	0.00030	U	mg/kg dry	1	0.00030	0.0012	7H23004	EPA 8260B	08/23/17 18:44	MRK	
4-Isopropyltoluene [99-87-6]^	0.00019	U	mg/kg dry	1	0.00019	0.0012	7H23004	EPA 8260B	08/23/17 18:44	MRK	
4-Methyl-2-pentanone [108-10-1]^	0.00066	U	mg/kg dry	1	0.00066	0.0058	7H23004	EPA 8260B	08/23/17 18:44	MRK	
Acetone [67-64-1]^	**0.021**	J	mg/kg dry	1	0.016	0.023	7H23004	EPA 8260B	08/23/17 18:44	MRK	
Benzene [71-43-2]^	0.00020	U	mg/kg dry	1	0.00020	0.0012	7H23004	EPA 8260B	08/23/17 18:44	MRK	
Bromobenzene [108-86-1]^	0.00026	U	mg/kg dry	1	0.00026	0.0012	7H23004	EPA 8260B	08/23/17 18:44	MRK	
Bromochloromethane [74-97-5]^	0.00048	U	mg/kg dry	1	0.00048	0.0012	7H23004	EPA 8260B	08/23/17 18:44	MRK	
Bromodichloromethane [75-27-4]^	0.00028	U	mg/kg dry	1	0.00028	0.0012	7H23004	EPA 8260B	08/23/17 18:44	MRK	
Bromoform [75-25-2]^	0.00052	U	mg/kg dry	1	0.00052	0.0012	7H23004	EPA 8260B	08/23/17 18:44	MRK	
Bromomethane [74-83-9]^	0.00037	U	mg/kg dry	1	0.00037	0.0012	7H23004	EPA 8260B	08/23/17 18:44	MRK	
Carbon disulfide [75-15-0]^	0.00045	U	mg/kg dry	1	0.00045	0.0058	7H23004	EPA 8260B	08/23/17 18:44	MRK	
Carbon Tetrachloride [56-23-5]^	0.00026	U	mg/kg dry	1	0.00026	0.0012	7H23004	EPA 8260B	08/23/17 18:44	MRK	
Chlorobenzene [108-90-7]^	0.00020	U	mg/kg dry	1	0.00020	0.0012	7H23004	EPA 8260B	08/23/17 18:44	MRK	
Chloroethane [75-00-3]^	0.00029	U	mg/kg dry	1	0.00029	0.0012	7H23004	EPA 8260B	08/23/17 18:44	MRK	
Chloroform [67-66-3]^	0.00021	U	mg/kg dry	1	0.00021	0.0012	7H23004	EPA 8260B	08/23/17 18:44	MRK	
Chloromethane [74-87-3]^	0.00024	U	mg/kg dry	1	0.00024	0.0012	7H23004	EPA 8260B	08/23/17 18:44	MRK	
cis-1,2-Dichloroethene [156-59-2]^	0.00027	U	mg/kg dry	1	0.00027	0.0012	7H23004	EPA 8260B	08/23/17 18:44	MRK	
cis-1,3-Dichloropropene [10061-01-5]^	0.00020	U	mg/kg dry	1	0.00020	0.0012	7H23004	EPA 8260B	08/23/17 18:44	MRK	
Dibromochloromethane [124-48-1]^	0.00041	U	mg/kg dry	1	0.00041	0.0012	7H23004	EPA 8260B	08/23/17 18:44	MRK	
Dibromomethane [74-95-3]^	0.00038	U	mg/kg dry	1	0.00038	0.0012	7H23004	EPA 8260B	08/23/17 18:44	MRK	
Dichlorodifluoromethane [75-71-8]^	0.00052	U	mg/kg dry	1	0.00052	0.0012	7H23004	EPA 8260B	08/23/17 18:44	MRK	
Ethylbenzene [100-41-4]^	0.00023	U	mg/kg dry	1	0.00023	0.0012	7H23004	EPA 8260B	08/23/17 18:44	MRK	

This report relates only to the sample as received by the laboratory, and may only be reproduced in full.

www.encolabs.com

ANALYTICAL RESULTS

Description: PO79-B1	**Lab Sample ID:** CA11841-13	**Received:** 08/17/17 11:00
Matrix: Soil	**Sampled:** 08/16/17 09:45	**Work Order:** CA11841
Project: NCDOT PSAs	**Sampled By:** Client	**% Solids:** 85.87

Volatile Organic Compounds by GCMS

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
Hexachlorobutadiene [87-68-3]^	0.00041	U	mg/kg dry	1	0.00041	0.0012	7H23004	EPA 8260B	08/23/17 18:44	MRK	
Isopropylbenzene [98-82-8]^	0.00017	U	mg/kg dry	1	0.00017	0.0012	7H23004	EPA 8260B	08/23/17 18:44	MRK	
m,p-Xylenes [108-38-3/106-42-3]^	0.00043	U	mg/kg dry	1	0.00043	0.0023	7H23004	EPA 8260B	08/23/17 18:44	MRK	
Methylene Chloride [75-09-2]^	0.00085	U	mg/kg dry	1	0.00085	0.0023	7H23004	EPA 8260B	08/23/17 18:44	MRK	
Methyl-tert-Butyl Ether [1634-04-4]^	0.00035	U	mg/kg dry	1	0.00035	0.0012	7H23004	EPA 8260B	08/23/17 18:44	MRK	
Naphthalene [91-20-3]^	0.00031	U	mg/kg dry	1	0.00031	0.0012	7H23004	EPA 8260B	08/23/17 18:44	MRK	
n-Butyl Benzene [104-51-8]^	0.00015	U	mg/kg dry	1	0.00015	0.0012	7H23004	EPA 8260B	08/23/17 18:44	MRK	
n-Propyl Benzene [103-65-1]^	0.00021	U	mg/kg dry	1	0.00021	0.0012	7H23004	EPA 8260B	08/23/17 18:44	MRK	
o-Xylene [95-47-6]^	0.00026	U	mg/kg dry	1	0.00026	0.0012	7H23004	EPA 8260B	08/23/17 18:44	MRK	
sec-Butylbenzene [135-98-8]^	0.0011	U	mg/kg dry	1	0.0011	0.0012	7H23004	EPA 8260B	08/23/17 18:44	MRK	
Styrene [100-42-5]^	0.0011	U	mg/kg dry	1	0.0011	0.0012	7H23004	EPA 8260B	08/23/17 18:44	MRK	
tert-Butylbenzene [98-06-6]^	0.00020	U	mg/kg dry	1	0.00020	0.0012	7H23004	EPA 8260B	08/23/17 18:44	MRK	
Tetrachloroethene [127-18-4]^	0.00033	U	mg/kg dry	1	0.00033	0.0012	7H23004	EPA 8260B	08/23/17 18:44	MRK	
Toluene [108-88-3]^	0.00028	U	mg/kg dry	1	0.00028	0.0012	7H23004	EPA 8260B	08/23/17 18:44	MRK	
trans-1,2-Dichloroethene [156-60-5]^	0.00043	U	mg/kg dry	1	0.00043	0.0012	7H23004	EPA 8260B	08/23/17 18:44	MRK	
trans-1,3-Dichloropropene [10061-02-6]^	0.00045	U	mg/kg dry	1	0.00045	0.0012	7H23004	EPA 8260B	08/23/17 18:44	MRK	
Trichloroethene [79-01-6]^	0.00037	U	mg/kg dry	1	0.00037	0.0012	7H23004	EPA 8260B	08/23/17 18:44	MRK	
Trichlorofluoromethane [75-69-4]^	0.00030	U	mg/kg dry	1	0.00030	0.0012	7H23004	EPA 8260B	08/23/17 18:44	MRK	
Vinyl chloride [75-01-4]^	0.00028	U	mg/kg dry	1	0.00028	0.0012	7H23004	EPA 8260B	08/23/17 18:44	MRK	
Xylenes (Total) [1330-20-7]^	0.00065	U	mg/kg dry	1	0.00065	0.0035	7H23004	EPA 8260B	08/23/17 18:44	MRK	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes
4-Bromofluorobenzene	*52*	*1*	*50.0*	*104 %*	*50-127*	*7H23004*	*EPA 8260B*	*08/23/17 18:44*	*MRK*	
Dibromofluoromethane	*54*	*1*	*50.0*	*108 %*	*52-128*	*7H23004*	*EPA 8260B*	*08/23/17 18:44*	*MRK*	
Toluene-d8	*56*	*1*	*50.0*	*112 %*	*57-124*	*7H23004*	*EPA 8260B*	*08/23/17 18:44*	*MRK*	

Metals by EPA 6000/7000 Series Methods

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
Arsenic [7440-38-2]^	**3.20**		mg/kg dry	1	0.373	0.582	7H17028	EPA 6010D	08/23/17 15:15	JMV	
Barium [7440-39-3]^	**60.8**		mg/kg dry	1	0.116	0.582	7H17028	EPA 6010D	08/23/17 15:15	JMV	
Cadmium [7440-43-9]^	**0.333**		mg/kg dry	1	0.0112	0.0582	7H17028	EPA 6010D	08/23/17 15:15	JMV	
Chromium [7440-47-3]^	**64.9**		mg/kg dry	1	0.116	0.582	7H17028	EPA 6010D	08/23/17 15:15	JMV	
Lead [7439-92-1]^	**16.7**		mg/kg dry	1	0.140	0.582	7H17028	EPA 6010D	08/23/17 15:15	JMV	
Mercury [7439-97-6]^	**0.0231**	J	mg/kg dry	1	0.0163	0.0279	7H24004	EPA 7471B	08/25/17 09:57	CMK	
Selenium [7782-49-2]^	0.477	U	mg/kg dry	1	0.477	0.582	7H17028	EPA 6010D	08/23/17 15:15	JMV	
Silver [7440-22-4]^	**1.04**		mg/kg dry	1	0.116	0.582	7H17028	EPA 6010D	08/23/17 15:15	JMV	

This report relates only to the sample as received by the laboratory, and may only be reproduced in full.

www.encolabs.com

ANALYTICAL RESULTS

Description: PO78-B5	**Lab Sample ID:** CA11841-14	**Received:** 08/17/17 11:00
Matrix: Soil	**Sampled:** 08/16/17 10:00	**Work Order:** CA11841
Project: NCDOT PSAs	**Sampled By:** Client	**% Solids:** 90.20

Volatile Organic Compounds by GCMS

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1,2-Tetrachloroethane [630-20-6]^	0.00018	U	mg/kg dry	1	0.00018	0.0011	7H23004	EPA 8260B	08/23/17 19:15	MRK	
1,1,1-Trichloroethane [71-55-6]^	0.00028	U	mg/kg dry	1	0.00028	0.0011	7H23004	EPA 8260B	08/23/17 19:15	MRK	
1,1,2,2-Tetrachloroethane [79-34-5]^	0.00022	U	mg/kg dry	1	0.00022	0.0011	7H23004	EPA 8260B	08/23/17 19:15	MRK	
1,1,2-Trichloroethane [79-00-5]^	0.00028	U	mg/kg dry	1	0.00028	0.0011	7H23004	EPA 8260B	08/23/17 19:15	MRK	
1,1-Dichloroethane [75-34-3]^	0.00028	U	mg/kg dry	1	0.00028	0.0011	7H23004	EPA 8260B	08/23/17 19:15	MRK	
1,1-Dichloroethene [75-35-4]^	0.00033	U	mg/kg dry	1	0.00033	0.0011	7H23004	EPA 8260B	08/23/17 19:15	MRK	
1,1-Dichloropropene [563-58-6]^	0.00018	U	mg/kg dry	1	0.00018	0.0011	7H23004	EPA 8260B	08/23/17 19:15	MRK	
1,2,3-Trichlorobenzene [87-61-6]^	0.00031	U	mg/kg dry	1	0.00031	0.0011	7H23004	EPA 8260B	08/23/17 19:15	MRK	
1,2,3-Trichloropropane [96-18-4]^	0.00071	U	mg/kg dry	1	0.00071	0.0011	7H23004	EPA 8260B	08/23/17 19:15	MRK	
1,2,4-Trichlorobenzene [120-82-1]^	0.00030	U	mg/kg dry	1	0.00030	0.0011	7H23004	EPA 8260B	08/23/17 19:15	MRK	
1,2,4-Trimethylbenzene [95-63-6]^	0.00019	U	mg/kg dry	1	0.00019	0.0011	7H23004	EPA 8260B	08/23/17 19:15	MRK	
1,2-Dibromo-3-chloropropane [96-12-8]^	0.00088	U	mg/kg dry	1	0.00088	0.0011	7H23004	EPA 8260B	08/23/17 19:15	MRK	
1,2-Dibromoethane [106-93-4]^	0.00051	U	mg/kg dry	1	0.00051	0.0011	7H23004	EPA 8260B	08/23/17 19:15	MRK	
1,2-Dichlorobenzene [95-50-1]^	0.00030	U	mg/kg dry	1	0.00030	0.0011	7H23004	EPA 8260B	08/23/17 19:15	MRK	
1,2-Dichloroethane [107-06-2]^	0.00045	U	mg/kg dry	1	0.00045	0.0011	7H23004	EPA 8260B	08/23/17 19:15	MRK	
1,2-Dichloropropane [78-87-5]^	0.00029	U	mg/kg dry	1	0.00029	0.0011	7H23004	EPA 8260B	08/23/17 19:15	MRK	
1,3,5-Trimethylbenzene [108-67-8]^	0.00022	U	mg/kg dry	1	0.00022	0.0011	7H23004	EPA 8260B	08/23/17 19:15	MRK	
1,3-Dichlorobenzene [541-73-1]^	0.00024	U	mg/kg dry	1	0.00024	0.0011	7H23004	EPA 8260B	08/23/17 19:15	MRK	
1,3-Dichloropropane [142-28-9]^	0.00032	U	mg/kg dry	1	0.00032	0.0011	7H23004	EPA 8260B	08/23/17 19:15	MRK	
1,4-Dichlorobenzene [106-46-7]^	0.00022	U	mg/kg dry	1	0.00022	0.0011	7H23004	EPA 8260B	08/23/17 19:15	MRK	
2,2-Dichloropropane [594-20-7]^	0.00025	U	mg/kg dry	1	0.00025	0.0011	7H23004	EPA 8260B	08/23/17 19:15	MRK	
2-Butanone [78-93-3]^	**0.0023**	J	mg/kg dry	1	0.00086	0.0055	7H23004	EPA 8260B	08/23/17 19:15	MRK	
2-Chloroethyl Vinyl Ether [110-75-8]^	0.00018	U	mg/kg dry	1	0.00018	0.0055	7H23004	EPA 8260B	08/23/17 19:15	MRK	
2-Chlorotoluene [95-49-8]^	0.00020	U	mg/kg dry	1	0.00020	0.0011	7H23004	EPA 8260B	08/23/17 19:15	MRK	
2-Hexanone [591-78-6]^	0.00083	U	mg/kg dry	1	0.00083	0.0055	7H23004	EPA 8260B	08/23/17 19:15	MRK	
4-Chlorotoluene [106-43-4]^	0.00029	U	mg/kg dry	1	0.00029	0.0011	7H23004	EPA 8260B	08/23/17 19:15	MRK	
4-Isopropyltoluene [99-87-6]^	0.00018	U	mg/kg dry	1	0.00018	0.0011	7H23004	EPA 8260B	08/23/17 19:15	MRK	
4-Methyl-2-pentanone [108-10-1]^	0.00063	U	mg/kg dry	1	0.00063	0.0055	7H23004	EPA 8260B	08/23/17 19:15	MRK	
Acetone [67-64-1]^	**0.067**		mg/kg dry	1	0.016	0.022	7H23004	EPA 8260B	08/23/17 19:15	MRK	
Benzene [71-43-2]^	0.00019	U	mg/kg dry	1	0.00019	0.0011	7H23004	EPA 8260B	08/23/17 19:15	MRK	
Bromobenzene [108-86-1]^	0.00024	U	mg/kg dry	1	0.00024	0.0011	7H23004	EPA 8260B	08/23/17 19:15	MRK	
Bromochloromethane [74-97-5]^	0.00045	U	mg/kg dry	1	0.00045	0.0011	7H23004	EPA 8260B	08/23/17 19:15	MRK	
Bromodichloromethane [75-27-4]^	0.00027	U	mg/kg dry	1	0.00027	0.0011	7H23004	EPA 8260B	08/23/17 19:15	MRK	
Bromoform [75-25-2]^	0.00050	U	mg/kg dry	1	0.00050	0.0011	7H23004	EPA 8260B	08/23/17 19:15	MRK	
Bromomethane [74-83-9]^	0.00035	U	mg/kg dry	1	0.00035	0.0011	7H23004	EPA 8260B	08/23/17 19:15	MRK	
Carbon disulfide [75-15-0]^	0.00043	U	mg/kg dry	1	0.00043	0.0055	7H23004	EPA 8260B	08/23/17 19:15	MRK	
Carbon Tetrachloride [56-23-5]^	0.00024	U	mg/kg dry	1	0.00024	0.0011	7H23004	EPA 8260B	08/23/17 19:15	MRK	
Chlorobenzene [108-90-7]^	0.00019	U	mg/kg dry	1	0.00019	0.0011	7H23004	EPA 8260B	08/23/17 19:15	MRK	
Chloroethane [75-00-3]^	0.00028	U	mg/kg dry	1	0.00028	0.0011	7H23004	EPA 8260B	08/23/17 19:15	MRK	
Chloroform [67-66-3]^	0.00020	U	mg/kg dry	1	0.00020	0.0011	7H23004	EPA 8260B	08/23/17 19:15	MRK	
Chloromethane [74-87-3]^	0.00023	U	mg/kg dry	1	0.00023	0.0011	7H23004	EPA 8260B	08/23/17 19:15	MRK	
cis-1,2-Dichloroethene [156-59-2]^	0.00025	U	mg/kg dry	1	0.00025	0.0011	7H23004	EPA 8260B	08/23/17 19:15	MRK	
cis-1,3-Dichloropropene [10061-01-5]^	0.00019	U	mg/kg dry	1	0.00019	0.0011	7H23004	EPA 8260B	08/23/17 19:15	MRK	
Dibromochloromethane [124-48-1]^	0.00039	U	mg/kg dry	1	0.00039	0.0011	7H23004	EPA 8260B	08/23/17 19:15	MRK	
Dibromomethane [74-95-3]^	0.00037	U	mg/kg dry	1	0.00037	0.0011	7H23004	EPA 8260B	08/23/17 19:15	MRK	
Dichlorodifluoromethane [75-71-8]^	0.00050	U	mg/kg dry	1	0.00050	0.0011	7H23004	EPA 8260B	08/23/17 19:15	MRK	
Ethylbenzene [100-41-4]^	0.00022	U	mg/kg dry	1	0.00022	0.0011	7H23004	EPA 8260B	08/23/17 19:15	MRK	

This report relates only to the sample as received by the laboratory, and may only be reproduced in full.

www.encolabs.com

ANALYTICAL RESULTS

Description: PO78-B5	**Lab Sample ID:** CA11841-14	**Received:** 08/17/17 11:00
Matrix: Soil	**Sampled:** 08/16/17 10:00	**Work Order:** CA11841
Project: NCDOT PSAs	**Sampled By:** Client	**% Solids:** 90.20

Volatile Organic Compounds by GCMS

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
Hexachlorobutadiene [87-68-3]^	0.00039	U	mg/kg dry	1	0.00039	0.0011	7H23004	EPA 8260B	08/23/17 19:15	MRK	
Isopropylbenzene [98-82-8]^	0.00017	U	mg/kg dry	1	0.00017	0.0011	7H23004	EPA 8260B	08/23/17 19:15	MRK	
m,p-Xylenes [108-38-3/106-42-3]^	0.00041	U	mg/kg dry	1	0.00041	0.0022	7H23004	EPA 8260B	08/23/17 19:15	MRK	
Methylene Chloride [75-09-2]^	0.00081	U	mg/kg dry	1	0.00081	0.0022	7H23004	EPA 8260B	08/23/17 19:15	MRK	
Methyl-tert-Butyl Ether [1634-04-4]^	0.00033	U	mg/kg dry	1	0.00033	0.0011	7H23004	EPA 8260B	08/23/17 19:15	MRK	
Naphthalene [91-20-3]^	0.00030	U	mg/kg dry	1	0.00030	0.0011	7H23004	EPA 8260B	08/23/17 19:15	MRK	
n-Butyl Benzene [104-51-8]^	0.00014	U	mg/kg dry	1	0.00014	0.0011	7H23004	EPA 8260B	08/23/17 19:15	MRK	
n-Propyl Benzene [103-65-1]^	0.00020	U	mg/kg dry	1	0.00020	0.0011	7H23004	EPA 8260B	08/23/17 19:15	MRK	
o-Xylene [95-47-6]^	0.00024	U	mg/kg dry	1	0.00024	0.0011	7H23004	EPA 8260B	08/23/17 19:15	MRK	
sec-Butylbenzene [135-98-8]^	0.0011	U	mg/kg dry	1	0.0011	0.0011	7H23004	EPA 8260B	08/23/17 19:15	MRK	
Styrene [100-42-5]^	0.0011	U	mg/kg dry	1	0.0011	0.0011	7H23004	EPA 8260B	08/23/17 19:15	MRK	
tert-Butylbenzene [98-06-6]^	0.00019	U	mg/kg dry	1	0.00019	0.0011	7H23004	EPA 8260B	08/23/17 19:15	MRK	
Tetrachloroethene [127-18-4]^	0.00031	U	mg/kg dry	1	0.00031	0.0011	7H23004	EPA 8260B	08/23/17 19:15	MRK	
Toluene [108-88-3]^	0.00027	U	mg/kg dry	1	0.00027	0.0011	7H23004	EPA 8260B	08/23/17 19:15	MRK	
trans-1,2-Dichloroethene [156-60-5]^	0.00041	U	mg/kg dry	1	0.00041	0.0011	7H23004	EPA 8260B	08/23/17 19:15	MRK	
trans-1,3-Dichloropropene [10061-02-6]^	0.00043	U	mg/kg dry	1	0.00043	0.0011	7H23004	EPA 8260B	08/23/17 19:15	MRK	
Trichloroethene [79-01-6]^	0.00035	U	mg/kg dry	1	0.00035	0.0011	7H23004	EPA 8260B	08/23/17 19:15	MRK	
Trichlorofluoromethane [75-69-4]^	0.00029	U	mg/kg dry	1	0.00029	0.0011	7H23004	EPA 8260B	08/23/17 19:15	MRK	
Vinyl chloride [75-01-4]^	0.00027	U	mg/kg dry	1	0.00027	0.0011	7H23004	EPA 8260B	08/23/17 19:15	MRK	
Xylenes (Total) [1330-20-7]^	0.00062	U	mg/kg dry	1	0.00062	0.0033	7H23004	EPA 8260B	08/23/17 19:15	MRK	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes
4-Bromofluorobenzene	*53*	*1*	*50.0*	*107 %*	*50-127*	*7H23004*	*EPA 8260B*	*08/23/17 19:15*	*MRK*	
Dibromofluoromethane	*55*	*1*	*50.0*	*110 %*	*52-128*	*7H23004*	*EPA 8260B*	*08/23/17 19:15*	*MRK*	
Toluene-d8	*56*	*1*	*50.0*	*113 %*	*57-124*	*7H23004*	*EPA 8260B*	*08/23/17 19:15*	*MRK*	

Metals by EPA 6000/7000 Series Methods

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
Arsenic [7440-38-2]^	**4.24**		mg/kg dry	1	0.355	0.554	7H17028	EPA 6010D	08/23/17 15:17	JMV	
Barium [7440-39-3]^	**34.9**		mg/kg dry	1	0.111	0.554	7H17028	EPA 6010D	08/23/17 15:17	JMV	
Cadmium [7440-43-9]^	**0.284**		mg/kg dry	1	0.0106	0.0554	7H17028	EPA 6010D	08/23/17 15:17	JMV	
Chromium [7440-47-3]^	**66.8**		mg/kg dry	1	0.111	0.554	7H17028	EPA 6010D	08/23/17 15:17	JMV	
Lead [7439-92-1]^	**21.3**		mg/kg dry	1	0.133	0.554	7H17028	EPA 6010D	08/23/17 15:17	JMV	
Mercury [7439-97-6]^	**0.0217**	J	mg/kg dry	1	0.0155	0.0266	7H24004	EPA 7471B	08/25/17 09:59	CMK	
Selenium [7782-49-2]^	0.455	U	mg/kg dry	1	0.455	0.554	7H17028	EPA 6010D	08/23/17 15:17	JMV	
Silver [7440-22-4]^	**1.07**		mg/kg dry	1	0.111	0.554	7H17028	EPA 6010D	08/23/17 15:17	JMV	

This report relates only to the sample as received by the laboratory, and may only be reproduced in full.

www.encolabs.com

ANALYTICAL RESULTS

Description: PO78-HA1	**Lab Sample ID:** CA11841-15	**Received:** 08/17/17 11:00
Matrix: Soil	**Sampled:** 08/16/17 10:45	**Work Order:** CA11841
Project: NCDOT PSAs	**Sampled By:** Client	**% Solids:** 93.10

Volatile Organic Compounds by GCMS

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1,2-Tetrachloroethane [630-20-6]^	0.00021	U	mg/kg dry	1.22	0.00021	0.0013	7H23004	EPA 8260B	08/23/17 19:45	MRK	QM-15
1,1,1,2-Tetrachloroethane [630-20-6]^	0.023	UD	mg/kg dry	133	0.023	0.14	7H29035	EPA 8260B	08/29/17 19:51	MRK	QM-15
1,1,1-Trichloroethane [71-55-6]^	0.00033	U	mg/kg dry	1.22	0.00033	0.0013	7H23004	EPA 8260B	08/23/17 19:45	MRK	QM-15
1,1,1-Trichloroethane [71-55-6]^	0.036	UD	mg/kg dry	133	0.036	0.14	7H29035	EPA 8260B	08/29/17 19:51	MRK	QM-15
1,1,2,2-Tetrachloroethane [79-34-5]^	0.00026	U	mg/kg dry	1.22	0.00026	0.0013	7H23004	EPA 8260B	08/23/17 19:45	MRK	QM-15
1,1,2,2-Tetrachloroethane [79-34-5]^	0.028	UD	mg/kg dry	133	0.028	0.14	7H29035	EPA 8260B	08/29/17 19:51	MRK	QM-15
1,1,2-Trichloroethane [79-00-5]^	0.00033	U	mg/kg dry	1.22	0.00033	0.0013	7H23004	EPA 8260B	08/23/17 19:45	MRK	QM-15
1,1,2-Trichloroethane [79-00-5]^	0.036	UD	mg/kg dry	133	0.036	0.14	7H29035	EPA 8260B	08/29/17 19:51	MRK	QM-15
1,1-Dichloroethane [75-34-3]^	0.00033	U	mg/kg dry	1.22	0.00033	0.0013	7H23004	EPA 8260B	08/23/17 19:45	MRK	QM-15
1,1-Dichloroethane [75-34-3]^	0.036	UD	mg/kg dry	133	0.036	0.14	7H29035	EPA 8260B	08/29/17 19:51	MRK	QM-15
1,1-Dichloroethene [75-35-4]^	0.00039	U	mg/kg dry	1.22	0.00039	0.0013	7H23004	EPA 8260B	08/23/17 19:45	MRK	QM-15
1,1-Dichloroethene [75-35-4]^	0.043	UD	mg/kg dry	133	0.043	0.14	7H29035	EPA 8260B	08/29/17 19:51	MRK	QM-15
1,1-Dichloropropene [563-58-6]^	0.00021	U	mg/kg dry	1.22	0.00021	0.0013	7H23004	EPA 8260B	08/23/17 19:45	MRK	QM-15
1,1-Dichloropropene [563-58-6]^	0.023	UD	mg/kg dry	133	0.023	0.14	7H29035	EPA 8260B	08/29/17 19:51	MRK	QM-15
1,2,3-Trichlorobenzene [87-61-6]^	0.00037	U	mg/kg dry	1.22	0.00037	0.0013	7H23004	EPA 8260B	08/23/17 19:45	MRK	QM-15
1,2,3-Trichlorobenzene [87-61-6]^	0.040	UD	mg/kg dry	133	0.040	0.14	7H29035	EPA 8260B	08/29/17 19:51	MRK	QM-15
1,2,3-Trichloropropane [96-18-4]^	0.00084	U	mg/kg dry	1.22	0.00084	0.0013	7H23004	EPA 8260B	08/23/17 19:45	MRK	QM-15
1,2,3-Trichloropropane [96-18-4]^	0.091	UD	mg/kg dry	133	0.091	0.14	7H29035	EPA 8260B	08/29/17 19:51	MRK	QM-15
1,2,4-Trichlorobenzene [120-82-1]^	0.00035	U	mg/kg dry	1.22	0.00035	0.0013	7H23004	EPA 8260B	08/23/17 19:45	MRK	QM-15
1,2,4-Trichlorobenzene [120-82-1]^	0.038	UD	mg/kg dry	133	0.038	0.14	7H29035	EPA 8260B	08/29/17 19:51	MRK	QM-15
1,2,4-Trimethylbenzene [95-63-6]^	0.00022	U	mg/kg dry	1.22	0.00022	0.0013	7H23004	EPA 8260B	08/23/17 19:45	MRK	QM-15
1,2,4-Trimethylbenzene [95-63-6]^	0.024	UD	mg/kg dry	133	0.024	0.14	7H29035	EPA 8260B	08/29/17 19:51	MRK	QM-15
1,2-Dibromo-3-chloropropane [96-12-8]^	0.0010	U	mg/kg dry	1.22	0.0010	0.0013	7H23004	EPA 8260B	08/23/17 19:45	MRK	QM-15
1,2-Dibromo-3-chloropropane [96-12-8]^	0.11	UD	mg/kg dry	133	0.11	0.14	7H29035	EPA 8260B	08/29/17 19:51	MRK	QM-15
1,2-Dibromoethane [106-93-4]^	0.00060	U	mg/kg dry	1.22	0.00060	0.0013	7H23004	EPA 8260B	08/23/17 19:45	MRK	QM-15
1,2-Dibromoethane [106-93-4]^	0.066	UD	mg/kg dry	133	0.066	0.14	7H29035	EPA 8260B	08/29/17 19:51	MRK	QM-15
1,2-Dichlorobenzene [95-50-1]^	0.00035	U	mg/kg dry	1.22	0.00035	0.0013	7H23004	EPA 8260B	08/23/17 19:45	MRK	QM-15
1,2-Dichlorobenzene [95-50-1]^	0.038	UD	mg/kg dry	133	0.038	0.14	7H29035	EPA 8260B	08/29/17 19:51	MRK	QM-15
1,2-Dichloroethane [107-06-2]^	0.00054	U	mg/kg dry	1.22	0.00054	0.0013	7H23004	EPA 8260B	08/23/17 19:45	MRK	QM-15
1,2-Dichloroethane [107-06-2]^	0.058	UD	mg/kg dry	133	0.058	0.14	7H29035	EPA 8260B	08/29/17 19:51	MRK	QM-15
1,2-Dichloropropane [78-87-5]^	0.00034	U	mg/kg dry	1.22	0.00034	0.0013	7H23004	EPA 8260B	08/23/17 19:45	MRK	QM-15
1,2-Dichloropropane [78-87-5]^	0.037	UD	mg/kg dry	133	0.037	0.14	7H29035	EPA 8260B	08/29/17 19:51	MRK	QM-15
1,3,5-Trimethylbenzene [108-67-8]^	0.00026	U	mg/kg dry	1.22	0.00026	0.0013	7H23004	EPA 8260B	08/23/17 19:45	MRK	QM-15
1,3,5-Trimethylbenzene [108-67-8]^	0.028	UD	mg/kg dry	133	0.028	0.14	7H29035	EPA 8260B	08/29/17 19:51	MRK	QM-15
1,3-Dichlorobenzene [541-73-1]^	0.00029	U	mg/kg dry	1.22	0.00029	0.0013	7H23004	EPA 8260B	08/23/17 19:45	MRK	QM-15
1,3-Dichlorobenzene [541-73-1]^	0.031	UD	mg/kg dry	133	0.031	0.14	7H29035	EPA 8260B	08/29/17 19:51	MRK	QM-15
1,3-Dichloropropane [142-28-9]^	0.00038	U	mg/kg dry	1.22	0.00038	0.0013	7H23004	EPA 8260B	08/23/17 19:45	MRK	QM-15
1,3-Dichloropropane [142-28-9]^	0.041	UD	mg/kg dry	133	0.041	0.14	7H29035	EPA 8260B	08/29/17 19:51	MRK	QM-15
1,4-Dichlorobenzene [106-46-7]^	0.00026	U	mg/kg dry	1.22	0.00026	0.0013	7H23004	EPA 8260B	08/23/17 19:45	MRK	QM-15
1,4-Dichlorobenzene [106-46-7]^	0.028	UD	mg/kg dry	133	0.028	0.14	7H29035	EPA 8260B	08/29/17 19:51	MRK	QM-15
2,2-Dichloropropane [594-20-7]^	0.00030	U	mg/kg dry	1.22	0.00030	0.0013	7H23004	EPA 8260B	08/23/17 19:45	MRK	QM-15
2,2-Dichloropropane [594-20-7]^	0.033	UD	mg/kg dry	133	0.033	0.14	7H29035	EPA 8260B	08/29/17 19:51	MRK	QM-15
2-Butanone [78-93-3]^	**0.011**		mg/kg dry	1.22	0.0010	0.0066	7H23004	EPA 8260B	08/23/17 19:45	MRK	QM-15
2-Butanone [78-93-3]^	0.11	UD	mg/kg dry	133	0.11	0.71	7H29035	EPA 8260B	08/29/17 19:51	MRK	QM-15
2-Chloroethyl Vinyl Ether [110-75-8]^	0.00021	U	mg/kg dry	1.22	0.00021	0.0066	7H23004	EPA 8260B	08/23/17 19:45	MRK	QM-15
2-Chloroethyl Vinyl Ether [110-75-8]^	0.023	UD	mg/kg dry	133	0.023	0.71	7H29035	EPA 8260B	08/29/17 19:51	MRK	QM-15
2-Chlorotoluene [95-49-8]^	0.00024	U	mg/kg dry	1.22	0.00024	0.0013	7H23004	EPA 8260B	08/23/17 19:45	MRK	QM-15

This report relates only to the sample as received by the laboratory, and may only be reproduced in full.

www.encolabs.com

ANALYTICAL RESULTS

Description: PO78-HA1	**Lab Sample ID:** CA11841-15	**Received:** 08/17/17 11:00
Matrix: Soil	**Sampled:** 08/16/17 10:45	**Work Order:** CA11841
Project: NCDOT PSAs	**Sampled By:** Client	**% Solids:** 93.10

Volatile Organic Compounds by GCMS

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
2-Chlorotoluene [95-49-8]^	0.026	UD	mg/kg dry	133	0.026	0.14	7H29035	EPA 8260B	08/29/17 19:51	MRK	QM-15
2-Hexanone [591-78-6]^	0.00098	U	mg/kg dry	1.22	0.00098	0.0066	7H23004	EPA 8260B	08/23/17 19:45	MRK	QM-15
2-Hexanone [591-78-6]^	0.11	UD	mg/kg dry	133	0.11	0.71	7H29035	EPA 8260B	08/29/17 19:51	MRK	QM-15
4-Chlorotoluene [106-43-4]^	0.00034	U	mg/kg dry	1.22	0.00034	0.0013	7H23004	EPA 8260B	08/23/17 19:45	MRK	QM-15
4-Chlorotoluene [106-43-4]^	0.037	UD	mg/kg dry	133	0.037	0.14	7H29035	EPA 8260B	08/29/17 19:51	MRK	QM-15
4-Isopropyltoluene [99-87-6]^	**0.080**		mg/kg dry	1.22	0.00021	0.0013	7H23004	EPA 8260B	08/23/17 19:45	MRK	QM-15
4-Isopropyltoluene [99-87-6]^	0.023	UD	mg/kg dry	133	0.023	0.14	7H29035	EPA 8260B	08/29/17 19:51	MRK	QM-15
4-Methyl-2-pentanone [108-10-1]^	0.00075	U	mg/kg dry	1.22	0.00075	0.0066	7H23004	EPA 8260B	08/23/17 19:45	MRK	QM-15
4-Methyl-2-pentanone [108-10-1]^	0.081	UD	mg/kg dry	133	0.081	0.71	7H29035	EPA 8260B	08/29/17 19:51	MRK	QM-15
Acetone [67-64-1]^	**0.69**	E	mg/kg dry	1.22	0.018	0.026	7H23004	EPA 8260B	08/23/17 19:45	MRK	QM-15
Acetone [67-64-1]^	2.0	UD	mg/kg dry	133	2.0	2.8	7H29035	EPA 8260B	08/29/17 19:51	MRK	QM-15
Benzene [71-43-2]^	0.00022	U	mg/kg dry	1.22	0.00022	0.0013	7H23004	EPA 8260B	08/23/17 19:45	MRK	QM-15
Benzene [71-43-2]^	0.024	UD	mg/kg dry	133	0.024	0.14	7H29035	EPA 8260B	08/29/17 19:51	MRK	QM-15
Bromobenzene [108-86-1]^	0.00029	U	mg/kg dry	1.22	0.00029	0.0013	7H23004	EPA 8260B	08/23/17 19:45	MRK	QM-15
Bromobenzene [108-86-1]^	0.031	UD	mg/kg dry	133	0.031	0.14	7H29035	EPA 8260B	08/29/17 19:51	MRK	QM-15
Bromochloromethane [74-97-5]^	0.00054	U	mg/kg dry	1.22	0.00054	0.0013	7H23004	EPA 8260B	08/23/17 19:45	MRK	QM-15
Bromochloromethane [74-97-5]^	0.058	UD	mg/kg dry	133	0.058	0.14	7H29035	EPA 8260B	08/29/17 19:51	MRK	QM-15
Bromodichloromethane [75-27-4]^	0.00032	U	mg/kg dry	1.22	0.00032	0.0013	7H23004	EPA 8260B	08/23/17 19:45	MRK	QM-15
Bromodichloromethane [75-27-4]^	0.034	UD	mg/kg dry	133	0.034	0.14	7H29035	EPA 8260B	08/29/17 19:51	MRK	QM-15
Bromoform [75-25-2]^	0.00059	U	mg/kg dry	1.22	0.00059	0.0013	7H23004	EPA 8260B	08/23/17 19:45	MRK	QM-15
Bromoform [75-25-2]^	0.064	UD	mg/kg dry	133	0.064	0.14	7H29035	EPA 8260B	08/29/17 19:51	MRK	QM-15
Bromomethane [74-83-9]^	0.00042	U	mg/kg dry	1.22	0.00042	0.0013	7H23004	EPA 8260B	08/23/17 19:45	MRK	QM-15
Bromomethane [74-83-9]^	0.046	UD	mg/kg dry	133	0.046	0.14	7H29035	EPA 8260B	08/29/17 19:51	MRK	QM-15
Carbon disulfide [75-15-0]^	0.00051	U	mg/kg dry	1.22	0.00051	0.0066	7H23004	EPA 8260B	08/23/17 19:45	MRK	QM-15
Carbon disulfide [75-15-0]^	0.056	UD	mg/kg dry	133	0.056	0.71	7H29035	EPA 8260B	08/29/17 19:51	MRK	QM-15
Carbon Tetrachloride [56-23-5]^	0.00029	U	mg/kg dry	1.22	0.00029	0.0013	7H23004	EPA 8260B	08/23/17 19:45	MRK	QM-15
Carbon Tetrachloride [56-23-5]^	0.031	UD	mg/kg dry	133	0.031	0.14	7H29035	EPA 8260B	08/29/17 19:51	MRK	QM-15
Chlorobenzene [108-90-7]^	0.00022	U	mg/kg dry	1.22	0.00022	0.0013	7H23004	EPA 8260B	08/23/17 19:45	MRK	QM-15
Chlorobenzene [108-90-7]^	0.024	UD	mg/kg dry	133	0.024	0.14	7H29035	EPA 8260B	08/29/17 19:51	MRK	QM-15
Chloroethane [75-00-3]^	0.00033	U	mg/kg dry	1.22	0.00033	0.0013	7H23004	EPA 8260B	08/23/17 19:45	MRK	QM-15
Chloroethane [75-00-3]^	0.036	UD	mg/kg dry	133	0.036	0.14	7H29035	EPA 8260B	08/29/17 19:51	MRK	QM-15
Chloroform [67-66-3]^	0.00024	U	mg/kg dry	1.22	0.00024	0.0013	7H23004	EPA 8260B	08/23/17 19:45	MRK	QM-15
Chloroform [67-66-3]^	0.026	UD	mg/kg dry	133	0.026	0.14	7H29035	EPA 8260B	08/29/17 19:51	MRK	QM-15
Chloromethane [74-87-3]^	0.00028	U	mg/kg dry	1.22	0.00028	0.0013	7H23004	EPA 8260B	08/23/17 19:45	MRK	QM-15
Chloromethane [74-87-3]^	0.030	UD	mg/kg dry	133	0.030	0.14	7H29035	EPA 8260B	08/29/17 19:51	MRK	QM-15
cis-1,2-Dichloroethene [156-59-2]^	0.00030	U	mg/kg dry	1.22	0.00030	0.0013	7H23004	EPA 8260B	08/23/17 19:45	MRK	QM-15
cis-1,2-Dichloroethene [156-59-2]^	0.033	UD	mg/kg dry	133	0.033	0.14	7H29035	EPA 8260B	08/29/17 19:51	MRK	QM-15
cis-1,3-Dichloropropene [10061-01-5]^	0.00022	U	mg/kg dry	1.22	0.00022	0.0013	7H23004	EPA 8260B	08/23/17 19:45	MRK	QM-15
cis-1,3-Dichloropropene [10061-01-5]^	0.024	UD	mg/kg dry	133	0.024	0.14	7H29035	EPA 8260B	08/29/17 19:51	MRK	QM-15
Dibromochloromethane [124-48-1]^	0.00046	U	mg/kg dry	1.22	0.00046	0.0013	7H23004	EPA 8260B	08/23/17 19:45	MRK	QM-15
Dibromochloromethane [124-48-1]^	0.050	UD	mg/kg dry	133	0.050	0.14	7H29035	EPA 8260B	08/29/17 19:51	MRK	QM-15
Dibromomethane [74-95-3]^	0.00043	U	mg/kg dry	1.22	0.00043	0.0013	7H23004	EPA 8260B	08/23/17 19:45	MRK	QM-15
Dibromomethane [74-95-3]^	0.047	UD	mg/kg dry	133	0.047	0.14	7H29035	EPA 8260B	08/29/17 19:51	MRK	QM-15
Dichlorodifluoromethane [75-71-8]^	0.00059	U	mg/kg dry	1.22	0.00059	0.0013	7H23004	EPA 8260B	08/23/17 19:45	MRK	QM-15
Dichlorodifluoromethane [75-71-8]^	0.064	UD	mg/kg dry	133	0.064	0.14	7H29035	EPA 8260B	08/29/17 19:51	MRK	QM-15
Ethylbenzene [100-41-4]^	0.00026	U	mg/kg dry	1.22	0.00026	0.0013	7H23004	EPA 8260B	08/23/17 19:45	MRK	QM-15
Ethylbenzene [100-41-4]^	0.028	UD	mg/kg dry	133	0.028	0.14	7H29035	EPA 8260B	08/29/17 19:51	MRK	QM-15

This report relates only to the sample as received by the laboratory, and may only be reproduced in full.

www.encolabs.com

ANALYTICAL RESULTS

Description: PO78-HA1	**Lab Sample ID:** CA11841-15	**Received:** 08/17/17 11:00
Matrix: Soil	**Sampled:** 08/16/17 10:45	**Work Order:** CA11841
Project: NCDOT PSAs	**Sampled By:** Client	**% Solids:** 93.10

Volatile Organic Compounds by GCMS

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
Hexachlorobutadiene [87-68-3]^	0.00046	U	mg/kg dry	1.22	0.00046	0.0013	7H23004	EPA 8260B	08/23/17 19:45	MRK	QM-15
Hexachlorobutadiene [87-68-3]^	0.050	UD	mg/kg dry	133	0.050	0.14	7H29035	EPA 8260B	08/29/17 19:51	MRK	QM-15
Isopropylbenzene [98-82-8]^	0.00020	U	mg/kg dry	1.22	0.00020	0.0013	7H23004	EPA 8260B	08/23/17 19:45	MRK	QM-15
Isopropylbenzene [98-82-8]^	0.021	UD	mg/kg dry	133	0.021	0.14	7H29035	EPA 8260B	08/29/17 19:51	MRK	QM-15
m,p-Xylenes [108-38-3/106-42-3]^	0.00049	U	mg/kg dry	1.22	0.00049	0.0026	7H23004	EPA 8260B	08/23/17 19:45	MRK	QM-15
m,p-Xylenes [108-38-3/106-42-3]^	0.053	UD	mg/kg dry	133	0.053	0.28	7H29035	EPA 8260B	08/29/17 19:51	MRK	QM-15
Methylene Chloride [75-09-2]^	0.00096	U	mg/kg dry	1.22	0.00096	0.0026	7H23004	EPA 8260B	08/23/17 19:45	MRK	QM-15
Methylene Chloride [75-09-2]^	0.10	UD	mg/kg dry	133	0.10	0.28	7H29035	EPA 8260B	08/29/17 19:51	MRK	QM-15
Methyl-tert-Butyl Ether [1634-04-4]^	0.00039	U	mg/kg dry	1.22	0.00039	0.0013	7H23004	EPA 8260B	08/23/17 19:45	MRK	QM-15
Methyl-tert-Butyl Ether [1634-04-4]^	0.043	UD	mg/kg dry	133	0.043	0.14	7H29035	EPA 8260B	08/29/17 19:51	MRK	QM-15
Naphthalene [91-20-3]^	0.00035	U	mg/kg dry	1.22	0.00035	0.0013	7H23004	EPA 8260B	08/23/17 19:45	MRK	QM-15
Naphthalene [91-20-3]^	0.038	UD	mg/kg dry	133	0.038	0.14	7H29035	EPA 8260B	08/29/17 19:51	MRK	QM-15
n-Butyl Benzene [104-51-8]^	0.00017	U	mg/kg dry	1.22	0.00017	0.0013	7H23004	EPA 8260B	08/23/17 19:45	MRK	QM-15
n-Butyl Benzene [104-51-8]^	0.019	UD	mg/kg dry	133	0.019	0.14	7H29035	EPA 8260B	08/29/17 19:51	MRK	QM-15
n-Propyl Benzene [103-65-1]^	0.00024	U	mg/kg dry	1.22	0.00024	0.0013	7H23004	EPA 8260B	08/23/17 19:45	MRK	QM-15
n-Propyl Benzene [103-65-1]^	0.026	UD	mg/kg dry	133	0.026	0.14	7H29035	EPA 8260B	08/29/17 19:51	MRK	QM-15
o-Xylene [95-47-6]^	0.00029	U	mg/kg dry	1.22	0.00029	0.0013	7H23004	EPA 8260B	08/23/17 19:45	MRK	QM-15
o-Xylene [95-47-6]^	0.031	UD	mg/kg dry	133	0.031	0.14	7H29035	EPA 8260B	08/29/17 19:51	MRK	QM-15
sec-Butylbenzene [135-98-8]^	0.0012	U	mg/kg dry	1.22	0.0012	0.0013	7H23004	EPA 8260B	08/23/17 19:45	MRK	QM-15
sec-Butylbenzene [135-98-8]^	0.14	UD	mg/kg dry	133	0.14	0.14	7H29035	EPA 8260B	08/29/17 19:51	MRK	QM-15
Styrene [100-42-5]^	**0.11**		mg/kg dry	1.22	0.0013	0.0013	7H23004	EPA 8260B	08/23/17 19:45	MRK	QM-15
Styrene [100-42-5]^	0.14	UD	mg/kg dry	133	0.14	0.14	7H29035	EPA 8260B	08/29/17 19:51	MRK	QM-15
tert-Butylbenzene [98-06-6]^	0.00022	U	mg/kg dry	1.22	0.00022	0.0013	7H23004	EPA 8260B	08/23/17 19:45	MRK	QM-15
tert-Butylbenzene [98-06-6]^	0.024	UD	mg/kg dry	133	0.024	0.14	7H29035	EPA 8260B	08/29/17 19:51	MRK	QM-15
Tetrachloroethene [127-18-4]^	0.00037	U	mg/kg dry	1.22	0.00037	0.0013	7H23004	EPA 8260B	08/23/17 19:45	MRK	QM-15
Tetrachloroethene [127-18-4]^	0.040	UD	mg/kg dry	133	0.040	0.14	7H29035	EPA 8260B	08/29/17 19:51	MRK	QM-15
Toluene [108-88-3]^	**0.00059**	J	mg/kg dry	1.22	0.00032	0.0013	7H23004	EPA 8260B	08/23/17 19:45	MRK	QM-15
Toluene [108-88-3]^	0.034	UD	mg/kg dry	133	0.034	0.14	7H29035	EPA 8260B	08/29/17 19:51	MRK	QM-15
trans-1,2-Dichloroethene [156-60-5]^	0.00049	U	mg/kg dry	1.22	0.00049	0.0013	7H23004	EPA 8260B	08/23/17 19:45	MRK	QM-15
trans-1,2-Dichloroethene [156-60-5]^	0.053	UD	mg/kg dry	133	0.053	0.14	7H29035	EPA 8260B	08/29/17 19:51	MRK	QM-15
trans-1,3-Dichloropropene [10061-02-6]^	0.00051	U	mg/kg dry	1.22	0.00051	0.0013	7H23004	EPA 8260B	08/23/17 19:45	MRK	QM-15
trans-1,3-Dichloropropene [10061-02-6]^	0.056	UD	mg/kg dry	133	0.056	0.14	7H29035	EPA 8260B	08/29/17 19:51	MRK	QM-15
Trichloroethene [79-01-6]^	0.00042	U	mg/kg dry	1.22	0.00042	0.0013	7H23004	EPA 8260B	08/23/17 19:45	MRK	QM-15
Trichloroethene [79-01-6]^	0.046	UD	mg/kg dry	133	0.046	0.14	7H29035	EPA 8260B	08/29/17 19:51	MRK	QM-15
Trichlorofluoromethane [75-69-4]^	0.00034	U	mg/kg dry	1.22	0.00034	0.0013	7H23004	EPA 8260B	08/23/17 19:45	MRK	QM-15
Trichlorofluoromethane [75-69-4]^	0.037	UD	mg/kg dry	133	0.037	0.14	7H29035	EPA 8260B	08/29/17 19:51	MRK	QM-15
Vinyl chloride [75-01-4]^	0.00032	U	mg/kg dry	1.22	0.00032	0.0013	7H23004	EPA 8260B	08/23/17 19:45	MRK	QM-15
Vinyl chloride [75-01-4]^	0.034	UD	mg/kg dry	133	0.034	0.14	7H29035	EPA 8260B	08/29/17 19:51	MRK	QM-15
Xylenes (Total) [1330-20-7]^	0.00074	U	mg/kg dry	1.22	0.00074	0.0039	7H23004	EPA 8260B	08/23/17 19:45	MRK	QM-15
Xylenes (Total) [1330-20-7]^	0.080	UD	mg/kg dry	133	0.080	0.43	7H29035	EPA 8260B	08/29/17 19:51	MRK	QM-15

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes
4-Bromofluorobenzene	*59*	*1.22*	*50.0*	*117 %*	*50-127*	*7H23004*	*EPA 8260B*	*08/23/17 19:45*	*MRK*	*QM-15*
4-Bromofluorobenzene	*54*	*1.33*	*50.0*	*107 %*	*50-127*	*7H29035*	*EPA 8260B*	*08/29/17 19:51*	*MRK*	*QM-15*
Dibromofluoromethane	*54*	*1.22*	*50.0*	*107 %*	*52-128*	*7H23004*	*EPA 8260B*	*08/23/17 19:45*	*MRK*	*QM-15*
Dibromofluoromethane	*64*	*1.33*	*50.0*	*129 %*	*52-128*	*7H29035*	*EPA 8260B*	*08/29/17 19:51*	*MRK*	*QM-15*
Toluene-d8	*54*	*1.22*	*50.0*	*109 %*	*57-124*	*7H23004*	*EPA 8260B*	*08/23/17 19:45*	*MRK*	*QM-15*
Toluene-d8	*60*	*1.33*	*50.0*	*119 %*	*57-124*	*7H29035*	*EPA 8260B*	*08/29/17 19:51*	*MRK*	*QM-15*

This report relates only to the sample as received by the laboratory, and may only be reproduced in full.

www.encolabs.com

ANALYTICAL RESULTS

Description:	PO78-HA1	**Lab Sample ID:**	CA11841-15	**Received:**	08/17/17 11:00
Matrix:	Soil	**Sampled:**	08/16/17 10:45	**Work Order:**	CA11841
Project:	NCDOT PSAs	**Sampled By:**	Client	**% Solids:**	93.10

Metals by EPA 6000/7000 Series Methods

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
Arsenic [7440-38-2]^	**9.38**		mg/kg dry	1	0.344	0.537	7H17028	EPA 6010D	08/23/17 15:19	JMV	
Barium [7440-39-3]^	**46.8**		mg/kg dry	1	0.107	0.537	7H17028	EPA 6010D	08/23/17 15:19	JMV	
Cadmium [7440-43-9]^	**0.253**		mg/kg dry	1	0.0103	0.0537	7H17028	EPA 6010D	08/23/17 15:19	JMV	
Chromium [7440-47-3]^	**31.2**		mg/kg dry	1	0.107	0.537	7H17028	EPA 6010D	08/23/17 15:19	JMV	
Lead [7439-92-1]^	**25.7**		mg/kg dry	1	0.129	0.537	7H17028	EPA 6010D	08/23/17 15:19	JMV	
Mercury [7439-97-6]^	**0.0843**		mg/kg dry	1	0.0150	0.0258	7H24004	EPA 7471B	08/25/17 10:04	CMK	
Selenium [7782-49-2]^	0.440	U	mg/kg dry	1	0.440	0.537	7H17028	EPA 6010D	08/23/17 15:19	JMV	
Silver [7440-22-4]^	0.107	U	mg/kg dry	1	0.107	0.537	7H17028	EPA 6010D	08/23/17 15:19	JMV	

This report relates only to the sample as received by the laboratory, and may only be reproduced in full.

www.encolabs.com

ANALYTICAL RESULTS

Description: PO78-HA2	**Lab Sample ID:** CA11841-16	**Received:** 08/17/17 11:00
Matrix: Soil	**Sampled:** 08/16/17 11:00	**Work Order:** CA11841
Project: NCDOT PSAs	**Sampled By:** Client	**% Solids:** 85.94

Volatile Organic Compounds by GCMS

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1,2-Tetrachloroethane [630-20-6]^	0.00019	U	mg/kg dry	1	0.00019	0.0012	7H23004	EPA 8260B	08/23/17 20:16	MRK	
1,1,1-Trichloroethane [71-55-6]^	0.00029	U	mg/kg dry	1	0.00029	0.0012	7H23004	EPA 8260B	08/23/17 20:16	MRK	
1,1,2,2-Tetrachloroethane [79-34-5]^	0.00023	U	mg/kg dry	1	0.00023	0.0012	7H23004	EPA 8260B	08/23/17 20:16	MRK	
1,1,2-Trichloroethane [79-00-5]^	0.00029	U	mg/kg dry	1	0.00029	0.0012	7H23004	EPA 8260B	08/23/17 20:16	MRK	
1,1-Dichloroethane [75-34-3]^	0.00029	U	mg/kg dry	1	0.00029	0.0012	7H23004	EPA 8260B	08/23/17 20:16	MRK	
1,1-Dichloroethene [75-35-4]^	0.00035	U	mg/kg dry	1	0.00035	0.0012	7H23004	EPA 8260B	08/23/17 20:16	MRK	
1,1-Dichloropropene [563-58-6]^	0.00019	U	mg/kg dry	1	0.00019	0.0012	7H23004	EPA 8260B	08/23/17 20:16	MRK	
1,2,3-Trichlorobenzene [87-61-6]^	0.00033	U	mg/kg dry	1	0.00033	0.0012	7H23004	EPA 8260B	08/23/17 20:16	MRK	
1,2,3-Trichloropropane [96-18-4]^	0.00074	U	mg/kg dry	1	0.00074	0.0012	7H23004	EPA 8260B	08/23/17 20:16	MRK	
1,2,4-Trichlorobenzene [120-82-1]^	0.00031	U	mg/kg dry	1	0.00031	0.0012	7H23004	EPA 8260B	08/23/17 20:16	MRK	
1,2,4-Trimethylbenzene [95-63-6]^	0.00020	U	mg/kg dry	1	0.00020	0.0012	7H23004	EPA 8260B	08/23/17 20:16	MRK	
1,2-Dibromo-3-chloropropane [96-12-8]^	0.00092	U	mg/kg dry	1	0.00092	0.0012	7H23004	EPA 8260B	08/23/17 20:16	MRK	
1,2-Dibromoethane [106-93-4]^	0.00054	U	mg/kg dry	1	0.00054	0.0012	7H23004	EPA 8260B	08/23/17 20:16	MRK	
1,2-Dichlorobenzene [95-50-1]^	0.00031	U	mg/kg dry	1	0.00031	0.0012	7H23004	EPA 8260B	08/23/17 20:16	MRK	
1,2-Dichloroethane [107-06-2]^	0.00048	U	mg/kg dry	1	0.00048	0.0012	7H23004	EPA 8260B	08/23/17 20:16	MRK	
1,2-Dichloropropane [78-87-5]^	0.00030	U	mg/kg dry	1	0.00030	0.0012	7H23004	EPA 8260B	08/23/17 20:16	MRK	
1,3,5-Trimethylbenzene [108-67-8]^	0.00023	U	mg/kg dry	1	0.00023	0.0012	7H23004	EPA 8260B	08/23/17 20:16	MRK	
1,3-Dichlorobenzene [541-73-1]^	0.00026	U	mg/kg dry	1	0.00026	0.0012	7H23004	EPA 8260B	08/23/17 20:16	MRK	
1,3-Dichloropropane [142-28-9]^	0.00034	U	mg/kg dry	1	0.00034	0.0012	7H23004	EPA 8260B	08/23/17 20:16	MRK	
1,4-Dichlorobenzene [106-46-7]^	0.00023	U	mg/kg dry	1	0.00023	0.0012	7H23004	EPA 8260B	08/23/17 20:16	MRK	
2,2-Dichloropropane [594-20-7]^	0.00027	U	mg/kg dry	1	0.00027	0.0012	7H23004	EPA 8260B	08/23/17 20:16	MRK	
2-Butanone [78-93-3]^	**0.0067**		mg/kg dry	1	0.00091	0.0058	7H23004	EPA 8260B	08/23/17 20:16	MRK	
2-Chloroethyl Vinyl Ether [110-75-8]^	0.00019	U	mg/kg dry	1	0.00019	0.0058	7H23004	EPA 8260B	08/23/17 20:16	MRK	
2-Chlorotoluene [95-49-8]^	**0.0014**		mg/kg dry	1	0.00021	0.0012	7H23004	EPA 8260B	08/23/17 20:16	MRK	
2-Hexanone [591-78-6]^	0.00087	U	mg/kg dry	1	0.00087	0.0058	7H23004	EPA 8260B	08/23/17 20:16	MRK	
4-Chlorotoluene [106-43-4]^	0.00030	U	mg/kg dry	1	0.00030	0.0012	7H23004	EPA 8260B	08/23/17 20:16	MRK	
4-Isopropyltoluene [99-87-6]^	**0.016**		mg/kg dry	1	0.00019	0.0012	7H23004	EPA 8260B	08/23/17 20:16	MRK	
4-Methyl-2-pentanone [108-10-1]^	0.00066	U	mg/kg dry	1	0.00066	0.0058	7H23004	EPA 8260B	08/23/17 20:16	MRK	
Acetone [67-64-1]^	**0.35**		mg/kg dry	1	0.016	0.023	7H23004	EPA 8260B	08/23/17 20:16	MRK	
Benzene [71-43-2]^	0.00020	U	mg/kg dry	1	0.00020	0.0012	7H23004	EPA 8260B	08/23/17 20:16	MRK	
Bromobenzene [108-86-1]^	0.00026	U	mg/kg dry	1	0.00026	0.0012	7H23004	EPA 8260B	08/23/17 20:16	MRK	
Bromochloromethane [74-97-5]^	0.00048	U	mg/kg dry	1	0.00048	0.0012	7H23004	EPA 8260B	08/23/17 20:16	MRK	
Bromodichloromethane [75-27-4]^	0.00028	U	mg/kg dry	1	0.00028	0.0012	7H23004	EPA 8260B	08/23/17 20:16	MRK	
Bromoform [75-25-2]^	0.00052	U	mg/kg dry	1	0.00052	0.0012	7H23004	EPA 8260B	08/23/17 20:16	MRK	
Bromomethane [74-83-9]^	0.00037	U	mg/kg dry	1	0.00037	0.0012	7H23004	EPA 8260B	08/23/17 20:16	MRK	
Carbon disulfide [75-15-0]^	0.00045	U	mg/kg dry	1	0.00045	0.0058	7H23004	EPA 8260B	08/23/17 20:16	MRK	
Carbon Tetrachloride [56-23-5]^	0.00026	U	mg/kg dry	1	0.00026	0.0012	7H23004	EPA 8260B	08/23/17 20:16	MRK	
Chlorobenzene [108-90-7]^	0.00020	U	mg/kg dry	1	0.00020	0.0012	7H23004	EPA 8260B	08/23/17 20:16	MRK	
Chloroethane [75-00-3]^	0.00029	U	mg/kg dry	1	0.00029	0.0012	7H23004	EPA 8260B	08/23/17 20:16	MRK	
Chloroform [67-66-3]^	0.00021	U	mg/kg dry	1	0.00021	0.0012	7H23004	EPA 8260B	08/23/17 20:16	MRK	
Chloromethane [74-87-3]^	0.00024	U	mg/kg dry	1	0.00024	0.0012	7H23004	EPA 8260B	08/23/17 20:16	MRK	
cis-1,2-Dichloroethene [156-59-2]^	0.00027	U	mg/kg dry	1	0.00027	0.0012	7H23004	EPA 8260B	08/23/17 20:16	MRK	
cis-1,3-Dichloropropene [10061-01-5]^	0.00020	U	mg/kg dry	1	0.00020	0.0012	7H23004	EPA 8260B	08/23/17 20:16	MRK	
Dibromochloromethane [124-48-1]^	0.00041	U	mg/kg dry	1	0.00041	0.0012	7H23004	EPA 8260B	08/23/17 20:16	MRK	
Dibromomethane [74-95-3]^	0.00038	U	mg/kg dry	1	0.00038	0.0012	7H23004	EPA 8260B	08/23/17 20:16	MRK	
Dichlorodifluoromethane [75-71-8]^	0.00052	U	mg/kg dry	1	0.00052	0.0012	7H23004	EPA 8260B	08/23/17 20:16	MRK	
Ethylbenzene [100-41-4]^	0.00023	U	mg/kg dry	1	0.00023	0.0012	7H23004	EPA 8260B	08/23/17 20:16	MRK	

This report relates only to the sample as received by the laboratory, and may only be reproduced in full.

www.encolabs.com

ANALYTICAL RESULTS

Description: PO78-HA2	**Lab Sample ID:** CA11841-16	**Received:** 08/17/17 11:00
Matrix: Soil	**Sampled:** 08/16/17 11:00	**Work Order:** CA11841
Project: NCDOT PSAs	**Sampled By:** Client	**% Solids:** 85.94

Volatile Organic Compounds by GCMS

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
Hexachlorobutadiene [87-68-3]^	0.00041	U	mg/kg dry	1	0.00041	0.0012	7H23004	EPA 8260B	08/23/17 20:16	MRK	
Isopropylbenzene [98-82-8]^	0.00017	U	mg/kg dry	1	0.00017	0.0012	7H23004	EPA 8260B	08/23/17 20:16	MRK	
m,p-Xylenes [108-38-3/106-42-3]^	0.00043	U	mg/kg dry	1	0.00043	0.0023	7H23004	EPA 8260B	08/23/17 20:16	MRK	
Methylene Chloride [75-09-2]^	0.00085	U	mg/kg dry	1	0.00085	0.0023	7H23004	EPA 8260B	08/23/17 20:16	MRK	
Methyl-tert-Butyl Ether [1634-04-4]^	0.00035	U	mg/kg dry	1	0.00035	0.0012	7H23004	EPA 8260B	08/23/17 20:16	MRK	
Naphthalene [91-20-3]^	0.00031	U	mg/kg dry	1	0.00031	0.0012	7H23004	EPA 8260B	08/23/17 20:16	MRK	
n-Butyl Benzene [104-51-8]^	0.00015	U	mg/kg dry	1	0.00015	0.0012	7H23004	EPA 8260B	08/23/17 20:16	MRK	
n-Propyl Benzene [103-65-1]^	0.00021	U	mg/kg dry	1	0.00021	0.0012	7H23004	EPA 8260B	08/23/17 20:16	MRK	
o-Xylene [95-47-6]^	0.00026	U	mg/kg dry	1	0.00026	0.0012	7H23004	EPA 8260B	08/23/17 20:16	MRK	
sec-Butylbenzene [135-98-8]^	0.0011	U	mg/kg dry	1	0.0011	0.0012	7H23004	EPA 8260B	08/23/17 20:16	MRK	
Styrene [100-42-5]^	**0.0074**		mg/kg dry	1	0.0011	0.0012	7H23004	EPA 8260B	08/23/17 20:16	MRK	
tert-Butylbenzene [98-06-6]^	0.00020	U	mg/kg dry	1	0.00020	0.0012	7H23004	EPA 8260B	08/23/17 20:16	MRK	
Tetrachloroethene [127-18-4]^	0.00033	U	mg/kg dry	1	0.00033	0.0012	7H23004	EPA 8260B	08/23/17 20:16	MRK	
Toluene [108-88-3]^	0.00028	U	mg/kg dry	1	0.00028	0.0012	7H23004	EPA 8260B	08/23/17 20:16	MRK	
trans-1,2-Dichloroethene [156-60-5]^	0.00043	U	mg/kg dry	1	0.00043	0.0012	7H23004	EPA 8260B	08/23/17 20:16	MRK	
trans-1,3-Dichloropropene [10061-02-6]^	0.00045	U	mg/kg dry	1	0.00045	0.0012	7H23004	EPA 8260B	08/23/17 20:16	MRK	
Trichloroethene [79-01-6]^	0.00037	U	mg/kg dry	1	0.00037	0.0012	7H23004	EPA 8260B	08/23/17 20:16	MRK	
Trichlorofluoromethane [75-69-4]^	0.00030	U	mg/kg dry	1	0.00030	0.0012	7H23004	EPA 8260B	08/23/17 20:16	MRK	
Vinyl chloride [75-01-4]^	0.00028	U	mg/kg dry	1	0.00028	0.0012	7H23004	EPA 8260B	08/23/17 20:16	MRK	
Xylenes (Total) [1330-20-7]^	0.00065	U	mg/kg dry	1	0.00065	0.0035	7H23004	EPA 8260B	08/23/17 20:16	MRK	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes
4-Bromofluorobenzene	*56*	*1*	*50.0*	*111 %*	*50-127*	*7H23004*	*EPA 8260B*	*08/23/17 20:16*	*MRK*	
Dibromofluoromethane	*54*	*1*	*50.0*	*109 %*	*52-128*	*7H23004*	*EPA 8260B*	*08/23/17 20:16*	*MRK*	
Toluene-d8	*55*	*1*	*50.0*	*110 %*	*57-124*	*7H23004*	*EPA 8260B*	*08/23/17 20:16*	*MRK*	

Metals by EPA 6000/7000 Series Methods

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
Arsenic [7440-38-2]^	**6.70**		mg/kg dry	1	0.372	0.582	7H17028	EPA 6010D	08/23/17 15:22	JMV	
Barium [7440-39-3]^	**47.1**		mg/kg dry	1	0.116	0.582	7H17028	EPA 6010D	08/23/17 15:22	JMV	
Cadmium [7440-43-9]^	**0.0625**		mg/kg dry	1	0.0112	0.0582	7H17028	EPA 6010D	08/23/17 15:22	JMV	
Chromium [7440-47-3]^	**23.4**		mg/kg dry	1	0.116	0.582	7H17028	EPA 6010D	08/23/17 15:22	JMV	
Lead [7439-92-1]^	**26.3**		mg/kg dry	1	0.140	0.582	7H17028	EPA 6010D	08/23/17 15:22	JMV	
Mercury [7439-97-6]^	**0.139**		mg/kg dry	1	0.0163	0.0279	7H24004	EPA 7471B	08/25/17 10:06	CMK	
Selenium [7782-49-2]^	0.477	U	mg/kg dry	1	0.477	0.582	7H17028	EPA 6010D	08/23/17 15:22	JMV	
Silver [7440-22-4]^	0.116	U	mg/kg dry	1	0.116	0.582	7H17028	EPA 6010D	08/23/17 15:22	JMV	

This report relates only to the sample as received by the laboratory, and may only be reproduced in full.

www.encolabs.com

ANALYTICAL RESULTS

Description: PO53-B6	**Lab Sample ID:** CA11841-17	**Received:** 08/17/17 11:00
Matrix: Soil	**Sampled:** 08/14/17 15:10	**Work Order:** CA11841
Project: NCDOT PSAs	**Sampled By:** Brian Olim	**% Solids:** 78.32

Volatile Organic Compounds by GCMS

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1,2-Tetrachloroethane [630-20-6]^	0.00020	U	mg/kg dry	1	0.00020	0.0013	7H23004	EPA 8260B	08/23/17 20:47	MRK	
1,1,1-Trichloroethane [71-55-6]^	0.00032	U	mg/kg dry	1	0.00032	0.0013	7H23004	EPA 8260B	08/23/17 20:47	MRK	
1,1,2,2-Tetrachloroethane [79-34-5]^	0.00026	U	mg/kg dry	1	0.00026	0.0013	7H23004	EPA 8260B	08/23/17 20:47	MRK	
1,1,2-Trichloroethane [79-00-5]^	0.00032	U	mg/kg dry	1	0.00032	0.0013	7H23004	EPA 8260B	08/23/17 20:47	MRK	
1,1-Dichloroethane [75-34-3]^	0.00032	U	mg/kg dry	1	0.00032	0.0013	7H23004	EPA 8260B	08/23/17 20:47	MRK	
1,1-Dichloroethene [75-35-4]^	0.00038	U	mg/kg dry	1	0.00038	0.0013	7H23004	EPA 8260B	08/23/17 20:47	MRK	
1,1-Dichloropropene [563-58-6]^	0.00020	U	mg/kg dry	1	0.00020	0.0013	7H23004	EPA 8260B	08/23/17 20:47	MRK	
1,2,3-Trichlorobenzene [87-61-6]^	0.00036	U	mg/kg dry	1	0.00036	0.0013	7H23004	EPA 8260B	08/23/17 20:47	MRK	
1,2,3-Trichloropropane [96-18-4]^	0.00082	U	mg/kg dry	1	0.00082	0.0013	7H23004	EPA 8260B	08/23/17 20:47	MRK	
1,2,4-Trichlorobenzene [120-82-1]^	0.00034	U	mg/kg dry	1	0.00034	0.0013	7H23004	EPA 8260B	08/23/17 20:47	MRK	
1,2,4-Trimethylbenzene [95-63-6]^	0.00022	U	mg/kg dry	1	0.00022	0.0013	7H23004	EPA 8260B	08/23/17 20:47	MRK	
1,2-Dibromo-3-chloropropane [96-12-8]^	0.0010	U	mg/kg dry	1	0.0010	0.0013	7H23004	EPA 8260B	08/23/17 20:47	MRK	
1,2-Dibromoethane [106-93-4]^	0.00059	U	mg/kg dry	1	0.00059	0.0013	7H23004	EPA 8260B	08/23/17 20:47	MRK	
1,2-Dichlorobenzene [95-50-1]^	0.00034	U	mg/kg dry	1	0.00034	0.0013	7H23004	EPA 8260B	08/23/17 20:47	MRK	
1,2-Dichloroethane [107-06-2]^	0.00052	U	mg/kg dry	1	0.00052	0.0013	7H23004	EPA 8260B	08/23/17 20:47	MRK	
1,2-Dichloropropane [78-87-5]^	0.00033	U	mg/kg dry	1	0.00033	0.0013	7H23004	EPA 8260B	08/23/17 20:47	MRK	
1,3,5-Trimethylbenzene [108-67-8]^	0.00026	U	mg/kg dry	1	0.00026	0.0013	7H23004	EPA 8260B	08/23/17 20:47	MRK	
1,3-Dichlorobenzene [541-73-1]^	0.00028	U	mg/kg dry	1	0.00028	0.0013	7H23004	EPA 8260B	08/23/17 20:47	MRK	
1,3-Dichloropropane [142-28-9]^	0.00037	U	mg/kg dry	1	0.00037	0.0013	7H23004	EPA 8260B	08/23/17 20:47	MRK	
1,4-Dichlorobenzene [106-46-7]^	0.00026	U	mg/kg dry	1	0.00026	0.0013	7H23004	EPA 8260B	08/23/17 20:47	MRK	
2,2-Dichloropropane [594-20-7]^	0.00029	U	mg/kg dry	1	0.00029	0.0013	7H23004	EPA 8260B	08/23/17 20:47	MRK	
2-Butanone [78-93-3]^	0.0010	U	mg/kg dry	1	0.0010	0.0064	7H23004	EPA 8260B	08/23/17 20:47	MRK	
2-Chloroethyl Vinyl Ether [110-75-8]^	0.00020	U	mg/kg dry	1	0.00020	0.0064	7H23004	EPA 8260B	08/23/17 20:47	MRK	
2-Chlorotoluene [95-49-8]^	0.00023	U	mg/kg dry	1	0.00023	0.0013	7H23004	EPA 8260B	08/23/17 20:47	MRK	
2-Hexanone [591-78-6]^	0.00096	U	mg/kg dry	1	0.00096	0.0064	7H23004	EPA 8260B	08/23/17 20:47	MRK	
4-Chlorotoluene [106-43-4]^	0.00033	U	mg/kg dry	1	0.00033	0.0013	7H23004	EPA 8260B	08/23/17 20:47	MRK	
4-Isopropyltoluene [99-87-6]^	0.00020	U	mg/kg dry	1	0.00020	0.0013	7H23004	EPA 8260B	08/23/17 20:47	MRK	
4-Methyl-2-pentanone [108-10-1]^	0.00073	U	mg/kg dry	1	0.00073	0.0064	7H23004	EPA 8260B	08/23/17 20:47	MRK	
Acetone [67-64-1]^	0.018	U	mg/kg dry	1	0.018	0.026	7H23004	EPA 8260B	08/23/17 20:47	MRK	
Benzene [71-43-2]^	0.00022	U	mg/kg dry	1	0.00022	0.0013	7H23004	EPA 8260B	08/23/17 20:47	MRK	
Bromobenzene [108-86-1]^	0.00028	U	mg/kg dry	1	0.00028	0.0013	7H23004	EPA 8260B	08/23/17 20:47	MRK	
Bromochloromethane [74-97-5]^	0.00052	U	mg/kg dry	1	0.00052	0.0013	7H23004	EPA 8260B	08/23/17 20:47	MRK	
Bromodichloromethane [75-27-4]^	0.00031	U	mg/kg dry	1	0.00031	0.0013	7H23004	EPA 8260B	08/23/17 20:47	MRK	
Bromoform [75-25-2]^	0.00057	U	mg/kg dry	1	0.00057	0.0013	7H23004	EPA 8260B	08/23/17 20:47	MRK	
Bromomethane [74-83-9]^	0.00041	U	mg/kg dry	1	0.00041	0.0013	7H23004	EPA 8260B	08/23/17 20:47	MRK	
Carbon disulfide [75-15-0]^	0.00050	U	mg/kg dry	1	0.00050	0.0064	7H23004	EPA 8260B	08/23/17 20:47	MRK	
Carbon Tetrachloride [56-23-5]^	0.00028	U	mg/kg dry	1	0.00028	0.0013	7H23004	EPA 8260B	08/23/17 20:47	MRK	
Chlorobenzene [108-90-7]^	0.00022	U	mg/kg dry	1	0.00022	0.0013	7H23004	EPA 8260B	08/23/17 20:47	MRK	
Chloroethane [75-00-3]^	0.00032	U	mg/kg dry	1	0.00032	0.0013	7H23004	EPA 8260B	08/23/17 20:47	MRK	
Chloroform [67-66-3]^	0.00023	U	mg/kg dry	1	0.00023	0.0013	7H23004	EPA 8260B	08/23/17 20:47	MRK	
Chloromethane [74-87-3]^	0.00027	U	mg/kg dry	1	0.00027	0.0013	7H23004	EPA 8260B	08/23/17 20:47	MRK	
cis-1,2-Dichloroethene [156-59-2]^	0.00029	U	mg/kg dry	1	0.00029	0.0013	7H23004	EPA 8260B	08/23/17 20:47	MRK	
cis-1,3-Dichloropropene [10061-01-5]^	0.00022	U	mg/kg dry	1	0.00022	0.0013	7H23004	EPA 8260B	08/23/17 20:47	MRK	
Dibromochloromethane [124-48-1]^	0.00045	U	mg/kg dry	1	0.00045	0.0013	7H23004	EPA 8260B	08/23/17 20:47	MRK	
Dibromomethane [74-95-3]^	0.00042	U	mg/kg dry	1	0.00042	0.0013	7H23004	EPA 8260B	08/23/17 20:47	MRK	
Dichlorodifluoromethane [75-71-8]^	0.00057	U	mg/kg dry	1	0.00057	0.0013	7H23004	EPA 8260B	08/23/17 20:47	MRK	
Ethylbenzene [100-41-4]^	0.00026	U	mg/kg dry	1	0.00026	0.0013	7H23004	EPA 8260B	08/23/17 20:47	MRK	

This report relates only to the sample as received by the laboratory, and may only be reproduced in full.

www.encolabs.com

ANALYTICAL RESULTS

Description: PO53-B6	**Lab Sample ID:** CA11841-17	**Received:** 08/17/17 11:00
Matrix: Soil	**Sampled:** 08/14/17 15:10	**Work Order:** CA11841
Project: NCDOT PSAs	**Sampled By:** Brian Olim	**% Solids:** 78.32

Volatile Organic Compounds by GCMS

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
Hexachlorobutadiene [87-68-3]^	0.00045	U	mg/kg dry	1	0.00045	0.0013	7H23004	EPA 8260B	08/23/17 20:47	MRK	
Isopropylbenzene [98-82-8]^	0.00019	U	mg/kg dry	1	0.00019	0.0013	7H23004	EPA 8260B	08/23/17 20:47	MRK	
m,p-Xylenes [108-38-3/106-42-3]^	0.00047	U	mg/kg dry	1	0.00047	0.0026	7H23004	EPA 8260B	08/23/17 20:47	MRK	
Methylene Chloride [75-09-2]^	0.00093	U	mg/kg dry	1	0.00093	0.0026	7H23004	EPA 8260B	08/23/17 20:47	MRK	
Methyl-tert-Butyl Ether [1634-04-4]^	0.00038	U	mg/kg dry	1	0.00038	0.0013	7H23004	EPA 8260B	08/23/17 20:47	MRK	
Naphthalene [91-20-3]^	0.00034	U	mg/kg dry	1	0.00034	0.0013	7H23004	EPA 8260B	08/23/17 20:47	MRK	
n-Butyl Benzene [104-51-8]^	0.00017	U	mg/kg dry	1	0.00017	0.0013	7H23004	EPA 8260B	08/23/17 20:47	MRK	
n-Propyl Benzene [103-65-1]^	0.00023	U	mg/kg dry	1	0.00023	0.0013	7H23004	EPA 8260B	08/23/17 20:47	MRK	
o-Xylene [95-47-6]^	0.00028	U	mg/kg dry	1	0.00028	0.0013	7H23004	EPA 8260B	08/23/17 20:47	MRK	
sec-Butylbenzene [135-98-8]^	0.0012	U	mg/kg dry	1	0.0012	0.0013	7H23004	EPA 8260B	08/23/17 20:47	MRK	
Styrene [100-42-5]^	0.0013	U	mg/kg dry	1	0.0013	0.0013	7H23004	EPA 8260B	08/23/17 20:47	MRK	
tert-Butylbenzene [98-06-6]^	0.00022	U	mg/kg dry	1	0.00022	0.0013	7H23004	EPA 8260B	08/23/17 20:47	MRK	
Tetrachloroethene [127-18-4]^	0.00036	U	mg/kg dry	1	0.00036	0.0013	7H23004	EPA 8260B	08/23/17 20:47	MRK	
Toluene [108-88-3]^	0.00031	U	mg/kg dry	1	0.00031	0.0013	7H23004	EPA 8260B	08/23/17 20:47	MRK	
trans-1,2-Dichloroethene [156-60-5]^	0.00047	U	mg/kg dry	1	0.00047	0.0013	7H23004	EPA 8260B	08/23/17 20:47	MRK	
trans-1,3-Dichloropropene [10061-02-6]^	0.00050	U	mg/kg dry	1	0.00050	0.0013	7H23004	EPA 8260B	08/23/17 20:47	MRK	
Trichloroethene [79-01-6]^	0.00041	U	mg/kg dry	1	0.00041	0.0013	7H23004	EPA 8260B	08/23/17 20:47	MRK	
Trichlorofluoromethane [75-69-4]^	0.00033	U	mg/kg dry	1	0.00033	0.0013	7H23004	EPA 8260B	08/23/17 20:47	MRK	
Vinyl chloride [75-01-4]^	0.00031	U	mg/kg dry	1	0.00031	0.0013	7H23004	EPA 8260B	08/23/17 20:47	MRK	
Xylenes (Total) [1330-20-7]^	0.00072	U	mg/kg dry	1	0.00072	0.0038	7H23004	EPA 8260B	08/23/17 20:47	MRK	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes
4-Bromofluorobenzene	*54*	*1*	*50.0*	*107 %*	*50-127*	*7H23004*	*EPA 8260B*	*08/23/17 20:47*	*MRK*	
Dibromofluoromethane	*55*	*1*	*50.0*	*109 %*	*52-128*	*7H23004*	*EPA 8260B*	*08/23/17 20:47*	*MRK*	
Toluene-d8	*56*	*1*	*50.0*	*112 %*	*57-124*	*7H23004*	*EPA 8260B*	*08/23/17 20:47*	*MRK*	

Metals by EPA 6000/7000 Series Methods

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
Arsenic [7440-38-2]^	**4.16**		mg/kg dry	1	0.409	0.638	7H17028	EPA 6010D	08/23/17 15:38	JMV	
Barium [7440-39-3]^	**69.1**		mg/kg dry	1	0.128	0.638	7H17028	EPA 6010D	08/23/17 15:38	JMV	
Cadmium [7440-43-9]^	**0.132**		mg/kg dry	1	0.0123	0.0638	7H17028	EPA 6010D	08/23/17 15:38	JMV	
Chromium [7440-47-3]^	**15.6**		mg/kg dry	1	0.128	0.638	7H17028	EPA 6010D	08/23/17 15:38	JMV	
Lead [7439-92-1]^	**15.1**		mg/kg dry	1	0.153	0.638	7H17028	EPA 6010D	08/23/17 15:38	JMV	
Mercury [7439-97-6]^	**0.0308**		mg/kg dry	1	0.0179	0.0306	7H24004	EPA 7471B	08/25/17 10:08	CMK	
Selenium [7782-49-2]^	0.523	U	mg/kg dry	1	0.523	0.638	7H17028	EPA 6010D	08/23/17 15:38	JMV	
Silver [7440-22-4]^	0.128	U	mg/kg dry	1	0.128	0.638	7H17028	EPA 6010D	08/23/17 15:38	JMV	

This report relates only to the sample as received by the laboratory, and may only be reproduced in full.

www.encolabs.com

ANALYTICAL RESULTS

Description: PO53-B5	**Lab Sample ID:** CA11841-18	**Received:** 08/17/17 11:00
Matrix: Soil	**Sampled:** 08/14/17 15:30	**Work Order:** CA11841
Project: NCDOT PSAs	**Sampled By:** Brian Olim	**% Solids:** 84.38

Volatile Organic Compounds by GCMS

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1,2-Tetrachloroethane [630-20-6]^	0.00019	U	mg/kg dry	1	0.00019	0.0012	7H23004	EPA 8260B	08/23/17 21:18	MRK	
1,1,1-Trichloroethane [71-55-6]^	0.00030	U	mg/kg dry	1	0.00030	0.0012	7H23004	EPA 8260B	08/23/17 21:18	MRK	
1,1,2,2-Tetrachloroethane [79-34-5]^	0.00024	U	mg/kg dry	1	0.00024	0.0012	7H23004	EPA 8260B	08/23/17 21:18	MRK	
1,1,2-Trichloroethane [79-00-5]^	0.00030	U	mg/kg dry	1	0.00030	0.0012	7H23004	EPA 8260B	08/23/17 21:18	MRK	
1,1-Dichloroethane [75-34-3]^	0.00030	U	mg/kg dry	1	0.00030	0.0012	7H23004	EPA 8260B	08/23/17 21:18	MRK	
1,1-Dichloroethene [75-35-4]^	0.00036	U	mg/kg dry	1	0.00036	0.0012	7H23004	EPA 8260B	08/23/17 21:18	MRK	
1,1-Dichloropropene [563-58-6]^	0.00019	U	mg/kg dry	1	0.00019	0.0012	7H23004	EPA 8260B	08/23/17 21:18	MRK	
1,2,3-Trichlorobenzene [87-61-6]^	0.00033	U	mg/kg dry	1	0.00033	0.0012	7H23004	EPA 8260B	08/23/17 21:18	MRK	
1,2,3-Trichloropropane [96-18-4]^	0.00076	U	mg/kg dry	1	0.00076	0.0012	7H23004	EPA 8260B	08/23/17 21:18	MRK	
1,2,4-Trichlorobenzene [120-82-1]^	0.00032	U	mg/kg dry	1	0.00032	0.0012	7H23004	EPA 8260B	08/23/17 21:18	MRK	
1,2,4-Trimethylbenzene [95-63-6]^	0.00020	U	mg/kg dry	1	0.00020	0.0012	7H23004	EPA 8260B	08/23/17 21:18	MRK	
1,2-Dibromo-3-chloropropane [96-12-8]^	0.00094	U	mg/kg dry	1	0.00094	0.0012	7H23004	EPA 8260B	08/23/17 21:18	MRK	
1,2-Dibromoethane [106-93-4]^	0.00055	U	mg/kg dry	1	0.00055	0.0012	7H23004	EPA 8260B	08/23/17 21:18	MRK	
1,2-Dichlorobenzene [95-50-1]^	0.00032	U	mg/kg dry	1	0.00032	0.0012	7H23004	EPA 8260B	08/23/17 21:18	MRK	
1,2-Dichloroethane [107-06-2]^	0.00049	U	mg/kg dry	1	0.00049	0.0012	7H23004	EPA 8260B	08/23/17 21:18	MRK	
1,2-Dichloropropane [78-87-5]^	0.00031	U	mg/kg dry	1	0.00031	0.0012	7H23004	EPA 8260B	08/23/17 21:18	MRK	
1,3,5-Trimethylbenzene [108-67-8]^	0.00024	U	mg/kg dry	1	0.00024	0.0012	7H23004	EPA 8260B	08/23/17 21:18	MRK	
1,3-Dichlorobenzene [541-73-1]^	0.00026	U	mg/kg dry	1	0.00026	0.0012	7H23004	EPA 8260B	08/23/17 21:18	MRK	
1,3-Dichloropropane [142-28-9]^	0.00034	U	mg/kg dry	1	0.00034	0.0012	7H23004	EPA 8260B	08/23/17 21:18	MRK	
1,4-Dichlorobenzene [106-46-7]^	0.00024	U	mg/kg dry	1	0.00024	0.0012	7H23004	EPA 8260B	08/23/17 21:18	MRK	
2,2-Dichloropropane [594-20-7]^	0.00027	U	mg/kg dry	1	0.00027	0.0012	7H23004	EPA 8260B	08/23/17 21:18	MRK	
2-Butanone [78-93-3]^	0.00092	U	mg/kg dry	1	0.00092	0.0059	7H23004	EPA 8260B	08/23/17 21:18	MRK	
2-Chloroethyl Vinyl Ether [110-75-8]^	0.00019	U	mg/kg dry	1	0.00019	0.0059	7H23004	EPA 8260B	08/23/17 21:18	MRK	
2-Chlorotoluene [95-49-8]^	0.00021	U	mg/kg dry	1	0.00021	0.0012	7H23004	EPA 8260B	08/23/17 21:18	MRK	
2-Hexanone [591-78-6]^	0.00089	U	mg/kg dry	1	0.00089	0.0059	7H23004	EPA 8260B	08/23/17 21:18	MRK	
4-Chlorotoluene [106-43-4]^	0.00031	U	mg/kg dry	1	0.00031	0.0012	7H23004	EPA 8260B	08/23/17 21:18	MRK	
4-Isopropyltoluene [99-87-6]^	0.00019	U	mg/kg dry	1	0.00019	0.0012	7H23004	EPA 8260B	08/23/17 21:18	MRK	
4-Methyl-2-pentanone [108-10-1]^	0.00068	U	mg/kg dry	1	0.00068	0.0059	7H23004	EPA 8260B	08/23/17 21:18	MRK	
Acetone [67-64-1]^	0.017	U	mg/kg dry	1	0.017	0.024	7H23004	EPA 8260B	08/23/17 21:18	MRK	
Benzene [71-43-2]^	0.00020	U	mg/kg dry	1	0.00020	0.0012	7H23004	EPA 8260B	08/23/17 21:18	MRK	
Bromobenzene [108-86-1]^	0.00026	U	mg/kg dry	1	0.00026	0.0012	7H23004	EPA 8260B	08/23/17 21:18	MRK	
Bromochloromethane [74-97-5]^	0.00049	U	mg/kg dry	1	0.00049	0.0012	7H23004	EPA 8260B	08/23/17 21:18	MRK	
Bromodichloromethane [75-27-4]^	0.00028	U	mg/kg dry	1	0.00028	0.0012	7H23004	EPA 8260B	08/23/17 21:18	MRK	
Bromoform [75-25-2]^	0.00053	U	mg/kg dry	1	0.00053	0.0012	7H23004	EPA 8260B	08/23/17 21:18	MRK	
Bromomethane [74-83-9]^	0.00038	U	mg/kg dry	1	0.00038	0.0012	7H23004	EPA 8260B	08/23/17 21:18	MRK	
Carbon disulfide [75-15-0]^	0.00046	U	mg/kg dry	1	0.00046	0.0059	7H23004	EPA 8260B	08/23/17 21:18	MRK	
Carbon Tetrachloride [56-23-5]^	0.00026	U	mg/kg dry	1	0.00026	0.0012	7H23004	EPA 8260B	08/23/17 21:18	MRK	
Chlorobenzene [108-90-7]^	0.00020	U	mg/kg dry	1	0.00020	0.0012	7H23004	EPA 8260B	08/23/17 21:18	MRK	
Chloroethane [75-00-3]^	0.00030	U	mg/kg dry	1	0.00030	0.0012	7H23004	EPA 8260B	08/23/17 21:18	MRK	
Chloroform [67-66-3]^	0.00021	U	mg/kg dry	1	0.00021	0.0012	7H23004	EPA 8260B	08/23/17 21:18	MRK	
Chloromethane [74-87-3]^	0.00025	U	mg/kg dry	1	0.00025	0.0012	7H23004	EPA 8260B	08/23/17 21:18	MRK	
cis-1,2-Dichloroethene [156-59-2]^	0.00027	U	mg/kg dry	1	0.00027	0.0012	7H23004	EPA 8260B	08/23/17 21:18	MRK	
cis-1,3-Dichloropropene [10061-01-5]^	0.00020	U	mg/kg dry	1	0.00020	0.0012	7H23004	EPA 8260B	08/23/17 21:18	MRK	
Dibromochloromethane [124-48-1]^	0.00041	U	mg/kg dry	1	0.00041	0.0012	7H23004	EPA 8260B	08/23/17 21:18	MRK	
Dibromomethane [74-95-3]^	0.00039	U	mg/kg dry	1	0.00039	0.0012	7H23004	EPA 8260B	08/23/17 21:18	MRK	
Dichlorodifluoromethane [75-71-8]^	0.00053	U	mg/kg dry	1	0.00053	0.0012	7H23004	EPA 8260B	08/23/17 21:18	MRK	
Ethylbenzene [100-41-4]^	0.00024	U	mg/kg dry	1	0.00024	0.0012	7H23004	EPA 8260B	08/23/17 21:18	MRK	

This report relates only to the sample as received by the laboratory, and may only be reproduced in full.

www.encolabs.com

ANALYTICAL RESULTS

Description: PO53-B5	**Lab Sample ID:** CA11841-18	**Received:** 08/17/17 11:00
Matrix: Soil	**Sampled:** 08/14/17 15:30	**Work Order:** CA11841
Project: NCDOT PSAs	**Sampled By:** Brian Olim	**% Solids:** 84.38

Volatile Organic Compounds by GCMS

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
Hexachlorobutadiene [87-68-3]^	0.00041	U	mg/kg dry	1	0.00041	0.0012	7H23004	EPA 8260B	08/23/17 21:18	MRK	
Isopropylbenzene [98-82-8]^	0.00018	U	mg/kg dry	1	0.00018	0.0012	7H23004	EPA 8260B	08/23/17 21:18	MRK	
m,p-Xylenes [108-38-3/106-42-3]^	0.00044	U	mg/kg dry	1	0.00044	0.0024	7H23004	EPA 8260B	08/23/17 21:18	MRK	
Methylene Chloride [75-09-2]^	0.00087	U	mg/kg dry	1	0.00087	0.0024	7H23004	EPA 8260B	08/23/17 21:18	MRK	
Methyl-tert-Butyl Ether [1634-04-4]^	0.00036	U	mg/kg dry	1	0.00036	0.0012	7H23004	EPA 8260B	08/23/17 21:18	MRK	
Naphthalene [91-20-3]^	0.00032	U	mg/kg dry	1	0.00032	0.0012	7H23004	EPA 8260B	08/23/17 21:18	MRK	
n-Butyl Benzene [104-51-8]^	0.00015	U	mg/kg dry	1	0.00015	0.0012	7H23004	EPA 8260B	08/23/17 21:18	MRK	
n-Propyl Benzene [103-65-1]^	0.00021	U	mg/kg dry	1	0.00021	0.0012	7H23004	EPA 8260B	08/23/17 21:18	MRK	
o-Xylene [95-47-6]^	0.00026	U	mg/kg dry	1	0.00026	0.0012	7H23004	EPA 8260B	08/23/17 21:18	MRK	
sec-Butylbenzene [135-98-8]^	0.0011	U	mg/kg dry	1	0.0011	0.0012	7H23004	EPA 8260B	08/23/17 21:18	MRK	
Styrene [100-42-5]^	0.0012	U	mg/kg dry	1	0.0012	0.0012	7H23004	EPA 8260B	08/23/17 21:18	MRK	
tert-Butylbenzene [98-06-6]^	0.00020	U	mg/kg dry	1	0.00020	0.0012	7H23004	EPA 8260B	08/23/17 21:18	MRK	
Tetrachloroethene [127-18-4]^	0.00033	U	mg/kg dry	1	0.00033	0.0012	7H23004	EPA 8260B	08/23/17 21:18	MRK	
Toluene [108-88-3]^	0.00028	U	mg/kg dry	1	0.00028	0.0012	7H23004	EPA 8260B	08/23/17 21:18	MRK	
trans-1,2-Dichloroethene [156-60-5]^	0.00044	U	mg/kg dry	1	0.00044	0.0012	7H23004	EPA 8260B	08/23/17 21:18	MRK	
trans-1,3-Dichloropropene [10061-02-6]^	0.00046	U	mg/kg dry	1	0.00046	0.0012	7H23004	EPA 8260B	08/23/17 21:18	MRK	
Trichloroethene [79-01-6]^	0.00038	U	mg/kg dry	1	0.00038	0.0012	7H23004	EPA 8260B	08/23/17 21:18	MRK	
Trichlorofluoromethane [75-69-4]^	0.00031	U	mg/kg dry	1	0.00031	0.0012	7H23004	EPA 8260B	08/23/17 21:18	MRK	
Vinyl chloride [75-01-4]^	0.00028	U	mg/kg dry	1	0.00028	0.0012	7H23004	EPA 8260B	08/23/17 21:18	MRK	
Xylenes (Total) [1330-20-7]^	0.00066	U	mg/kg dry	1	0.00066	0.0036	7H23004	EPA 8260B	08/23/17 21:18	MRK	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes
4-Bromofluorobenzene	*54*	*1*	*50.0*	*108 %*	*50-127*	*7H23004*	*EPA 8260B*	*08/23/17 21:18*	*MRK*	
Dibromofluoromethane	*54*	*1*	*50.0*	*108 %*	*52-128*	*7H23004*	*EPA 8260B*	*08/23/17 21:18*	*MRK*	
Toluene-d8	*55*	*1*	*50.0*	*110 %*	*57-124*	*7H23004*	*EPA 8260B*	*08/23/17 21:18*	*MRK*	

Metals by EPA 6000/7000 Series Methods

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
Arsenic [7440-38-2]^	**2.14**		mg/kg dry	1	0.379	0.593	7H17028	EPA 6010D	08/23/17 15:40	JMV	
Barium [7440-39-3]^	**24.6**		mg/kg dry	1	0.119	0.593	7H17028	EPA 6010D	08/23/17 15:40	JMV	
Cadmium [7440-43-9]^	0.0114	U	mg/kg dry	1	0.0114	0.0593	7H17028	EPA 6010D	08/23/17 15:40	JMV	
Chromium [7440-47-3]^	**7.92**		mg/kg dry	1	0.119	0.593	7H17028	EPA 6010D	08/23/17 15:40	JMV	
Lead [7439-92-1]^	**6.82**		mg/kg dry	1	0.142	0.593	7H17028	EPA 6010D	08/23/17 15:40	JMV	
Mercury [7439-97-6]^	**0.0178**	J	mg/kg dry	1	0.0166	0.0284	7H24004	EPA 7471B	08/25/17 10:11	CMK	
Selenium [7782-49-2]^	0.486	U	mg/kg dry	1	0.486	0.593	7H17028	EPA 6010D	08/23/17 15:40	JMV	
Silver [7440-22-4]^	0.119	U	mg/kg dry	1	0.119	0.593	7H17028	EPA 6010D	08/23/17 15:40	JMV	

This report relates only to the sample as received by the laboratory, and may only be reproduced in full.

www.encolabs.com

ANALYTICAL RESULTS

Description: PO53-B4	**Lab Sample ID:** CA11841-19	**Received:** 08/17/17 11:00
Matrix: Soil	**Sampled:** 08/14/17 15:54	**Work Order:** CA11841
Project: NCDOT PSAs	**Sampled By:** Brian Olim	**% Solids:** 86.38

Volatile Organic Compounds by GCMS

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1,2-Tetrachloroethane [630-20-6]^	0.00019	U	mg/kg dry	1	0.00019	0.0012	7H23004	EPA 8260B	08/23/17 21:48	MRK	
1,1,1-Trichloroethane [71-55-6]^	0.00029	U	mg/kg dry	1	0.00029	0.0012	7H23004	EPA 8260B	08/23/17 21:48	MRK	
1,1,2,2-Tetrachloroethane [79-34-5]^	0.00023	U	mg/kg dry	1	0.00023	0.0012	7H23004	EPA 8260B	08/23/17 21:48	MRK	
1,1,2-Trichloroethane [79-00-5]^	0.00029	U	mg/kg dry	1	0.00029	0.0012	7H23004	EPA 8260B	08/23/17 21:48	MRK	
1,1-Dichloroethane [75-34-3]^	0.00029	U	mg/kg dry	1	0.00029	0.0012	7H23004	EPA 8260B	08/23/17 21:48	MRK	
1,1-Dichloroethene [75-35-4]^	0.00035	U	mg/kg dry	1	0.00035	0.0012	7H23004	EPA 8260B	08/23/17 21:48	MRK	
1,1-Dichloropropene [563-58-6]^	0.00019	U	mg/kg dry	1	0.00019	0.0012	7H23004	EPA 8260B	08/23/17 21:48	MRK	
1,2,3-Trichlorobenzene [87-61-6]^	0.00032	U	mg/kg dry	1	0.00032	0.0012	7H23004	EPA 8260B	08/23/17 21:48	MRK	
1,2,3-Trichloropropane [96-18-4]^	0.00074	U	mg/kg dry	1	0.00074	0.0012	7H23004	EPA 8260B	08/23/17 21:48	MRK	
1,2,4-Trichlorobenzene [120-82-1]^	0.00031	U	mg/kg dry	1	0.00031	0.0012	7H23004	EPA 8260B	08/23/17 21:48	MRK	
1,2,4-Trimethylbenzene [95-63-6]^	0.00020	U	mg/kg dry	1	0.00020	0.0012	7H23004	EPA 8260B	08/23/17 21:48	MRK	
1,2-Dibromo-3-chloropropane [96-12-8]^	0.00091	U	mg/kg dry	1	0.00091	0.0012	7H23004	EPA 8260B	08/23/17 21:48	MRK	
1,2-Dibromoethane [106-93-4]^	0.00053	U	mg/kg dry	1	0.00053	0.0012	7H23004	EPA 8260B	08/23/17 21:48	MRK	
1,2-Dichlorobenzene [95-50-1]^	0.00031	U	mg/kg dry	1	0.00031	0.0012	7H23004	EPA 8260B	08/23/17 21:48	MRK	
1,2-Dichloroethane [107-06-2]^	0.00047	U	mg/kg dry	1	0.00047	0.0012	7H23004	EPA 8260B	08/23/17 21:48	MRK	
1,2-Dichloropropane [78-87-5]^	0.00030	U	mg/kg dry	1	0.00030	0.0012	7H23004	EPA 8260B	08/23/17 21:48	MRK	
1,3,5-Trimethylbenzene [108-67-8]^	0.00023	U	mg/kg dry	1	0.00023	0.0012	7H23004	EPA 8260B	08/23/17 21:48	MRK	
1,3-Dichlorobenzene [541-73-1]^	0.00025	U	mg/kg dry	1	0.00025	0.0012	7H23004	EPA 8260B	08/23/17 21:48	MRK	
1,3-Dichloropropane [142-28-9]^	0.00034	U	mg/kg dry	1	0.00034	0.0012	7H23004	EPA 8260B	08/23/17 21:48	MRK	
1,4-Dichlorobenzene [106-46-7]^	0.00023	U	mg/kg dry	1	0.00023	0.0012	7H23004	EPA 8260B	08/23/17 21:48	MRK	
2,2-Dichloropropane [594-20-7]^	0.00027	U	mg/kg dry	1	0.00027	0.0012	7H23004	EPA 8260B	08/23/17 21:48	MRK	
2-Butanone [78-93-3]^	0.00090	U	mg/kg dry	1	0.00090	0.0058	7H23004	EPA 8260B	08/23/17 21:48	MRK	
2-Chloroethyl Vinyl Ether [110-75-8]^	0.00019	U	mg/kg dry	1	0.00019	0.0058	7H23004	EPA 8260B	08/23/17 21:48	MRK	
2-Chlorotoluene [95-49-8]^	0.00021	U	mg/kg dry	1	0.00021	0.0012	7H23004	EPA 8260B	08/23/17 21:48	MRK	
2-Hexanone [591-78-6]^	0.00087	U	mg/kg dry	1	0.00087	0.0058	7H23004	EPA 8260B	08/23/17 21:48	MRK	
4-Chlorotoluene [106-43-4]^	0.00030	U	mg/kg dry	1	0.00030	0.0012	7H23004	EPA 8260B	08/23/17 21:48	MRK	
4-Isopropyltoluene [99-87-6]^	0.00019	U	mg/kg dry	1	0.00019	0.0012	7H23004	EPA 8260B	08/23/17 21:48	MRK	
4-Methyl-2-pentanone [108-10-1]^	0.00066	U	mg/kg dry	1	0.00066	0.0058	7H23004	EPA 8260B	08/23/17 21:48	MRK	
Acetone [67-64-1]^	0.016	U	mg/kg dry	1	0.016	0.023	7H23004	EPA 8260B	08/23/17 21:48	MRK	
Benzene [71-43-2]^	0.00020	U	mg/kg dry	1	0.00020	0.0012	7H23004	EPA 8260B	08/23/17 21:48	MRK	
Bromobenzene [108-86-1]^	0.00025	U	mg/kg dry	1	0.00025	0.0012	7H23004	EPA 8260B	08/23/17 21:48	MRK	
Bromochloromethane [74-97-5]^	0.00047	U	mg/kg dry	1	0.00047	0.0012	7H23004	EPA 8260B	08/23/17 21:48	MRK	
Bromodichloromethane [75-27-4]^	0.00028	U	mg/kg dry	1	0.00028	0.0012	7H23004	EPA 8260B	08/23/17 21:48	MRK	
Bromoform [75-25-2]^	0.00052	U	mg/kg dry	1	0.00052	0.0012	7H23004	EPA 8260B	08/23/17 21:48	MRK	
Bromomethane [74-83-9]^	0.00037	U	mg/kg dry	1	0.00037	0.0012	7H23004	EPA 8260B	08/23/17 21:48	MRK	
Carbon disulfide [75-15-0]^	0.00045	U	mg/kg dry	1	0.00045	0.0058	7H23004	EPA 8260B	08/23/17 21:48	MRK	
Carbon Tetrachloride [56-23-5]^	0.00025	U	mg/kg dry	1	0.00025	0.0012	7H23004	EPA 8260B	08/23/17 21:48	MRK	
Chlorobenzene [108-90-7]^	0.00020	U	mg/kg dry	1	0.00020	0.0012	7H23004	EPA 8260B	08/23/17 21:48	MRK	
Chloroethane [75-00-3]^	0.00029	U	mg/kg dry	1	0.00029	0.0012	7H23004	EPA 8260B	08/23/17 21:48	MRK	
Chloroform [67-66-3]^	0.00021	U	mg/kg dry	1	0.00021	0.0012	7H23004	EPA 8260B	08/23/17 21:48	MRK	
Chloromethane [74-87-3]^	0.00024	U	mg/kg dry	1	0.00024	0.0012	7H23004	EPA 8260B	08/23/17 21:48	MRK	
cis-1,2-Dichloroethene [156-59-2]^	0.00027	U	mg/kg dry	1	0.00027	0.0012	7H23004	EPA 8260B	08/23/17 21:48	MRK	
cis-1,3-Dichloropropene [10061-01-5]^	0.00020	U	mg/kg dry	1	0.00020	0.0012	7H23004	EPA 8260B	08/23/17 21:48	MRK	
Dibromochloromethane [124-48-1]^	0.00041	U	mg/kg dry	1	0.00041	0.0012	7H23004	EPA 8260B	08/23/17 21:48	MRK	
Dibromomethane [74-95-3]^	0.00038	U	mg/kg dry	1	0.00038	0.0012	7H23004	EPA 8260B	08/23/17 21:48	MRK	
Dichlorodifluoromethane [75-71-8]^	0.00052	U	mg/kg dry	1	0.00052	0.0012	7H23004	EPA 8260B	08/23/17 21:48	MRK	
Ethylbenzene [100-41-4]^	0.00023	U	mg/kg dry	1	0.00023	0.0012	7H23004	EPA 8260B	08/23/17 21:48	MRK	

This report relates only to the sample as received by the laboratory, and may only be reproduced in full.

www.encolabs.com

ANALYTICAL RESULTS

Description: PO53-B4	**Lab Sample ID:** CA11841-19	**Received:** 08/17/17 11:00
Matrix: Soil	**Sampled:** 08/14/17 15:54	**Work Order:** CA11841
Project: NCDOT PSAs	**Sampled By:** Brian Olim	**% Solids:** 86.38

Volatile Organic Compounds by GCMS

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
Hexachlorobutadiene [87-68-3]^	0.00041	U	mg/kg dry	1	0.00041	0.0012	7H23004	EPA 8260B	08/23/17 21:48	MRK	
Isopropylbenzene [98-82-8]^	0.00017	U	mg/kg dry	1	0.00017	0.0012	7H23004	EPA 8260B	08/23/17 21:48	MRK	
m,p-Xylenes [108-38-3/106-42-3]^	0.00043	U	mg/kg dry	1	0.00043	0.0023	7H23004	EPA 8260B	08/23/17 21:48	MRK	
Methylene Chloride [75-09-2]^	0.00085	U	mg/kg dry	1	0.00085	0.0023	7H23004	EPA 8260B	08/23/17 21:48	MRK	
Methyl-tert-Butyl Ether [1634-04-4]^	0.00035	U	mg/kg dry	1	0.00035	0.0012	7H23004	EPA 8260B	08/23/17 21:48	MRK	
Naphthalene [91-20-3]^	0.00031	U	mg/kg dry	1	0.00031	0.0012	7H23004	EPA 8260B	08/23/17 21:48	MRK	
n-Butyl Benzene [104-51-8]^	0.00015	U	mg/kg dry	1	0.00015	0.0012	7H23004	EPA 8260B	08/23/17 21:48	MRK	
n-Propyl Benzene [103-65-1]^	0.00021	U	mg/kg dry	1	0.00021	0.0012	7H23004	EPA 8260B	08/23/17 21:48	MRK	
o-Xylene [95-47-6]^	0.00025	U	mg/kg dry	1	0.00025	0.0012	7H23004	EPA 8260B	08/23/17 21:48	MRK	
sec-Butylbenzene [135-98-8]^	0.0011	U	mg/kg dry	1	0.0011	0.0012	7H23004	EPA 8260B	08/23/17 21:48	MRK	
Styrene [100-42-5]^	0.0011	U	mg/kg dry	1	0.0011	0.0012	7H23004	EPA 8260B	08/23/17 21:48	MRK	
tert-Butylbenzene [98-06-6]^	0.00020	U	mg/kg dry	1	0.00020	0.0012	7H23004	EPA 8260B	08/23/17 21:48	MRK	
Tetrachloroethene [127-18-4]^	0.00032	U	mg/kg dry	1	0.00032	0.0012	7H23004	EPA 8260B	08/23/17 21:48	MRK	
Toluene [108-88-3]^	0.00028	U	mg/kg dry	1	0.00028	0.0012	7H23004	EPA 8260B	08/23/17 21:48	MRK	
trans-1,2-Dichloroethene [156-60-5]^	0.00043	U	mg/kg dry	1	0.00043	0.0012	7H23004	EPA 8260B	08/23/17 21:48	MRK	
trans-1,3-Dichloropropene [10061-02-6]^	0.00045	U	mg/kg dry	1	0.00045	0.0012	7H23004	EPA 8260B	08/23/17 21:48	MRK	
Trichloroethene [79-01-6]^	0.00037	U	mg/kg dry	1	0.00037	0.0012	7H23004	EPA 8260B	08/23/17 21:48	MRK	
Trichlorofluoromethane [75-69-4]^	0.00030	U	mg/kg dry	1	0.00030	0.0012	7H23004	EPA 8260B	08/23/17 21:48	MRK	
Vinyl chloride [75-01-4]^	0.00028	U	mg/kg dry	1	0.00028	0.0012	7H23004	EPA 8260B	08/23/17 21:48	MRK	
Xylenes (Total) [1330-20-7]^	0.00065	U	mg/kg dry	1	0.00065	0.0035	7H23004	EPA 8260B	08/23/17 21:48	MRK	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes
4-Bromofluorobenzene	*54*	*1*	*50.0*	*108 %*	*50-127*	*7H23004*	*EPA 8260B*	*08/23/17 21:48*	*MRK*	
Dibromofluoromethane	*54*	*1*	*50.0*	*108 %*	*52-128*	*7H23004*	*EPA 8260B*	*08/23/17 21:48*	*MRK*	
Toluene-d8	*56*	*1*	*50.0*	*112 %*	*57-124*	*7H23004*	*EPA 8260B*	*08/23/17 21:48*	*MRK*	

Metals by EPA 6000/7000 Series Methods

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
Arsenic [7440-38-2]^	**3.59**		mg/kg dry	1	0.370	0.579	7H17029	EPA 6010D	08/24/17 11:24	JMV	
Barium [7440-39-3]^	**29.6**		mg/kg dry	1	0.116	0.579	7H17029	EPA 6010D	08/24/17 11:24	JMV	
Cadmium [7440-43-9]^	0.0111	U	mg/kg dry	1	0.0111	0.0579	7H17029	EPA 6010D	08/24/17 11:24	JMV	
Chromium [7440-47-3]^	**9.98**		mg/kg dry	1	0.116	0.579	7H17029	EPA 6010D	08/24/17 11:24	JMV	
Lead [7439-92-1]^	**13.6**		mg/kg dry	1	0.139	0.579	7H17029	EPA 6010D	08/24/17 11:24	JMV	
Mercury [7439-97-6]^	**0.0808**		mg/kg dry	1	0.0162	0.0278	7H24005	EPA 7471B	08/25/17 10:22	CMK	
Selenium [7782-49-2]^	0.475	U	mg/kg dry	1	0.475	0.579	7H17029	EPA 6010D	08/24/17 11:24	JMV	
Silver [7440-22-4]^	0.116	U	mg/kg dry	1	0.116	0.579	7H17029	EPA 6010D	08/24/17 11:24	JMV	

This report relates only to the sample as received by the laboratory, and may only be reproduced in full.

www.encolabs.com

ANALYTICAL RESULTS

Description: PO53-B3	**Lab Sample ID:** CA11841-20	**Received:** 08/17/17 11:00
Matrix: Soil	**Sampled:** 08/14/17 16:00	**Work Order:** CA11841
Project: NCDOT PSAs	**Sampled By:** Brian Olim	**% Solids:** 95.80

Volatile Organic Compounds by GCMS

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1,2-Tetrachloroethane [630-20-6]^	0.00017	U	mg/kg dry	1	0.00017	0.0010	7H25021	EPA 8260B	08/28/17 17:56	MRK	
1,1,1-Trichloroethane [71-55-6]^	0.00026	U	mg/kg dry	1	0.00026	0.0010	7H25021	EPA 8260B	08/28/17 17:56	MRK	
1,1,2,2-Tetrachloroethane [79-34-5]^	0.00021	U	mg/kg dry	1	0.00021	0.0010	7H25021	EPA 8260B	08/28/17 17:56	MRK	
1,1,2-Trichloroethane [79-00-5]^	0.00026	U	mg/kg dry	1	0.00026	0.0010	7H25021	EPA 8260B	08/28/17 17:56	MRK	
1,1-Dichloroethane [75-34-3]^	0.00026	U	mg/kg dry	1	0.00026	0.0010	7H25021	EPA 8260B	08/28/17 17:56	MRK	
1,1-Dichloroethene [75-35-4]^	0.00031	U	mg/kg dry	1	0.00031	0.0010	7H25021	EPA 8260B	08/28/17 17:56	MRK	
1,1-Dichloropropene [563-58-6]^	0.00017	U	mg/kg dry	1	0.00017	0.0010	7H25021	EPA 8260B	08/28/17 17:56	MRK	
1,2,3-Trichlorobenzene [87-61-6]^	0.00029	U	mg/kg dry	1	0.00029	0.0010	7H25021	EPA 8260B	08/28/17 17:56	MRK	
1,2,3-Trichloropropane [96-18-4]^	0.00067	U	mg/kg dry	1	0.00067	0.0010	7H25021	EPA 8260B	08/28/17 17:56	MRK	
1,2,4-Trichlorobenzene [120-82-1]^	0.00028	U	mg/kg dry	1	0.00028	0.0010	7H25021	EPA 8260B	08/28/17 17:56	MRK	
1,2,4-Trimethylbenzene [95-63-6]^	0.00018	U	mg/kg dry	1	0.00018	0.0010	7H25021	EPA 8260B	08/28/17 17:56	MRK	
1,2-Dibromo-3-chloropropane [96-12-8]^	0.00082	U	mg/kg dry	1	0.00082	0.0010	7H25021	EPA 8260B	08/28/17 17:56	MRK	
1,2-Dibromoethane [106-93-4]^	0.00048	U	mg/kg dry	1	0.00048	0.0010	7H25021	EPA 8260B	08/28/17 17:56	MRK	
1,2-Dichlorobenzene [95-50-1]^	0.00028	U	mg/kg dry	1	0.00028	0.0010	7H25021	EPA 8260B	08/28/17 17:56	MRK	
1,2-Dichloroethane [107-06-2]^	0.00043	U	mg/kg dry	1	0.00043	0.0010	7H25021	EPA 8260B	08/28/17 17:56	MRK	
1,2-Dichloropropane [78-87-5]^	0.00027	U	mg/kg dry	1	0.00027	0.0010	7H25021	EPA 8260B	08/28/17 17:56	MRK	
1,3,5-Trimethylbenzene [108-67-8]^	0.00021	U	mg/kg dry	1	0.00021	0.0010	7H25021	EPA 8260B	08/28/17 17:56	MRK	
1,3-Dichlorobenzene [541-73-1]^	0.00023	U	mg/kg dry	1	0.00023	0.0010	7H25021	EPA 8260B	08/28/17 17:56	MRK	
1,3-Dichloropropane [142-28-9]^	0.00030	U	mg/kg dry	1	0.00030	0.0010	7H25021	EPA 8260B	08/28/17 17:56	MRK	
1,4-Dichlorobenzene [106-46-7]^	0.00021	U	mg/kg dry	1	0.00021	0.0010	7H25021	EPA 8260B	08/28/17 17:56	MRK	
2,2-Dichloropropane [594-20-7]^	0.00024	U	mg/kg dry	1	0.00024	0.0010	7H25021	EPA 8260B	08/28/17 17:56	MRK	
2-Butanone [78-93-3]^	0.00081	U	mg/kg dry	1	0.00081	0.0052	7H25021	EPA 8260B	08/28/17 17:56	MRK	
2-Chloroethyl Vinyl Ether [110-75-8]^	0.00017	U	mg/kg dry	1	0.00017	0.0052	7H25021	EPA 8260B	08/28/17 17:56	MRK	
2-Chlorotoluene [95-49-8]^	0.00019	U	mg/kg dry	1	0.00019	0.0010	7H25021	EPA 8260B	08/28/17 17:56	MRK	
2-Hexanone [591-78-6]^	0.00078	U	mg/kg dry	1	0.00078	0.0052	7H25021	EPA 8260B	08/28/17 17:56	MRK	
4-Chlorotoluene [106-43-4]^	0.00027	U	mg/kg dry	1	0.00027	0.0010	7H25021	EPA 8260B	08/28/17 17:56	MRK	
4-Isopropyltoluene [99-87-6]^	0.00017	U	mg/kg dry	1	0.00017	0.0010	7H25021	EPA 8260B	08/28/17 17:56	MRK	
4-Methyl-2-pentanone [108-10-1]^	0.00059	U	mg/kg dry	1	0.00059	0.0052	7H25021	EPA 8260B	08/28/17 17:56	MRK	
Acetone [67-64-1]^	0.015	U	mg/kg dry	1	0.015	0.021	7H25021	EPA 8260B	08/28/17 17:56	MRK	
Benzene [71-43-2]^	0.00018	U	mg/kg dry	1	0.00018	0.0010	7H25021	EPA 8260B	08/28/17 17:56	MRK	
Bromobenzene [108-86-1]^	0.00023	U	mg/kg dry	1	0.00023	0.0010	7H25021	EPA 8260B	08/28/17 17:56	MRK	
Bromochloromethane [74-97-5]^	0.00043	U	mg/kg dry	1	0.00043	0.0010	7H25021	EPA 8260B	08/28/17 17:56	MRK	
Bromodichloromethane [75-27-4]^	0.00025	U	mg/kg dry	1	0.00025	0.0010	7H25021	EPA 8260B	08/28/17 17:56	MRK	
Bromoform [75-25-2]^	0.00047	U	mg/kg dry	1	0.00047	0.0010	7H25021	EPA 8260B	08/28/17 17:56	MRK	
Bromomethane [74-83-9]^	0.00033	U	mg/kg dry	1	0.00033	0.0010	7H25021	EPA 8260B	08/28/17 17:56	MRK	
Carbon disulfide [75-15-0]^	0.00041	U	mg/kg dry	1	0.00041	0.0052	7H25021	EPA 8260B	08/28/17 17:56	MRK	
Carbon Tetrachloride [56-23-5]^	0.00023	U	mg/kg dry	1	0.00023	0.0010	7H25021	EPA 8260B	08/28/17 17:56	MRK	
Chlorobenzene [108-90-7]^	0.00018	U	mg/kg dry	1	0.00018	0.0010	7H25021	EPA 8260B	08/28/17 17:56	MRK	
Chloroethane [75-00-3]^	0.00026	U	mg/kg dry	1	0.00026	0.0010	7H25021	EPA 8260B	08/28/17 17:56	MRK	
Chloroform [67-66-3]^	**0.012**		mg/kg dry	1	0.00019	0.0010	7H25021	EPA 8260B	08/28/17 17:56	MRK	
Chloromethane [74-87-3]^	0.00022	U	mg/kg dry	1	0.00022	0.0010	7H25021	EPA 8260B	08/28/17 17:56	MRK	
cis-1,2-Dichloroethene [156-59-2]^	0.00024	U	mg/kg dry	1	0.00024	0.0010	7H25021	EPA 8260B	08/28/17 17:56	MRK	
cis-1,3-Dichloropropene [10061-01-5]^	0.00018	U	mg/kg dry	1	0.00018	0.0010	7H25021	EPA 8260B	08/28/17 17:56	MRK	
Dibromochloromethane [124-48-1]^	0.00037	U	mg/kg dry	1	0.00037	0.0010	7H25021	EPA 8260B	08/28/17 17:56	MRK	
Dibromomethane [74-95-3]^	0.00034	U	mg/kg dry	1	0.00034	0.0010	7H25021	EPA 8260B	08/28/17 17:56	MRK	
Dichlorodifluoromethane [75-71-8]^	0.00047	U	mg/kg dry	1	0.00047	0.0010	7H25021	EPA 8260B	08/28/17 17:56	MRK	
Ethylbenzene [100-41-4]^	0.00021	U	mg/kg dry	1	0.00021	0.0010	7H25021	EPA 8260B	08/28/17 17:56	MRK	

This report relates only to the sample as received by the laboratory, and may only be reproduced in full.

www.encolabs.com

ANALYTICAL RESULTS

Description: PO53-B3	**Lab Sample ID:** CA11841-20	**Received:** 08/17/17 11:00
Matrix: Soil	**Sampled:** 08/14/17 16:00	**Work Order:** CA11841
Project: NCDOT PSAs	**Sampled By:** Brian Olim	**% Solids:** 95.80

Volatile Organic Compounds by GCMS

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
Hexachlorobutadiene [87-68-3]^	0.00037	U	mg/kg dry	1	0.00037	0.0010	7H25021	EPA 8260B	08/28/17 17:56	MRK	
Isopropylbenzene [98-82-8]^	0.00016	U	mg/kg dry	1	0.00016	0.0010	7H25021	EPA 8260B	08/28/17 17:56	MRK	
m,p-Xylenes [108-38-3/106-42-3]^	0.00039	U	mg/kg dry	1	0.00039	0.0021	7H25021	EPA 8260B	08/28/17 17:56	MRK	
Methylene Chloride [75-09-2]^	0.00076	U	mg/kg dry	1	0.00076	0.0021	7H25021	EPA 8260B	08/28/17 17:56	MRK	
Methyl-tert-Butyl Ether [1634-04-4]^	0.00031	U	mg/kg dry	1	0.00031	0.0010	7H25021	EPA 8260B	08/28/17 17:56	MRK	
Naphthalene [91-20-3]^	0.00028	U	mg/kg dry	1	0.00028	0.0010	7H25021	EPA 8260B	08/28/17 17:56	MRK	
n-Butyl Benzene [104-51-8]^	0.00014	U	mg/kg dry	1	0.00014	0.0010	7H25021	EPA 8260B	08/28/17 17:56	MRK	
n-Propyl Benzene [103-65-1]^	0.00019	U	mg/kg dry	1	0.00019	0.0010	7H25021	EPA 8260B	08/28/17 17:56	MRK	
o-Xylene [95-47-6]^	0.00023	U	mg/kg dry	1	0.00023	0.0010	7H25021	EPA 8260B	08/28/17 17:56	MRK	
sec-Butylbenzene [135-98-8]^	0.00099	U	mg/kg dry	1	0.00099	0.0010	7H25021	EPA 8260B	08/28/17 17:56	MRK	
Styrene [100-42-5]^	0.0010	U	mg/kg dry	1	0.0010	0.0010	7H25021	EPA 8260B	08/28/17 17:56	MRK	
tert-Butylbenzene [98-06-6]^	0.00018	U	mg/kg dry	1	0.00018	0.0010	7H25021	EPA 8260B	08/28/17 17:56	MRK	
Tetrachloroethene [127-18-4]^	0.00029	U	mg/kg dry	1	0.00029	0.0010	7H25021	EPA 8260B	08/28/17 17:56	MRK	
Toluene [108-88-3]^	0.00025	U	mg/kg dry	1	0.00025	0.0010	7H25021	EPA 8260B	08/28/17 17:56	MRK	
trans-1,2-Dichloroethene [156-60-5]^	0.00039	U	mg/kg dry	1	0.00039	0.0010	7H25021	EPA 8260B	08/28/17 17:56	MRK	
trans-1,3-Dichloropropene [10061-02-6]^	0.00041	U	mg/kg dry	1	0.00041	0.0010	7H25021	EPA 8260B	08/28/17 17:56	MRK	
Trichloroethene [79-01-6]^	0.00033	U	mg/kg dry	1	0.00033	0.0010	7H25021	EPA 8260B	08/28/17 17:56	MRK	
Trichlorofluoromethane [75-69-4]^	0.00027	U	mg/kg dry	1	0.00027	0.0010	7H25021	EPA 8260B	08/28/17 17:56	MRK	
Vinyl chloride [75-01-4]^	0.00025	U	mg/kg dry	1	0.00025	0.0010	7H25021	EPA 8260B	08/28/17 17:56	MRK	
Xylenes (Total) [1330-20-7]^	0.00058	U	mg/kg dry	1	0.00058	0.0031	7H25021	EPA 8260B	08/28/17 17:56	MRK	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes
4-Bromofluorobenzene	*53*	*1*	*50.0*	*105 %*	*50-127*	*7H25021*	*EPA 8260B*	*08/28/17 17:56*	*MRK*	
Dibromofluoromethane	*56*	*1*	*50.0*	*113 %*	*52-128*	*7H25021*	*EPA 8260B*	*08/28/17 17:56*	*MRK*	
Toluene-d8	*56*	*1*	*50.0*	*113 %*	*57-124*	*7H25021*	*EPA 8260B*	*08/28/17 17:56*	*MRK*	

Metals by EPA 6000/7000 Series Methods

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
Arsenic [7440-38-2]^	**2.54**		mg/kg dry	1	0.334	0.522	7H17029	EPA 6010D	08/24/17 11:49	JMV	
Barium [7440-39-3]^	**33.3**		mg/kg dry	1	0.104	0.522	7H17029	EPA 6010D	08/24/17 11:49	JMV	
Cadmium [7440-43-9]^	0.0100	U	mg/kg dry	1	0.0100	0.0522	7H17029	EPA 6010D	08/24/17 11:49	JMV	
Chromium [7440-47-3]^	**7.37**		mg/kg dry	1	0.104	0.522	7H17029	EPA 6010D	08/24/17 11:49	JMV	
Lead [7439-92-1]^	**9.13**		mg/kg dry	1	0.125	0.522	7H17029	EPA 6010D	08/24/17 11:49	JMV	
Mercury [7439-97-6]^	**0.0278**		mg/kg dry	0.857	0.0125	0.0215	7H24005	EPA 7471B	08/25/17 11:07	CMK	
Selenium [7782-49-2]^	0.428	U	mg/kg dry	1	0.428	0.522	7H17029	EPA 6010D	08/24/17 11:49	JMV	
Silver [7440-22-4]^	0.104	U	mg/kg dry	1	0.104	0.522	7H17029	EPA 6010D	08/24/17 11:49	JMV	

This report relates only to the sample as received by the laboratory, and may only be reproduced in full.

www.encolabs.com

ANALYTICAL RESULTS

Description: PO53-B2	**Lab Sample ID:** CA11841-21	**Received:** 08/17/17 11:00
Matrix: Soil	**Sampled:** 08/14/17 16:45	**Work Order:** CA11841
Project: NCDOT PSAs	**Sampled By:** Brian Olim	**% Solids:** 91.48

Volatile Organic Compounds by GCMS

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1,2-Tetrachloroethane [630-20-6]^	0.00017	U	mg/kg dry	1	0.00017	0.0011	7I05027	EPA 8260B	09/05/17 21:39	MRK	Q-01
1,1,1-Trichloroethane [71-55-6]^	0.00027	U	mg/kg dry	1	0.00027	0.0011	7I05027	EPA 8260B	09/05/17 21:39	MRK	Q-01
1,1,2,2-Tetrachloroethane [79-34-5]^	0.00022	U	mg/kg dry	1	0.00022	0.0011	7I05027	EPA 8260B	09/05/17 21:39	MRK	Q-01
1,1,2-Trichloroethane [79-00-5]^	0.00027	U	mg/kg dry	1	0.00027	0.0011	7I05027	EPA 8260B	09/05/17 21:39	MRK	Q-01
1,1-Dichloroethane [75-34-3]^	0.00027	U	mg/kg dry	1	0.00027	0.0011	7I05027	EPA 8260B	09/05/17 21:39	MRK	Q-01
1,1-Dichloroethene [75-35-4]^	0.00033	U	mg/kg dry	1	0.00033	0.0011	7I05027	EPA 8260B	09/05/17 21:39	MRK	Q-01
1,1-Dichloropropene [563-58-6]^	0.00017	U	mg/kg dry	1	0.00017	0.0011	7I05027	EPA 8260B	09/05/17 21:39	MRK	Q-01
1,2,3-Trichlorobenzene [87-61-6]^	0.00031	U	mg/kg dry	1	0.00031	0.0011	7I05027	EPA 8260B	09/05/17 21:39	MRK	Q-01
1,2,3-Trichloropropane [96-18-4]^	0.00070	U	mg/kg dry	1	0.00070	0.0011	7I05027	EPA 8260B	09/05/17 21:39	MRK	Q-01
1,2,4-Trichlorobenzene [120-82-1]^	0.00030	U	mg/kg dry	1	0.00030	0.0011	7I05027	EPA 8260B	09/05/17 21:39	MRK	Q-01
1,2,4-Trimethylbenzene [95-63-6]^	0.00019	U	mg/kg dry	1	0.00019	0.0011	7I05027	EPA 8260B	09/05/17 21:39	MRK	Q-01
1,2-Dibromo-3-chloropropane [96-12-8]^	0.00086	U	mg/kg dry	1	0.00086	0.0011	7I05027	EPA 8260B	09/05/17 21:39	MRK	Q-01
1,2-Dibromoethane [106-93-4]^	0.00050	U	mg/kg dry	1	0.00050	0.0011	7I05027	EPA 8260B	09/05/17 21:39	MRK	Q-01
1,2-Dichlorobenzene [95-50-1]^	0.00030	U	mg/kg dry	1	0.00030	0.0011	7I05027	EPA 8260B	09/05/17 21:39	MRK	Q-01
1,2-Dichloroethane [107-06-2]^	0.00045	U	mg/kg dry	1	0.00045	0.0011	7I05027	EPA 8260B	09/05/17 21:39	MRK	Q-01
1,2-Dichloropropane [78-87-5]^	0.00028	U	mg/kg dry	1	0.00028	0.0011	7I05027	EPA 8260B	09/05/17 21:39	MRK	Q-01
1,3,5-Trimethylbenzene [108-67-8]^	0.00022	U	mg/kg dry	1	0.00022	0.0011	7I05027	EPA 8260B	09/05/17 21:39	MRK	Q-01
1,3-Dichlorobenzene [541-73-1]^	0.00024	U	mg/kg dry	1	0.00024	0.0011	7I05027	EPA 8260B	09/05/17 21:39	MRK	Q-01
1,3-Dichloropropane [142-28-9]^	0.00032	U	mg/kg dry	1	0.00032	0.0011	7I05027	EPA 8260B	09/05/17 21:39	MRK	Q-01
1,4-Dichlorobenzene [106-46-7]^	0.00022	U	mg/kg dry	1	0.00022	0.0011	7I05027	EPA 8260B	09/05/17 21:39	MRK	Q-01
2,2-Dichloropropane [594-20-7]^	0.00025	U	mg/kg dry	1	0.00025	0.0011	7I05027	EPA 8260B	09/05/17 21:39	MRK	Q-01
2-Butanone [78-93-3]^	0.00085	U	mg/kg dry	1	0.00085	0.0055	7I05027	EPA 8260B	09/05/17 21:39	MRK	Q-01
2-Chloroethyl Vinyl Ether [110-75-8]^	0.00017	U	mg/kg dry	1	0.00017	0.0055	7I05027	EPA 8260B	09/05/17 21:39	MRK	Q-01
2-Chlorotoluene [95-49-8]^	0.00020	U	mg/kg dry	1	0.00020	0.0011	7I05027	EPA 8260B	09/05/17 21:39	MRK	Q-01
2-Hexanone [591-78-6]^	0.00082	U	mg/kg dry	1	0.00082	0.0055	7I05027	EPA 8260B	09/05/17 21:39	MRK	Q-01
4-Chlorotoluene [106-43-4]^	0.00028	U	mg/kg dry	1	0.00028	0.0011	7I05027	EPA 8260B	09/05/17 21:39	MRK	Q-01
4-Isopropyltoluene [99-87-6]^	0.00017	U	mg/kg dry	1	0.00017	0.0011	7I05027	EPA 8260B	09/05/17 21:39	MRK	Q-01
4-Methyl-2-pentanone [108-10-1]^	0.00062	U	mg/kg dry	1	0.00062	0.0055	7I05027	EPA 8260B	09/05/17 21:39	MRK	Q-01
Acetone [67-64-1]^	0.015	U	mg/kg dry	1	0.015	0.022	7I05027	EPA 8260B	09/05/17 21:39	MRK	Q-01
Benzene [71-43-2]^	0.00019	U	mg/kg dry	1	0.00019	0.0011	7I05027	EPA 8260B	09/05/17 21:39	MRK	Q-01
Bromobenzene [108-86-1]^	0.00024	U	mg/kg dry	1	0.00024	0.0011	7I05027	EPA 8260B	09/05/17 21:39	MRK	Q-01
Bromochloromethane [74-97-5]^	0.00045	U	mg/kg dry	1	0.00045	0.0011	7I05027	EPA 8260B	09/05/17 21:39	MRK	Q-01
Bromodichloromethane [75-27-4]^	0.00026	U	mg/kg dry	1	0.00026	0.0011	7I05027	EPA 8260B	09/05/17 21:39	MRK	Q-01
Bromoform [75-25-2]^	0.00049	U	mg/kg dry	1	0.00049	0.0011	7I05027	EPA 8260B	09/05/17 21:39	MRK	Q-01
Bromomethane [74-83-9]^	0.00035	U	mg/kg dry	1	0.00035	0.0011	7I05027	EPA 8260B	09/05/17 21:39	MRK	Q-01
Carbon disulfide [75-15-0]^	0.00043	U	mg/kg dry	1	0.00043	0.0055	7I05027	EPA 8260B	09/05/17 21:39	MRK	Q-01
Carbon Tetrachloride [56-23-5]^	0.00024	U	mg/kg dry	1	0.00024	0.0011	7I05027	EPA 8260B	09/05/17 21:39	MRK	Q-01
Chlorobenzene [108-90-7]^	0.00019	U	mg/kg dry	1	0.00019	0.0011	7I05027	EPA 8260B	09/05/17 21:39	MRK	Q-01
Chloroethane [75-00-3]^	0.00027	U	mg/kg dry	1	0.00027	0.0011	7I05027	EPA 8260B	09/05/17 21:39	MRK	Q-01
Chloroform [67-66-3]^	0.00020	U	mg/kg dry	1	0.00020	0.0011	7I05027	EPA 8260B	09/05/17 21:39	MRK	Q-01
Chloromethane [74-87-3]^	0.00023	U	mg/kg dry	1	0.00023	0.0011	7I05027	EPA 8260B	09/05/17 21:39	MRK	Q-01
cis-1,2-Dichloroethene [156-59-2]^	0.00025	U	mg/kg dry	1	0.00025	0.0011	7I05027	EPA 8260B	09/05/17 21:39	MRK	Q-01
cis-1,3-Dichloropropene [10061-01-5]^	0.00019	U	mg/kg dry	1	0.00019	0.0011	7I05027	EPA 8260B	09/05/17 21:39	MRK	Q-01
Dibromochloromethane [124-48-1]^	0.00038	U	mg/kg dry	1	0.00038	0.0011	7I05027	EPA 8260B	09/05/17 21:39	MRK	Q-01
Dibromomethane [74-95-3]^	0.00036	U	mg/kg dry	1	0.00036	0.0011	7I05027	EPA 8260B	09/05/17 21:39	MRK	Q-01
Dichlorodifluoromethane [75-71-8]^	0.00049	U	mg/kg dry	1	0.00049	0.0011	7I05027	EPA 8260B	09/05/17 21:39	MRK	Q-01
Ethylbenzene [100-41-4]^	0.00022	U	mg/kg dry	1	0.00022	0.0011	7I05027	EPA 8260B	09/05/17 21:39	MRK	Q-01

This report relates only to the sample as received by the laboratory, and may only be reproduced in full.

www.encolabs.com

ANALYTICAL RESULTS

Description: PO53-B2	**Lab Sample ID:** CA11841-21	**Received:** 08/17/17 11:00
Matrix: Soil	**Sampled:** 08/14/17 16:45	**Work Order:** CA11841
Project: NCDOT PSAs	**Sampled By:** Brian Olim	**% Solids:** 91.48

Volatile Organic Compounds by GCMS

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
Hexachlorobutadiene [87-68-3]^	0.00038	U	mg/kg dry	1	0.00038	0.0011	7I05027	EPA 8260B	09/05/17 21:39	MRK	Q-01
Isopropylbenzene [98-82-8]^	0.00016	U	mg/kg dry	1	0.00016	0.0011	7I05027	EPA 8260B	09/05/17 21:39	MRK	Q-01
m,p-Xylenes [108-38-3/106-42-3]^	0.00040	U	mg/kg dry	1	0.00040	0.0022	7I05027	EPA 8260B	09/05/17 21:39	MRK	Q-01
Methylene Chloride [75-09-2]^	0.00080	U	mg/kg dry	1	0.00080	0.0022	7I05027	EPA 8260B	09/05/17 21:39	MRK	Q-01
Methyl-tert-Butyl Ether [1634-04-4]^	0.00033	U	mg/kg dry	1	0.00033	0.0011	7I05027	EPA 8260B	09/05/17 21:39	MRK	Q-01
Naphthalene [91-20-3]^	0.00030	U	mg/kg dry	1	0.00030	0.0011	7I05027	EPA 8260B	09/05/17 21:39	MRK	Q-01
n-Butyl Benzene [104-51-8]^	0.00014	U	mg/kg dry	1	0.00014	0.0011	7I05027	EPA 8260B	09/05/17 21:39	MRK	Q-01
n-Propyl Benzene [103-65-1]^	0.00020	U	mg/kg dry	1	0.00020	0.0011	7I05027	EPA 8260B	09/05/17 21:39	MRK	Q-01
o-Xylene [95-47-6]^	0.00024	U	mg/kg dry	1	0.00024	0.0011	7I05027	EPA 8260B	09/05/17 21:39	MRK	Q-01
sec-Butylbenzene [135-98-8]^	0.0010	U	mg/kg dry	1	0.0010	0.0011	7I05027	EPA 8260B	09/05/17 21:39	MRK	Q-01
Styrene [100-42-5]^	0.0011	U	mg/kg dry	1	0.0011	0.0011	7I05027	EPA 8260B	09/05/17 21:39	MRK	Q-01
tert-Butylbenzene [98-06-6]^	0.00019	U	mg/kg dry	1	0.00019	0.0011	7I05027	EPA 8260B	09/05/17 21:39	MRK	Q-01
Tetrachloroethene [127-18-4]^	0.00031	U	mg/kg dry	1	0.00031	0.0011	7I05027	EPA 8260B	09/05/17 21:39	MRK	Q-01
Toluene [108-88-3]^	0.00026	U	mg/kg dry	1	0.00026	0.0011	7I05027	EPA 8260B	09/05/17 21:39	MRK	Q-01
trans-1,2-Dichloroethene [156-60-5]^	0.00040	U	mg/kg dry	1	0.00040	0.0011	7I05027	EPA 8260B	09/05/17 21:39	MRK	Q-01
trans-1,3-Dichloropropene [10061-02-6]^	0.00043	U	mg/kg dry	1	0.00043	0.0011	7I05027	EPA 8260B	09/05/17 21:39	MRK	Q-01
Trichloroethene [79-01-6]^	0.00035	U	mg/kg dry	1	0.00035	0.0011	7I05027	EPA 8260B	09/05/17 21:39	MRK	Q-01
Trichlorofluoromethane [75-69-4]^	0.00028	U	mg/kg dry	1	0.00028	0.0011	7I05027	EPA 8260B	09/05/17 21:39	MRK	Q-01
Vinyl chloride [75-01-4]^	0.00026	U	mg/kg dry	1	0.00026	0.0011	7I05027	EPA 8260B	09/05/17 21:39	MRK	Q-01
Xylenes (Total) [1330-20-7]^	0.00061	U	mg/kg dry	1	0.00061	0.0033	7I05027	EPA 8260B	09/05/17 21:39	MRK	Q-01

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	*Notes*
4-Bromofluorobenzene	*53*	*1*	*50.0*	*105 %*	*50-127*	*7I05027*	*EPA 8260B*	*09/05/17 21:39*	*MRK*	*Q-01*
Dibromofluoromethane	*67*	*1*	*50.0*	*134 %*	*52-128*	*7I05027*	*EPA 8260B*	*09/05/17 21:39*	*MRK*	*QS-03, Q-01*
Toluene-d8	*60*	*1*	*50.0*	*120 %*	*57-124*	*7I05027*	*EPA 8260B*	*09/05/17 21:39*	*MRK*	*Q-01*

Metals by EPA 6000/7000 Series Methods

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
Arsenic [7440-38-2]^	**2.41**		mg/kg dry	1	0.350	0.547	7H17029	EPA 6010D	08/24/17 11:51	JMV	
Barium [7440-39-3]^	**30.4**		mg/kg dry	1	0.109	0.547	7H17029	EPA 6010D	08/24/17 11:51	JMV	
Cadmium [7440-43-9]^	0.0105	U	mg/kg dry	1	0.0105	0.0547	7H17029	EPA 6010D	08/24/17 11:51	JMV	
Chromium [7440-47-3]^	**5.74**		mg/kg dry	1	0.109	0.547	7H17029	EPA 6010D	08/24/17 11:51	JMV	
Lead [7439-92-1]^	**10.1**		mg/kg dry	1	0.131	0.547	7H17029	EPA 6010D	08/24/17 11:51	JMV	
Mercury [7439-97-6]^	0.0153	U	mg/kg dry	1	0.0153	0.0262	7H24005	EPA 7471B	08/25/17 11:10	CMK	
Selenium [7782-49-2]^	0.448	U	mg/kg dry	1	0.448	0.547	7H17029	EPA 6010D	08/24/17 11:51	JMV	
Silver [7440-22-4]^	0.109	U	mg/kg dry	1	0.109	0.547	7H17029	EPA 6010D	08/24/17 11:51	JMV	

This report relates only to the sample as received by the laboratory, and may only be reproduced in full.

www.encolabs.com

ANALYTICAL RESULTS

Description: PO53-B1	**Lab Sample ID:** CA11841-22	**Received:** 08/17/17 11:00
Matrix: Soil	**Sampled:** 08/14/17 16:15	**Work Order:** CA11841
Project: NCDOT PSAs	**Sampled By:** Brian Olim	**% Solids:** 91.01

Volatile Organic Compounds by GCMS

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1,2-Tetrachloroethane [630-20-6]^	0.00018	U	mg/kg dry	1	0.00018	0.0011	7H29030	EPA 8260B	08/29/17 14:22	MRK	Q-01
1,1,1-Trichloroethane [71-55-6]^	0.00027	U	mg/kg dry	1	0.00027	0.0011	7H29030	EPA 8260B	08/29/17 14:22	MRK	Q-01
1,1,2,2-Tetrachloroethane [79-34-5]^	0.00022	U	mg/kg dry	1	0.00022	0.0011	7H29030	EPA 8260B	08/29/17 14:22	MRK	Q-01
1,1,2-Trichloroethane [79-00-5]^	0.00027	U	mg/kg dry	1	0.00027	0.0011	7H29030	EPA 8260B	08/29/17 14:22	MRK	Q-01
1,1-Dichloroethane [75-34-3]^	0.00027	U	mg/kg dry	1	0.00027	0.0011	7H29030	EPA 8260B	08/29/17 14:22	MRK	Q-01
1,1-Dichloroethene [75-35-4]^	0.00033	U	mg/kg dry	1	0.00033	0.0011	7H29030	EPA 8260B	08/29/17 14:22	MRK	Q-01
1,1-Dichloropropene [563-58-6]^	0.00018	U	mg/kg dry	1	0.00018	0.0011	7H29030	EPA 8260B	08/29/17 14:22	MRK	Q-01
1,2,3-Trichlorobenzene [87-61-6]^	0.00031	U	mg/kg dry	1	0.00031	0.0011	7H29030	EPA 8260B	08/29/17 14:22	MRK	Q-01
1,2,3-Trichloropropane [96-18-4]^	0.00070	U	mg/kg dry	1	0.00070	0.0011	7H29030	EPA 8260B	08/29/17 14:22	MRK	Q-01
1,2,4-Trichlorobenzene [120-82-1]^	0.00030	U	mg/kg dry	1	0.00030	0.0011	7H29030	EPA 8260B	08/29/17 14:22	MRK	Q-01
1,2,4-Trimethylbenzene [95-63-6]^	0.00019	U	mg/kg dry	1	0.00019	0.0011	7H29030	EPA 8260B	08/29/17 14:22	MRK	Q-01
1,2-Dibromo-3-chloropropane [96-12-8]^	0.00087	U	mg/kg dry	1	0.00087	0.0011	7H29030	EPA 8260B	08/29/17 14:22	MRK	Q-01
1,2-Dibromoethane [106-93-4]^	0.00051	U	mg/kg dry	1	0.00051	0.0011	7H29030	EPA 8260B	08/29/17 14:22	MRK	Q-01
1,2-Dichlorobenzene [95-50-1]^	0.00030	U	mg/kg dry	1	0.00030	0.0011	7H29030	EPA 8260B	08/29/17 14:22	MRK	Q-01
1,2-Dichloroethane [107-06-2]^	0.00045	U	mg/kg dry	1	0.00045	0.0011	7H29030	EPA 8260B	08/29/17 14:22	MRK	Q-01
1,2-Dichloropropane [78-87-5]^	0.00029	U	mg/kg dry	1	0.00029	0.0011	7H29030	EPA 8260B	08/29/17 14:22	MRK	Q-01
1,3,5-Trimethylbenzene [108-67-8]^	0.00022	U	mg/kg dry	1	0.00022	0.0011	7H29030	EPA 8260B	08/29/17 14:22	MRK	Q-01
1,3-Dichlorobenzene [541-73-1]^	0.00024	U	mg/kg dry	1	0.00024	0.0011	7H29030	EPA 8260B	08/29/17 14:22	MRK	Q-01
1,3-Dichloropropane [142-28-9]^	0.00032	U	mg/kg dry	1	0.00032	0.0011	7H29030	EPA 8260B	08/29/17 14:22	MRK	Q-01
1,4-Dichlorobenzene [106-46-7]^	0.00022	U	mg/kg dry	1	0.00022	0.0011	7H29030	EPA 8260B	08/29/17 14:22	MRK	Q-01
2,2-Dichloropropane [594-20-7]^	0.00025	U	mg/kg dry	1	0.00025	0.0011	7H29030	EPA 8260B	08/29/17 14:22	MRK	Q-01
2-Butanone [78-93-3]^	0.00086	U	mg/kg dry	1	0.00086	0.0055	7H29030	EPA 8260B	08/29/17 14:22	MRK	Q-01
2-Chloroethyl Vinyl Ether [110-75-8]^	0.00018	U	mg/kg dry	1	0.00018	0.0055	7H29030	EPA 8260B	08/29/17 14:22	MRK	Q-01
2-Chlorotoluene [95-49-8]^	0.00020	U	mg/kg dry	1	0.00020	0.0011	7H29030	EPA 8260B	08/29/17 14:22	MRK	Q-01
2-Hexanone [591-78-6]^	0.00082	U	mg/kg dry	1	0.00082	0.0055	7H29030	EPA 8260B	08/29/17 14:22	MRK	Q-01
4-Chlorotoluene [106-43-4]^	0.00029	U	mg/kg dry	1	0.00029	0.0011	7H29030	EPA 8260B	08/29/17 14:22	MRK	Q-01
4-Isopropyltoluene [99-87-6]^	0.00018	U	mg/kg dry	1	0.00018	0.0011	7H29030	EPA 8260B	08/29/17 14:22	MRK	Q-01
4-Methyl-2-pentanone [108-10-1]^	0.00063	U	mg/kg dry	1	0.00063	0.0055	7H29030	EPA 8260B	08/29/17 14:22	MRK	Q-01
Acetone [67-64-1]^	0.015	U	mg/kg dry	1	0.015	0.022	7H29030	EPA 8260B	08/29/17 14:22	MRK	Q-01
Benzene [71-43-2]^	0.00019	U	mg/kg dry	1	0.00019	0.0011	7H29030	EPA 8260B	08/29/17 14:22	MRK	Q-01
Bromobenzene [108-86-1]^	0.00024	U	mg/kg dry	1	0.00024	0.0011	7H29030	EPA 8260B	08/29/17 14:22	MRK	Q-01
Bromochloromethane [74-97-5]^	0.00045	U	mg/kg dry	1	0.00045	0.0011	7H29030	EPA 8260B	08/29/17 14:22	MRK	Q-01
Bromodichloromethane [75-27-4]^	0.00026	U	mg/kg dry	1	0.00026	0.0011	7H29030	EPA 8260B	08/29/17 14:22	MRK	Q-01
Bromoform [75-25-2]^	0.00049	U	mg/kg dry	1	0.00049	0.0011	7H29030	EPA 8260B	08/29/17 14:22	MRK	Q-01
Bromomethane [74-83-9]^	0.00035	U	mg/kg dry	1	0.00035	0.0011	7H29030	EPA 8260B	08/29/17 14:22	MRK	Q-01
Carbon disulfide [75-15-0]^	0.00043	U	mg/kg dry	1	0.00043	0.0055	7H29030	EPA 8260B	08/29/17 14:22	MRK	Q-01
Carbon Tetrachloride [56-23-5]^	0.00024	U	mg/kg dry	1	0.00024	0.0011	7H29030	EPA 8260B	08/29/17 14:22	MRK	Q-01
Chlorobenzene [108-90-7]^	0.00019	U	mg/kg dry	1	0.00019	0.0011	7H29030	EPA 8260B	08/29/17 14:22	MRK	Q-01
Chloroethane [75-00-3]^	0.00027	U	mg/kg dry	1	0.00027	0.0011	7H29030	EPA 8260B	08/29/17 14:22	MRK	Q-01
Chloroform [67-66-3]^	**0.0019**		mg/kg dry	1	0.00020	0.0011	7H29030	EPA 8260B	08/29/17 14:22	MRK	Q-01
Chloromethane [74-87-3]^	0.00023	U	mg/kg dry	1	0.00023	0.0011	7H29030	EPA 8260B	08/29/17 14:22	MRK	Q-01
cis-1,2-Dichloroethene [156-59-2]^	0.00025	U	mg/kg dry	1	0.00025	0.0011	7H29030	EPA 8260B	08/29/17 14:22	MRK	Q-01
cis-1,3-Dichloropropene [10061-01-5]^	0.00019	U	mg/kg dry	1	0.00019	0.0011	7H29030	EPA 8260B	08/29/17 14:22	MRK	Q-01
Dibromochloromethane [124-48-1]^	0.00038	U	mg/kg dry	1	0.00038	0.0011	7H29030	EPA 8260B	08/29/17 14:22	MRK	Q-01
Dibromomethane [74-95-3]^	0.00036	U	mg/kg dry	1	0.00036	0.0011	7H29030	EPA 8260B	08/29/17 14:22	MRK	Q-01
Dichlorodifluoromethane [75-71-8]^	0.00049	U	mg/kg dry	1	0.00049	0.0011	7H29030	EPA 8260B	08/29/17 14:22	MRK	Q-01
Ethylbenzene [100-41-4]^	0.00022	U	mg/kg dry	1	0.00022	0.0011	7H29030	EPA 8260B	08/29/17 14:22	MRK	Q-01

This report relates only to the sample as received by the laboratory, and may only be reproduced in full.

www.encolabs.com

ANALYTICAL RESULTS

Description: PO53-B1	**Lab Sample ID:** CA11841-22	**Received:** 08/17/17 11:00
Matrix: Soil	**Sampled:** 08/14/17 16:15	**Work Order:** CA11841
Project: NCDOT PSAs	**Sampled By:** Brian Olim	**% Solids:** 91.01

Volatile Organic Compounds by GCMS

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
Hexachlorobutadiene [87-68-3]^	0.00038	U	mg/kg dry	1	0.00038	0.0011	7H29030	EPA 8260B	08/29/17 14:22	MRK	Q-01
Isopropylbenzene [98-82-8]^	0.00016	U	mg/kg dry	1	0.00016	0.0011	7H29030	EPA 8260B	08/29/17 14:22	MRK	Q-01
m,p-Xylenes [108-38-3/106-42-3]^	0.00041	U	mg/kg dry	1	0.00041	0.0022	7H29030	EPA 8260B	08/29/17 14:22	MRK	Q-01
Methylene Chloride [75-09-2]^	0.00080	U	mg/kg dry	1	0.00080	0.0022	7H29030	EPA 8260B	08/29/17 14:22	MRK	Q-01
Methyl-tert-Butyl Ether [1634-04-4]^	0.00033	U	mg/kg dry	1	0.00033	0.0011	7H29030	EPA 8260B	08/29/17 14:22	MRK	Q-01
Naphthalene [91-20-3]^	0.00030	U	mg/kg dry	1	0.00030	0.0011	7H29030	EPA 8260B	08/29/17 14:22	MRK	Q-01
n-Butyl Benzene [104-51-8]^	0.00014	U	mg/kg dry	1	0.00014	0.0011	7H29030	EPA 8260B	08/29/17 14:22	MRK	Q-01
n-Propyl Benzene [103-65-1]^	0.00020	U	mg/kg dry	1	0.00020	0.0011	7H29030	EPA 8260B	08/29/17 14:22	MRK	Q-01
o-Xylene [95-47-6]^	0.00024	U	mg/kg dry	1	0.00024	0.0011	7H29030	EPA 8260B	08/29/17 14:22	MRK	Q-01
sec-Butylbenzene [135-98-8]^	0.0010	U	mg/kg dry	1	0.0010	0.0011	7H29030	EPA 8260B	08/29/17 14:22	MRK	Q-01
Styrene [100-42-5]^	0.0011	U	mg/kg dry	1	0.0011	0.0011	7H29030	EPA 8260B	08/29/17 14:22	MRK	Q-01
tert-Butylbenzene [98-06-6]^	0.00019	U	mg/kg dry	1	0.00019	0.0011	7H29030	EPA 8260B	08/29/17 14:22	MRK	Q-01
Tetrachloroethene [127-18-4]^	0.00031	U	mg/kg dry	1	0.00031	0.0011	7H29030	EPA 8260B	08/29/17 14:22	MRK	Q-01
Toluene [108-88-3]^	0.00026	U	mg/kg dry	1	0.00026	0.0011	7H29030	EPA 8260B	08/29/17 14:22	MRK	Q-01
trans-1,2-Dichloroethene [156-60-5]^	0.00041	U	mg/kg dry	1	0.00041	0.0011	7H29030	EPA 8260B	08/29/17 14:22	MRK	Q-01
trans-1,3-Dichloropropene [10061-02-6]^	0.00043	U	mg/kg dry	1	0.00043	0.0011	7H29030	EPA 8260B	08/29/17 14:22	MRK	Q-01
Trichloroethene [79-01-6]^	0.00035	U	mg/kg dry	1	0.00035	0.0011	7H29030	EPA 8260B	08/29/17 14:22	MRK	Q-01
Trichlorofluoromethane [75-69-4]^	0.00029	U	mg/kg dry	1	0.00029	0.0011	7H29030	EPA 8260B	08/29/17 14:22	MRK	Q-01
Vinyl chloride [75-01-4]^	0.00026	U	mg/kg dry	1	0.00026	0.0011	7H29030	EPA 8260B	08/29/17 14:22	MRK	Q-01
Xylenes (Total) [1330-20-7]^	0.00062	U	mg/kg dry	1	0.00062	0.0033	7H29030	EPA 8260B	08/29/17 14:22	MRK	Q-01

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes
4-Bromofluorobenzene	*50*	*1*	*50.0*	*101 %*	*50-127*	*7H29030*	*EPA 8260B*	*08/29/17 14:22*	*MRK*	*Q-01*
Dibromofluoromethane	*55*	*1*	*50.0*	*110 %*	*52-128*	*7H29030*	*EPA 8260B*	*08/29/17 14:22*	*MRK*	*Q-01*
Toluene-d8	*54*	*1*	*50.0*	*108 %*	*57-124*	*7H29030*	*EPA 8260B*	*08/29/17 14:22*	*MRK*	*Q-01*

Metals by EPA 6000/7000 Series Methods

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
Arsenic [7440-38-2]^	**5.18**		mg/kg dry	1	0.352	0.549	7H17029	EPA 6010D	08/24/17 11:53	JMV	
Barium [7440-39-3]^	**33.0**		mg/kg dry	1	0.110	0.549	7H17029	EPA 6010D	08/24/17 11:53	JMV	
Cadmium [7440-43-9]^	0.0105	U	mg/kg dry	1	0.0105	0.0549	7H17029	EPA 6010D	08/24/17 11:53	JMV	
Chromium [7440-47-3]^	**17.3**		mg/kg dry	1	0.110	0.549	7H17029	EPA 6010D	08/24/17 11:53	JMV	
Lead [7439-92-1]^	**17.5**		mg/kg dry	1	0.132	0.549	7H17029	EPA 6010D	08/24/17 11:53	JMV	
Mercury [7439-97-6]^	**0.0324**		mg/kg dry	1	0.0154	0.0264	7H24005	EPA 7471B	08/25/17 11:12	CMK	
Selenium [7782-49-2]^	0.451	U	mg/kg dry	1	0.451	0.549	7H17029	EPA 6010D	08/24/17 11:53	JMV	
Silver [7440-22-4]^	0.110	U	mg/kg dry	1	0.110	0.549	7H17029	EPA 6010D	08/24/17 11:53	JMV	

This report relates only to the sample as received by the laboratory, and may only be reproduced in full.

www.encolabs.com

ANALYTICAL RESULTS

Description: PO54-B1	**Lab Sample ID:** CA11841-23	**Received:** 08/17/17 11:00
Matrix: Soil	**Sampled:** 08/15/17 09:25	**Work Order:** CA11841
Project: NCDOT PSAs	**Sampled By:** Brian Olim	**% Solids:** 92.69

Volatile Organic Compounds by GCMS

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1,2-Tetrachloroethane [630-20-6]^	0.00017	U	mg/kg dry	1	0.00017	0.0011	7H25021	EPA 8260B	08/28/17 18:27	MRK	
1,1,1-Trichloroethane [71-55-6]^	0.00027	U	mg/kg dry	1	0.00027	0.0011	7H25021	EPA 8260B	08/28/17 18:27	MRK	
1,1,2,2-Tetrachloroethane [79-34-5]^	0.00022	U	mg/kg dry	1	0.00022	0.0011	7H25021	EPA 8260B	08/28/17 18:27	MRK	
1,1,2-Trichloroethane [79-00-5]^	0.00027	U	mg/kg dry	1	0.00027	0.0011	7H25021	EPA 8260B	08/28/17 18:27	MRK	
1,1-Dichloroethane [75-34-3]^	0.00027	U	mg/kg dry	1	0.00027	0.0011	7H25021	EPA 8260B	08/28/17 18:27	MRK	
1,1-Dichloroethene [75-35-4]^	0.00032	U	mg/kg dry	1	0.00032	0.0011	7H25021	EPA 8260B	08/28/17 18:27	MRK	
1,1-Dichloropropene [563-58-6]^	0.00017	U	mg/kg dry	1	0.00017	0.0011	7H25021	EPA 8260B	08/28/17 18:27	MRK	
1,2,3-Trichlorobenzene [87-61-6]^	0.00030	U	mg/kg dry	1	0.00030	0.0011	7H25021	EPA 8260B	08/28/17 18:27	MRK	
1,2,3-Trichloropropane [96-18-4]^	0.00069	U	mg/kg dry	1	0.00069	0.0011	7H25021	EPA 8260B	08/28/17 18:27	MRK	
1,2,4-Trichlorobenzene [120-82-1]^	0.00029	U	mg/kg dry	1	0.00029	0.0011	7H25021	EPA 8260B	08/28/17 18:27	MRK	
1,2,4-Trimethylbenzene [95-63-6]^	0.00018	U	mg/kg dry	1	0.00018	0.0011	7H25021	EPA 8260B	08/28/17 18:27	MRK	
1,2-Dibromo-3-chloropropane [96-12-8]^	0.00085	U	mg/kg dry	1	0.00085	0.0011	7H25021	EPA 8260B	08/28/17 18:27	MRK	
1,2-Dibromoethane [106-93-4]^	0.00050	U	mg/kg dry	1	0.00050	0.0011	7H25021	EPA 8260B	08/28/17 18:27	MRK	
1,2-Dichlorobenzene [95-50-1]^	0.00029	U	mg/kg dry	1	0.00029	0.0011	7H25021	EPA 8260B	08/28/17 18:27	MRK	
1,2-Dichloroethane [107-06-2]^	0.00044	U	mg/kg dry	1	0.00044	0.0011	7H25021	EPA 8260B	08/28/17 18:27	MRK	
1,2-Dichloropropane [78-87-5]^	0.00028	U	mg/kg dry	1	0.00028	0.0011	7H25021	EPA 8260B	08/28/17 18:27	MRK	
1,3,5-Trimethylbenzene [108-67-8]^	0.00022	U	mg/kg dry	1	0.00022	0.0011	7H25021	EPA 8260B	08/28/17 18:27	MRK	
1,3-Dichlorobenzene [541-73-1]^	0.00024	U	mg/kg dry	1	0.00024	0.0011	7H25021	EPA 8260B	08/28/17 18:27	MRK	
1,3-Dichloropropane [142-28-9]^	0.00031	U	mg/kg dry	1	0.00031	0.0011	7H25021	EPA 8260B	08/28/17 18:27	MRK	
1,4-Dichlorobenzene [106-46-7]^	0.00022	U	mg/kg dry	1	0.00022	0.0011	7H25021	EPA 8260B	08/28/17 18:27	MRK	
2,2-Dichloropropane [594-20-7]^	0.00025	U	mg/kg dry	1	0.00025	0.0011	7H25021	EPA 8260B	08/28/17 18:27	MRK	
2-Butanone [78-93-3]^	**0.0041**	J	mg/kg dry	1	0.00084	0.0054	7H25021	EPA 8260B	08/28/17 18:27	MRK	
2-Chloroethyl Vinyl Ether [110-75-8]^	0.00017	U	mg/kg dry	1	0.00017	0.0054	7H25021	EPA 8260B	08/28/17 18:27	MRK	
2-Chlorotoluene [95-49-8]^	0.00019	U	mg/kg dry	1	0.00019	0.0011	7H25021	EPA 8260B	08/28/17 18:27	MRK	
2-Hexanone [591-78-6]^	0.00081	U	mg/kg dry	1	0.00081	0.0054	7H25021	EPA 8260B	08/28/17 18:27	MRK	
4-Chlorotoluene [106-43-4]^	0.00028	U	mg/kg dry	1	0.00028	0.0011	7H25021	EPA 8260B	08/28/17 18:27	MRK	
4-Isopropyltoluene [99-87-6]^	0.00017	U	mg/kg dry	1	0.00017	0.0011	7H25021	EPA 8260B	08/28/17 18:27	MRK	
4-Methyl-2-pentanone [108-10-1]^	0.00061	U	mg/kg dry	1	0.00061	0.0054	7H25021	EPA 8260B	08/28/17 18:27	MRK	
Acetone [67-64-1]^	**0.15**		mg/kg dry	1	0.015	0.022	7H25021	EPA 8260B	08/28/17 18:27	MRK	
Benzene [71-43-2]^	0.00018	U	mg/kg dry	1	0.00018	0.0011	7H25021	EPA 8260B	08/28/17 18:27	MRK	
Bromobenzene [108-86-1]^	0.00024	U	mg/kg dry	1	0.00024	0.0011	7H25021	EPA 8260B	08/28/17 18:27	MRK	
Bromochloromethane [74-97-5]^	0.00044	U	mg/kg dry	1	0.00044	0.0011	7H25021	EPA 8260B	08/28/17 18:27	MRK	
Bromodichloromethane [75-27-4]^	0.00026	U	mg/kg dry	1	0.00026	0.0011	7H25021	EPA 8260B	08/28/17 18:27	MRK	
Bromoform [75-25-2]^	0.00049	U	mg/kg dry	1	0.00049	0.0011	7H25021	EPA 8260B	08/28/17 18:27	MRK	
Bromomethane [74-83-9]^	0.00035	U	mg/kg dry	1	0.00035	0.0011	7H25021	EPA 8260B	08/28/17 18:27	MRK	
Carbon disulfide [75-15-0]^	0.00042	U	mg/kg dry	1	0.00042	0.0054	7H25021	EPA 8260B	08/28/17 18:27	MRK	
Carbon Tetrachloride [56-23-5]^	0.00024	U	mg/kg dry	1	0.00024	0.0011	7H25021	EPA 8260B	08/28/17 18:27	MRK	
Chlorobenzene [108-90-7]^	0.00018	U	mg/kg dry	1	0.00018	0.0011	7H25021	EPA 8260B	08/28/17 18:27	MRK	
Chloroethane [75-00-3]^	0.00027	U	mg/kg dry	1	0.00027	0.0011	7H25021	EPA 8260B	08/28/17 18:27	MRK	
Chloroform [67-66-3]^	0.00019	U	mg/kg dry	1	0.00019	0.0011	7H25021	EPA 8260B	08/28/17 18:27	MRK	
Chloromethane [74-87-3]^	0.00023	U	mg/kg dry	1	0.00023	0.0011	7H25021	EPA 8260B	08/28/17 18:27	MRK	
cis-1,2-Dichloroethene [156-59-2]^	0.00025	U	mg/kg dry	1	0.00025	0.0011	7H25021	EPA 8260B	08/28/17 18:27	MRK	
cis-1,3-Dichloropropene [10061-01-5]^	0.00018	U	mg/kg dry	1	0.00018	0.0011	7H25021	EPA 8260B	08/28/17 18:27	MRK	
Dibromochloromethane [124-48-1]^	0.00038	U	mg/kg dry	1	0.00038	0.0011	7H25021	EPA 8260B	08/28/17 18:27	MRK	
Dibromomethane [74-95-3]^	0.00036	U	mg/kg dry	1	0.00036	0.0011	7H25021	EPA 8260B	08/28/17 18:27	MRK	
Dichlorodifluoromethane [75-71-8]^	0.00049	U	mg/kg dry	1	0.00049	0.0011	7H25021	EPA 8260B	08/28/17 18:27	MRK	
Ethylbenzene [100-41-4]^	0.00022	U	mg/kg dry	1	0.00022	0.0011	7H25021	EPA 8260B	08/28/17 18:27	MRK	

This report relates only to the sample as received by the laboratory, and may only be reproduced in full.

www.encolabs.com

ANALYTICAL RESULTS

Description: PO54-B1	**Lab Sample ID:** CA11841-23	**Received:** 08/17/17 11:00
Matrix: Soil	**Sampled:** 08/15/17 09:25	**Work Order:** CA11841
Project: NCDOT PSAs	**Sampled By:** Brian Olim	**% Solids:** 92.69

Volatile Organic Compounds by GCMS

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
Hexachlorobutadiene [87-68-3]^	0.00038	U	mg/kg dry	1	0.00038	0.0011	7H25021	EPA 8260B	08/28/17 18:27	MRK	
Isopropylbenzene [98-82-8]^	0.00016	U	mg/kg dry	1	0.00016	0.0011	7H25021	EPA 8260B	08/28/17 18:27	MRK	
m,p-Xylenes [108-38-3/106-42-3]^	0.00040	U	mg/kg dry	1	0.00040	0.0022	7H25021	EPA 8260B	08/28/17 18:27	MRK	
Methylene Chloride [75-09-2]^	0.00079	U	mg/kg dry	1	0.00079	0.0022	7H25021	EPA 8260B	08/28/17 18:27	MRK	
Methyl-tert-Butyl Ether [1634-04-4]^	0.00032	U	mg/kg dry	1	0.00032	0.0011	7H25021	EPA 8260B	08/28/17 18:27	MRK	
Naphthalene [91-20-3]^	0.00029	U	mg/kg dry	1	0.00029	0.0011	7H25021	EPA 8260B	08/28/17 18:27	MRK	
n-Butyl Benzene [104-51-8]^	0.00014	U	mg/kg dry	1	0.00014	0.0011	7H25021	EPA 8260B	08/28/17 18:27	MRK	
n-Propyl Benzene [103-65-1]^	0.00019	U	mg/kg dry	1	0.00019	0.0011	7H25021	EPA 8260B	08/28/17 18:27	MRK	
o-Xylene [95-47-6]^	0.00024	U	mg/kg dry	1	0.00024	0.0011	7H25021	EPA 8260B	08/28/17 18:27	MRK	
sec-Butylbenzene [135-98-8]^	0.0010	U	mg/kg dry	1	0.0010	0.0011	7H25021	EPA 8260B	08/28/17 18:27	MRK	
Styrene [100-42-5]^	0.0011	U	mg/kg dry	1	0.0011	0.0011	7H25021	EPA 8260B	08/28/17 18:27	MRK	
tert-Butylbenzene [98-06-6]^	0.00018	U	mg/kg dry	1	0.00018	0.0011	7H25021	EPA 8260B	08/28/17 18:27	MRK	
Tetrachloroethene [127-18-4]^	0.00030	U	mg/kg dry	1	0.00030	0.0011	7H25021	EPA 8260B	08/28/17 18:27	MRK	
Toluene [108-88-3]^	0.00026	U	mg/kg dry	1	0.00026	0.0011	7H25021	EPA 8260B	08/28/17 18:27	MRK	
trans-1,2-Dichloroethene [156-60-5]^	0.00040	U	mg/kg dry	1	0.00040	0.0011	7H25021	EPA 8260B	08/28/17 18:27	MRK	
trans-1,3-Dichloropropene [10061-02-6]^	0.00042	U	mg/kg dry	1	0.00042	0.0011	7H25021	EPA 8260B	08/28/17 18:27	MRK	
Trichloroethene [79-01-6]^	0.00035	U	mg/kg dry	1	0.00035	0.0011	7H25021	EPA 8260B	08/28/17 18:27	MRK	
Trichlorofluoromethane [75-69-4]^	0.00028	U	mg/kg dry	1	0.00028	0.0011	7H25021	EPA 8260B	08/28/17 18:27	MRK	
Vinyl chloride [75-01-4]^	0.00026	U	mg/kg dry	1	0.00026	0.0011	7H25021	EPA 8260B	08/28/17 18:27	MRK	
Xylenes (Total) [1330-20-7]^	0.00060	U	mg/kg dry	1	0.00060	0.0032	7H25021	EPA 8260B	08/28/17 18:27	MRK	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes
4-Bromofluorobenzene	*53*	*1*	*50.0*	*107 %*	*50-127*	*7H25021*	*EPA 8260B*	*08/28/17 18:27*	*MRK*	
Dibromofluoromethane	*59*	*1*	*50.0*	*118 %*	*52-128*	*7H25021*	*EPA 8260B*	*08/28/17 18:27*	*MRK*	
Toluene-d8	*57*	*1*	*50.0*	*115 %*	*57-124*	*7H25021*	*EPA 8260B*	*08/28/17 18:27*	*MRK*	

Metals by EPA 6000/7000 Series Methods

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
Arsenic [7440-38-2]^	**2.24**		mg/kg dry	1	0.345	0.539	7H17029	EPA 6010D	08/24/17 11:55	JMV	
Barium [7440-39-3]^	**31.6**		mg/kg dry	1	0.108	0.539	7H17029	EPA 6010D	08/24/17 11:55	JMV	
Cadmium [7440-43-9]^	0.0104	U	mg/kg dry	1	0.0104	0.0539	7H17029	EPA 6010D	08/24/17 11:55	JMV	
Chromium [7440-47-3]^	**7.72**		mg/kg dry	1	0.108	0.539	7H17029	EPA 6010D	08/24/17 11:55	JMV	
Lead [7439-92-1]^	**9.11**		mg/kg dry	1	0.129	0.539	7H17029	EPA 6010D	08/24/17 11:55	JMV	
Mercury [7439-97-6]^	**0.0194**	J	mg/kg dry	1	0.0151	0.0259	7H24005	EPA 7471B	08/25/17 11:14	CMK	
Selenium [7782-49-2]^	0.442	U	mg/kg dry	1	0.442	0.539	7H17029	EPA 6010D	08/24/17 11:55	JMV	
Silver [7440-22-4]^	0.108	U	mg/kg dry	1	0.108	0.539	7H17029	EPA 6010D	08/24/17 11:55	JMV	

This report relates only to the sample as received by the laboratory, and may only be reproduced in full.

www.encolabs.com

ANALYTICAL RESULTS

Description: PO54-B2	**Lab Sample ID:** CA11841-24	**Received:** 08/17/17 11:00
Matrix: Soil	**Sampled:** 08/15/17 09:40	**Work Order:** CA11841
Project: NCDOT PSAs	**Sampled By:** Brian Olim	**% Solids:** 93.15

Volatile Organic Compounds by GCMS

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1,2-Tetrachloroethane [630-20-6]^	0.00017	U	mg/kg dry	1	0.00017	0.0011	7H25021	EPA 8260B	08/28/17 18:58	MRK	
1,1,1-Trichloroethane [71-55-6]^	0.00027	U	mg/kg dry	1	0.00027	0.0011	7H25021	EPA 8260B	08/28/17 18:58	MRK	
1,1,2,2-Tetrachloroethane [79-34-5]^	0.00021	U	mg/kg dry	1	0.00021	0.0011	7H25021	EPA 8260B	08/28/17 18:58	MRK	
1,1,2-Trichloroethane [79-00-5]^	0.00027	U	mg/kg dry	1	0.00027	0.0011	7H25021	EPA 8260B	08/28/17 18:58	MRK	
1,1-Dichloroethane [75-34-3]^	0.00027	U	mg/kg dry	1	0.00027	0.0011	7H25021	EPA 8260B	08/28/17 18:58	MRK	
1,1-Dichloroethene [75-35-4]^	0.00032	U	mg/kg dry	1	0.00032	0.0011	7H25021	EPA 8260B	08/28/17 18:58	MRK	
1,1-Dichloropropene [563-58-6]^	0.00017	U	mg/kg dry	1	0.00017	0.0011	7H25021	EPA 8260B	08/28/17 18:58	MRK	
1,2,3-Trichlorobenzene [87-61-6]^	0.00030	U	mg/kg dry	1	0.00030	0.0011	7H25021	EPA 8260B	08/28/17 18:58	MRK	
1,2,3-Trichloropropane [96-18-4]^	0.00069	U	mg/kg dry	1	0.00069	0.0011	7H25021	EPA 8260B	08/28/17 18:58	MRK	
1,2,4-Trichlorobenzene [120-82-1]^	0.00029	U	mg/kg dry	1	0.00029	0.0011	7H25021	EPA 8260B	08/28/17 18:58	MRK	
1,2,4-Trimethylbenzene [95-63-6]^	0.00018	U	mg/kg dry	1	0.00018	0.0011	7H25021	EPA 8260B	08/28/17 18:58	MRK	
1,2-Dibromo-3-chloropropane [96-12-8]^	0.00085	U	mg/kg dry	1	0.00085	0.0011	7H25021	EPA 8260B	08/28/17 18:58	MRK	
1,2-Dibromoethane [106-93-4]^	0.00049	U	mg/kg dry	1	0.00049	0.0011	7H25021	EPA 8260B	08/28/17 18:58	MRK	
1,2-Dichlorobenzene [95-50-1]^	0.00029	U	mg/kg dry	1	0.00029	0.0011	7H25021	EPA 8260B	08/28/17 18:58	MRK	
1,2-Dichloroethane [107-06-2]^	0.00044	U	mg/kg dry	1	0.00044	0.0011	7H25021	EPA 8260B	08/28/17 18:58	MRK	
1,2-Dichloropropane [78-87-5]^	0.00028	U	mg/kg dry	1	0.00028	0.0011	7H25021	EPA 8260B	08/28/17 18:58	MRK	
1,3,5-Trimethylbenzene [108-67-8]^	0.00021	U	mg/kg dry	1	0.00021	0.0011	7H25021	EPA 8260B	08/28/17 18:58	MRK	
1,3-Dichlorobenzene [541-73-1]^	0.00024	U	mg/kg dry	1	0.00024	0.0011	7H25021	EPA 8260B	08/28/17 18:58	MRK	
1,3-Dichloropropane [142-28-9]^	0.00031	U	mg/kg dry	1	0.00031	0.0011	7H25021	EPA 8260B	08/28/17 18:58	MRK	
1,4-Dichlorobenzene [106-46-7]^	0.00021	U	mg/kg dry	1	0.00021	0.0011	7H25021	EPA 8260B	08/28/17 18:58	MRK	
2,2-Dichloropropane [594-20-7]^	0.00025	U	mg/kg dry	1	0.00025	0.0011	7H25021	EPA 8260B	08/28/17 18:58	MRK	
2-Butanone [78-93-3]^	**0.0011**	J	mg/kg dry	1	0.00084	0.0054	7H25021	EPA 8260B	08/28/17 18:58	MRK	
2-Chloroethyl Vinyl Ether [110-75-8]^	0.00017	U	mg/kg dry	1	0.00017	0.0054	7H25021	EPA 8260B	08/28/17 18:58	MRK	
2-Chlorotoluene [95-49-8]^	0.00019	U	mg/kg dry	1	0.00019	0.0011	7H25021	EPA 8260B	08/28/17 18:58	MRK	
2-Hexanone [591-78-6]^	0.00081	U	mg/kg dry	1	0.00081	0.0054	7H25021	EPA 8260B	08/28/17 18:58	MRK	
4-Chlorotoluene [106-43-4]^	0.00028	U	mg/kg dry	1	0.00028	0.0011	7H25021	EPA 8260B	08/28/17 18:58	MRK	
4-Isopropyltoluene [99-87-6]^	0.00017	U	mg/kg dry	1	0.00017	0.0011	7H25021	EPA 8260B	08/28/17 18:58	MRK	
4-Methyl-2-pentanone [108-10-1]^	0.00061	U	mg/kg dry	1	0.00061	0.0054	7H25021	EPA 8260B	08/28/17 18:58	MRK	
Acetone [67-64-1]^	0.015	U	mg/kg dry	1	0.015	0.021	7H25021	EPA 8260B	08/28/17 18:58	MRK	
Benzene [71-43-2]^	0.00018	U	mg/kg dry	1	0.00018	0.0011	7H25021	EPA 8260B	08/28/17 18:58	MRK	
Bromobenzene [108-86-1]^	0.00024	U	mg/kg dry	1	0.00024	0.0011	7H25021	EPA 8260B	08/28/17 18:58	MRK	
Bromochloromethane [74-97-5]^	0.00044	U	mg/kg dry	1	0.00044	0.0011	7H25021	EPA 8260B	08/28/17 18:58	MRK	
Bromodichloromethane [75-27-4]^	0.00026	U	mg/kg dry	1	0.00026	0.0011	7H25021	EPA 8260B	08/28/17 18:58	MRK	
Bromoform [75-25-2]^	0.00048	U	mg/kg dry	1	0.00048	0.0011	7H25021	EPA 8260B	08/28/17 18:58	MRK	
Bromomethane [74-83-9]^	0.00034	U	mg/kg dry	1	0.00034	0.0011	7H25021	EPA 8260B	08/28/17 18:58	MRK	
Carbon disulfide [75-15-0]^	0.00042	U	mg/kg dry	1	0.00042	0.0054	7H25021	EPA 8260B	08/28/17 18:58	MRK	
Carbon Tetrachloride [56-23-5]^	0.00024	U	mg/kg dry	1	0.00024	0.0011	7H25021	EPA 8260B	08/28/17 18:58	MRK	
Chlorobenzene [108-90-7]^	0.00018	U	mg/kg dry	1	0.00018	0.0011	7H25021	EPA 8260B	08/28/17 18:58	MRK	
Chloroethane [75-00-3]^	0.00027	U	mg/kg dry	1	0.00027	0.0011	7H25021	EPA 8260B	08/28/17 18:58	MRK	
Chloroform [67-66-3]^	0.00019	U	mg/kg dry	1	0.00019	0.0011	7H25021	EPA 8260B	08/28/17 18:58	MRK	
Chloromethane [74-87-3]^	0.00023	U	mg/kg dry	1	0.00023	0.0011	7H25021	EPA 8260B	08/28/17 18:58	MRK	
cis-1,2-Dichloroethene [156-59-2]^	0.00025	U	mg/kg dry	1	0.00025	0.0011	7H25021	EPA 8260B	08/28/17 18:58	MRK	
cis-1,3-Dichloropropene [10061-01-5]^	0.00018	U	mg/kg dry	1	0.00018	0.0011	7H25021	EPA 8260B	08/28/17 18:58	MRK	
Dibromochloromethane [124-48-1]^	0.00038	U	mg/kg dry	1	0.00038	0.0011	7H25021	EPA 8260B	08/28/17 18:58	MRK	
Dibromomethane [74-95-3]^	0.00035	U	mg/kg dry	1	0.00035	0.0011	7H25021	EPA 8260B	08/28/17 18:58	MRK	
Dichlorodifluoromethane [75-71-8]^	0.00048	U	mg/kg dry	1	0.00048	0.0011	7H25021	EPA 8260B	08/28/17 18:58	MRK	
Ethylbenzene [100-41-4]^	0.00021	U	mg/kg dry	1	0.00021	0.0011	7H25021	EPA 8260B	08/28/17 18:58	MRK	

This report relates only to the sample as received by the laboratory, and may only be reproduced in full.

www.encolabs.com

ANALYTICAL RESULTS

Description: PO54-B2	**Lab Sample ID:** CA11841-24	**Received:** 08/17/17 11:00
Matrix: Soil	**Sampled:** 08/15/17 09:40	**Work Order:** CA11841
Project: NCDOT PSAs	**Sampled By:** Brian Olim	**% Solids:** 93.15

Volatile Organic Compounds by GCMS

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
Hexachlorobutadiene [87-68-3]^	0.00038	U	mg/kg dry	1	0.00038	0.0011	7H25021	EPA 8260B	08/28/17 18:58	MRK	
Isopropylbenzene [98-82-8]^	0.00016	U	mg/kg dry	1	0.00016	0.0011	7H25021	EPA 8260B	08/28/17 18:58	MRK	
m,p-Xylenes [108-38-3/106-42-3]^	0.00040	U	mg/kg dry	1	0.00040	0.0021	7H25021	EPA 8260B	08/28/17 18:58	MRK	
Methylene Chloride [75-09-2]^	0.00078	U	mg/kg dry	1	0.00078	0.0021	7H25021	EPA 8260B	08/28/17 18:58	MRK	
Methyl-tert-Butyl Ether [1634-04-4]^	0.00032	U	mg/kg dry	1	0.00032	0.0011	7H25021	EPA 8260B	08/28/17 18:58	MRK	
Naphthalene [91-20-3]^	0.00029	U	mg/kg dry	1	0.00029	0.0011	7H25021	EPA 8260B	08/28/17 18:58	MRK	
n-Butyl Benzene [104-51-8]^	0.00014	U	mg/kg dry	1	0.00014	0.0011	7H25021	EPA 8260B	08/28/17 18:58	MRK	
n-Propyl Benzene [103-65-1]^	0.00019	U	mg/kg dry	1	0.00019	0.0011	7H25021	EPA 8260B	08/28/17 18:58	MRK	
o-Xylene [95-47-6]^	0.00024	U	mg/kg dry	1	0.00024	0.0011	7H25021	EPA 8260B	08/28/17 18:58	MRK	
sec-Butylbenzene [135-98-8]^	0.0010	U	mg/kg dry	1	0.0010	0.0011	7H25021	EPA 8260B	08/28/17 18:58	MRK	
Styrene [100-42-5]^	0.0011	U	mg/kg dry	1	0.0011	0.0011	7H25021	EPA 8260B	08/28/17 18:58	MRK	
tert-Butylbenzene [98-06-6]^	0.00018	U	mg/kg dry	1	0.00018	0.0011	7H25021	EPA 8260B	08/28/17 18:58	MRK	
Tetrachloroethene [127-18-4]^	0.00030	U	mg/kg dry	1	0.00030	0.0011	7H25021	EPA 8260B	08/28/17 18:58	MRK	
Toluene [108-88-3]^	0.00026	U	mg/kg dry	1	0.00026	0.0011	7H25021	EPA 8260B	08/28/17 18:58	MRK	
trans-1,2-Dichloroethene [156-60-5]^	0.00040	U	mg/kg dry	1	0.00040	0.0011	7H25021	EPA 8260B	08/28/17 18:58	MRK	
trans-1,3-Dichloropropene [10061-02-6]^	0.00042	U	mg/kg dry	1	0.00042	0.0011	7H25021	EPA 8260B	08/28/17 18:58	MRK	
Trichloroethene [79-01-6]^	0.00034	U	mg/kg dry	1	0.00034	0.0011	7H25021	EPA 8260B	08/28/17 18:58	MRK	
Trichlorofluoromethane [75-69-4]^	0.00028	U	mg/kg dry	1	0.00028	0.0011	7H25021	EPA 8260B	08/28/17 18:58	MRK	
Vinyl chloride [75-01-4]^	0.00026	U	mg/kg dry	1	0.00026	0.0011	7H25021	EPA 8260B	08/28/17 18:58	MRK	
Xylenes (Total) [1330-20-7]^	0.00060	U	mg/kg dry	1	0.00060	0.0032	7H25021	EPA 8260B	08/28/17 18:58	MRK	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes
4-Bromofluorobenzene	*54*	*1*	*50.0*	*108 %*	*50-127*	*7H25021*	*EPA 8260B*	*08/28/17 18:58*	*MRK*	
Dibromofluoromethane	*58*	*1*	*50.0*	*116 %*	*52-128*	*7H25021*	*EPA 8260B*	*08/28/17 18:58*	*MRK*	
Toluene-d8	*56*	*1*	*50.0*	*111 %*	*57-124*	*7H25021*	*EPA 8260B*	*08/28/17 18:58*	*MRK*	

Metals by EPA 6000/7000 Series Methods

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
Arsenic [7440-38-2]^	**2.04**		mg/kg dry	1	0.344	0.537	7H17029	EPA 6010D	08/24/17 11:57	JMV	
Barium [7440-39-3]^	**34.4**		mg/kg dry	1	0.107	0.537	7H17029	EPA 6010D	08/24/17 11:57	JMV	
Cadmium [7440-43-9]^	0.0103	U	mg/kg dry	1	0.0103	0.0537	7H17029	EPA 6010D	08/24/17 11:57	JMV	
Chromium [7440-47-3]^	**8.97**		mg/kg dry	1	0.107	0.537	7H17029	EPA 6010D	08/24/17 11:57	JMV	
Lead [7439-92-1]^	**8.29**		mg/kg dry	1	0.129	0.537	7H17029	EPA 6010D	08/24/17 11:57	JMV	
Mercury [7439-97-6]^	**0.0372**		mg/kg dry	1	0.0137	0.0234	7H24005	EPA 7471B	08/25/17 11:17	CMK	
Selenium [7782-49-2]^	0.440	U	mg/kg dry	1	0.440	0.537	7H17029	EPA 6010D	08/24/17 11:57	JMV	
Silver [7440-22-4]^	0.107	U	mg/kg dry	1	0.107	0.537	7H17029	EPA 6010D	08/24/17 11:57	JMV	

This report relates only to the sample as received by the laboratory, and may only be reproduced in full.

www.encolabs.com

ANALYTICAL RESULTS

Description: PO54-B3	**Lab Sample ID:** CA11841-25	**Received:** 08/17/17 11:00
Matrix: Soil	**Sampled:** 08/15/17 09:55	**Work Order:** CA11841
Project: NCDOT PSAs	**Sampled By:** Brian Olim	**% Solids:** 85.75

Volatile Organic Compounds by GCMS

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1,2-Tetrachloroethane [630-20-6]^	0.00017	U	mg/kg dry	0.888	0.00017	0.0010	7H25021	EPA 8260B	08/28/17 19:37	MRK	
1,1,1-Trichloroethane [71-55-6]^	0.00026	U	mg/kg dry	0.888	0.00026	0.0010	7H25021	EPA 8260B	08/28/17 19:37	MRK	
1,1,2,2-Tetrachloroethane [79-34-5]^	0.00021	U	mg/kg dry	0.888	0.00021	0.0010	7H25021	EPA 8260B	08/28/17 19:37	MRK	
1,1,2-Trichloroethane [79-00-5]^	0.00026	U	mg/kg dry	0.888	0.00026	0.0010	7H25021	EPA 8260B	08/28/17 19:37	MRK	
1,1-Dichloroethane [75-34-3]^	0.00026	U	mg/kg dry	0.888	0.00026	0.0010	7H25021	EPA 8260B	08/28/17 19:37	MRK	
1,1-Dichloroethene [75-35-4]^	0.00031	U	mg/kg dry	0.888	0.00031	0.0010	7H25021	EPA 8260B	08/28/17 19:37	MRK	
1,1-Dichloropropene [563-58-6]^	0.00017	U	mg/kg dry	0.888	0.00017	0.0010	7H25021	EPA 8260B	08/28/17 19:37	MRK	
1,2,3-Trichlorobenzene [87-61-6]^	0.00029	U	mg/kg dry	0.888	0.00029	0.0010	7H25021	EPA 8260B	08/28/17 19:37	MRK	
1,2,3-Trichloropropane [96-18-4]^	0.00066	U	mg/kg dry	0.888	0.00066	0.0010	7H25021	EPA 8260B	08/28/17 19:37	MRK	
1,2,4-Trichlorobenzene [120-82-1]^	0.00028	U	mg/kg dry	0.888	0.00028	0.0010	7H25021	EPA 8260B	08/28/17 19:37	MRK	
1,2,4-Trimethylbenzene [95-63-6]^	0.00018	U	mg/kg dry	0.888	0.00018	0.0010	7H25021	EPA 8260B	08/28/17 19:37	MRK	
1,2-Dibromo-3-chloropropane [96-12-8]^	0.00082	U	mg/kg dry	0.888	0.00082	0.0010	7H25021	EPA 8260B	08/28/17 19:37	MRK	
1,2-Dibromoethane [106-93-4]^	0.00048	U	mg/kg dry	0.888	0.00048	0.0010	7H25021	EPA 8260B	08/28/17 19:37	MRK	
1,2-Dichlorobenzene [95-50-1]^	0.00028	U	mg/kg dry	0.888	0.00028	0.0010	7H25021	EPA 8260B	08/28/17 19:37	MRK	
1,2-Dichloroethane [107-06-2]^	0.00042	U	mg/kg dry	0.888	0.00042	0.0010	7H25021	EPA 8260B	08/28/17 19:37	MRK	
1,2-Dichloropropane [78-87-5]^	0.00027	U	mg/kg dry	0.888	0.00027	0.0010	7H25021	EPA 8260B	08/28/17 19:37	MRK	
1,3,5-Trimethylbenzene [108-67-8]^	0.00021	U	mg/kg dry	0.888	0.00021	0.0010	7H25021	EPA 8260B	08/28/17 19:37	MRK	
1,3-Dichlorobenzene [541-73-1]^	0.00023	U	mg/kg dry	0.888	0.00023	0.0010	7H25021	EPA 8260B	08/28/17 19:37	MRK	
1,3-Dichloropropane [142-28-9]^	0.00030	U	mg/kg dry	0.888	0.00030	0.0010	7H25021	EPA 8260B	08/28/17 19:37	MRK	
1,4-Dichlorobenzene [106-46-7]^	0.00021	U	mg/kg dry	0.888	0.00021	0.0010	7H25021	EPA 8260B	08/28/17 19:37	MRK	
2,2-Dichloropropane [594-20-7]^	0.00024	U	mg/kg dry	0.888	0.00024	0.0010	7H25021	EPA 8260B	08/28/17 19:37	MRK	
2-Butanone [78-93-3]^	0.00081	U	mg/kg dry	0.888	0.00081	0.0052	7H25021	EPA 8260B	08/28/17 19:37	MRK	
2-Chloroethyl Vinyl Ether [110-75-8]^	0.00017	U	mg/kg dry	0.888	0.00017	0.0052	7H25021	EPA 8260B	08/28/17 19:37	MRK	
2-Chlorotoluene [95-49-8]^	0.00019	U	mg/kg dry	0.888	0.00019	0.0010	7H25021	EPA 8260B	08/28/17 19:37	MRK	
2-Hexanone [591-78-6]^	0.00078	U	mg/kg dry	0.888	0.00078	0.0052	7H25021	EPA 8260B	08/28/17 19:37	MRK	
4-Chlorotoluene [106-43-4]^	0.00027	U	mg/kg dry	0.888	0.00027	0.0010	7H25021	EPA 8260B	08/28/17 19:37	MRK	
4-Isopropyltoluene [99-87-6]^	0.00017	U	mg/kg dry	0.888	0.00017	0.0010	7H25021	EPA 8260B	08/28/17 19:37	MRK	
4-Methyl-2-pentanone [108-10-1]^	0.00059	U	mg/kg dry	0.888	0.00059	0.0052	7H25021	EPA 8260B	08/28/17 19:37	MRK	
Acetone [67-64-1]^	0.014	U	mg/kg dry	0.888	0.014	0.021	7H25021	EPA 8260B	08/28/17 19:37	MRK	
Benzene [71-43-2]^	0.00018	U	mg/kg dry	0.888	0.00018	0.0010	7H25021	EPA 8260B	08/28/17 19:37	MRK	
Bromobenzene [108-86-1]^	0.00023	U	mg/kg dry	0.888	0.00023	0.0010	7H25021	EPA 8260B	08/28/17 19:37	MRK	
Bromochloromethane [74-97-5]^	0.00042	U	mg/kg dry	0.888	0.00042	0.0010	7H25021	EPA 8260B	08/28/17 19:37	MRK	
Bromodichloromethane [75-27-4]^	0.00025	U	mg/kg dry	0.888	0.00025	0.0010	7H25021	EPA 8260B	08/28/17 19:37	MRK	
Bromoform [75-25-2]^	0.00047	U	mg/kg dry	0.888	0.00047	0.0010	7H25021	EPA 8260B	08/28/17 19:37	MRK	
Bromomethane [74-83-9]^	0.00033	U	mg/kg dry	0.888	0.00033	0.0010	7H25021	EPA 8260B	08/28/17 19:37	MRK	
Carbon disulfide [75-15-0]^	0.00040	U	mg/kg dry	0.888	0.00040	0.0052	7H25021	EPA 8260B	08/28/17 19:37	MRK	
Carbon Tetrachloride [56-23-5]^	0.00023	U	mg/kg dry	0.888	0.00023	0.0010	7H25021	EPA 8260B	08/28/17 19:37	MRK	
Chlorobenzene [108-90-7]^	0.00018	U	mg/kg dry	0.888	0.00018	0.0010	7H25021	EPA 8260B	08/28/17 19:37	MRK	
Chloroethane [75-00-3]^	0.00026	U	mg/kg dry	0.888	0.00026	0.0010	7H25021	EPA 8260B	08/28/17 19:37	MRK	
Chloroform [67-66-3]^	0.00019	U	mg/kg dry	0.888	0.00019	0.0010	7H25021	EPA 8260B	08/28/17 19:37	MRK	
Chloromethane [74-87-3]^	0.00022	U	mg/kg dry	0.888	0.00022	0.0010	7H25021	EPA 8260B	08/28/17 19:37	MRK	
cis-1,2-Dichloroethene [156-59-2]^	0.00024	U	mg/kg dry	0.888	0.00024	0.0010	7H25021	EPA 8260B	08/28/17 19:37	MRK	
cis-1,3-Dichloropropene [10061-01-5]^	0.00018	U	mg/kg dry	0.888	0.00018	0.0010	7H25021	EPA 8260B	08/28/17 19:37	MRK	
Dibromochloromethane [124-48-1]^	0.00036	U	mg/kg dry	0.888	0.00036	0.0010	7H25021	EPA 8260B	08/28/17 19:37	MRK	
Dibromomethane [74-95-3]^	0.00034	U	mg/kg dry	0.888	0.00034	0.0010	7H25021	EPA 8260B	08/28/17 19:37	MRK	
Dichlorodifluoromethane [75-71-8]^	0.00047	U	mg/kg dry	0.888	0.00047	0.0010	7H25021	EPA 8260B	08/28/17 19:37	MRK	
Ethylbenzene [100-41-4]^	0.00021	U	mg/kg dry	0.888	0.00021	0.0010	7H25021	EPA 8260B	08/28/17 19:37	MRK	

This report relates only to the sample as received by the laboratory, and may only be reproduced in full.

www.encolabs.com

ANALYTICAL RESULTS

Description: PO54-B3	**Lab Sample ID:** CA11841-25	**Received:** 08/17/17 11:00
Matrix: Soil	**Sampled:** 08/15/17 09:55	**Work Order:** CA11841
Project: NCDOT PSAs	**Sampled By:** Brian Olim	**% Solids:** 85.75

Volatile Organic Compounds by GCMS

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
Hexachlorobutadiene [87-68-3]^	0.00036	U	mg/kg dry	0.888	0.00036	0.0010	7H25021	EPA 8260B	08/28/17 19:37	MRK	
Isopropylbenzene [98-82-8]^	0.00016	U	mg/kg dry	0.888	0.00016	0.0010	7H25021	EPA 8260B	08/28/17 19:37	MRK	
m,p-Xylenes [108-38-3/106-42-3]^	0.00038	U	mg/kg dry	0.888	0.00038	0.0021	7H25021	EPA 8260B	08/28/17 19:37	MRK	
Methylene Chloride [75-09-2]^	0.00076	U	mg/kg dry	0.888	0.00076	0.0021	7H25021	EPA 8260B	08/28/17 19:37	MRK	
Methyl-tert-Butyl Ether [1634-04-4]^	0.00031	U	mg/kg dry	0.888	0.00031	0.0010	7H25021	EPA 8260B	08/28/17 19:37	MRK	
Naphthalene [91-20-3]^	0.00028	U	mg/kg dry	0.888	0.00028	0.0010	7H25021	EPA 8260B	08/28/17 19:37	MRK	
n-Butyl Benzene [104-51-8]^	0.00013	U	mg/kg dry	0.888	0.00013	0.0010	7H25021	EPA 8260B	08/28/17 19:37	MRK	
n-Propyl Benzene [103-65-1]^	0.00019	U	mg/kg dry	0.888	0.00019	0.0010	7H25021	EPA 8260B	08/28/17 19:37	MRK	
o-Xylene [95-47-6]^	0.00023	U	mg/kg dry	0.888	0.00023	0.0010	7H25021	EPA 8260B	08/28/17 19:37	MRK	
sec-Butylbenzene [135-98-8]^	0.00098	U	mg/kg dry	0.888	0.00098	0.0010	7H25021	EPA 8260B	08/28/17 19:37	MRK	
Styrene [100-42-5]^	0.0010	U	mg/kg dry	0.888	0.0010	0.0010	7H25021	EPA 8260B	08/28/17 19:37	MRK	
tert-Butylbenzene [98-06-6]^	0.00018	U	mg/kg dry	0.888	0.00018	0.0010	7H25021	EPA 8260B	08/28/17 19:37	MRK	
Tetrachloroethene [127-18-4]^	0.00029	U	mg/kg dry	0.888	0.00029	0.0010	7H25021	EPA 8260B	08/28/17 19:37	MRK	
Toluene [108-88-3]^	0.00025	U	mg/kg dry	0.888	0.00025	0.0010	7H25021	EPA 8260B	08/28/17 19:37	MRK	
trans-1,2-Dichloroethene [156-60-5]^	0.00038	U	mg/kg dry	0.888	0.00038	0.0010	7H25021	EPA 8260B	08/28/17 19:37	MRK	
trans-1,3-Dichloropropene [10061-02-6]^	0.00040	U	mg/kg dry	0.888	0.00040	0.0010	7H25021	EPA 8260B	08/28/17 19:37	MRK	
Trichloroethene [79-01-6]^	0.00033	U	mg/kg dry	0.888	0.00033	0.0010	7H25021	EPA 8260B	08/28/17 19:37	MRK	
Trichlorofluoromethane [75-69-4]^	0.00027	U	mg/kg dry	0.888	0.00027	0.0010	7H25021	EPA 8260B	08/28/17 19:37	MRK	
Vinyl chloride [75-01-4]^	0.00025	U	mg/kg dry	0.888	0.00025	0.0010	7H25021	EPA 8260B	08/28/17 19:37	MRK	
Xylenes (Total) [1330-20-7]^	0.00058	U	mg/kg dry	0.888	0.00058	0.0031	7H25021	EPA 8260B	08/28/17 19:37	MRK	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes
4-Bromofluorobenzene	*53*	*0.888*	*50.0*	*106 %*	*50-127*	*7H25021*	*EPA 8260B*	*08/28/17 19:37*	*MRK*	
Dibromofluoromethane	*59*	*0.888*	*50.0*	*118 %*	*52-128*	*7H25021*	*EPA 8260B*	*08/28/17 19:37*	*MRK*	
Toluene-d8	*55*	*0.888*	*50.0*	*111 %*	*57-124*	*7H25021*	*EPA 8260B*	*08/28/17 19:37*	*MRK*	

Metals by EPA 6000/7000 Series Methods

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
Arsenic [7440-38-2]^	**3.05**		mg/kg dry	1	0.373	0.583	7H17029	EPA 6010D	08/24/17 11:59	JMV	
Barium [7440-39-3]^	**24.1**		mg/kg dry	1	0.117	0.583	7H17029	EPA 6010D	08/24/17 11:59	JMV	
Cadmium [7440-43-9]^	0.0112	U	mg/kg dry	1	0.0112	0.0583	7H17029	EPA 6010D	08/24/17 11:59	JMV	
Chromium [7440-47-3]^	**14.2**		mg/kg dry	1	0.117	0.583	7H17029	EPA 6010D	08/24/17 11:59	JMV	
Lead [7439-92-1]^	**6.54**		mg/kg dry	1	0.140	0.583	7H17029	EPA 6010D	08/24/17 11:59	JMV	
Mercury [7439-97-6]^	**0.0257**	J	mg/kg dry	1	0.0163	0.0280	7H24005	EPA 7471B	08/25/17 11:23	CMK	
Selenium [7782-49-2]^	0.478	U	mg/kg dry	1	0.478	0.583	7H17029	EPA 6010D	08/24/17 11:59	JMV	
Silver [7440-22-4]^	0.117	U	mg/kg dry	1	0.117	0.583	7H17029	EPA 6010D	08/24/17 11:59	JMV	

This report relates only to the sample as received by the laboratory, and may only be reproduced in full.

www.encolabs.com

ANALYTICAL RESULTS

Description: Trip Blank | **Lab Sample ID:** CA11841-26 | **Received:** 08/17/17 11:00

Matrix: Water | **Sampled:** 08/14/17 15:10 | **Work Order:** CA11841

Project: NCDOT PSAs | **Sampled By:** ENCO

Volatile Organic Compounds by GCMS

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
1,1,1,2-Tetrachloroethane [630-20-6]^	0.17	U	ug/L	1	0.17	1.0	7H19001	EPA 8260B	08/19/17 23:00	MRK	
1,1,1-Trichloroethane [71-55-6]^	0.12	U	ug/L	1	0.12	1.0	7H19001	EPA 8260B	08/19/17 23:00	MRK	
1,1,2,2-Tetrachloroethane [79-34-5]^	0.28	U	ug/L	1	0.28	1.0	7H19001	EPA 8260B	08/19/17 23:00	MRK	
1,1,2-Trichloroethane [79-00-5]^	0.14	U	ug/L	1	0.14	1.0	7H19001	EPA 8260B	08/19/17 23:00	MRK	
1,1-Dichloroethane [75-34-3]^	0.13	U	ug/L	1	0.13	1.0	7H19001	EPA 8260B	08/19/17 23:00	MRK	
1,1-Dichloroethene [75-35-4]^	0.21	U	ug/L	1	0.21	1.0	7H19001	EPA 8260B	08/19/17 23:00	MRK	
1,1-Dichloropropene [563-58-6]^	0.15	U	ug/L	1	0.15	1.0	7H19001	EPA 8260B	08/19/17 23:00	MRK	
1,2,3-Trichlorobenzene [87-61-6]^	0.012	U	ug/L	1	0.012	1.0	7H19001	EPA 8260B	08/19/17 23:00	MRK	
1,2,3-Trichloropropane [96-18-4]^	0.23	U	ug/L	1	0.23	1.0	7H19001	EPA 8260B	08/19/17 23:00	MRK	
1,2,4-Trichlorobenzene [120-82-1]^	0.14	U	ug/L	1	0.14	1.0	7H19001	EPA 8260B	08/19/17 23:00	MRK	
1,2,4-Trimethylbenzene [95-63-6]^	0.10	U	ug/L	1	0.10	1.0	7H19001	EPA 8260B	08/19/17 23:00	MRK	
1,2-Dibromo-3-chloropropane [96-12-8]^	0.48	U	ug/L	1	0.48	1.0	7H19001	EPA 8260B	08/19/17 23:00	MRK	
1,2-Dibromoethane [106-93-4]^	0.66	U	ug/L	1	0.66	1.0	7H19001	EPA 8260B	08/19/17 23:00	MRK	
1,2-Dichlorobenzene [95-50-1]^	0.19	U	ug/L	1	0.19	1.0	7H19001	EPA 8260B	08/19/17 23:00	MRK	
1,2-Dichloroethane [107-06-2]^	0.21	U	ug/L	1	0.21	1.0	7H19001	EPA 8260B	08/19/17 23:00	MRK	
1,2-Dichloropropane [78-87-5]^	0.10	U	ug/L	1	0.10	1.0	7H19001	EPA 8260B	08/19/17 23:00	MRK	
1,3,5-Trimethylbenzene [108-67-8]^	0.30	U	ug/L	1	0.30	1.0	7H19001	EPA 8260B	08/19/17 23:00	MRK	
1,3-Dichlorobenzene [541-73-1]^	0.15	U	ug/L	1	0.15	1.0	7H19001	EPA 8260B	08/19/17 23:00	MRK	
1,3-Dichloropropane [142-28-9]^	0.16	U	ug/L	1	0.16	1.0	7H19001	EPA 8260B	08/19/17 23:00	MRK	
1,4-Dichlorobenzene [106-46-7]^	0.19	U	ug/L	1	0.19	1.0	7H19001	EPA 8260B	08/19/17 23:00	MRK	
2,2-Dichloropropane [594-20-7]^	0.28	U	ug/L	1	0.28	1.0	7H19001	EPA 8260B	08/19/17 23:00	MRK	
2-Butanone [78-93-3]^	1.3	U	ug/L	1	1.3	5.0	7H19001	EPA 8260B	08/19/17 23:00	MRK	
2-Chloroethyl Vinyl Ether [110-75-8]^	1.1	U	ug/L	1	1.1	5.0	7H19001	EPA 8260B	08/19/17 23:00	MRK	
2-Chlorotoluene [95-49-8]^	0.081	U	ug/L	1	0.081	1.0	7H19001	EPA 8260B	08/19/17 23:00	MRK	
2-Hexanone [591-78-6]^	0.88	U	ug/L	1	0.88	5.0	7H19001	EPA 8260B	08/19/17 23:00	MRK	
4-Chlorotoluene [106-43-4]^	0.068	U	ug/L	1	0.068	1.0	7H19001	EPA 8260B	08/19/17 23:00	MRK	
4-Isopropyltoluene [99-87-6]^	0.085	U	ug/L	1	0.085	1.0	7H19001	EPA 8260B	08/19/17 23:00	MRK	
4-Methyl-2-pentanone [108-10-1]^	1.1	U	ug/L	1	1.1	5.0	7H19001	EPA 8260B	08/19/17 23:00	MRK	
Acetone [67-64-1]^	10	U	ug/L	1	10	20	7H19001	EPA 8260B	08/19/17 23:00	MRK	
Benzene [71-43-2]^	0.15	U	ug/L	1	0.15	1.0	7H19001	EPA 8260B	08/19/17 23:00	MRK	
Bromobenzene [108-86-1]^	0.16	U	ug/L	1	0.16	1.0	7H19001	EPA 8260B	08/19/17 23:00	MRK	
Bromochloromethane [74-97-5]^	0.48	U	ug/L	1	0.48	1.0	7H19001	EPA 8260B	08/19/17 23:00	MRK	
Bromodichloromethane [75-27-4]^	0.17	U	ug/L	1	0.17	1.0	7H19001	EPA 8260B	08/19/17 23:00	MRK	
Bromoform [75-25-2]^	0.22	U	ug/L	1	0.22	1.0	7H19001	EPA 8260B	08/19/17 23:00	MRK	
Bromomethane [74-83-9]^	0.14	U	ug/L	1	0.14	1.0	7H19001	EPA 8260B	08/19/17 23:00	MRK	
Carbon disulfide [75-15-0]^	1.5	U	ug/L	1	1.5	5.0	7H19001	EPA 8260B	08/19/17 23:00	MRK	
Carbon tetrachloride [56-23-5]^	0.17	U	ug/L	1	0.17	1.0	7H19001	EPA 8260B	08/19/17 23:00	MRK	
Chlorobenzene [108-90-7]^	0.17	U	ug/L	1	0.17	1.0	7H19001	EPA 8260B	08/19/17 23:00	MRK	
Chloroethane [75-00-3]^	0.23	U	ug/L	1	0.23	1.0	7H19001	EPA 8260B	08/19/17 23:00	MRK	
Chloroform [67-66-3]^	0.18	U	ug/L	1	0.18	1.0	7H19001	EPA 8260B	08/19/17 23:00	MRK	
Chloromethane [74-87-3]^	0.13	U	ug/L	1	0.13	1.0	7H19001	EPA 8260B	08/19/17 23:00	MRK	
cis-1,2-Dichloroethene [156-59-2]^	0.15	U	ug/L	1	0.15	1.0	7H19001	EPA 8260B	08/19/17 23:00	MRK	
cis-1,3-Dichloropropene [10061-01-5]^	0.20	U	ug/L	1	0.20	1.0	7H19001	EPA 8260B	08/19/17 23:00	MRK	
Dibromochloromethane [124-48-1]^	0.17	U	ug/L	1	0.17	1.0	7H19001	EPA 8260B	08/19/17 23:00	MRK	
Dibromomethane [74-95-3]^	0.27	U	ug/L	1	0.27	1.0	7H19001	EPA 8260B	08/19/17 23:00	MRK	
Dichlorodifluoromethane [75-71-8]^	0.20	U	ug/L	1	0.20	1.0	7H19001	EPA 8260B	08/19/17 23:00	MRK	
Ethylbenzene [100-41-4]^	0.13	U	ug/L	1	0.13	1.0	7H19001	EPA 8260B	08/19/17 23:00	MRK	

This report relates only to the sample as received by the laboratory, and may only be reproduced in full.

www.encolabs.com

ANALYTICAL RESULTS

Description: Trip Blank | **Lab Sample ID:** CA11841-26 | **Received:** 08/17/17 11:00

Matrix: Water | **Sampled:** 08/14/17 15:10 | **Work Order:** CA11841

Project: NCDOT PSAs | **Sampled By:** ENCO

Volatile Organic Compounds by GCMS

^ - ENCO Cary certified analyte [NC 591]

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	PQL	Batch	Method	Analyzed	By	Notes
Hexachlorobutadiene [87-68-3]^	0.22	U	ug/L	1	0.22	1.0	7H19001	EPA 8260B	08/19/17 23:00	MRK	
Isopropylbenzene [98-82-8]^	0.14	U	ug/L	1	0.14	1.0	7H19001	EPA 8260B	08/19/17 23:00	MRK	
m,p-Xylenes [108-38-3/106-42-3]^	0.17	U	ug/L	1	0.17	2.0	7H19001	EPA 8260B	08/19/17 23:00	MRK	
Methylene chloride [75-09-2]^	0.23	U	ug/L	1	0.23	1.0	7H19001	EPA 8260B	08/19/17 23:00	MRK	
Methyl-tert-Butyl Ether [1634-04-4]^	0.16	U	ug/L	1	0.16	1.0	7H19001	EPA 8260B	08/19/17 23:00	MRK	
Naphthalene [91-20-3]^	0.11	U	ug/L	1	0.11	1.0	7H19001	EPA 8260B	08/19/17 23:00	MRK	
n-Butyl Benzene [104-51-8]^	0.058	U	ug/L	1	0.058	1.0	7H19001	EPA 8260B	08/19/17 23:00	MRK	
n-Propyl Benzene [103-65-1]^	0.12	U	ug/L	1	0.12	1.0	7H19001	EPA 8260B	08/19/17 23:00	MRK	
o-Xylene [95-47-6]^	0.065	U	ug/L	1	0.065	1.0	7H19001	EPA 8260B	08/19/17 23:00	MRK	
sec-Butylbenzene [135-98-8]^	0.10	U	ug/L	1	0.10	1.0	7H19001	EPA 8260B	08/19/17 23:00	MRK	
Styrene [100-42-5]^	0.11	U	ug/L	1	0.11	1.0	7H19001	EPA 8260B	08/19/17 23:00	MRK	
tert-Butylbenzene [98-06-6]^	0.17	U	ug/L	1	0.17	1.0	7H19001	EPA 8260B	08/19/17 23:00	MRK	
Tetrachloroethene [127-18-4]^	0.17	U	ug/L	1	0.17	1.0	7H19001	EPA 8260B	08/19/17 23:00	MRK	
Toluene [108-88-3]^	0.14	U	ug/L	1	0.14	1.0	7H19001	EPA 8260B	08/19/17 23:00	MRK	
trans-1,2-Dichloroethene [156-60-5]^	0.21	U	ug/L	1	0.21	1.0	7H19001	EPA 8260B	08/19/17 23:00	MRK	
trans-1,3-Dichloropropene [10061-02-6]^	0.15	U	ug/L	1	0.15	1.0	7H19001	EPA 8260B	08/19/17 23:00	MRK	
Trichloroethene [79-01-6]^	0.15	U	ug/L	1	0.15	1.0	7H19001	EPA 8260B	08/19/17 23:00	MRK	
Trichlorofluoromethane [75-69-4]^	0.24	U	ug/L	1	0.24	1.0	7H19001	EPA 8260B	08/19/17 23:00	MRK	
Vinyl chloride [75-01-4]^	0.32	U	ug/L	1	0.32	1.0	7H19001	EPA 8260B	08/19/17 23:00	MRK	
Xylenes (Total) [1330-20-7]^	0.45	U	ug/L	1	0.45	3.0	7H19001	EPA 8260B	08/19/17 23:00	MRK	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes
4-Bromofluorobenzene	*51*	*1*	*50.0*	*102 %*	*53-136*	*7H19001*	*EPA 8260B*	*08/19/17 23:00*	*MRK*	
Dibromofluoromethane	*53*	*1*	*50.0*	*106 %*	*67-129*	*7H19001*	*EPA 8260B*	*08/19/17 23:00*	*MRK*	
Toluene-d8	*57*	*1*	*50.0*	*113 %*	*59-134*	*7H19001*	*EPA 8260B*	*08/19/17 23:00*	*MRK*	

This report relates only to the sample as received by the laboratory, and may only be reproduced in full.

QUALITY CONTROL DATA

Volatile Organic Compounds by GCMS - Quality Control

Batch 7H19001 - EPA 5030B_MS

Blank (7H19001-BLK1) Prepared: 08/19/2017 12:21 Analyzed: 08/19/2017 21:30

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1,2-Tetrachloroethane	0.17	U	1.0	ug/L							
1,1,1-Trichloroethane	0.12	U	1.0	ug/L							
1,1,2,2-Tetrachloroethane	0.28	U	1.0	ug/L							
1,1,2-Trichloroethane	0.14	U	1.0	ug/L							
1,1-Dichloroethane	0.13	U	1.0	ug/L							
1,1-Dichloroethene	0.21	U	1.0	ug/L							
1,1-Dichloropropene	0.15	U	1.0	ug/L							
1,2,3-Trichlorobenzene	0.012	U	1.0	ug/L							
1,2,3-Trichloropropane	0.23	U	1.0	ug/L							
1,2,4-Trichlorobenzene	0.14	U	1.0	ug/L							
1,2,4-Trimethylbenzene	0.10	U	1.0	ug/L							
1,2-Dibromo-3-chloropropane	0.48	U	1.0	ug/L							
1,2-Dibromoethane	0.66	U	1.0	ug/L							
1,2-Dichlorobenzene	0.19	U	1.0	ug/L							
1,2-Dichloroethane	0.21	U	1.0	ug/L							
1,2-Dichloropropane	0.10	U	1.0	ug/L							
1,3,5-Trimethylbenzene	0.30	U	1.0	ug/L							
1,3-Dichlorobenzene	0.15	U	1.0	ug/L							
1,3-Dichloropropane	0.16	U	1.0	ug/L							
1,4-Dichlorobenzene	0.19	U	1.0	ug/L							
2,2-Dichloropropane	0.28	U	1.0	ug/L							
2-Butanone	1.3	U	5.0	ug/L							
2-Chloroethyl Vinyl Ether	1.1	U	5.0	ug/L							
2-Chlorotoluene	0.081	U	1.0	ug/L							
2-Hexanone	0.88	U	5.0	ug/L							
4-Chlorotoluene	0.068	U	1.0	ug/L							
4-Isopropyltoluene	0.085	U	1.0	ug/L							
4-Methyl-2-pentanone	1.1	U	5.0	ug/L							
Acetone	10	U	20	ug/L							
Benzene	0.15	U	1.0	ug/L							
Bromobenzene	0.16	U	1.0	ug/L							
Bromochloromethane	0.48	U	1.0	ug/L							
Bromodichloromethane	0.17	U	1.0	ug/L							
Bromoform	0.22	U	1.0	ug/L							
Bromomethane	0.14	U	1.0	ug/L							
Carbon disulfide	1.5	U	5.0	ug/L							
Carbon tetrachloride	0.17	U	1.0	ug/L							
Chlorobenzene	0.17	U	1.0	ug/L							
Chloroethane	0.23	U	1.0	ug/L							
Chloroform	0.18	U	1.0	ug/L							
Chloromethane	0.13	U	1.0	ug/L							
cis-1,2-Dichloroethene	0.15	U	1.0	ug/L							
cis-1,3-Dichloropropene	0.20	U	1.0	ug/L							
Dibromochloromethane	0.17	U	1.0	ug/L							
Dibromomethane	0.27	U	1.0	ug/L							
Dichlorodifluoromethane	0.20	U	1.0	ug/L							
Ethylbenzene	0.13	U	1.0	ug/L							
Hexachlorobutadiene	0.22	U	1.0	ug/L							
Isopropylbenzene	0.14	U	1.0	ug/L							

This report relates only to the sample as received by the laboratory, and may only be reproduced in full.

QUALITY CONTROL DATA

Volatile Organic Compounds by GCMS - Quality Control

Batch 7H19001 - EPA 5030B_MS - Continued

Blank (7H19001-BLK1) Continued Prepared: 08/19/2017 12:21 Analyzed: 08/19/2017 21:30

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
m,p-Xylenes	0.17	U	2.0	ug/L							
Methylene chloride	0.23	U	1.0	ug/L							
Methyl-tert-Butyl Ether	0.16	U	1.0	ug/L							
Naphthalene	0.11	U	1.0	ug/L							
n-Butyl Benzene	0.058	U	1.0	ug/L							
n-Propyl Benzene	0.12	U	1.0	ug/L							
o-Xylene	0.065	U	1.0	ug/L							
sec-Butylbenzene	0.10	U	1.0	ug/L							
Styrene	0.11	U	1.0	ug/L							
tert-Butylbenzene	0.17	U	1.0	ug/L							
Tetrachloroethene	0.17	U	1.0	ug/L							
Toluene	0.14	U	1.0	ug/L							
trans-1,2-Dichloroethene	0.21	U	1.0	ug/L							
trans-1,3-Dichloropropene	0.15	U	1.0	ug/L							
Trichloroethene	0.15	U	1.0	ug/L							
Trichlorofluoromethane	0.24	U	1.0	ug/L							
Vinyl chloride	0.32	U	1.0	ug/L							
Xylenes (Total)	0.45	U	3.0	ug/L							
4-Bromofluorobenzene	*51*			*ug/L*	*50.0*		*101*	*53-136*			
Dibromofluoromethane	*52*			*ug/L*	*50.0*		*103*	*67-129*			
Toluene-d8	*55*			*ug/L*	*50.0*		*110*	*59-134*			

LCS (7H19001-BS1) Prepared: 08/19/2017 12:21 Analyzed: 08/19/2017 19:29

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1-Dichloroethene	19		1.0	ug/L	20.0		95	75-133			
Benzene	21		1.0	ug/L	20.0		105	81-134			
Chlorobenzene	21		1.0	ug/L	20.0		106	83-117			
Toluene	21		1.0	ug/L	20.0		104	71-118			
Trichloroethene	20		1.0	ug/L	20.0		100	74-119			
4-Bromofluorobenzene	*54*			*ug/L*	*50.0*		*108*	*53-136*			
Dibromofluoromethane	*53*			*ug/L*	*50.0*		*106*	*67-129*			
Toluene-d8	*56*			*ug/L*	*50.0*		*111*	*59-134*			

Matrix Spike (7H19001-MS1) Prepared: 08/19/2017 12:21 Analyzed: 08/19/2017 19:59

Source: CA12480-08

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1-Dichloroethene	18		1.0	ug/L	20.0	0.21 U	89	75-133			
Benzene	21		1.0	ug/L	20.0	0.15 U	103	81-134			
Chlorobenzene	21		1.0	ug/L	20.0	0.17 U	103	83-117			
Toluene	21		1.0	ug/L	20.0	0.14 U	103	71-118			
Trichloroethene	20		1.0	ug/L	20.0	0.15 U	99	74-119			
4-Bromofluorobenzene	*54*			*ug/L*	*50.0*		*109*	*53-136*			
Dibromofluoromethane	*53*			*ug/L*	*50.0*		*106*	*67-129*			
Toluene-d8	*56*			*ug/L*	*50.0*		*113*	*59-134*			

This report relates only to the sample as received by the laboratory, and may only be reproduced in full.

QUALITY CONTROL DATA

Volatile Organic Compounds by GCMS - Quality Control

Batch 7H19001 - EPA 5030B_MS - Continued

Matrix Spike Dup (7H19001-MSD1) Prepared: 08/19/2017 12:21 Analyzed: 08/19/2017 20:29

Source: CA12480-08

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1-Dichloroethene	19		1.0	ug/L	20.0	0.21 U	93	75-133	5	20	
Benzene	21		1.0	ug/L	20.0	0.15 U	103	81-134	0.6	17	
Chlorobenzene	21		1.0	ug/L	20.0	0.17 U	103	83-117	0.1	16	
Toluene	21		1.0	ug/L	20.0	0.14 U	103	71-118	0.1	17	
Trichloroethene	20		1.0	ug/L	20.0	0.15 U	101	74-119	2	22	
4-Bromofluorobenzene	*54*			*ug/L*	*50.0*		*108*	*53-136*			
Dibromofluoromethane	*53*			*ug/L*	*50.0*		*106*	*67-129*			
Toluene-d8	*56*			*ug/L*	*50.0*		*111*	*59-134*			

Batch 7H23004 - EPA 5035_MS

Blank (7H23004-BLK1) Prepared: 08/23/2017 07:33 Analyzed: 08/23/2017 12:23

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1,2-Tetrachloroethane	0.00016	U	0.0010	mg/kg wet							
1,1,1-Trichloroethane	0.00025	U	0.0010	mg/kg wet							
1,1,2,2-Tetrachloroethane	0.00020	U	0.0010	mg/kg wet							
1,1,2-Trichloroethane	0.00025	U	0.0010	mg/kg wet							
1,1-Dichloroethane	0.00025	U	0.0010	mg/kg wet							
1,1-Dichloroethene	0.00030	U	0.0010	mg/kg wet							
1,1-Dichloropropene	0.00016	U	0.0010	mg/kg wet							
1,2,3-Trichlorobenzene	0.00028	U	0.0010	mg/kg wet							
1,2,3-Trichloropropane	0.00064	U	0.0010	mg/kg wet							
1,2,4-Trichlorobenzene	0.00027	U	0.0010	mg/kg wet							
1,2,4-Trimethylbenzene	0.00017	U	0.0010	mg/kg wet							
1,2-Dibromo-3-chloropropane	0.00079	U	0.0010	mg/kg wet							
1,2-Dibromoethane	0.00046	U	0.0010	mg/kg wet							
1,2-Dichlorobenzene	0.00027	U	0.0010	mg/kg wet							
1,2-Dichloroethane	0.00041	U	0.0010	mg/kg wet							
1,2-Dichloropropane	0.00026	U	0.0010	mg/kg wet							
1,3,5-Trimethylbenzene	0.00020	U	0.0010	mg/kg wet							
1,3-Dichlorobenzene	0.00022	U	0.0010	mg/kg wet							
1,3-Dichloropropane	0.00029	U	0.0010	mg/kg wet							
1,4-Dichlorobenzene	0.00020	U	0.0010	mg/kg wet							
2,2-Dichloropropane	0.00023	U	0.0010	mg/kg wet							
2-Butanone	0.00078	U	0.0050	mg/kg wet							
2-Chloroethyl Vinyl Ether	0.00016	U	0.0050	mg/kg wet							
2-Chlorotoluene	0.00018	U	0.0010	mg/kg wet							
2-Hexanone	0.00075	U	0.0050	mg/kg wet							
4-Chlorotoluene	0.00026	U	0.0010	mg/kg wet							
4-Isopropyltoluene	0.00016	U	0.0010	mg/kg wet							
4-Methyl-2-pentanone	0.00057	U	0.0050	mg/kg wet							
Acetone	0.014	U	0.020	mg/kg wet							
Benzene	0.00017	U	0.0010	mg/kg wet							
Bromobenzene	0.00022	U	0.0010	mg/kg wet							
Bromochloromethane	0.00041	U	0.0010	mg/kg wet							
Bromodichloromethane	0.00024	U	0.0010	mg/kg wet							
Bromoform	0.00045	U	0.0010	mg/kg wet							
Bromomethane	0.00032	U	0.0010	mg/kg wet							

This report relates only to the sample as received by the laboratory, and may only be reproduced in full.

QUALITY CONTROL DATA

Volatile Organic Compounds by GCMS - Quality Control

Batch 7H23004 - EPA 5035_MS - Continued

Blank (7H23004-BLK1) Continued Prepared: 08/23/2017 07:33 Analyzed: 08/23/2017 12:23

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Carbon disulfide	0.00039	U	0.0050	mg/kg wet							
Carbon Tetrachloride	0.00022	U	0.0010	mg/kg wet							
Chlorobenzene	0.00017	U	0.0010	mg/kg wet							
Chloroethane	0.00025	U	0.0010	mg/kg wet							
Chloroform	0.00018	U	0.0010	mg/kg wet							
Chloromethane	0.00021	U	0.0010	mg/kg wet							
cis-1,2-Dichloroethene	0.00023	U	0.0010	mg/kg wet							
cis-1,3-Dichloropropene	0.00017	U	0.0010	mg/kg wet							
Dibromochloromethane	0.00035	U	0.0010	mg/kg wet							
Dibromomethane	0.00033	U	0.0010	mg/kg wet							
Dichlorodifluoromethane	0.00045	U	0.0010	mg/kg wet							
Ethylbenzene	0.00020	U	0.0010	mg/kg wet							
Hexachlorobutadiene	0.00035	U	0.0010	mg/kg wet							
Isopropylbenzene	0.00015	U	0.0010	mg/kg wet							
m,p-Xylenes	0.00037	U	0.0020	mg/kg wet							
Methylene Chloride	0.00073	U	0.0020	mg/kg wet							
Methyl-tert-Butyl Ether	0.00030	U	0.0010	mg/kg wet							
Naphthalene	0.00027	U	0.0010	mg/kg wet							
n-Butyl Benzene	0.00013	U	0.0010	mg/kg wet							
n-Propyl Benzene	0.00018	U	0.0010	mg/kg wet							
o-Xylene	0.00022	U	0.0010	mg/kg wet							
sec-Butylbenzene	0.00095	U	0.0010	mg/kg wet							
Styrene	0.00098	U	0.0010	mg/kg wet							
tert-Butylbenzene	0.00017	U	0.0010	mg/kg wet							
Tetrachloroethene	0.00028	U	0.0010	mg/kg wet							
Toluene	0.00024	U	0.0010	mg/kg wet							
trans-1,2-Dichloroethene	0.00037	U	0.0010	mg/kg wet							
trans-1,3-Dichloropropene	0.00039	U	0.0010	mg/kg wet							
Trichloroethene	0.00032	U	0.0010	mg/kg wet							
Trichlorofluoromethane	0.00026	U	0.0010	mg/kg wet							
Vinyl chloride	0.00024	U	0.0010	mg/kg wet							
Xylenes (Total)	0.00056	U	0.0030	mg/kg wet							
4-Bromofluorobenzene	*52*			*ug/L*	*50.0*		*103*	*50-127*			
Dibromofluoromethane	*51*			*ug/L*	*50.0*		*103*	*52-128*			
Toluene-d8	*53*			*ug/L*	*50.0*		*106*	*57-124*			

LCS (7H23004-BS1) Prepared: 08/23/2017 07:33 Analyzed: 08/23/2017 10:20

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1-Dichloroethene	0.019		0.0010	mg/kg wet	0.0200		94	64-133			
Benzene	0.018		0.0010	mg/kg wet	0.0200		91	79-129			
Chlorobenzene	0.019		0.0010	mg/kg wet	0.0200		95	79-121			
Toluene	0.019		0.0010	mg/kg wet	0.0200		93	77-120			
Trichloroethene	0.018		0.0010	mg/kg wet	0.0200		88	78-118			
4-Bromofluorobenzene	*54*			*ug/L*	*50.0*		*108*	*50-127*			
Dibromofluoromethane	*52*			*ug/L*	*50.0*		*104*	*52-128*			
Toluene-d8	*54*			*ug/L*	*50.0*		*108*	*57-124*			

This report relates only to the sample as received by the laboratory, and may only be reproduced in full.

QUALITY CONTROL DATA

Volatile Organic Compounds by GCMS - Quality Control

Batch 7H23004 - EPA 5035_MS - Continued

Matrix Spike (7H23004-MS1) Prepared: 08/23/2017 07:33 Analyzed: 08/23/2017 10:51

Source: CA12786-07

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1-Dichloroethene	0.019		0.0010	mg/kg wet	0.0200	0.00030 U	93	64-133			
Benzene	0.018		0.0010	mg/kg wet	0.0200	0.00017 U	90	79-129			
Chlorobenzene	0.018		0.0010	mg/kg wet	0.0200	0.00017 U	92	79-121			
Toluene	0.018		0.0010	mg/kg wet	0.0200	0.00024 U	90	77-120			
Trichloroethene	0.017		0.0010	mg/kg wet	0.0200	0.00032 U	86	78-118			
4-Bromofluorobenzene	*53*			*ug/L*	*50.0*		*107*	*50-127*			
Dibromofluoromethane	*52*			*ug/L*	*50.0*		*104*	*52-128*			
Toluene-d8	*54*			*ug/L*	*50.0*		*108*	*57-124*			

Matrix Spike Dup (7H23004-MSD1) Prepared: 08/23/2017 07:33 Analyzed: 08/23/2017 11:21

Source: CA12786-07

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1-Dichloroethene	0.019		0.0010	mg/kg wet	0.0200	0.00030 U	94	64-133	0.6	23	
Benzene	0.018		0.0010	mg/kg wet	0.0200	0.00017 U	92	79-129	2	23	
Chlorobenzene	0.019		0.0010	mg/kg wet	0.0200	0.00017 U	94	79-121	2	25	
Toluene	0.018		0.0010	mg/kg wet	0.0200	0.00024 U	91	77-120	0.8	23	
Trichloroethene	0.018		0.0010	mg/kg wet	0.0200	0.00032 U	89	78-118	3	24	
4-Bromofluorobenzene	*53*			*ug/L*	*50.0*		*106*	*50-127*			
Dibromofluoromethane	*52*			*ug/L*	*50.0*		*105*	*52-128*			
Toluene-d8	*56*			*ug/L*	*50.0*		*112*	*57-124*			

Batch 7H25021 - EPA 5035_MS

Blank (7H25021-BLK1) Prepared: 08/25/2017 11:35 Analyzed: 08/28/2017 13:50

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1,2-Tetrachloroethane	0.00016	U	0.0010	mg/kg wet							
1,1,1-Trichloroethane	0.00025	U	0.0010	mg/kg wet							
1,1,2,2-Tetrachloroethane	0.00020	U	0.0010	mg/kg wet							
1,1,2-Trichloroethane	0.00025	U	0.0010	mg/kg wet							
1,1-Dichloroethane	0.00025	U	0.0010	mg/kg wet							
1,1-Dichloroethene	0.00030	U	0.0010	mg/kg wet							
1,1-Dichloropropene	0.00016	U	0.0010	mg/kg wet							
1,2,3-Trichlorobenzene	0.00028	U	0.0010	mg/kg wet							
1,2,3-Trichloropropane	0.00064	U	0.0010	mg/kg wet							
1,2,4-Trichlorobenzene	0.00027	U	0.0010	mg/kg wet							
1,2,4-Trimethylbenzene	0.00017	U	0.0010	mg/kg wet							
1,2-Dibromo-3-chloropropane	0.00079	U	0.0010	mg/kg wet							
1,2-Dibromoethane	0.00046	U	0.0010	mg/kg wet							
1,2-Dichlorobenzene	0.00027	U	0.0010	mg/kg wet							
1,2-Dichloroethane	0.00041	U	0.0010	mg/kg wet							
1,2-Dichloropropane	0.00026	U	0.0010	mg/kg wet							
1,3,5-Trimethylbenzene	0.00020	U	0.0010	mg/kg wet							
1,3-Dichlorobenzene	0.00022	U	0.0010	mg/kg wet							
1,3-Dichloropropane	0.00029	U	0.0010	mg/kg wet							
1,4-Dichlorobenzene	0.00020	U	0.0010	mg/kg wet							
2,2-Dichloropropane	0.00023	U	0.0010	mg/kg wet							
2-Butanone	0.00078	U	0.0050	mg/kg wet							

This report relates only to the sample as received by the laboratory, and may only be reproduced in full.

QUALITY CONTROL DATA

Volatile Organic Compounds by GCMS - Quality Control

Batch 7H25021 - EPA 5035_MS - Continued

Blank (7H25021-BLK1) Continued Prepared: 08/25/2017 11:35 Analyzed: 08/28/2017 13:50

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
2-Chloroethyl Vinyl Ether	0.00016	U	0.0050	mg/kg wet							
2-Chlorotoluene	0.00018	U	0.0010	mg/kg wet							
2-Hexanone	0.00075	U	0.0050	mg/kg wet							
4-Chlorotoluene	0.00026	U	0.0010	mg/kg wet							
4-Isopropyltoluene	0.00016	U	0.0010	mg/kg wet							
4-Methyl-2-pentanone	0.00057	U	0.0050	mg/kg wet							
Acetone	0.014	U	0.020	mg/kg wet							
Benzene	0.00017	U	0.0010	mg/kg wet							
Bromobenzene	0.00022	U	0.0010	mg/kg wet							
Bromochloromethane	0.00041	U	0.0010	mg/kg wet							
Bromodichloromethane	0.00024	U	0.0010	mg/kg wet							
Bromoform	0.00045	U	0.0010	mg/kg wet							
Bromomethane	0.00032	U	0.0010	mg/kg wet							
Carbon disulfide	0.00039	U	0.0050	mg/kg wet							
Carbon Tetrachloride	0.00022	U	0.0010	mg/kg wet							
Chlorobenzene	0.00017	U	0.0010	mg/kg wet							
Chloroethane	0.00025	U	0.0010	mg/kg wet							
Chloroform	0.00018	U	0.0010	mg/kg wet							
Chloromethane	0.00021	U	0.0010	mg/kg wet							
cis-1,2-Dichloroethene	0.00023	U	0.0010	mg/kg wet							
cis-1,3-Dichloropropene	0.00017	U	0.0010	mg/kg wet							
Dibromochloromethane	0.00035	U	0.0010	mg/kg wet							
Dibromomethane	0.00033	U	0.0010	mg/kg wet							
Dichlorodifluoromethane	0.00045	U	0.0010	mg/kg wet							
Ethylbenzene	0.00020	U	0.0010	mg/kg wet							
Hexachlorobutadiene	0.00035	U	0.0010	mg/kg wet							
Isopropylbenzene	0.00015	U	0.0010	mg/kg wet							
m,p-Xylenes	0.00037	U	0.0020	mg/kg wet							
Methylene Chloride	0.00073	U	0.0020	mg/kg wet							
Methyl-tert-Butyl Ether	0.00030	U	0.0010	mg/kg wet							
Naphthalene	0.00027	U	0.0010	mg/kg wet							
n-Butyl Benzene	0.00013	U	0.0010	mg/kg wet							
n-Propyl Benzene	0.00018	U	0.0010	mg/kg wet							
o-Xylene	0.00022	U	0.0010	mg/kg wet							
sec-Butylbenzene	0.00095	U	0.0010	mg/kg wet							
Styrene	0.00098	U	0.0010	mg/kg wet							
tert-Butylbenzene	0.00017	U	0.0010	mg/kg wet							
Tetrachloroethene	0.00028	U	0.0010	mg/kg wet							
Toluene	0.00024	U	0.0010	mg/kg wet							
trans-1,2-Dichloroethene	0.00037	U	0.0010	mg/kg wet							
trans-1,3-Dichloropropene	0.00039	U	0.0010	mg/kg wet							
Trichloroethene	0.00032	U	0.0010	mg/kg wet							
Trichlorofluoromethane	0.00026	U	0.0010	mg/kg wet							
Vinyl chloride	0.00024	U	0.0010	mg/kg wet							
Xylenes (Total)	0.00056	U	0.0030	mg/kg wet							
4-Bromofluorobenzene	*52*			*ug/L*	*50.0*		*104*	*50-127*			
Dibromofluoromethane	*53*			*ug/L*	*50.0*		*106*	*52-128*			
Toluene-d8	*55*			*ug/L*	*50.0*		*110*	*57-124*			

This report relates only to the sample as received by the laboratory, and may only be reproduced in full.

QUALITY CONTROL DATA

Volatile Organic Compounds by GCMS - Quality Control

Batch 7H25021 - EPA 5035_MS - Continued

LCS (7H25021-BS1) Prepared: 08/25/2017 11:35 Analyzed: 08/28/2017 12:48

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1-Dichloroethene	0.018		0.0010	mg/kg wet	0.0200		91	64-133			
Benzene	0.018		0.0010	mg/kg wet	0.0200		88	79-129			
Chlorobenzene	0.019		0.0010	mg/kg wet	0.0200		94	79-121			
Toluene	0.018		0.0010	mg/kg wet	0.0200		88	77-120			
Trichloroethene	0.018		0.0010	mg/kg wet	0.0200		88	78-118			
4-Bromofluorobenzene	*54*			*ug/L*	*50.0*		*109*	*50-127*			
Dibromofluoromethane	*52*			*ug/L*	*50.0*		*105*	*52-128*			
Toluene-d8	*55*			*ug/L*	*50.0*		*110*	*57-124*			

Matrix Spike (7H25021-MS1) Prepared: 08/25/2017 11:35 Analyzed: 08/28/2017 11:15

Source: CA12924-09

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1-Dichloroethene	0.012		0.0010	mg/kg wet	0.0200	0.00030 U	61	64-133			QM-07
Benzene	0.015		0.0010	mg/kg wet	0.0200	0.00017 U	74	79-129			QM-07
Chlorobenzene	0.016		0.0010	mg/kg wet	0.0200	0.00017 U	78	79-121			QM-07
Toluene	0.014		0.0010	mg/kg wet	0.0200	0.00024 U	72	77-120			QM-07
Trichloroethene	0.013		0.0010	mg/kg wet	0.0200	0.00032 U	67	78-118			QM-07
4-Bromofluorobenzene	*54*			*ug/L*	*50.0*		*107*	*50-127*			
Dibromofluoromethane	*55*			*ug/L*	*50.0*		*110*	*52-128*			
Toluene-d8	*55*			*ug/L*	*50.0*		*110*	*57-124*			

Matrix Spike Dup (7H25021-MSD1) Prepared: 08/25/2017 11:35 Analyzed: 08/28/2017 11:46

Source: CA12924-09

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1-Dichloroethene	0.016		0.0010	mg/kg wet	0.0200	0.00030 U	80	64-133	26	23	QR-05
Benzene	0.016		0.0010	mg/kg wet	0.0200	0.00017 U	82	79-129	10	23	
Chlorobenzene	0.017		0.0010	mg/kg wet	0.0200	0.00017 U	84	79-121	7	25	
Toluene	0.016		0.0010	mg/kg wet	0.0200	0.00024 U	79	77-120	9	23	
Trichloroethene	0.019		0.0010	mg/kg wet	0.0200	0.00032 U	95	78-118	35	24	QR-05
4-Bromofluorobenzene	*53*			*ug/L*	*50.0*		*106*	*50-127*			
Dibromofluoromethane	*53*			*ug/L*	*50.0*		*106*	*52-128*			
Toluene-d8	*54*			*ug/L*	*50.0*		*108*	*57-124*			

Batch 7H29030 - EPA 5035_MS

Blank (7H29030-BLK1) Prepared: 08/29/2017 00:49 Analyzed: 08/29/2017 13:52

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1,2-Tetrachloroethane	0.00016	U	0.0010	mg/kg wet							
1,1,1-Trichloroethane	0.00025	U	0.0010	mg/kg wet							
1,1,2,2-Tetrachloroethane	0.00020	U	0.0010	mg/kg wet							
1,1,2-Trichloroethane	0.00025	U	0.0010	mg/kg wet							
1,1-Dichloroethane	0.00025	U	0.0010	mg/kg wet							
1,1-Dichloroethene	0.00030	U	0.0010	mg/kg wet							
1,1-Dichloropropene	0.00016	U	0.0010	mg/kg wet							
1,2,3-Trichlorobenzene	0.00028	U	0.0010	mg/kg wet							
1,2,3-Trichloropropane	0.00064	U	0.0010	mg/kg wet							
1,2,4-Trichlorobenzene	0.00027	U	0.0010	mg/kg wet							

This report relates only to the sample as received by the laboratory, and may only be reproduced in full.

QUALITY CONTROL DATA

Volatile Organic Compounds by GCMS - Quality Control

Batch 7H29030 - EPA 5035_MS - Continued

Blank (7H29030-BLK1) Continued Prepared: 08/29/2017 00:49 Analyzed: 08/29/2017 13:52

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,2,4-Trimethylbenzene	0.00017	U	0.0010	mg/kg wet							
1,2-Dibromo-3-chloropropane	0.00079	U	0.0010	mg/kg wet							
1,2-Dibromoethane	0.00046	U	0.0010	mg/kg wet							
1,2-Dichlorobenzene	0.00027	U	0.0010	mg/kg wet							
1,2-Dichloroethane	0.00041	U	0.0010	mg/kg wet							
1,2-Dichloropropane	0.00026	U	0.0010	mg/kg wet							
1,3,5-Trimethylbenzene	0.00020	U	0.0010	mg/kg wet							
1,3-Dichlorobenzene	0.00022	U	0.0010	mg/kg wet							
1,3-Dichloropropane	0.00029	U	0.0010	mg/kg wet							
1,4-Dichlorobenzene	0.00020	U	0.0010	mg/kg wet							
2,2-Dichloropropane	0.00023	U	0.0010	mg/kg wet							
2-Butanone	0.00078	U	0.0050	mg/kg wet							
2-Chloroethyl Vinyl Ether	0.00016	U	0.0050	mg/kg wet							
2-Chlorotoluene	0.00018	U	0.0010	mg/kg wet							
2-Hexanone	0.00075	U	0.0050	mg/kg wet							
4-Chlorotoluene	0.00026	U	0.0010	mg/kg wet							
4-Isopropyltoluene	0.00016	U	0.0010	mg/kg wet							
4-Methyl-2-pentanone	0.00057	U	0.0050	mg/kg wet							
Acetone	0.014	U	0.020	mg/kg wet							
Benzene	0.00017	U	0.0010	mg/kg wet							
Bromobenzene	0.00022	U	0.0010	mg/kg wet							
Bromochloromethane	0.00041	U	0.0010	mg/kg wet							
Bromodichloromethane	0.00024	U	0.0010	mg/kg wet							
Bromoform	0.00045	U	0.0010	mg/kg wet							
Bromomethane	0.00032	U	0.0010	mg/kg wet							
Carbon disulfide	0.00039	U	0.0050	mg/kg wet							
Carbon Tetrachloride	0.00022	U	0.0010	mg/kg wet							
Chlorobenzene	0.00017	U	0.0010	mg/kg wet							
Chloroethane	0.00025	U	0.0010	mg/kg wet							
Chloroform	0.00018	U	0.0010	mg/kg wet							
Chloromethane	0.00021	U	0.0010	mg/kg wet							
cis-1,2-Dichloroethene	0.00023	U	0.0010	mg/kg wet							
cis-1,3-Dichloropropene	0.00017	U	0.0010	mg/kg wet							
Dibromochloromethane	0.00035	U	0.0010	mg/kg wet							
Dibromomethane	0.00033	U	0.0010	mg/kg wet							
Dichlorodifluoromethane	0.00045	U	0.0010	mg/kg wet							
Ethylbenzene	0.00020	U	0.0010	mg/kg wet							
Hexachlorobutadiene	0.00035	U	0.0010	mg/kg wet							
Isopropylbenzene	0.00015	U	0.0010	mg/kg wet							
m,p-Xylenes	0.00037	U	0.0020	mg/kg wet							
Methylene Chloride	**0.00073**	**J**	0.0020	mg/kg wet							
Methyl-tert-Butyl Ether	0.00030	U	0.0010	mg/kg wet							
Naphthalene	0.00027	U	0.0010	mg/kg wet							
n-Butyl Benzene	0.00013	U	0.0010	mg/kg wet							
n-Propyl Benzene	0.00018	U	0.0010	mg/kg wet							
o-Xylene	0.00022	U	0.0010	mg/kg wet							
sec-Butylbenzene	0.00095	U	0.0010	mg/kg wet							
Styrene	0.00098	U	0.0010	mg/kg wet							
tert-Butylbenzene	0.00017	U	0.0010	mg/kg wet							

This report relates only to the sample as received by the laboratory, and may only be reproduced in full.

QUALITY CONTROL DATA

Volatile Organic Compounds by GCMS - Quality Control

Batch 7H29030 - EPA 5035_MS - Continued

Blank (7H29030-BLK1) Continued Prepared: 08/29/2017 00:49 Analyzed: 08/29/2017 13:52

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Tetrachloroethene	0.00028	U	0.0010	mg/kg wet							
Toluene	0.00024	U	0.0010	mg/kg wet							
trans-1,2-Dichloroethene	0.00037	U	0.0010	mg/kg wet							
trans-1,3-Dichloropropene	0.00039	U	0.0010	mg/kg wet							
Trichloroethene	0.00032	U	0.0010	mg/kg wet							
Trichlorofluoromethane	0.00026	U	0.0010	mg/kg wet							
Vinyl chloride	0.00024	U	0.0010	mg/kg wet							
Xylenes (Total)	0.00056	U	0.0030	mg/kg wet							
4-Bromofluorobenzene	*49*			*ug/L*	*50.0*		*99*	*50-127*			
Dibromofluoromethane	*53*			*ug/L*	*50.0*		*105*	*52-128*			
Toluene-d8	*55*			*ug/L*	*50.0*		*109*	*57-124*			

LCS (7H29030-BS1) Prepared: 08/29/2017 00:49 Analyzed: 08/29/2017 11:49

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1-Dichloroethene	0.019		0.0010	mg/kg wet	0.0200		94	64-133			
Benzene	0.020		0.0010	mg/kg wet	0.0200		98	79-129			
Chlorobenzene	0.020		0.0010	mg/kg wet	0.0200		101	79-121			
Toluene	0.019		0.0010	mg/kg wet	0.0200		94	77-120			
Trichloroethene	0.020		0.0010	mg/kg wet	0.0200		101	78-118			
4-Bromofluorobenzene	*58*			*ug/L*	*50.0*		*115*	*50-127*			
Dibromofluoromethane	*56*			*ug/L*	*50.0*		*111*	*52-128*			
Toluene-d8	*60*			*ug/L*	*50.0*		*121*	*57-124*			

Matrix Spike (7H29030-MS1) Prepared: 08/29/2017 00:49 Analyzed: 08/29/2017 12:20

Source: CA13109-01

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1-Dichloroethene	0.020		0.0010	mg/kg wet	0.0200	0.00030 U	102	64-133			
Benzene	0.020		0.0010	mg/kg wet	0.0200	0.00017 U	98	79-129			
Chlorobenzene	0.020		0.0010	mg/kg wet	0.0200	0.00017 U	98	79-121			
Toluene	0.019		0.0010	mg/kg wet	0.0200	0.00024 U	93	77-120			
Trichloroethene	0.019		0.0010	mg/kg wet	0.0200	0.00032 U	96	78-118			
4-Bromofluorobenzene	*52*			*ug/L*	*50.0*		*104*	*50-127*			
Dibromofluoromethane	*53*			*ug/L*	*50.0*		*105*	*52-128*			
Toluene-d8	*54*			*ug/L*	*50.0*		*109*	*57-124*			

Matrix Spike Dup (7H29030-MSD1) Prepared: 08/29/2017 00:49 Analyzed: 08/29/2017 12:50

Source: CA13109-01

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1-Dichloroethene	0.020		0.0010	mg/kg wet	0.0200	0.00030 U	100	64-133	2	23	
Benzene	0.020		0.0010	mg/kg wet	0.0200	0.00017 U	100	79-129	3	23	
Chlorobenzene	0.020		0.0010	mg/kg wet	0.0200	0.00017 U	99	79-121	1	25	
Toluene	0.019		0.0010	mg/kg wet	0.0200	0.00024 U	94	77-120	1	23	
Trichloroethene	0.020		0.0010	mg/kg wet	0.0200	0.00032 U	102	78-118	6	24	
4-Bromofluorobenzene	*53*			*ug/L*	*50.0*		*105*	*50-127*			
Dibromofluoromethane	*53*			*ug/L*	*50.0*		*106*	*52-128*			
Toluene-d8	*55*			*ug/L*	*50.0*		*110*	*57-124*			

This report relates only to the sample as received by the laboratory, and may only be reproduced in full.

QUALITY CONTROL DATA

Volatile Organic Compounds by GCMS - Quality Control

Batch 7H29035 - EPA 5035_MS

Blank (7H29035-BLK1) Prepared: 08/29/2017 15:07 Analyzed: 08/29/2017 19:21

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1,2-Tetrachloroethane	0.00016	U	0.0010	mg/kg wet							
1,1,1-Trichloroethane	0.00025	U	0.0010	mg/kg wet							
1,1,2,2-Tetrachloroethane	0.00020	U	0.0010	mg/kg wet							
1,1,2-Trichloroethane	0.00025	U	0.0010	mg/kg wet							
1,1-Dichloroethane	0.00025	U	0.0010	mg/kg wet							
1,1-Dichloroethene	0.00030	U	0.0010	mg/kg wet							
1,1-Dichloropropene	0.00016	U	0.0010	mg/kg wet							
1,2,3-Trichlorobenzene	0.00028	U	0.0010	mg/kg wet							
1,2,3-Trichloropropane	0.00064	U	0.0010	mg/kg wet							
1,2,4-Trichlorobenzene	0.00027	U	0.0010	mg/kg wet							
1,2,4-Trimethylbenzene	0.00017	U	0.0010	mg/kg wet							
1,2-Dibromo-3-chloropropane	0.00079	U	0.0010	mg/kg wet							
1,2-Dibromoethane	0.00046	U	0.0010	mg/kg wet							
1,2-Dichlorobenzene	0.00027	U	0.0010	mg/kg wet							
1,2-Dichloroethane	0.00041	U	0.0010	mg/kg wet							
1,2-Dichloropropane	0.00026	U	0.0010	mg/kg wet							
1,3,5-Trimethylbenzene	0.00020	U	0.0010	mg/kg wet							
1,3-Dichlorobenzene	0.00022	U	0.0010	mg/kg wet							
1,3-Dichloropropane	0.00029	U	0.0010	mg/kg wet							
1,4-Dichlorobenzene	0.00020	U	0.0010	mg/kg wet							
2,2-Dichloropropane	0.00023	U	0.0010	mg/kg wet							
2-Butanone	0.00078	U	0.0050	mg/kg wet							
2-Chloroethyl Vinyl Ether	0.00016	U	0.0050	mg/kg wet							
2-Chlorotoluene	0.00018	U	0.0010	mg/kg wet							
2-Hexanone	0.00075	U	0.0050	mg/kg wet							
4-Chlorotoluene	0.00026	U	0.0010	mg/kg wet							
4-Isopropyltoluene	0.00016	U	0.0010	mg/kg wet							
4-Methyl-2-pentanone	0.00057	U	0.0050	mg/kg wet							
Acetone	0.014	U	0.020	mg/kg wet							
Benzene	0.00017	U	0.0010	mg/kg wet							
Bromobenzene	0.00022	U	0.0010	mg/kg wet							
Bromochloromethane	0.00041	U	0.0010	mg/kg wet							
Bromodichloromethane	0.00024	U	0.0010	mg/kg wet							
Bromoform	0.00045	U	0.0010	mg/kg wet							
Bromomethane	0.00032	U	0.0010	mg/kg wet							
Carbon disulfide	0.00039	U	0.0050	mg/kg wet							
Carbon Tetrachloride	0.00022	U	0.0010	mg/kg wet							
Chlorobenzene	0.00017	U	0.0010	mg/kg wet							
Chloroethane	0.00025	U	0.0010	mg/kg wet							
Chloroform	0.00018	U	0.0010	mg/kg wet							
Chloromethane	0.00021	U	0.0010	mg/kg wet							
cis-1,2-Dichloroethene	0.00023	U	0.0010	mg/kg wet							
cis-1,3-Dichloropropene	0.00017	U	0.0010	mg/kg wet							
Dibromochloromethane	0.00035	U	0.0010	mg/kg wet							
Dibromomethane	0.00033	U	0.0010	mg/kg wet							
Dichlorodifluoromethane	0.00045	U	0.0010	mg/kg wet							
Ethylbenzene	0.00020	U	0.0010	mg/kg wet							
Hexachlorobutadiene	0.00035	U	0.0010	mg/kg wet							
Isopropylbenzene	0.00015	U	0.0010	mg/kg wet							

This report relates only to the sample as received by the laboratory, and may only be reproduced in full.

QUALITY CONTROL DATA

Volatile Organic Compounds by GCMS - Quality Control

Batch 7H29035 - EPA 5035_MS - Continued

Blank (7H29035-BLK1) Continued Prepared: 08/29/2017 15:07 Analyzed: 08/29/2017 19:21

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
m,p-Xylenes	0.00037	U	0.0020	mg/kg wet							
Methylene Chloride	0.00073	U	0.0020	mg/kg wet							
Methyl-tert-Butyl Ether	0.00030	U	0.0010	mg/kg wet							
Naphthalene	0.00027	U	0.0010	mg/kg wet							
n-Butyl Benzene	0.00013	U	0.0010	mg/kg wet							
n-Propyl Benzene	0.00018	U	0.0010	mg/kg wet							
o-Xylene	0.00022	U	0.0010	mg/kg wet							
sec-Butylbenzene	0.00095	U	0.0010	mg/kg wet							
Styrene	0.00098	U	0.0010	mg/kg wet							
tert-Butylbenzene	0.00017	U	0.0010	mg/kg wet							
Tetrachloroethene	0.00028	U	0.0010	mg/kg wet							
Toluene	0.00024	U	0.0010	mg/kg wet							
trans-1,2-Dichloroethene	0.00037	U	0.0010	mg/kg wet							
trans-1,3-Dichloropropene	0.00039	U	0.0010	mg/kg wet							
Trichloroethene	0.00032	U	0.0010	mg/kg wet							
Trichlorofluoromethane	0.00026	U	0.0010	mg/kg wet							
Vinyl chloride	0.00024	U	0.0010	mg/kg wet							
Xylenes (Total)	0.00056	U	0.0030	mg/kg wet							
4-Bromofluorobenzene	*53*			*ug/L*	*50.0*		*106*	*50-127*			
Dibromofluoromethane	*64*			*ug/L*	*50.0*		*129*	*52-128*			*QS-03*
Toluene-d8	*58*			*ug/L*	*50.0*		*116*	*57-124*			

LCS (7H29035-BS1) Prepared: 08/29/2017 15:07 Analyzed: 08/29/2017 16:50

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1-Dichloroethene	0.022		0.0010	mg/kg wet	0.0200		111	64-133			
Benzene	0.021		0.0010	mg/kg wet	0.0200		106	79-129			
Chlorobenzene	0.021		0.0010	mg/kg wet	0.0200		104	79-121			
Toluene	0.020		0.0010	mg/kg wet	0.0200		99	77-120			
Trichloroethene	0.021		0.0010	mg/kg wet	0.0200		105	78-118			
4-Bromofluorobenzene	*56*			*ug/L*	*50.0*		*113*	*50-127*			
Dibromofluoromethane	*62*			*ug/L*	*50.0*		*123*	*52-128*			
Toluene-d8	*59*			*ug/L*	*50.0*		*119*	*57-124*			

Matrix Spike (7H29035-MS1) Prepared: 08/29/2017 15:07 Analyzed: 08/29/2017 17:50

Source: CA13109-04

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1-Dichloroethene	0.022		0.0010	mg/kg wet	0.0200	0.00030 U	110	64-133			
Benzene	0.022		0.0010	mg/kg wet	0.0200	0.00017 U	109	79-129			
Chlorobenzene	0.021		0.0010	mg/kg wet	0.0200	0.00017 U	103	79-121			
Toluene	0.020		0.0010	mg/kg wet	0.0200	0.00024 U	98	77-120			
Trichloroethene	0.021		0.0010	mg/kg wet	0.0200	0.00032 U	107	78-118			
4-Bromofluorobenzene	*56*			*ug/L*	*50.0*		*113*	*50-127*			
Dibromofluoromethane	*62*			*ug/L*	*50.0*		*123*	*52-128*			
Toluene-d8	*61*			*ug/L*	*50.0*		*122*	*57-124*			

This report relates only to the sample as received by the laboratory, and may only be reproduced in full.

QUALITY CONTROL DATA

Volatile Organic Compounds by GCMS - Quality Control

Batch 7H29035 - EPA 5035_MS - Continued

Matrix Spike Dup (7H29035-MSD1) Prepared: 08/29/2017 15:07 Analyzed: 08/29/2017 18:20

Source: CA13109-04

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1-Dichloroethene	0.022		0.0010	mg/kg wet	0.0200	0.00030 U	109	64-133	1	23	
Benzene	0.021		0.0010	mg/kg wet	0.0200	0.00017 U	103	79-129	6	23	
Chlorobenzene	0.020		0.0010	mg/kg wet	0.0200	0.00017 U	100	79-121	4	25	
Toluene	0.019		0.0010	mg/kg wet	0.0200	0.00024 U	97	77-120	1	23	
Trichloroethene	0.020		0.0010	mg/kg wet	0.0200	0.00032 U	98	78-118	9	24	
4-Bromofluorobenzene	*56*			*ug/L*	*50.0*		*113*	*50-127*			
Dibromofluoromethane	*65*			*ug/L*	*50.0*		*130*	*52-128*			*QS-03*
Toluene-d8	*59*			*ug/L*	*50.0*		*119*	*57-124*			

Batch 7I05027 - EPA 5035_MS

Blank (7I05027-BLK1) Prepared: 09/05/2017 11:41 Analyzed: 09/05/2017 21:08

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1,2-Tetrachloroethane	0.00016	U	0.0010	mg/kg wet							
1,1,1-Trichloroethane	0.00025	U	0.0010	mg/kg wet							
1,1,2,2-Tetrachloroethane	0.00020	U	0.0010	mg/kg wet							
1,1,2-Trichloroethane	0.00025	U	0.0010	mg/kg wet							
1,1-Dichloroethane	0.00025	U	0.0010	mg/kg wet							
1,1-Dichloroethene	0.00030	U	0.0010	mg/kg wet							
1,1-Dichloropropene	0.00016	U	0.0010	mg/kg wet							
1,2,3-Trichlorobenzene	0.00028	U	0.0010	mg/kg wet							
1,2,3-Trichloropropane	0.00064	U	0.0010	mg/kg wet							
1,2,4-Trichlorobenzene	0.00027	U	0.0010	mg/kg wet							
1,2,4-Trimethylbenzene	0.00017	U	0.0010	mg/kg wet							
1,2-Dibromo-3-chloropropane	0.00079	U	0.0010	mg/kg wet							
1,2-Dibromoethane	0.00046	U	0.0010	mg/kg wet							
1,2-Dichlorobenzene	0.00027	U	0.0010	mg/kg wet							
1,2-Dichloroethane	0.00041	U	0.0010	mg/kg wet							
1,2-Dichloropropane	0.00026	U	0.0010	mg/kg wet							
1,3,5-Trimethylbenzene	0.00020	U	0.0010	mg/kg wet							
1,3-Dichlorobenzene	0.00022	U	0.0010	mg/kg wet							
1,3-Dichloropropane	0.00029	U	0.0010	mg/kg wet							
1,4-Dichlorobenzene	0.00020	U	0.0010	mg/kg wet							
2,2-Dichloropropane	0.00023	U	0.0010	mg/kg wet							
2-Butanone	0.00078	U	0.0050	mg/kg wet							
2-Chloroethyl Vinyl Ether	0.00016	U	0.0050	mg/kg wet							
2-Chlorotoluene	0.00018	U	0.0010	mg/kg wet							
2-Hexanone	0.00075	U	0.0050	mg/kg wet							
4-Chlorotoluene	0.00026	U	0.0010	mg/kg wet							
4-Isopropyltoluene	0.00016	U	0.0010	mg/kg wet							
4-Methyl-2-pentanone	0.00057	U	0.0050	mg/kg wet							
Acetone	0.014	U	0.020	mg/kg wet							
Benzene	0.00017	U	0.0010	mg/kg wet							
Bromobenzene	0.00022	U	0.0010	mg/kg wet							
Bromochloromethane	0.00041	U	0.0010	mg/kg wet							
Bromodichloromethane	0.00024	U	0.0010	mg/kg wet							
Bromoform	0.00045	U	0.0010	mg/kg wet							
Bromomethane	0.00032	U	0.0010	mg/kg wet							

This report relates only to the sample as received by the laboratory, and may only be reproduced in full.

QUALITY CONTROL DATA

Volatile Organic Compounds by GCMS - Quality Control

Batch 7I05027 - EPA 5035_MS - Continued

Blank (7I05027-BLK1) Continued Prepared: 09/05/2017 11:41 Analyzed: 09/05/2017 21:08

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Carbon disulfide	0.00039	U	0.0050	mg/kg wet							
Carbon Tetrachloride	0.00022	U	0.0010	mg/kg wet							
Chlorobenzene	0.00017	U	0.0010	mg/kg wet							
Chloroethane	0.00025	U	0.0010	mg/kg wet							
Chloroform	0.00018	U	0.0010	mg/kg wet							
Chloromethane	0.00021	U	0.0010	mg/kg wet							
cis-1,2-Dichloroethene	0.00023	U	0.0010	mg/kg wet							
cis-1,3-Dichloropropene	0.00017	U	0.0010	mg/kg wet							
Dibromochloromethane	0.00035	U	0.0010	mg/kg wet							
Dibromomethane	0.00033	U	0.0010	mg/kg wet							
Dichlorodifluoromethane	0.00045	U	0.0010	mg/kg wet							
Ethylbenzene	0.00020	U	0.0010	mg/kg wet							
Hexachlorobutadiene	0.00035	U	0.0010	mg/kg wet							
Isopropylbenzene	0.00015	U	0.0010	mg/kg wet							
m,p-Xylenes	0.00037	U	0.0020	mg/kg wet							
Methylene Chloride	0.00073	U	0.0020	mg/kg wet							
Methyl-tert-Butyl Ether	0.00030	U	0.0010	mg/kg wet							
Naphthalene	0.00027	U	0.0010	mg/kg wet							
n-Butyl Benzene	0.00013	U	0.0010	mg/kg wet							
n-Propyl Benzene	0.00018	U	0.0010	mg/kg wet							
o-Xylene	0.00022	U	0.0010	mg/kg wet							
sec-Butylbenzene	0.00095	U	0.0010	mg/kg wet							
Styrene	0.00098	U	0.0010	mg/kg wet							
tert-Butylbenzene	0.00017	U	0.0010	mg/kg wet							
Tetrachloroethene	0.00028	U	0.0010	mg/kg wet							
Toluene	0.00024	U	0.0010	mg/kg wet							
trans-1,2-Dichloroethene	0.00037	U	0.0010	mg/kg wet							
trans-1,3-Dichloropropene	0.00039	U	0.0010	mg/kg wet							
Trichloroethene	0.00032	U	0.0010	mg/kg wet							
Trichlorofluoromethane	0.00026	U	0.0010	mg/kg wet							
Vinyl chloride	0.00024	U	0.0010	mg/kg wet							
Xylenes (Total)	0.00056	U	0.0030	mg/kg wet							
4-Bromofluorobenzene	*52*			*ug/L*	*50.0*		*103*	*50-127*			
Dibromofluoromethane	*66*			*ug/L*	*50.0*		*132*	*52-128*			*QS-03*
Toluene-d8	*60*			*ug/L*	*50.0*		*120*	*57-124*			

LCS (7I05027-BS1) Prepared: 09/05/2017 11:41 Analyzed: 09/05/2017 19:05

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1-Dichloroethene	0.018		0.0010	mg/kg wet	0.0200		89	64-133			
Benzene	0.017		0.0010	mg/kg wet	0.0200		86	79-129			
Chlorobenzene	0.017		0.0010	mg/kg wet	0.0200		85	79-121			
Toluene	0.016		0.0010	mg/kg wet	0.0200		81	77-120			
Trichloroethene	0.017		0.0010	mg/kg wet	0.0200		83	78-118			
4-Bromofluorobenzene	*50*			*ug/L*	*50.0*		*100*	*50-127*			
Dibromofluoromethane	*58*			*ug/L*	*50.0*		*115*	*52-128*			
Toluene-d8	*55*			*ug/L*	*50.0*		*110*	*57-124*			

This report relates only to the sample as received by the laboratory, and may only be reproduced in full.

QUALITY CONTROL DATA

Volatile Organic Compounds by GCMS - Quality Control

Batch 7I05027 - EPA 5035_MS - Continued

Matrix Spike (7I05027-MS1) Prepared: 09/05/2017 11:41 Analyzed: 09/05/2017 19:36

Source: CA13692-04

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1-Dichloroethene	0.022		0.0010	mg/kg wet	0.0200	0.00030 U	109	64-133			
Benzene	0.021		0.0010	mg/kg wet	0.0200	0.00017 U	103	79-129			
Chlorobenzene	0.021		0.0010	mg/kg wet	0.0200	0.00017 U	104	79-121			
Toluene	0.020		0.0010	mg/kg wet	0.0200	0.00024 U	102	77-120			
Trichloroethene	0.020		0.0010	mg/kg wet	0.0200	0.00032 U	101	78-118			
4-Bromofluorobenzene	*53*			*ug/L*	*50.0*		*106*	*50-127*			
Dibromofluoromethane	*60*			*ug/L*	*50.0*		*119*	*52-128*			
Toluene-d8	*56*			*ug/L*	*50.0*		*112*	*57-124*			

Matrix Spike Dup (7I05027-MSD1) Prepared: 09/05/2017 11:41 Analyzed: 09/05/2017 20:07

Source: CA13692-04

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1-Dichloroethene	0.021		0.0010	mg/kg wet	0.0200	0.00030 U	107	64-133	2	23	
Benzene	0.021		0.0010	mg/kg wet	0.0200	0.00017 U	105	79-129	2	23	
Chlorobenzene	0.021		0.0010	mg/kg wet	0.0200	0.00017 U	103	79-121	0.6	25	
Toluene	0.020		0.0010	mg/kg wet	0.0200	0.00024 U	102	77-120	0.1	23	
Trichloroethene	0.020		0.0010	mg/kg wet	0.0200	0.00032 U	101	78-118	0.1	24	
4-Bromofluorobenzene	*51*			*ug/L*	*50.0*		*102*	*50-127*			
Dibromofluoromethane	*57*			*ug/L*	*50.0*		*115*	*52-128*			
Toluene-d8	*56*			*ug/L*	*50.0*		*113*	*57-124*			

Metals by EPA 6000/7000 Series Methods - Quality Control

Batch 7H17028 - EPA 3050B

Blank (7H17028-BLK1) Prepared: 08/17/2017 12:14 Analyzed: 08/23/2017 14:18

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Arsenic	0.320	U	0.500	mg/kg wet							
Barium	0.100	U	0.500	mg/kg wet							
Cadmium	0.00960	U	0.0500	mg/kg wet							
Chromium	0.100	U	0.500	mg/kg wet							
Lead	0.120	U	0.500	mg/kg wet							
Selenium	0.410	U	0.500	mg/kg wet							
Silver	**0.145**	**J**	0.500	mg/kg wet							

LCS (7H17028-BS1) Prepared: 08/17/2017 12:14 Analyzed: 08/23/2017 14:21

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Arsenic	9.85		0.500	mg/kg wet	10.0		98	80-120			
Barium	10.2		0.500	mg/kg wet	10.0		102	80-120			
Cadmium	1.01		0.0500	mg/kg wet	1.00		101	80-120			
Chromium	9.90		0.500	mg/kg wet	10.0		99	80-120			
Lead	10.0		0.500	mg/kg wet	10.0		100	80-120			
Selenium	9.28		0.500	mg/kg wet	10.0		93	80-120			
Silver	10.2		0.500	mg/kg wet	10.0		102	80-120			

This report relates only to the sample as received by the laboratory, and may only be reproduced in full.

QUALITY CONTROL DATA

Metals by EPA 6000/7000 Series Methods - Quality Control

Batch 7H17028 - EPA 3050B - Continued

Matrix Spike (7H17028-MS1) Prepared: 08/17/2017 12:14 Analyzed: 08/23/2017 14:34

Source: CA11841-01

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Arsenic	14.9		0.578	mg/kg dry	11.5	6.52	73	75-125			QM-07
Barium	44.7		0.578	mg/kg dry	11.5	43.1	15	75-125			QM-07
Cadmium	1.31		0.0578	mg/kg dry	1.15	0.195	98	75-125			
Chromium	160		0.578	mg/kg dry	11.5	146	122	75-125			
Lead	46.5		0.578	mg/kg dry	11.5	42.6	34	75-125			QM-07
Selenium	0.474	U	0.578	mg/kg dry	11.5	0.474 U		75-125			QM-07
Silver	14.0		0.578	mg/kg dry	11.5	3.17	95	75-125			

Matrix Spike Dup (7H17028-MSD1) Prepared: 08/17/2017 12:14 Analyzed: 08/23/2017 14:36

Source: CA11841-01

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Arsenic	19.4		0.578	mg/kg dry	11.3	6.52	114	75-125	26	20	QM-11
Barium	53.9		0.578	mg/kg dry	11.3	43.1	96	75-125	19	20	
Cadmium	1.95		0.0578	mg/kg dry	1.13	0.195	155	75-125	39	20	QM-07, QM-11
Chromium	281		0.578	mg/kg dry	11.3	146	NR	75-125	55	20	QM-07, QM-11
Lead	55.4		0.578	mg/kg dry	11.3	42.6	113	75-125	18	20	
Selenium	0.474	U	0.578	mg/kg dry	11.3	0.474 U		75-125		20	QM-07
Silver	15.3		0.578	mg/kg dry	11.3	3.17	107	75-125	9	20	

Post Spike (7H17028-PS1) Prepared: 08/17/2017 12:14 Analyzed: 08/23/2017 14:38

Source: CA11841-01

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Arsenic	0.314		0.0100	mg/L	0.200	0.112	101	80-120			
Barium	0.916		0.0100	mg/L	0.200	0.737	90	80-120			
Cadmium	0.0282		0.00100	mg/L	0.0200	0.00334	124	80-120			QM-08
Chromium	2.63		0.0100	mg/L	0.200	2.50	64	80-120			QM-08
Lead	0.906		0.0100	mg/L	0.200	0.729	89	80-120			
Selenium	0.0333		0.0100	mg/L	0.200	-0.122	17	80-120			QM-08
Silver	0.230		0.0100	mg/L	0.200	0.0542	88	80-120			

Batch 7H17029 - EPA 3050B

Blank (7H17029-BLK1) Prepared: 08/17/2017 12:18 Analyzed: 08/24/2017 11:17

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Arsenic	0.320	U	0.500	mg/kg wet							
Barium	0.100	U	0.500	mg/kg wet							
Cadmium	0.00960	U	0.0500	mg/kg wet							
Chromium	0.100	U	0.500	mg/kg wet							
Lead	0.120	U	0.500	mg/kg wet							
Selenium	0.410	U	0.500	mg/kg wet							
Silver	0.100	U	0.500	mg/kg wet							

LCS (7H17029-BS1) Prepared: 08/17/2017 12:18 Analyzed: 08/24/2017 11:20

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Arsenic	10.0		0.500	mg/kg wet	10.2		98	80-120			

This report relates only to the sample as received by the laboratory, and may only be reproduced in full.

QUALITY CONTROL DATA

Metals by EPA 6000/7000 Series Methods - Quality Control

Batch 7H17029 - EPA 3050B - Continued

LCS (7H17029-BS1) Continued Prepared: 08/17/2017 12:18 Analyzed: 08/24/2017 11:20

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Barium	10.1		0.500	mg/kg wet	10.2		99	80-120			
Cadmium	0.991		0.0500	mg/kg wet	1.02		97	80-120			
Chromium	10.2		0.500	mg/kg wet	10.2		100	80-120			
Lead	9.93		0.500	mg/kg wet	10.2		97	80-120			
Selenium	9.74		0.500	mg/kg wet	10.2		95	80-120			
Silver	10.5		0.500	mg/kg wet	10.2		103	80-120			

Matrix Spike (7H17029-MS1) Prepared: 08/17/2017 12:18 Analyzed: 08/24/2017 11:26

Source: CA11841-19

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Arsenic	13.4		0.579	mg/kg dry	11.2	3.59	87	75-125			
Barium	53.0		0.579	mg/kg dry	11.2	29.6	208	75-125			QM-07
Cadmium	0.938		0.0579	mg/kg dry	1.12	0.0111 U	83	75-125			
Chromium	21.7		0.579	mg/kg dry	11.2	9.98	104	75-125			
Lead	25.6		0.579	mg/kg dry	11.2	13.6	107	75-125			
Selenium	7.91		0.579	mg/kg dry	11.2	0.475 U	70	75-125			QM-07
Silver	10.4		0.579	mg/kg dry	11.2	0.116 U	93	75-125			

Matrix Spike Dup (7H17029-MSD1) Prepared: 08/17/2017 12:18 Analyzed: 08/24/2017 11:28

Source: CA11841-19

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Arsenic	12.8		0.579	mg/kg dry	11.4	3.59	81	75-125	4	20	
Barium	51.4		0.579	mg/kg dry	11.4	29.6	192	75-125	3	20	QM-07
Cadmium	0.901		0.0579	mg/kg dry	1.14	0.0111 U	79	75-125	4	20	
Chromium	21.1		0.579	mg/kg dry	11.4	9.98	98	75-125	3	20	
Lead	25.3		0.579	mg/kg dry	11.4	13.6	103	75-125	1	20	
Selenium	8.15		0.579	mg/kg dry	11.4	0.475 U	72	75-125	3	20	QM-07
Silver	10.4		0.579	mg/kg dry	11.4	0.116 U	92	75-125	0.3	20	

Post Spike (7H17029-PS1) Prepared: 08/17/2017 12:18 Analyzed: 08/24/2017 11:44

Source: CA11841-19

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Arsenic	0.276		0.0100	mg/L	0.200	0.0621	107	80-120			
Barium	0.740		0.0100	mg/L	0.200	0.511	114	80-120			
Cadmium	0.0193		0.00100	mg/L	0.0200	-0.00182	97	80-120			
Chromium	0.394		0.0100	mg/L	0.200	0.172	111	80-120			
Lead	0.452		0.0100	mg/L	0.200	0.236	108	80-120			
Selenium	0.195		0.0100	mg/L	0.200	-0.0171	97	80-120			
Silver	0.189		0.0100	mg/L	0.200	-0.00342	94	80-120			

Batch 7H24004 - EPA 7471B

Blank (7H24004-BLK1) Prepared: 08/24/2017 08:08 Analyzed: 08/25/2017 09:16

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Mercury	0.0127	U	0.0218	mg/kg wet							

This report relates only to the sample as received by the laboratory, and may only be reproduced in full.

QUALITY CONTROL DATA

Metals by EPA 6000/7000 Series Methods - Quality Control

Batch 7H24004 - EPA 7471B - Continued

LCS (7H24004-BS1) Prepared: 08/24/2017 08:08 Analyzed: 08/25/2017 09:18

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Mercury	0.541		0.0240	mg/kg wet	0.581		93	80-120			

Matrix Spike (7H24004-MS1) Prepared: 08/24/2017 08:08 Analyzed: 08/25/2017 09:22

Source: CA11841-01

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Mercury	0.675		0.0278	mg/kg dry	0.694	0.0250	94	80-120			

Matrix Spike Dup (7H24004-MSD1) Prepared: 08/24/2017 08:08 Analyzed: 08/25/2017 09:24

Source: CA11841-01

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Mercury	0.711		0.0278	mg/kg dry	0.694	0.0250	99	80-120	5	20	

Post Spike (7H24004-PS1) Prepared: 08/24/2017 08:08 Analyzed: 08/25/2017 09:26

Source: CA11841-01

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Mercury	6.85		0.200	ug/L	5.00	0.180	133	75-125			QM-08

Batch 7H24005 - EPA 7471B

Blank (7H24005-BLK1) Prepared: 08/24/2017 08:13 Analyzed: 08/25/2017 10:18

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Mercury	0.0140	U	0.0240	mg/kg wet							

LCS (7H24005-BS1) Prepared: 08/24/2017 08:13 Analyzed: 08/25/2017 10:20

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Mercury	0.544		0.0240	mg/kg wet	0.562		97	80-120			

Matrix Spike (7H24005-MS1) Prepared: 08/24/2017 08:13 Analyzed: 08/25/2017 10:24

Source: CA11841-19

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Mercury	0.698		0.0253	mg/kg dry	0.631	0.0808	98	80-120			

Matrix Spike Dup (7H24005-MSD1) Prepared: 08/24/2017 08:13 Analyzed: 08/25/2017 10:30

Source: CA11841-19

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Mercury	0.671		0.0278	mg/kg dry	0.651	0.0808	91	80-120	4	20	

Post Spike (7H24005-PS1) Prepared: 08/24/2017 08:13 Analyzed: 08/25/2017 10:32

Source: CA11841-19

Analyte	Result	Flag	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Mercury	7.19		0.200	ug/L	5.00	0.581	132	75-125			QM-08

This report relates only to the sample as received by the laboratory, and may only be reproduced in full.

FLAGS/NOTES AND DEFINITIONS

B	The analyte was detected in the associated method blank.
D	The sample was analyzed at dilution.
J	The reported value is between the laboratory method detection limit (MDL) and the laboratory method reporting limit (MRL), adjusted for actual sample preparation data and moisture content, where applicable.
U	The analyte was analyzed for but not detected to the level shown, adjusted for actual sample preparation data and moisture content, where applicable.
E	The concentration indicated for this analyte is an estimated value above the calibration range of the instrument. This value is considered an estimate.
MRL	Method Reporting Limit. The MRL is roughly equivalent to the practical quantitation limit (PQL) and is based on the low point of the calibration curve, when applicable, sample preparation factor, dilution factor, and, in the case of soil samples, moisture content.
PQL	PQL: Practical Quantitation Limit.
N	The analysis indicates the presence of an analyte for which there is presumptive evidence (85% or greater confidence) to make a "tentative identification".
P	Greater than 25% concentration difference was observed between the primary and secondary GC column. The lower concentration is reported.
Q-01	Analysis performed outside of method - specified holding time.
QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
QM-08	Post-digestion spike did not meet method requirements due to confirmed matrix effects (dilution test).
QM-11	Precision between duplicate matrix spikes of the same sample was outside acceptance limits.
QM-15	Confirmed sample inhomogeneity
QR-05	The RPD value for the sample duplicate or MS/MSD was outside of QC acceptance limits.
QS-03	Surrogate recovery outside acceptance limits

This report relates only to the sample as received by the laboratory, and may only be reproduced in full.

ENCO

ENVIRONMENTAL CONSERVATION LABORATORIES CHAIN-OF-CUSTODY RECORD

www.encolabs.com

10775 Central Port Dr.
Orlando, FL 32824
(407) 826-5314 Fax (407) 850-6945

4810 Executive Park Court, Suite 111
Jacksonville, FL 32216-6069
(904) 296-3007 Fax (904) 296-6210

102-A Woodwinds Industrial Ct.
Cary, NC 27511
(919) 467-3090 Fax (919) 467-3515

Page ___ of ___

Client Name: Froehling and Robertson (FR004)	Project Number: 66V-0092
Address: 310 Hubert Street	Project Name/Desc: NCDOT PSAs
City/ST/Zip: Raleigh, NC 27603	PO # / Billing Info: 66V0092-00004
Tel: 919-719-1960 / Fax: (919) 828-5751	Reporting Contact: Ben Whitley
Sampler(s) Name, Affiliation (Print): ,Mike Sabodish	Billing Contact: Mike Sabodish
Sampler(s) Signature:	Site Location / Time Zone:

Requested Analyses: %Solids,Ag,As,Ba,Cd,Cr,Hg,Pb,Se — 8260B

Requested Turnaround Times

Note : Rush requests subject to acceptance by the facility

___ Standard

___ Expedited

Due ___/___/___

Lab Workorder: CA11841

Preservation (See Codes) (Combine as necessary)

Item #	Sample ID (Field Identification)	Collection Date	Collection Time	Comp / Grab	Matrix (see codes)	Total # of Containers	%Solids,Ag,As,Ba,Cd,Cr,Hg,Pb,Se	8260B								Sample Comments
	P078-B4	8-15	1415		SO	4	X	X								
	P078-B1	↓	1445		SO	4	X	X								
	P078-B2		1455		SO	4	X	X								
	P078-B3	8-15	1505		SO	4	X	X								
	P079-B3	8-15	1550		SO	4	X	X								
	P079-B7	8-15	1610		SO	4	X	X								
	P079-B9	8-15	1625		SO	4	X	X								
	P079-B5	8-15	1640		SO	4	X	X								
	P079-B8	8-16	0845		SO	4	X	X								
	P079-B6	8-16	0900		SO	4	X	X								
	P079-B4	8-16	0920		SO	4	X	X								
	P079-B2	8-16	0935		SO	4	X	X								

<-- Total # of Containers

Sample Kit Prepared By	Date/Time	Relinquished By	Date/Time	Received By	Date/Time
KAY	8/3	[signature]	8/17/17	[signature]	8/17/17 11:00
Comments/Special Reporting Requirements		Relinquished By	Date/Time	Received By	Date/Time
		Relinquished By	Date/Time	Received By	Date/Time
		Cooler #'s & Temps on Receipt: C-538 2.1c		Condition Upon Receipt: ✓ Acceptable ___ Unacceptable	

Matrix : GW-Groundwater SO-Soil DW-Drinking Water SE-Sediment SW-Surface Water WW-Wastewater A-Air O-Other (detail in comments)

Preservation: I-Ice H-HCl N-HNO3 S-H2SO4 NO-NaOH O-Other (detail in comments)

Note : All samples submitted to ENCO Labs are in accordance with the terms and conditions listed on the reverse of this form, unless prior written agreements exist

ENCO

ENVIRONMENTAL CONSERVATION LABORATORIES CHAIN-OF-CUSTODY RECORD

www.encolabs.com

10775 Central Port Dr.
Orlando, FL 32824
(407) 826-5314 Fax (407) 850-6945

4810 Executive Park Court, Suite 111
Jacksonville, FL 32216-6069
(904) 296-3007 Fax (904) 296-6210

102-A Woodwinds Industrial Ct.
Cary, NC 27511
(919) 467-3090 Fax (919) 467-3515

Page ____ of ____

Client Name: Froehling and Robertson (FR004)	Project Number: 66V-0092
Address: 310 Hubert Street	Project Name/Desc: NCDOT PSAs
City/ST/Zip: Raleigh, NC 27603	PO # / Billing Info: 66V0092-00004
Tel: 919-719-1960 Fax: (919) 828-5751	Reporting Contact: Ben Whitley
Sampler(s) Name, Affiliation (Print): ,Mike Sabodish	Billing Contact: Mike Sabodish
Sampler(s) Signature:	Site Location / Time Zone:

Requested Analyses: %Solids, Ag, As, Ba, Cd, Cr, Hg, Pb, Se; 8260B

Requested Turnaround Times

Note : Rush requests subject to acceptance by the facility

____ Standard

____ Expedited

Due ___/___/___

Lab Workorder: CA11841

Preservation (See Codes) (Combine as necessary)

Item #	Sample ID (Field Identification)	Collection Date	Collection Time	Comp / Grab	Matrix (see codes)	Total # of Containers	%Solids, Ag, As, Ba, Cd, Cr, Hg, Pb, Se	8260B	Sample Comments
	P079-B1	8-16	0945	G	SO	4	X	X	
	Trip Blank				WA	2		X	
	P078-B5	8-16	1000		SO	4	X	X	
	P078-HA1	8-16	1045		SO	4	X	X	
	P078-HA2	8-15	1100	G	SO	4	X	X	

<-- Total # of Containers

Sample Kit Prepared By	Date/Time	Relinquished By: [signature]	Date/Time: 8/17/17	Received By: [signature]	Date/Time: 8/17/17
Comments/Special Reporting Requirements		Relinquished By	Date/Time	Received By	Date/Time
		Relinquished By	Date/Time	Received By	Date/Time
		Cooler #'s & Temps on Receipt		Condition Upon Receipt: ✓ Acceptable ____ Unacceptable	

Matrix : GW-Groundwater SO-Soil DW-Drinking Water SE-Sediment SW-Surface Water WW-Wastewater A-Air O-Other (detail in comments) Preservation: I-Ice H-HCl N-HNO3 S-H2SO4 NO-NaOH O-Other (detail in comments)

Note : All samples submitted to ENCO Labs are in accordance with the terms and conditions listed on the reverse of this form, unless prior written agreements exist

ENCO

ENVIRONMENTAL CONSERVATION LABORATORIES CHAIN-OF-CUSTODY RECORD

www.encolabs.com

10775 Central Port Dr.
Orlando, FL 32824
(407) 826-5314 Fax (407) 850-6945

4810 Executive Park Court, Suite 111
Jacksonville, FL 32216-6069
(904) 296-3007 Fax (904) 296-6210

102-A Woodwinds Industrial Ct.
Cary, NC 27511
(919) 467-3090 Fax (919) 467-3515

Client Name: Froehling and Robertson (FR004)	Project Number: 66V-0092
Address: 310 Hubert Street	Project Name/Desc: NCDOT PSAs
City/ST/Zip: Raleigh, NC 27603	PO # / Billing Info: 66V0092-00004
Tel: 919-719-1960 / Fax: (919) 828-5751	Reporting Contact: Ben Whitley
Sampler(s) Name, Affiliation (Print): ~~Mike Sabodish~~ Brian Ott, F&R	Billing Contact: Mike Sabodish
Sampler(s) Signature: [signature]	Site Location / Time Zone: Albemarle, NC

Requested Analyses: %Solids, Ag, As, Ba, Cd, Cr, Hg, Pb, Se — 8260B

Requested Turnaround Times

Note : Rush requests subject to acceptance by the facility

___ Standard

___ Expedited

Due ___/___/___

Lab Workorder: CA71841 ~~CA71842~~

Preservation (See Codes) (Combine as necessary)

Item #	Sample ID (Field Identification)	Collection Date	Collection Time	Comp / Grab	Matrix (see codes)	Total # of Containers	%Solids, Ag, As, Ba, Cd, Cr, Hg, Pb, Se	8260B							Sample Comments
	P053-B6	8-14-17	1510	G	SO	4	X	X							
	P053-B5	8-14-17	1530		SO	4	X	X							
	P053-B4	8-14-17	1554		SO	4	X	X							
	P053-B3	8-14-17	1600		SO	4	X	X							
	P053-B2	8-14-17	1645		SO	4	X	X							
	P053-B-1	8-14-17	1615	G	SO	4	X	X							
	P054-B1	8-15-17	0925		SO	4	X	X							
	P054-B2	8-15-17	0940		SO	4	X	X							
	P054-B3	8-15-17	0955	G	SO	4	X	X							
					SO	4	X	X							
					SO	4	X	X							
					SO	4	X	X							

<-- Total # of Containers

Sample Kit Prepared By	Date/Time	Relinquished By	Date/Time	Received By	Date/Time
Luke Emma	8/3/17	[signature]	8/17/17	Luke Emma	8/17/17
Comments/Special Reporting Requirements		Relinquished By	Date/Time	Received By	Date/Time
		Relinquished By	Date/Time	Received By	Date/Time
		Cooler #'s & Temps on Receipt: C-67		Condition Upon Receipt: ✓ Acceptable ___ Unacceptable	

Matrix : GW-Groundwater SO-Soil DW-Drinking Water SE-Sediment SW-Surface Water WW-Wastewater A-Air O-Other (detail in comments) Preservation: I-Ice H-HCl N-HNO3 S-H2SO4 NO-NaOH O-Other (detail in comments)

Note : All samples submitted to ENCO Labs are in accordance with the terms and conditions listed on the reverse of this form, unless prior written agreements exist

ENVIRONMENTAL CONSERVATION LABORATORIES CHAIN-OF-CUSTODY RECORD

10775 Central Port Dr.
Orlando, FL 32824
(407) 826-5314 Fax (407) 850-6945

4810 Executive Park Court, Suite 111
Jacksonville, FL 32216-6069
(904) 296-3007 Fax (904) 296-6210

102-A Woodwinds Industrial Ct.
Cary, NC 27511
(919) 467-3090 Fax (919) 467-3515

www.encolabs.com

Client Name: Froehling and Robertson (FR004)	Project Number: 66V-0092
Address: 310 Hubert Street	Project Name/Desc: NCDOT PSAs
City/ST/Zip: Raleigh, NC 27603	PO # / Billing Info: 66V0092-00004
Tel: 919-719-1960 / Fax: (919) 828-5751	Reporting Contact: Ben Whitley
Sampler(s) Name, Affiliation (Print): ,Mike Sabodish	Billing Contact: Mike Sabodish
Sampler(s) Signature:	Site Location / Time Zone:

Requested Analyses: %Solids,Ag,As,Ba,Cd,Cr,Hg,Pb,Se — 8260B

Requested Turnaround Times

Note : Rush requests subject to acceptance by the facility

___ Standard

___ Expedited

Due ___/___/___

Lab Workorder: CA11541 ~~CA11842~~

Preservation (See Codes) (Combine as necessary)

Item #	Sample ID (Field Identification)	Collection Date	Collection Time	Comp / Grab	Matrix (see codes)	Total # of Containers	%Solids,Ag,As,Ba,Cd,Cr,Hg,Pb,Se	8260B							Sample Comments
					SO	4	X	X							
	Trip Blank				WA	2		X							

<-- Total # of Containers

Sample Kit Prepared By	Date/Time	Relinquished By	Date/Time 8/17/17	Received By	Date/Time 8/17/17
Comments/Special Reporting Requirements		Relinquished By	Date/Time	Received By	Date/Time
		Relinquished By	Date/Time	Received By	Date/Time
		Cooler #'s & Temps on Receipt		Condition Upon Receipt: ✓ Acceptable ___ Unacceptable	

Matrix : GW-Groundwater SO-Soil DW-Drinking Water SE-Sediment SW-Surface Water WW-Wastewater A-Air O-Other (detail in comments) **Preservation:** I-Ice H-HCl N-HNO3 S-H2SO4 NO-NaOH O-Other (detail in comments)

Note : All samples submitted to ENCO Labs are in accordance with the terms and conditions listed on the reverse of this form, unless prior written agreements exist

SINCE

F&R®

1881