LIMITED PRELIMINARY SITE ASSESSMENT

Parcel 089
Paul D. Biggerstaff Property
84 Mount View Drive
Burnsville, NC 28714

State Project No. R-2519A
WBS Element No. 35609.1.1
EI Project No. ENMO060029.00

Prepared For:

Gregory A. Smith
State of North Carolina
Department of Transportation
Geotechnical Unit
GeoEnvironmental Section
1589 Mail Service Center
Raleigh, NC 27699-1589

Prepared by:

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April 2006

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Conducted on

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For

Mr. Gregory A. Smith
State of North Carolina
Department of Transportation
Geotechnical Engineering Unit
GeoEnvironmental Section
1589 Mail Service Center
Raleigh, NC 27699-1589

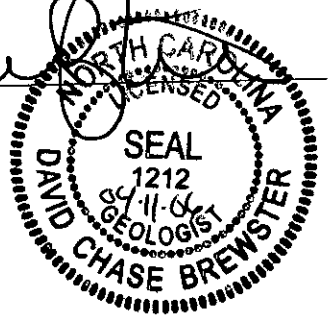
Issue Date: April 11, 2006

Robert M. Shaut
Project Geologist/Manager

David C. Brewster, P.G.
Principal Geologist

Signature

Signature



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1.0 INTRODUCTION

Environmental Investigations, Inc. (EI), conducted a *Limited Preliminary Site Assessment* (PSA) within the existing and/or proposed North Carolina Department of Transportation (NCDOT) *right-of-way* (ROW) adjacent to a parcel (identified by the NCDOT as Parcel 089) located at 84 Mount View Drive, Burnsville, North Carolina 28714. A residence is currently located on the adjacent parcel. The report presented herein documents the findings of the PSA that was conducted within the described ROW. For purposes of this report, the terms subject site and/or site include the existing NCDOT ROW and the proposed ROW, and/or the abutting property/parcel.

1.1 Report Organization

Field activities were conducted by Mr. Robert Michael Shaut, an Environmental Geologist with EI, on February 21, 2005. The report presented herein summarizes the scope of work conducted, discusses sampling procedures, and presents our findings, conclusions and recommendations. A table entitled "Summary of Soil Analytical Results" is presented in **Table 1.** A "Site Location Map", a "Site Map" and "Extent of Residual Petroleum Impact (Vadose Zone) Map" are presented in **Figures 1, 2,** and **3,** respectively. A compilation of "Site Photographs" are presented in **Appendix A,** the "Standard Field Operating Procedures (SOP)" are presented in **Appendix B,** and "Soil Boring Logs" are included in **Appendix C,** while an "Analytical Laboratory Report" is presented in **Appendix D.**

1.2 Background

Mr. Eugene Tarascio, GeoEnvironmental Project Manager with the NCDOT GeoTechnical Engineering Unit submitted to EI a "*Request for Technical and Cost Proposal*" (RFP), dated February 7, 2006. The RFP solicited a technical and cost proposal to perform Limited PSAs on a total of six (6) Parcels located within a NCDOT Highway Project, identified as WBS Element #35609.1.1, State Project #R-2519A, located in Burnsville, NC. The RFP outlined site information on each of the six (6) parcels and NCDOT Figures (Plan Sheets) and applicable site photographs were attached to the RFP. Mr. Gregory A. Smith, LG, PE, GeoEnvironmental Supervisor with the NCDOT, GeoTechnical Engineering Unit, GeoEnvironmental Section authorized EI to perform the PSAs, as documented in a "Notice to Proceed" dated February 16, 2006 (verbal authorization on February 10, 2006).

1.3 Objectives

The objective of performing the PSA was to determine if an existing residential heating oil UST has impacted the subsurface of the existing and/or proposed ROW. The study (PSA) on the referenced

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parcel (Parcel 089 –Paul D. Biggerstaff Property) included herein was performed with a reasonable effort to investigate and quantify potentially petroleum-hydrocarbon residual impacted subsurface soils. However, findings documented in the report do not constitute a guarantee that all potential sources of (petroleum) environmental contamination have been assessed and subsequently analyzed.

This report is provided for the sole use of the NCDOT on the project for which it was prepared. All materials and information used for this project were obtained by EI, Inc. Use of this report by any third parties other than the NCDOT will be at such party's sole risk. EI Inc. disclaims liability for any use of or reliance on this report by third parties.

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2.0 SCOPE OF WORK & ENVIRONMENTAL SERVICES

2.1 Requested Scope of Work

Documented in the RFP, dated February 7, 2006, the NCDOT requested the following scope of work:

- Determine if contaminated soils are present around the heating oil UST;
- delineate and estimate the quantity of impacted soils and indicate the approximate area of soil contamination on a site map for the site;
- if groundwater is encountered and the project manager suspects the possibility of groundwater contamination, obtain a sample for analysis by converting one (1) of the borings to a temporary monitoring well;
- for each groundwater sample collected, also obtain a 24-hour groundwater depth;
- prepare a report including field activities, findings, and recommendations for the site and submit in quadruplet to this office.

2.2 Scope of Services

To accomplish the scope-of-services, a field reconnaissance was performed to identify general site conditions; a hand auger and Direct Push Technology (DPT) were utilized to collect soil samples on the subject parcel.

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To perform the requested Limited PSA, EI personnel visited the site on two (2) occasions to supervise, oversee and/or perform site reconnaissance activities and collect appropriate samples to complete the project objectives. To complete the study on the subject parcel, EI performed the following scope of services:

- Advancement of ten (10) soil test borings utilizing a hand auger to a total depth of less than 2.74 meters (9.0 feet) below the land surface (bls) in the vicinity of the heating oil UST.
- Supervision, and oversight of the advancement of two (2) soil test borings utilizing DPT methods to depths ranging from 3.65 to 10.67 meters (12.0 to 35.0 feet) bls in the vicinity of the heating oil UST.
- Collection and submittal of five (5) soil samples for laboratory analytical testing.
- Photo documentation of pertinent site features.
- Preparation of this *Limited PSA Report*, presenting our findings and conclusions along with our recommendations.

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3.0 SITE CHARACTERIZATION

3.1 Site Location

A residence known as the Paul D. Biggerstaff property is currently located at 84 Mount View Drive, in Burnsville, North Carolina (**Figures 1**). The subject property is currently located immediately adjacent to the DOT ROW (**Photograph 1**) as identified in DOT's R-2519A Plan Sheets 18 and 19. Copies of digital site photographs are presented in **Appendix A**.

3.2 Physical Setting

The subject site parcel currently consists of a residence. The parcel consists of a one-story house a concrete driveway and is surrounded by grass and/or shrubbery. Please refer to **Figure 2 (Site Map)** for the location of the residence.

3.2.1 Number and Capacitates of USTs

A heating oil UST is located in the front yard near a concrete sidewalk. A vent and fill port for the tank are visible and according to the NCDOT, the property owner stated that the tank is 3,785 liter (1,000-gallon) capacity in size.

3.3 Site Topography

Site observations and review of the Burnsville, NC United States Geological Survey (USGS) Topographic Quadrangle Map (July 1, 1984) revealed that the subject site is located at an elevation of approximately 862 meters (2,828 feet) above mean sea level (msl) (**Figure 1**). Topographically, the site slopes to the northeast. Surface water runoff appears to flow directly northeast in the direction of Little Crabtree Creek located approximately 107 meter (360 feet) from the site.

3.4 Land Use & Surrounding Properties

The subject property is located inside the city limits of Burnsville, NC. Land use in the immediate vicinity of the site is characterized by rural and residential properties. The site is bounded on the north by US 19E, to the east by Mount View Drive, to the south by residential properties and to the west by undeveloped properties.

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4.0 SUBURFACE INVESTIAGTION

4.1 Subsurface Soils Investigation

On February 21, 2006, an EI Geologist advanced a total of ten (10) soil test borings (HA-1 through HA-10) in the vicinity of existing residential heating oil UST with a hand-auger. Troxler Geologic Services, based in Raleigh, North Carolina, was selected and subcontracted to provide Direct Push Technology (DPT) services. On March 22, 2006, EI directed and supervised the advancement of two (2) soil test borings (GP-1 and GP-2) in an area that showed residual petroleum impact (hand auger soil sample analysis) in the vicinity of existing residential heating oil UST.

In general, the borings were advanced in order to evaluate the absence/presence of potential subsurface soil (vadose zone) impact and/or subsurface groundwater (petroleum smearing) impact associated with potential petroleum releases associated with either former and/or present UST system spills and/or releases into the subsurface. The soil borings were advanced to investigative depths ranging from 0.31 meters (1.0 feet) to a depth of 10.67 meters (35.0 feet) bls.

4.2 Soil Test Boring Methodology

A complete descriptive explanation of EI's *Standard Field Operating Procedures* that discusses specific sampling methodology is presented in **Appendix B**.

4.3 Soil Sample Collection Procedures

Based on the results of site conditions (i.e., location of UST system), a total of five (5) soil samples were collected for laboratory retention from the 12 soil test borings conducted at the property (**Photographs 3** to **6**). Numerous rocks and gravel were encountered throughout the boring advancement activities, and several of the borings were not advanced to their desired target depths (auger refusal).

Soil samples retained for laboratory analyses were shipped, via overnight courier service (Federal Express) to Paradigm Analytical Laboratory, for laboratory analytical testing. Dates and times of sample shipment may be referenced in the analytical Chain-of Custodies (COC) presented in **Appendix D**.

4.4 Backfill Activities

At the completion of the exploratory subsurface advancement activities, the test borings were backfilled to surface grade. A complete descriptive explanation of EI's *Standard Field Operating Procedures* that discusses backfill procedures is presented in **Appendix B**.

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4.5 Subsurface Soil Lithology

During boring advancement activities, soil samples were classified in the field by an EI geologist utilizing the Unified Soil Classification System (USCS). Subsurface soils encountered in the area of study were fairly consistent. The on-site geology consists of grass with surficial topsoil from the surface to approximately 0.15 meters (0.5-foot) below grade. Layers of soil consisting of reddish brown light tan clayey SILT (ML) grading into silty CLAY were encountered to the investigated depth of approximately 3.66 meters (12.0) feet below the land surface (bls). A deeper soil test boring was installed in attempt to retrieve a groundwater sample; however, to expedite the drilling process, the drill rods were advanced to the final depth without retrieving soil sample liners, thus soils identified at a depth below 3.66 meters (12.0) feet bls were not identified.

Detailed descriptions are presented in Soil Boring Logs included in **Appendix C**. The boring logs include an interpretation of subsurface conditions based on field samples.

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5.0 LABORATORY TESTING AND RESULTS

5.1 Subsurface Soil Analytical Methods

A total of 5 soil samples ("PAR 89 HA6-8", "PAR HA4-8", "PAR 89 HA9-9", "PAR 89 HA10-9", "PAR 89 HA10-9", "PAR 89 HA 11-9") were submitted for total petroleum hydrocarbons (TPH) analyses by Method 8015B with preparation methods for the analysis of Diesel Range Organics (DRO) by GC-FID and Gasoline Range Organics (GRO) by GC-FID. The GRO method is utilized to extract volatile fuels such as gasoline, while the DRO method is utilized to extract less volatile petroleum products such as diesel fuel, No. 2 fuel oil, kerosene, and varsol.

A total of one (1) soil sample ("PAR 89 HA6-8") was analyzed for Risk Based parameters by the following methods: volatile organics by SW-846 Method 8260 (5035 Preparation), for semi-volatiles (SVOCs) by SW-846 Method 8270 (Base-Neutrals only), and for aliphatics and aromatics by Massachusetts Department of Environmental Protection's (MADEP) method for volatile petroleum hydrocarbons (VPH) and MADEP's method for extractable petroleum hydrocarbons (EPH), respectively.

These laboratory analytical methods were utilized as required in the *Guidelines* in order to compare results to the DWM's maximum soil contaminant concentration (MSCC) cleanup standards. The MSCC concentrations are also published in the *Guidelines*.

5.2 Soil Laboratory Analyses Results

Laboratory analysis of soil samples collected from four (4) of the five (5) soil test borings did not detect DRO or GRO concentrations above the laboratory detection limits. One (1) of the samples analyzed ("PAR 89 HA9-9") showed concentrations of DRO at **51.8** mg/kg, which exceeds the North Carolina Department of Environment Resources (NCDENR), Division of Waste Management (DWM), Underground Storage Tank Section's regulatory action limit of 10.0 mg/kg.

The one (1) sample ("PAR 89 HA6-8") which was analyzed for Risk Based parameters showed only minor concentrations of volatiles, while concentrations of aliphatics, aromatics and SVOCs were not detected at or above the laboratory reporting limits. None of the VOC detected analytes showed concentrations above the most stringent of the MSCC Cleanup Standards (Soil-to-Groundwater).

The specific results of the analytical testing of the soil samples are tabulated and presented in **Table 1**. The complete laboratory results and Chain-of-Custody Records are presented in **Appendix D**.

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6.0 SUMMARY OF FINDINGS

EI has reviewed information gathered during the Limited PSA study including the site reconnaissance activities, review of DOT plan sheets, review of the site investigation including soil collection activities, and review of a laboratory analyses report. Compiled below is a summarized list of the significant findings.

- A heating oil UST is located in the front yard of the subject site house, near a concrete sidewalk. A vent and fill port for the tank were visible and according to the NCDOT, the property owner stated that the tank is 3,785 liter (1,000-gallon) capacity in size.

- Analyses of one (1) soil sample ("PAR 89 HA-9-9") collected at a depth of 2.74 meters (9.0 feet) bls, which is a depth that is beneath the bottom depth of the tank reported concentrations of DRO above the NCDENR action limits. The remaining soil samples did not show concentrations of TPH either in the gasoline or the diesel ranges above the laboratory detection limits. A second sample ("PAR 89 HA-6-8") also collected at a depth of 2.74 meters (9.0 feet) bls, reported minor concentrations of VOCs but not a levels that exceeded applicable regulatory cleanup standards (MSCC Soil-to-Groundwater).

- It appears based on laboratory analytical data, that a minor petroleum spill and/or release has occurred in the vicinity of the heating oil UST, which is located within the *proposed* NCDOT ROW. According to the analytical data, the release and/or spill is consistent with the chemical characteristics of heating oil.

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7.0 CONCLUSIONS AND RECOMMENDATIONS

EI personnel have reviewed information obtained during the *Limited PSA* at the site (Parcel 089) and present the following conclusions and recommendations.

Based upon the absence of petroleum hydrocarbon field indicators at shallow depths and the presence of DRO at depths below the bottom of the UST, it appears that the presence of hydrocarbons may be attributed to an UST leak as opposed to a spill incident, although a spill cannot be ruled out. A combination of both (leak and spill) may be the most likely.

It appears that the vadose zone beneath and in an area located directly adjacent to the subject UST (located within the NCDOT *proposed* ROW) has been impacted by petroleum hydrocarbon residuals. Based on the assumptions stated above, EI projects that an estimated volume of approximately **114 cubic meters (150 cubic yards) of contaminated subsurface soils** are likely present directly beneath and/or adjacent to the tank.

Based on the likely presence of weathered rock and the absence of groundwater at a depth of less than 10.67 meters (35.0 feet) bls at the time of investigation, EI does not project that the aquifer (groundwater) beneath the site has been significantly impacted, although minor impact may be present.

Based on the conclusions, based on the detection of DRO concentrations above reportable levels, the property owner should be notified of this finding. It also should be noted that the detection of DRO discovered during this investigation normally should be reported to the regulatory agency (NCDENR). At this time, no other recommendations are warranted.

Note: This report does not constitute a guarantee that all potential sources of environmental contamination have been assessed and subsequently analyzed.

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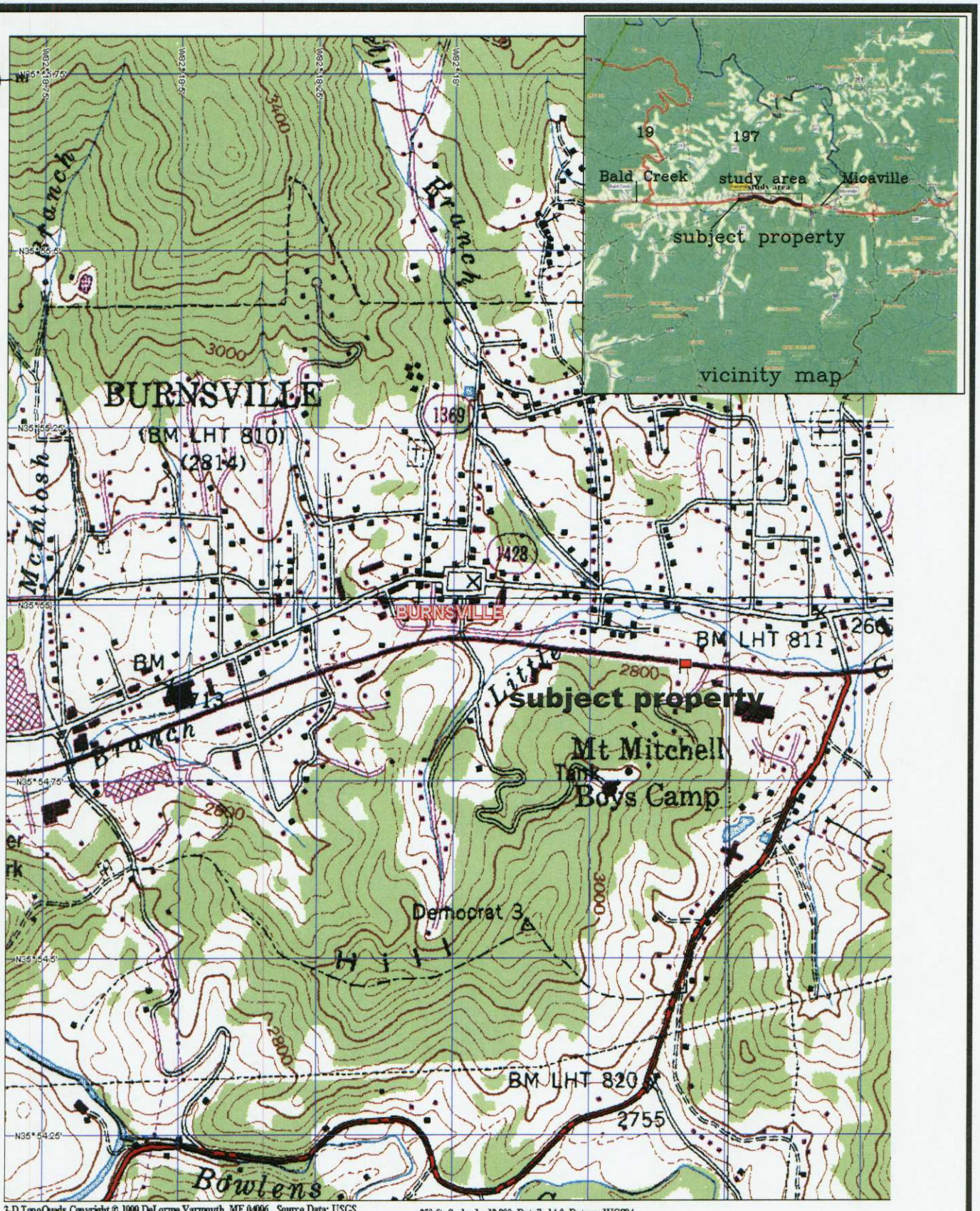
TABLES

TABLE 1
SUMMARY OF SOIL ANALYTICAL RESULTS
Parcel 89
Paul D. Biggerstaff Property Property
84 Mount View Drive,
Burnsville, NC 28714
State Project No. R-2519A
WBS Element No. 35609.1.1

Sample Identification				PAR 89 HA6-8	PAR 89 HA4-8	PAR 89 HA9-9	PAR 89 HA10-9	GP1-10	GP2-12
Sample Depth Meters (Feet)				2.134m-2.438m (7'-8')	2.134m-2.438m (7' 8')	2.438m - 2.743m (8'-9')	2.438m - 2.743m (8'-9')	2.743m - 3.048m (9'-10')	3.353m - 3.658m (11'-12')
Sample Date				2/21/2006				3/22/2006	
Field Screening Results-PID (ppm)				0.0	0.1	0.8	0.1	0.0	0.0
Laboratory Analysis	Cleanup Standards (MSCC) Residential MSCC (mg/kg)	Industrial Commercial MSCC (mg/kg)	Soil-to-GW MSCC (mg/kg)	Laboratory Results (mg/kg)					
MADEP VPH									
C5-C8 Aliphatics	939	24528	72	<10					
C9-C12 Aliphatics	9386	245280	3255	<10					
C9-C10 Aromatics	469	12264	34	<10					
MADEP EPH	**Cleanup Standards (MSCC)**			**Laboratory Results (mg/kg)**					
C9-C18 Aliphatics	9386	245280	3255	<10					
C19-C36 Aliphatics	469	12264	34	<10					
C11-C22 Aromatics	93860	*	Immobile	<10					
Volatile Organic Compounds Method 8260B/5035	**Cleanup Standards (MSCC)**			**Laboratory Results (mg/kg)**					
Benzene	22	200	0.0056	BQL					
Toluene	3200	82000	7	0.0052					
Ethylbenzene	1560	40000	0.24	BQL					
Total Xylenes	32000	200000	5	BQL					
2-Butanone (MEK)	9385	245280	0.7	0.00689					
Acetone	1564	40880	3	0.0299					
Isopropylbenzene (Cumene)	1564	40880	2	BQL					
Iodomethane	NS	NS	NS	0.00851					
n-Propylbenzene	156	4088	2	BQL					
1,2,4-Trimethylbenzene	782	20440	8	0.00382					
1,3,5-Trimethylbenzene	782	20440	7	BQL					
sec-Butylbenzene	156	4088	3	BQL					
n-Butylbenzene	156	4088	4	BQL					
Naphthalene	63	1635	0.58	0.00444					
Isopropylether (IPE)	156	4088	0.37	BQL					
Methyl Tert-butyl Ether (MTBE)	156	4088	0.92	BQL					
Methylene chloride	85	763	0.02	0.0194					
p-Isopropyltoluene	NS	NS	NS	BQL					
All Remaining Analytes	NA	NA	NA	BQL					
Semivolatile Organic Compounds SW846-8270C	**Cleanup Standards (MSCC)**			**Laboratory Results (mg/kg)**					
Naphthalene	63	1635	0.58	BQL					
2-methyl naphthalene	63	1635	3	BQL					
Phenanthrene	469	12264	60	BQL					
All Remaining Analytes	NA	NA	NA	BQL					
Laboratory Analysis (Total Petroleum Hydrocarbons by GC/FID 8015)	**NCDENR[1] (Volume II) Reportable Concentration (mg/kg)**			**Laboratory Results (mg/kg)**	**LABORATORY RESULTS (mg/kg)**				
Gasoline Range Organics	10			BQL	BQL	BQL	BQL	BQL	BQL
Diesel Range Organics				BQL	BQL	***51.8***	BQL	BQL	BQL

NOTE:
NS = No Standard
mg/kg denotes parts per million
MSCC = Maximum Soil Contaminant Concentrations
Bold & Italics Font = In Excess of MSCC Cleanup Standards



3-D TopoQuads Copyright © 1999 DeLorme Yarmouth, ME 04096 Source Data: USGS 350 ft Scale: 1 : 12,800 Detail: 14-0 Datum: WGS84

DWN NO.	FIGURE 1
JOB NO.:	ENM0060029.00
DRAWN BY:	USGS/RMS
CHECKED BY:	DCB
DATE:	2/21/06
SCALE:	as shown

SITE LOCATION MAP

PARCEL 089

Paul D. Biggerstaff Property
Burnsville, NC 28714
State Project: R-2519A

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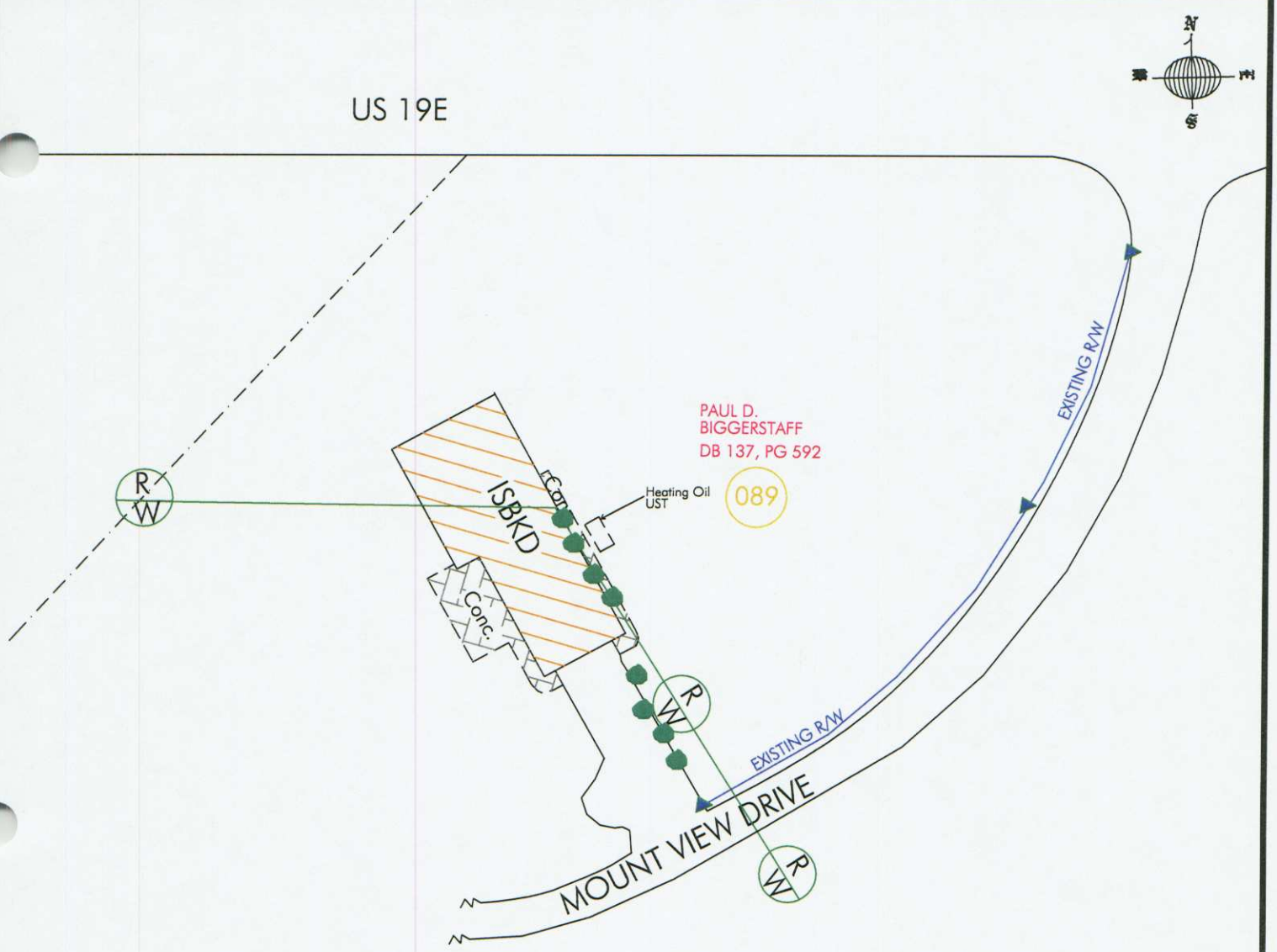


LEGEND:

- Property Line
- Bushes
- Proposed Right-of-Way
- Existing Right-of-Way

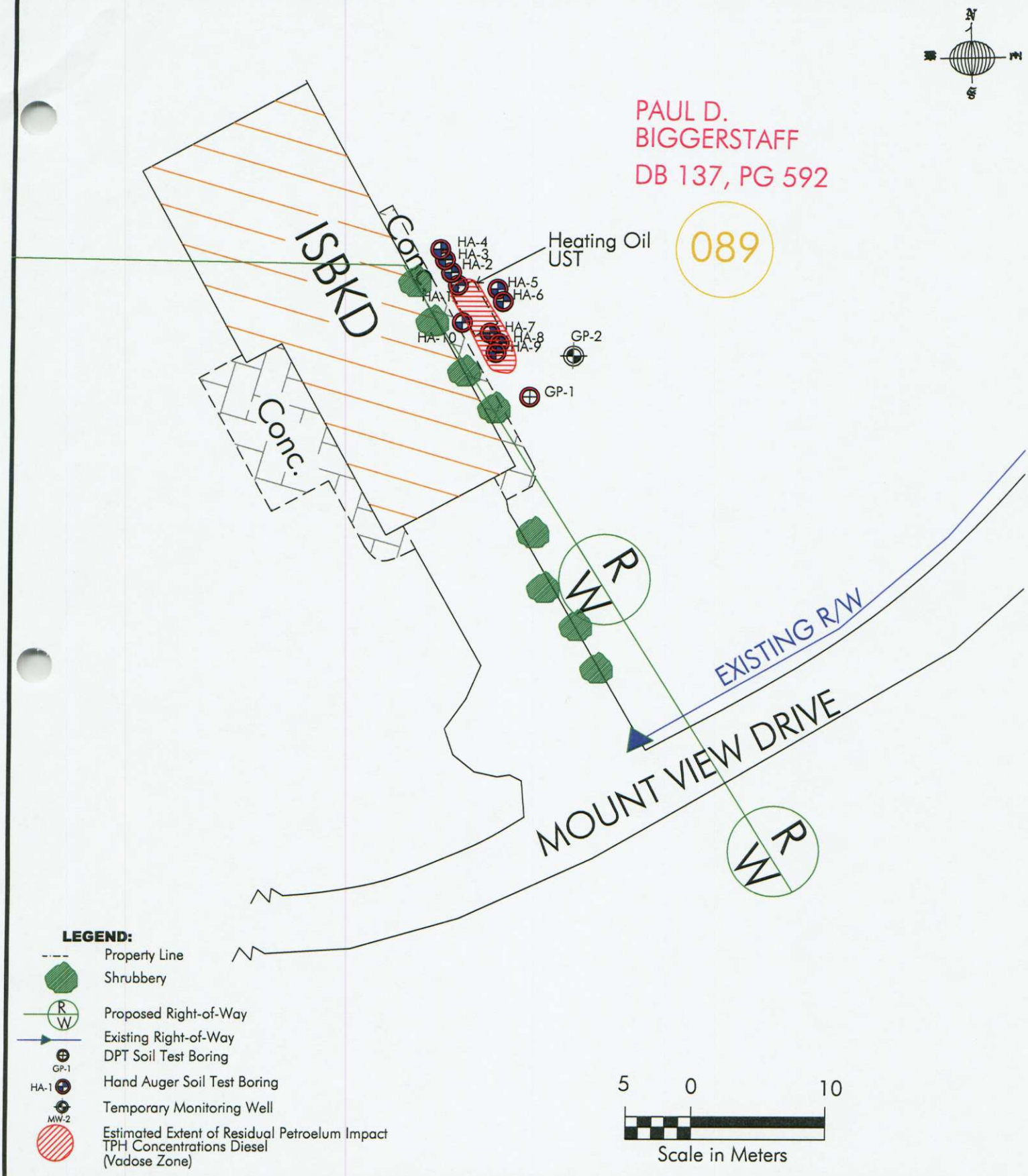
5 0 10

Scale in Meters

DWN NO.	FIGURE 2
JOB NO.:	ENM0060029.00
DRAWN BY:	RMS
CHECKED BY:	DCB
DATE:	2/21/06
SCALE:	1cm = 80m

SITE MAP
PARCEL 089
Paul D. Biggerstaff Property
Burnsville, NC 28714
State Project: R-2519A

ENVIRONMENTAL INVESTIGATIONS, INC.



WN NO.	FIGURE 3
JOB NO.:	ENM0060029.00
DRAWN BY:	RMS
CHECKED BY:	DCB
DATE:	2/21/06
SCALE:	1cm = 40m

EXTENT OF RESIDUAL PETROLEUM IMPACT (VADOSE ZONE) MAP
PARCEL 089
Paul D. Biggerstaff Property
Burnsville, NC 28714
State Project: R-2519A

ENVIRONMENTAL INVESTIGATIONS, INC.

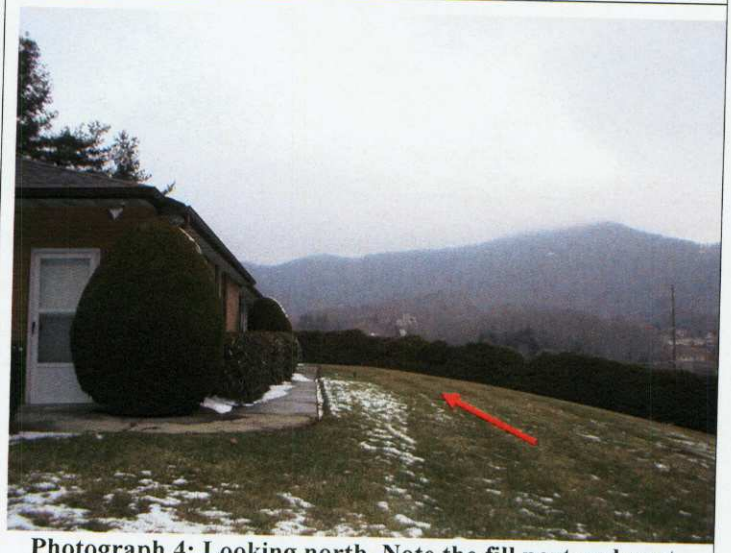
APPENDIX A

SITE PHOTOGRAPHS

Photograph 1: Looking west at the subject property.

Photograph 2: A closer view, note fill port and vent pipe.

Photograph 3: Looking south. Note the fill port and vent pipe in the center of the photo.



Photograph 4: Looking north. Note the fill port and vent pipe in the center of the photo.

Photograph 5: View of initial phase of advanced boring locations.

Photograph 6: Another view of initial phase of advanced boring locations.

APPENDIX B

STANDARD OPERATING PROCEDURES

STANDARD OPERATING PROCEDURES
Subsurface Assessment Methodology And Sampling Protocol

Parcel 089
Paul D. Biggerstaff Property
84 Mount View Drive
Burnsville, NC 28714

WBS Element # 35609.1.1
State Project # R-2519A
EI Project No. ENMO060029.00

Prepared For:

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State of North Carolina
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March 2006

STANDARD OPERATING PROCEDURES
(Subsurface Assessment Methodology And Sampling Protocol

INTRODUCTION

Environmental Investigations, Inc. (EI) has prepared this STANDARD OPERATING PROCEDURES - Subsurface Assessment Methodology and Sampling Protocol Plan (SPP) for a residential property owned by Paul D. Biggerstaff property located at 84 Mount View Drive, Burnsville, Yancey County, North Carolina.

The document presented herein describes the methodology and protocol that was utilized during the *Limited Preliminary Site Assessment* conducted at the above referenced project "site".

SAMPLING DESIGN

Prior to conducting a subsurface assessment, a sampling strategy was developed by EI based on the objectives of the investigation. After designing our soil sampling strategy, the appropriate equipment and techniques were selected to conduct the investigation. Our sampling strategy was based upon the premise of accomplishing the following performance objectives:

- collect soil samples that are representative of conditions as they exist at the study site;
- selecting the appropriate sampling device(s);
- taking measures to avoid introducing contamination as a result of poor sampling and/or poor handling techniques;
- reducing the potential of cross contamination between samples;
- defining sampling site selections and collection procedures for the appropriate individual media;
- defining the quality control assurance procedures;
- analytical requirements and limitations; and
- Data interpretation and assessment.

The sampling plan for this study was developed using the non-probabilistic (directed sampling designs) in nature. The location and frequency was based on this approach, to allow for the flexibility of the field coordinator (Geologist) to determine the number of samples collected for analysis. This approach allowed for the study objectives, properties of the matrix, resource constraints and access to sampling points to be adequately performed. Provision for access, use of sampling equipment, was also pre-determined.

The following section of the SPP discusses the sampling equipment available and collection methods which have been utilized to be technically appropriate.

SITE ORIENTATION

Prior to conducting any soil sampling procedures, the EI Project Geologist/Manager reviewed and presented the Site and Safety Health Plan to all participants involved with the project which was developed based on the EI Safety and Health program. All monitoring, protective equipment (latex gloves, Tyvek® suits, etc.), potential hazards associated with the site and general health and safety standards were discussed.

Site Survey

Prior to conducting specific sampling activities, EI personnel will conduct a limited site survey of the target and surrounding areas. Information discovered during the survey will be utilized to better perform the sampling activities and will provide more insight into establishment of the conclusions of this study. The site survey will consist of the following:

- General site layout (UST system layouts, overhead canopies, dispensers, etc.);
- Site access;
- Soil types and depths;
- Surface water drainage pathways;
- Existing site conditions;
- Visible staining of surface soil;
- Vegetation stress, and
- Possible offsite or non-site related sources.

FIELD INVESTIGATIVE PROCEDURES

Sampling Objectives

The general objective of sampling for this project was to collect a sample representative of subsurface and/or groundwater to reduce the potential bias caused by the sampling equipment used to obtain the sample.

The chosen sample locations were evaluated as discrete samples. A discrete sample is defined as "a discrete aliquot representative of a specific location at a given point in time."

Areas of Environmental Concern

The objectives of choosing the proper sampling methods to collect appropriate samples that are representative of the conditions as they exist at the site were as follows:

- Selecting the appropriate sampling device.
- Taking measures to avoid introducing contamination as a result of poor sampling and/or handling techniques.
- Reducing the potential of cross contamination between samples.

The areas of environmental concern consisted of an existing heating oil UST.

SOIL SAMPLING ACTIVITIES

Manual techniques and equipment, such as hand augers, are usually used for surface or shallow, subsurface soil sampling. Power operated equipment is usually associated with collecting deep samples, but this equipment can also be used for collecting shallow samples when the auger hole begins to collapse, or when the soil is so tight that manual auguring is not practical. Based on the request of the property owner, EI mainly used hand augers and to a lesser extent we utilized Direct Push Technology (DPT). The following section discusses the DPT methods employed during the site study.

Soil Sampling Collection Methods

Soil samples were collected utilizing either Hand-auger or Direct Push Technology (DPT) methods.

Direct Push Technology Methodology

DPT refers to tools and sensors that are inserted into the subsurface without the use of drilling to remove soil and make a path for the tool. To perform the DPT activities, the contractor utilized a GeoProbe® 6600 machine. The GeoProbe® 6600 is a hydraulically-powered probing machine designed, which uses static force and a percussion hammer to advance small diameter sampling tools into the subsurface to collect soil cores, groundwater samples, and or soil gas samples. A GeoProbe relies on a relatively small amount of static (vehicle) weight combined with percussion as the energy for advancement of a tool string.

The advantages of utilizing DPT drilling methods are described as follows:

- avoids the use of drilling fluids and lubricants during drilling;
- the equipment is highly mobile;
- disturbance of geochemical conditions during installation is minimized; and
- The drilling process does not produce drill cuttings.

DPT Soil Sample Collection Methods

Soil samples utilizing DPT methods were collected from the advanced DPT soil borings continuously in 4.0-foot increments using acetate liners contained in a nickel plated macro sampling tubes. Each soil-filled liner was split for field screening and soil sample collection purposes. Soil samples were collected from the liners with disposable vinyl gloves and utilized for soil vapor screening testing and/or laboratory retention. This sampling method allows for continuous soil sampling from the ground surface to the desired depth. Soil samples selected for analyses are referenced in the text section.

Soil Sample Collection Protocol

The following soil sampling collection procedures were utilized during this study:

- Ensured that all equipment, samplers and tools that will come in contact with the sample media was thoroughly decontaminated.
- Informed driller of sample interval (s) for borehole and oversaw the sampling process.
- Prepared and labeled all sample containers. Samples collected for the analytes of volatiles (if applicable) were sampled first.
- Labeled the containers including the location, depth, analyte, date and time of sampling.
- Delegated the driller to prepare the sample liner by cutting the liner in half.
- Placed liners on a clean sheet of plastic.
- Cut the soil core with a clean decontaminated knife to allow of visual soil classification.
- Sniffed the soil core with a PID/FID and recorded instrument readings volatile organics (VOCs) in a logbook (discussed further below).
- Logged the soil core in a logbook, including borehole identification (ID), sample number, date, time and any pertinent data.

- Logged soil classification including: recording percent recovery, color, description of major constituent, soil texture/structure, grading/sorting/plasticity, relative density or hardness consistency, clay, sand, silt, gravel content, grain size, moisture content, odor, staining and the Unified Soil Classification System (USCS) identifier and symbol;
- Physically collected the selected soil samples and placed these samples into laboratory prepared containers.
- Ensured the soil sample did not contain twigs, stones, and other debris from the soil.
- Packed soil samples for shipment, prepared chain-of-custody records and shipping documentation

Soil Vapor Screening

An important tool in performing this study is performing the soil vapor screening or sniffing activities. Field screening is generally performed for a variety of reasons. The technique conducted during this study was used to screen soil samples for measurable levels of volatile organics. The results obtained from this procedure are not quantitative; however the results from several soil samples are relative and allowed the Field Geologist/Project Manager to select samples that are the most contaminated with the contaminated media. Generally, the presence of little or no organic vapor is possibly indicative of non-contaminated soils. Soil samples collected for purposes of soil headspace screening were tested by the following procedures:

- the field instrument was calibrated, prior to use;
- soil samples were collected directly from the DPT soil liners and placed into sealable plastic bags;
- soil samples within the bags were allowed to equilibrate for approximately five minutes;
- the headspace of each bagged sample was screened with the instrument probe for the presence of volatile organic compound (VOCs) with a Mini-RAE Photo-ionization Detector (PID);
- recording the instrument readings (VOCs) in a field logbook; and
- Verified that the FID/PID was reading background levels prior to exposing the probe into another sample.

Collection of Grab Soil Samples

Soil samples may provide two (2) types of soil contamination representation including grab and composite. Samples may be generally collected in random locations from a grid pattern or selected areas believed to be contaminated as evidenced by field indicators (staining, odors and/or measurable volatile organic readings).

For this study, grab samples selected from areas showing field indicators or confirmation soil samples chosen to confirm the absence of volatile organic readings were chosen. The technical definition for a grab sample is as follows: A grab sample is a discrete aliquot representative of a specific location at a given point in time. The sample is collected at one time and at one particular sampling point and depth. Refer to the text or Chain-of-Custody in this study for soil sample selection, date, time and depths of each sample chosen for laboratory analyses.

Sample Handling Procedures

The sample handling procedures were conducted as follows:

1) Disposable surgical latex gloves were used to avoid cross contamination of samples. Gloves were discarded in a designated "waste bag after each sample was collected.

2) Each confirmation sample upon collection was immediately stored in a cooler containing ice. During the sample collection process, care was taken to insure the samples were not collected in direct sunlight. In addition, during the collection process, no parts of the body without gloves touched any part of the sample.

3) Once placed into the cooler, each sample was protected with bubble wrap® and foam was inserted in the base, sides and top of the cooler.

Soil Boring Abandonment Procedures

Due to the fact that holes in the subsurface may act as a conduit for contamination migration, proper sealing of holes is essential for ensuring that a site assessment does not contribute to the spread of contaminants. The objective of hole-sealing is to prevent preferential migration of contaminants through the bore hole. To seal the boreholes advanced during this study, the contractor utilized a method known as surface pouring. Surface pouring entails sealing the boreholes with dry products (e.g., bentonite granules, chips and/or pellets). Once the DPT drive rods have been withdrawn, dry products are physically poured into the bottom of the borehole and filled vertically up the column to at least two (2) feet from the base of the

borehole. Once the dry products have seated into the borehole, the product is hydrated to expand the clay material. After the hydration process has been performed, the remaining portions of the boreholes are backfilled with the soil cores. Due to the nature of DPT, no soil cuttings were generated during soil boring exploration assessment work.

GROUNDWATER INVESTIGATION

The purpose of a monitoring well is to provide an access point for measuring groundwater levels and to collect groundwater samples representing actual in-situ groundwater conditions at that point of access. For the purpose of this investigation, based on the scope of work, EI chose to install temporary groundwater monitoring wells (Type I).

WELL DEVELOPMENT AND GROUNDWATER SAMPLE COLLECTION

Water Development

The groundwater monitor well was purged with a Peristaltic™ pump. Well development allows fresh water from the formation to enter the well and the groundwater samples will more accurately represent actual groundwater conditions. The well was purged of approximately three (3) to five (5) well volumes of water or until dry prior to sampling.

Groundwater Sampling Procedures

After well development activities were performed, groundwater samples were collected from the well(s) with the referenced pump. During the collection process, samples were poured directly from the bailer into the laboratory supplied containers which were placed into an ice chest filled with ice. Under no circumstances were any intermediate sample containers used, i.e. jar, beaker, etc., and then transferred to the sample container. In addition, water samples were not field filtered.

Prior to collecting the water sample, the containers were labeled accordingly. This procedure was performed prior to sampling because sample containers have a tendency to "sweat" when filled with groundwater; this makes it difficult to affix a label to the container after sampling. The sample label also was covered with a clear piece of tape, which was wrapped around the sample container. This procedure prevented the label from detaching from the container during sample storage and shipment.

Each sample container was labeled indicating the sample location (i.e. GP-1, or MW-1, etc.), date and time of collection, sample location, collector, project site, and analysis identification. Other pertinent information was recorded in the field book.

After the groundwater sample(s) was collected, the containers were immediately placed in a sample cooler containing ice. Upon completion, the samples were transported to Paradigm Analytical Laboratories, located in Wilmington, NC using chain-of-custody documentation.

Soil Boring Abandonment Procedures

Due to the fact that holes in the subsurface may act as a conduit for contamination migration, proper sealing of holes is essential for ensuring that a site assessment does not contribute to the spread of contaminants. The objective of hole-sealing is to prevent preferential migration of contaminants through the bore hole. To seal the boreholes advanced during this study, the contractor utilized a method known as surface pouring. Surface pouring entails sealing the boreholes with dry products (e.g., bentonite granules, chips and/or pellets). Once the DPT drive rods have been withdrawn, dry products are physically poured into the bottom of the borehole and filled vertically up the column to at least two (2) feet from the base of the borehole. Once the dry products have seated into the borehole, the product is hydrated to expand the clay material. After the hydration process has been performed, the remaining portions of the boreholes are backfilled with the soil cores. Due to the nature of DPT, no soil cuttings were generated during soil boring exploration assessment work.

LABORATORY ANALYTICAL METHODS

Soil Analytical Methods

Based upon verbal information provided by NCDOT personnel (Eugene Tarascio), EI selected to analyze the chosen soil samples for total petroleum hydrocarbons (TPH) analyses by Method 8015B with preparation methods for the analysis of Diesel Range Organics (DRO) by GC-FID and Gasoline Range Organics (GRO) by GC-FID. The GRO method is utilized to extract volatile fuels such as gasoline, while the DRO method is utilized to extract less volatile petroleum products such as diesel fuel, fuel oil #2, kerosene, and varsol.

One (1) soil sample from the site was analyzed for volatile organics by SW-846 Method 8260 (5035 Prep), for semi-volatiles (SVOCs) by SW-846 Method 8270, and for aliphatics and aromatics by Massachusetts Department of Environmental Protection's (MADEP) method for volatile petroleum hydrocarbons (VPH) and MADEP's method for extractable petroleum hydrocarbons (EPH), respectively.

These laboratory analytical methods were utilized as required in the *Guidelines* in order to compare results to the DWM's maximum soil contaminant concentration (MSCC) cleanup standards. The MSCC concentrations are also published in the *Guidelines*.

SAMPLE PACKAGING AND SHIPPING

This section discusses the sample packaging and shipping protocol that shall be used to transport collected samples to the laboratories for analytical testing. Samples collected, prepared, preserved and stored must then be readied for packaging and shipping. It is important that the presented protocol be followed to ensure that the samples reach their destination in sound condition. In addition, the samples must be under strict COC from the time they are sampled until the analysis is complete.

Samples collected for this project were classified as environmental materials samples and were not considered hazardous. In addition, the samples collected for this study were not classified as "dangerous goods".

Environmental samples collected for this field study were packed prior to shipment using the following procedures:

1. Secure drain plug on cooler with tape.
2. Place cushioned layer on bottom of cooler (vermiculite or "bubble-wrap" plastic).
3. Line cooler with large heavy duty plastic bag.
4. Place all sample containers in large plastic bag within the cooler. Be sure the lids on all bottles are tight (will not leak).
5. Cushion containers to prevent breakage.
6 Put ice that has been "double bagged" in heavy duty polyethylene bags and placed on top of and/or between the samples within the large plastic bag. Fill all remaining space between the containers with cushion materials.
7 Securely fasten the top of the large plastic bag with tape or tie.
8. Place the Chain-of-Custody Record into a plastic bag, and tape the bag to the inner side of the cooler lid.
9. Close the cooler and securely tape (preferably with fiber tape) the top of the cooler shut. Custody seals should be affixed to the top and sides of the cooler within the securing tape so that the cooler cannot be opened without breaking the seal.
10. Shipping containers (ice cooler) must be marked "THIS END UP", and arrow labels which indicate the proper upward position of the container should be affixed to the container. A label containing the name and address of the shipper should be placed on the containers exterior. Labels used in the shipment of hazardous materials (e.g., Cargo Only Air Craft, Flammable Solids, etc.) are

not permitted to be on the outside of containers used to transport environmental samples.

Shipping Note:
"When samples are to be shipped by common carrier or sent through the United States mail, it must comply with the Department of Transportation Hazardous Materials Regulations (49 CFR 172). The person offering such material for transportation is responsible or ensuring such compliance. For the preservation requirements of 40 CFR, Part 136, Table II, the Office of Hazardous Materials, Materials Transportation Bureau, Department of Transportation has determined that the Hazardous Materials Regulations do not apply to the following materials: Hydrochloric Acid (HCL) in water solutions at concentrations of 0.04% by weight or less (pH about 1.96 or greater); Nitric acid (HN03) in water solutions at concentrations of O.-15% by weight or less (pH about 1. 62 or greater); Sulfuric acid (H2SO4) in water solutions at concentrations of 0.35% by weight or less (pH about 1. 15 or greater); and Sodium Hydroxide (Na OH) in water solutions at concentrations of 0.08% by weight or less (pH about 12.30 or less). This footnote is wholly reproduced from 40 CFR 136.3, which is definitive".

Sample Transportation

The cooler(s) containing the collected soil samples was shipped overnight via Federal Express, with COC documentation, to Prism Laboratories, Inc. in Charlotte, NC. The following protocol was used for sample handling and transportation:

1) The lids on all bottles were tightened to reduce the potential for leakage.
2) The sample identification label on each individual laboratory container was covered with a clear piece of plastic tape. Each container was then placed within an appropriately sized polyethylene bag and sealed.
3) The containers were placed into a bubble-wrap® lined rectangular ice chest (cooler).
4) Ice was placed on top and surrounding bubble-wrap® sample containers. Some of the remaining spaces between the containers were filled with bubble-wrap® and/or ice.
5) The cooler drain plug was secured with clear tape.
6) The COC's was double plastic bagged and was taped to the inner side of the cooler lid.
7) The cooler was closed and securely taped.
8) A label with adhesive tape containing the name and address of the shipper and the address of the laboratory was placed on top of the cooler.

DECONTAMINATION PROCEDURES

Decontamination is the process of washing, rinsing and removing contaminants from exposed surfaces of equipment. Decontamination helps prevent the spread of contamination off-site, and avoids cross-contamination to other samples. The decontamination procedures were performed as follows:

1) Disposable surgical latex gloves were used in lieu of decontamination procedures to collect soil samples.

The soil samples retained for laboratory analyses were placed in the appropriate clean laboratory prepared containers, labeled and subsequently delivered with chain-of-custody documentation (COC) for analysis. Dates and times of sampling may be referenced on the COC's. Specific laboratory analysis methods are referenced in the text of this Study.

QUALITY ASSURANCE PROTOCOL

Field and Laboratory Control Samples

The purpose of this section is to describe the standard control sampling program that supported the data quality objectives for this site. These control samples will included field control Quality Assurance (QA) samples used to assess sources of error. To minimize or consider the impact these errors have on the resulting data, a combination of unique field QA/QC protocols and control samples were developed to meet the QA overall objectives.

Field Control Samples

The elements of the sampling and field QA/QC strategy included the following:

(1) El developed a well thought out sampling strategy for the site. The plan adequately and sufficiently outlined the different types of environmental media and protocol to sample the media.
(2) Sampling methodologies to obtain true representative samples.
(3) Used decontamination procedures in order to reduce cross-contamination potential between sampling points.
(4) Used the proper sample containers, and preservation requirements.
(5) Used the proper storage, and shipping of samples protocol.

Techniques to verify the inclusion of the QA/QC program included scheduled field control samples consisting of field blanks (trip and temperature). The field control samples were handled similarly as the environmental samples.

Quality Control Samples

A trip and temperature blank were collected during this study.

Laboratory QA/QC Procedures

Laboratory QA/QC procedures are implemented in order to prevent, detects, and corrects potential errors during the analytical process. The reliability and credibility of analytical laboratories are corroborated by the development and performance of their respective QA/QC programs. For this project, the NCDOT contracted laboratory provided and performed their program as they see fit. Standard practices used by the selected laboratory included the following quality control sample information in their generated reports:

(a) laboratory method blanks;
(b) temperature blanks.

INVESTIGATION DERIVED WASTE MANAGEMENT PROTOCOL

The investigation derived waste (IDW) generated during the sampling activities were placed on site. These wastes include any derivative investigative soils leftover from the sampling and backfilling protocol, decontamination water (cleaning of field equipment), bailers, bailer haul-line and PPE equipment, if applicable. The management of IDW for this project complies with applicable or relevant and appropriate requirements (ARAs). The site specific ARAs were followed in consensus with the EPA Standard Operating Procedures (SOP) and Quality Assurance Manual, Region 4 and the *Guidelines For Assessment And Corrective Action*, drafted by the North Carolina Underground Storage Tank Section, effective July 1, 2001.

APPENDIX C

SOIL BORING LOGS

ENVIRONMENTAL INVESTIGATIONS, INC.

2101 Gateway Centre Boulevard, Suite 200
Morrisville, North Carolina
919-657-7500

SOIL BORING LOG

Boring No. HA-1
Date Drilled: 02/20/06

Client: NCDOT
Project Name: Parcel #089
Project/Site Location: 84 Mount View Drive, Burnsville, NC
Project Number: ENMO060029.00

Logged By: RMS
Drilling Company: N/A
Drill Device: Hand Auger
Drill Method: Hand Auger

Total Boring Depth: 1.22m
Boring Diameter: 10.16 cm
Weather Conditions: Cold
Boring Location: Proposed Drainage Piping
Surface Elevation:

Depth (Feet)	Depth (meters)	Time	Sample Analyzed	Recovery	Soil Profile	Lithological Description	Sample PID (ppm)
2.00	0.61			100%		Tan to light brown clayey SILT (ML) with trace fine sand, micaceous, dry.	0.0
4.00	1.22						0.0
						Auger Refusal. Boring terminated at 1.22 meters (4.0') bls.	

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919-657-7500

SOIL BORING LOG

Boring No. HA-2
Date Drilled: 02/20/06

Client:	NCDOT	Logged By:	RMS
Project Name:	Parcel #089	Drilling Company:	N/A
Project/Site Location:	84 Mount View Drive, Burnsville, NC	Drill Device:	Hand Auger
Project Number:	ENMO060029.00	Drill Method:	Hand Auger

Total Boring Depth: 1.22m
Boring Diameter: 10.16 cm
Weather Conditions: Cold
Boring Location: Proposed Drainage Piping
Surface Elevation:

Depth (Feet)	Depth (meters)	Time	Sample Analyzed	Recovery	Soil Profile	Lithological Description	Sample PID (ppm)
2.00	0.61			100%		Tan to light brown clayey SILT (ML) with trace fine sand, micaceous, dry.	0.0
4.00	1.22						0.0
						Auger Refusal. Boring terminated at 1.22 meters (4.0') bls.	

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919-657-7500

SOIL BORING LOG

Boring No. **HA-3**
Date Drilled: **02/20/06**

Client:	NCDOT	Logged By:	RMS
Project Name:	Parcel #089	Drilling Company:	N/A
Project/Site Location:	84 Mount View Drive, Burnsville, NC	Drill Device:	Hand Auger
Project Number:	ENMO060029.00	Drill Method:	Hand Auger

Total Boring Depth: 1.22m
Boring Diameter: 10.16 cm
Weather Conditions: Cold
Boring Location: Proposed Drainage Piping
Surface Elevation:

Depth (Feet)	Depth (meters)	Time	Sample Analyzed	Recovery	Soil Profile	Lithological Description	Sample PID (ppm)
2.00	0.61			100%		Tan to light brown clayey SILT (ML) with trace fine sand, micaeous, dry.	0.0
4.00	1.22						0.0
						Auger Refusal. Boring terminated at 1.22 meters (4.0') bls.	

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SOIL BORING LOG

Boring No. **HA-4**
Date Drilled: **02/20/06**

Client:	NCDOT	Logged By:	RMS
Project Name:	Parcel #089	Drilling Company:	N/A
Project/Site Location:	84 Mount View Drive, Burnsville, NC	Drill Device:	Hand Auger
Project Number:	ENMO060029.00	Drill Method:	Hand Auger

Total Boring Depth: 2.44m
Boring Diameter: 10.16 cm
Weather Conditions: Cold
Boring Location: Proposed Drainage Piping
Surface Elevation:

Depth (Feet)	Depth (meters)	Time	Sample Analyzed	Recovery	Soil Profile	Lithological Description	Sample PID (ppm)
2.00	0.61			100%	ML	Reddish brown to light tan clayey SILT (ML), micaceous, dry to slightly moist	0.0
4.00	1.22						0.1
6.00	1.83			100%	CL	Reddish brown to light tan silty CLAY (CL), very micaceous, low plasticity, dry to slightly moist	0.0
8.00	2.44	11:20	x				0.3
						Boring terminated at 2.44 meters (8.0') bls. x denotes soil sample at 2.13m - 2.44m (7'-8') bls interval collected for laboratory retention.	

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SOIL BORING LOG

Boring No. **HA-5**
Date Drilled: **02/20/06**

Client:	NCDOT	Logged By:	RMS
Project Name:	Parcel #089	Drilling Company:	N/A
Project/Site Location:	84 Mount View Drive, Burnsville, NC	Drill Device:	Hand Auger
Project Number:	ENMO060029.00	Drill Method:	Hand Auger

Total Boring Depth: 1.22m
Boring Diameter: 10.16 cm
Weather Conditions: Cold
Boring Location: Proposed Drainage Piping
Surface Elevation:

Depth (Feet)	Depth (meters)	Time	Sample Analyzed	Recovery	Soil Profile	Lithological Description	Sample PID (ppm)
2.00	0.61			100%		Tan to light brown clayey SILT (ML) with trace fine sand, micaeous, dry.	0.0
4.00	1.22						0.0
						Auger Refusal. Boring terminated at 1.22 meters (4.0') bls.	

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SOIL BORING LOG

Boring No. **HA-6**
Date Drilled: **02/20/06**

Client:	NCDOT	Logged By:	RMS
Project Name:	Parcel #089	Drilling Company:	N/A
Project/Site Location:	84 Mount View Drive, Burnsville, NC	Drill Device:	Hand Auger
Project Number:	ENMO060029.00	Drill Method:	Hand Auger

Total Boring Depth: 2.44m
Boring Diameter: 10.16 cm
Weather Conditions: Cold
Boring Location: Proposed Drainage Piping
Surface Elevation:

Depth (Feet)	Depth (meters)	Time	Sample Analyzed	Recovery	Soil Profile	Lithological Description	Sample PID (ppm)
2.00	0.61			100%	ML	Reddish brown to light tan clayey SILT (ML), micaceous, dry to slightly moist	0.0
4.00	1.22						0.1
6.00	1.83			100%	CL	Reddish brown to light tan silty CLAY (CL), very micaceous, low plasticity, dry to slightly moist	0.0
8.00	2.44	12:45	x				0.3
						Boring terminated at 2.44 meters (8.0') bls. x denotes soil sample at 2.13m - 2.44m (7'-8') bls interval collected for laboratory retention.	

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SOIL BORING LOG

Boring No. HA-7
Date Drilled: 02/20/06

Client:	NCDOT	Logged By:	RMS
Project Name:	Parcel #089	Drilling Company:	N/A
Project/Site Location:	84 Mount View Drive, Burnsville, NC	Drill Device:	Hand Auger
Project Number:	ENMO060029.00	Drill Method:	Hand Auger

Total Boring Depth: 1.22m
Boring Diameter: 10.16 cm
Weather Conditions: Cold
Boring Location: Proposed Drainage Piping
Surface Elevation:

Depth (Feet)	Depth (meters)	Time	Sample Analyzed	Recovery	Soil Profile	Lithological Description	Sample PID (ppm)
						Tan to light brown clayey SILT (ML) with trace fine sand, micaeous, dry.	0.0
2.00	0.61			100%			
							0.0
4.00	1.22						
						Auger Refusal. Boring terminated at 1.22 meters (4.0') bls.	

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SOIL BORING LOG

Boring No. **HA-8**
Date Drilled: **02/20/06**

Client:	NCDOT	Logged By:	RMS
Project Name:	Parcel #089	Drilling Company:	N/A
Project/Site Location:	84 Mount View Drive, Burnsville, NC	Drill Device:	Hand Auger
Project Number:	ENMO060029.00	Drill Method:	Hand Auger

Total Boring Depth: 1.22m
Weather Conditions: Cold
Surface Elevation:
Boring Diameter: 10.16 cm
Boring Location: Proposed Drainage Piping

Depth (Feet)	Depth (meters)	Time	Sample Analyzed	Recovery	Soil Profile	Lithological Description	Sample PID (ppm)
						Tan to light brown clayey SILT (ML) with trace fine sand, micaceous, dry.	0.0
2.00	0.61			100%			0.0
4.00	1.22					Auger Refusal. Boring terminated at 1.22 meters (4.0') bls.	

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SOIL BORING LOG

Boring No. **HA-9**
Date Drilled: **02/21/06**

Client:	NCDOT	Logged By:	RMS
Project Name:	Parcel #089	Drilling Company:	N/A
Project/Site Location:	84 Mount View Drive, Burnsville, NC	Drill Device:	Hand Auger
Project Number:	ENMO060029.00	Drill Method:	Hand Auger

Total Boring Depth: 2.44m
Boring Diameter: 10.16 cm
Weather Conditions: Cold
Boring Location: Proposed Drainage Piping
Surface Elevation:

Depth (Feet)	Depth (meters)	Time	Sample Analyzed	Recovery	Soil Profile	Lithological Description	Sample PID (ppm)
						Reddish brown to light tan clayey SILT (ML), micaceous, dry to slightly moist	0.0
2.00	0.61			100%			0.1
4.00	1.22						
						Reddish brown to light tan silty CLAY (CL), very micaceous, low plasticity, dry to slightly moist	0.0
6.00	1.83			100%			0.3
8.00	2.44	12:06	x				
						Boring terminated at 2.44 meters (8.0') bls. x denotes soil sample at 2.13m - 2.44m (7'-8') bls interval collected for laboratory retention.	

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SOIL BORING LOG

Boring No. **HA-10**
Date Drilled: **02/21/06**

Client:	NCDOT	Logged By:	RMS
Project Name:	Parcel #089	Drilling Company:	N/A
Project/Site Location:	84 Mount View Drive, Burnsville, NC	Drill Device:	Hand Auger
Project Number:	ENMO060029.00	Drill Method:	Hand Auger

Total Boring Depth: 2.44m
Boring Diameter: 10.16 cm
Weather Conditions: Cold
Boring Location: Proposed Drainage Piping
Surface Elevation:

Depth (Feet)	Depth (meters)	Time	Sample Analyzed	Recovery	Soil Profile	Lithological Description	Sample PID (ppm)
						Reddish brown to light tan clayey SILT (ML), micaeous, dry to slightly moist	0.0
2.00	0.61			100%	ML		0.1
4.00	1.22						
						Reddish brown to light tan silty CLAY (CL), very micaeous, low plasticity, dry to slightly moist	0.0
6.00	1.83			100%	CL		
		12:44	x				0.3
8.00	2.44						
						Boring terminated at 2.44 meters (8.0') bls. x denotes soil sample at 2.13m - 2.44m (7'-8') bls interval collected for laboratory retention.	

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SOIL BORING LOG

Boring No. GP-1
Date Drilled: 03/22/06

Client:	NCDOT	Logged By:	RMS
Project Name:	Parcel #089	Drilling Company:	N/A
Project/Site Location:	84 Mount View Drive, Burnsville, NC	Drill Device:	Hand Auger
Project Number:	ENMO060029.00	Drill Method:	Hand Auger

Total Boring Depth: 3.66m | Weather Conditions: Cold | Surface Elevation:
Boring Diameter: 10.16 cm | Boring Location: Downgradient from USTs

Depth (Feet)	Depth (meters)	Time	Sample Analyzed	Recovery	Soil Profile	Lithological Description	Sample PID (ppm)
						Reddish brown to tan clayey SILT (ML) with trace fine sand, slightly micaceous, dry.	0.0
2.00	0.61			100%			0.0
4.00	1.22						
				100%		Reddish brown to tan silty CLAY (CL) micaceous, dry.	0.0
6.00	1.83						0.0
8.00	2.44						
				100%			0.0
10.00	3.05						
		15:05	x				0.0
12.00	3.66						
						Boring terminated at 3,658m (12.0') bls. x denotes soil sample at 2.13m - 2.44m (7'-8') bls interval collected for laboratory retention.	

ENVIRONMENTAL INVESTIGATIONS, INC.

2101 Gateway Centre Boulevard, Suite 200
Morrisville, North Carolina
919-657-7500

SOIL BORING LOG

Boring No. GP-2
Date Drilled: 03/22/06

Client:	NCDOT	Logged By:	RMS
Project Name:	Parcel #089	Drilling Company:	Troxler Geologic Services
Project/Site Location:	84 Mount View Drive, Burnsville, NC	Drill Device:	GeoProbe 6600
Project Number:	ENMO060029.00	Drill Method:	DPT

Total Boring Depth: 10.98m
Weather Conditions: Cool
Surface Elevation:
Boring Diameter: 10.16 cm
Boring Location: Downgradient of pump island

Depth (Feet)	Depth (meters)	Time	Sample Analyzed	Recovery	Soil Profile	Lithological Description	Sample PID (ppm)
4.00	1.22			100%		Tan to light brown clayey SILT (ML), dry.	NA
8.00	2.44	15:15	x				NA
12.00	3.66			100%			0.0
16.00	4.88					Unknown - Boring was advanced to the investigated depth without soil sampling for purposes of retrieving a water sample.	
20.00	6.10						
24.00	7.32						
28.00	8.54						
32.00	9.76						
35.00	10.67						
						Boring terminated at 10.98m (35.0 feet) bls. Type I temporary monitoring well installed. Soil sample collected at 2.44m - 3.05m (8.0 - 10.0 feet) bls interval for analyical testing.	

APPENDIX D

LABORATORY ANALYICAL REPORT

Mr. Bob Shaut
Environmental Investigations
2101 Gateway Centre Boulevard
Suite 200
Morrisville NC 27560
Report Number: G106-565

Client Project: NCDOT-Yancey

Dear Mr. Shaut:

Enclosed are the results of the analytical services performed under the referenced project. The samples are certified to meet the requirements of the National Environmental Laboratory Accreditation Conference Standards. Copies of this report and supporting data will be retained in our files for a period of five years in the event they are required for future reference. Any samples submitted to our laboratory will will be retained for a maximum of thirty (30) days from the date of this report unless other arrangements are requested.

If there are any questions about the report or the services performed during this project, please call Paradigm at (910) 350-1903. We will be happy to answer any questions or concerns which you may have.

Thank you for using Paradigm Analytical Labs for your analytical services. We look forward to working with you again on any additional analytical needs which you may have.

Sincerely,
Paradigm Analytical Laboratories, Inc.

3/10/2006
Laboratory Director — Date
J. Patrick Weaver

CASE NARATIVE

Date: March 10, 2006

Environmental Investigations Project ID: NCDOT Yancey
SGS-Paradigm Analytical ID: G106-565

Twenty-four samples were received at the laboratory February 24 for analysis as indicated on the chain of custody. The samples were received in good condition, within temperature and holding time limits.

All extractions and analyses were completed within holding time and without quality control exception.

Many of the 8260 sample results show low concentrations of methylene chloride below the reporting limit but above the method detection limit. This analyte is a common laboratory solvent and its detection is likely a laboratory artifact.

Results for Total Petroleum Hydrocarbons
by GC/FID 8015

Client Sample ID: PAR 206 GP1
Client Project ID: NCDOT-Yancey
Lab Sample ID: G106-565-1
Lab Project ID: G106-565
Report Basis: Dry Weight

Analyzed By: MJC
Date Collected: 2/22/06 16:00
Date Received: 2/24/06
Matrix: Soil
Solids 78.08

Analyte	Result MG/KG	RL MG/KG	Prep Method	Dilution Factor	Date Analyzed
Gasoline Range Organics	BQL	7.75	5035	1	02/25/06
Diesel Range Organics	13.8	7.51	3541	1	02/27/06

Reviewed By: _____
TPH_LIMS_v1 8.XLS

Results for Total Petroleum Hydrocarbons
by GC/FID 8015

Client Sample ID: PAR 206 HA1
Client Project ID: NCDOT-Yancey
Lab Sample ID: G106-565-2
Lab Project ID: G106-565
Report Basis: Dry Weight

Analyzed By: MJC
Date Collected: 2/22/06 17:00
Date Received: 2/24/06
Matrix: Soil
Solids 75.83

Analyte	Result MG/KG	RL MG/KG	Prep Method	Dilution Factor	Date Analyzed
Gasoline Range Organics	BQL	9.16	5035	1	02/25/06
Diesel Range Organics	BQL	7.54	3541	1	02/27/06

Reviewed By: _____

Results for Total Petroleum Hydrocarbons
by GC/FID 8015

Client Sample ID: PAR 206 HA1A
Client Project ID: NCDOT-Yancey
Lab Sample ID: G106-565-3
Lab Project ID: G106-565
Report Basis: Dry Weight

Analyzed By: MJC
Date Collected: 2/23/06 9:50
Date Received: 2/24/06
Matrix: Soil
Solids 76.88

Analyte	Result MG/KG	RL MG/KG	Prep Method	Dilution Factor	Date Analyzed
Gasoline Range Organics	BQL	8.32	5035	1	02/25/06
Diesel Range Organics	BQL	7.67	3541	1	02/27/06

Reviewed By: _____
TPH_LIMS_V1.9.XLS

Results for Total Petroleum Hydrocarbons
by GC/FID 8015

Client Sample ID: PAR 206 HA2
Client Project ID: NCDOT-Yancey
Lab Sample ID: G106-565-4
Lab Project ID: G106-565
Report Basis: Dry Weight

Analyzed By: MJC
Date Collected: 2/23/06 10:20
Date Received: 2/24/06
Matrix: Soil
Solids 77.25

Analyte	Result MG/KG	RL MG/KG	Prep Method	Dilution Factor	Date Analyzed
Gasoline Range Organics	BQL	7.23	5035	1	02/27/06
Diesel Range Organics	BQL	7.58	3541	1	02/27/06

Reviewed By: _____

Results for Total Petroleum Hydrocarbons
by GC/FID 8015

Client Sample ID: PAR 206 HA3
Client Project ID: NCDOT-Yancey
Lab Sample ID: G106-565-5
Lab Project ID: G106-565
Report Basis: Dry Weight

Analyzed By: MJC
Date Collected: 2/23/06 11:00
Date Received: 2/24/06
Matrix: Soil
Solids 70.87

Analyte	Result MG/KG	RL MG/KG	Prep Method	Dilution Factor	Date Analyzed
Gasoline Range Organics	BQL	8.14	5035	1	02/27/06
Diesel Range Organics	BQL	8.10	3541	1	02/28/06

Reviewed By: _____
TPH_LIMS_v1 ▮ XLS

Results for Total Petroleum Hydrocarbons
by GC/FID 8015

Client Sample ID: PAR 206 HA4
Client Project ID: NCDOT-Yancey
Lab Sample ID: G106-565-6
Lab Project ID: G106-565
Report Basis: Dry Weight

Analyzed By: MJC
Date Collected: 2/23/06 11:05
Date Received: 2/24/06
Matrix: Soil
Solids 73.43

Analyte	Result MG/KG	RL MG/KG	Prep Method	Dilution Factor	Date Analyzed
Gasoline Range Organics	BQL	6.98	5035	1	02/27/06
Diesel Range Organics	109	8.47	3541	1	02/28/06

Results for Total Petroleum Hydrocarbons
by GC/FID 8015

Client Sample ID: PAR 127 GP1-8
Client Project ID: NCDOT-Yancey
Lab Sample ID: G106-565-7
Lab Project ID: G106-565
Report Basis: Dry Weight

Analyzed By: MJC
Date Collected: 2/23/06 14:00
Date Received: 2/24/06
Matrix: Soil
Solids 78.88

Analyte	Result MG/KG	RL MG/KG	Prep Method	Dilution Factor	Date Analyzed
Gasoline Range Organics	BQL	6.89	5035	1	02/27/06
Diesel Range Organics	BQL	7.86	3541	1	02/28/06

Reviewed By: [signature]

Results for Total Petroleum Hydrocarbons
by GC/FID 8015

Client Sample ID: PAR 163 GP1-10
Client Project ID: NCDOT-Yancey
Lab Sample ID: G106-565-8
Lab Project ID: G106-565
Report Basis: Dry Weight

Analyzed By: MJC
Date Collected: 2/22/06 9:15
Date Received: 2/24/06
Matrix: Soil
Solids 71.71

Analyte	Result MG/KG	RL MG/KG	Prep Method	Dilution Factor	Date Analyzed
Gasoline Range Organics	BQL	7.57	5035	1	02/27/06
Diesel Range Organics	BQL	8.14	3541	1	02/28/06

Reviewed By: _____

Results for Total Petroleum Hydrocarbons
by GC/FID 8015

Client Sample ID: PAR 163 GP2-10
Client Project ID: NCDOT-Yancey
Lab Sample ID: G106-565-9
Lab Project ID: G106-565
Report Basis: Dry Weight

Analyzed By: MJC
Date Collected: 2/22/06 9:22
Date Received: 2/24/06
Matrix: Soil
Solids 77.19

Analyte	Result MG/KG	RL MG/KG	Prep Method	Dilution Factor	Date Analyzed
Gasoline Range Organics	BQL	7.22	5035	1	02/27/06
Diesel Range Organics	**8.04**	7.16	3541	1	02/28/06

Reviewed By: _____

Results for Total Petroleum Hydrocarbons
by **GC/FID 8015**

Client Sample ID: PAR 163 GP3-10
Client Project ID: NCDOT-Yancey
Lab Sample ID: G106-565-10
Lab Project ID: G106-565
Report Basis: Dry Weight

Analyzed By: MJC
Date Collected: 2/22/06 10:00
Date Received: 2/24/06
Matrix: Soil
Solids 74.16

Analyte	Result MG/KG	RL MG/KG	Prep Method	Dilution Factor	Date Analyzed
Gasoline Range Organics	BQL	7.04	5035	1	02/27/06
Diesel Range Organics	BQL	8.12	3541	1	02/28/06

Results for Total Petroleum Hydrocarbons
by GC/FID 8015

Client Sample ID: PAR 163 GP4-10
Client Project ID: NCDOT-Yancey
Lab Sample ID: G106-565-11
Lab Project ID: G106-565
Report Basis: Dry Weight

Analyzed By: MJC
Date Collected: 2/22/06 10:45
Date Received: 2/24/06
Matrix: Soil
Solids 77.80

Analyte	Result MG/KG	RL MG/KG	Prep Method	Dilution Factor	Date Analyzed
Gasoline Range Organics	BQL	6.54	5035	1	02/27/06
Diesel Range Organics	**20.6**	7.26	3541	1	02/28/06

Results for Total Petroleum Hydrocarbons
by GC/FID 8015

Client Sample ID: PAR 163 GP5-10
Client Project ID: NCDOT-Yancey
Lab Sample ID: G106-565-12
Lab Project ID: G106-565
Report Basis: Dry Weight

Analyzed By: MJC
Date Collected: 2/22/06 11:00
Date Received: 2/24/06
Matrix: Soil
Solids 69.99

Analyte	Result MG/KG	RL MG/KG	Prep Method	Dilution Factor	Date Analyzed
Gasoline Range Organics	BQL	7.75	5035	1	02/27/06
Diesel Range Organics	BQL	8.31	3541	1	02/28/06

Reviewed By: _____

Results for Total Petroleum Hydrocarbons
by GC/FID 8015

Client Sample ID: PAR 199A GP1-10
Client Project ID: NCDOT-Yancey
Lab Sample ID: G106-565-13
Lab Project ID: G106-565
Report Basis: Dry Weight

Analyzed By: MJC
Date Collected: 2/22/06 12:30
Date Received: 2/24/06
Matrix: Soil
Solids 86.37

Analyte	Result MG/KG	RL MG/KG	Prep Method	Dilution Factor	Date Analyzed
Gasoline Range Organics	BQL	7.31	5035	1	02/27/06
Diesel Range Organics	BQL	6.75	3541	1	02/28/06

Reviewed By: _____
TPH_LIMS_v1.9 XLS

Results for Total Petroleum Hydrocarbons
by **GC/FID 8015**

Client Sample ID: PAR 199A GP2-10
Client Project ID: NCDOT-Yancey
Lab Sample ID: G106-565-14
Lab Project ID: G106-565
Report Basis: Dry Weight

Analyzed By: MJC
Date Collected: 2/22/06 12:45
Date Received: 2/24/06
Matrix: Soil
Solids 90.91

Analyte	Result MG/KG	RL MG/KG	Prep Method	Dilution Factor	Date Analyzed
Gasoline Range Organics	BQL	6.57	5035	1	02/27/06
Diesel Range Organics	BQL	6.65	3541	1	02/28/06

Reviewed By: _____

Results for Total Petroleum Hydrocarbons
by GC/FID 8015

Client Sample ID: PAR 199A GP3-10
Client Project ID: NCDOT-Yancey
Lab Sample ID: G106-565-15
Lab Project ID: G106-565
Report Basis: Dry Weight

Analyzed By: MJC
Date Collected: 2/22/06 13:00
Date Received: 2/24/06
Matrix: Soil
Solids 91.13

Analyte	Result MG/KG	RL MG/KG	Prep Method	Dilution Factor	Date Analyzed
Gasoline Range Organics	BQL	7.53	5035	1	02/27/06
Diesel Range Organics	BQL	6.74	3541	1	03/02/06

Reviewed By: _____

Results for Total Petroleum Hydrocarbons
by GC/FID 8015

Client Sample ID: PAR 89 HA4-8
Client Project ID: NCDOT-Yancey
Lab Sample ID: G106-565-16
Lab Project ID: G106-565
Report Basis: Dry Weight

Analyzed By: MJC
Date Collected: 2/20/2006 11:20
Date Received: 2/24/2006
Matrix: Soil
Solids 68.16

Analyte	Result MG/KG	Report Limit MG/KG	Prep Method	Dilution Factor	Date Analyzed
Gasoline Range Organics	BQL	8.08	5035	1	02/24/06
Diesel Range Organics	BQL	9.13	3545	1	03/02/06

Comments:

Reviewed By: _____

Results for Total Petroleum Hydrocarbons
by GC/FID 8015

Client Sample ID: PAR 89 HA6-8
Client Project ID: NCDOT-Yancey
Lab Sample ID: G106-565-17
Lab Project ID: G106-565
Report Basis: Dry Weight

Analyzed By: MJC
Date Collected: 2/20/06 12:45
Date Received: 2/24/06
Matrix: Soil
Solids 77.20

Analyte	Result MG/KG	RL MG/KG	Prep Method	Dilution Factor	Date Analyzed
Gasoline Range Organics	BQL	8.69	5035	1	02/24/06
Diesel Range Organics	BQL	8.05	3541	1	03/02/06

Reviewed By: _____

Results for Total Petroleum Hydrocarbons
by GC/FID 8015

Client Sample ID: PAR 89 HA9-9
Client Project ID: NCDOT-Yancey
Lab Sample ID: G106-565-18
Lab Project ID: G106-565
Report Basis: Dry Weight

Analyzed By: MJC
Date Collected: 2/21/06 12:06
Date Received: 2/24/06
Matrix: Soil
Solids 69.34

Analyte	Result MG/KG	RL MG/KG	Prep Method	Dilution Factor	Date Analyzed
Gasoline Range Organics	BQL	8.45	5035	1	02/24/06
Diesel Range Organics	51.8	8.98	3541	1	03/02/06

Reviewed By: _____

Results for Total Petroleum Hydrocarbons

by **GC/FID 8015**

Client Sample ID: PAR 89 HA10-9
Client Project ID: NCDOT-Yancey
Lab Sample ID: G106-565-19
Lab Project ID: G106-565
Report Basis: Dry Weight

Analyzed By: MJC
Date Collected: 2/21/2006 12:44
Date Received: 2/24/2006
Matrix: Soil
Solids 61.86

Analyte	Result MG/KG	Report Limit MG/KG	Prep Method	Dilution Factor	Date Analyzed
Gasoline Range Organics	BQL	7.09	5035	1	02/24/06
Diesel Range Organics	BQL	9.89	3545	1	03/02/06

Comments:

Reviewed By: _____

Results for Total Petroleum Hydrocarbons
by GC/FID 8015

Client Sample ID: PAR 221 GP1-8
Client Project ID: NCDOT-Yancey
Lab Sample ID: G106-565-20
Lab Project ID: G106-565
Report Basis: Dry Weight

Analyzed By: MJC
Date Collected: 2/21/06 15:15
Date Received: 2/24/06
Matrix: Soil
Solids 75.74

Analyte	Result MG/KG	RL MG/KG	Prep Method	Dilution Factor	Date Analyzed
Gasoline Range Organics	**19.0**	6.65	5035	1	02/24/06
Diesel Range Organics	**112**	8.11	3541	1	03/02/06

Reviewed By: _____
TPH_LIMS_v1.0 XLS

Results for Total Petroleum Hydrocarbons
by GC/FID 8015

Client Sample ID: PAR 221 GP2-8
Client Project ID: NCDOT-Yancey
Lab Sample ID: G106-565-21
Lab Project ID: G106-565
Report Basis: Dry Weight

Analyzed By: MJC
Date Collected: 2/21/06 15:28
Date Received: 2/24/06
Matrix: Soil
Solids 69.37

Analyte	Result MG/KG	RL MG/KG	Prep Method	Dilution Factor	Date Analyzed
Gasoline Range Organics	BQL	8.50	5035	1	02/25/06
Diesel Range Organics	BQL	8.96	3541	1	03/02/06

Reviewed By: _____

Results for Total Petroleum Hydrocarbons
by GC/FID 8015

Client Sample ID: PAR 221 GP3-8
Client Project ID: NCDOT-Yancey
Lab Sample ID: G106-565-22
Lab Project ID: G106-565
Report Basis: Dry Weight

Analyzed By: MJC
Date Collected: 2/21/06 15:45
Date Received: 2/24/06
Matrix: Soil
Solids 72.24

Analyte	Result MG/KG	RL MG/KG	Prep Method	Dilution Factor	Date Analyzed
Gasoline Range Organics	BQL	6.82	5035	1	02/25/06
Diesel Range Organics	**10.8**	8.64	3541	1	03/02/06

Reviewed By: _____

Results for Total Petroleum Hydrocarbons
by GC/FID 8015

Client Sample ID: PAR 221 GP4-10
Client Project ID: NCDOT-Yancey
Lab Sample ID: G106-565-23
Lab Project ID: G106-565
Report Basis: Dry Weight

Analyzed By: MJC
Date Collected: 2/21/06 16:36
Date Received: 2/24/06
Matrix: Soil
Solids 76.29

Analyte	Result MG/KG	RL MG/KG	Prep Method	Dilution Factor	Date Analyzed
Gasoline Range Organics	BQL	7.12	5035	1	02/25/06
Diesel Range Organics	BQL	8.10	3541	1	03/02/06

Reviewed By: BV

QC Results for Total Petroleum Hydrocarbons
by GC/FID

Client Sample ID: Batch QC
Lab Sample ID: g106-565-20a
LCS ID: LCS4022406A / VP022406

Analyzed By: MJC
Matrix: Soil
Solids 75.74

MS/MSD

Analyte	Sample MG/KG	Spiked MG/KG	MS MG/KG	REC %		Spiked MG/KG	MSD MG/KG	REC % (70-130)		RPD %
GRO	17.8	44.3	62.1	100		44.3	63.2	102		1.98

LCS

Analyte		Spiked MG/KG	Result MG/KG	REC %		LIMITS Lower	Upper	
GRO		40	39	96.3		70	130	

Comments:

Reviewed By: _____

Results for Total Petroleum Hydrocarbons
by GC/FID 8015

Client Sample ID: Method Blank
Client Project ID:
Lab Sample ID: VBLK4022406A
Lab Project ID:
Report Basis: Dry Weight

Analyzed By: MJC
Date Collected:
Date Received:
Matrix: Soil
Solids 100.00

Analyte	Result mg/kg	RL mg/kg	Prep Method	Dilution Factor	Date Analyzed
Gasoline Range Organics	BQL	6.00	5035	1	02/24/06

Surrogate Spike Results	Spike Added	Spike Result	Percent Recovery
BFB	50	49.5	99

Comments:

Flags:

QC Results for Total Petroleum Hydrocarbons
by GC/FID

Client Sample ID: Batch QC
Lab Sample ID: g106-565-4a
LCS ID: LCS4022706A / VP022706

Analyzed By: MJC
Matrix: Soil
Solids 77.25

MS/MSD

Analyte	Sample MG/KG	Spiked MG/KG	MS MG/KG	REC %		Spiked MG/KG	MSD MG/KG	REC % (70-130)		RPD %
GRO	BQL	48.2	44.5	92.3		48.2	45.8	95		2.88

LCS

Analyte		Spiked MG/KG	Result MG/KG	REC %		LIMITS Lower	Upper	
GRO		40	38	95.3		70	130	

Comments:

Reviewed By: BV

Results for Total Petroleum Hydrocarbons
by GC/FID 8015

Client Sample ID: Method Blank
Client Project ID:
Lab Sample ID: VBLK4022706A
Lab Project ID:
Report Basis: Dry Weight

Analyzed By: MJC
Date Collected:
Date Received:
Matrix: Soil
Solids 100.00

Analyte	Result mg/kg	RL mg/kg	Prep Method	Dilution Factor	Date Analyzed
Gasoline Range Organics	BQL	6.00	5035	1	02/27/06

Surrogate Spike Results	Spike Added	Spike Result	Percent Recovery
BFB	50	46.6	93.2

Comments:

Flags:

Reviewed By: _____

Results for Volatiles
by GCMS 8260-5035

Client Sample ID: PAR 206 GP1
Client Project ID: NCDOT-Yancey
Lab Sample ID G106-565-1A
Lab Project ID: G106-565
Report Basis: Dry Weight

Analyzed By: JTF
Date Collected: 02-22-2006 16:00
Date Received: 2/24/2006
Matrix: Soil
%Solids: 78.1

Report Name Compound	Result UG/KG	Quantitation Limit UG/KG	MDL UG/KG	Dilution Factor	Date Analyzed	Flag
Acetone	**25.9**	70.8	4.17	1	2/27/2006	J
Benzene	BQL	7.08	4.04	1	2/27/2006	
Bromobenzene	BQL	7.08	3.49	1	2/27/2006	
Bromochloromethane	BQL	7.08	4.14	1	2/27/2006	
Bromodichloromethane	BQL	7.08	4.02	1	2/27/2006	
Bromoform	BQL	7.08	3.43	1	2/27/2006	
Bromomethane	BQL	7.08	5.94	1	2/27/2006	
2-Butanone	**11.5**	35.4	4.08	1	2/27/2006	J
n-Butylbenzene	BQL	7.08	4.75	1	2/27/2006	
sec-Butylbenzene	BQL	7.08	4.96	1	2/27/2006	
tert-Butylbenzene	BQL	7.08	4.92	1	2/27/2006	
Carbon disulfide	BQL	7.08	3.73	1	2/27/2006	
Carbon tetrachloride	BQL	7.08	4.90	1	2/27/2006	
Chlorobenzene	BQL	7.08	3.56	1	2/27/2006	
Chloroethane	BQL	7.08	4.45	1	2/27/2006	
Chloroform	BQL	7.08	3.56	1	2/27/2006	
Chloromethane	BQL	7.08	3.41	1	2/27/2006	
2-Chlorotoluene	BQL	7.08	4.22	1	2/27/2006	
4-Chlorotoluene	BQL	7.08	3.94	1	2/27/2006	
Dibromochloromethane	BQL	7.08	3.17	1	2/27/2006	
1,2-Dibromo-3-chloropropane	BQL	7.08	15.0	1	2/27/2006	
Dibromomethane	BQL	7.08	4.25	1	2/27/2006	
1,2-Dibromoethane (EDB)	BQL	7.08	3.30	1	2/27/2006	
1,2-Dichlorobenzene	BQL	7.08	3.41	1	2/27/2006	
1,3-Dichlorobenzene	BQL	7.08	3.32	1	2/27/2006	
1,4-Dichlorobenzene	BQL	7.08	3.49	1	2/27/2006	
trans-1,4-Dichloro-2-butene	BQL	7.08	15.2	1	2/27/2006	
1,1-Dichloroethane	BQL	7.08	4.08	1	2/27/2006	
1,1-Dichloroethene	BQL	7.08	5.45	1	2/27/2006	
1,2-Dichloroethane	BQL	7.08	4.07	1	2/27/2006	
cis-1,2-Dichloroethene	BQL	7.08	3.49	1	2/27/2006	
trans-1,2-dichloroethene	BQL	7.08	4.60	1	2/27/2006	
1,2-Dichloropropane	BQL	7.08	3.63	1	2/27/2006	
1,3-Dichloropropane	BQL	7.08	3.24	1	2/27/2006	
2,2-Dichloropropane	BQL	7.08	4.51	1	2/27/2006	
1,1-Dichloropropene	BQL	7.08	5.11	1	2/27/2006	
cis-1,3-Dichloropropene	BQL	7.08	3.94	1	2/27/2006	
trans-1,3-Dichloropropene	BQL	7.08	4.01	1	2/27/2006	
Dichlorodifluoromethane	BQL	7.08	5.28	1	2/27/2006	
Diisopropyl ether (DIPE)	BQL	7.08	3.36	1	2/27/2006	
Ethylbenzene	BQL	7.08	4.31	1	2/27/2006	

Results for Volatiles
by GCMS 8260-5035

Client Sample ID: PAR 206 GP1
Client Project ID: NCDOT-Yancey
Lab Sample ID G106-565-1A
Lab Project ID: G106-565
Report Basis: Dry Weight

Analyzed By: JTF
Date Collected: 02-22-2006 16:00
Date Received: 2/24/2006
Matrix: Soil
%Solids: 78.1

Report Name Compound	Result UG/KG	Quantitation Limit UG/KG	MDL UG/KG	Dilution Factor	Date Analyzed	Flag
Hexachlorobutadiene	BQL	7.08	5.60	1	2/27/2006	
2-Hexanone	BQL	7.08	3.09	1	2/27/2006	
Iodomethane	BQL	7.08	6.59	1	2/27/2006	
Isopropylbenzene	BQL	7.08	4.56	1	2/27/2006	
4-Isopropyltoluene	BQL	7.08	4.82	1	2/27/2006	
Methylene chloride	16.3	28.3	4.05	1	2/27/2006	J
4-Methyl-2-pentanone	BQL	7.08	3.27	1	2/27/2006	
Methyl-tert-butyl ether (MTBE)	BQL	7.08	3.60	1	2/27/2006	
Naphthalene	BQL	7.08	2.85	1	2/27/2006	
n-Propyl benzene	BQL	7.08	4.55	1	2/27/2006	
Styrene	BQL	7.08	5.07	1	2/27/2006	
1,1,1,2-Tetrachloroethane	BQL	7.08	3.85	1	2/27/2006	
1,1,2,2-Tetrachloroethane	BQL	7.08	3.49	1	2/27/2006	
Tetrachloroethene	BQL	7.08	4.46	1	2/27/2006	
Toluene	BQL	7.08	4.19	1	2/27/2006	
1,2,3-Trichlorobenzene	BQL	7.08	3.10	1	2/27/2006	
1,2,4-Trichlorobenzene	BQL	7.08	3.17	1	2/27/2006	
Trichloroethene	BQL	7.08	4.42	1	2/27/2006	
1,1,1-Trichloroethane	BQL	7.08	4.89	1	2/27/2006	
1,1,2-Trichloroethane	BQL	7.08	3.66	1	2/27/2006	
Trichlorofluoromethane	BQL	7.08	5.85	1	2/27/2006	
1,2,3-Trichloropropane	BQL	7.08	3.75	1	2/27/2006	
1,2,4-Trimethylbenzene	BQL	7.08	3.97	1	2/27/2006	
1,3,5-Trimethylbenzene	BQL	7.08	4.22	1	2/27/2006	
Vinyl chloride	BQL	7.08	4.68	1	2/27/2006	
m-,p-Xylene	BQL	14.2	8.03	1	2/27/2006	
o-Xylene	BQL	7.08	3.97	1	2/27/2006	

	Spike Added	Spike Result	Percent Recovered
4-Bromofluorobenzene	50	49.1	98
1,2-Dichloroethane-d4	50	59.9	120
Toluene-d8	50	51.4	103

Comments:

Flags:

Reviewed By: _____

Results for Volatiles by GCMS 8260-5035

Client Sample ID: PAR 206 HA1
Client Project ID: NCDOT-Yancey
Lab Sample ID G106-565-2A
Lab Project ID: G106-565
Report Basis: Dry Weight

Analyzed By: JTF
Date Collected: 02-22-2006 17:00
Date Received: 2/24/2006
Matrix: Soil
%Solids: 75.8

Report Name Compound	Result UG/KG	Quantitation Limit UG/KG	MDL UG/KG	Dilution Factor	Date Analyzed	Flag
Acetone	**61.2**	72.0	4.23	1	2/27/2006	J
Benzene	BQL	7.20	4.10	1	2/27/2006	
Bromobenzene	BQL	7.20	3.54	1	2/27/2006	
Bromochloromethane	BQL	7.20	4.20	1	2/27/2006	
Bromodichloromethane	BQL	7.20	4.09	1	2/27/2006	
Bromoform	BQL	7.20	3.48	1	2/27/2006	
Bromomethane	BQL	7.20	6.03	1	2/27/2006	
2-Butanone	**13.8**	36.0	4.15	1	2/27/2006	J
n-Butylbenzene	BQL	7.20	4.82	1	2/27/2006	
sec-Butylbenzene	BQL	7.20	5.04	1	2/27/2006	
tert-Butylbenzene	BQL	7.20	5.00	1	2/27/2006	
Carbon disulfide	BQL	7.20	3.79	1	2/27/2006	
Carbon tetrachloride	BQL	7.20	4.98	1	2/27/2006	
Chlorobenzene	BQL	7.20	3.61	1	2/27/2006	
Chloroethane	BQL	7.20	4.52	1	2/27/2006	
Chloroform	BQL	7.20	3.61	1	2/27/2006	
Chloromethane	BQL	7.20	3.47	1	2/27/2006	
2-Chlorotoluene	BQL	7.20	4.29	1	2/27/2006	
4-Chlorotoluene	BQL	7.20	4.00	1	2/27/2006	
Dibromochloromethane	BQL	7.20	3.22	1	2/27/2006	
1,2-Dibromo-3-chloropropane	BQL	7.20	15.3	1	2/27/2006	
Dibromomethane	BQL	7.20	4.32	1	2/27/2006	
1,2-Dibromoethane (EDB)	BQL	7.20	3.35	1	2/27/2006	
1,2-Dichlorobenzene	BQL	7.20	3.47	1	2/27/2006	
1,3-Dichlorobenzene	BQL	7.20	3.37	1	2/27/2006	
1,4-Dichlorobenzene	BQL	7.20	3.54	1	2/27/2006	
trans-1,4-Dichloro-2-butene	BQL	7.20	15.4	1	2/27/2006	
1,1-Dichloroethane	BQL	7.20	4.15	1	2/27/2006	
1,1-Dichloroethene	BQL	7.20	5.54	1	2/27/2006	
1,2-Dichloroethane	BQL	7.20	4.13	1	2/27/2006	
cis-1,2-Dichloroethene	BQL	7.20	3.54	1	2/27/2006	
trans-1,2-dichloroethene	BQL	7.20	4.68	1	2/27/2006	
1,2-Dichloropropane	BQL	7.20	3.69	1	2/27/2006	
1,3-Dichloropropane	BQL	7.20	3.30	1	2/27/2006	
2,2-Dichloropropane	BQL	7.20	4.58	1	2/27/2006	
1,1-Dichloropropene	BQL	7.20	5.20	1	2/27/2006	
cis-1,3-Dichloropropene	BQL	7.20	4.00	1	2/27/2006	
trans-1,3-Dichloropropene	BQL	7.20	4.07	1	2/27/2006	
Dichlorodifluoromethane	BQL	7.20	5.37	1	2/27/2006	
Diisopropyl ether (DIPE)	BQL	7.20	3.41	1	2/27/2006	
Ethylbenzene	BQL	7.20	4.38	1	2/27/2006	

Results for Volatiles
by GCMS 8260-5035

Client Sample ID: PAR 206 HA1
Client Project ID: NCDOT-Yancey
Lab Sample ID G106-565-2A
Lab Project ID: G106-565
Report Basis: Dry Weight

Analyzed By: JTF
Date Collected: 02-22-2006 17:00
Date Received: 2/24/2006
Matrix: Soil
%Solids: 75.8

Report Name Compound	Result UG/KG	Quantitation Limit UG/KG	MDL UG/KG	Dilution Factor	Date Analyzed	Flag
Hexachlorobutadiene	BQL	7.20	5.69	1	2/27/2006	
2-Hexanone	BQL	7.20	3.14	1	2/27/2006	
Iodomethane	BQL	7.20	6.69	1	2/27/2006	
Isopropylbenzene	BQL	7.20	4.64	1	2/27/2006	
4-Isopropyltoluene	BQL	7.20	4.89	1	2/27/2006	
Methylene chloride	**9.85**	28.8	4.12	1	2/27/2006	J
4-Methyl-2-pentanone	BQL	7.20	3.33	1	2/27/2006	
Methyl-tert-butyl ether (MTBE)	BQL	7.20	3.66	1	2/27/2006	
Naphthalene	BQL	7.20	2.89	1	2/27/2006	
n-Propyl benzene	BQL	7.20	4.62	1	2/27/2006	
Styrene	BQL	7.20	5.15	1	2/27/2006	
1,1,1,2-Tetrachloroethane	BQL	7.20	3.92	1	2/27/2006	
1,1,2,2-Tetrachloroethane	BQL	7.20	3.54	1	2/27/2006	
Tetrachloroethene	BQL	7.20	4.53	1	2/27/2006	
Toluene	BQL	7.20	4.26	1	2/27/2006	
1,2,3-Trichlorobenzene	BQL	7.20	3.15	1	2/27/2006	
1,2,4-Trichlorobenzene	BQL	7.20	3.22	1	2/27/2006	
Trichloroethene	BQL	7.20	4.49	1	2/27/2006	
1,1,1-Trichloroethane	BQL	7.20	4.97	1	2/27/2006	
1,1,2-Trichloroethane	BQL	7.20	3.71	1	2/27/2006	
Trichlorofluoromethane	BQL	7.20	5.95	1	2/27/2006	
1,2,3-Trichloropropane	BQL	7.20	3.82	1	2/27/2006	
1,2,4-Trimethylbenzene	BQL	7.20	4.03	1	2/27/2006	
1,3,5-Trimethylbenzene	BQL	7.20	4.29	1	2/27/2006	
Vinyl chloride	BQL	7.20	4.75	1	2/27/2006	
m-,p-Xylene	BQL	14.4	8.16	1	2/27/2006	
o-Xylene	BQL	7.20	4.03	1	2/27/2006	

	Spike Added	Spike Result	Percent Recovered
4-Bromofluorobenzene	50	50	100
1,2-Dichloroethane-d4	50	61.4	123
Toluene-d8	50	52.3	105

Comments:

Flags:

Reviewed By: _____

Results for Volatiles
by GCMS 8260-5035

Client Sample ID: PAR 206 HA1A
Client Project ID: NCDOT-Yancey
Lab Sample ID G106-565-3A
Lab Project ID: G106-565
Report Basis: Dry Weight

Analyzed By: JTF
Date Collected: 02-23-2006 09:50
Date Received: 2/24/2006
Matrix: Soil
%Solids: 76.9

Report Name Compound	Result UG/KG	Quantitation Limit UG/KG	MDL UG/KG	Dilution Factor	Date Analyzed	Flag
Acetone	34.3	75.4	4.44	1	2/27/2006	J
Benzene	BQL	7.54	4.30	1	2/27/2006	
Bromobenzene	BQL	7.54	3.71	1	2/27/2006	
Bromochloromethane	BQL	7.54	4.41	1	2/27/2006	
Bromodichloromethane	BQL	7.54	4.29	1	2/27/2006	
Bromoform	BQL	7.54	3.65	1	2/27/2006	
Bromomethane	BQL	7.54	6.32	1	2/27/2006	
2-Butanone	BQL	37.7	4.35	1	2/27/2006	
n-Butylbenzene	BQL	7.54	5.06	1	2/27/2006	
sec-Butylbenzene	BQL	7.54	5.28	1	2/27/2006	
tert-Butylbenzene	BQL	7.54	5.24	1	2/27/2006	
Carbon disulfide	BQL	7.54	3.97	1	2/27/2006	
Carbon tetrachloride	BQL	7.54	5.22	1	2/27/2006	
Chlorobenzene	BQL	7.54	3.79	1	2/27/2006	
Chloroethane	BQL	7.54	4.74	1	2/27/2006	
Chloroform	BQL	7.54	3.79	1	2/27/2006	
Chloromethane	BQL	7.54	3.64	1	2/27/2006	
2-Chlorotoluene	BQL	7.54	4.50	1	2/27/2006	
4-Chlorotoluene	BQL	7.54	4.19	1	2/27/2006	
Dibromochloromethane	BQL	7.54	3.38	1	2/27/2006	
1,2-Dibromo-3-chloropropane	BQL	7.54	16.0	1	2/27/2006	
Dibromomethane	BQL	7.54	4.53	1	2/27/2006	
1,2-Dibromoethane (EDB)	BQL	7.54	3.52	1	2/27/2006	
1,2-Dichlorobenzene	BQL	7.54	3.64	1	2/27/2006	
1,3-Dichlorobenzene	BQL	7.54	3.53	1	2/27/2006	
1,4-Dichlorobenzene	BQL	7.54	3.71	1	2/27/2006	
trans-1,4-Dichloro-2-butene	BQL	7.54	16.1	1	2/27/2006	
1,1-Dichloroethane	BQL	7.54	4.35	1	2/27/2006	
1,1-Dichloroethene	BQL	7.54	5.81	1	2/27/2006	
1,2-Dichloroethane	BQL	7.54	4.33	1	2/27/2006	
cis-1,2-Dichloroethene	BQL	7.54	3.71	1	2/27/2006	
trans-1,2-dichloroethene	BQL	7.54	4.90	1	2/27/2006	
1,2-Dichloropropane	BQL	7.54	3.86	1	2/27/2006	
1,3-Dichloropropane	BQL	7.54	3.46	1	2/27/2006	
2,2-Dichloropropane	BQL	7.54	4.80	1	2/27/2006	
1,1-Dichloropropene	BQL	7.54	5.45	1	2/27/2006	
cis-1,3-Dichloropropene	BQL	7.54	4.19	1	2/27/2006	
trans-1,3-Dichloropropene	BQL	7.54	4.27	1	2/27/2006	
Dichlorodifluoromethane	BQL	7.54	5.63	1	2/27/2006	
Diisopropyl ether (DIPE)	BQL	7.54	3.58	1	2/27/2006	
Ethylbenzene	BQL	7.54	4.59	1	2/27/2006	

Results for Volatiles
by GCMS 8260-5035

Client Sample ID: PAR 206 HA1A
Client Project ID: NCDOT-Yancey
Lab Sample ID G106-565-3A
Lab Project ID: G106-565
Report Basis: Dry Weight

Analyzed By: JTF
Date Collected: 02-23-2006 09:50
Date Received: 2/24/2006
Matrix: Soil
%Solids: 76.9

Report Name Compound	Result UG/KG	Quantitation Limit UG/KG	MDL UG/KG	Dilution Factor	Date Analyzed	Flag
Hexachlorobutadiene	BQL	7.54	5.96	1	2/27/2006	
2-Hexanone	BQL	7.54	3.29	1	2/27/2006	
Iodomethane	BQL	7.54	7.02	1	2/27/2006	
Isopropylbenzene	BQL	7.54	4.86	1	2/27/2006	
4-Isopropyltoluene	BQL	7.54	5.13	1	2/27/2006	
Methylene chloride	7.82	30.2	4.32	1	2/27/2006	J
4-Methyl-2-pentanone	BQL	7.54	3.49	1	2/27/2006	
Methyl-tert-butyl ether (MTBE)	BQL	7.54	3.83	1	2/27/2006	
Naphthalene	BQL	7.54	3.03	1	2/27/2006	
n-Propyl benzene	BQL	7.54	4.84	1	2/27/2006	
Styrene	BQL	7.54	5.40	1	2/27/2006	
1,1,1,2-Tetrachloroethane	BQL	7.54	4.10	1	2/27/2006	
1,1,2,2-Tetrachloroethane	BQL	7.54	3.71	1	2/27/2006	
Tetrachloroethene	BQL	7.54	4.75	1	2/27/2006	
Toluene	BQL	7.54	4.47	1	2/27/2006	
1,2,3-Trichlorobenzene	BQL	7.54	3.30	1	2/27/2006	
1,2,4-Trichlorobenzene	BQL	7.54	3.38	1	2/27/2006	
Trichloroethene	BQL	7.54	4.71	1	2/27/2006	
1,1,1-Trichloroethane	BQL	7.54	5.21	1	2/27/2006	
1,1,2-Trichloroethane	BQL	7.54	3.89	1	2/27/2006	
Trichlorofluoromethane	BQL	7.54	6.23	1	2/27/2006	
1,2,3-Trichloropropane	BQL	7.54	4.00	1	2/27/2006	
1,2,4-Trimethylbenzene	BQL	7.54	4.23	1	2/27/2006	
1,3,5-Trimethylbenzene	BQL	7.54	4.50	1	2/27/2006	
Vinyl chloride	BQL	7.54	4.98	1	2/27/2006	
m-,p-Xylene	BQL	15.1	8.56	1	2/27/2006	
o-Xylene	BQL	7.54	4.23	1	2/27/2006	

	Spike Added	Spike Result	Percent Recovered
4-Bromofluorobenzene	50	48.3	97
1,2-Dichloroethane-d4	50	60	120
Toluene-d8	50	50.1	100

Comments:

Flags:

Reviewed By: _____

Results for Volatiles
by GCMS 8260-5030

Client Sample ID: PAR 206 HA2
Client Project ID: NCDOT-Yancey
Lab Sample ID G106-565-4A
Lab Project ID: G106-565
Report Basis: Dry Weight

Analyzed By: JTF
Date Collected: 02-23-2006 10:20
Date Received: 2/24/2006
Matrix: Soil
%Solids: 77.3

Report Name Compound	Result UG/KG	Quantitation Limit UG/KG	MDL UG/KG	Dilution Factor	Date Analyzed	Flag
Acetone	BQL	60.3	3.35	1	2/27/2006	
Benzene	BQL	6.03	3.64	1	2/27/2006	
Bromobenzene	BQL	6.03	3.91	1	2/27/2006	
Bromochloromethane	BQL	6.03	2.66	1	2/27/2006	
Bromodichloromethane	BQL	6.03	3.18	1	2/27/2006	
Bromoform	BQL	6.03	2.72	1	2/27/2006	
Bromomethane	BQL	6.03	5.79	1	2/27/2006	
2-Butanone	BQL	30.1	3.87	1	2/27/2006	
n-Butylbenzene	BQL	6.03	3.30	1	2/27/2006	
sec-Butylbenzene	BQL	6.03	4.66	1	2/27/2006	
tert-Butylbenzene	BQL	6.03	4.44	1	2/27/2006	
Carbon disulfide	BQL	6.03	3.15	1	2/27/2006	
Carbon tetrachloride	BQL	6.03	4.23	1	2/27/2006	
Chlorobenzene	BQL	6.03	4.23	1	2/27/2006	
Chloroethane	BQL	6.03	5.34	1	2/27/2006	
Chloroform	BQL	6.03	3.51	1	2/27/2006	
Chloromethane	BQL	6.03	3.75	1	2/27/2006	
2-Chlorotoluene	BQL	6.03	4.17	1	2/27/2006	
4-Chlorotoluene	BQL	6.03	4.36	1	2/27/2006	
Dibromochloromethane	BQL	6.03	3.04	1	2/27/2006	
1,2-Dibromo-3-chloropropane	BQL	6.03	8.74	1	2/27/2006	
Dibromomethane	BQL	6.03	2.15	1	2/27/2006	
1,2-Dibromoethane (EDB)	BQL	6.03	2.24	1	2/27/2006	
1,2-Dichlorobenzene	BQL	6.03	3.64	1	2/27/2006	
1,3-Dichlorobenzene	BQL	6.03	3.95	1	2/27/2006	
1,4-Dichlorobenzene	BQL	6.03	3.84	1	2/27/2006	
trans-1,4-Dichloro-2-butene	BQL	6.03	7.94	1	2/27/2006	
1,1-Dichloroethane	BQL	6.03	4.18	1	2/27/2006	
1,1-Dichloroethene	BQL	6.03	4.30	1	2/27/2006	
1,2-Dichloroethane	BQL	6.03	2.88	1	2/27/2006	
cis-1,2-Dichloroethene	BQL	6.03	3.82	1	2/27/2006	
trans-1,2-dichloroethene	BQL	6.03	4.30	1	2/27/2006	
1,2-Dichloropropane	BQL	6.03	3.34	1	2/27/2006	
1,3-Dichloropropane	BQL	6.03	2.47	1	2/27/2006	
2,2-Dichloropropane	BQL	6.03	3.48	1	2/27/2006	
1,1-Dichloropropene	BQL	6.03	4.22	1	2/27/2006	
cis-1,3-Dichloropropene	BQL	6.03	2.82	1	2/27/2006	
trans-1,3-Dichloropropene	BQL	6.03	2.39	1	2/27/2006	
Dichlorodifluoromethane	BQL	6.03	4.34	1	2/27/2006	
Diisopropyl ether (DIPE)	BQL	6.03	3.53	1	2/27/2006	
Ethylbenzene	BQL	6.03	4.29	1	2/27/2006	

Results for Volatiles
by GCMS 8260-5030

Client Sample ID: PAR 206 HA2
Client Project ID: NCDOT-Yancey
Lab Sample ID G106-565-4A
Lab Project ID: G106-565
Report Basis: Dry Weight

Analyzed By: JTF
Date Collected: 02-23-2006 10:20
Date Received: 2/24/2006
Matrix: Soil
%Solids: 77.3

Report Name Compound	Result UG/KG	Quantitation Limit UG/KG	MDL UG/KG	Dilution Factor	Date Analyzed	Flag
Hexachlorobutadiene	BQL	6.03	4.31	1	2/27/2006	
2-Hexanone	BQL	6.03	2.15	1	2/27/2006	
Iodomethane	BQL	6.03	4.34	1	2/27/2006	
Isopropylbenzene	BQL	6.03	4.57	1	2/27/2006	
4-Isopropyltoluene	BQL	6.03	4.44	1	2/27/2006	
Methylene chloride	BQL	24.1	3.71	1	2/27/2006	
4-Methyl-2-pentanone	BQL	6.03	1.43	1	2/27/2006	
Methyl-tert-butyl ether (MTBE)	BQL	6.03	2.74	1	2/27/2006	
Naphthalene	BQL	6.03	2.87	1	2/27/2006	
n-Propyl benzene	BQL	6.03	4.48	1	2/27/2006	
Styrene	BQL	6.03	5.69	1	2/27/2006	
1,1,1,2-Tetrachloroethane	BQL	6.03	3.51	1	2/27/2006	
1,1,2,2-Tetrachloroethane	BQL	6.03	2.18	1	2/27/2006	
Tetrachloroethene	BQL	6.03	4.60	1	2/27/2006	
Toluene	BQL	6.03	3.89	1	2/27/2006	
1,2,3-Trichlorobenzene	BQL	6.03	3.17	1	2/27/2006	
1,2,4-Trichlorobenzene	BQL	6.03	2.81	1	2/27/2006	
Trichloroethene	BQL	6.03	4.19	1	2/27/2006	
1,1,1-Trichloroethane	BQL	6.03	4.22	1	2/27/2006	
1,1,2-Trichloroethane	BQL	6.03	2.42	1	2/27/2006	
Trichlorofluoromethane	BQL	6.03	4.74	1	2/27/2006	
1,2,3-Trichloropropane	BQL	6.03	2.24	1	2/27/2006	
1,2,4-Trimethylbenzene	BQL	6.03	4.36	1	2/27/2006	
1,3,5-Trimethylbenzene	BQL	6.03	4.46	1	2/27/2006	
Vinyl chloride	BQL	6.03	4.15	1	2/27/2006	
m-,p-Xylene	BQL	12.1	8.86	1	2/27/2006	
o-Xylene	BQL	6.03	4.28	1	2/27/2006	

	Spike Added	Spike Result	Percent Recovered
4-Bromofluorobenzene	50	49.2	98
1,2-Dichloroethane-d4	50	48.5	97
Toluene-d8	50	49.3	99

Comments:

Flags:
BQL = Below Quantitation Limits.

Reviewed By: _____

Results for Volatiles by GCMS 8260-5030

Client Sample ID: PAR 206 HA3
Client Project ID: NCDOT-Yancey
Lab Sample ID G106-565-5A
Lab Project ID: G106-565
Report Basis: Dry Weight

Analyzed By: JTF
Date Collected: 02-23-2006 11:00
Date Received: 2/24/2006
Matrix: Soil
%Solids: 70.9

Report Name Compound	Result UG/KG	Quantitation Limit UG/KG	MDL UG/KG	Dilution Factor	Date Analyzed	Flag
Acetone	BQL	67.8	3.77	1	2/27/2006	
Benzene	BQL	6.78	4.10	1	2/27/2006	
Bromobenzene	BQL	6.78	4.40	1	2/27/2006	
Bromochloromethane	BQL	6.78	3.00	1	2/27/2006	
Bromodichloromethane	BQL	6.78	3.58	1	2/27/2006	
Bromoform	BQL	6.78	3.07	1	2/27/2006	
Bromomethane	BQL	6.78	6.51	1	2/27/2006	
2-Butanone	BQL	33.9	4.36	1	2/27/2006	
n-Butylbenzene	BQL	6.78	3.72	1	2/27/2006	
sec-Butylbenzene	**31.1**	6.78	5.25	1	2/27/2006	
tert-Butylbenzene	BQL	6.78	4.99	1	2/27/2006	
Carbon disulfide	BQL	6.78	3.54	1	2/27/2006	
Carbon tetrachloride	BQL	6.78	4.76	1	2/27/2006	
Chlorobenzene	BQL	6.78	4.76	1	2/27/2006	
Chloroethane	BQL	6.78	6.01	1	2/27/2006	
Chloroform	BQL	6.78	3.95	1	2/27/2006	
Chloromethane	BQL	6.78	4.22	1	2/27/2006	
2-Chlorotoluene	BQL	6.78	4.69	1	2/27/2006	
4-Chlorotoluene	BQL	6.78	4.91	1	2/27/2006	
Dibromochloromethane	BQL	6.78	3.42	1	2/27/2006	
1,2-Dibromo-3-chloropropane	BQL	6.78	9.84	1	2/27/2006	
Dibromomethane	BQL	6.78	2.42	1	2/27/2006	
1,2-Dibromoethane (EDB)	BQL	6.78	2.52	1	2/27/2006	
1,2-Dichlorobenzene	BQL	6.78	4.10	1	2/27/2006	
1,3-Dichlorobenzene	BQL	6.78	4.45	1	2/27/2006	
1,4-Dichlorobenzene	BQL	6.78	4.33	1	2/27/2006	
trans-1,4-Dichloro-2-butene	BQL	6.78	8.94	1	2/27/2006	
1,1-Dichloroethane	BQL	6.78	4.71	1	2/27/2006	
1,1-Dichloroethene	BQL	6.78	4.84	1	2/27/2006	
1,2-Dichloroethane	BQL	6.78	3.24	1	2/27/2006	
cis-1,2-Dichloroethene	BQL	6.78	4.30	1	2/27/2006	
trans-1,2-dichloroethene	BQL	6.78	4.84	1	2/27/2006	
1,2-Dichloropropane	BQL	6.78	3.76	1	2/27/2006	
1,3-Dichloropropane	BQL	6.78	2.78	1	2/27/2006	
2,2-Dichloropropane	BQL	6.78	3.92	1	2/27/2006	
1,1-Dichloropropene	BQL	6.78	4.75	1	2/27/2006	
cis-1,3-Dichloropropene	BQL	6.78	3.17	1	2/27/2006	
trans-1,3-Dichloropropene	BQL	6.78	2.69	1	2/27/2006	
Dichlorodifluoromethane	BQL	6.78	4.88	1	2/27/2006	
Diisopropyl ether (DIPE)	BQL	6.78	3.98	1	2/27/2006	
Ethylbenzene	**25.8**	6.78	4.83	1	2/27/2006	

Results for Volatiles
by GCMS 8260-5030

Client Sample ID: PAR 206 HA3
Client Project ID: NCDOT-Yancey
Lab Sample ID G106-565-5A
Lab Project ID: G106-565
Report Basis: Dry Weight

Analyzed By: JTF
Date Collected: 02-23-2006 11:00
Date Received: 2/24/2006
Matrix: Soil
%Solids: 70.9

Report Name Compound	Result UG/KG	Quantitation Limit UG/KG	MDL UG/KG	Dilution Factor	Date Analyzed	Flag
Hexachlorobutadiene	BQL	6.78	4.86	1	2/27/2006	
2-Hexanone	BQL	6.78	2.42	1	2/27/2006	
Iodomethane	BQL	6.78	4.88	1	2/27/2006	
Isopropylbenzene	BQL	6.78	5.14	1	2/27/2006	
4-Isopropyltoluene	BQL	6.78	4.99	1	2/27/2006	
Methylene chloride	BQL	27.1	4.18	1	2/27/2006	
4-Methyl-2-pentanone	BQL	6.78	1.61	1	2/27/2006	
Methyl-tert-butyl ether (MTBE)	BQL	6.78	3.08	1	2/27/2006	
Naphthalene	**15.0**	6.78	3.23	1	2/27/2006	
n-Propyl benzene	**7.22**	6.78	5.05	1	2/27/2006	
Styrene	BQL	6.78	6.40	1	2/27/2006	
1,1,1,2-Tetrachloroethane	BQL	6.78	3.95	1	2/27/2006	
1,1,2,2-Tetrachloroethane	BQL	6.78	2.46	1	2/27/2006	
Tetrachloroethene	BQL	6.78	5.18	1	2/27/2006	
Toluene	**50.5**	6.78	4.38	1	2/27/2006	
1,2,3-Trichlorobenzene	BQL	6.78	3.57	1	2/27/2006	
1,2,4-Trichlorobenzene	BQL	6.78	3.16	1	2/27/2006	
Trichloroethene	BQL	6.78	4.72	1	2/27/2006	
1,1,1-Trichloroethane	BQL	6.78	4.75	1	2/27/2006	
1,1,2-Trichloroethane	BQL	6.78	2.73	1	2/27/2006	
Trichlorofluoromethane	BQL	6.78	5.33	1	2/27/2006	
1,2,3-Trichloropropane	BQL	6.78	2.52	1	2/27/2006	
1,2,4-Trimethylbenzene	**50.8**	6.78	4.91	1	2/27/2006	
1,3,5-Trimethylbenzene	**15.6**	6.78	5.02	1	2/27/2006	
Vinyl chloride	BQL	6.78	4.67	1	2/27/2006	
m-,p-Xylene	**125**	13.6	9.97	1	2/27/2006	
o-Xylene	**57.4**	6.78	4.82	1	2/27/2006	

	Spike Added	Spike Result	Percent Recovered
4-Bromofluorobenzene	50	50.2	100
1,2-Dichloroethane-d4	50	45.5	91
Toluene-d8	50	51.2	102

Comments:

Flags:
BQL = Below Quantitation Limits.

Reviewed By: _____

Results for Volatiles
by GCMS 8260-5030

Client Sample ID: PAR 206 HA4
Client Project ID: NCDOT-Yancey
Lab Sample ID G106-565-6A
Lab Project ID: G106-565
Report Basis: Dry Weight

Analyzed By: JTF
Date Collected: 02-23-2006 11:05
Date Received: 2/24/2006
Matrix: Soil
%Solids: 73.4

Report Name Compound	Result UG/KG	Quantitation Limit UG/KG	MDL UG/KG	Dilution Factor	Date Analyzed	Flag
Acetone	BQL	58.2	3.24	1	2/27/2006	
Benzene	BQL	5.82	3.52	1	2/27/2006	
Bromobenzene	BQL	5.82	3.77	1	2/27/2006	
Bromochloromethane	BQL	5.82	2.57	1	2/27/2006	
Bromodichloromethane	BQL	5.82	3.07	1	2/27/2006	
Bromoform	BQL	5.82	2.63	1	2/27/2006	
Bromomethane	BQL	5.82	5.59	1	2/27/2006	
2-Butanone	BQL	29.1	3.74	1	2/27/2006	
n-Butylbenzene	BQL	5.82	3.19	1	2/27/2006	
sec-Butylbenzene	BQL	5.82	4.50	1	2/27/2006	
tert-Butylbenzene	BQL	5.82	4.28	1	2/27/2006	
Carbon disulfide	BQL	5.82	3.04	1	2/27/2006	
Carbon tetrachloride	BQL	5.82	4.09	1	2/27/2006	
Chlorobenzene	BQL	5.82	4.09	1	2/27/2006	
Chloroethane	BQL	5.82	5.16	1	2/27/2006	
Chloroform	BQL	5.82	3.39	1	2/27/2006	
Chloromethane	BQL	5.82	3.62	1	2/27/2006	
2-Chlorotoluene	BQL	5.82	4.03	1	2/27/2006	
4-Chlorotoluene	BQL	5.82	4.21	1	2/27/2006	
Dibromochloromethane	BQL	5.82	2.93	1	2/27/2006	
1,2-Dibromo-3-chloropropane	BQL	5.82	8.44	1	2/27/2006	
Dibromomethane	BQL	5.82	2.07	1	2/27/2006	
1,2-Dibromoethane (EDB)	BQL	5.82	2.16	1	2/27/2006	
1,2-Dichlorobenzene	BQL	5.82	3.52	1	2/27/2006	
1,3-Dichlorobenzene	BQL	5.82	3.82	1	2/27/2006	
1,4-Dichlorobenzene	BQL	5.82	3.71	1	2/27/2006	
trans-1,4-Dichloro-2-butene	BQL	5.82	7.67	1	2/27/2006	
1,1-Dichloroethane	BQL	5.82	4.04	1	2/27/2006	
1,1-Dichloroethene	BQL	5.82	4.16	1	2/27/2006	
1,2-Dichloroethane	BQL	5.82	2.78	1	2/27/2006	
cis-1,2-Dichloroethene	BQL	5.82	3.69	1	2/27/2006	
trans-1,2-dichloroethene	BQL	5.82	4.16	1	2/27/2006	
1,2-Dichloropropane	BQL	5.82	3.22	1	2/27/2006	
1,3-Dichloropropane	BQL	5.82	2.39	1	2/27/2006	
2,2-Dichloropropane	BQL	5.82	3.36	1	2/27/2006	
1,1-Dichloropropene	BQL	5.82	4.07	1	2/27/2006	
cis-1,3-Dichloropropene	BQL	5.82	2.72	1	2/27/2006	
trans-1,3-Dichloropropene	BQL	5.82	2.30	1	2/27/2006	
Dichlorodifluoromethane	BQL	5.82	4.19	1	2/27/2006	
Diisopropyl ether (DIPE)	BQL	5.82	3.41	1	2/27/2006	
Ethylbenzene	BQL	5.82	4.14	1	2/27/2006	

Results for Volatiles by GCMS 8260-5030

Client Sample ID: PAR 206 HA4
Client Project ID: NCDOT-Yancey
Lab Sample ID G106-565-6A
Lab Project ID: G106-565
Report Basis: Dry Weight

Analyzed By: JTF
Date Collected: 02-23-2006 11:05
Date Received: 2/24/2006
Matrix: Soil
%Solids: 73.4

Report Name Compound	Result UG/KG	Quantitation Limit UG/KG	MDL UG/KG	Dilution Factor	Date Analyzed	Flag
Hexachlorobutadiene	BQL	5.82	4.17	1	2/27/2006	
2-Hexanone	BQL	5.82	2.07	1	2/27/2006	
Iodomethane	BQL	5.82	4.19	1	2/27/2006	
Isopropylbenzene	BQL	5.82	4.41	1	2/27/2006	
4-Isopropyltoluene	BQL	5.82	4.28	1	2/27/2006	
Methylene chloride	BQL	23.3	3.59	1	2/27/2006	
4-Methyl-2-pentanone	BQL	5.82	1.39	1	2/27/2006	
Methyl-tert-butyl ether (MTBE)	BQL	5.82	2.64	1	2/27/2006	
Naphthalene	BQL	5.82	2.77	1	2/27/2006	
n-Propyl benzene	BQL	5.82	4.33	1	2/27/2006	
Styrene	BQL	5.82	5.49	1	2/27/2006	
1,1,1,2-Tetrachloroethane	BQL	5.82	3.39	1	2/27/2006	
1,1,2,2-Tetrachloroethane	BQL	5.82	2.11	1	2/27/2006	
Tetrachloroethene	BQL	5.82	4.45	1	2/27/2006	
Toluene	BQL	5.82	3.76	1	2/27/2006	
1,2,3-Trichlorobenzene	BQL	5.82	3.06	1	2/27/2006	
1,2,4-Trichlorobenzene	BQL	5.82	2.71	1	2/27/2006	
Trichloroethene	BQL	5.82	4.05	1	2/27/2006	
1,1,1-Trichloroethane	BQL	5.82	4.07	1	2/27/2006	
1,1,2-Trichloroethane	BQL	5.82	2.34	1	2/27/2006	
Trichlorofluoromethane	BQL	5.82	4.57	1	2/27/2006	
1,2,3-Trichloropropane	BQL	5.82	2.16	1	2/27/2006	
1,2,4-Trimethylbenzene	BQL	5.82	4.21	1	2/27/2006	
1,3,5-Trimethylbenzene	BQL	5.82	4.31	1	2/27/2006	
Vinyl chloride	BQL	5.82	4.00	1	2/27/2006	
m-,p-Xylene	BQL	11.6	8.56	1	2/27/2006	
o-Xylene	BQL	5.82	4.13	1	2/27/2006	

	Spike Added	Spike Result	Percent Recovered
4-Bromofluorobenzene	50	48.4	97
1,2-Dichloroethane-d4	50	48.4	97
Toluene-d8	50	52.2	104

Comments:

Flags:
BQL = Below Quantitation Limits.

Reviewed By: _____

Results for Volatiles by GCMS 8260-5035

Client Sample ID: PAR 163 GP2-10
Client Project ID: NCDOT-Yancey
Lab Sample ID G106-565-9A
Lab Project ID: G106-565
Report Basis: Dry Weight

Analyzed By: JTF
Date Collected: 02-22-2006 09:22
Date Received: 2/24/2006
Matrix: Soil
%Solids: 77.2

Report Name Compound	Result UG/KG	Quantitation Limit UG/KG	MDL UG/KG	Dilution Factor	Date Analyzed	Flag
Acetone	**16.6**	63.5	3.73	1	2/27/2006	J
Benzene	BQL	6.35	3.62	1	2/27/2006	
Bromobenzene	BQL	6.35	3.12	1	2/27/2006	
Bromochloromethane	BQL	6.35	3.71	1	2/27/2006	
Bromodichloromethane	BQL	6.35	3.61	1	2/27/2006	
Bromoform	BQL	6.35	3.07	1	2/27/2006	
Bromomethane	BQL	6.35	5.32	1	2/27/2006	
2-Butanone	**5.86**	31.8	3.66	1	2/27/2006	J
n-Butylbenzene	**26.5**	6.35	4.25	1	2/27/2006	
sec-Butylbenzene	**21.2**	6.35	4.45	1	2/27/2006	
tert-Butylbenzene	BQL	6.35	4.41	1	2/27/2006	
Carbon disulfide	BQL	6.35	3.34	1	2/27/2006	
Carbon tetrachloride	BQL	6.35	4.39	1	2/27/2006	
Chlorobenzene	BQL	6.35	3.19	1	2/27/2006	
Chloroethane	BQL	6.35	3.99	1	2/27/2006	
Chloroform	BQL	6.35	3.19	1	2/27/2006	
Chloromethane	BQL	6.35	3.06	1	2/27/2006	
2-Chlorotoluene	BQL	6.35	3.78	1	2/27/2006	
4-Chlorotoluene	BQL	6.35	3.53	1	2/27/2006	
Dibromochloromethane	BQL	6.35	2.85	1	2/27/2006	
1,2-Dibromo-3-chloropropane	BQL	6.35	13.5	1	2/27/2006	
Dibromomethane	BQL	6.35	3.81	1	2/27/2006	
1,2-Dibromoethane (EDB)	BQL	6.35	2.96	1	2/27/2006	
1,2-Dichlorobenzene	BQL	6.35	3.06	1	2/27/2006	
1,3-Dichlorobenzene	BQL	6.35	2.97	1	2/27/2006	
1,4-Dichlorobenzene	BQL	6.35	3.12	1	2/27/2006	
trans-1,4-Dichloro-2-butene	BQL	6.35	13.6	1	2/27/2006	
1,1-Dichloroethane	BQL	6.35	3.66	1	2/27/2006	
1,1-Dichloroethene	BQL	6.35	4.89	1	2/27/2006	
1,2-Dichloroethane	BQL	6.35	3.65	1	2/27/2006	
cis-1,2-Dichloroethene	BQL	6.35	3.12	1	2/27/2006	
trans-1,2-dichloroethene	BQL	6.35	4.13	1	2/27/2006	
1,2-Dichloropropane	BQL	6.35	3.25	1	2/27/2006	
1,3-Dichloropropane	BQL	6.35	2.91	1	2/27/2006	
2,2-Dichloropropane	BQL	6.35	4.04	1	2/27/2006	
1,1-Dichloropropene	BQL	6.35	4.59	1	2/27/2006	
cis-1,3-Dichloropropene	BQL	6.35	3.53	1	2/27/2006	
trans-1,3-Dichloropropene	BQL	6.35	3.59	1	2/27/2006	
Dichlorodifluoromethane	BQL	6.35	4.74	1	2/27/2006	
Diisopropyl ether (DIPE)	BQL	6.35	3.01	1	2/27/2006	
Ethylbenzene	**18.8**	6.35	3.86	1	2/27/2006	

Results for Volatiles
by GCMS 8260-5035

Client Sample ID: PAR 163 GP2-10
Client Project ID: NCDOT-Yancey
Lab Sample ID G106-565-9A
Lab Project ID: G106-565
Report Basis: Dry Weight

Analyzed By: JTF
Date Collected: 02-22-2006 09:22
Date Received: 2/24/2006
Matrix: Soil
%Solids: 77.2

Report Name Compound	Result UG/KG	Quantitation Limit UG/KG	MDL UG/KG	Dilution Factor	Date Analyzed	Flag
Hexachlorobutadiene	BQL	6.35	5.02	1	2/27/2006	
2-Hexanone	BQL	6.35	2.77	1	2/27/2006	
Iodomethane	BQL	6.35	5.91	1	2/27/2006	
Isopropylbenzene	**16.3**	6.35	4.09	1	2/27/2006	
4-Isopropyltoluene	**16.8**	6.35	4.32	1	2/27/2006	
Methylene chloride	**9.25**	25.4	3.63	1	2/27/2006	J
4-Methyl-2-pentanone	BQL	6.35	2.93	1	2/27/2006	
Methyl-tert-butyl ether (MTBE)	BQL	6.35	3.23	1	2/27/2006	
Naphthalene	**95.4**	6.35	2.55	1	2/27/2006	
n-Propyl benzene	**27.6**	6.35	4.08	1	2/27/2006	
Styrene	BQL	6.35	4.55	1	2/27/2006	
1,1,1,2-Tetrachloroethane	BQL	6.35	3.45	1	2/27/2006	
1,1,2,2-Tetrachloroethane	BQL	6.35	3.12	1	2/27/2006	
Tetrachloroethene	BQL	6.35	4.00	1	2/27/2006	
Toluene	BQL	6.35	3.76	1	2/27/2006	
1,2,3-Trichlorobenzene	BQL	6.35	2.78	1	2/27/2006	
1,2,4-Trichlorobenzene	BQL	6.35	2.85	1	2/27/2006	
Trichloroethene	BQL	6.35	3.96	1	2/27/2006	
1,1,1-Trichloroethane	BQL	6.35	4.38	1	2/27/2006	
1,1,2-Trichloroethane	BQL	6.35	3.28	1	2/27/2006	
Trichlorofluoromethane	BQL	6.35	5.25	1	2/27/2006	
1,2,3-Trichloropropane	BQL	6.35	3.37	1	2/27/2006	
1,2,4-Trimethylbenzene	**128**	6.35	3.56	1	2/27/2006	
1,3,5-Trimethylbenzene	**48.3**	6.35	3.78	1	2/27/2006	
Vinyl chloride	BQL	6.35	4.19	1	2/27/2006	
m-,p-Xylene	**18.4**	12.7	7.20	1	2/27/2006	
o-Xylene	**34.2**	6.35	3.56	1	2/27/2006	

	Spike Added	Spike Result	Percent Recovered
4-Bromofluorobenzene	50	36.4	73
1,2-Dichloroethane-d4	50	66.7	133
Toluene-d8	50	50.5	101

Comments:

Flags:
BQL = Below Quantitation Limits.
J = Detected below the quantitation limit.

Reviewed By: _____

Results for Volatiles by GCMS 8260-5035

Client Sample ID: PAR 199A GP2-10
Client Project ID: NCDOT-Yancey
Lab Sample ID G106-565-14A
Lab Project ID: G106-565
Report Basis: Dry Weight

Analyzed By: JTF
Date Collected: 02-22-2006 12:45
Date Received: 2/24/2006
Matrix: Soil
%Solids: 90.9

Report Name Compound	Result UG/KG	Quantitation Limit UG/KG	MDL UG/KG	Dilution Factor	Date Analyzed	Flag
Acetone	3.97	47.0	2.76	1	2/27/2006	J
Benzene	BQL	4.70	2.68	1	2/27/2006	
Bromobenzene	BQL	4.70	2.31	1	2/27/2006	
Bromochloromethane	BQL	4.70	2.75	1	2/27/2006	
Bromodichloromethane	BQL	4.70	2.67	1	2/27/2006	
Bromoform	BQL	4.70	2.28	1	2/27/2006	
Bromomethane	BQL	4.70	3.94	1	2/27/2006	
2-Butanone	BQL	23.5	2.71	1	2/27/2006	
n-Butylbenzene	BQL	4.70	3.15	1	2/27/2006	
sec-Butylbenzene	BQL	4.70	3.29	1	2/27/2006	
tert-Butylbenzene	BQL	4.70	3.26	1	2/27/2006	
Carbon disulfide	BQL	4.70	2.47	1	2/27/2006	
Carbon tetrachloride	BQL	4.70	3.25	1	2/27/2006	
Chlorobenzene	BQL	4.70	2.36	1	2/27/2006	
Chloroethane	BQL	4.70	2.95	1	2/27/2006	
Chloroform	BQL	4.70	2.36	1	2/27/2006	
Chloromethane	BQL	4.70	2.27	1	2/27/2006	
2-Chlorotoluene	BQL	4.70	2.80	1	2/27/2006	
4-Chlorotoluene	BQL	4.70	2.61	1	2/27/2006	
Dibromochloromethane	BQL	4.70	2.11	1	2/27/2006	
1,2-Dibromo-3-chloropropane	BQL	4.70	9.97	1	2/27/2006	
Dibromomethane	BQL	4.70	2.82	1	2/27/2006	
1,2-Dibromoethane (EDB)	BQL	4.70	2.19	1	2/27/2006	
1,2-Dichlorobenzene	BQL	4.70	2.27	1	2/27/2006	
1,3-Dichlorobenzene	BQL	4.70	2.20	1	2/27/2006	
1,4-Dichlorobenzene	BQL	4.70	2.31	1	2/27/2006	
trans-1,4-Dichloro-2-butene	BQL	4.70	10.1	1	2/27/2006	
1,1-Dichloroethane	BQL	4.70	2.71	1	2/27/2006	
1,1-Dichloroethene	BQL	4.70	3.62	1	2/27/2006	
1,2-Dichloroethane	BQL	4.70	2.70	1	2/27/2006	
cis-1,2-Dichloroethene	BQL	4.70	2.31	1	2/27/2006	
trans-1,2-dichloroethene	BQL	4.70	3.06	1	2/27/2006	
1,2-Dichloropropane	BQL	4.70	2.41	1	2/27/2006	
1,3-Dichloropropane	BQL	4.70	2.15	1	2/27/2006	
2,2-Dichloropropane	BQL	4.70	2.99	1	2/27/2006	
1,1-Dichloropropene	BQL	4.70	3.39	1	2/27/2006	
cis-1,3-Dichloropropene	BQL	4.70	2.61	1	2/27/2006	
trans-1,3-Dichloropropene	BQL	4.70	2.66	1	2/27/2006	
Dichlorodifluoromethane	BQL	4.70	3.51	1	2/27/2006	
Diisopropyl ether (DIPE)	BQL	4.70	2.23	1	2/27/2006	
Ethylbenzene	BQL	4.70	2.86	1	2/27/2006	

Results for Volatiles
by GCMS 8260-5035

Client Sample ID: PAR 199A GP2-10
Client Project ID: NCDOT-Yancey
Lab Sample ID G106-565-14A
Lab Project ID: G106-565
Report Basis: Dry Weight

Analyzed By: JTF
Date Collected: 02-22-2006 12:45
Date Received: 2/24/2006
Matrix: Soil
%Solids: 90.9

Report Name Compound	Result UG/KG	Quantitation Limit UG/KG	MDL UG/KG	Dilution Factor	Date Analyzed	Flag
Hexachlorobutadiene	BQL	4.70	3.71	1	2/27/2006	
2-Hexanone	BQL	4.70	2.05	1	2/27/2006	
Iodomethane	BQL	4.70	4.37	1	2/27/2006	
Isopropylbenzene	BQL	4.70	3.03	1	2/27/2006	
4-Isopropyltoluene	BQL	4.70	3.20	1	2/27/2006	
Methylene chloride	8.67	18.8	2.69	1	2/27/2006	J
4-Methyl-2-pentanone	BQL	4.70	2.17	1	2/27/2006	
Methyl-tert-butyl ether (MTBE)	BQL	4.70	2.39	1	2/27/2006	
Naphthalene	BQL	4.70	1.89	1	2/27/2006	
n-Propyl benzene	BQL	4.70	3.02	1	2/27/2006	
Styrene	BQL	4.70	3.37	1	2/27/2006	
1,1,1,2-Tetrachloroethane	BQL	4.70	2.56	1	2/27/2006	
1,1,2,2-Tetrachloroethane	BQL	4.70	2.31	1	2/27/2006	
Tetrachloroethene	BQL	4.70	2.96	1	2/27/2006	
Toluene	BQL	4.70	2.78	1	2/27/2006	
1,2,3-Trichlorobenzene	BQL	4.70	2.06	1	2/27/2006	
1,2,4-Trichlorobenzene	BQL	4.70	2.11	1	2/27/2006	
Trichloroethene	BQL	4.70	2.93	1	2/27/2006	
1,1,1-Trichloroethane	BQL	4.70	3.24	1	2/27/2006	
1,1,2-Trichloroethane	BQL	4.70	2.43	1	2/27/2006	
Trichlorofluoromethane	BQL	4.70	3.88	1	2/27/2006	
1,2,3-Trichloropropane	BQL	4.70	2.49	1	2/27/2006	
1,2,4-Trimethylbenzene	BQL	4.70	2.63	1	2/27/2006	
1,3,5-Trimethylbenzene	BQL	4.70	2.80	1	2/27/2006	
Vinyl chloride	BQL	4.70	3.10	1	2/27/2006	
m-,p-Xylene	BQL	9.40	5.33	1	2/27/2006	
o-Xylene	BQL	4.70	2.63	1	2/27/2006	

	Spike Added	Spike Result	Percent Recovered
4-Bromofluorobenzene	50	52.5	105
1,2-Dichloroethane-d4	50	54.5	109
Toluene-d8	50	50.6	101

Comments:

Flags:
BQL = Below Quantitation Limits.
J = Detected below the quantitation limit.

Reviewed By: _____

Results for Volatiles
by GCMS 8260-5035

Client Sample ID: PAR 89 HA6-8
Client Project ID: NCDOT-Yancey
Lab Sample ID G106-565-17A
Lab Project ID: G106-565
Report Basis: Dry Weight

Analyzed By: JTF
Date Collected: 02-20-2006 12:45
Date Received: 2/24/2006
Matrix: Soil
%Solids: 77.2

Report Name Compound	Result UG/KG	Quantitation Limit UG/KG	MDL UG/KG	Dilution Factor	Date Analyzed	Flag
Acetone	**29.9**	67.0	3.94	1	2/28/2006	J
Benzene	BQL	6.70	3.82	1	2/28/2006	
Bromobenzene	BQL	6.70	3.30	1	2/28/2006	
Bromochloromethane	BQL	6.70	3.92	1	2/28/2006	
Bromodichloromethane	BQL	6.70	3.81	1	2/28/2006	
Bromoform	BQL	6.70	3.25	1	2/28/2006	
Bromomethane	BQL	6.70	5.62	1	2/28/2006	
2-Butanone	**6.89**	33.5	3.86	1	2/28/2006	J
n-Butylbenzene	BQL	6.70	4.49	1	2/28/2006	
sec-Butylbenzene	BQL	6.70	4.69	1	2/28/2006	
tert-Butylbenzene	BQL	6.70	4.65	1	2/28/2006	
Carbon disulfide	BQL	6.70	3.53	1	2/28/2006	
Carbon tetrachloride	BQL	6.70	4.64	1	2/28/2006	
Chlorobenzene	BQL	6.70	3.37	1	2/28/2006	
Chloroethane	BQL	6.70	4.21	1	2/28/2006	
Chloroform	BQL	6.70	3.37	1	2/28/2006	
Chloromethane	BQL	6.70	3.23	1	2/28/2006	
2-Chlorotoluene	BQL	6.70	4.00	1	2/28/2006	
4-Chlorotoluene	BQL	6.70	3.73	1	2/28/2006	
Dibromochloromethane	BQL	6.70	3.00	1	2/28/2006	
1,2-Dibromo-3-chloropropane	BQL	6.70	14.2	1	2/28/2006	
Dibromomethane	BQL	6.70	4.02	1	2/28/2006	
1,2-Dibromoethane (EDB)	BQL	6.70	3.12	1	2/28/2006	
1,2-Dichlorobenzene	BQL	6.70	3.23	1	2/28/2006	
1,3-Dichlorobenzene	BQL	6.70	3.14	1	2/28/2006	
1,4-Dichlorobenzene	BQL	6.70	3.30	1	2/28/2006	
trans-1,4-Dichloro-2-butene	BQL	6.70	14.3	1	2/28/2006	
1,1-Dichloroethane	BQL	6.70	3.86	1	2/28/2006	
1,1-Dichloroethene	BQL	6.70	5.16	1	2/28/2006	
1,2-Dichloroethane	BQL	6.70	3.85	1	2/28/2006	
cis-1,2-Dichloroethene	BQL	6.70	3.30	1	2/28/2006	
trans-1,2-dichloroethene	BQL	6.70	4.36	1	2/28/2006	
1,2-Dichloropropane	BQL	6.70	3.43	1	2/28/2006	
1,3-Dichloropropane	BQL	6.70	3.07	1	2/28/2006	
2,2-Dichloropropane	BQL	6.70	4.26	1	2/28/2006	
1,1-Dichloropropene	BQL	6.70	4.84	1	2/28/2006	
cis-1,3-Dichloropropene	BQL	6.70	3.73	1	2/28/2006	
trans-1,3-Dichloropropene	BQL	6.70	3.79	1	2/28/2006	
Dichlorodifluoromethane	BQL	6.70	5.00	1	2/28/2006	
Diisopropyl ether (DIPE)	BQL	6.70	3.18	1	2/28/2006	
Ethylbenzene	BQL	6.70	4.08	1	2/28/2006	

Results for Volatiles by GCMS 8260-5035

Client Sample ID: PAR 89 HA6-8
Client Project ID: NCDOT-Yancey
Lab Sample ID G106-565-17A
Lab Project ID: G106-565
Report Basis: Dry Weight

Analyzed By: JTF
Date Collected: 02-20-2006 12:45
Date Received: 2/24/2006
Matrix: Soil
%Solids: 77.2

Report Name Compound	Result UG/KG	Quantitation Limit UG/KG	MDL UG/KG	Dilution Factor	Date Analyzed	Flag
Hexachlorobutadiene	BQL	6.70	5.30	1	2/28/2006	
2-Hexanone	BQL	6.70	2.92	1	2/28/2006	
Iodomethane	**8.51**	6.70	6.24	1	2/28/2006	
Isopropylbenzene	BQL	6.70	4.32	1	2/28/2006	
4-Isopropyltoluene	BQL	6.70	4.56	1	2/28/2006	
Methylene chloride	**19.4**	26.8	3.84	1	2/28/2006	J
4-Methyl-2-pentanone	BQL	6.70	3.10	1	2/28/2006	
Methyl-tert-butyl ether (MTBE)	BQL	6.70	3.41	1	2/28/2006	
Naphthalene	**4.44**	6.70	2.70	1	2/28/2006	J
n-Propyl benzene	BQL	6.70	4.30	1	2/28/2006	
Styrene	BQL	6.70	4.80	1	2/28/2006	
1,1,1,2-Tetrachloroethane	BQL	6.70	3.65	1	2/28/2006	
1,1,2,2-Tetrachloroethane	BQL	6.70	3.30	1	2/28/2006	
Tetrachloroethene	BQL	6.70	4.22	1	2/28/2006	
Toluene	**5.20**	6.70	3.97	1	2/28/2006	J
1,2,3-Trichlorobenzene	BQL	6.70	2.94	1	2/28/2006	
1,2,4-Trichlorobenzene	BQL	6.70	3.00	1	2/28/2006	
Trichloroethene	BQL	6.70	4.18	1	2/28/2006	
1,1,1-Trichloroethane	BQL	6.70	4.63	1	2/28/2006	
1,1,2-Trichloroethane	BQL	6.70	3.46	1	2/28/2006	
Trichlorofluoromethane	BQL	6.70	5.54	1	2/28/2006	
1,2,3-Trichloropropane	BQL	6.70	3.55	1	2/28/2006	
1,2,4-Trimethylbenzene	**3.82**	6.70	3.75	1	2/28/2006	J
1,3,5-Trimethylbenzene	BQL	6.70	4.00	1	2/28/2006	
Vinyl chloride	BQL	6.70	4.43	1	2/28/2006	
m-,p-Xylene	BQL	13.4	7.60	1	2/28/2006	
o-Xylene	BQL	6.70	3.75	1	2/28/2006	

	Spike Added	Spike Result	Percent Recovered
4-Bromofluorobenzene	50	55.3	111
1,2-Dichloroethane-d4	50	74.2	148
Toluene-d8	50	52.1	104

Comments:

Flags:
BQL = Below Quantitation Limits.
J = Detected below the quantitation limit.

Reviewed By: _____

Results for Volatiles
by GCMS 8260-5035

Client Sample ID: PAR 221 GP1-8
Client Project ID: NCDOT-Yancey
Lab Sample ID G106-565-24A
Lab Project ID: G106-565
Report Basis: Dry Weight

Analyzed By: JTF
Date Collected: 02-23-2006 12:00
Date Received: 2/24/2006
Matrix: Soil
%Solids: 75.2

Report Name Compound	Result UG/KG	Quantitation Limit UG/KG	MDL UG/KG	Dilution Factor	Date Analyzed	Flag
Acetone	10.1	60.0	3.53	1	2/28/2006	J
Benzene	BQL	6.00	3.42	1	2/28/2006	
Bromobenzene	BQL	6.00	2.95	1	2/28/2006	
Bromochloromethane	BQL	6.00	3.50	1	2/28/2006	
Bromodichloromethane	BQL	6.00	3.41	1	2/28/2006	
Bromoform	BQL	6.00	2.90	1	2/28/2006	
Bromomethane	BQL	6.00	5.03	1	2/28/2006	
2-Butanone	BQL	30.0	3.46	1	2/28/2006	
n-Butylbenzene	BQL	6.00	4.02	1	2/28/2006	
sec-Butylbenzene	BQL	6.00	4.20	1	2/28/2006	
tert-Butylbenzene	BQL	6.00	4.16	1	2/28/2006	
Carbon disulfide	BQL	6.00	3.16	1	2/28/2006	
Carbon tetrachloride	BQL	6.00	4.15	1	2/28/2006	
Chlorobenzene	BQL	6.00	3.01	1	2/28/2006	
Chloroethane	BQL	6.00	3.77	1	2/28/2006	
Chloroform	BQL	6.00	3.01	1	2/28/2006	
Chloromethane	BQL	6.00	2.89	1	2/28/2006	
2-Chlorotoluene	BQL	6.00	3.58	1	2/28/2006	
4-Chlorotoluene	BQL	6.00	3.34	1	2/28/2006	
Dibromochloromethane	BQL	6.00	2.69	1	2/28/2006	
1,2-Dibromo-3-chloropropane	BQL	6.00	12.7	1	2/28/2006	
Dibromomethane	BQL	6.00	3.60	1	2/28/2006	
1,2-Dibromoethane (EDB)	BQL	6.00	2.80	1	2/28/2006	
1,2-Dichlorobenzene	BQL	6.00	2.89	1	2/28/2006	
1,3-Dichlorobenzene	BQL	6.00	2.81	1	2/28/2006	
1,4-Dichlorobenzene	BQL	6.00	2.95	1	2/28/2006	
trans-1,4-Dichloro-2-butene	BQL	6.00	12.8	1	2/28/2006	
1,1-Dichloroethane	BQL	6.00	3.46	1	2/28/2006	
1,1-Dichloroethene	BQL	6.00	4.62	1	2/28/2006	
1,2-Dichloroethane	BQL	6.00	3.44	1	2/28/2006	
cis-1,2-Dichloroethene	BQL	6.00	2.95	1	2/28/2006	
trans-1,2-dichloroethene	BQL	6.00	3.90	1	2/28/2006	
1,2-Dichloropropane	BQL	6.00	3.07	1	2/28/2006	
1,3-Dichloropropane	BQL	6.00	2.75	1	2/28/2006	
2,2-Dichloropropane	BQL	6.00	3.82	1	2/28/2006	
1,1-Dichloropropene	BQL	6.00	4.33	1	2/28/2006	
cis-1,3-Dichloropropene	BQL	6.00	3.34	1	2/28/2006	
trans-1,3-Dichloropropene	BQL	6.00	3.40	1	2/28/2006	
Dichlorodifluoromethane	BQL	6.00	4.47	1	2/28/2006	
Diisopropyl ether (DIPE)	BQL	6.00	2.84	1	2/28/2006	
Ethylbenzene	BQL	6.00	3.65	1	2/28/2006	

Results for Volatiles by GCMS 8260-5035

Client Sample ID: PAR 221 GP1-8
Client Project ID: NCDOT-Yancey
Lab Sample ID G106-565-24A
Lab Project ID: G106-565
Report Basis: Dry Weight

Analyzed By: JTF
Date Collected: 02-23-2006 12:00
Date Received: 2/24/2006
Matrix: Soil
%Solids: 75.2

Report Name / Compound	Result UG/KG	Quantitation Limit UG/KG	MDL UG/KG	Dilution Factor	Date Analyzed	Flag
Hexachlorobutadiene	BQL	6.00	4.74	1	2/28/2006	
2-Hexanone	BQL	6.00	2.62	1	2/28/2006	
Iodomethane	BQL	6.00	5.58	1	2/28/2006	
Isopropylbenzene	BQL	6.00	3.86	1	2/28/2006	
4-Isopropyltoluene	BQL	6.00	4.08	1	2/28/2006	
Methylene chloride	4.55	24.0	3.43	1	2/28/2006	J
4-Methyl-2-pentanone	BQL	6.00	2.77	1	2/28/2006	
Methyl-tert-butyl ether (MTBE)	BQL	6.00	3.05	1	2/28/2006	
Naphthalene	BQL	6.00	2.41	1	2/28/2006	
n-Propyl benzene	BQL	6.00	3.85	1	2/28/2006	
Styrene	BQL	6.00	4.29	1	2/28/2006	
1,1,1,2-Tetrachloroethane	BQL	6.00	3.26	1	2/28/2006	
1,1,2,2-Tetrachloroethane	BQL	6.00	2.95	1	2/28/2006	
Tetrachloroethene	BQL	6.00	3.78	1	2/28/2006	
Toluene	BQL	6.00	3.55	1	2/28/2006	
1,2,3-Trichlorobenzene	BQL	6.00	2.63	1	2/28/2006	
1,2,4-Trichlorobenzene	BQL	6.00	2.69	1	2/28/2006	
Trichloroethene	BQL	6.00	3.74	1	2/28/2006	
1,1,1-Trichloroethane	BQL	6.00	4.14	1	2/28/2006	
1,1,2-Trichloroethane	BQL	6.00	3.10	1	2/28/2006	
Trichlorofluoromethane	BQL	6.00	4.95	1	2/28/2006	
1,2,3-Trichloropropane	BQL	6.00	3.18	1	2/28/2006	
1,2,4-Trimethylbenzene	BQL	6.00	3.36	1	2/28/2006	
1,3,5-Trimethylbenzene	BQL	6.00	3.58	1	2/28/2006	
Vinyl chloride	BQL	6.00	3.96	1	2/28/2006	
m-,p-Xylene	BQL	12.0	6.80	1	2/28/2006	
o-Xylene	BQL	6.00	3.36	1	2/28/2006	

	Spike Added	Spike Result	Percent Recovered
4-Bromofluorobenzene	50	53.8	108
1,2-Dichloroethane-d4	50	69.6	139
Toluene-d8	50	51.6	103

Comments:

Flags:
BQL = Below Quantitation Limits.
J = Detected below the quantitation limit.

Reviewed By: _____

Results for Volatiles
by GCMS 8260-5035

Client Sample ID: Method Blank
Client Project ID:
Lab Sample ID VBLK3022706B
Lab Project ID:
Report Basis: Dry Weight

Analyzed By: JTF
Date Collected:
Date Received:
Matrix: Soil
%Solids: 100.0

Report Name Compound	Result UG/KG	Quantitation Limit UG/KG	MDL UG/KG	Dilution Factor	Date Analyzed	Flag
Acetone	BQL	50.0	2.94	1	2/27/2006	
Benzene	BQL	5.00	2.85	1	2/27/2006	
Bromobenzene	BQL	5.00	2.46	1	2/27/2006	
Bromochloromethane	BQL	5.00	2.92	1	2/27/2006	
Bromodichloromethane	BQL	5.00	2.84	1	2/27/2006	
Bromoform	BQL	5.00	2.42	1	2/27/2006	
Bromomethane	BQL	5.00	4.19	1	2/27/2006	
2-Butanone	BQL	25.0	2.88	1	2/27/2006	
n-Butylbenzene	BQL	5.00	3.35	1	2/27/2006	
sec-Butylbenzene	BQL	5.00	3.50	1	2/27/2006	
tert-Butylbenzene	BQL	5.00	3.47	1	2/27/2006	
Carbon disulfide	BQL	5.00	2.63	1	2/27/2006	
Carbon tetrachloride	BQL	5.00	3.46	1	2/27/2006	
Chlorobenzene	BQL	5.00	2.51	1	2/27/2006	
Chloroethane	BQL	5.00	3.14	1	2/27/2006	
Chloroform	BQL	5.00	2.51	1	2/27/2006	
Chloromethane	BQL	5.00	2.41	1	2/27/2006	
2-Chlorotoluene	BQL	5.00	2.98	1	2/27/2006	
4-Chlorotoluene	BQL	5.00	2.78	1	2/27/2006	
Dibromochloromethane	BQL	5.00	2.24	1	2/27/2006	
1,2-Dibromo-3-chloropropane	BQL	5.00	10.6	1	2/27/2006	
Dibromomethane	BQL	5.00	3.00	1	2/27/2006	
1,2-Dibromoethane (EDB)	BQL	5.00	2.33	1	2/27/2006	
1,2-Dichlorobenzene	BQL	5.00	2.41	1	2/27/2006	
1,3-Dichlorobenzene	BQL	5.00	2.34	1	2/27/2006	
1,4-Dichlorobenzene	BQL	5.00	2.46	1	2/27/2006	
trans-1,4-Dichloro-2-butene	BQL	5.00	10.7	1	2/27/2006	
1,1-Dichloroethane	BQL	5.00	2.88	1	2/27/2006	
1,1-Dichloroethene	BQL	5.00	3.85	1	2/27/2006	
1,2-Dichloroethane	BQL	5.00	2.87	1	2/27/2006	
cis-1,2-Dichloroethene	BQL	5.00	2.46	1	2/27/2006	
trans-1,2-dichloroethene	BQL	5.00	3.25	1	2/27/2006	
1,2-Dichloropropane	BQL	5.00	2.56	1	2/27/2006	
1,3-Dichloropropane	BQL	5.00	2.29	1	2/27/2006	
2,2-Dichloropropane	BQL	5.00	3.18	1	2/27/2006	
1,1-Dichloropropene	BQL	5.00	3.61	1	2/27/2006	
cis-1,3-Dichloropropene	BQL	5.00	2.78	1	2/27/2006	
trans-1,3-Dichloropropene	BQL	5.00	2.83	1	2/27/2006	
Dichlorodifluoromethane	BQL	5.00	3.73	1	2/27/2006	
Diisopropyl ether (DIPE)	BQL	5.00	2.37	1	2/27/2006	
Ethylbenzene	BQL	5.00	3.04	1	2/27/2006	

Results for Volatiles
by GCMS 8260-5035

Client Sample ID: Method Blank
Client Project ID:
Lab Sample ID VBLK3022706B
Lab Project ID:
Report Basis: Dry Weight

Analyzed By: JTF
Date Collected:
Date Received:
Matrix: Soil
%Solids: 100.0

Report Name Compound	Result UG/KG	Quantitation Limit UG/KG	MDL UG/KG	Dilution Factor	Date Analyzed	Flag
Hexachlorobutadiene	BQL	5.00	3.95	1	2/27/2006	
2-Hexanone	BQL	5.00	2.18	1	2/27/2006	
Iodomethane	BQL	5.00	4.65	1	2/27/2006	
Isopropylbenzene	BQL	5.00	3.22	1	2/27/2006	
4-Isopropyltoluene	BQL	5.00	3.40	1	2/27/2006	
Methylene chloride	BQL	20.0	2.86	1	2/27/2006	
4-Methyl-2-pentanone	BQL	5.00	2.31	1	2/27/2006	
Methyl-tert-butyl ether (MTBE)	BQL	5.00	2.54	1	2/27/2006	
Naphthalene	BQL	5.00	2.01	1	2/27/2006	
n-Propyl benzene	BQL	5.00	3.21	1	2/27/2006	
Styrene	BQL	5.00	3.58	1	2/27/2006	
1,1,1,2-Tetrachloroethane	BQL	5.00	2.72	1	2/27/2006	
1,1,2,2-Tetrachloroethane	BQL	5.00	2.46	1	2/27/2006	
Tetrachloroethene	BQL	5.00	3.15	1	2/27/2006	
Toluene	BQL	5.00	2.96	1	2/27/2006	
1,2,3-Trichlorobenzene	BQL	5.00	2.19	1	2/27/2006	
1,2,4-Trichlorobenzene	BQL	5.00	2.24	1	2/27/2006	
Trichloroethene	BQL	5.00	3.12	1	2/27/2006	
1,1,1-Trichloroethane	BQL	5.00	3.45	1	2/27/2006	
1,1,2-Trichloroethane	BQL	5.00	2.58	1	2/27/2006	
Trichlorofluoromethane	BQL	5.00	4.13	1	2/27/2006	
1,2,3-Trichloropropane	BQL	5.00	2.65	1	2/27/2006	
1,2,4-Trimethylbenzene	BQL	5.00	2.80	1	2/27/2006	
1,3,5-Trimethylbenzene	BQL	5.00	2.98	1	2/27/2006	
Vinyl chloride	BQL	5.00	3.30	1	2/27/2006	
m-,p-Xylene	BQL	10.0	5.67	1	2/27/2006	
o-Xylene	BQL	5.00	2.80	1	2/27/2006	

	Spike Added	Spike Result	Percent Recovered
4-Bromofluorobenzene	50	50.5	101
1,2-Dichloroethane-d4	50	46.3	93
Toluene-d8	50	48.3	97

Comments:

Flags:
BQL = Below Quantitation Limits.
J = Detected below the quantitation limit.

Reviewed By: _____

Results for Laboratory Control Spike (LCS)
by GC/MS 8260/5035

Lab Sample ID: lcs3022706c
Analyst: JTF
Batch ID: 3022706

Date Analyzed: 27 Feb 2006 11:13 pm
Matrix: Soil

compound	Spiked (µg/Kg)	Amount recovered	LCS (%)	Limits Lower (%)	Limits Upper (%)
benzene	50	48.06	96.1	77.6	122
chlorobenzene	50	47.91	95.8	75.3	125
1,1-dichloroethene	50	46.31	92.6	78.5	121
toluene	50	48.16	96.3	75.7	124
trichloroethene	50	49.42	98.8	60.8	139

Comments: Concentration values are on column amount.

Flags: * = Out of limits.
NA = Not applicable
NS = Not spiked

Reviewed by: BNF

Results for MS/MSD
by GC/MS 8260/5035

Client Project ID: Batch QC
Lab Sample ID: g122-2732-6a
Batch ID: 3022706

Date Analyzed: 28 Feb 2006 7:55 am
Matrix: Soil
Analyzed By: JTF

Compound	Unspiked Sample ug/L	Spike conc. ug/L	Recovered MS %	Recovered MSD %	Limits Lower %	Limits Upper %	RPD %	RPD Limit %
benzene	BQL	50	98.4	98.2	74.8	133	0.2	30
chlorobenzene	BQL	50	101.8	102.7	66.3	135	0.9	30
1,1-dichloroethene	BQL	50	96.7	97.3	72.0	135	0.6	30
toluene	BQL	50	102.2	101.3	70.5	138	0.8	30
trichloroethene	BQL	50	105.3	103.3	60.7	152	1.9	30

Comments:
Concentrations are on column amounts.
Concentration Units: ug/L

Flags:
* = Out of limits.
NA = Not applicable
BQL = Below quantitation limit.

Reviewed By: _____

VO41.072303.1

Results for Volatiles
by GCMS 8260-5035

Client Sample ID: Method Blank
Client Project ID:
Lab Sample ID VBLK3022706D
Lab Project ID:
Report Basis: Dry Weight

Analyzed By: JTF
Date Collected:
Date Received:
Matrix: Soil
%Solids: 100.0

Report Name Compound	Result UG/KG	Quantitation Limit UG/KG	MDL UG/KG	Dilution Factor	Date Analyzed	Flag
Acetone	BQL	50.0	2.94	1	2/28/2006	
Benzene	BQL	5.00	2.85	1	2/28/2006	
Bromobenzene	BQL	5.00	2.46	1	2/28/2006	
Bromochloromethane	BQL	5.00	2.92	1	2/28/2006	
Bromodichloromethane	BQL	5.00	2.84	1	2/28/2006	
Bromoform	BQL	5.00	2.42	1	2/28/2006	
Bromomethane	BQL	5.00	4.19	1	2/28/2006	
2-Butanone	BQL	25.0	2.88	1	2/28/2006	
n-Butylbenzene	BQL	5.00	3.35	1	2/28/2006	
sec-Butylbenzene	BQL	5.00	3.50	1	2/28/2006	
tert-Butylbenzene	BQL	5.00	3.47	1	2/28/2006	
Carbon disulfide	BQL	5.00	2.63	1	2/28/2006	
Carbon tetrachloride	BQL	5.00	3.46	1	2/28/2006	
Chlorobenzene	BQL	5.00	2.51	1	2/28/2006	
Chloroethane	BQL	5.00	3.14	1	2/28/2006	
Chloroform	BQL	5.00	2.51	1	2/28/2006	
Chloromethane	BQL	5.00	2.41	1	2/28/2006	
2-Chlorotoluene	BQL	5.00	2.98	1	2/28/2006	
4-Chlorotoluene	BQL	5.00	2.78	1	2/28/2006	
Dibromochloromethane	BQL	5.00	2.24	1	2/28/2006	
1,2-Dibromo-3-chloropropane	BQL	5.00	10.6	1	2/28/2006	
Dibromomethane	BQL	5.00	3.00	1	2/28/2006	
1,2-Dibromoethane (EDB)	BQL	5.00	2.33	1	2/28/2006	
1,2-Dichlorobenzene	BQL	5.00	2.41	1	2/28/2006	
1,3-Dichlorobenzene	BQL	5.00	2.34	1	2/28/2006	
1,4-Dichlorobenzene	BQL	5.00	2.46	1	2/28/2006	
trans-1,4-Dichloro-2-butene	BQL	5.00	10.7	1	2/28/2006	
1,1-Dichloroethane	BQL	5.00	2.88	1	2/28/2006	
1,1-Dichloroethene	BQL	5.00	3.85	1	2/28/2006	
1,2-Dichloroethane	BQL	5.00	2.87	1	2/28/2006	
cis-1,2-Dichloroethene	BQL	5.00	2.46	1	2/28/2006	
trans-1,2-dichloroethene	BQL	5.00	3.25	1	2/28/2006	
1,2-Dichloropropane	BQL	5.00	2.56	1	2/28/2006	
1,3-Dichloropropane	BQL	5.00	2.29	1	2/28/2006	
2,2-Dichloropropane	BQL	5.00	3.18	1	2/28/2006	
1,1-Dichloropropene	BQL	5.00	3.61	1	2/28/2006	
cis-1,3-Dichloropropene	BQL	5.00	2.78	1	2/28/2006	
trans-1,3-Dichloropropene	BQL	5.00	2.83	1	2/28/2006	
Dichlorodifluoromethane	BQL	5.00	3.73	1	2/28/2006	
Diisopropyl ether (DIPE)	BQL	5.00	2.37	1	2/28/2006	
Ethylbenzene	BQL	5.00	3.04	1	2/28/2006	

Results for Volatiles
by GCMS 8260-5035

Client Sample ID: Method Blank
Client Project ID:
Lab Sample ID VBLK3022706D
Lab Project ID:
Report Basis: Dry Weight

Analyzed By: JTF
Date Collected:
Date Received:
Matrix: Soil
%Solids: 100.0

Report Name Compound	Result UG/KG	Quantitation Limit UG/KG	MDL UG/KG	Dilution Factor	Date Analyzed	Flag
Hexachlorobutadiene	BQL	5.00	3.95	1	2/28/2006	
2-Hexanone	BQL	5.00	2.18	1	2/28/2006	
Iodomethane	BQL	5.00	4.65	1	2/28/2006	
Isopropylbenzene	BQL	5.00	3.22	1	2/28/2006	
4-Isopropyltoluene	BQL	5.00	3.40	1	2/28/2006	
Methylene chloride	BQL	20.0	2.86	1	2/28/2006	
4-Methyl-2-pentanone	BQL	5.00	2.31	1	2/28/2006	
Methyl-tert-butyl ether (MTBE)	BQL	5.00	2.54	1	2/28/2006	
Naphthalene	BQL	5.00	2.01	1	2/28/2006	
n-Propyl benzene	BQL	5.00	3.21	1	2/28/2006	
Styrene	BQL	5.00	3.58	1	2/28/2006	
1,1,1,2-Tetrachloroethane	BQL	5.00	2.72	1	2/28/2006	
1,1,2,2-Tetrachloroethane	BQL	5.00	2.46	1	2/28/2006	
Tetrachloroethene	BQL	5.00	3.15	1	2/28/2006	
Toluene	BQL	5.00	2.96	1	2/28/2006	
1,2,3-Trichlorobenzene	BQL	5.00	2.19	1	2/28/2006	
1,2,4-Trichlorobenzene	BQL	5.00	2.24	1	2/28/2006	
Trichloroethene	BQL	5.00	3.12	1	2/28/2006	
1,1,1-Trichloroethane	BQL	5.00	3.45	1	2/28/2006	
1,1,2-Trichloroethane	BQL	5.00	2.58	1	2/28/2006	
Trichlorofluoromethane	BQL	5.00	4.13	1	2/28/2006	
1,2,3-Trichloropropane	BQL	5.00	2.65	1	2/28/2006	
1,2,4-Trimethylbenzene	BQL	5.00	2.80	1	2/28/2006	
1,3,5-Trimethylbenzene	BQL	5.00	2.98	1	2/28/2006	
Vinyl chloride	BQL	5.00	3.30	1	2/28/2006	
m-,p-Xylene	BQL	10.0	5.67	1	2/28/2006	
o-Xylene	BQL	5.00	2.80	1	2/28/2006	

	Spike Added	Spike Result	Percent Recovered
4-Bromofluorobenzene	50	51.3	103
1,2-Dichloroethane-d4	50	46.8	94
Toluene-d8	50	50.2	100

Comments:

Flags:
BQL = Below Quantitation Limits.
J = Detected below the quantitation limit.

Reviewed By: _____

Results for MS/MSD
by GC/MS 8260/5035

Client Project ID: Batch QC
Lab Sample ID: g122-2735-1a
Batch ID: 3022706

Date Analyzed: 27 Feb 2006 8:08 pm
Matrix: Soil
Analyzed By: JTF

Compound	Unspiked Sample ug/L	Spike conc. ug/L	Recovered MS %	Recovered MSD %	Limits Lower %	Limits Upper %	RPD %	RPD Limit %
benzene	BQL	50	95.7	98.0	74.8	133	2.4	30
chlorobenzene	BQL	50	95.2	93.1	66.3	135	2.3	30
1,1-dichloroethene	BQL	50	92.8	94.5	72.0	135	1.8	30
toluene	0.5	50	94.6	95.8	70.5	138	1.3	30
trichloroethene	BQL	50	93.5	100.3	60.7	152	7.0	30

Comments:
Concentrations are on column amounts.
Concentration Units: ug/L

Flags:
* = Out of limits.
NA = Not applicable
BQL = Below quantitation limit.

Reviewed By: _____

VO41.072303.1

Results for Laboratory Control Spike (LCS)
by GC/MS 8260/5035

Lab Sample ID: lcs3022706a
Analyst: JTF
Batch ID: 3022706

Date Analyzed: 27 Feb 2006 10:23 am
Matrix: Soil

compound	Spiked (µg/Kg)	Amount recovered	LCS (%)	Limits Lower (%)	Limits Upper (%)
benzene	50	48.24	96.5	77.6	122
chlorobenzene	50	40.33	80.7	75.3	125
1,1-dichloroethene	50	43.40	86.8	78.5	121
toluene	50	45.36	90.7	75.7	124
trichloroethene	50	43.65	87.3	60.8	139

Comments: Concentration values are on column amount.

Flags: * = Out of limits.
NA = Not applicable
NS = Not spiked

Reviewed by: _____

VO39.072303.1

Results for Semivolatiles by GCMS 8270

Client Sample ID: PAR 163 GP2-10
Client Project ID: NCDOT-Yancey
Lab Sample ID: G106-565-9K
Lab Project ID: G106-565
Report Basis: Dry weight

Analyzed By: MRC
Date Collected: 2/22/2006 9:22
Date Received: 2/24/2006
Date Extracted: 2/28/2006
Matrix: Soil
% Solids: 77.19

Compound	Result ug/Kg	RL ug/Kg	MDL ug/Kg	Dilution Factor	Date Analyzed	Flag
Acenaphthene	BQL	403	57.7	1	3/1/2006	
Acenaphthylene	BQL	403	53.6	1	3/1/2006	
Anthracene	BQL	403	58.5	1	3/1/2006	
Benzo[a]anthracene	BQL	403	69.8	1	3/1/2006	
Benzo[a]pyrene	BQL	403	61.7	1	3/1/2006	
Benzo[b]fluoranthene	BQL	403	70.6	1	3/1/2006	
Benzo[g,h,i]perylene	BQL	403	110	1	3/1/2006	
Benzo[k]fluoranthene	BQL	403	77.8	1	3/1/2006	
Benzoic Acid	BQL	807	807	1	3/1/2006	
Bis(2-chloroethoxy)methane	BQL	403	60.1	1	3/1/2006	
Bis(2-chloroethyl)ether	BQL	403	48.8	1	3/1/2006	
Bis(2-chloroisopropyl)ether	BQL	403	50.4	1	3/1/2006	
Bis(2-ethylhexyl)phthalate	BQL	403	54.0	1	3/1/2006	
4-bromophenyl phenyl ether	BQL	403	68.2	1	3/1/2006	
Butylbenzylphthalate	BQL	403	62.1	1	3/1/2006	
2-Chloronaphthalene	BQL	403	63.3	1	3/1/2006	
2-Chlorophenol	BQL	403	126	1	3/1/2006	
4-Chloro-3-methylphenol	BQL	403	126	1	3/1/2006	
4-Chloroaniline	BQL	2020	307	1	3/1/2006	
4-Chlorophenyl phenyl ether	BQL	403	59.3	1	3/1/2006	
Chrysene	BQL	403	43.6	1	3/1/2006	
Dibenzo[a,h]anthracene	BQL	403	113	1	3/1/2006	
Dibenzofuran	BQL	403	73.4	1	3/1/2006	
Di-n-Butylphthalate	BQL	403	48.0	1	3/1/2006	
1,2-Dichlorobenzene	BQL	403	44.8	1	3/1/2006	
1,3-Dichlorobenzene	BQL	403	44.0	1	3/1/2006	
1,4-Dichlorobenzene	BQL	403	45.6	1	3/1/2006	
3,3'-Dichlorobenzidine	BQL	807	102	1	3/1/2006	
2,4-Dichlorophenol	BQL	403	145	1	3/1/2006	
Diethylphthalate	BQL	403	52.0	1	3/1/2006	
Dimethylphthalate	BQL	403	48.8	1	3/1/2006	
2,4-Dimethylphenol	BQL	403	288	1	3/1/2006	
Di-n-octylphthalate	BQL	403	66.5	1	3/1/2006	
4,6-Dinitro-2-methylphenol	BQL	2020	238	1	3/1/2006	
2,4-Dinitrophenol	BQL	2020	888	1	3/1/2006	
2,4-Dinitrotoluene	BQL	403	52.4	1	3/1/2006	
2,6-Dinitrotoluene	BQL	403	73.4	1	3/1/2006	
Diphenylamine *	BQL	403	39.5	1	3/1/2006	
Fluoranthene	BQL	403	56.5	1	3/1/2006	
Fluorene	BQL	403	50.0	1	3/1/2006	
Hexachlorobenzene	BQL	403	62.1	1	3/1/2006	
Hexachlorobutadiene	BQL	403	64.5	1	3/1/2006	
Hexachlorocyclopentadiene	BQL	807	41.5	1	3/1/2006	
Hexachloroethane	BQL	403	36.3	1	3/1/2006	
Indeno(1,2,3-c,d)pyrene	BQL	403	103	1	3/1/2006	

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Results for Semivolatiles by GCMS 8270

Client Sample ID: PAR 163 GP2-10
Client Project ID: NCDOT-Yancey
Lab Sample ID: G106-565-9K
Lab Project ID: G106-565
Report Basis: Dry weight

Analyzed By: MRC
Date Collected: 2/22/2006 9:22
Date Received: 2/24/2006
Date Extracted: 2/28/2006
Matrix: Soil
% Solids: 77.19

Compound	Result ug/Kg	RL ug/Kg	MDL ug/Kg	Dilution Factor	Date Analyzed	Flag
Isophorone	BQL	403	59.3	1	3/1/2006	
2-Methylnaphthalene	BQL	403	118	1	3/1/2006	
2-Methylphenol	BQL	403	142	1	3/1/2006	
3- & 4-Methylphenol	BQL	403	137	1	3/1/2006	
Naphthalene	BQL	403	32.7	1	3/1/2006	
2-Nitroaniline	BQL	403	63.3	1	3/1/2006	
3-Nitroaniline	BQL	2020	415	1	3/1/2006	
4-Nitroaniline	BQL	2020	124	1	3/1/2006	
Nitrobenzene	BQL	403	54.4	1	3/1/2006	
2-Nitrophenol	BQL	403	125	1	3/1/2006	
4-Nitrophenol	BQL	2020	112	1	3/1/2006	
N-Nitrosodi-n-propylamine	BQL	403	51.2	1	3/1/2006	
Pentachlorophenol	BQL	2020	105	1	3/1/2006	
Phenanthrene	BQL	403	46.0	1	3/1/2006	
Phenol	BQL	403	111	1	3/1/2006	
Pyrene	BQL	403	77.4	1	3/1/2006	
1,2,4-Trichlorobenzene	BQL	403	50.4	1	3/1/2006	
2,4,5-Trichlorophenol	BQL	403	156	1	3/1/2006	
2,4,6-Trichlorophenol	BQL	403	144	1	3/1/2006	

	Spike Added	Spike Result	Percent Recovered
2-Fluorobiphenyl	10	10.1	101
2-Fluorophenol	10	11	110
Nitrobenzene-d5	10	11.2	112
Phenol-d6	10	11.2	112
2,4,6-Tribromophenol	10	10.7	107
4-Terphenyl-d14	10	10.9	109

Comments:
* N-Nitrosodiphenylamine is reported as the breakdown product Diphenylamine.

Flags:
BQL = Below Quantitation Limits.
J = Detected below the quantitation limit.

Reviewed By: _____

Results for Semivolatiles by GCMS 8270

Client Sample ID: PAR 199A GP2-10
Client Project ID: NCDOT-Yancey
Lab Sample ID: G106-565-14N
Lab Project ID: G106-565
Report Basis: Dry weight

Analyzed By: MRC
Date Collected: 2/22/2006 12:45
Date Received: 2/24/2006
Date Extracted: 2/28/2006
Matrix: Soil
% Solids: 90.91

Compound	Result ug/Kg	RL ug/Kg	MDL ug/Kg	Dilution Factor	Date Analyzed	Flag
Acenaphthene	BQL	343	49.1	1	3/1/2006	
Acenaphthylene	BQL	343	45.6	1	3/1/2006	
Anthracene	BQL	343	49.7	1	3/1/2006	
Benzo[a]anthracene	BQL	343	59.4	1	3/1/2006	
Benzo[a]pyrene	BQL	343	52.5	1	3/1/2006	
Benzo[b]fluoranthene	BQL	343	60.0	1	3/1/2006	
Benzo[g,h,i]perylene	BQL	343	93.3	1	3/1/2006	
Benzo[k]fluoranthene	BQL	343	66.2	1	3/1/2006	
Benzoic Acid	BQL	686	686	1	3/1/2006	
Bis(2-chloroethoxy)methane	BQL	343	51.1	1	3/1/2006	
Bis(2-chloroethyl)ether	BQL	343	41.5	1	3/1/2006	
Bis(2-chloroisopropyl)ether	BQL	343	42.9	1	3/1/2006	
Bis(2-ethylhexyl)phthalate	BQL	343	46.0	1	3/1/2006	
4-bromophenyl phenyl ether	BQL	343	58.0	1	3/1/2006	
Butylbenzylphthalate	BQL	343	52.8	1	3/1/2006	
2-Chloronaphthalene	BQL	343	53.9	1	3/1/2006	
2-Chlorophenol	BQL	343	107	1	3/1/2006	
4-Chloro-3-methylphenol	BQL	343	107	1	3/1/2006	
4-Chloroaniline	BQL	1720	261	1	3/1/2006	
4-Chlorophenyl phenyl ether	BQL	343	50.4	1	3/1/2006	
Chrysene	BQL	343	37.1	1	3/1/2006	
Dibenzo[a,h]anthracene	BQL	343	96.1	1	3/1/2006	
Dibenzofuran	BQL	343	62.4	1	3/1/2006	
Di-n-Butylphthalate	BQL	343	40.8	1	3/1/2006	
1,2-Dichlorobenzene	BQL	343	38.1	1	3/1/2006	
1,3-Dichlorobenzene	BQL	343	37.4	1	3/1/2006	
1,4-Dichlorobenzene	BQL	343	38.8	1	3/1/2006	
3,3'-Dichlorobenzidine	BQL	686	86.5	1	3/1/2006	
2,4-Dichlorophenol	BQL	343	124	1	3/1/2006	
Diethylphthalate	BQL	343	44.3	1	3/1/2006	
Dimethylphthalate	BQL	343	41.5	1	3/1/2006	
2,4-Dimethylphenol	BQL	343	245	1	3/1/2006	
Di-n-octylphthalate	BQL	343	56.6	1	3/1/2006	
4,6-Dinitro-2-methylphenol	BQL	1720	202	1	3/1/2006	
2,4-Dinitrophenol	BQL	1720	756	1	3/1/2006	
2,4-Dinitrotoluene	BQL	343	44.6	1	3/1/2006	
2,6-Dinitrotoluene	BQL	343	62.4	1	3/1/2006	
Diphenylamine *	BQL	343	33.6	1	3/1/2006	
Fluoranthene	BQL	343	48.0	1	3/1/2006	
Fluorene	BQL	343	42.5	1	3/1/2006	
Hexachlorobenzene	BQL	343	52.8	1	3/1/2006	
Hexachlorobutadiene	BQL	343	54.9	1	3/1/2006	
Hexachlorocyclopentadiene	BQL	686	35.3	1	3/1/2006	
Hexachloroethane	BQL	343	30.9	1	3/1/2006	
Indeno(1,2,3-c,d)pyrene	BQL	343	87.8	1	3/1/2006	

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Results for Semivolatiles by GCMS 8270

Client Sample ID: PAR 199A GP2-10
Client Project ID: NCDOT-Yancey
Lab Sample ID: G106-565-14N
Lab Project ID: G106-565
Report Basis: Dry weight

Analyzed By: MRC
Date Collected: 2/22/2006 12:45
Date Received: 2/24/2006
Date Extracted: 2/28/2006
Matrix: Soil
% Solids: 90.91

Compound	Result ug/Kg	RL ug/Kg	MDL ug/Kg	Dilution Factor	Date Analyzed	Flag
Isophorone	BQL	343	50.4	1	3/1/2006	
2-Methylnaphthalene	BQL	343	100	1	3/1/2006	
2-Methylphenol	BQL	343	121	1	3/1/2006	
3- & 4-Methylphenol	BQL	343	116	1	3/1/2006	
Naphthalene	BQL	343	27.8	1	3/1/2006	
2-Nitroaniline	BQL	343	53.9	1	3/1/2006	
3-Nitroaniline	BQL	1720	353	1	3/1/2006	
4-Nitroaniline	BQL	1720	106	1	3/1/2006	
Nitrobenzene	BQL	343	46.3	1	3/1/2006	
2-Nitrophenol	BQL	343	106	1	3/1/2006	
4-Nitrophenol	BQL	1720	95.0	1	3/1/2006	
N-Nitrosodi-n-propylamine	BQL	343	43.6	1	3/1/2006	
Pentachlorophenol	BQL	1720	89.5	1	3/1/2006	
Phenanthrene	BQL	343	39.1	1	3/1/2006	
Phenol	BQL	343	94.0	1	3/1/2006	
Pyrene	BQL	343	65.9	1	3/1/2006	
1,2,4-Trichlorobenzene	BQL	343	42.9	1	3/1/2006	
2,4,5-Trichlorophenol	BQL	343	133	1	3/1/2006	
2,4,6-Trichlorophenol	BQL	343	122	1	3/1/2006	

	Spike Added	Spike Result	Percent Recovered
2-Fluorobiphenyl	10	10.3	103
2-Fluorophenol	10	8.8	88
Nitrobenzene-d5	10	10.7	107
Phenol-d6	10	9.2	92
2,4,6-Tribromophenol	10	9	90
4-Terphenyl-d14	10	11.4	114

Comments:
* N-Nitrosodiphenylamine is reported as the breakdown product Diphenylamine.

Flags:
BQL = Below Quantitation Limits.
J = Detected below the quantitation limit.

Reviewed By: _____

Results for Semivolatiles by GCMS 8270

Client Sample ID: PAR 89 HA6-8
Client Project ID: NCDOT-Yancey
Lab Sample ID: G106-565-17L
Lab Project ID: G106-565
Report Basis: Dry weight

Analyzed By: MRC
Date Collected: 2/20/2006 12:45
Date Received: 2/24/2006
Date Extracted: 2/28/2006
Matrix: Soil
% Solids: 77.2

Compound	Result ug/Kg	RL ug/Kg	MDL ug/Kg	Dilution Factor	Date Analyzed	Flag
Acenaphthene	BQL	404	57.7	1	3/1/2006	
Acenaphthylene	BQL	404	53.7	1	3/1/2006	
Anthracene	BQL	404	58.5	1	3/1/2006	
Benzo[a]anthracene	BQL	404	69.9	1	3/1/2006	
Benzo[a]pyrene	BQL	404	61.8	1	3/1/2006	
Benzo[b]fluoranthene	BQL	404	70.7	1	3/1/2006	
Benzo[g,h,i]perylene	BQL	404	110	1	3/1/2006	
Benzo[k]fluoranthene	BQL	404	77.9	1	3/1/2006	
Benzoic Acid	BQL	808	808	1	3/1/2006	
Bis(2-chloroethoxy)methane	BQL	404	60.2	1	3/1/2006	
Bis(2-chloroethyl)ether	BQL	404	48.9	1	3/1/2006	
Bis(2-chloroisopropyl)ether	BQL	404	50.5	1	3/1/2006	
Bis(2-ethylhexyl)phthalate	BQL	404	54.1	1	3/1/2006	
4-bromophenyl phenyl ether	BQL	404	68.2	1	3/1/2006	
Butylbenzylphthalate	BQL	404	62.2	1	3/1/2006	
2-Chloronaphthalene	BQL	404	63.4	1	3/1/2006	
2-Chlorophenol	BQL	404	126	1	3/1/2006	
4-Chloro-3-methylphenol	BQL	404	126	1	3/1/2006	
4-Chloroaniline	BQL	2020	308	1	3/1/2006	
4-Chlorophenyl phenyl ether	BQL	404	59.4	1	3/1/2006	
Chrysene	BQL	404	43.6	1	3/1/2006	
Dibenzo[a,h]anthracene	BQL	404	113	1	3/1/2006	
Dibenzofuran	BQL	404	73.5	1	3/1/2006	
Di-n-Butylphthalate	BQL	404	48.1	1	3/1/2006	
1,2-Dichlorobenzene	BQL	404	44.8	1	3/1/2006	
1,3-Dichlorobenzene	BQL	404	44.0	1	3/1/2006	
1,4-Dichlorobenzene	BQL	404	45.6	1	3/1/2006	
3,3'-Dichlorobenzidine	BQL	808	102	1	3/1/2006	
2,4-Dichlorophenol	BQL	404	145	1	3/1/2006	
Diethylphthalate	BQL	404	52.1	1	3/1/2006	
Dimethylphthalate	BQL	404	48.9	1	3/1/2006	
2,4-Dimethylphenol	BQL	404	289	1	3/1/2006	
Di-n-octylphthalate	BQL	404	66.6	1	3/1/2006	
4,6-Dinitro-2-methylphenol	BQL	2020	238	1	3/1/2006	
2,4-Dinitrophenol	BQL	2020	889	1	3/1/2006	
2,4-Dinitrotoluene	BQL	404	52.5	1	3/1/2006	
2,6-Dinitrotoluene	BQL	404	73.5	1	3/1/2006	
Diphenylamine *	BQL	404	39.6	1	3/1/2006	
Fluoranthene	BQL	404	56.5	1	3/1/2006	
Fluorene	BQL	404	50.1	1	3/1/2006	
Hexachlorobenzene	BQL	404	62.2	1	3/1/2006	
Hexachlorobutadiene	BQL	404	64.6	1	3/1/2006	
Hexachlorocyclopentadiene	BQL	808	41.6	1	3/1/2006	
Hexachloroethane	BQL	404	36.3	1	3/1/2006	
Indeno(1,2,3-c,d)pyrene	BQL	404	103	1	3/1/2006	

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Results for Semivolatiles by GCMS 8270

Client Sample ID: PAR 89 HA6-8
Client Project ID: NCDOT-Yancey
Lab Sample ID: G106-565-17L
Lab Project ID: G106-565
Report Basis: Dry weight

Analyzed By: MRC
Date Collected: 2/20/2006 12:45
Date Received: 2/24/2006
Date Extracted: 2/28/2006
Matrix: Soil
% Solids: 77.2

Compound	Result ug/Kg	RL ug/Kg	MDL ug/Kg	Dilution Factor	Date Analyzed	Flag
Isophorone	BQL	404	59.4	1	3/1/2006	
2-Methylnaphthalene	BQL	404	118	1	3/1/2006	
2-Methylphenol	BQL	404	142	1	3/1/2006	
3- & 4-Methylphenol	BQL	404	137	1	3/1/2006	
Naphthalene	BQL	404	32.7	1	3/1/2006	
2-Nitroaniline	BQL	404	63.4	1	3/1/2006	
3-Nitroaniline	BQL	2020	416	1	3/1/2006	
4-Nitroaniline	BQL	2020	124	1	3/1/2006	
Nitrobenzene	BQL	404	54.5	1	3/1/2006	
2-Nitrophenol	BQL	404	125	1	3/1/2006	
4-Nitrophenol	BQL	2020	112	1	3/1/2006	
N-Nitrosodi-n-propylamine	BQL	404	51.3	1	3/1/2006	
Pentachlorophenol	BQL	2020	105	1	3/1/2006	
Phenanthrene	BQL	404	46.0	1	3/1/2006	
Phenol	BQL	404	111	1	3/1/2006	
Pyrene	BQL	404	77.5	1	3/1/2006	
1,2,4-Trichlorobenzene	BQL	404	50.5	1	3/1/2006	
2,4,5-Trichlorophenol	BQL	404	156	1	3/1/2006	
2,4,6-Trichlorophenol	BQL	404	144	1	3/1/2006	

	Spike Added	Spike Result	Percent Recovered
2-Fluorobiphenyl	10	9.9	99
2-Fluorophenol	10	8.3	83
Nitrobenzene-d5	10	10.6	106
Phenol-d6	10	9.1	91
2,4,6-Tribromophenol	10	7.5	75
4-Terphenyl-d14	10	10.7	107

Comments:
* N-Nitrosodiphenylamine is reported as the breakdown product Diphenylamine.

Flags:
BQL = Below Quantitation Limits.
J = Detected below the quantitation limit.

Reviewed By: BW

Results for Semivolatiles by GCMS 8270

Client Sample ID: PAR 221 GP1-8
Client Project ID: NCDOT-Yancey
Lab Sample ID: G106-565-24G
Lab Project ID: G106-565
Report Basis: Dry weight

Analyzed By: MRC
Date Collected: 2/23/2006 12:00
Date Received: 2/24/2006
Date Extracted: 2/28/2006
Matrix: Soil
% Solids: 75.23

Compound	Result ug/Kg	RL ug/Kg	MDL ug/Kg	Dilution Factor	Date Analyzed	Flag
Acenaphthene	BQL	410	58.6	1	3/1/2006	
Acenaphthylene	BQL	410	54.5	1	3/1/2006	
Anthracene	BQL	410	59.4	1	3/1/2006	
Benzo[a]anthracene	BQL	410	70.8	1	3/1/2006	
Benzo[a]pyrene	BQL	410	62.7	1	3/1/2006	
Benzo[b]fluoranthene	BQL	410	71.7	1	3/1/2006	
Benzo[g,h,i]perylene	BQL	410	111	1	3/1/2006	
Benzo[k]fluoranthene	BQL	410	79.0	1	3/1/2006	
Benzoic Acid	BQL	819	819	1	3/1/2006	
Bis(2-chloroethoxy)methane	BQL	410	61.0	1	3/1/2006	
Bis(2-chloroethyl)ether	BQL	410	49.6	1	3/1/2006	
Bis(2-chloroisopropyl)ether	BQL	410	51.2	1	3/1/2006	
Bis(2-ethylhexyl)phthalate	BQL	410	54.9	1	3/1/2006	
4-bromophenyl phenyl ether	BQL	410	69.2	1	3/1/2006	
Butylbenzylphthalate	BQL	410	63.1	1	3/1/2006	
2-Chloronaphthalene	BQL	410	64.3	1	3/1/2006	
2-Chlorophenol	BQL	410	128	1	3/1/2006	
4-Chloro-3-methylphenol	BQL	410	128	1	3/1/2006	
4-Chloroaniline	BQL	2050	312	1	3/1/2006	
4-Chlorophenyl phenyl ether	BQL	410	60.2	1	3/1/2006	
Chrysene	BQL	410	44.2	1	3/1/2006	
Dibenzo[a,h]anthracene	BQL	410	115	1	3/1/2006	
Dibenzofuran	BQL	410	74.5	1	3/1/2006	
Di-n-Butylphthalate	BQL	410	48.7	1	3/1/2006	
1,2-Dichlorobenzene	BQL	410	45.5	1	3/1/2006	
1,3-Dichlorobenzene	BQL	410	44.6	1	3/1/2006	
1,4-Dichlorobenzene	BQL	410	46.3	1	3/1/2006	
3,3'-Dichlorobenzidine	BQL	819	103	1	3/1/2006	
2,4-Dichlorophenol	BQL	410	147	1	3/1/2006	
Diethylphthalate	BQL	410	52.8	1	3/1/2006	
Dimethylphthalate	BQL	410	49.6	1	3/1/2006	
2,4-Dimethylphenol	BQL	410	293	1	3/1/2006	
Di-n-octylphthalate	BQL	410	67.6	1	3/1/2006	
4,6-Dinitro-2-methylphenol	BQL	2050	241	1	3/1/2006	
2,4-Dinitrophenol	BQL	2050	902	1	3/1/2006	
2,4-Dinitrotoluene	BQL	410	53.2	1	3/1/2006	
2,6-Dinitrotoluene	BQL	410	74.5	1	3/1/2006	
Diphenylamine *	BQL	410	40.1	1	3/1/2006	
Fluoranthene	BQL	410	57.3	1	3/1/2006	
Fluorene	BQL	410	50.8	1	3/1/2006	
Hexachlorobenzene	BQL	410	63.1	1	3/1/2006	
Hexachlorobutadiene	BQL	410	65.5	1	3/1/2006	
Hexachlorocyclopentadiene	BQL	819	42.2	1	3/1/2006	
Hexachloroethane	BQL	410	36.9	1	3/1/2006	
Indeno(1,2,3-c,d)pyrene	BQL	410	105	1	3/1/2006	

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Results for Semivolatiles by GCMS 8270

Client Sample ID: PAR 221 GP1-8
Client Project ID: NCDOT-Yancey
Lab Sample ID: G106-565-24G
Lab Project ID: G106-565
Report Basis: Dry weight

Analyzed By: MRC
Date Collected: 2/23/2006 12:00
Date Received: 2/24/2006
Date Extracted: 2/28/2006
Matrix: Soil
% Solids: 75.23

Compound	Result ug/Kg	RL ug/Kg	MDL ug/Kg	Dilution Factor	Date Analyzed	Flag
Isophorone	BQL	410	60.2	1	3/1/2006	
2-Methylnaphthalene	BQL	410	120	1	3/1/2006	
2-Methylphenol	BQL	410	144	1	3/1/2006	
3- & 4-Methylphenol	BQL	410	139	1	3/1/2006	
Naphthalene	BQL	410	33.2	1	3/1/2006	
2-Nitroaniline	BQL	410	64.3	1	3/1/2006	
3-Nitroaniline	BQL	2050	422	1	3/1/2006	
4-Nitroaniline	BQL	2050	126	1	3/1/2006	
Nitrobenzene	BQL	410	55.3	1	3/1/2006	
2-Nitrophenol	BQL	410	127	1	3/1/2006	
4-Nitrophenol	BQL	2050	113	1	3/1/2006	
N-Nitrosodi-n-propylamine	BQL	410	52.0	1	3/1/2006	
Pentachlorophenol	BQL	2050	107	1	3/1/2006	
Phenanthrene	BQL	410	46.7	1	3/1/2006	
Phenol	BQL	410	112	1	3/1/2006	
Pyrene	BQL	410	78.6	1	3/1/2006	
1,2,4-Trichlorobenzene	BQL	410	51.2	1	3/1/2006	
2,4,5-Trichlorophenol	BQL	410	158	1	3/1/2006	
2,4,6-Trichlorophenol	BQL	410	146	1	3/1/2006	

	Spike Added	Spike Result	Percent Recovered
2-Fluorobiphenyl	10	9.6	96
2-Fluorophenol	10	7.9	79
Nitrobenzene-d5	10	9.8	98
Phenol-d6	10	8.9	89
2,4,6-Tribromophenol	10	7.2	73
4-Terphenyl-d14	10	10.5	105

Comments:
* N-Nitrosodiphenylamine is reported as the breakdown product Diphenylamine.

Flags:
BQL = Below Quantitation Limits.
J = Detected below the quantitation limit.

Reviewed By: _____

Results for Semivolatiles
by GCMS 8270

Client Sample ID: Method Blank
Client Project ID:
Lab Sample ID: PB4597
Lab Project ID:
Report Basis: Dry Weight

Analyzed By: MRC
Date Collected:
Date Received:
Date Extracted: 2/28/2006
Matrix: SOIL
% Solids: 100

Compound	Result ug/Kg	RL ug/Kg	MDL ug/Kg	Dilution Factor	Date Analyzed	Flag
Acenaphthene	BQL	313	44.7	1	3/1/2006	
Acenaphthylene	BQL	313	41.6	1	3/1/2006	
Anthracene	BQL	313	45.3	1	3/1/2006	
Benzo[a]anthracene	BQL	313	54.1	1	3/1/2006	
Benzo[a]pyrene	BQL	313	47.8	1	3/1/2006	
Benzo[b]fluoranthene	BQL	313	54.7	1	3/1/2006	
Benzo[g,h,i]perylene	BQL	313	85.0	1	3/1/2006	
Benzo[k]fluoranthene	BQL	313	60.3	1	3/1/2006	
Benzoic Acid	BQL	625	625	1	3/1/2006	
Bis(2-chloroethoxy)methane	BQL	313	46.6	1	3/1/2006	
Bis(2-chloroethyl)ether	BQL	313	37.8	1	3/1/2006	
Bis(2-chloroisopropyl)ether	BQL	313	39.1	1	3/1/2006	
Bis(2-ethylhexyl)phthalate	BQL	313	41.9	1	3/1/2006	
4-bromophenyl phenyl ether	BQL	313	52.8	1	3/1/2006	
Butylbenzylphthalate	BQL	313	48.1	1	3/1/2006	
2-Chloronaphthalene	BQL	313	49.1	1	3/1/2006	
2-Chlorophenol	BQL	313	97.8	1	3/1/2006	
4-Chloro-3-methylphenol	BQL	313	97.5	1	3/1/2006	
4-Chloroaniline	BQL	1560	238	1	3/1/2006	
4-Chlorophenyl phenyl ether	BQL	313	45.9	1	3/1/2006	
Chrysene	BQL	313	33.8	1	3/1/2006	
Dibenzo[a,h]anthracene	BQL	313	87.5	1	3/1/2006	
Dibenzofuran	BQL	313	56.9	1	3/1/2006	
Di-n-Butylphthalate	BQL	313	37.2	1	3/1/2006	
1,2-Dichlorobenzene	BQL	313	34.7	1	3/1/2006	
1,3-Dichlorobenzene	BQL	313	34.1	1	3/1/2006	
1,4-Dichlorobenzene	BQL	313	35.3	1	3/1/2006	
3,3'-Dichlorobenzidine	BQL	625	78.8	1	3/1/2006	
2,4-Dichlorophenol	BQL	313	113	1	3/1/2006	
Diethylphthalate	BQL	313	40.3	1	3/1/2006	
Dimethylphthalate	BQL	313	37.8	1	3/1/2006	
2,4-Dimethylphenol	BQL	313	223	1	3/1/2006	
Di-n-octylphthalate	BQL	313	51.6	1	3/1/2006	
4,6-Dinitro-2-methylphenol	BQL	1560	184	1	3/1/2006	
2,4-Dinitrophenol	BQL	1560	688	1	3/1/2006	
2,4-Dinitrotoluene	BQL	313	40.6	1	3/1/2006	
2,6-Dinitrotoluene	BQL	313	56.9	1	3/1/2006	
Diphenylamine *	BQL	313	30.6	1	3/1/2006	
Fluoranthene	BQL	313	43.7	1	3/1/2006	
Fluorene	BQL	313	38.8	1	3/1/2006	
Hexachlorobenzene	BQL	313	48.1	1	3/1/2006	
Hexachlorobutadiene	BQL	313	50.0	1	3/1/2006	
Hexachlorocyclopentadiene	BQL	625	32.2	1	3/1/2006	
Hexachloroethane	BQL	313	28.1	1	3/1/2006	
Indeno(1,2,3-c,d)pyrene	BQL	313	80.0	1	3/1/2006	

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Results For Matrix Spike / Matrix Spike Duplicate and Laboratory Control Standard (MS/MSD/LCS)
by GCMS

Client Sample ID: Batch QC
Client Project ID:
Lab Sample ID: Batch-4597-MS/MSD/LCS
Lab Project ID:
Matrix: SOIL
Prep Method: 3540

Date Collected:
Date Received:
Date Extracted: 02/28/06
Date Analyzed: 03/02/06
Analyzed By: MRC
Dilution: 1

	Sample Amount (µg/kg)	MS Spike (µg/kg)	MS Conc. (µg/kg)	MS Spike % Rec.	MSD Spike (µg/kg)	MSD Conc. (µg/kg)	MSD Conc. % Rec.	RPD	QC Limits RPD	QC Limits % Rec.
Acenaphthylene	BQL	3360	4160	124	3350	3880	116.0	6.59	30	73.0-140
4-Chloro-3-methylphenol	BQL	3360	3550	106	3350	3320	99.1	6.45	30	80.0-115
2-Chlorophenol	BQL	3360	3380	101	3350	3140	93.8	7.00	30	77.1-111
1,4-Dichlorobenzene	BQL	3360	3180	94.8	3350	2990	89.3	5.98	30	70.6-117
2,4-Dinitrotoluene	BQL	3360	3500	104	3350	3270	97.6	6.45	30	67.6-136
N-Nitrosodi-n-propylamine	BQL	3360	3240	96.6	3350	2960	88.4	8.86	30	74.3-133
4-Nitrophenol	BQL	3360	3780	113	3350	3450	103.0	9.00	30	56.8-133
Pentachlorophenol	BQL	3360	3410	101	3350	3190	95.2	6.31	30	29.2-108
Phenol	BQL	3360	3430	102	3350	3240	96.8	5.33	30	71.2-120
Pyrene	BQL	3360	3360	100	3350	3190	95.4	4.81	30	68.5-140
1,2,4-Trichlorobenzene	BQL	3360	3200	95.4	3350	3010	89.9	5.94	30	68.9-119

	Spiked Amount (µg/kg)	LCS Conc. (µg/kg)	LCS Spike %	QC Limits % Rec.
Acenaphthylene	3125	3770	121	80.9-143
4-Chloro-3-methylphenol	3125	3200	102	83.9-124
2-Chlorophenol	3125	3080	98.7	80.3-119
1,4-Dichlorobenzene	3125	2940	94.0	76.3-118
2,4-Dinitrotoluene	3125	3210	103	80.6-126
N-Nitrosodi-n-propylamine	3125	2910	93.0	80.3-131
4-Nitrophenol	3125	3370	108	60.0-145
Pentachlorophenol	3125	3080	98.4	36.4-114
Phenol	3125	3100	99.3	74.3-117
Pyrene	3125	3120	99.7	74.7-141
1,2,4-Trichlorobenzene	3125	2950	94.4	74.1-120

Comments:
Concentrations reflect the spiked sample amounts.

Flags:
* = Out of limits.
NA = Not applicable.

Reviewed By: _____

Results for Oil and Grease

Client Sample ID: PAR 206 GP1
Client Project ID: NCDOT-Yancey
Lab Sample ID: g106-565-1p
Lab Project ID: G106-565
Matrix: Soil

Date Analyzed: 3/2/2006
Analyzed By: nio
Date Collected: 2/22/2006 16:00
Date Received: 2/24/2006
Solids: 78.08

Parameter	Method	RL	Result
		MG/KG	MG/KG
Oil & Grease	9071	38.5	BQL

Comments:

BQL = Below Quantitation Limit
All soils are corrected for percent solids.

Reviewed By: _____
9071_LIMS_v1.35

Results for Oil and Grease

Client Sample ID: PAR 206 HA1
Client Project ID: NCDOT-Yancey
Lab Sample ID: g106-565-2L
Lab Project ID: G106-565
Matrix: Soil

Date Analyzed: 3/2/2006
Analyzed By: nio
Date Collected: 2/22/2006 17:00
Date Received: 2/24/2006
Solids: 75.83

Parameter	Method	RL	Result
		MG/KG	MG/KG
Oil & Grease	9071	40.7	BQL

Comments:

BQL = Below Quantitation Limit
All soils are corrected for percent solids.

Reviewed By: _____
9071_LIMS_v1.35

Results for Oil and Grease

Client Sample ID: PAR 206 HA1A
Client Project ID: NCDOT-Yancey
Lab Sample ID: g106-565-3L
Lab Project ID: G106-565
Matrix: Soil

Date Analyzed: 3/2/2006
Analyzed By: nio
Date Collected: 2/23/2006 9:50
Date Received: 2/24/2006
Solids: 76.88

Parameter	Method	RL	Result
		MG/KG	MG/KG
Oil & Grease	9071	40.3	BQL

Comments:

BQL = Below Quantitation Limit
All soils are corrected for percent solids.

Reviewed By: _____
9071_LIMS_v1.35

Results for Oil and Grease

Client Sample ID: PAR 206 HA2
Client Project ID: NCDOT-Yancey
Lab Sample ID: g106-565-4I
Lab Project ID: G106-565
Matrix: Soil

Date Analyzed: 3/2/2006
Analyzed By: nio
Date Collected: 2/23/2006 10:20
Date Received: 2/24/2006
Solids: 77.25

Parameter	Method	RL	Result
		MG/KG	MG/KG
Oil & Grease	9071	40	BQL

Comments:

BQL = Below Quantitation Limit
All soils are corrected for percent solids.

Reviewed By: _____
9071_LIMS_v1.35

Results for Oil and Grease

Client Sample ID: PAR 206 HA3
Client Project ID: NCDOT-Yancey
Lab Sample ID: g106-565-5l
Lab Project ID: G106-565
Matrix: Soil

Date Analyzed: 3/2/2006
Analyzed By: nio
Date Collected: 2/23/2006 11:00
Date Received: 2/24/2006
Solids: 70.87

Parameter	Method	RL	Result
		MG/KG	MG/KG
Oil & Grease	9071	42.3	BQL

Comments:

BQL = Below Quantitation Limit
All soils are corrected for percent solids.

Reviewed By: _____
9071_LIMS_v1.35

Results for Oil and Grease

Client Sample ID: PAR 206 HA4
Client Project ID: NCDOT-Yancey
Lab Sample ID: g106-565-6J
Lab Project ID: G106-565
Matrix: Soil

Date Analyzed: 3/2/2006
Analyzed By: nio
Date Collected: 2/23/2006 11:05
Date Received: 2/24/2006
Solids: 73.43

Parameter	Method	RL	Result
		MG/KG	MG/KG
Oil & Grease	9071	39.7	**373**

Comments:

BQL = Below Quantitation Limit
All soils are corrected for percent solids.

Reviewed By: _____
9071_LIMS_v1.35

Client Sample ID: Batch QC
Lab Sample ID: G106-565-6J
Batch ID: 4612

Analyzed by: nio
Matrix: Soil
Solids: 73.43

MS/MSD

Analyte	Sample MG/KG	Spiked MG/KG	MS MG/KG	REC %	Spiked MG/KG	MSD MG/KG	REC %	RPD %
Oil & Grease	373	421	282	N/A	415	365	N/A	166

LCS

Analyte		Spiked MG/KG	Result MG/KG	REC %	Limits	
					Lower	Upper
Oil & Grease		312	228	73	70	130

Prep Blank

Analyte	Sample MG/KG
Oil & Grease	BQL

VPH (Aliphatics/Aromatics) Laboratory Reporting Form

Client Name: Environmental Investigations

Project Name: NCDOT-Yancey

Sample Information and Analytical Results	
Sample Identification	PAR 163 GP2-10
Sample Matrix	Soil
Collection Option (for Soil)*	2
Date Collected	02/22/06
Date Received	02/24/06
Date Extracted	02/22/06
Date Analyzed	02/27/06
Dry Weight	77
Dilution Factor	1
C_5-C_8 Aliphatics**	< 10 (mg/Kg)
C_9-C_{12} Aliphatics**	12 (mg/Kg)
C_9-C_{10} Aromatics**	10 (mg/Kg)
Surrogate % Recovery - PID	100
Surrogate % Recovery - FID	100

* = Option 1 = Established fill line on vial, Option 2 = Sampling Device/Brand, or Option 3 = Field weight of soil.

** = Excludes any surrogates or internal standards.

Lab Info: g106-565-9d

Reviewed By: BH

VPH (Aliphatics/Aromatics) Laboratory Reporting Form

Client Name: Environmental Investigations

Project Name: NCDOT-Yancey

Sample Information and Analytical Results	
Sample Identification	PAR 199A GP2-10
Sample Matrix	Soil
Collection Option (for Soil)*	2
Date Collected	02/22/06
Date Received	02/24/06
Date Extracted	02/22/06
Date Analyzed	02/27/06
Dry Weight	91
Dilution Factor	1
C_5-C_8 Aliphatics**	< 10 (mg/Kg)
C_9-C_{12} Aliphatics**	< 10 (mg/Kg)
C_9-C_{10} Aromatics**	< 10 (mg/Kg)
Surrogate % Recovery - PID	96
Surrogate % Recovery - FID	94

* = Option 1 = Established fill line on vial, Option 2 = Sampling Device/Brand, or Option 3 = Field weight of soil.

** = Excludes any surrogates or internal standards.

Lab Info: g106-565-14d

Reviewed By: RNP

VPH (Aliphatics/Aromatics) Laboratory Reporting Form

Client Name: Environmental Investigations

Project Name: NCDOT-Yancey

Sample Information and Analytical Results	
Sample Identification	PAR 89 HA6-8
Sample Matrix	Soil
Collection Option (for Soil)*	2
Date Collected	02/20/06
Date Received	02/24/06
Date Extracted	02/20/06
Date Analyzed	02/24/06
Dry Weight	77
Dilution Factor	1
C_5-C_8 Aliphatics**	< 10 (mg/Kg)
C_9-C_{12} Aliphatics**	< 10 (mg/Kg)
C_9-C_{10} Aromatics**	< 10 (mg/Kg)
Surrogate % Recovery - PID	96
Surrogate % Recovery - FID	93

* = Option 1 = Established fill line on vial, Option 2 = Sampling Device/Brand, or Option 3 = Field weight of soil.

** = Excludes any surrogates or internal standards.

Lab Info: g106-565-17g

Reviewed By: RV

VPH (Aliphatics/Aromatics) Laboratory Reporting Form

Client Name: Environmental Investigations

Project Name: NCDOT-Yancey

Sample Information and Analytical Results	
Sample Identification	PAR 221 GP1-8
Sample Matrix	Soil
Collection Option (for Soil)*	2
Date Collected	02/23/06
Date Received	02/24/06
Date Extracted	02/23/06
Date Analyzed	02/27/06
Dry Weight	75
Dilution Factor	1
C_5-C_8 Aliphatics**	< 10 (mg/Kg)
C_9-C_{12} Aliphatics**	< 10 (mg/Kg)
C_9-C_{10} Aromatics**	< 10 (mg/Kg)
Surrogate % Recovery - PID	98
Surrogate % Recovery - FID	95

* = Option 1 = Established fill line on vial, Option 2 = Sampling Device/Brand, or Option 3 = Field weight of soil.

** = Excludes any surrogates or internal standards.

Lab Info: g106-565-24c

Reviewed By: _____

Attachment 2

VPH Laboratory Reporting Form

Calibration and QA/QC Information

FID Initial Calibration Date: 02/11/06 PID Initial Calibration Date: 02/11/06

Calibration Ranges and Limits

Range	MDL (07/15/2004) (µg/L)	ML (µg/L)	RL (µg/L)	RL (mg/Kg)
C_5-C_8 Aliphatics	4.4	14	100	10
C_9-C_{12} Aliphatics	3.4	11	100	10
C_9-C_{10} Aromatics	0.13	0.41	100	10

Calibration Concentration Levels

Range	Levels (µg/L)	%RSD or CCC	Method of Quantitation
C_5-C_8 Aliphatics	40	10.8	Calibration Factor
	1000		
	2000		
	3000		
	4000		
C_9-C_{12} Aliphatics	10	0.99	Linear Regression
	250		
	500		
	750		
	1000		
C_9-C_{10} Aromatics	10	19.30	Calibration Factor
	250		
	500		
	750		
	1000		

Calibration Check Date: 02/24/06

Calibration Check

Range	Levels (µg/L)	Levels (mg/Kg)	RPD
C_5-C_8 Aliphatics	2000	200	0.4
C_9-C_{12} Aliphatics	500	50	-9.2
C_9-C_{10} Aromatics	500	50	-8.2

MDL = Method Detection Limit
ML = Minimum Limit
RL = Reportable Limit

RPD = Relative Percent Difference
%RSD = Percent Relative Standard Deviation
CCC = Correlation Coefficient of Curve

Attachment 2

VPH Laboratory Reporting Form

Calibration and QA/QC Information

FID Initial Calibration Date: 02/11/06 PID Initial Calibration Date: 02/11/06

Calibration Ranges and Limits

Range	MDL (07/15/2004) (µg/L)	ML (µg/L)	RL (µg/L)	RL (mg/Kg)
C_5-C_8 Aliphatics	4.4	14	100	10
C_9-C_{12} Aliphatics	3.4	11	100	10
C_9-C_{10} Aromatics	0.13	0.41	100	10

Calibration Concentration Levels

Range	Levels (µg/L)	%RSD or CCC	Method of Quantitation
C_5-C_8 Aliphatics	40	10.8	Calibration Factor
	1000		
	2000		
	3000		
	4000		
C_9-C_{12} Aliphatics	10	0.99	Linear Regression
	250		
	500		
	750		
	1000		
C_9-C_{10} Aromatics	10	19.30	Calibration Factor
	250		
	500		
	750		
	1000		

Calibration Check Date: 02/27/06

Calibration Check

Range	Levels (µg/L)	Levels (mg/Kg)	RPD
C_5-C_8 Aliphatics	2000	200	3.5
C_9-C_{12} Aliphatics	500	50	-3.4
C_9-C_{10} Aromatics	500	50	-2.9

MDL = Method Detection Limit
ML = Minimum Limit
RL = Reportable Limit

RPD = Relative Percent Difference
%RSD = Percent Relative Standard Deviation
CCC = Correlation Coefficient of Curve

EPH (Aliphatics/Aromatics) Results

by MDEP-EPH

Client Name: Environmental Investigations

Project Name: NCDOT-Yancey

Sample Information and Analytical Results	
Sample Identification	PAR 163 GP2-10
Sample Matrix	Soil
Date Collected	02/22/06
Date Received	02/24/06
Date Extracted	02/27/06
Date Analyzed	03/06/06
Dry Weight	77.2
Dilution Factor	1:1
C_9-C_{18} Aliphatics*	160 (mg/Kg)
C_{19}-C_{36} Aliphatics*	20 (mg/Kg)
C_{11}-C_{22} Aromatics*	33 (mg/Kg)
Aliphatic Surrogate % Recovery	88
Aromatic Surrogate % Recovery	85
Fractionation Surrogate 1 % Recovery	85

Comments:

* = Excludes any surrogates or internal standards.

Lab info: G106-565-9J

Reviewed By: RJ

EPH (Aliphatics/Aromatics) Results

by MDEP-EPH

Client Name: Environmental Investigations

Project Name: NCDOT-Yancey

Sample Information and Analytical Results	
Sample Identification	PAR 199A GP2-10
Sample Matrix	Soil
Date Collected	02/22/06
Date Received	02/24/06
Date Extracted	02/27/06
Date Analyzed	02/28/06
Dry Weight	90.9
Dilution Factor	1
C_9-C_{18} Aliphatics*	< 10 (mg/Kg)
C_{19}-C_{36} Aliphatics*	< 10 (mg/Kg)
C_{11}-C_{22} Aromatics*	< 10 (mg/Kg)
Aliphatic Surrogate % Recovery	96
Aromatic Surrogate % Recovery	96

Comments:

* = Excludes any surrogates or internal standards.
Sample did not require fractionation.

Lab info: G106-565-14M

Reviewed By: _____

EPH (Aliphatics/Aromatics) Results

by MDEP-EPH

Client Name: Environmental Investigations

Project Name: NCDOT-Yancey

Sample Information and Analytical Results	
Sample Identification	PAR 89 HA6-8
Sample Matrix	Soil
Date Collected	02/20/06
Date Received	02/24/06
Date Extracted	02/27/06
Date Analyzed	02/28/06
Dry Weight	77.2
Dilution Factor	1
C_9-C_{18} Aliphatics*	< 10 (mg/Kg)
C_{19}-C_{36} Aliphatics*	< 10 (mg/Kg)
C_{11}-C_{22} Aromatics*	< 10 (mg/Kg)
Aliphatic Surrogate % Recovery	95
Aromatic Surrogate % Recovery	92

Comments:

* = Excludes any surrogates or internal standards.
Sample did not require fractionation.

Lab info: G106-565-17J

Reviewed By: BAV

EPH (Aliphatics/Aromatics) Results

by MDEP-EPH

Client Name: Environmental Investigations

Project Name: NCDOT-Yancey

Sample Information and Analytical Results	
Sample Identification	PAR 221 GP1-8
Sample Matrix	Soil
Date Collected	02/23/06
Date Received	02/24/06
Date Extracted	02/27/06
Date Analyzed	02/28/06
Dry Weight	75.2
Dilution Factor	1
C_9-C_{18} Aliphatics*	< 10 (mg/Kg)
C_{19}-C_{36} Aliphatics*	< 10 (mg/Kg)
C_{11}-C_{22} Aromatics*	< 10 (mg/Kg)
Aliphatic Surrogate % Recovery	94
Aromatic Surrogate % Recovery	92

Comments:

* = Excludes any surrogates or internal standards.
Sample did not require fractionation.

Lab info: G106-565-24F

Reviewed By: PMP

Attachment 3

EPH Laboratory Reporting Form

Calibration and QA/QC Information

Initial Calibration Date: 12/28/05

Calibration Ranges and Limits

Range	MDL (2/2004) (µg/L)	ML (µg/L)	RL (µg/L)	RL (mg/Kg)
C_9-C_{18} Aliphatics	3.84	12.2	100	10
C_{19}-C_{36} Aliphatics	0.57	1.8	100	10
C_{11}-C_{22} Aromatics	4.54	14.4	100	10

Calibration Concentration Levels

Range	Levels (µg/mL)	%RSD or CCC	Method of Quantitation
C_9-C_{18} Aliphatics	6	24.90	Calibration Factor
	30		
	60		
	120		
	240		
C_{19}-C_{36} Aliphatics	8	15.4	Calibration Factor
	40		
	80		
	160		
	320		
C_{11}-C_{22} Aromatics	17	9.8	Calibration Factor
	85		
	170		
	340		
	680		

Calibration Check Date: 03/06/06

Calibration Check

Range	Levels (µg/mL)	RPD
C_9-C_{18} Aliphatics	120	12.7
C_{19}-C_{36} Aliphatics	160	6.7
C_{11}-C_{22} Aromatics	340	12.9

MDL = Method Detection Limit
ML = Minimum Limit
RL = Reportable Limit

RPD = Relative Percent Difference
%RSD = Percent Relative Standard Deviation
CCC = Correlation Coefficient of Curve

Attachment 3

EPH Laboratory Reporting Form

Calibration and QA/QC Information

Initial Calibration Date: 12/28/05

Calibration Ranges and Limits

Range	MDL (2/2004) (µg/L)	ML (µg/L)	RL (µg/L)	RL (mg/Kg)
C_9-C_{18} Aliphatics	3.84	12.2	100	10
C_{19}-C_{36} Aliphatics	0.57	1.8	100	10
C_{11}-C_{22} Aromatics	4.54	14.4	100	10

Calibration Concentration Levels

Range	Levels (µg/mL)	%RSD or CCC	Method of Quantitation
C_9-C_{18} Aliphatics	6	24.90	Calibration Factor
	30		
	60		
	120		
	240		
C_{19}-C_{36} Aliphatics	8	15.4	Calibration Factor
	40		
	80		
	160		
	320		
C_{11}-C_{22} Aromatics	17	9.8	Calibration Factor
	85		
	170		
	340		
	680		

Calibration Check Date: 02/28/06

Calibration Check

Range	Levels (µg/mL)	RPD
C_9-C_{18} Aliphatics	120	17.0
C_{19}-C_{36} Aliphatics	160	10.3
C_{11}-C_{22} Aromatics	340	10.7

MDL = Method Detection Limit
ML = Minimum Limit
RL = Reportable Limit

RPD = Relative Percent Difference
%RSD = Percent Relative Standard Deviation
CCC = Correlation Coefficient of Curve

Results for Metals

Client Sample ID:	PAR 206 GP1	Analyzed By:	PSW
Client Project ID:	NCDOT-Yancey	Date Collected:	2/22/2006 16:00
Lab Sample ID:	G106-565-1	Date Received:	2/24/2006
Lab Project ID:	G106-565	Matrix:	SOIL
Batch ID:	4586 4592	Solids	78.08
Report Basis:	Dry		

Metals	Result	RL	MDL	DF	Units	Method	Date Analyzed	Flags
Antimony	BQL	7.68	0.553	1	MG/KG	6010B	2/28/2006	B
Arsenic	**3.72**	1.28	0.541	1	MG/KG	6010B	2/28/2006	
Beryllium	**1.41**	1.28	0.0152	1	MG/KG	6010B	2/28/2006	
Cadmium	**0.756**	1.28	0.0215	1	MG/KG	6010B	2/28/2006	JB
Chromium	**53.8**	1.28	0.0608	1	MG/KG	6010B	2/28/2006	
Copper	**45.1**	2.56	0.0569	1	MG/KG	6010B	2/28/2006	B
Lead	**53.6**	1.28	0.150	1	MG/KG	6010B	2/28/2006	B
Mercury	**0.0291**	0.0235	0.00411	1	MG/KG	7471	2/28/2006	
Nickel	**23.2**	5.12	0.0383	1	MG/KG	6010B	2/28/2006	B
Selenium	BQL	2.56	0.566	1	MG/KG	6010B	2/28/2006	B
Silver	BQL	1.28	0.0512	1	MG/KG	6010B	2/28/2006	
Thallium	BQL	1.28	0.585	1	MG/KG	6010B	2/28/2006	
Zinc	**77.0**	2.56	0.223	1	MG/KG	6010B	2/28/2006	B

Comments
BQL = Below Quantitation Limits
DF = Dilution Factor
J = Between MDL and RL
B= Amount in Prep Blank > MDL

Reviewed By: _____
MET_LIMS_4.0

Results for Metals

Client Sample ID:	PAR 206 HA1	Analyzed By:	PSW
Client Project ID:	NCDOT-Yancey	Date Collected:	2/22/2006 17:00
Lab Sample ID:	G106-565-2	Date Received:	2/24/2006
Lab Project ID:	G106-565	Matrix:	SOIL
Batch ID:	4586 4592	Solids	75.83
Report Basis:	Dry		

Metals	Result	RL	MDL	DF	Units	Method	Date Analyzed	Flags
Antimony	BQL	7.33	0.527	1	MG/KG	6010B	2/28/2006	B
Arsenic	**3.89**	1.22	0.515	1	MG/KG	6010B	2/28/2006	
Beryllium	**1.83**	1.22	0.0145	1	MG/KG	6010B	2/28/2006	
Cadmium	**0.884**	1.22	0.0205	1	MG/KG	6010B	2/28/2006	JB
Chromium	**58.4**	1.22	0.0580	1	MG/KG	6010B	2/28/2006	
Copper	**57.5**	2.44	0.0542	1	MG/KG	6010B	2/28/2006	B
Lead	**32.0**	1.22	0.143	1	MG/KG	6010B	2/28/2006	B
Mercury	**0.0829**	0.0225	0.00394	1	MG/KG	7471	2/28/2006	
Nickel	**20.9**	4.88	0.0365	1	MG/KG	6010B	2/28/2006	B
Selenium	**1.57**	2.44	0.540	1	MG/KG	6010B	2/28/2006	JB
Silver	BQL	1.22	0.0488	1	MG/KG	6010B	2/28/2006	
Thallium	BQL	1.22	0.558	1	MG/KG	6010B	2/28/2006	
Zinc	**158**	2.44	0.212	1	MG/KG	6010B	2/28/2006	B

Comments
BQL = Below Quantitation Limits
DF = Dilution Factor
J = Between MDL and RL
B= Amount in Prep Blank > MDL

Reviewed By: _____
MET_LIMS_4 0

Results for Metals

Client Sample ID:	PAR 206 HA1A	Analyzed By:	PSW
Client Project ID:	NCDOT-Yancey	Date Collected:	2/23/2006 09:50
Lab Sample ID:	G106-565-3	Date Received:	2/24/2006
Lab Project ID:	G106-565	Matrix:	SOIL
Batch ID:	4586 4592	Solids	76.88
Report Basis:	Dry		

Metals	Result	RL	MDL	DF	Units	Method	Date Analyzed	Flags
Antimony	BQL	7.36	0.530	1	MG/KG	6010B	2/28/2006	B
Arsenic	**4.95**	1.23	0.518	1	MG/KG	6010B	2/28/2006	
Beryllium	**1.09**	1.23	0.0146	1	MG/KG	6010B	2/28/2006	J
Cadmium	**0.216**	1.23	0.0206	1	MG/KG	6010B	2/28/2006	JB
Chromium	**52.4**	1.23	0.0583	1	MG/KG	6010B	2/28/2006	
Copper	**59.3**	2.45	0.0545	1	MG/KG	6010B	2/28/2006	B
Lead	**22.7**	1.23	0.144	1	MG/KG	6010B	2/28/2006	B
Mercury	**0.0206**	0.0248	0.00434	1	MG/KG	7471	2/28/2006	J
Nickel	**23.1**	4.91	0.0367	1	MG/KG	6010B	2/28/2006	B
Selenium	BQL	2.45	0.542	1	MG/KG	6010B	2/28/2006	B
Silver	BQL	1.23	0.0491	1	MG/KG	6010B	2/28/2006	
Thallium	BQL	1.23	0.561	1	MG/KG	6010B	2/28/2006	
Zinc	**75.2**	2.45	0.213	1	MG/KG	6010B	2/28/2006	B

Comments
BQL = Below Quantitation Limits
DF = Dilution Factor
J = Between MDL and RL
B= Amount in Prep Blank > MDL

Reviewed By: _____
MET_LIMS_4 0

Results for Metals

Client Sample ID:	PAR 206 HA2	Analyzed By:	PSW
Client Project ID:	NCDOT-Yancey	Date Collected:	2/23/2006 10:20
Lab Sample ID:	G106-565-4	Date Received:	2/24/2006
Lab Project ID:	G106-565	Matrix:	SOIL
Batch ID:	4586 4592	Solids	77.25
Report Basis:	Dry		

Metals	Result	RL	MDL	DF	Units	Method	Date Analyzed	Flags
Antimony	BQL	6.58	0.474	1	MG/KG	6010B	2/28/2006	B
Arsenic	**3.51**	1.10	0.463	1	MG/KG	6010B	2/28/2006	
Beryllium	**1.80**	1.10	0.0131	1	MG/KG	6010B	2/28/2006	
Cadmium	**2.22**	1.10	0.0184	1	MG/KG	6010B	2/28/2006	B
Chromium	**53.3**	1.10	0.0521	1	MG/KG	6010B	2/28/2006	
Copper	**29.8**	2.19	0.0487	1	MG/KG	6010B	2/28/2006	B
Lead	**24.6**	1.10	0.128	1	MG/KG	6010B	2/28/2006	B
Mercury	**0.123**	0.0247	0.00431	1	MG/KG	7471	2/28/2006	
Nickel	**22.6**	4.39	0.0328	1	MG/KG	6010B	2/28/2006	B
Selenium	BQL	2.19	0.485	1	MG/KG	6010B	2/28/2006	B
Silver	BQL	1.10	0.0439	1	MG/KG	6010B	2/28/2006	
Thallium	BQL	1.10	0.501	1	MG/KG	6010B	2/28/2006	
Zinc	**150**	2.19	0.191	1	MG/KG	6010B	2/28/2006	B

Comments
BQL = Below Quantitation Limits
DF = Dilution Factor
J = Between MDL and RL
B= Amount in Prep Blank > MDL

Reviewed By: _____
MET_LIMS_4 0

Results for Metals

Client Sample ID:	PAR 206 HA3	Analyzed By:	PSW
Client Project ID:	NCDOT-Yancey	Date Collected:	2/23/2006 11:00
Lab Sample ID:	G106-565-5	Date Received:	2/24/2006
Lab Project ID:	G106-565	Matrix:	SOIL
Batch ID:	4586 4592	Solids	70.87
Report Basis:	Dry		

Metals	Result	RL	MDL	DF	Units	Method	Date Analyzed	Flags
Antimony	BQL	8.30	0.597	1	MG/KG	6010B	2/28/2006	B
Arsenic	**4.54**	1.38	0.584	1	MG/KG	6010B	2/28/2006	
Beryllium	**2.57**	1.38	0.0165	1	MG/KG	6010B	2/28/2006	
Cadmium	**0.609**	1.38	0.0232	1	MG/KG	6010B	2/28/2006	JB
Chromium	**92.8**	1.38	0.0657	1	MG/KG	6010B	2/28/2006	
Copper	**48.9**	2.77	0.0614	1	MG/KG	6010B	2/28/2006	B
Lead	**12.2**	1.38	0.162	1	MG/KG	6010B	2/28/2006	B
Mercury	**0.0469**	0.0264	0.00462	1	MG/KG	7471	2/28/2006	
Nickel	**36.2**	5.53	0.0414	1	MG/KG	6010B	2/28/2006	B
Selenium	BQL	2.77	0.611	1	MG/KG	6010B	2/28/2006	B
Silver	BQL	1.38	0.0553	1	MG/KG	6010B	2/28/2006	
Thallium	BQL	1.38	0.632	1	MG/KG	6010B	2/28/2006	
Zinc	**160**	2.77	0.240	1	MG/KG	6010B	2/28/2006	B

Comments
BQL = Below Quantitation Limits
DF = Dilution Factor
J = Between MDL and RL
B= Amount in Prep Blank > MDL

Reviewed By: _____
MET_LIMS_4.0

Results for Metals

Client Sample ID: PAR 206 HA4
Client Project ID: NCDOT-Yancey
Lab Sample ID: G106-565-6
Lab Project ID: G106-565
Batch ID: 4586 4592
Report Basis: Dry

Analyzed By: PSW
Date Collected: 2/23/2006 11:05
Date Received: 2/24/2006
Matrix: SOIL
Solids 73.43

Metals	Result	RL	MDL	DF	Units	Method	Date Analyzed	Flags
Antimony	BQL	6.92	0.498	1	MG/KG	6010B	2/28/2006	B
Arsenic	**3.84**	1.15	0.487	1	MG/KG	6010B	2/28/2006	
Beryllium	**1.41**	1.15	0.0137	1	MG/KG	6010B	2/28/2006	
Cadmium	**1.68**	1.15	0.0194	1	MG/KG	6010B	2/28/2006	B
Chromium	**53.4**	1.15	0.0548	1	MG/KG	6010B	2/28/2006	
Copper	**61.6**	2.31	0.0512	1	MG/KG	6010B	2/28/2006	B
Lead	**44.3**	1.15	0.135	1	MG/KG	6010B	2/28/2006	B
Mercury	**0.102**	0.0255	0.00445	1	MG/KG	7471	2/28/2006	
Nickel	**23.2**	4.62	0.0345	1	MG/KG	6010B	2/28/2006	B
Selenium	**0.945**	2.31	0.510	1	MG/KG	6010B	2/28/2006	JB
Silver	BQL	1.15	0.0462	1	MG/KG	6010B	2/28/2006	
Thallium	BQL	1.15	0.528	1	MG/KG	6010B	2/28/2006	
Zinc	171	2.31	0.201	1	MG/KG	6010B	2/28/2006	B

Comments
BQL = Below Quantitation Limits
DF = Dilution Factor
J = Between MDL and RL
B= Amount in Prep Blank > MDL

Reviewed By: _____
MET_LIMS_4 0

Results for Metals

Client Sample ID: Lab Blank
Client Project ID:
Lab Sample ID: pb4586
Lab Project ID:
Batch ID: 4586
Report Basis: Dry

Analyzed By: PSW
Date Collected:
Date Received:
Matrix: SOIL
Solids 100.00

Metals	Result	RL	MDL	DF	Units	Method	Date Analyzed	Flags
Antimony	**0.747**	6.00	0.432	1	MG/KG	6010B	2/28/2006	JB
Arsenic	BQL	1.00	0.422	1	MG/KG	6010B	2/28/2006	
Beryllium	BQL	1.00	0.0119	1	MG/KG	6010B	2/28/2006	
Cadmium	**0.0350**	1.00	0.0168	1	MG/KG	6010B	2/28/2006	JB
Chromium	BQL	1.00	0.0475	1	MG/KG	6010B	2/28/2006	
Copper	**0.287**	2.00	0.0444	1	MG/KG	6010B	2/28/2006	JB
Lead	**0.317**	1.00	0.117	1	MG/KG	6010B	2/28/2006	JB
Nickel	**0.349**	4.00	0.0299	1	MG/KG	6010B	2/28/2006	JB
Selenium	**0.648**	2.00	0.442	1	MG/KG	6010B	2/28/2006	JB
Silver	BQL	1.00	0.0400	1	MG/KG	6010B	2/28/2006	
Thallium	BQL	1.00	0.457	1	MG/KG	6010B	2/28/2006	
Zinc	**0.225**	2.00	0.174	1	MG/KG	6010B	2/28/2006	JB

Comments
BQL = Below Quantitation Limits
DF = Dilution Factor
J = Between MDL and RL
B= Amount in Prep Blank > RL

Reviewed By: _____
PrepBlank

Results for Metals

Client Sample ID:	Lab Blank	Analyzed By:	PSW
Client Project ID:		Date Collected:	
Lab Sample ID:	pb4592	Date Received:	
Lab Project ID:		Matrix:	SOIL
Batch ID:	4592	Solids	100.00
Report Basis:	Dry		

Metals	Result	RL	MDL	DF	Units	Method	Date Analyzed	Flags
Mercury	BQL	0.02	0.0035	1	MG/KG	7471	2/28/2006	

Comments
BQL = Below Quantitation Limits
DF = Dilution Factor
J = Between MDL and RL
B= Amount in Prep Blank > RL

Reviewed By: _____
PrepBlank

METALS Results for LCS/LCD

ICP Batch: 4586
HG Batch: 4592
Other:

Matrix: SOIL
Units: MG/KG

Analyte	TRUE Value	LCS	LCS %REC	LCD	LCD %REC	Limit Lower	Limit Upper	RPD	RPD Limit
Antimony	40.0	38.1	95.3	39.2	98.0	80	120	2.85	20
Arsenic	40.0	35.9	89.8	38.1	95.3	80	120	5.95	20
Beryllium	40.0	36.1	90.2	38.3	95.8	80	120	5.91	20
Cadmium	40.0	35	87.5	36.3	90.7	80	120	3.65	20
Chromium	40.0	36.7	91.8	38.3	95.8	80	120	4.27	20
Copper	40.0	38	95.0	40.3	101	80	120	5.87	20
Lead	40.0	36.5	91.2	37.6	94.0	80	120	2.97	20
Mercury	0.500	0.483	96.6	0.484	96.8	80	120	0.207	20
Nickel	40.0	37.1	92.8	38.4	96.0	80	120	3.44	20
Selenium	40.0	32.8	82.0	34.5	86.2	80	120	5.05	20
Silver	40.0	35	87.5	36.0	90.0	80	120	2.82	20
Thallium	40.0	34	85.0	35.7	89.3	80	120	4.88	20
Zinc	40.0	35.4	88.5	36.6	91.5	80	120	3.33	20

Reviewed By: BJW

PARADIGM ANALYTICAL LABORATORIES, INC.

MS/MSD Results for METALS

Lab ID: G106-565-1
MS Lab ID: G106-565-1
MSD Lab ID: G106-565-1
ICP Batch: 4586
HG Batch: 4592
Other:

Analyzed By: PSW
Matrix: Soil
Units: MG/KG
Solids: 78.08

Analyte	Sample Result	SA MS	MS Result	MS %REC		SA MSD	MSD Result	MSD %REC		Limit Lower	Limit Upper	RPD		RPD Limit
Antimony	BQL	43.4	8.54	19.7	*	46.6	8.55	18.3	*	75	125	0.117		20
Arsenic	3.72	43.4	40.5	84.7		46.6	44.0	86.4		75	125	8.28		20
Beryllium	1.41	43.4	41.6	92.6		46.6	44.4	92.3		75	125	6.51		20
Cadmium	BQL	43.4	38.2	88.0		46.6	41.8	89.7		75	125	9.00		20
Chromium	53.8	43.4	103	113		46.6	102	103		75	125	0.976		20
Copper	45.1	43.4	94.8	114		46.6	92.6	102		75	125	2.35		20
Lead	53.6	43.4	90.1	84.1		46.6	137	179	*	75	125	41.3	*	20
Mercury	0.0291	0.572	0.661	111		0.562	0.593	100		75	125	10.8		20
Nickel	23.2	43.4	65.1	96.5		46.6	67.8	95.7		75	125	4.06		20
Selenium	BQL	43.4	30.9	71.2	*	46.6	33.7	72.3	*	75	125	8.67		20
Silver	BQL	43.4	36.8	84.8		46.6	40.6	87.1		75	125	9.82		20
Thallium	BQL	43.4	31.0	71.4	*	46.6	36.0	77.3		75	125	14.9		20
Zinc	77	43.4	120	99.0		46.6	131	116		75	125	8.76		20

Comments

*=Out of Limits
NA = Not applicable, due to sample concentration greater than three times spike concentration

Reviewed By: _____

List of Reporting Abbreviations and Data Qualifiers

B = Compound also detected in batch blank

BQL = Below Quantitation Limit (RL or MDL)

DF = Dilution Factor

Dup = Duplicate

D = Detected, but RPD is > 40% between results in dual column method.

E = Estimated concentration, exceeds calibration range.

J = Estimated concentration, below calibration range and above MDL

LCS(D) = Laboratory Control Spike (Duplicate)

MDL = Method Detection Limit

MS(D) = Matrix Spike (Duplicate)

PQL = Practical Quantitation Limit

RL = Reporting Limit

RPD = Relative Percent Difference

mg/kg = milligram per kilogram, ppm, parts per million

ug/kg = micrograms per kilogram, ppb, parts per billion

mg/L = milligram per liter, ppm, parts per million

ug/L = micrograms per liter, ppb, parts per billion

% Rec = Percent Recovery

% soilds = Percent Solids

Special Notes:

1) Metals and mercury samples are digested with a hot block, see the standard operating procedure document for details.

2) Uncertainty for all reported data is less than or equal to 30 percent.

MI34.030606.3

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054859

PARADIGM ANALYTICAL LABORATORIES, INC.

N.C. CERTIFICATION #481

(1)

CLIENT: BOB SHAW

CONTACT: EI PHONE NO: (919) 544-7500

PROJECT: DOT-YANCEY SITE/PWSID#: R-2519A

REPORTS TO: BOB SHAW FAX NO.: 919, 544-2199

INVOICE TO: NCDOT QUOTE # WBS # 35609.1.1

P.O. NUMBER

SGS Reference: G106-565

PAGE _____ OF _____

(2)

LAB NO.	SAMPLE IDENTIFICATION	DATE	TIME	MATRIX	No CONTAINERS	SAMPLE TYPE C=COMP G=GRAB	Preservatives Used	Analysis Required (3) TPH-GRO	TPH-DRO	9071-O&G (waste)	VOCs-8260	PP METALS	REMARKS
	PAR 206 GP1	2-22-06	1600	SOIL	8			X	X	X	X	X	
	PAR 206 HA1	2-22-06	1700	SOIL	8			X	X	X	X	X	
	PAR 206 HA2A	2-23-06	0950	SOIL	8			X	X	X	X	X	
	PAR 206 HA2	2-23-06	1020	SOIL	5			X	X	X	X	X	EXTRACT FOR VOCs
	PAR 206 HA3	2-23-06	1100	SOIL	5			X	X	X	X	X	↓
	PAR 206 HA4	2-23-06	1105	SOIL	5			X	X	X	X	X	
	PAR 127 GP1-8	2-22-06	1401	SOIL	3			X	X				

(5)

Collected/Relinquished By: (1)	Date	Time	Received By:
	2-23-06		
Relinquished By: (2)	Date 3/24/06	Time 1000	Received By:
Relinquished By: (3)	Date	Time	Received By:
Relinquished By: (4)	Date	Time	Received By:

(4)

Shipping Carrier:	Samples Received Cold? (Circle) YES NO
Shipping Ticket No:	Temperature °C: 2.3°C, 2.7°C
Special Deliverable Requirements:	Chain of Custody Seal: (Circle) INTACT BROKEN ABSENT
Requested Turnaround Time and Special Instructions:	

☐ 200 W. Potter Drive Anchorage, AK 99518 Tel: (907) 562-2343 Fax: (907) 561-5301
☐ 5500 Business Drive Wilmington, NC 28405 Tel: (910) 350-1903 Fax: (910) 350-1557
☐ 1258 Greenbrier Street Charleston, WV 25311 Tel: (304) 346-0725 Fax: (304) 346-0761

White - Retained by Lab
Yellow - Returned with Report
Pink - Retained by Sampler

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- New Jersey
- North Carolina
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PARADIGM ANALYTICAL LABORATORIES, INC.

N.C. CERTIFICATION #481

(1)

CLIENT: EI

CONTACT: BOB SHAUT PHONE NO:(919) 544-7500

PROJECT: NCDOT - YANCEY SITE/PWSID#: R-2519A

REPORTS TO: BOB SHAW - EI FAX NO.:919, 544-2199

INVOICE TO: NCDOT QUOTE #: WBS # 35609.1.1 P.O. NUMBER

SGS Reference: G106-565 PAGE _____ OF _____

(2)

LAB NO.	SAMPLE IDENTIFICATION	DATE	TIME	MATRIX	No CONTAINERS	SAMPLE TYPE C=COMP G=GRAB	Preservatives Used	Analysis Required (3) TPH GRO	TPH DRO	VOCs 8260	SVOCs 8270	MADEP VPH	MADEP EPH	REMARKS
1/2	PAR 89 HA4-8	2-20-06	1120	SOIL				X	X					
1/2	PAR 89 HA6-8	2-20-06	1245					X	X	X	X	X	X	
1/2	PAR 89 HA9-9	2-21-06	1206					X	X					
1/2	PAR 89 HA10-9	2-21-06	1244					X	X					
1/2	PAR 221 GP1-8	2-21-06	1515					X	X					
1/2	PAR 221 GP2-8	2-21-06	1528					X	X					
1/2	PAR221 GP3-8	2-21-06	1545					X	X					
1/2	PAR221 GP4-10	2-21-06	1636					X	X					
2/4	PAR 221 GP1-8	2-23-06	1200							X	X	X	X	

(5)

Collected/Relinquished By:(1)	Date	Time	Received By:
	2-23-06		
Relinquished By: (2)	Date 2/24/06	Time 1000	Received By:
Relinquished By: (3)	Date	Time	Received By:
Relinquished By: (4)	Date	Time	Received By:

(4)

Shipping Carrier:	Samples Received Cold? (Circle) YES NO
Shipping Ticket No:	Temperature °C: 2.3°C, 2.7°C
Special Deliverable Requirements:	Chain of Custody Seal: (Circle) INTACT BROKEN ABSENT
Requested Turnaround Time and Special Instructions:	

200 W. [illegible] Drive Anchorage, AK 99518 Tel: (907) 562-2343 Fax: (907) 561-5301
5500 B[illegible] Drive Wilmington, NC 28405 Tel: (910) 350-1903 Fax: (910) 350-1557
1258 Greenbrier Street Charleston, WV 25311 Tel: (304) 346-0725 Fax: (304) 346-0761

White - Retained by Lab
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PARADIGM ANALYTICAL LABORATORIES, INC.

N.C. CERTIFICATION #481

(1)
CLIENT: EI
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PROJECT: NCDOT - YANCEY SITE/PWSID#: R-2519A
REPORTS TO: BOB SHAUT - EI FAX NO.: (919) 544-2199
INVOICE TO: QUOTE # WBS # 35609.1.1
P.O. NUMBER

SGS Reference: G106-565

PAGE ____ OF ____

(2)

LAB NO.	SAMPLE IDENTIFICATION	DATE	TIME	MATRIX	No CONTAINERS	SAMPLE TYPE C=COMP G=GRAB	Preservatives Used	(3) Analysis Required: TPH-GRO	TPH-DRO	VOCs-8260	SVOCs-8270	MADEP VPH	MADEP EPH	REMARKS
2	PAR 163 GP1-10	2-22-06	0915	SOIL	3			X	X					
16	PAR 163 GP2-10	2-22-06	0922		6			X	X	X	X	X	X	
2	PAR 163 GP3-10	2-22-06	1000		3			X	X					
13	PAR 163 GP4-10	"	1045		3			X	X					
12	PAR 163 GP5-10	"	1100		3			X	X					
1	PAR 199A GP1-10	"	1230		3			X	X					
17	PAR 199A GP2-10	"	1245		6			X	X	X	X	X	X	
12	PAR 199A GP3-10	"	1300		3			X	X					

(5)

Collected/Relinquished By: (1)	Date	Time	Received By:
	2-23-06		
Relinquished By: (2)	Date	Time	Received By:
	2/24/06	1000	
Relinquished By: (3)	Date	Time	Received By:
Relinquished By: (4)	Date	Time	Received By:

(4)

Shipping Carrier:
Shipping Ticket No:
Samples Received Cold? (Circle) YES NO
Temperature °C: 2.3 T ____
Special Deliverable Requirements:
Chain of Custody Seal: (Circle) INTACT BROKEN ABSENT
Requested Turnaround Time and Special Instructions:

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