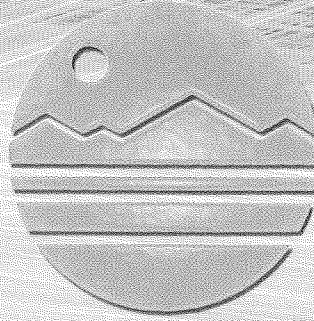


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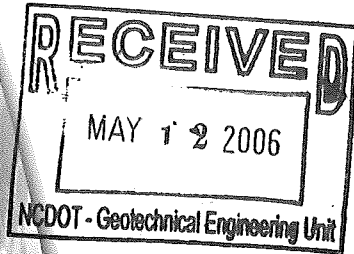
**LIMITED PRELIMINARY SITE ASSESSMENT**

**Parcel 123**

**Glen Raven Mills Property**

**US Hwy 19E**

**Burnsville, NC 28714**



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

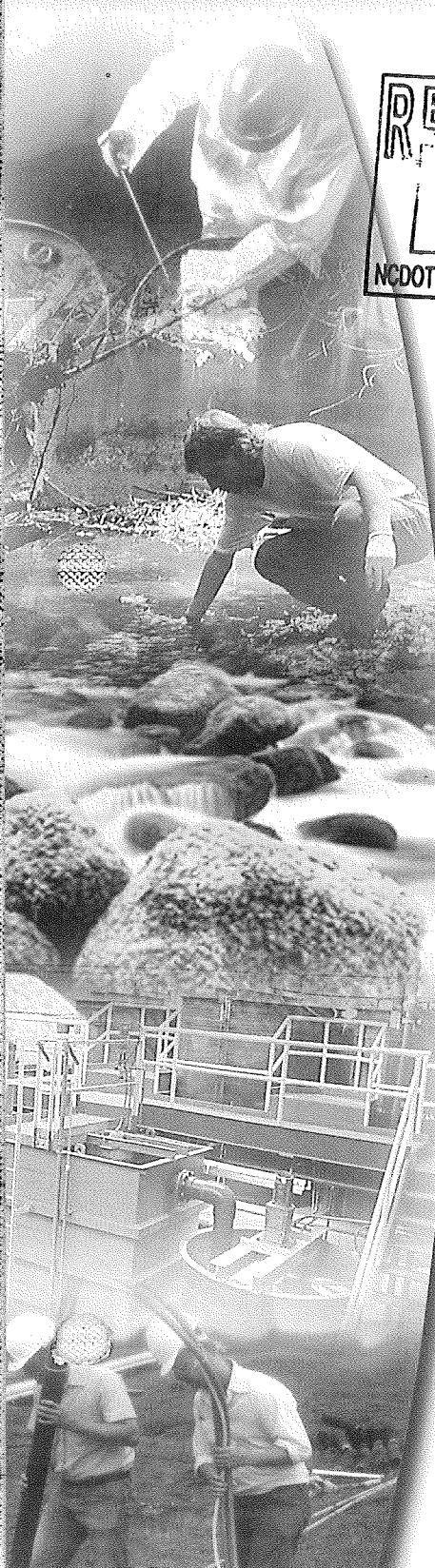
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Gregory A. Smith  
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May 2006



**LIMITED PRELIMINARY SITE ASSESSMENT (PSA)**

**Conducted on**

**Parcel 123**  
**Glen Raven Mills Property**  
**HUS Hwy 19E**  
**Burnsville, NC 28714**  
**State Project No. R-2519A**  
**WBS Element No. 35609.1.1**  
**EI Project No. ENMO060029.00**

**For**

Mr. Gregory A. Smith  
State of North Carolina  
Department of Transportation  
Geotechnical Engineering Unit  
GeoEnvironmental Section  
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Issue Date: May 12, 2006

Robert M. Shaut  
Project Geologist/Manager

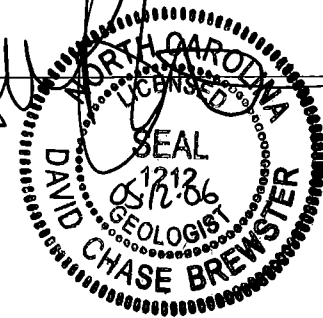
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**Appendix D:** Laboratory Analytical Results Report

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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 123) located at US Hwy 19E, Burnsville, North Carolina 28714. A mill known as *Glen Raven Mills* 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 April 20 through 21, and April 26, 2006. 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 (Proposed Drainage Piping)”, a table entitled “Soil Analytical Results (Background Samples Only), and a table entitled “Summary of Groundwater Analytical Results”, are presented in **Tables 1** through **3**. A “Site Location Map”, two (2) “Site Maps” and two (2) “Soil Impact Maps” are presented in **Figures 1, 2, 2.1, 3, and 3.1**, respectively. A compilation of “Site Photographs” are presented in **Appendix A**, the “Standard Field Operating Procedures (SOP)” are presented in **Appendix B**, “Soil Boring Logs” are included in **Appendix C**, while “Analytical Laboratory Reports” are 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 Supplemental Technical and Cost Proposal*” (RFP), dated February 24, 2006. The RFP solicited a technical and cost proposal to perform Limited PSAs on a total of 18 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 18 parcels, some site photographs and NCDOT Figures (Plan Sheets) 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 March 13, 2006.

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### 1.3 Objectives

The objective of performing the PSA was to determine if present and/or former facility operations has impacted the subsurface of the existing and/or proposed ROW. The study (PSA) on the referenced parcel (**Parcel 123 – Glen Raven Mills Property**) included herein was performed with a reasonable effort to investigate and quantify potentially petroleum-hydrocarbon residual impacted subsurface soils and sample groundwater conditions. However, findings documented in the report do not constitute a guarantee that all potential sources of 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 24, 2006, the NCDOT requested the following scope of work:

- Determine if contaminated soils are present around any underground storage tanks (USTs) identified that are within the existing and/or the proposed ROW;
- in addition, collect soil samples every 15.24 meters (50.0 feet) to a maximum depth of 2.44 meters (8.0 feet) along the proposed drainage (if there is no proposed drainage, collect samples at same interval along the edge of existing and/or proposed ROW within the “area of investigation”);
- delineate and estimate the quantity of impacted soils and indicate the approximate area of soil contamination on a site map for each 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;
- if a groundwater sample is collected for proposed drainage, perform aquifer testing to determine the recharge rate and use this to provide an estimated quantity of contaminated water that will have to be disposed of when de-watering occurs to install the proposed drainage;
- prepare a report including field activities, findings, and recommendations for the site and submit in quadruplet to the NCDOT office.

### 2.2 Scope of Services

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

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To perform the requested Limited PSA, EI personnel supervised, oversaw and performed site reconnaissance activities and collected appropriate samples to complete the project objectives. To complete the study on the subject parcel, EI performed the following scope of services:

- Performed the field study described herein within a NCDOT prescribed area of study that encompassed approximately 530 square meters (5,705 cubic feet). The area of study consisted of proposed drainage piping only was identified in the referenced NCDOT Plan Sheet.
- Supervision, and oversight of the advancement of 17 soil test borings utilizing DPT methods to the investigative depth of 2.44 meters (8.0 feet) below the land surface (bls) within the existing and/or the proposed NCDOT ROW.
- Collection and submittal of 17 soil samples for laboratory analytical testing.
- Collection and submittal of two (2) groundwater samples from two (2) existing permanent 2.0" -diameter monitoring wells for laboratory analysis.
- Photo documentation of pertinent site features.
- Preparation of the *Limited PSA Report*, presented herein that presents our findings and conclusions along with our recommendations.



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### 3.0 SITE CHARACTERIZATION

#### 3.1 Site Location

A textile mill known as the “Glen Raven Mills” is currently located on the north side of US 19 East approximately 31 meters (100 feet) west of the NC 197 intersection. The specific site address for the property is US Highway 19E and NC Highway 197 North, Burnsville, North Carolina 28714 (**Figure 1**). The subject property is currently located immediately adjacent to the NCDOT ROW (**Photograph 1**) as identified in NCDOT’s R-2519A Plan Sheets 22 and 23. Copies of digital site photographs are presented in **Appendix A**.

#### 3.2 Physical Setting

The subject property mill is surrounded by a steel mesh fence. The NCDOT ROW area of investigation includes proposed drainage piping only and is located to the south of the facility that abuts US Hwy 19E. Portions of the ROW area of investigation include grassy areas with shrubbery, ditches, and an asphalt parking area. See **Figure 2** for pertinent site features.

##### 3.2.1 Number and Capacities of USTs

Indications of known USTs were not observed within the NCDOT ROW area of investigation.

#### 3.3 Site History

The subject site has been an active weaving mill since 1948 and is currently on the Inactive Hazardous Waste Sites lists for North Carolina and the Environmental Protection Agency (EPA) Facility ID is NCD003158094. The mill produces a synthetic fabric that is shipped out for cutting, dyeing and printing. Prior to 1948, the land was used for agricultural purposes.

According to a *Site Screening Investigation (SSI) Report*, issued by the North Carolina Department of Environment, Health and Natural Resources (NCDEHNR), Division of Solid Waste Management in 1992, the company (Glen Raven Mills) reportedly poured waste solvents from a quill cleaning process onto the ground and into storm drains between 1948 and 1983. Glen Raven Mills personnel estimated that a maximum of 76 to 379 liters (20 to 100 gallons) of waste solvents were dumped on the premises per year. Reportedly, the SSI did not find groundwater contamination at that time. Also, according to the SSI, an area of contaminated soil (285-square foot) is located on the north side of the facility. Low levels of lead, mercury, and cadmium were found in this area. In addition, there was reported documentation of migration of low-level mercury contamination from the site to Little Crabtree Creek.

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### **3.4 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 826 meters (2,710 feet) above mean sea level (msl) (**Figure 1**). Topographically, the site slopes gently to the north/northeast. Surface water runoff appears to flow directly north in the direction of Little Crabtree Creek located approximately 114 meters (375) feet from the site.

### **3.5 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 commercial properties. The site is bounded on the north by an undeveloped parcel, to the east and south by NC 97 and US Hwy 19 E, respectively, and to the west by commercial properties.

---

## 4.0 SUBURFACE INVESTIAGTION

### 4.1 Subsurface Soils Investigation

Subsurface Environmental Investigations (SEI), Inc., based in Statesville, North Carolina, was selected and subcontracted to provide DPT services. On April 20, and April 21, 2006, EI directed and supervised the advancement of 17 soil test borings (GP-1 through GP-17), all of which were advanced along the proposed drainage piping.

In general, the borings were advanced in order to evaluate the absence/presence of potential subsurface soil (vadose zone) impact and/or subsurface groundwater (contaminant smearing) impact associated with potential metal and/or volatile release(s). The possibility of these contaminants of concern is based on the referenced site history (Section 3.3). The soil borings were advanced to the maximum investigative depth of 3.05 meters (10.0 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

A total of 17 soil samples were collected for laboratory analysis. Soil samples retained for laboratory analysis were shipped to representatives of 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**.

### 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 0.31 meters (1.0-foot) below grade. A layer of soil consisting of tan, light brown clayey SILT was encountered to the investigated depth of approximately 1.22 meters (4.0 feet) bls underlain by reddish brown to tan silty CLAY (CL-CH) very micaceous, to

the investigative depth of 2.44 meters (8.0 feet) bls. Detailed descriptions are presented in Soil Boring Logs presented in **Appendix C**. The boring logs include an interpretation of subsurface conditions based on field samples.

#### **4.6 Groundwater Investigation**

Two (2) existing groundwater Type II monitoring wells were observed within the NCDOT area of investigation. See **Figures 2** and **2.1** for the specific locations.

##### **4.6.1 Monitoring Well Sampling**

On April 26, 2006, EI personnel collected two (2) groundwater samples from the referenced existing monitoring wells (identified for purposes of this report as “MW-1” and “MW-2”) for purposes of analytical testing. On April 27, 2006, the samples were transferred to representatives of Prism Analytical Laboratories for analytical laboratory testing. Groundwater sampling procedures are discussed in more detail in the *Standard Operating Procedures* presented in **Appendix C**.

On the sampling date, the groundwater table was measured in both monitoring wells. Groundwater was measured at 2.18 meters (7.14 feet) and 3.27 meters (10.72 feet) below the top of casing (TOC), from MW-1 and MW-2, respectively. The TOC in each well was level with the ground surface (flush-mount well pads).

---

## 5.0 LABORATORY TESTING AND RESULTS

### 5.1 Subsurface Soil Analytical Methods

A total of 17 soil samples (“GP1-8”, “GP2-8”, “GP3-8”, “GP4-8”, “GP5”, “GP6-6”, “GP7-7”, “GP8-7”, “GP9-4”, “GP10-5”, “GP11-5”, “GP12-4”, “GP13-6”, “GP14-6”, “GP15-6”, “GP16-5”, and “GP17-6”) were submitted for the 8 RCRA Metals and VOCs. These laboratory analytical methods were utilized to evaluate for the potential presence of either metals and/or volatile contaminants of concern.

### 5.2 Soil Laboratory Analyses Results

#### VOC Results

Reported concentrations of VOCs were not detected at or above the method laboratory detection limits for any of the analytes analyzed for all of the samples analyzed.

#### Metals

Reported concentrations of arsenic, barium, chromium, lead, mercury, and selenium were detected in one (1) or more samples analyzed during this study. Concentrations of two (2) of the metals (arsenic and chromium) were detected in one (1) or more samples analyzed at concentrations that exceeded either the USEPA Preliminary Removal Goals (PRGs) – Industrial Soil (mg/kg) and/or the Soil Screening Levels (SSLs) – Migration To Groundwater (DAF 20) (mg/kg).

Specific results showed concentrations of *arsenic* above either the PRGs or the SSLs in the following 11 samples: GP2-6, GP2-8, GP4-8, GP5, GP6-6, GP7-7, GP8-7, GP9-4, GP13-6, GP14-6, and GP15-5.

Specific results showed concentrations of *chromium* above either the PRGs or the SSLs in the following 13 samples: GP1-8, GP2-6, GP2-8, GP4-8, GP5, GP6-6, GP7-7, GP8-7, GP10-5, GP11-5, GP14-6, GP16-5, and GP17-6. 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**.

#### Background Samples

A series of seven (7) soil samples were collected on an adjacent parcel (within the NCDOT area of investigation for NCDOT Parcel 115) at similar depths to the sampling program performed for this study. The purpose of collecting the samples was to determine the level of concentrations

(mean concentrations values) of the naturally occurring metals found in similar type of soils that are not subjected to the contaminants of concern at the Mill facility.

Based on the analyses of the referenced background samples, it has been determined that the majority of the background concentrations of the metal arsenic were consistently lower than the regulatory cleanup levels (PRGs and SSLs), while background concentrations of the metal chromium showed concentrations that exceeded the same.

Specifically, concentrations of arsenic ranged from below the quantitation limits (BQL) to 1.92 mg/kg (parts per million), with a mean average of 0.47 mg/kg, while concentrations of chromium ranged from 55.5 mg/kg to 112.9 mg/kg, with a mean of 90.43. Results of these findings seems to suggest that the background concentrations for arsenic were below the regulatory derived values and thus represent a natural baseline for concentrations in the area of study, while the background concentrations for chromium indicate that mean concentration value was above the regulatory cleanup standards.

Thus, it appears that the metal chromium detected in the area of investigation is naturally occurring, while the presence of the metal arsenic may indicate a potential release. Based on this study, the source for the arsenic is unknown.

Results of these metal findings along with the results of the remaining metals are presented in **Table 2**. The complete laboratory results and Chain-of-Custody Records are presented in **Appendix D**.

### **5.3 Groundwater Laboratory Analysis**

Groundwater samples “MW-1” and “MW-2” collected from the referenced permanent monitoring wells were submitted for VOCs analysis for aromatic and halogenated volatiles by GC/PID-ELCD for EPA Method 6230D + IPE & MTBE, for semivolatile organic compounds by GC/MS for EPA Method 625 and the top ten (10) peaks identified, for extractable petroleum hydrocarbons by GC/FID by Method MADEP EPH, and for volatile petroleum hydrocarbons by GC-PID/FID by MADEP VPH.

### **5.4 Groundwater Laboratory Analyses Results**

Analysis of a groundwater sample collected from the two (2) referenced monitoring wells (“MW1” and “MW-2”) reported detectable concentrations of VOCs, aliphatics and SVOC analytes. However, none of the reported concentrations were exceeded the North Carolina Groundwater Standards (15A NCAC 2L .0202). Specific results were as follows:

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MW-1

Two (2) VOC analytes (cis-1,2-dichloroethene and trichloroethene) were reported at 91.0 and 22.0 ug/L, respectively, while one (1) SVOC analyte (bis 2-ethylhexyl phthalate) was reported at 100.0 ug/L. In addition, one aliphatic analyte (C9-C18 Aliphatics) was reported at 83.0 ug/L.

MW-2

One (1) VOC analyte (trichloroethene) was reported at 4.4 ug/L, while one (1) SVOC analyte (bis 2-ethylhexyl phthalate) was reported at 12.0 ug/L. In addition, one aliphatic analyte (C9-C18 Aliphatics) was reported at 83.0 ug/L.

A summary of the groundwater analytical results is tabulated in **Table 3**.

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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 NCDOT plan sheets, review of the site investigation including soil and groundwater collection activities, and review of a laboratory analyses report. Compiled below is a summarized list of the significant findings.

- The subject property mill is surrounded by a steel fence. The NCDOT ROW area of investigation includes proposed drainage piping only, and is located to the south of the facility that abuts US Hwy 19E.
- Indications of known underground storage tanks (USTs) were not observed within the NCDOT ROW area of investigation.
- Topographically, the site slopes gently to the north/northeast. Surface water runoff appears to flow directly north in the direction of Little Crabtree Creek located approximately 114 meters (375) feet from the site.
- Groundwater was measured at 2.18 meters (7.14 feet) and 3.27 meters (10.72 feet) below the TOC, from MW-1 and MW-2, respectively.
- None of the soil samples collected showed concentrations of VOCs at or above the method laboratory detection limits for any of the analytes analyzed for all of the samples analyzed.
- Reported concentrations of arsenic, barium, chromium, lead, mercury, and selenium were detected in one (1) or more soil samples analyzed during this study. Concentrations of two (2) of the metals (arsenic and chromium) (collected from 16 of 17 samples) were shown to be present in one (1) or more samples at concentrations that exceeded either the PRGs – Industrial Soil (mg/kg) and/or the SSLs – Migration To Groundwater (DAF 20) (mg/kg).
- Results of the soil background concentrations seem to suggest that the naturally occurring concentrations of metals for arsenic were for the most part below the regulatory derived values (cleanup standards – PRGs and SSLs) and indicate a natural baseline for concentrations in the area of study, while elevated background concentrations of chromium indicate that the presence of this metal is naturally occurring in this area.
- It was determined that the mean background concentration values for the two (2) metals of concern, arsenic and chromium were calculated at 0.4 mg/kg, and 90.43 mg/kg, respectively.



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- Analysis of groundwater samples collected from the two (2) referenced monitoring wells (“MW1” and “MW-2”) showed the presence of VOCs, aliphatics and SVOC analytes. However, none of the reported concentrations exceeded the North Carolina Groundwater Standards (15A NCAC 2L .0202).

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## 7.0 CONCLUSIONS AND RECOMMENDATIONS

EI personnel have reviewed information obtained during the *Limited PSA* at the site (**Parcel 123**) and present the following conclusions and recommendations.

Soil samples collected from 17 of 18 samples from the proposed drainage piping areas showed two (2) metals (arsenic and chromium) with *slightly elevated* concentrations above the PRGs and/or SSLs. Based on the analysis of background concentrations collected on adjacent parcel, the elevated concentrations of the metal chromium are natural occurring, while the presence of arsenic may be attributed to an unknown release.

The presence of arsenic may be attributed to either a surficial and/or subsurface release from prior site activities. However, considering the limited extent of this site study, the source of this metal cannot be determined at this time. Considering the location of the subject property, the presence of naturally occurring metals is a likely possibility. Historical releases on the subject parcel were documented on the north portion of the parcel, while this investigation occurred on the southern portion of the parcel.

Review of the sample locations indicates that a large area of soils have been impacted by *slightly elevated* arsenic concentrations. The area of impact includes a large majority of the proposed drainage piping. The impacted area includes a horizon of soil encountered from depths of approximately 1.22 meters (4.0 feet) to 2.44 meters (8.0 feet), which is also the estimated depths for the area of investigation (proposed installed drainage piping). Surficial soils were not collected for this study due to nature of the future proposed drainage piping installed depths. **The total area of arsenic (soil) impacted has been estimated at 581 cubic meters (755 cubic yards).** The sections of projected volume of impacted soil along the proposed drainage piping is presented as follows:

### Soil Impact (Arsenic)

140m (460') x 3m (10') x 1.2m (4.0') depth = Total Volume of 521 cubic meters (682 cubic yards)

15m (49') x 3m (10') x 1.2m (4.0') depth = Total Volume of 60 cubic meters (79 cubic yards)

*Note: since surficial soils were not collected as part of this investigation, the area and volume of impact may be greater than estimated.*

Considering the two (2) monitoring well locations within the NCDOT area of investigation, it appears that the **groundwater (shallow aquifer) has not been impacted by petroleum or organics**, at levels that exceed regulatory standards; however, it should be noted that petroleum compounds typically found in diesel or heating oil were detected in the samples, suggesting that either minor historical releases or adjacent site releases may have occurred.

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Based on the detection of arsenic at reported soil concentrations above cleanup standards, the property owner should be notified of this finding. It also should be noted that this type of finding typically would be reported to the regulatory agency (NCDENR – Division of Solid Waste Management) by the property owner.

To determine the source of the arsenic, additional investigations may be necessary, in addition, if the NCDOT plans on removing the impact, additional investigation may also be necessary to better define the impact. The scope of work for this study was limited to the proposed drainage piping; however, based on this study, the estimate of arsenic impact represents a good indicator of the impact encountered. 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.*

**TABLES**

TABLE 1  
SUMMARY OF SOIL ANALYTICAL RESULTS  
Proposed Drainage Piping  
Parcel 123  
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WBS Element No. 35609.1.1

Sample Identification			GP1-8	GP2-6	GP3-8	GP4-8	GP5	GP6-6	GP7-7	GP8-7
Sample Depth Meters (Feet)			2.134m-2.438m (7'-8')	1.52m-1.83m (5'-6')	2.134m-2.438m (7'-8')			1.52m-1.83m (5'-6')	1.83m-2.14m (6'-7')	1.83m-2.14m (6'-7')
Sample Date			4/19/2006				4/20/2006			
Analyte	Cleanup Standards		Laboratory Results (mg/kg)							
	(1) USEPA Preliminary Removal Goals (PRGs) Industrial Soil (mg/kg)	(2) Soil Screening Levels (SSLs) - Migration to groundwater (DAF 20) (mg/kg)								
Acetone	54,000	16	BQL	0.0647	BQL	BQL	BQL	0.142	BQL	BQL
Chloroform	0.47	0.6	BQL	BQL	BQL	BQL	BQL	BQL	BQL	0.00965
Anthalene	NS	NS	0.0298	BQL	BQL	BQL	BQL	BQL	BQL	BQL
All Remaining Analytes	NA	NA	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL
Analyte	Cleanup Standards		Laboratory Results (mg/kg)							
	(1) USEPA Preliminary Removal Goals (PRGs) Industrial Soil (mg/kg)	(2) Soil Screening Levels (SSLs) - Migration to groundwater (DAF 20) (mg/kg)								
Arsenic	1.6	29	BQL	<u>3.92</u>	<u>2.06</u>	<u>2.76</u>	<u>1.97</u>	<u>1.95</u>	<u>5.47</u>	<u>1.62</u>
Barium	67,000	1,600	86	251	122	268	72.8	89.6	257	271
Cadmium	450	8	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL
Chromium	450	38	<u>60.4</u>	<u>39.5</u>	<u>39.8</u>	18.4	<u>68.2</u>	<u>58.6</u>	<u>85.2</u>	<u>144</u>
Lead	800	NA	16.2	15.1	15.9	4.94	9.85	116	4.95	4.44
Mercury	62	NA	0.0559	0.0364	0.0717	0.0337	0.146	0.0248	BQL	BQL
Selenium	5,100	5	3.06	2.94	BQL	BQL	BQL	BQL	BQL	BQL
Silver	5,100	34	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL

**NOTE:**

mg/kg denotes parts per million

(1) Environmental Protection Agency's (EPA) Region 9, 10/04 Preliminary Remediation Goals (PRGs) for industrial soils

(2) Environmental Protection Agency's (EPA) Region 9, 10/04 SSL's - "Migration to Groundwater" - Dilution Attenuation Factor 20

**Bold & Italics Font** = In Excess of PRGs for industrial soils

Underline denotes in excess of Background Concentrations

NE = Not Established

N/A = Not applicable

NS= No Standard

TABLE 1 (Continued)  
SUMMARY OF SOIL ANALYTICAL RESULTS  
Proposed Drainage Piping  
Parcel 123  
Glen Raven Mills Property  
US Hwy 19E  
Burnsville, NC 28714  
State Project No. R-2519A  
WBS Element No. 35609.1.1

Sample Identification			GP9-4	GP10-5	GP11-5	GP12-4	GP13-6	GP14-6	GP15-5	GP16-5	GP17-6
Sample Depth Meters (Feet)			0.91m-1.22m (3'-4')	1.22m-1.52m (4'-5')		0.91m-1.22m (3'-4')	1.52m-1.83m (5'-6')		1.22m-1.52m (4'-5')		1.52m-1.83m (5'-6')
Sample Date			4/20/2006								
Cleanup Standards (MSCC)			Laboratory Results (mg/kg)								
Laboratory Analysis (Volatile Organic Compounds) (EPA 8160)	(1) USEPA Preliminary Removal Goals (PRGs) - Industrial Soil (mg/kg)	(2) Soil Screening Levels (SSLs) - Migration to groundwater (DAF 20) (mg/kg)									
Acetone	54,000	16	0.132	BQL	BQL	0.0907	0.0914	BQL	BQL	BQL	0.297
Carbon disulfide	720	32	BQL	BQL	BQL	BQL	BQL	BQL	0.00818	BQL	BQL
Remaining Analytes	NA	NA	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL
Laboratory Analysis (Inorganic) (EPA 8000)	(1) USEPA Preliminary Removal Goals (PRGs) - Industrial Soil (mg/kg)	(2) Soil Screening Levels (SSLs) - Migration to groundwater (DAF 20) (mg/kg)	Laboratory Results (mg/kg)								
Arsenic	1.6	29	<b>8.56</b>	BQL	BQL	BQL	<b>5.93</b>	<b>2.98</b>	<b>3.3</b>	1.51	BQL
Barium	67,000	1,600	198	78.3	87.1	55.3	328	117	124	202	59.9
Cadmium	450	8	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL
Chromium	450	38	30.6	<b>125</b>	<b>85.1</b>	32.2	34.6	<b>47.6</b>	36.4	<b>42.3</b>	<b>73.5</b>
Lead	800	NA	14.4	BQL	2.42	2.67	24	12.9	12.8	64.2	9.28
Mercury	62	NA	BQL	BQL	BQL	BQL	0.0581	0.0522	0.0505	BQL	0.102
Selenium	5,100	5	BQL	BQL	BQL	BQL	BQL	BQL	2.39	BQL	BQL
Silver	5,100	34	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL

**NOTE:**

mg/kg denotes parts per million

(1) Environmental Protection Agency's (EPA) Region 9, 10/04 Preliminary Remediation Goals (PRGs) for industrial soils

(2) Environmental Protection Agency's (EPA) Region 9, 10/04 SSL's - "Migration to Groundwater" - Dilution Attenuation Factor 20

**Bold & Italics Font** = In Excess of PRGs for industrial soils

Underline denotes in excess of Background Concentrations

NE = Not Established

N/A = Not applicable

NS= No Standard

**TABLE 2**  
**SUMMARY OF SOIL ANALYTICAL RESULTS (Background Samples Only)**  
 Parcel 123  
 Glen Raven Mills Property  
 US Hwy 19E  
 Burnsville, NC 28714  
 State Project No. R-2519A  
 WBS Element No. 35609.1.1

Sample Identification				GP12-7	GP13-7	GP14-6	GP15-7	GP16-7	GP17-6	GP18-4
Sample Depth Meters (Feet)				(0.5' - 1.0')						
Sample Date				4/20/2006						
Parameter Analyzed (mg/kg)	(1) USEPA Preliminary Removal Goals (PRGs) - Industrial Soil (mg/kg)	(2) Soil Screening Levels (SSLs) - Migration to groundwater (DAF 20) (mg/kg)	Mean Concentrations (mg/kg)							
Arsenic	1.6	29	0.47	BQL	1.4	BQL	BQL	BQL	BQL	1.92
Barium	67,000	1,600	NA	158	207	239	267	147	140	96
Cadmium	450	8	NA	BQL	BQL	BQL	BQL	BQL	BQL	BQL
Chromium	450	38	90.43	<b>86.6</b>	<b>93.5</b>	<b>110</b>	<b>112</b>	<b>101</b>	<b>74.4</b>	<b>55.5</b>
Lead	800	NA	NA	3.66	5.69	7.73	4.98	10.1	26.3	10.8
Mercury	62	NA	NA	BQL	BQL	BQL	BQL	BQL	BQL	0.0466
Selenium	5,100	5	NA	BQL	BQL	BQL	BQL	BQL	BQL	2.29
Silver	5,100	34	NA	BQL	BQL	BQL	BQL	BQL	BQL	BQL

**NOTE:**  
 mg/kg denotes parts per million  
 (1) Environmental Protection Agency's (EPA) Region 9, 10/04 Preliminary Remediation Goals (PRGs) for industrial soils  
 (2) Environmental Protection Agency's (EPA) Region 9, 10/04 SSL's - "Migration to Groundwater" - Dilution Attenuation Factor 20  
**Bold & Italics Font** = In Excess of PRGs for industrial soils  
 NE = Not Established  
 N/A = Not applicable  
 NS= No Standard

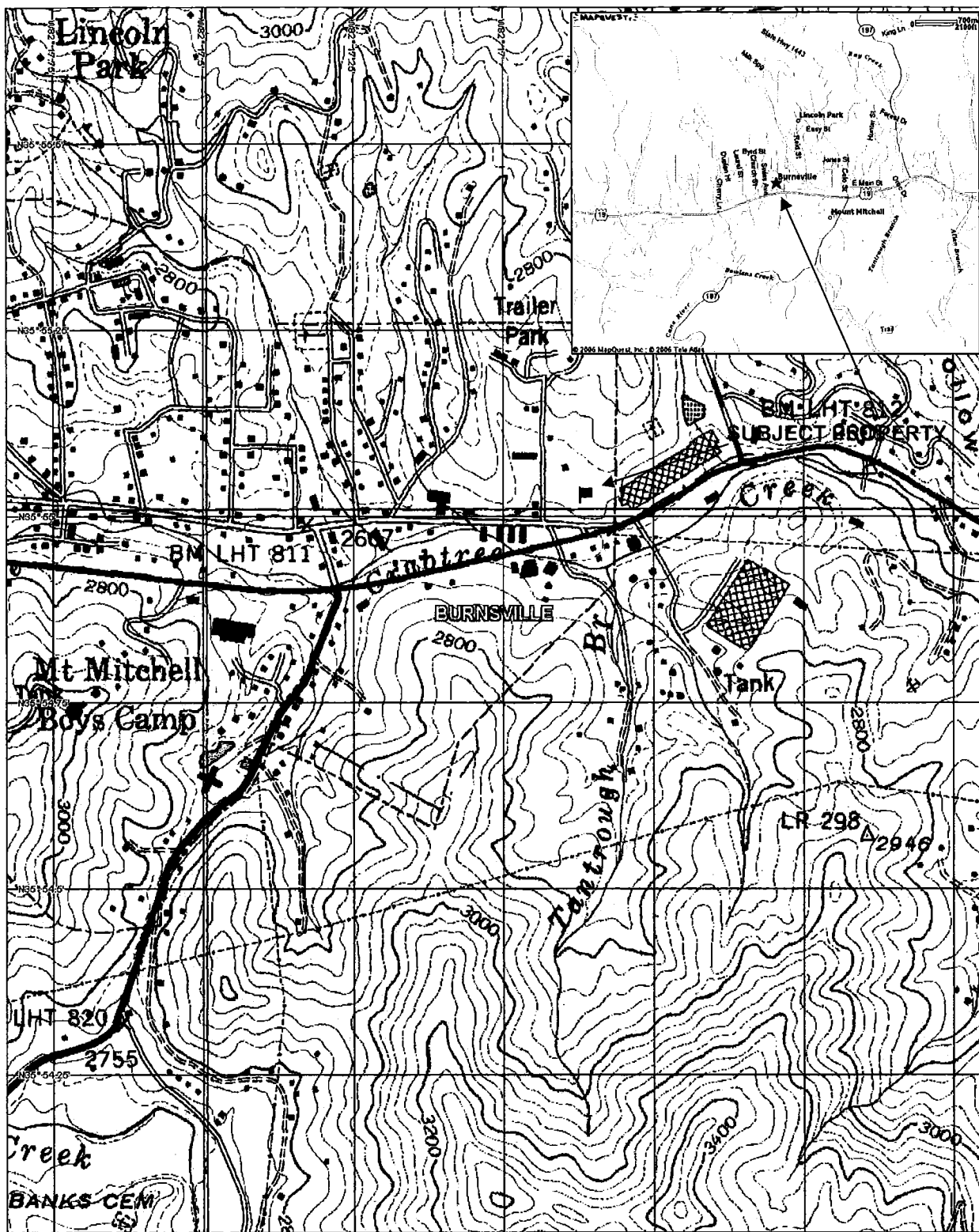
**TABLE 3**  
**SUMMARY OF GROUNDWATER ANALYTICAL RESULTS**  
 Parcel 123 - Glen Raven Mills Property  
 US Hwy 19E  
 Burnsville, NC 28714  
 State Project: R-25190A  
 WBS Element: 35609.1.1

Sample Identification		MW-1	MW-2
Groundwater Depth (From top of casing) meters (Feet)		2.18m (7.14)	3.27m (10.72)
Sample Date		4/26/2006	
Volatiles CC 6280D	2L Groundwater Standards (ug/L)	Laboratory Results (ug/L)	
Benzene	1	BRL	BRL
cis-1,2-Dichloroethene	70	<b>91</b>	BRL
Methyl-tert butyl ether (MTBE)	200	BRL	BRL
Naphthalene	21	BRL	BRL
Total Xylenes	530	BRL	BRL
Toluene	1,000	BRL	BRL
Trichloroethene	2.8	<b>22</b>	<b>4.4</b>
All remaining analytes	NA	BRL	BRL
MADE P/M/BE	2L GW Standards (ug/L)	Laboratory Results (ug/L)	
C5-C8 Aliphatics	420	BRL	BRL
C9-C12 Aliphatics	4200	BRL	BRL
C9-C10 Aliphatics	210	BRL	BRL
MADE P/P/BE	2L GW Standards (ug/L)	Laboratory Results (ug/L)	
C9-C18 Aliphatics	4200	83	BRL
C19-C36 Aliphatics	42000	BRL	BRL
C11-C22 Aromatics	210	BRL	BRL
Sampled from CCMS Mt. Road C25	2L GW Standards (ug/L)	Laboratory Results (ug/L)	
Bis (2-ethylhexyl) Phthalate	NS	100	12
Naphthalene	21	BRL	BRL
Phenanthrene	210	BRL	BRL
Pyrene	210	BRL	BRL
All remaining analytes	N/A	BRL	BRL

**Legend:**  
*Italics/Bold Font* = In Excess of NCAC 2L Class GA Standards  
 BQL = Below Quantitation Limit  
 NA = Not Applicable  
 NS = No Standard



**FIGURES**



3-D TopoQuads Copyright © 1999 DeLorme Yarmouth, ME 04896 Source Data: USGS 350 ft Scale: 1: 12,800 Detail: 14-0 Datum: WGS84



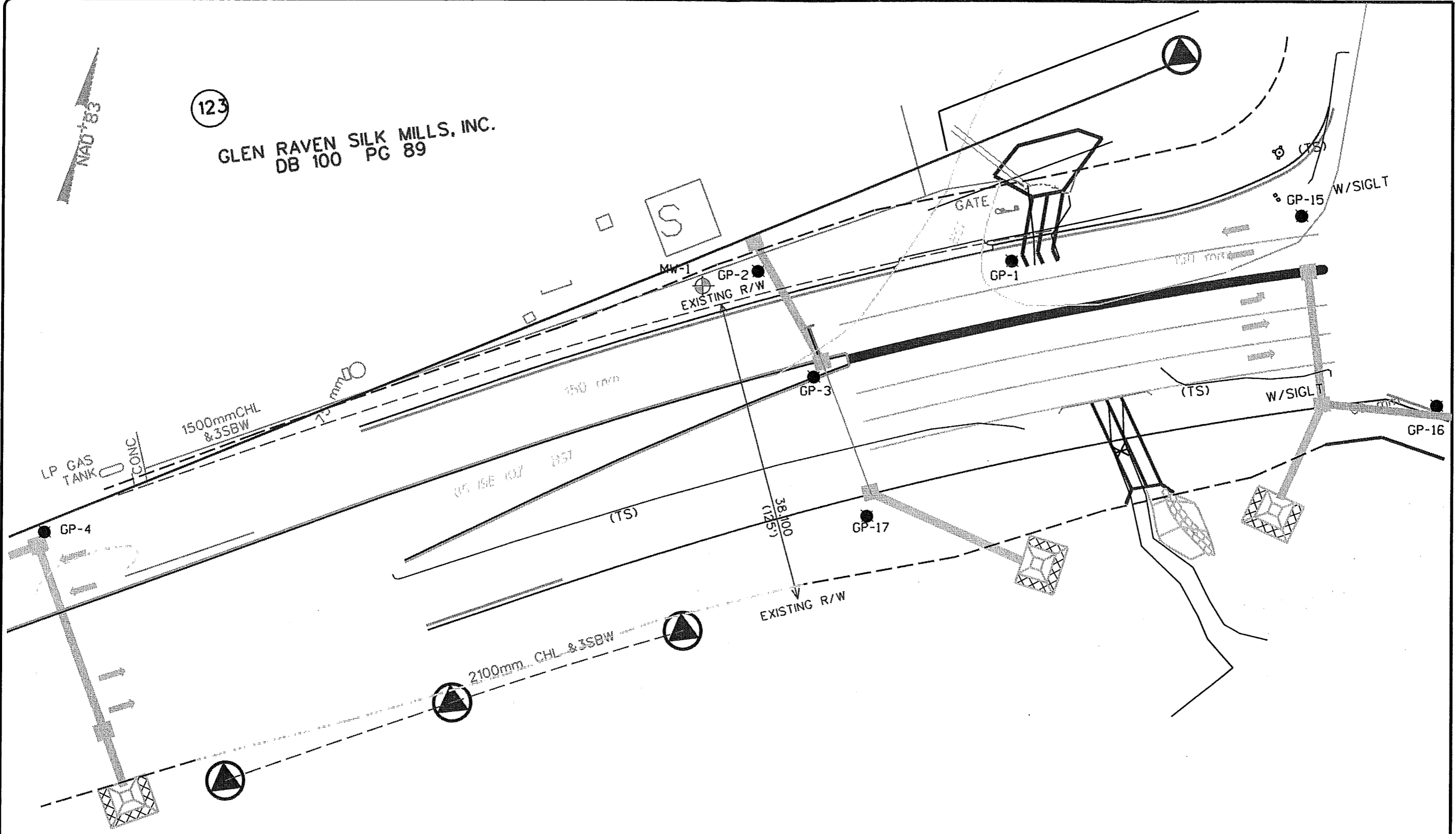
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QUAD:	Burnsville
PROJECT NUMBER:	ENMO060029
SCALE:	As Shown

**SITE LOCATION MAP**  
 Glen Raven Mills Property  
 US Highway 19 E  
 Burnsville, North Carolina

**ENVIRONMENTAL INVESTIGATIONS, INC**

123

GLEN RAVEN SILK MILLS, INC.  
DB 100 PG 89



**LEGEND**

- GP-1 ● SOIL TEST BORING
- GP-1 ⊕ EXISTING MONITORING WELL
- GP-1 ⊕ TEMPORARY MONITORING WELL
- PROPERTY BOUNDARY
- - - EXISTING R/W
- PROPOSED R/W

SOIL IMPACTED AREA

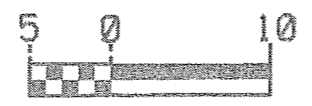
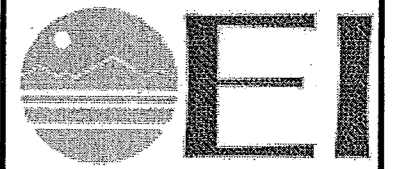


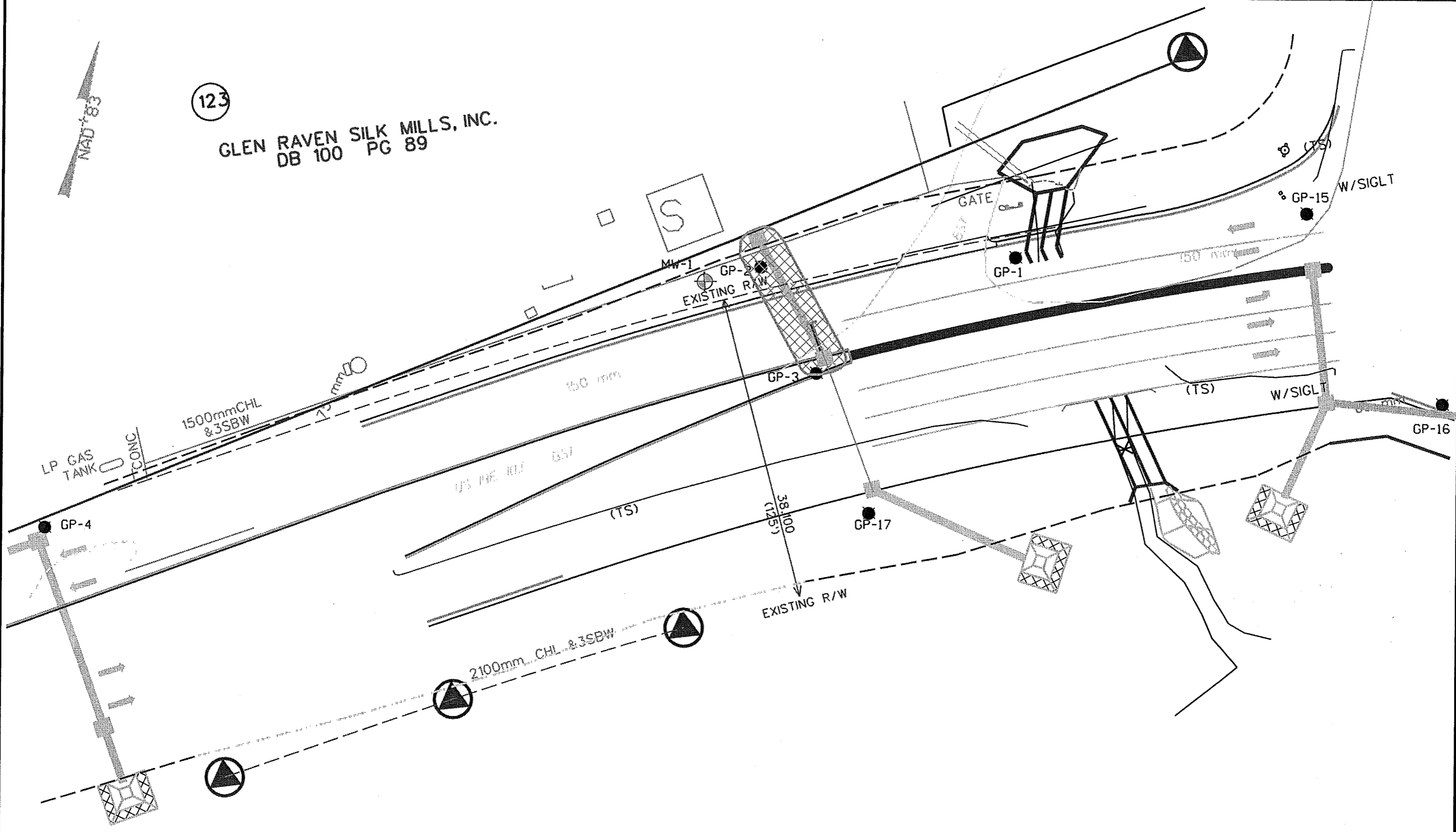
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DATE:	APR 2006
PROJ NO:	ENM0060029.00
SCALE:	1 cm = 5m

**SITE MAP**  
**PARCEL 123**  
 Glen Raven Mills Property  
 US HWY 19E  
 Burnsville, NC 28714  
 WBS Element: 35609.1.1



123

GLEN RAVEN SILK MILLS, INC.  
DB 100 PG 89



LEGEND

- GP-1 ● SOIL TEST BORING
- GP-1 ⊕ EXISTING MONITORING WELL
- GP-1 ⊕ TEMPORARY MONITORING WELL

- AREA OF INVESTIGATION (PROPOSED DRAINAGE PIPING)
- SOIL IMPACTED AREA (Arsenic)

- - - - - PROPERTY BOUNDARY
- ..... EXISTING R/W

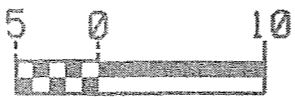
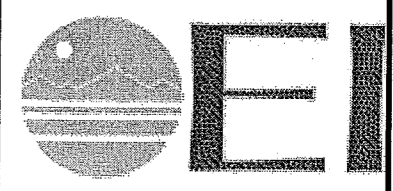
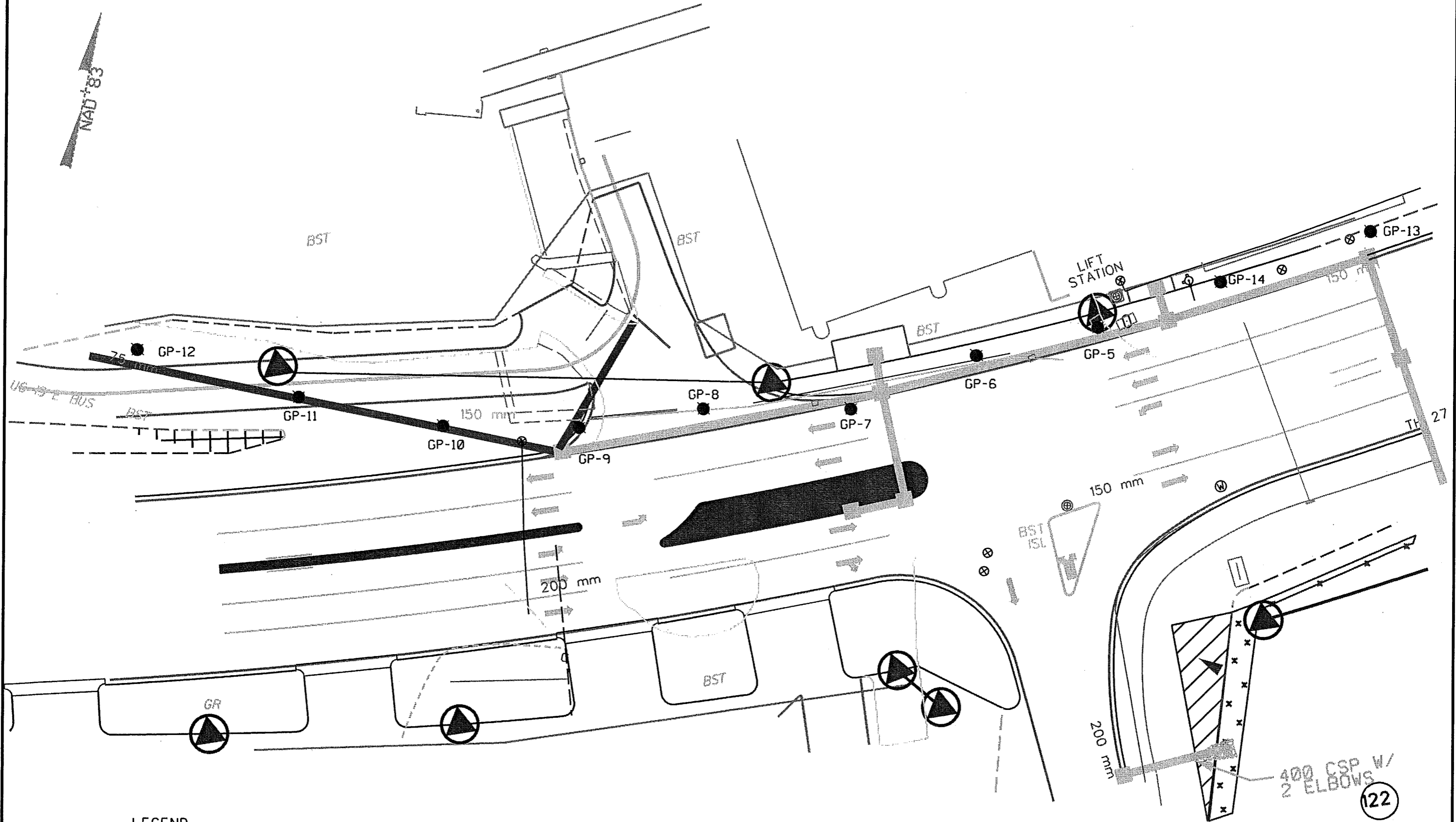


FIGURE:	2.1
DRAWN BY:	NCDOT/RMS
DATE:	APR 2006
PROJ NO:	ENM0060029.00
SCALE:	1 cm = 5m

IMPACTED SOILS MAP  
 PARCEL 123  
 Glen Raven Mills Property  
 US HWY 19E  
 Burnsville, NC 28714  
 WBS Element: 35609.1.1



NAD 83



**LEGEND**

- GP-1 ● SOIL TEST BORING
- GP-1 ⊕ TEMPORARY MONITORING WELL
- PROPERTY BOUNDARY
- - - EXISTING R/W
- ▲— PROPOSED R/W

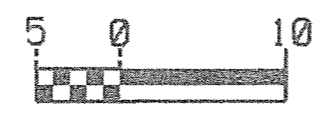
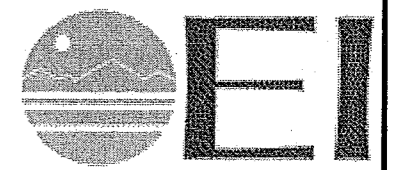
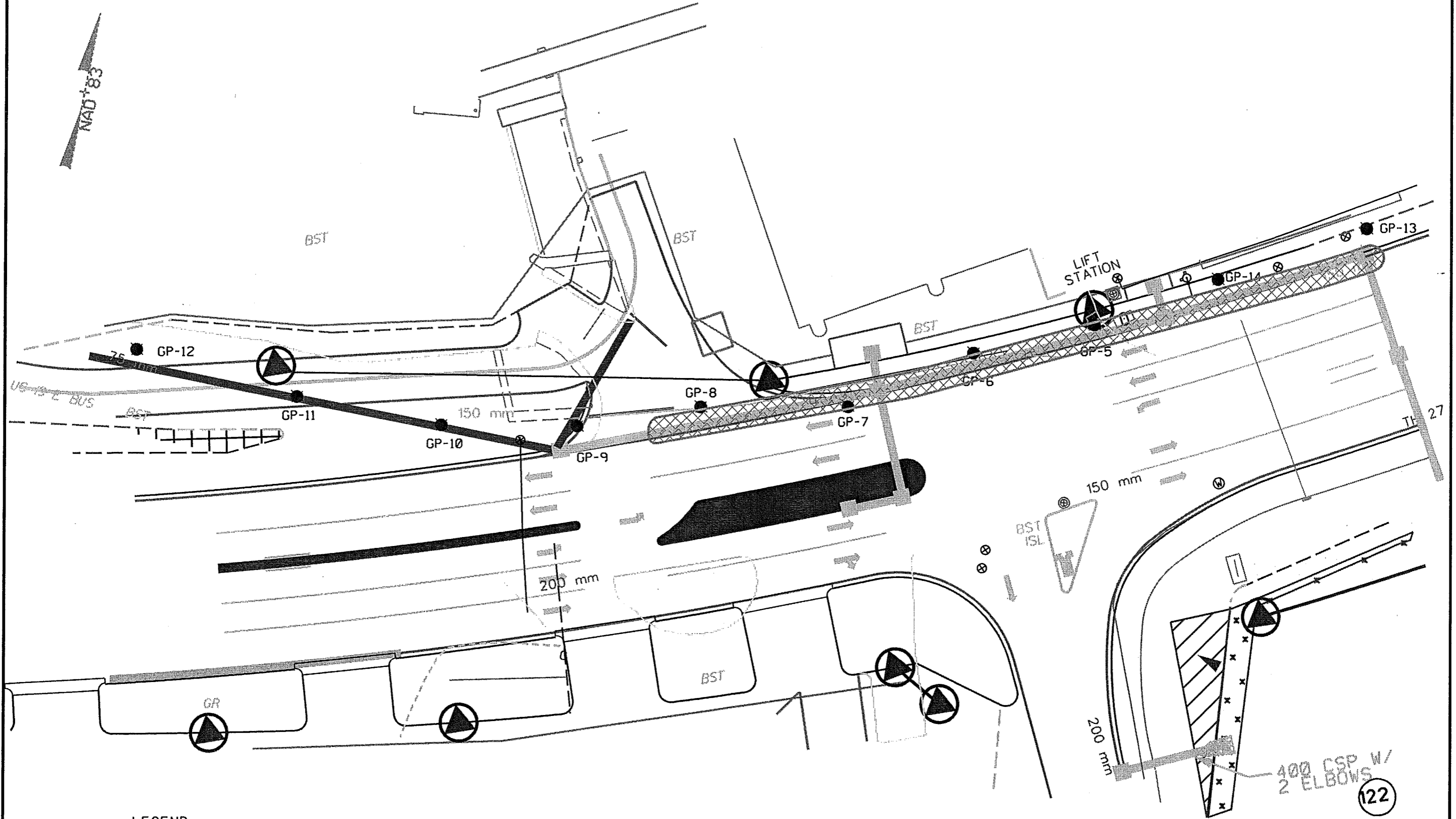


FIGURE:	3
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PROJ NO:	ENMD060029.00
SCALE:	1 cm = 5m

**SITE MAP**  
 PARCEL 123  
 Glen Raven Mills Property  
 US HWY 19E  
 Burnsville, NC 28714  
 WBS Element: 35609.1.1





**LEGEND**

- GP-1 ● SOIL TEST BORING
- GP-1 ⊕ TEMPORARY MONITORING WELL
- PROPERTY BOUNDARY
- - - EXISTING R/W
- ⊕ PROPOSED R/W
- ▨ AREA OF INVESTIGATION (PROPOSED DRAINAGE PIPING)
- ⊗ AREA OF SOIL IMPACT (Arsenic)

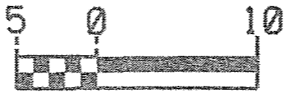
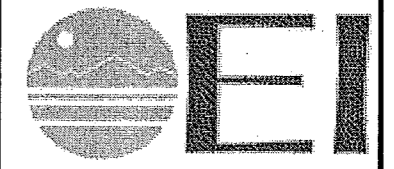


FIGURE:	3.1
DRAWN BY:	NCDOT/RMS
DATE:	APR 2006
PROJ NO:	ENM0060029.00
SCALE:	1 cm = 5m

**IMPACTED SOILS MAP**  
 PARCEL 123  
 Glen Raven Mills Property  
 US HWY 19E  
 Burnsville, NC 28714  
 WBS Element: 35609.1.1



**APPENDIX A**  
**SITE PHOTOGRAPHS**



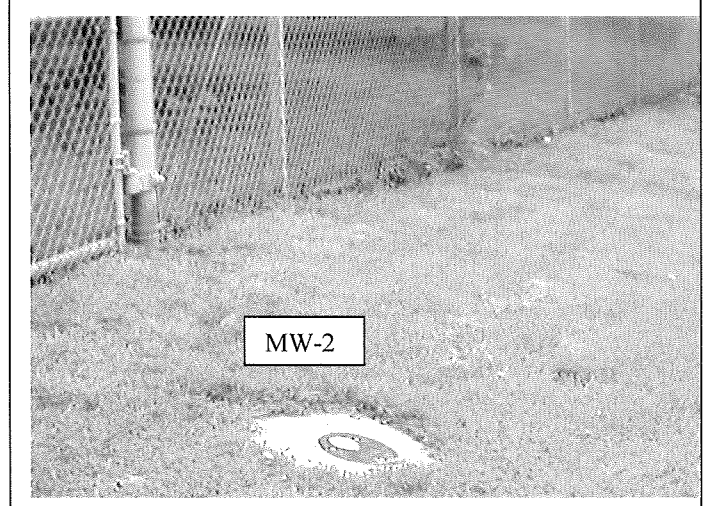
Photo 1: Looking east along the proposed drainage piping area within the proposed NCDOT right-of-way.



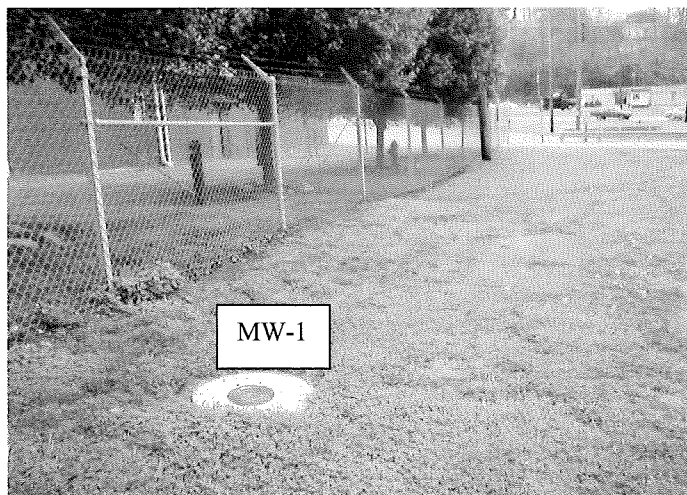
Photo 2: Looking west along the proposed drainage piping area within the proposed NCDOT right-of-way.



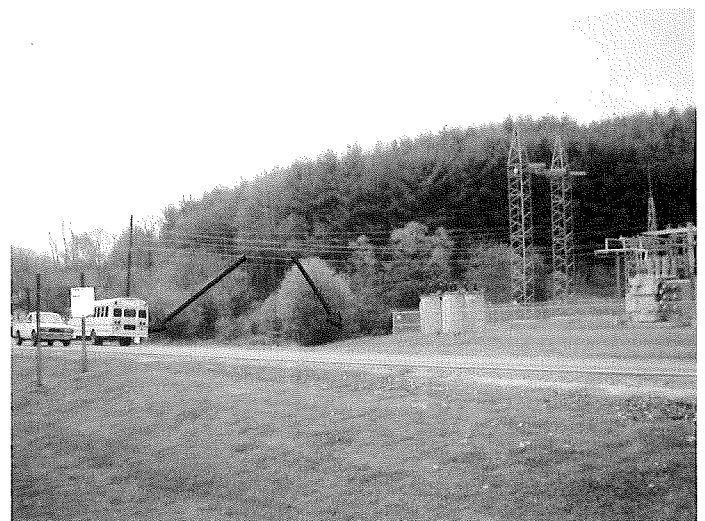
Photo 3: Looking west along some of the proposed drainage piping area within the western portion of the area.



Photograph 4: View of existing monitoring well within the proposed drainage piping area.



Photograph 5: View of existing monitoring well within the proposed drainage piping area.



Photograph 6: Looking northwest across US Hwy 19E at the proposed drainage piping area.



**APPENDIX B**

**STANDARD OPERATING PROCEDURES**

**STANDARD OPERATING PROCEDURES  
Subsurface Assessment Methodology And Sampling Protocol**

**Parcel 123  
Glen Raven Mills Property  
Former Sam's Oil Company  
US Hwy 158E  
Burnsville, NC 28714**

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

**Prepared For:**

**Gregory A. Smith  
State of North Carolina  
Department of Transportation  
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1589 Mail Service Center  
Raleigh, NC 27699-1589**

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PH (919) 544-7500 FAX (919) 544-2199**

**May 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 commercial property identified as the Glen Raven Mills property located at US Hwy 158E, 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.

STANDARD OPERATING PROCEDURES  
Subsurface Assessment Methodology And Sampling Protocol

**Parcel 123 – Glen Raven Mills Property**  
**US Hwy 158 E, Burnsville, NC 28714**  
NCDOT R-2519A – Preliminary Site Assessment (March 2006)

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**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 location and type of property, EI 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 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.

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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

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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

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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 for 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 0.-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.

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### **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 include 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

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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, detect, and correct 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**



# E.I.

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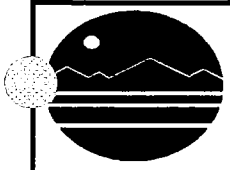
## SOIL BORING LOG

Boring No. GP-1  
Date Drilled: 04/19/06

Client:	<u>NCDOT</u>	Logged By:	<u>RMS</u>
Project Name:	<u>Parcel #123 - Glen Raven Mills Property</u>	Drilling Company:	<u>SEL, Inc.</u>
Project/Site Location:	<u>Burnsville, NC</u>	Drill Device:	<u>GeoProbe 6600</u>
Project Number:	<u>ENMO060029.00</u>	Drill Method:	<u>DPT</u>

Total Boring Depth: 2.74m      Weather Conditions: Warm - Lt rain      Surface Elevation: \_\_\_\_\_  
 Boring Diameter: 10.16cm      Boring Location: Proposed Drainage Piping

Depth (Feet)	Depth (meters)	Time	Sample Analyzed	Recovery	Soil Profile	Lithological Description	Sample PID (ppm)
					Topsoil	Grass with topsoil - brick fragments.	
2.00	0.61			100%	(CL)	Reddish bn. Silty CLAY (CL), micaceous, moist to wet at 2.14 m (7.0') bls.	0
4.00	1.22						0
6.00	1.83			100%			0
8.00	2.44	16:49	x				0
						Probe Refusal. Boring terminated at 2.74 meters (9.0') 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-2  
Date Drilled: 04/19/06

Client:	<u>NCDOT</u>	Logged By:	<u>RMS</u>
Project Name:	<u>Parcel #123 - Glen Raven Mills Property</u>	Drilling Company:	<u>SEI, Inc.</u>
Project/Site Location:	<u>Burnsville, NC</u>	Drill Device:	<u>GeoProbe 6600</u>
Project Number:	<u>ENMO060029.00</u>	Drill Method:	<u>DPT</u>

Total Boring Depth: 3.05m      Weather Conditions: Warm - Lt rain      Surface Elevation: \_\_\_\_\_  
 Boring Diameter: 10.16cm      Boring Location: Proposed Drainage Piping

Depth (Feet)	Depth (meters)	Time	Sample Analyzed	Recovery	Soil Profile	Lithological Description	Sample PID (ppm)
					Topsoil	Grass with topsoil.	
2.00	0.61			100%	(CL)	Reddish bn. Silty CLAY (CL), micaceous, moist to wet at 2.14 m (7.0') bls.	0
4.00	1.22			0			
6.00	1.83	17:10	x	100%			0
8.00	2.44						0
10.00	3.05			100%			0
						Boring terminated at 3.05 meters (10.0') bls. x denotes soil sample at 1.52m - 1.83m (5'-6') bls interval collected for laboratory retention.	



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## SOIL BORING LOG

Boring No. GP-3  
Date Drilled: 04/19/06

Client:	<u>NCDOT</u>	Logged By:	<u>RMS</u>
Project Name:	<u>Parcel #123 - Glen Raven Mills Property</u>	Drilling Company:	<u>SEI, Inc.</u>
Project/Site Location:	<u>Burnsville, NC</u>	Drill Device:	<u>GeoProbe 6600</u>
Project Number:	<u>ENMO060029.00</u>	Drill Method:	<u>DPT</u>

Total Boring Depth: 3.05m      Weather Conditions: Warm - Lt rain      Surface Elevation: \_\_\_\_\_  
 Boring Diameter: 10.16cm      Boring Location: Proposed Drainage Piping

Depth (Feet)	Depth (meters)	Time	Sample Analyzed	Recovery	Soil Profile	Lithological Description	Sample PID (ppm)
					Topsoil	Grass with topsoil.	
2.00	0.61			100%	(CL)	Reddish bn. Silty CLAY (CL), micaceous, moist to wet at 2.14 m (7.0') bls.	0
4.00	1.22						0
6.00	1.83			100%			0
8.00	2.44	17:25	x				0
10.00	3.05			100%			0
						Boring terminated at 3.05 meters (10.0') bls. x denotes soil sample at 2.14m - 3.05m (7'-8') bls interval collected for laboratory retention.	



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## SOIL BORING LOG

Boring No. GP-4  
Date Drilled: 04/19/06

Client: NCDOT  
Project Name: Parcel #123 - Glen Raven Mills Property  
Project/Site Location: Burnsville, NC  
Project Number: ENMO060029.00

Logged By: RMS  
Drilling Company: SEI, Inc.  
Drill Device: GeoProbe 6600  
Drill Method: DPT

Total Boring Depth: 3.05m  
Boring Diameter: 10.16cm

Weather Conditions: Warm - Lt rain  
Boring Location: Proposed Drainage Piping

Surface Elevation: \_\_\_\_\_

Depth (Feet)	Depth (meters)	Time	Sample Analyzed	Recovery	Soil Profile	Lithological Description	Sample PID (ppm)
					Topsoil	Grass with topsoil.	
2.00	0.61			100%	(CL)	Reddish bn. Silty CLAY (CL), micaceous, moist to wet at 2.14 m (7.0') bls.	0
4.00	1.22						0
6.00	1.83			100%			0
8.00	2.44	17:50	x				0
10.00	3.05			100%			0
						Boring terminated at 3.05 meters (10.0') bls. x denotes soil sample at 2.14m - 3.05m (7'-8') bls interval collected for laboratory retention.	



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## SOIL BORING LOG

Boring No. GP-5  
Date Drilled: 04/20/06

Client:	<u>NCDOT</u>	Logged By:	<u>RMS</u>
Project Name:	<u>Parcel #123 - Glen Raven Mills Property</u>	Drilling Company:	<u>SEI, Inc.</u>
Project/Site Location:	<u>Burnsville, NC</u>	Drill Device:	<u>GeoProbe 6600</u>
Project Number:	<u>ENMO060029.00</u>	Drill Method:	<u>DPT</u>

Total Boring Depth: 3.05m      Weather Conditions: Warm - Lt rain      Surface Elevation: \_\_\_\_\_  
 Boring Diameter: 10.16cm      Boring Location: Proposed Drainage Piping

Depth (Feet)	Depth (meters)	Time	Sample Analyzed	Recovery	Soil Profile	Lithological Description	Sample PID (ppm)
					Topsoil	Grass with topsoil.	
2.00	0.61			100%	(CL)	Reddish bn. Silty CLAY (CL), micaceous, moist to wet at 2.14 m (7.0') bls.	0
4.00	1.22						0
6.00	1.83			100%			0
8.00	2.44	x	x				0
10.00	3.05			100%			0
						Boring terminated at 3.05 meters (10.0') bls. x denotes soil sample at 2.14m - 3.05m (7'-8') bls interval collected for laboratory retention.	



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## SOIL BORING LOG

Boring No. GP-6  
Date Drilled: 04/20/06

Client:	<u>NCDOT</u>	Logged By:	<u>RMS</u>
Project Name:	<u>Parcel #123 - Glen Raven Mills Property</u>	Drilling Company:	<u>SEI, Inc.</u>
Project/Site Location:	<u>Burnsville, NC</u>	Drill Device:	<u>GeoProbe 6600</u>
Project Number:	<u>ENMO060029.00</u>	Drill Method:	<u>DPT</u>

Total Boring Depth: 3.05m      Weather Conditions: Warm - Lt rain      Surface Elevation: \_\_\_\_\_  
 Boring Diameter: 10.16cm      Boring Location: Proposed Drainage Piping

Depth (Feet)	Depth (meters)	Time	Sample Analyzed	Recovery	Soil Profile	Lithological Description	Sample PID (ppm)
					Topsoil	Asphalt.	
2.00	0.61			100%		Reddish bn. to gold clayey SILT (ML), very micaeous, subrounded gravel interbedded from 1.52 m (5.0') to 1.83 m (6.0') bls interval, moist to wet at 2.14 m (7.0') bls	0
4.00	1.22						0
6.00	1.83	13:00	x	100%			0
8.00	2.44						0
10.00	3.05			100%			0
						Boring terminated at 3.05 meters (10.0') bls. x denotes soil sample at 1.52m - 1.83m (5'-6') bls interval collected for laboratory retention.	



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## SOIL BORING LOG

Boring No. GP-7  
Date Drilled: 04/20/06

Client:	<u>NCDOT</u>	Logged By:	<u>RMS</u>
Project Name:	<u>Parcel #123 - Glen Raven Mills Property</u>	Drilling Company:	<u>SEI, Inc.</u>
Project/Site Location:	<u>Burnsville, NC</u>	Drill Device:	<u>GeoProbe 6600</u>
Project Number:	<u>ENMO060029.00</u>	Drill Method:	<u>DPT</u>

Total Boring Depth: 3.05m      Weather Conditions: Warm - Lt rain      Surface Elevation: \_\_\_\_\_  
 Boring Diameter: 10.16cm      Boring Location: Proposed Drainage Piping

Depth (Feet)	Depth (meters)	Time	Sample Analyzed	Recovery	Soil Profile	Lithological Description	Sample PID (ppm)
					Topsoil	Asphalt.	
2.00	0.61			100%		Reddish bn. to gold clayey SILT (ML), very micaceous, subrounded gravel interbedded from 1.52 m (5.0') to 1.83 m (6.0') bls interval, moist to wet at 2.14 m (7.0') bls, saprolite and weathered rock at 3.05 m (10.0') bls.	0
4.00	1.22						0
6.00	1.83	13:00	x	100%			0
8.00	2.44						0
10.00	3.05			100%			0
						Probe refusal. Boring terminated at 3.05 meters (10.0') bls. x denotes soil sample at 1.52m - 1.83m (5'-6') bls interval collected for laboratory retention.	





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## SOIL BORING LOG

Boring No. GP-8  
Date Drilled: 04/20/06

Client:	<u>NCDOT</u>	Logged By:	<u>RMS</u>
Project Name:	<u>Parcel #123 - Glen Raven Mills Property</u>	Drilling Company:	<u>SEI, Inc.</u>
Project/Site Location:	<u>Burnsville, NC</u>	Drill Device:	<u>GeoProbe 6600</u>
Project Number:	<u>ENMO060029.00</u>	Drill Method:	<u>DPT</u>

Total Boring Depth: 3.05m      Weather Conditions: Warm - Lt rain      Surface Elevation: \_\_\_\_\_  
 Boring Diameter: 10.16cm      Boring Location: Proposed Drainage Piping

Depth (Feet)	Depth (meters)	Time	Sample Analyzed	Recovery	Soil Profile	Lithological Description	Sample PID (ppm)
					Topsoil	Asphalt.	
2.00	0.61			100%		Reddish bn. to gold clayey SILT (ML), very micaceous, subrounded gravel interbedded from 1.52 m (5.0') to 1.83 m (6.0') bls interval, moist to wet at 2.14 m (7.0') bls, saprolite and weathered rock at 3.05 m (10.0') bls.	0
4.00	1.22						0
6.00	1.83			100%			0
8.00	2.44	13:30	x				0
10.00	3.05			100%			0
						Probe refusal. Boring terminated at 3.05 meters (10.0') bls. x denotes soil sample at 1.83m - 2.14m (6'-7') bls interval collected for laboratory retention.	



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## SOIL BORING LOG

Boring No. GP-9  
Date Drilled: 04/20/06

Client:	<u>NCDOT</u>	Logged By:	<u>RMS</u>
Project Name:	<u>Parcel #123 - Glen Raven Mills Property</u>	Drilling Company:	<u>SEL, Inc.</u>
Project/Site Location:	<u>Burnsville, NC</u>	Drill Device:	<u>GeoProbe 6600</u>
Project Number:	<u>ENMO060029.00</u>	Drill Method:	<u>DPT</u>

Total Boring Depth: 3.05m      Weather Conditions: Warm - Lt rain      Surface Elevation: \_\_\_\_\_  
 Boring Diameter: 10.16cm      Boring Location: Proposed Drainage Piping

Depth (Feet)	Depth (meters)	Time	Sample Analyzed	Recovery	Soil Profile	Lithological Description	Sample PID (ppm)
					Topsoil	Asphalt.	
2.00	0.61			100%		Reddish bn. to gold clayey SILT (ML), very micaceous, subrounded gravel interbedded from 1.52 m (5.0') to 1.83 m (6.0') bls interval, moist to wet at 2.14 m (7.0') bls.	0
4.00	1.22	13:30	x				0
6.00	1.83			100%			0
8.00	2.44						0
10.00	3.05			100%			0
						Boring terminated at 3.05 meters (10.0') bls. x denotes soil sample at 1.83m - 2.14m (6'-7') bls interval collected for laboratory retention.	



# EI

ENVIRONMENTAL INVESTIGATIONS, INC.

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

## SOIL BORING LOG

Boring No. GP-10  
Date Drilled: 04/20/06

Client: NCDOT  
Project Name: Parcel #123 - Glen Raven Mills Property  
Project/Site Location: Burnsville, NC  
Project Number: ENMO060029.00

Logged By: RMS  
Drilling Company: SEI, Inc.  
Drill Device: GeoProbe 6600  
Drill Method: DPT

Total Boring Depth: 3.05m Weather Conditions: Warm - Lt rain Surface Elevation: \_\_\_\_\_  
Boring Diameter: 10.16cm Boring Location: Proposed Drainage Piping

Depth (Feet)	Depth (meters)	Time	Sample Analyzed	Recovery	Soil Profile	Lithological Description	Sample PID (ppm)	
					Topsoil	Grass with topsoil.		
2.00	0.61			100%		Reddish bn. to gold clayey SILT (ML), very micaceous, moist to wet at 2.14 m (7.0') bls.	0	
4.00	1.22						0	
		13:50	x					0
6.00	1.83			100%				0
8.00	2.44							0
10.00	3.05			100%			0	
						Boring terminated at 3.05 meters (10.0') bls. x denotes soil sample at 1.22m - 1.52m (4'-5') bls interval collected for laboratory retention.		



# E.I.

ENVIRONMENTAL INVESTIGATIONS, INC.

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

## SOIL BORING LOG

Boring No. GP-11  
Date Drilled: 04/20/06

Client: NCDOT  
Project Name: Parcel #123 - Glen Raven Mills Property  
Project/Site Location: Burnsville, NC  
Project Number: ENMO060029.00

Logged By: RMS  
Drilling Company: SEI, Inc.  
Drill Device: GeoProbe 6600  
Drill Method: DPT

Total Boring Depth: 3.05m Weather Conditions: Warm - Lt rain Surface Elevation: \_\_\_\_\_  
Boring Diameter: 10.16cm Boring Location: Proposed Drainage Piping

Depth (Feet)	Depth (meters)	Time	Sample Analyzed	Recovery	Soil Profile	Lithological Description	Sample PID (ppm)
					Topsoil	Grass with topsoil.	
2.00	0.61			100%		Reddish bn. to gold clayey SILT (ML), very micaceous, moist to wet at 2.14 m (7.0') bls.	0
4.00	1.22	14:00	x				0
6.00	1.83			100%			0
8.00	2.44						0
10.00	3.05			100%			0
						Boring terminated at 3.05 meters (10.0') bls. x denotes soil sample at 1.22m - 1.52m (4'-5') bls interval collected for laboratory retention.	



# E.I.

ENVIRONMENTAL INVESTIGATIONS, INC.

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

## SOIL BORING LOG

Boring No. GP-12  
Date Drilled: 04/20/06

Client: NCDOT  
Project Name: Parcel #123 - Glen Raven Mills Property  
Project/Site Location: Burnsville, NC  
Project Number: ENMO060029.00

Logged By: RMS  
Drilling Company: SEI, Inc.  
Drill Device: GeoProbe 6600  
Drill Method: DPT

Total Boring Depth: 3.05m Weather Conditions: Warm - Lt rain Surface Elevation: \_\_\_\_\_  
Boring Diameter: 10.16cm Boring Location: Proposed Drainage Piping

Depth (Feet)	Depth (meters)	Time	Sample Analyzed	Recovery	Soil Profile	Lithological Description	Sample PID (ppm)
					Topsoil	Grass with topsoil.	
2.00	0.61			100%		Reddish bn. to gold clayey SILT (ML), very micaceous, moist to wet at 2.14 m (7.0') bls.	0
4.00	1.22	14:13	x	0			
6.00	1.83			100%			0
8.00	2.44						0
10.00	3.05			100%			0
						Boring terminated at 3.05 meters (10.0') bls. x denotes soil sample at .91m - 1.22m (3'-4') bls interval collected for laboratory retention.	



# E.I.

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

## SOIL BORING LOG

Boring No. GP-13  
Date Drilled: 04/20/06

Client:	<u>NCDOT</u>	Logged By:	<u>RMS</u>
Project Name:	<u>Parcel #123 - Glen Raven Mills Property</u>	Drilling Company:	<u>SEI, Inc.</u>
Project/Site Location:	<u>Burnsville, NC</u>	Drill Device:	<u>GeoProbe 6600</u>
Project Number:	<u>ENMO060029.00</u>	Drill Method:	<u>DPT</u>

Total Boring Depth: 3.05m      Weather Conditions: Warm - Lt rain      Surface Elevation: \_\_\_\_\_  
 Boring Diameter: 10.16cm      Boring Location: Proposed Drainage Piping

Depth (Feet)	Depth (meters)	Time	Sample Analyzed	Recovery	Soil Profile	Lithological Description	Sample PID (ppm)
					Topsoil	Grass with topsoil.	
2.00	0.61			100%	(CL)	Reddish bn. Silty CLAY (CL), micaceous, moist to wet at 2.14 m (7.0') bls.	0
4.00	1.22						0
6.00	1.83	14:25	x	100%			0
8.00	2.44						0
10.00	3.05			100%			0
						Boring terminated at 3.05 meters (10.0') bls. x denotes soil sample at 1.52m - 1.83m (5'-6') bls interval collected for laboratory retention.	



# E.I.

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

## SOIL BORING LOG

Boring No. GP-14  
Date Drilled: 04/20/06

Client:	<u>NCDOT</u>	Logged By:	<u>RMS</u>
Project Name:	<u>Parcel #123 - Glen Raven Mills Property</u>	Drilling Company:	<u>SEI, Inc.</u>
Project/Site Location:	<u>Burnsville, NC</u>	Drill Device:	<u>GeoProbe 6600</u>
Project Number:	<u>ENMO060029.00</u>	Drill Method:	<u>DPT</u>

Total Boring Depth: 3.05m      Weather Conditions: Warm - Lt rain      Surface Elevation: \_\_\_\_\_  
 Boring Diameter: 10.16cm      Boring Location: Proposed Drainage Piping

Depth (Feet)	Depth (meters)	Time	Sample Analyzed	Recovery	Soil Profile	Lithological Description	Sample PID (ppm)
					Topsoil	Grass with topsoil.	
2.00	0.61			100%	(CL)	Reddish bn. Silty CLAY (CL), micaceous, moist to wet at 2.14 m (7.0') bls.	0
4.00	1.22						0
6.00	1.83	14:40	x	100%			0
8.00	2.44						0
10.00	3.05			100%			0
							Boring terminated at 3.05 meters (10.0') bls. x denotes soil sample at 1.52m - 1.83m (5'-6') bls interval collected for laboratory retention.



# SEI

ENVIRONMENTAL INVESTIGATIONS, INC.

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

## SOIL BORING LOG

Boring No. GP-15  
Date Drilled: 04/20/06

Client: NCDOT  
Project Name: Parcel #123 - Glen Raven Mills Property  
Project/Site Location: Burnsville, NC  
Project Number: ENMO060029.00

Logged By: RMS  
Drilling Company: SEI, Inc.  
Drill Device: GeoProbe 6600  
Drill Method: DPT

Total Boring Depth: 3.05m  
Boring Diameter: 10.16cm

Weather Conditions: Warm - Lt rain  
Boring Location: Proposed Drainage Piping

Surface Elevation: \_\_\_\_\_

Depth (Feet)	Depth (meters)	Time	Sample Analyzed	Recovery	Soil Profile	Lithological Description	Sample PID (ppm)
					Topsoil	Grass with topsoil.	
2.00	0.61			100%	(CL)	Reddish bn. Silty CLAY (CL), micaceous, moist to wet at 2.14 m (7.0') bls.	0
4.00	1.22	3:14	x				0
6.00	1.83			100%			0
8.00	2.44						0
10.00	3.05			100%			0
						Boring terminated at 3.05 meters (10.0') bls. x denotes soil sample at 1.22m - 1.52m (4'-5') bls interval collected for laboratory retention.	





# E.I.

ENVIRONMENTAL INVESTIGATIONS, INC.

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

## SOIL BORING LOG

Boring No. GP-16  
Date Drilled: 04/20/06

Client:	<u>NCDOT</u>	Logged By:	<u>RMS</u>
Project Name:	<u>Parcel #123 - Glen Raven Mills Property</u>	Drilling Company:	<u>SEI, Inc.</u>
Project/Site Location:	<u>Burnsville, NC</u>	Drill Device:	<u>GeoProbe 6600</u>
Project Number:	<u>ENMO060029.00</u>	Drill Method:	<u>DPT</u>

Total Boring Depth: 3.05m  
Boring Diameter: 10.16cm

Weather Conditions: Warm - Lt rain  
Boring Location: Proposed Drainage Piping

Surface Elevation: \_\_\_\_\_

Depth (Feet)	Depth (meters)	Time	Sample Analyzed	Recovery	Soil Profile	Lithological Description	Sample PID (ppm)
					Topsoil	Grass with topsoil.	0
2.00	0.61			100%		Reddish bn. Silty CLAY (CL), micaceous, moist to wet at 2.14 m (7.0') bls.	0
4.00	1.22	15:20	x				0
6.00	1.83			100%			0
8.00	2.44						0
10.00	3.05			100%			0
						Boring terminated at 3.05 meters (10.0') bls. x denotes soil sample at 1.22m - 1.52m (4'-5') bls interval collected for laboratory retention.	



# E.I.

ENVIRONMENTAL INVESTIGATIONS, INC.

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

## SOIL BORING LOG

Boring No. GP-17  
Date Drilled: 04/20/06

Client:	<u>NCDOT</u>	Logged By:	<u>RMS</u>
Project Name:	<u>Parcel #123 - Glen Raven Mills Property</u>	Drilling Company:	<u>SEI, Inc.</u>
Project/Site Location:	<u>Burnsville, NC</u>	Drill Device:	<u>GeoProbe 6600</u>
Project Number:	<u>ENMO060029.00</u>	Drill Method:	<u>DPT</u>

Total Boring Depth:	<u>3.05m</u>	Weather Conditions:	<u>Warm - Lt rain</u>	Surface Elevation:	<u>          </u>
Boring Diameter:	<u>10.16cm</u>	Boring Location:	<u>Proposed Drainage Piping</u>		

Depth (Feet)	Depth (meters)	Time	Sample Analyzed	Recovery	Soil Profile	Lithological Description	Sample PID (ppm)
					Topsoil	Grass with topsoil.	
2.00	0.61			100%	((CL))	Reddish bn. Silty CLAY (CL), micaceous, moist to wet at 2.14 m (7.0') bls.	0
4.00	1.22						0
6.00	1.83	3:36	x	100%			0
8.00	2.44						0
10.00	3.05			100%			0
						Boring terminated at 3.05 meters (10.0') bls. x denotes soil sample at 1.52m - 1.83m (5'-6') bls interval collected for laboratory retention.	

**APPENDIX D**  
**LABORATORY RESULTS**



RECEIVED MAY 10 2006

Mr. Bob Shaut  
Environmental Investigations  
2101 Gateway Centre Boulevard  
Suite 200  
Morrisville NC 27560  
Report Number: G106-597  
Client Project: NCDOT-Yancey/R-2519A

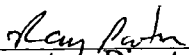
Dear Mr. Shaut:

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 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 SGS/Paradigm at (910) 350-1903. We will be happy to answer any questions or concerns which you may have.

Thank you for using SGS/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,  
SGS/Paradigm Analytical Laboratories, Inc.

  
\_\_\_\_\_  
Laboratory Director                      5/8/2006  
J. Patrick Weaver                                      Date



Results for Volatiles  
by GCMS 8260-5035

Client Sample ID: GP1-8  
Client Project ID: NCDOT-Yancey/R-2519A  
Lab Sample ID G106-597-1A  
Lab Project ID: G106-597  
Report Basis: Dry Weight

Analyzed By: JTF  
Date Collected: 04-19-2006 16:49  
Date Received: 4/25/2006  
Matrix: Soil  
%Solids: 72.5

Report Name Compound	Result UG/KG	Quantitation Limit UG/KG	Dilution Factor	Date Analyzed
Acetone	BQL	54.1	1	5/3/2006
Benzene	BQL	5.41	1	5/3/2006
Bromobenzene	BQL	5.41	1	5/3/2006
Bromochloromethane	BQL	5.41	1	5/3/2006
Bromodichloromethane	BQL	5.41	1	5/3/2006
Bromoform	BQL	5.41	1	5/3/2006
Bromomethane	BQL	5.41	1	5/3/2006
2-Butanone	BQL	27.0	1	5/3/2006
n-Butylbenzene	BQL	5.41	1	5/3/2006
sec-Butylbenzene	BQL	5.41	1	5/3/2006
tert-Butylbenzene	BQL	5.41	1	5/3/2006
Carbon disulfide	BQL	5.41	1	5/3/2006
Carbon tetrachloride	BQL	5.41	1	5/3/2006
Chlorobenzene	BQL	5.41	1	5/3/2006
Chloroethane	BQL	5.41	1	5/3/2006
Chloroform	BQL	5.41	1	5/3/2006
Chloromethane	BQL	5.41	1	5/3/2006
2-Chlorotoluene	BQL	5.41	1	5/3/2006
4-Chlorotoluene	BQL	5.41	1	5/3/2006
Dibromochloromethane	BQL	5.41	1	5/3/2006
1,2-Dibromo-3-chloropropane	BQL	5.41	1	5/3/2006
Dibromomethane	BQL	5.41	1	5/3/2006
1,2-Dibromoethane (EDB)	BQL	5.41	1	5/3/2006
1,2-Dichlorobenzene	BQL	5.41	1	5/3/2006
1,3-Dichlorobenzene	BQL	5.41	1	5/3/2006
1,4-Dichlorobenzene	BQL	5.41	1	5/3/2006
trans-1,4-Dichloro-2-butene	BQL	5.41	1	5/3/2006
1,1-Dichloroethane	BQL	5.41	1	5/3/2006
1,1-Dichloroethene	BQL	5.41	1	5/3/2006
1,2-Dichloroethane	BQL	5.41	1	5/3/2006
cis-1,2-Dichloroethene	BQL	5.41	1	5/3/2006
trans-1,2-dichloroethene	BQL	5.41	1	5/3/2006
1,2-Dichloropropane	BQL	5.41	1	5/3/2006
1,3-Dichloropropane	BQL	5.41	1	5/3/2006
2,2-Dichloropropane	BQL	5.41	1	5/3/2006
1,1-Dichloropropene	BQL	5.41	1	5/3/2006
cis-1,3-Dichloropropene	BQL	5.41	1	5/3/2006
trans-1,3-Dichloropropene	BQL	5.41	1	5/3/2006
Dichlorodifluoromethane	BQL	5.41	1	5/3/2006
Diisopropyl ether (DIPE)	BQL	5.41	1	5/3/2006
Ethylbenzene	BQL	5.41	1	5/3/2006
Hexachlorobutadiene	BQL	5.41	1	5/3/2006



**Results for Volatiles  
by GCMS 8260-5035**

Client Sample ID: GP1-8  
 Client Project ID: NCDOT-Yancey/R-2519A  
 Lab Sample ID G106-597-1A  
 Lab Project ID: G106-597  
 Report Basis: Dry Weight

Analyzed By: JTF  
 Date Collected: 04-19-2006 16:49  
 Date Received: 4/25/2006  
 Matrix: Soil  
 %Solids: 72.5

Report Name Compound	Result UG/KG	Quantitation Limit UG/KG	Dilution Factor	Date Analyzed
2-Hexanone	BQL	5.41	1	5/3/2006
Iodomethane	BQL	5.41	1	5/3/2006
Isopropylbenzene	BQL	5.41	1	5/3/2006
4-Isopropyltoluene	BQL	5.41	1	5/3/2006
Methylene chloride	BQL	21.6	1	5/3/2006
4-Methyl-2-pentanone	BQL	5.41	1	5/3/2006
Methyl-tert-butyl ether (MTBE)	BQL	5.41	1	5/3/2006
Naphthalene	29.8	5.41	1	5/3/2006
n-Propyl benzene	BQL	5.41	1	5/3/2006
Styrene	BQL	5.41	1	5/3/2006
1,1,1,2-Tetrachloroethane	BQL	5.41	1	5/3/2006
1,1,2,2-Tetrachloroethane	BQL	5.41	1	5/3/2006
Tetrachloroethene	BQL	5.41	1	5/3/2006
Toluene	BQL	5.41	1	5/3/2006
1,2,3-Trichlorobenzene	BQL	5.41	1	5/3/2006
1,2,4-Trichlorobenzene	BQL	5.41	1	5/3/2006
Trichloroethene	BQL	5.41	1	5/3/2006
1,1,1-Trichloroethane	BQL	5.41	1	5/3/2006
1,1,2-Trichloroethane	BQL	5.41	1	5/3/2006
Trichlorofluoromethane	BQL	5.41	1	5/3/2006
1,2,3-Trichloropropane	BQL	5.41	1	5/3/2006
1,2,4-Trimethylbenzene	BQL	5.41	1	5/3/2006
1,3,5-Trimethylbenzene	BQL	5.41	1	5/3/2006
Vinyl chloride	BQL	5.41	1	5/3/2006
m,p-Xylene	BQL	10.8	1	5/3/2006
o-Xylene	BQL	5.41	1	5/3/2006

	Spike Added	Spike Result	Percent Recovered
4-Bromofluorobenzene	50	49.6	99
1,2-Dichloroethane-d4	50	71.5	143
Toluene-d8	50	51.6	103

**Comments:**

**Flags:**

BQL = Below Quantitation Limits.

Reviewed By:



**Results for Volatiles  
by GCMS 8260-5035**

Client Sample ID: GP2-6  
 Client Project ID: NCDOT-Yancey/R-2519A  
 Lab Sample ID G106-597-2A  
 Lab Project ID: G106-597  
 Report Basis: Dry Weight

Analyzed By: JTF  
 Date Collected: 04-19-2006 17:10  
 Date Received: 4/25/2006  
 Matrix: Soil  
 %Solids: 78.9

Report Name Compound	Result UG/KG	Quantitation Limit UG/KG	Dilution Factor	Date Analyzed
Acetone	64.7	48.3	1	5/3/2006
Benzene	BQL	4.83	1	5/3/2006
Bromobenzene	BQL	4.83	1	5/3/2006
Bromochloromethane	BQL	4.83	1	5/3/2006
Bromodichloromethane	BQL	4.83	1	5/3/2006
Bromoform	BQL	4.83	1	5/3/2006
Bromomethane	BQL	4.83	1	5/3/2006
2-Butanone	BQL	24.1	1	5/3/2006
n-Butylbenzene	BQL	4.83	1	5/3/2006
sec-Butylbenzene	BQL	4.83	1	5/3/2006
tert-Butylbenzene	BQL	4.83	1	5/3/2006
Carbon disulfide	BQL	4.83	1	5/3/2006
Carbon tetrachloride	BQL	4.83	1	5/3/2006
Chlorobenzene	BQL	4.83	1	5/3/2006
Chloroethane	BQL	4.83	1	5/3/2006
Chloroform	BQL	4.83	1	5/3/2006
Chloromethane	BQL	4.83	1	5/3/2006
2-Chlorotoluene	BQL	4.83	1	5/3/2006
4-Chlorotoluene	BQL	4.83	1	5/3/2006
Dibromochloromethane	BQL	4.83	1	5/3/2006
1,2-Dibromo-3-chloropropane	BQL	4.83	1	5/3/2006
Dibromomethane	BQL	4.83	1	5/3/2006
1,2-Dibromoethane (EDB)	BQL	4.83	1	5/3/2006
1,2-Dichlorobenzene	BQL	4.83	1	5/3/2006
1,3-Dichlorobenzene	BQL	4.83	1	5/3/2006
1,4-Dichlorobenzene	BQL	4.83	1	5/3/2006
trans-1,4-Dichloro-2-butene	BQL	4.83	1	5/3/2006
1,1-Dichloroethane	BQL	4.83	1	5/3/2006
1,1-Dichloroethene	BQL	4.83	1	5/3/2006
1,2-Dichloroethane	BQL	4.83	1	5/3/2006
cis-1,2-Dichloroethene	BQL	4.83	1	5/3/2006
trans-1,2-dichloroethene	BQL	4.83	1	5/3/2006
1,2-Dichloropropane	BQL	4.83	1	5/3/2006
1,3-Dichloropropane	BQL	4.83	1	5/3/2006
2,2-Dichloropropane	BQL	4.83	1	5/3/2006
1,1-Dichloropropene	BQL	4.83	1	5/3/2006
cis-1,3-Dichloropropene	BQL	4.83	1	5/3/2006
trans-1,3-Dichloropropene	BQL	4.83	1	5/3/2006
Dichlorodifluoromethane	BQL	4.83	1	5/3/2006
Diisopropyl ether (DIPE)	BQL	4.83	1	5/3/2006
Ethylbenzene	BQL	4.83	1	5/3/2006
Hexachlorobutadiene	BQL	4.83	1	5/3/2006



**Results for Volatiles  
by GCMS 8260-5035**

Client Sample ID: GP2-6  
 Client Project ID: NCDOT-Yancey/R-2519A  
 Lab Sample ID G106-597-2A  
 Lab Project ID: G106-597  
 Report Basis: Dry Weight

Analyzed By: JTF  
 Date Collected: 04-19-2006 17:10  
 Date Received: 4/25/2006  
 Matrix: Soil  
 %Solids: 78.9

Report Name Compound	Result UG/KG	Quantitation Limit UG/KG	Dilution Factor	Date Analyzed
2-Hexanone	BQL	4.83	1	5/3/2006
Iodomethane	BQL	4.83	1	5/3/2006
Isopropylbenzene	BQL	4.83	1	5/3/2006
4-Isopropyltoluene	BQL	4.83	1	5/3/2006
Methylene chloride	BQL	19.3	1	5/3/2006
4-Methyl-2-pentanone	BQL	4.83	1	5/3/2006
Methyl-tert-butyl ether (MTBE)	BQL	4.83	1	5/3/2006
Naphthalene	BQL	4.83	1	5/3/2006
n-Propyl benzene	BQL	4.83	1	5/3/2006
Styrene	BQL	4.83	1	5/3/2006
1,1,1,2-Tetrachloroethane	BQL	4.83	1	5/3/2006
1,1,2,2-Tetrachloroethane	BQL	4.83	1	5/3/2006
Tetrachloroethene	BQL	4.83	1	5/3/2006
Toluene	BQL	4.83	1	5/3/2006
1,2,3-Trichlorobenzene	BQL	4.83	1	5/3/2006
1,2,4-Trichlorobenzene	BQL	4.83	1	5/3/2006
Trichloroethene	BQL	4.83	1	5/3/2006
1,1,1-Trichloroethane	BQL	4.83	1	5/3/2006
1,1,2-Trichloroethane	BQL	4.83	1	5/3/2006
Trichlorofluoromethane	BQL	4.83	1	5/3/2006
1,2,3-Trichloropropane	BQL	4.83	1	5/3/2006
1,2,4-Trimethylbenzene	BQL	4.83	1	5/3/2006
1,3,5-Trimethylbenzene	BQL	4.83	1	5/3/2006
Vinyl chloride	BQL	4.83	1	5/3/2006
m-,p-Xylene	BQL	9.65	1	5/3/2006
o-Xylene	BQL	4.83	1	5/3/2006

	Spike Added	Spike Result	Percent Recovered
4-Bromofluorobenzene	50	52.2	104
1,2-Dichloroethane-d4	50	72.2	144
Toluene-d8	50	51.4	103

**Comments:**

**Flags:**

BQL = Below Quantitation Limits.

Reviewed By:





Results for Volatiles  
by GCMS 8260-5035

Client Sample ID: GP3-8  
Client Project ID: NCDOT-Yancey/R-2519A  
Lab Sample ID G106-597-3A  
Lab Project ID: G106-597  
Report Basis: Dry Weight

Analyzed By: JTF  
Date Collected: 04-19-2006 17:25  
Date Received: 4/25/2006  
Matrix: Soil  
%Solids: 73.0

Report Name Compound	Result UG/KG	Quantitation Limit UG/KG	Dilution Factor	Date Analyzed
Acetone	BQL	51.9	1	5/3/2006
Benzene	BQL	5.19	1	5/3/2006
Bromobenzene	BQL	5.19	1	5/3/2006
Bromochloromethane	BQL	5.19	1	5/3/2006
Bromodichloromethane	BQL	5.19	1	5/3/2006
Bromoform	BQL	5.19	1	5/3/2006
Bromomethane	BQL	5.19	1	5/3/2006
2-Butanone	BQL	26.0	1	5/3/2006
n-Butylbenzene	BQL	5.19	1	5/3/2006
sec-Butylbenzene	BQL	5.19	1	5/3/2006
tert-Butylbenzene	BQL	5.19	1	5/3/2006
Carbon disulfide	BQL	5.19	1	5/3/2006
Carbon tetrachloride	BQL	5.19	1	5/3/2006
Chlorobenzene	BQL	5.19	1	5/3/2006
Chloroethane	BQL	5.19	1	5/3/2006
Chloroform	BQL	5.19	1	5/3/2006
Chloromethane	BQL	5.19	1	5/3/2006
2-Chlorotoluene	BQL	5.19	1	5/3/2006
4-Chlorotoluene	BQL	5.19	1	5/3/2006
Dibromochloromethane	BQL	5.19	1	5/3/2006
1,2-Dibromo-3-chloropropane	BQL	5.19	1	5/3/2006
Dibromomethane	BQL	5.19	1	5/3/2006
1,2-Dibromoethane (EDB)	BQL	5.19	1	5/3/2006
1,2-Dichlorobenzene	BQL	5.19	1	5/3/2006
1,3-Dichlorobenzene	BQL	5.19	1	5/3/2006
1,4-Dichlorobenzene	BQL	5.19	1	5/3/2006
trans-1,4-Dichloro-2-butene	BQL	5.19	1	5/3/2006
1,1-Dichloroethane	BQL	5.19	1	5/3/2006
1,1-Dichloroethene	BQL	5.19	1	5/3/2006
1,2-Dichloroethane	BQL	5.19	1	5/3/2006
cis-1,2-Dichloroethene	BQL	5.19	1	5/3/2006
trans-1,2-dichloroethene	BQL	5.19	1	5/3/2006
1,2-Dichloropropane	BQL	5.19	1	5/3/2006
1,3-Dichloropropane	BQL	5.19	1	5/3/2006
2,2-Dichloropropane	BQL	5.19	1	5/3/2006
1,1-Dichloropropene	BQL	5.19	1	5/3/2006
cis-1,3-Dichloropropene	BQL	5.19	1	5/3/2006
trans-1,3-Dichloropropene	BQL	5.19	1	5/3/2006
Dichlorodifluoromethane	BQL	5.19	1	5/3/2006
Diisopropyl ether (DIPE)	BQL	5.19	1	5/3/2006
Ethylbenzene	BQL	5.19	1	5/3/2006
Hexachlorobutadiene	BQL	5.19	1	5/3/2006



**Results for Volatiles  
by GCMS 8260-5035**

Client Sample ID: GP3-8  
 Client Project ID: NCDOT-Yancey/R-2519A  
 Lab Sample ID G106-597-3A  
 Lab Project ID: G106-597  
 Report Basis: Dry Weight

Analyzed By: JTF  
 Date Collected: 04-19-2006 17:25  
 Date Received: 4/25/2006  
 Matrix: Soil  
 %Solids: 73.0

Report Name Compound	Result UG/KG	Quantitation Limit UG/KG	Dilution Factor	Date Analyzed
2-Hexanone	BQL	5.19	1	5/3/2006
Iodomethane	BQL	5.19	1	5/3/2006
Isopropylbenzene	BQL	5.19	1	5/3/2006
4-Isopropyltoluene	BQL	5.19	1	5/3/2006
Methylene chloride	BQL	20.8	1	5/3/2006
4-Methyl-2-pentanone	BQL	5.19	1	5/3/2006
Methyl-tert-butyl ether (MTBE)	BQL	5.19	1	5/3/2006
Naphthalene	BQL	5.19	1	5/3/2006
n-Propyl benzene	BQL	5.19	1	5/3/2006
Styrene	BQL	5.19	1	5/3/2006
1,1,1,2-Tetrachloroethane	BQL	5.19	1	5/3/2006
1,1,2,2-Tetrachloroethane	BQL	5.19	1	5/3/2006
Tetrachloroethene	BQL	5.19	1	5/3/2006
Toluene	BQL	5.19	1	5/3/2006
1,2,3-Trichlorobenzene	BQL	5.19	1	5/3/2006
1,2,4-Trichlorobenzene	BQL	5.19	1	5/3/2006
Trichloroethene	BQL	5.19	1	5/3/2006
1,1,1-Trichloroethane	BQL	5.19	1	5/3/2006
1,1,2-Trichloroethane	BQL	5.19	1	5/3/2006
Trichlorofluoromethane	BQL	5.19	1	5/3/2006
1,2,3-Trichloropropane	BQL	5.19	1	5/3/2006
1,2,4-Trimethylbenzene	BQL	5.19	1	5/3/2006
1,3,5-Trimethylbenzene	BQL	5.19	1	5/3/2006
Vinyl chloride	BQL	5.19	1	5/3/2006
m-,p-Xylene	BQL	10.4	1	5/3/2006
o-Xylene	BQL	5.19	1	5/3/2006

	Spike Added	Spike Result	Percent Recovered
4-Bromofluorobenzene	50	53.9	108
1,2-Dichloroethane-d4	50	71.9	144
Toluene-d8	50	50.9	102

**Comments:**

**Flags:**

BQL = Below Quantitation Limits.

Reviewed By:



Results for Volatiles  
by GCMS 8260-5035

Client Sample ID: GP4-8  
Client Project ID: NCDOT-Yancey/R-2519A  
Lab Sample ID G106-597-4A  
Lab Project ID: G106-597  
Report Basis: Dry Weight

Analyzed By: JTF  
Date Collected: 04-19-2006 17:50  
Date Received: 4/25/2006  
Matrix: Soil  
%Solids: 74.2

Report Name Compound	Result UG/KG	Quantitation Limit UG/KG	Dilution Factor	Date Analyzed
Acetone	BQL	58.5	1	5/3/2006
Benzene	BQL	5.85	1	5/3/2006
Bromobenzene	BQL	5.85	1	5/3/2006
Bromochloromethane	BQL	5.85	1	5/3/2006
Bromodichloromethane	BQL	5.85	1	5/3/2006
Bromoform	BQL	5.85	1	5/3/2006
Bromomethane	BQL	5.85	1	5/3/2006
2-Butanone	BQL	29.3	1	5/3/2006
n-Butylbenzene	BQL	5.85	1	5/3/2006
sec-Butylbenzene	BQL	5.85	1	5/3/2006
tert-Butylbenzene	BQL	5.85	1	5/3/2006
Carbon disulfide	BQL	5.85	1	5/3/2006
Carbon tetrachloride	BQL	5.85	1	5/3/2006
Chlorobenzene	BQL	5.85	1	5/3/2006
Chloroethane	BQL	5.85	1	5/3/2006
Chloroform	BQL	5.85	1	5/3/2006
Chloromethane	BQL	5.85	1	5/3/2006
2-Chlorotoluene	BQL	5.85	1	5/3/2006
4-Chlorotoluene	BQL	5.85	1	5/3/2006
Dibromochloromethane	BQL	5.85	1	5/3/2006
1,2-Dibromo-3-chloropropane	BQL	5.85	1	5/3/2006
Dibromomethane	BQL	5.85	1	5/3/2006
1,2-Dibromoethane (EDB)	BQL	5.85	1	5/3/2006
1,2-Dichlorobenzene	BQL	5.85	1	5/3/2006
1,3-Dichlorobenzene	BQL	5.85	1	5/3/2006
1,4-Dichlorobenzene	BQL	5.85	1	5/3/2006
trans-1,4-Dichloro-2-butene	BQL	5.85	1	5/3/2006
1,1-Dichloroethane	BQL	5.85	1	5/3/2006
1,1-Dichloroethene	BQL	5.85	1	5/3/2006
1,2-Dichloroethane	BQL	5.85	1	5/3/2006
cis-1,2-Dichloroethene	BQL	5.85	1	5/3/2006
trans-1,2-dichloroethene	BQL	5.85	1	5/3/2006
1,2-Dichloropropane	BQL	5.85	1	5/3/2006
1,3-Dichloropropane	BQL	5.85	1	5/3/2006
2,2-Dichloropropane	BQL	5.85	1	5/3/2006
1,1-Dichloropropene	BQL	5.85	1	5/3/2006
cis-1,3-Dichloropropene	BQL	5.85	1	5/3/2006
trans-1,3-Dichloropropene	BQL	5.85	1	5/3/2006
Dichlorodifluoromethane	BQL	5.85	1	5/3/2006
Diisopropyl ether (DIPE)	BQL	5.85	1	5/3/2006
Ethylbenzene	BQL	5.85	1	5/3/2006
Hexachlorobutadiene	BQL	5.85	1	5/3/2006



**Results for Volatiles  
by GCMS 8260-5035**

Client Sample ID: GP4-8  
 Client Project ID: NCDOT-Yancey/R-2519A  
 Lab Sample ID G106-597-4A  
 Lab Project ID: G106-597  
 Report Basis: Dry Weight

Analyzed By: JTF  
 Date Collected: 04-19-2006 17:50  
 Date Received: 4/25/2006  
 Matrix: Soil  
 %Solids: 74.2

Report Name Compound	Result UG/KG	Quantitation Limit UG/KG	Dilution Factor	Date Analyzed
2-Hexanone	BQL	5.85	1	5/3/2006
Iodomethane	BQL	5.85	1	5/3/2006
Isopropylbenzene	BQL	5.85	1	5/3/2006
4-Isopropyltoluene	BQL	5.85	1	5/3/2006
Methylene chloride	BQL	23.4	1	5/3/2006
4-Methyl-2-pentanone	BQL	5.85	1	5/3/2006
Methyl-tert-butyl ether (MTBE)	BQL	5.85	1	5/3/2006
Naphthalene	BQL	5.85	1	5/3/2006
n-Propyl benzene	BQL	5.85	1	5/3/2006
Styrene	BQL	5.85	1	5/3/2006
1,1,1,2-Tetrachloroethane	BQL	5.85	1	5/3/2006
1,1,2,2-Tetrachloroethane	BQL	5.85	1	5/3/2006
Tetrachloroethene	BQL	5.85	1	5/3/2006
Toluene	BQL	5.85	1	5/3/2006
1,2,3-Trichlorobenzene	BQL	5.85	1	5/3/2006
1,2,4-Trichlorobenzene	BQL	5.85	1	5/3/2006
Trichloroethene	BQL	5.85	1	5/3/2006
1,1,1-Trichloroethane	BQL	5.85	1	5/3/2006
1,1,2-Trichloroethane	BQL	5.85	1	5/3/2006
Trichlorofluoromethane	BQL	5.85	1	5/3/2006
1,2,3-Trichloropropane	BQL	5.85	1	5/3/2006
1,2,4-Trimethylbenzene	BQL	5.85	1	5/3/2006
1,3,5-Trimethylbenzene	BQL	5.85	1	5/3/2006
Vinyl chloride	BQL	5.85	1	5/3/2006
m-,p-Xylene	BQL	11.7	1	5/3/2006
o-Xylene	BQL	5.85	1	5/3/2006

	Spike Added	Spike Result	Percent Recovered
4-Bromofluorobenzene	50	53.6	107
1,2-Dichloroethane-d4	50	71.7	143
Toluene-d8	50	50.5	101

**Comments:**

**Flags:**

BQL = Below Quantitation Limits.

Reviewed By: JTF



Results for Volatiles  
by GCMS 8260-5035

Client Sample ID: GP5  
Client Project ID: NCDOT-Yancey/R-2519A  
Lab Sample ID G106-597-5A  
Lab Project ID: G106-597  
Report Basis: Dry Weight

Analyzed By: JTF  
Date Collected: 04-20-2006 12:30  
Date Received: 4/25/2006  
Matrix: Soil  
%Solids: 73.0

Report Name Compound	Result UG/KG	Quantitation Limit UG/KG	Dilution Factor	Date Analyzed
Acetone	BQL	31.7	1	5/3/2006
Benzene	BQL	3.17	1	5/3/2006
Bromobenzene	BQL	3.17	1	5/3/2006
Bromochloromethane	BQL	3.17	1	5/3/2006
Bromodichloromethane	BQL	3.17	1	5/3/2006
Bromoform	BQL	3.17	1	5/3/2006
Bromomethane	BQL	3.17	1	5/3/2006
2-Butanone	BQL	15.9	1	5/3/2006
n-Butylbenzene	BQL	3.17	1	5/3/2006
sec-Butylbenzene	BQL	3.17	1	5/3/2006
tert-Butylbenzene	BQL	3.17	1	5/3/2006
Carbon disulfide	BQL	3.17	1	5/3/2006
Carbon tetrachloride	BQL	3.17	1	5/3/2006
Chlorobenzene	BQL	3.17	1	5/3/2006
Chloroethane	BQL	3.17	1	5/3/2006
Chloroform	BQL	3.17	1	5/3/2006
Chloromethane	BQL	3.17	1	5/3/2006
2-Chlorotoluene	BQL	3.17	1	5/3/2006
4-Chlorotoluene	BQL	3.17	1	5/3/2006
Dibromochloromethane	BQL	3.17	1	5/3/2006
1,2-Dibromo-3-chloropropane	BQL	3.17	1	5/3/2006
Dibromomethane	BQL	3.17	1	5/3/2006
1,2-Dibromoethane (EDB)	BQL	3.17	1	5/3/2006
1,2-Dichlorobenzene	BQL	3.17	1	5/3/2006
1,3-Dichlorobenzene	BQL	3.17	1	5/3/2006
1,4-Dichlorobenzene	BQL	3.17	1	5/3/2006
trans-1,4-Dichloro-2-butene	BQL	3.17	1	5/3/2006
1,1-Dichloroethane	BQL	3.17	1	5/3/2006
1,1-Dichloroethene	BQL	3.17	1	5/3/2006
1,2-Dichloroethane	BQL	3.17	1	5/3/2006
cis-1,2-Dichloroethene	BQL	3.17	1	5/3/2006
trans-1,2-dichloroethene	BQL	3.17	1	5/3/2006
1,2-Dichloropropane	BQL	3.17	1	5/3/2006
1,3-Dichloropropane	BQL	3.17	1	5/3/2006
2,2-Dichloropropane	BQL	3.17	1	5/3/2006
1,1-Dichloropropene	BQL	3.17	1	5/3/2006
cis-1,3-Dichloropropene	BQL	3.17	1	5/3/2006
trans-1,3-Dichloropropene	BQL	3.17	1	5/3/2006
Dichlorodifluoromethane	BQL	3.17	1	5/3/2006
Diisopropyl ether (DIPE)	BQL	3.17	1	5/3/2006
Ethylbenzene	BQL	3.17	1	5/3/2006
Hexachlorobutadiene	BQL	3.17	1	5/3/2006



**Results for Volatiles  
by GCMS 8260-5035**

Client Sample ID: GP5  
 Client Project ID: NCDOT-Yancey/R-2519A  
 Lab Sample ID G106-597-5A  
 Lab Project ID: G106-597  
 Report Basis: Dry Weight

Analyzed By: JTF  
 Date Collected: 04-20-2006 12:30  
 Date Received: 4/25/2006  
 Matrix: Soil  
 %Solids: 73.0

Report Name Compound	Result UG/KG	Quantitation Limit UG/KG	Dilution Factor	Date Analyzed
2-Hexanone	BQL	3.17	1	5/3/2006
Iodomethane	BQL	3.17	1	5/3/2006
Isopropylbenzene	BQL	3.17	1	5/3/2006
4-Isopropyltoluene	BQL	3.17	1	5/3/2006
Methylene chloride	BQL	12.7	1	5/3/2006
4-Methyl-2-pentanone	BQL	3.17	1	5/3/2006
Methyl-tert-butyl ether (MTBE)	BQL	3.17	1	5/3/2006
Naphthalene	BQL	3.17	1	5/3/2006
n-Propyl benzene	BQL	3.17	1	5/3/2006
Styrene	BQL	3.17	1	5/3/2006
1,1,1,2-Tetrachloroethane	BQL	3.17	1	5/3/2006
1,1,2,2-Tetrachloroethane	BQL	3.17	1	5/3/2006
Tetrachloroethene	BQL	3.17	1	5/3/2006
Toluene	BQL	3.17	1	5/3/2006
1,2,3-Trichlorobenzene	BQL	3.17	1	5/3/2006
1,2,4-Trichlorobenzene	BQL	3.17	1	5/3/2006
Trichloroethene	BQL	3.17	1	5/3/2006
1,1,1-Trichloroethane	BQL	3.17	1	5/3/2006
1,1,2-Trichloroethane	BQL	3.17	1	5/3/2006
Trichlorofluoromethane	BQL	3.17	1	5/3/2006
1,2,3-Trichloropropane	BQL	3.17	1	5/3/2006
1,2,4-Trimethylbenzene	BQL	3.17	1	5/3/2006
1,3,5-Trimethylbenzene	BQL	3.17	1	5/3/2006
Vinyl chloride	BQL	3.17	1	5/3/2006
m,p-Xylene	BQL	6.34	1	5/3/2006
o-Xylene	BQL	3.17	1	5/3/2006

	Spike Added	Spike Result	Percent Recovered
4-Bromofluorobenzene	50	53.1	106
1,2-Dichloroethane-d4	50	72	144
Toluene-d8	50	50.5	101

**Comments:**

**Flags:**

BQL = Below Quantitation Limits.

Reviewed By:



**Results for Volatiles  
by GCMS 8260-5035**

Client Sample ID: GP6-6  
 Client Project ID: NCDOT-Yancey/R-2519A  
 Lab Sample ID G106-597-6A  
 Lab Project ID: G106-597  
 Report Basis: Dry Weight

Analyzed By: JTF  
 Date Collected: 04-20-2006 13:00  
 Date Received: 4/25/2006  
 Matrix: Soil  
 %Solids: 82.8

Report Name Compound	Result UG/KG	Quantitation Limit UG/KG	Dilution Factor	Date Analyzed
Acetone	142	59.5	1	5/3/2006
Benzene	BQL	5.95	1	5/3/2006
Bromobenzene	BQL	5.95	1	5/3/2006
Bromochloromethane	BQL	5.95	1	5/3/2006
Bromodichloromethane	BQL	5.95	1	5/3/2006
Bromoform	BQL	5.95	1	5/3/2006
Bromomethane	BQL	5.95	1	5/3/2006
2-Butanone	BQL	29.7	1	5/3/2006
n-Butylbenzene	BQL	5.95	1	5/3/2006
sec-Butylbenzene	BQL	5.95	1	5/3/2006
tert-Butylbenzene	BQL	5.95	1	5/3/2006
Carbon disulfide	BQL	5.95	1	5/3/2006
Carbon tetrachloride	BQL	5.95	1	5/3/2006
Chlorobenzene	BQL	5.95	1	5/3/2006
Chloroethane	BQL	5.95	1	5/3/2006
Chloroform	BQL	5.95	1	5/3/2006
Chloromethane	BQL	5.95	1	5/3/2006
2-Chlorotoluene	BQL	5.95	1	5/3/2006
4-Chlorotoluene	BQL	5.95	1	5/3/2006
Dibromochloromethane	BQL	5.95	1	5/3/2006
1,2-Dibromo-3-chloropropane	BQL	5.95	1	5/3/2006
Dibromomethane	BQL	5.95	1	5/3/2006
1,2-Dibromoethane (EDB)	BQL	5.95	1	5/3/2006
1,2-Dichlorobenzene	BQL	5.95	1	5/3/2006
1,3-Dichlorobenzene	BQL	5.95	1	5/3/2006
1,4-Dichlorobenzene	BQL	5.95	1	5/3/2006
trans-1,4-Dichloro-2-butene	BQL	5.95	1	5/3/2006
1,1-Dichloroethane	BQL	5.95	1	5/3/2006
1,1-Dichloroethene	BQL	5.95	1	5/3/2006
1,2-Dichloroethane	BQL	5.95	1	5/3/2006
cis-1,2-Dichloroethene	BQL	5.95	1	5/3/2006
trans-1,2-dichloroethene	BQL	5.95	1	5/3/2006
1,2-Dichloropropane	BQL	5.95	1	5/3/2006
1,3-Dichloropropane	BQL	5.95	1	5/3/2006
2,2-Dichloropropane	BQL	5.95	1	5/3/2006
1,1-Dichloropropene	BQL	5.95	1	5/3/2006
cis-1,3-Dichloropropene	BQL	5.95	1	5/3/2006
trans-1,3-Dichloropropene	BQL	5.95	1	5/3/2006
Dichlorodifluoromethane	BQL	5.95	1	5/3/2006
Diisopropyl ether (DIPE)	BQL	5.95	1	5/3/2006
Ethylbenzene	BQL	5.95	1	5/3/2006
Hexachlorobutadiene	BQL	5.95	1	5/3/2006



**Results for Volatiles  
by GCMS 8260-5035**

Client Sample ID: GP6-6  
 Client Project ID: NCDOT-Yancey/R-2519A  
 Lab Sample ID G106-597-6A  
 Lab Project ID: G106-597  
 Report Basis: Dry Weight

Analyzed By: JTF  
 Date Collected: 04-20-2006 13:00  
 Date Received: 4/25/2006  
 Matrix: Soil  
 %Solids: 82.8

Report Name Compound	Result UG/KG	Quantitation Limit UG/KG	Dilution Factor	Date Analyzed
2-Hexanone	BQL	5.95	1	5/3/2006
Iodomethane	BQL	5.95	1	5/3/2006
Isopropylbenzene	BQL	5.95	1	5/3/2006
4-Isopropyltoluene	BQL	5.95	1	5/3/2006
Methylene chloride	BQL	23.8	1	5/3/2006
4-Methyl-2-pentanone	BQL	5.95	1	5/3/2006
Methyl-tert-butyl ether (MTBE)	BQL	5.95	1	5/3/2006
Naphthalene	BQL	5.95	1	5/3/2006
n-Propyl benzene	BQL	5.95	1	5/3/2006
Styrene	BQL	5.95	1	5/3/2006
1,1,1,2-Tetrachloroethane	BQL	5.95	1	5/3/2006
1,1,2,2-Tetrachloroethane	BQL	5.95	1	5/3/2006
Tetrachloroethene	BQL	5.95	1	5/3/2006
Toluene	BQL	5.95	1	5/3/2006
1,2,3-Trichlorobenzene	BQL	5.95	1	5/3/2006
1,2,4-Trichlorobenzene	BQL	5.95	1	5/3/2006
Trichloroethene	BQL	5.95	1	5/3/2006
1,1,1-Trichloroethane	BQL	5.95	1	5/3/2006
1,1,2-Trichloroethane	BQL	5.95	1	5/3/2006
Trichlorofluoromethane	BQL	5.95	1	5/3/2006
1,2,3-Trichloropropane	BQL	5.95	1	5/3/2006
1,2,4-Trimethylbenzene	BQL	5.95	1	5/3/2006
1,3,5-Trimethylbenzene	BQL	5.95	1	5/3/2006
Vinyl chloride	BQL	5.95	1	5/3/2006
m-,p-Xylene	BQL	11.9	1	5/3/2006
o-Xylene	BQL	5.95	1	5/3/2006

	Spike Added	Spike Result	Percent Recovered
4-Bromofluorobenzene	50	52.6	105
1,2-Dichloroethane-d4	50	78.4	157
Toluene-d8	50	48.6	97

**Comments:**

**Flags:**

BQL = Below Quantitation Limits.

Reviewed By:





Results for Volatiles  
by GCMS 8260-5035

Client Sample ID: GP7-7  
Client Project ID: NCDOT-Yancey/R-2519A  
Lab Sample ID G106-597-7A  
Lab Project ID: G106-597  
Report Basis: Dry Weight

Analyzed By: JTF  
Date Collected: 04-20-2006 13:19  
Date Received: 4/25/2006  
Matrix: Soil  
%Solids: 70.9

Report Name Compound	Result UG/KG	Quantitation Limit UG/KG	Dilution Factor	Date Analyzed
Acetone	BQL	62.9	1	5/3/2006
Benzene	BQL	6.29	1	5/3/2006
Bromobenzene	BQL	6.29	1	5/3/2006
Bromochloromethane	BQL	6.29	1	5/3/2006
Bromodichloromethane	BQL	6.29	1	5/3/2006
Bromoform	BQL	6.29	1	5/3/2006
Bromomethane	BQL	6.29	1	5/3/2006
2-Butanone	BQL	31.5	1	5/3/2006
n-Butylbenzene	BQL	6.29	1	5/3/2006
sec-Butylbenzene	BQL	6.29	1	5/3/2006
tert-Butylbenzene	BQL	6.29	1	5/3/2006
Carbon disulfide	BQL	6.29	1	5/3/2006
Carbon tetrachloride	BQL	6.29	1	5/3/2006
Chlorobenzene	BQL	6.29	1	5/3/2006
Chloroethane	BQL	6.29	1	5/3/2006
Chloroform	BQL	6.29	1	5/3/2006
Chloromethane	BQL	6.29	1	5/3/2006
2-Chlorotoluene	BQL	6.29	1	5/3/2006
4-Chlorotoluene	BQL	6.29	1	5/3/2006
Dibromochloromethane	BQL	6.29	1	5/3/2006
1,2-Dibromo-3-chloropropane	BQL	6.29	1	5/3/2006
Dibromomethane	BQL	6.29	1	5/3/2006
1,2-Dibromoethane (EDB)	BQL	6.29	1	5/3/2006
1,2-Dichlorobenzene	BQL	6.29	1	5/3/2006
1,3-Dichlorobenzene	BQL	6.29	1	5/3/2006
1,4-Dichlorobenzene	BQL	6.29	1	5/3/2006
trans-1,4-Dichloro-2-butene	BQL	6.29	1	5/3/2006
1,1-Dichloroethane	BQL	6.29	1	5/3/2006
1,1-Dichloroethene	BQL	6.29	1	5/3/2006
1,2-Dichloroethane	BQL	6.29	1	5/3/2006
cis-1,2-Dichloroethene	BQL	6.29	1	5/3/2006
trans-1,2-dichloroethene	BQL	6.29	1	5/3/2006
1,2-Dichloropropane	BQL	6.29	1	5/3/2006
1,3-Dichloropropane	BQL	6.29	1	5/3/2006
2,2-Dichloropropane	BQL	6.29	1	5/3/2006
1,1-Dichloropropene	BQL	6.29	1	5/3/2006
cis-1,3-Dichloropropene	BQL	6.29	1	5/3/2006
trans-1,3-Dichloropropene	BQL	6.29	1	5/3/2006
Dichlorodifluoromethane	BQL	6.29	1	5/3/2006
Diisopropyl ether (DIPE)	BQL	6.29	1	5/3/2006
Ethylbenzene	BQL	6.29	1	5/3/2006
Hexachlorobutadiene	BQL	6.29	1	5/3/2006



**Results for Volatiles  
by GCMS 8260-5035**

Client Sample ID: GP7-7  
 Client Project ID: NCDOT-Yancey/R-2519A  
 Lab Sample ID G106-597-7A  
 Lab Project ID: G106-597  
 Report Basis: Dry Weight

Analyzed By: JTF  
 Date Collected: 04-20-2006 13:19  
 Date Received: 4/25/2006  
 Matrix: Soil  
 %Solids: 70.9

Report Name Compound	Result UG/KG	Quantitation Limit UG/KG	Dilution Factor	Date Analyzed
2-Hexanone	BQL	6.29	1	5/3/2006
Iodomethane	BQL	6.29	1	5/3/2006
Isopropylbenzene	BQL	6.29	1	5/3/2006
4-Isopropyltoluene	BQL	6.29	1	5/3/2006
Methylene chloride	BQL	25.2	1	5/3/2006
4-Methyl-2-pentanone	BQL	6.29	1	5/3/2006
Methyl-tert-butyl ether (MTBE)	BQL	6.29	1	5/3/2006
Naphthalene	BQL	6.29	1	5/3/2006
n-Propyl benzene	BQL	6.29	1	5/3/2006
Styrene	BQL	6.29	1	5/3/2006
1,1,1,2-Tetrachloroethane	BQL	6.29	1	5/3/2006
1,1,2,2-Tetrachloroethane	BQL	6.29	1	5/3/2006
Tetrachloroethene	BQL	6.29	1	5/3/2006
Toluene	BQL	6.29	1	5/3/2006
1,2,3-Trichlorobenzene	BQL	6.29	1	5/3/2006
1,2,4-Trichlorobenzene	BQL	6.29	1	5/3/2006
Trichloroethene	BQL	6.29	1	5/3/2006
1,1,1-Trichloroethane	BQL	6.29	1	5/3/2006
1,1,2-Trichloroethane	BQL	6.29	1	5/3/2006
Trichlorofluoromethane	BQL	6.29	1	5/3/2006
1,2,3-Trichloropropane	BQL	6.29	1	5/3/2006
1,2,4-Trimethylbenzene	BQL	6.29	1	5/3/2006
1,3,5-Trimethylbenzene	BQL	6.29	1	5/3/2006
Vinyl chloride	BQL	6.29	1	5/3/2006
m-,p-Xylene	BQL	12.6	1	5/3/2006
o-Xylene	BQL	6.29	1	5/3/2006

	Spike Added	Spike Result	Percent Recovered
4-Bromofluorobenzene	50	53.4	107
1,2-Dichloroethane-d4	50	74.7	149
Toluene-d8	50	49.1	98

**Comments:**

**Flags:**

BQL = Below Quantitation Limits.

Reviewed By: JTF



**Results for Volatiles  
by GCMS 8260-5035**

Client Sample ID: GP8-7  
 Client Project ID: NCDOT-Yancey/R-2519A  
 Lab Sample ID G106-597-8A  
 Lab Project ID: G106-597  
 Report Basis: Dry Weight

Analyzed By: JTF  
 Date Collected: 04-20-2006 13:30  
 Date Received: 4/25/2006  
 Matrix: Soil  
 %Solids: 61.2

Report Name Compound	Result UG/KG	Quantitation Limit UG/KG	Dilution Factor	Date Analyzed
Acetone	BQL	76.5	1	5/3/2006
Benzene	BQL	7.65	1	5/3/2006
Bromobenzene	BQL	7.65	1	5/3/2006
Bromochloromethane	BQL	7.65	1	5/3/2006
Bromodichloromethane	BQL	7.65	1	5/3/2006
Bromoform	BQL	7.65	1	5/3/2006
Bromomethane	BQL	7.65	1	5/3/2006
2-Butanone	BQL	38.2	1	5/3/2006
n-Butylbenzene	BQL	7.65	1	5/3/2006
sec-Butylbenzene	BQL	7.65	1	5/3/2006
tert-Butylbenzene	BQL	7.65	1	5/3/2006
Carbon disulfide	BQL	7.65	1	5/3/2006
Carbon tetrachloride	BQL	7.65	1	5/3/2006
Chlorobenzene	BQL	7.65	1	5/3/2006
Chloroethane	BQL	7.65	1	5/3/2006
Chloroform	9.65	7.65	1	5/3/2006
Chloromethane	BQL	7.65	1	5/3/2006
2-Chlorotoluene	BQL	7.65	1	5/3/2006
4-Chlorotoluene	BQL	7.65	1	5/3/2006
Dibromochloromethane	BQL	7.65	1	5/3/2006
1,2-Dibromo-3-chloropropane	BQL	7.65	1	5/3/2006
Dibromomethane	BQL	7.65	1	5/3/2006
1,2-Dibromoethane (EDB)	BQL	7.65	1	5/3/2006
1,2-Dichlorobenzene	BQL	7.65	1	5/3/2006
1,3-Dichlorobenzene	BQL	7.65	1	5/3/2006
1,4-Dichlorobenzene	BQL	7.65	1	5/3/2006
trans-1,4-Dichloro-2-butene	BQL	7.65	1	5/3/2006
1,1-Dichloroethane	BQL	7.65	1	5/3/2006
1,1-Dichloroethene	BQL	7.65	1	5/3/2006
1,2-Dichloroethane	BQL	7.65	1	5/3/2006
cis-1,2-Dichloroethene	BQL	7.65	1	5/3/2006
trans-1,2-dichloroethene	BQL	7.65	1	5/3/2006
1,2-Dichloropropane	BQL	7.65	1	5/3/2006
1,3-Dichloropropane	BQL	7.65	1	5/3/2006
2,2-Dichloropropane	BQL	7.65	1	5/3/2006
1,1-Dichloropropene	BQL	7.65	1	5/3/2006
cis-1,3-Dichloropropene	BQL	7.65	1	5/3/2006
trans-1,3-Dichloropropene	BQL	7.65	1	5/3/2006
Dichlorodifluoromethane	BQL	7.65	1	5/3/2006
Diisopropyl ether (DIPE)	BQL	7.65	1	5/3/2006
Ethylbenzene	BQL	7.65	1	5/3/2006
Hexachlorobutadiene	BQL	7.65	1	5/3/2006



**Results for Volatiles  
by GCMS 8260-5035**

Client Sample ID: GP8-7  
 Client Project ID: NCDOT-Yancey/R-2519A  
 Lab Sample ID G106-597-8A  
 Lab Project ID: G106-597  
 Report Basis: Dry Weight

Analyzed By: JTF  
 Date Collected: 04-20-2006 13:30  
 Date Received: 4/25/2006  
 Matrix: Soil  
 %Solids: 61.2

Report Name Compound	Result UG/KG	Quantitation Limit UG/KG	Dilution Factor	Date Analyzed
2-Hexanone	BQL	7.65	1	5/3/2006
Iodomethane	BQL	7.65	1	5/3/2006
Isopropylbenzene	BQL	7.65	1	5/3/2006
4-Isopropyltoluene	BQL	7.65	1	5/3/2006
Methylene chloride	BQL	30.6	1	5/3/2006
4-Methyl-2-pentanone	BQL	7.65	1	5/3/2006
Methyl-tert-butyl ether (MTBE)	BQL	7.65	1	5/3/2006
Naphthalene	BQL	7.65	1	5/3/2006
n-Propyl benzene	BQL	7.65	1	5/3/2006
Styrene	BQL	7.65	1	5/3/2006
1,1,1,2-Tetrachloroethane	BQL	7.65	1	5/3/2006
1,1,2,2-Tetrachloroethane	BQL	7.65	1	5/3/2006
Tetrachloroethene	BQL	7.65	1	5/3/2006
Toluene	BQL	7.65	1	5/3/2006
1,2,3-Trichlorobenzene	BQL	7.65	1	5/3/2006
1,2,4-Trichlorobenzene	BQL	7.65	1	5/3/2006
Trichloroethene	BQL	7.65	1	5/3/2006
1,1,1-Trichloroethane	BQL	7.65	1	5/3/2006
1,1,2-Trichloroethane	BQL	7.65	1	5/3/2006
Trichlorofluoromethane	BQL	7.65	1	5/3/2006
1,2,3-Trichloropropane	BQL	7.65	1	5/3/2006
1,2,4-Trimethylbenzene	BQL	7.65	1	5/3/2006
1,3,5-Trimethylbenzene	BQL	7.65	1	5/3/2006
Vinyl chloride	BQL	7.65	1	5/3/2006
m-,p-Xylene	BQL	15.3	1	5/3/2006
o-Xylene	BQL	7.65	1	5/3/2006

	Spike Added	Spike Result	Percent Recovered
4-Bromofluorobenzene	50	54.1	108
1,2-Dichloroethane-d4	50	77.9	156
Toluene-d8	50	48.7	97

**Comments:**

**Flags:**

BQL = Below Quantitation Limits.

Reviewed By:   *end*



Results for Volatiles  
by GCMS 8260-5035

Client Sample ID: GP9-4  
Client Project ID: NCDOT-Yancey/R-2519A  
Lab Sample ID G106-597-9A  
Lab Project ID: G106-597  
Report Basis: Dry Weight

Analyzed By: JTF  
Date Collected: 04-20-2006 13:42  
Date Received: 4/25/2006  
Matrix: Soil  
%Solids: 79.2

Report Name Compound	Result UG/KG	Quantitation Limit UG/KG	Dilution Factor	Date Analyzed
Acetone	132	54.0	1	5/3/2006
Benzene	BQL	5.40	1	5/3/2006
Bromobenzene	BQL	5.40	1	5/3/2006
Bromochloromethane	BQL	5.40	1	5/3/2006
Bromodichloromethane	BQL	5.40	1	5/3/2006
Bromoform	BQL	5.40	1	5/3/2006
Bromomethane	BQL	5.40	1	5/3/2006
2-Butanone	BQL	27.0	1	5/3/2006
n-Butylbenzene	BQL	5.40	1	5/3/2006
sec-Butylbenzene	BQL	5.40	1	5/3/2006
tert-Butylbenzene	BQL	5.40	1	5/3/2006
Carbon disulfide	BQL	5.40	1	5/3/2006
Carbon tetrachloride	BQL	5.40	1	5/3/2006
Chlorobenzene	BQL	5.40	1	5/3/2006
Chloroethane	BQL	5.40	1	5/3/2006
Chloroform	BQL	5.40	1	5/3/2006
Chloromethane	BQL	5.40	1	5/3/2006
2-Chlorotoluene	BQL	5.40	1	5/3/2006
4-Chlorotoluene	BQL	5.40	1	5/3/2006
Dibromochloromethane	BQL	5.40	1	5/3/2006
1,2-Dibromo-3-chloropropane	BQL	5.40	1	5/3/2006
Dibromomethane	BQL	5.40	1	5/3/2006
1,2-Dibromoethane (EDB)	BQL	5.40	1	5/3/2006
1,2-Dichlorobenzene	BQL	5.40	1	5/3/2006
1,3-Dichlorobenzene	BQL	5.40	1	5/3/2006
1,4-Dichlorobenzene	BQL	5.40	1	5/3/2006
trans-1,4-Dichloro-2-butene	BQL	5.40	1	5/3/2006
1,1-Dichloroethane	BQL	5.40	1	5/3/2006
1,1-Dichloroethene	BQL	5.40	1	5/3/2006
1,2-Dichloroethane	BQL	5.40	1	5/3/2006
cis-1,2-Dichloroethene	BQL	5.40	1	5/3/2006
trans-1,2-dichloroethene	BQL	5.40	1	5/3/2006
1,2-Dichloropropane	BQL	5.40	1	5/3/2006
1,3-Dichloropropane	BQL	5.40	1	5/3/2006
2,2-Dichloropropane	BQL	5.40	1	5/3/2006
1,1-Dichloropropene	BQL	5.40	1	5/3/2006
cis-1,3-Dichloropropene	BQL	5.40	1	5/3/2006
trans-1,3-Dichloropropene	BQL	5.40	1	5/3/2006
Dichlorodifluoromethane	BQL	5.40	1	5/3/2006
Dilisopropyl ether (DIPE)	BQL	5.40	1	5/3/2006
Ethylbenzene	BQL	5.40	1	5/3/2006
Hexachlorobutadiene	BQL	5.40	1	5/3/2006



**Results for Volatiles  
by GCMS 8260-5035**

Client Sample ID: GP9-4  
 Client Project ID: NCDOT-Yancey/R-2519A  
 Lab Sample ID G106-597-9A  
 Lab Project ID: G106-597  
 Report Basis: Dry Weight

Analyzed By: JTF  
 Date Collected: 04-20-2006 13:42  
 Date Received: 4/25/2006  
 Matrix: Soil  
 %Solids: 79.2

Report Name Compound	Result UG/KG	Quantitation Limit UG/KG	Dilution Factor	Date Analyzed
2-Hexanone	BQL	5.40	1	5/3/2006
Iodomethane	BQL	5.40	1	5/3/2006
Isopropylbenzene	BQL	5.40	1	5/3/2006
4-Isopropyltoluene	BQL	5.40	1	5/3/2006
Methylene chloride	BQL	21.6	1	5/3/2006
4-Methyl-2-pentanone	BQL	5.40	1	5/3/2006
Methyl-tert-butyl ether (MTBE)	BQL	5.40	1	5/3/2006
Naphthalene	BQL	5.40	1	5/3/2006
n-Propyl benzene	BQL	5.40	1	5/3/2006
Styrene	BQL	5.40	1	5/3/2006
1,1,1,2-Tetrachloroethane	BQL	5.40	1	5/3/2006
1,1,2,2-Tetrachloroethane	BQL	5.40	1	5/3/2006
Tetrachloroethene	BQL	5.40	1	5/3/2006
Toluene	BQL	5.40	1	5/3/2006
1,2,3-Trichlorobenzene	BQL	5.40	1	5/3/2006
1,2,4-Trichlorobenzene	BQL	5.40	1	5/3/2006
Trichloroethene	BQL	5.40	1	5/3/2006
1,1,1-Trichloroethane	BQL	5.40	1	5/3/2006
1,1,2-Trichloroethane	BQL	5.40	1	5/3/2006
Trichlorofluoromethane	BQL	5.40	1	5/3/2006
1,2,3-Trichloropropane	BQL	5.40	1	5/3/2006
1,2,4-Trimethylbenzene	BQL	5.40	1	5/3/2006
1,3,5-Trimethylbenzene	BQL	5.40	1	5/3/2006
Vinyl chloride	BQL	5.40	1	5/3/2006
m-,p-Xylene	BQL	10.8	1	5/3/2006
o-Xylene	BQL	5.40	1	5/3/2006

	Spike Added	Spike Result	Percent Recovered
4-Bromofluorobenzene	50	52.4	105
1,2-Dichloroethane-d4	50	76.9	154
Toluene-d8	50	48.7	97

**Comments:**

**Flags:**

BQL = Below Quantitation Limits.

Reviewed By: JTF



Results for Volatiles  
by GCMS 8260-5035

Client Sample ID: GP10-5  
Client Project ID: NCDOT-Yancey/R-2519A  
Lab Sample ID G106-597-10A  
Lab Project ID: G106-597  
Report Basis: Dry Weight

Analyzed By: JTF  
Date Collected: 04-20-2006 13:50  
Date Received: 4/25/2006  
Matrix: Soil  
%Solids: 61.7

Report Name Compound	Result UG/KG	Quantitation Limit UG/KG	Dilution Factor	Date Analyzed
Acetone	BQL	74.1	1	5/3/2006
Benzene	BQL	7.41	1	5/3/2006
Bromobenzene	BQL	7.41	1	5/3/2006
Bromochloromethane	BQL	7.41	1	5/3/2006
Bromodichloromethane	BQL	7.41	1	5/3/2006
Bromoform	BQL	7.41	1	5/3/2006
Bromomethane	BQL	7.41	1	5/3/2006
2-Butanone	BQL	37.0	1	5/3/2006
n-Butylbenzene	BQL	7.41	1	5/3/2006
sec-Butylbenzene	BQL	7.41	1	5/3/2006
tert-Butylbenzene	BQL	7.41	1	5/3/2006
Carbon disulfide	BQL	7.41	1	5/3/2006
Carbon tetrachloride	BQL	7.41	1	5/3/2006
Chlorobenzene	BQL	7.41	1	5/3/2006
Chloroethane	BQL	7.41	1	5/3/2006
Chloroform	BQL	7.41	1	5/3/2006
Chloromethane	BQL	7.41	1	5/3/2006
2-Chlorotoluene	BQL	7.41	1	5/3/2006
4-Chlorotoluene	BQL	7.41	1	5/3/2006
Dibromochloromethane	BQL	7.41	1	5/3/2006
1,2-Dibromo-3-chloropropane	BQL	7.41	1	5/3/2006
Dibromomethane	BQL	7.41	1	5/3/2006
1,2-Dibromoethane (EDB)	BQL	7.41	1	5/3/2006
1,2-Dichlorobenzene	BQL	7.41	1	5/3/2006
1,3-Dichlorobenzene	BQL	7.41	1	5/3/2006
1,4-Dichlorobenzene	BQL	7.41	1	5/3/2006
trans-1,4-Dichloro-2-butene	BQL	7.41	1	5/3/2006
1,1-Dichloroethane	BQL	7.41	1	5/3/2006
1,1-Dichloroethene	BQL	7.41	1	5/3/2006
1,2-Dichloroethane	BQL	7.41	1	5/3/2006
cis-1,2-Dichloroethene	BQL	7.41	1	5/3/2006
trans-1,2-dichloroethene	BQL	7.41	1	5/3/2006
1,2-Dichloropropane	BQL	7.41	1	5/3/2006
1,3-Dichloropropane	BQL	7.41	1	5/3/2006
2,2-Dichloropropane	BQL	7.41	1	5/3/2006
1,1-Dichloropropene	BQL	7.41	1	5/3/2006
cis-1,3-Dichloropropene	BQL	7.41	1	5/3/2006
trans-1,3-Dichloropropene	BQL	7.41	1	5/3/2006
Dichlorodifluoromethane	BQL	7.41	1	5/3/2006
Diisopropyl ether (DIPE)	BQL	7.41	1	5/3/2006
Ethylbenzene	BQL	7.41	1	5/3/2006
Hexachlorobutadiene	BQL	7.41	1	5/3/2006



**Results for Volatiles  
by GCMS 8260-5035**

Client Sample ID: GP10-5  
 Client Project ID: NCDOT-Yancey/R-2519A  
 Lab Sample ID G106-597-10A  
 Lab Project ID: G106-597  
 Report Basis: Dry Weight

Analyzed By: JTF  
 Date Collected: 04-20-2006 13:50  
 Date Received: 4/25/2006  
 Matrix: Soil  
 %Solids: 61.7

Report Name Compound	Result UG/KG	Quantitation Limit UG/KG	Dilution Factor	Date Analyzed
2-Hexanone	BQL	7.41	1	5/3/2006
Iodomethane	BQL	7.41	1	5/3/2006
Isopropylbenzene	BQL	7.41	1	5/3/2006
4-Isopropyltoluene	BQL	7.41	1	5/3/2006
Methylene chloride	BQL	29.6	1	5/3/2006
4-Methyl-2-pentanone	BQL	7.41	1	5/3/2006
Methyl-tert-butyl ether (MTBE)	BQL	7.41	1	5/3/2006
Naphthalene	BQL	7.41	1	5/3/2006
n-Propyl benzene	BQL	7.41	1	5/3/2006
Styrene	BQL	7.41	1	5/3/2006
1,1,1,2-Tetrachloroethane	BQL	7.41	1	5/3/2006
1,1,2,2-Tetrachloroethane	BQL	7.41	1	5/3/2006
Tetrachloroethene	BQL	7.41	1	5/3/2006
Toluene	BQL	7.41	1	5/3/2006
1,2,3-Trichlorobenzene	BQL	7.41	1	5/3/2006
1,2,4-Trichlorobenzene	BQL	7.41	1	5/3/2006
Trichloroethene	BQL	7.41	1	5/3/2006
1,1,1-Trichloroethane	BQL	7.41	1	5/3/2006
1,1,2-Trichloroethane	BQL	7.41	1	5/3/2006
Trichlorofluoromethane	BQL	7.41	1	5/3/2006
1,2,3-Trichloropropane	BQL	7.41	1	5/3/2006
1,2,4-Trimethylbenzene	BQL	7.41	1	5/3/2006
1,3,5-Trimethylbenzene	BQL	7.41	1	5/3/2006
Vinyl chloride	BQL	7.41	1	5/3/2006
m-,p-Xylene	BQL	14.8	1	5/3/2006
o-Xylene	BQL	7.41	1	5/3/2006

	Spike Added	Spike Result	Percent Recovered
4-Bromofluorobenzene	50	53.5	107
1,2-Dichloroethane-d4	50	76.9	154
Toluene-d8	50	48.8	98

**Comments:**

**Flags:**

BQL = Below Quantitation Limits.

Reviewed By: JTF





Results for Volatiles  
by GCMS 8260-5035

Client Sample ID: GP11-5  
Client Project ID: NCDOT-Yancey/R-2519A  
Lab Sample ID G106-597-11A  
Lab Project ID: G106-597  
Report Basis: Dry Weight

Analyzed By: JTF  
Date Collected: 04-20-2006 14:00  
Date Received: 4/25/2006  
Matrix: Soil  
%Solids: 59.6

Report Name Compound	Result UG/KG	Quantitation Limit UG/KG	Dilution Factor	Date Analyzed
Acetone	BQL	82.0	1	5/3/2006
Benzene	BQL	8.20	1	5/3/2006
Bromobenzene	BQL	8.20	1	5/3/2006
Bromochloromethane	BQL	8.20	1	5/3/2006
Bromodichloromethane	BQL	8.20	1	5/3/2006
Bromoform	BQL	8.20	1	5/3/2006
Bromomethane	BQL	8.20	1	5/3/2006
2-Butanone	BQL	41.0	1	5/3/2006
n-Butylbenzene	BQL	8.20	1	5/3/2006
sec-Butylbenzene	BQL	8.20	1	5/3/2006
tert-Butylbenzene	BQL	8.20	1	5/3/2006
Carbon disulfide	BQL	8.20	1	5/3/2006
Carbon tetrachloride	BQL	8.20	1	5/3/2006
Chlorobenzene	BQL	8.20	1	5/3/2006
Chloroethane	BQL	8.20	1	5/3/2006
Chloroform	BQL	8.20	1	5/3/2006
Chloromethane	BQL	8.20	1	5/3/2006
2-Chlorotoluene	BQL	8.20	1	5/3/2006
4-Chlorotoluene	BQL	8.20	1	5/3/2006
Dibromochloromethane	BQL	8.20	1	5/3/2006
1,2-Dibromo-3-chloropropane	BQL	8.20	1	5/3/2006
Dibromomethane	BQL	8.20	1	5/3/2006
1,2-Dibromoethane (EDB)	BQL	8.20	1	5/3/2006
1,2-Dichlorobenzene	BQL	8.20	1	5/3/2006
1,3-Dichlorobenzene	BQL	8.20	1	5/3/2006
1,4-Dichlorobenzene	BQL	8.20	1	5/3/2006
trans-1,4-Dichloro-2-butene	BQL	8.20	1	5/3/2006
1,1-Dichloroethane	BQL	8.20	1	5/3/2006
1,1-Dichloroethene	BQL	8.20	1	5/3/2006
1,2-Dichloroethane	BQL	8.20	1	5/3/2006
cis-1,2-Dichloroethene	BQL	8.20	1	5/3/2006
trans-1,2-dichloroethene	BQL	8.20	1	5/3/2006
1,2-Dichloropropane	BQL	8.20	1	5/3/2006
1,3-Dichloropropane	BQL	8.20	1	5/3/2006
2,2-Dichloropropane	BQL	8.20	1	5/3/2006
1,1-Dichloropropene	BQL	8.20	1	5/3/2006
cis-1,3-Dichloropropene	BQL	8.20	1	5/3/2006
trans-1,3-Dichloropropene	BQL	8.20	1	5/3/2006
Dichlorodifluoromethane	BQL	8.20	1	5/3/2006
Diisopropyl ether (DIPE)	BQL	8.20	1	5/3/2006
Ethylbenzene	BQL	8.20	1	5/3/2006
Hexachlorobutadiene	BQL	8.20	1	5/3/2006



**Results for Volatiles  
by GCMS 8260-5035**

Client Sample ID: GP11-5  
 Client Project ID: NCDOT-Yancey/R-2519A  
 Lab Sample ID G106-597-11A  
 Lab Project ID: G106-597  
 Report Basis: Dry Weight

Analyzed By: JTF  
 Date Collected: 04-20-2006 14:00  
 Date Received: 4/25/2006  
 Matrix: Soil  
 %Solids: 59.6

Report Name Compound	Result UG/KG	Quantitation Limit UG/KG	Dilution Factor	Date Analyzed
2-Hexanone	BQL	8.20	1	5/3/2006
Iodomethane	BQL	8.20	1	5/3/2006
Isopropylbenzene	BQL	8.20	1	5/3/2006
4-Isopropyltoluene	BQL	8.20	1	5/3/2006
Methylene chloride	BQL	32.8	1	5/3/2006
4-Methyl-2-pentanone	BQL	8.20	1	5/3/2006
Methyl-tert-butyl ether (MTBE)	BQL	8.20	1	5/3/2006
Naphthalene	BQL	8.20	1	5/3/2006
n-Propyl benzene	BQL	8.20	1	5/3/2006
Styrene	BQL	8.20	1	5/3/2006
1,1,1,2-Tetrachloroethane	BQL	8.20	1	5/3/2006
1,1,2,2-Tetrachloroethane	BQL	8.20	1	5/3/2006
Tetrachloroethene	BQL	8.20	1	5/3/2006
Toluene	BQL	8.20	1	5/3/2006
1,2,3-Trichlorobenzene	BQL	8.20	1	5/3/2006
1,2,4-Trichlorobenzene	BQL	8.20	1	5/3/2006
Trichloroethene	BQL	8.20	1	5/3/2006
1,1,1-Trichloroethane	BQL	8.20	1	5/3/2006
1,1,2-Trichloroethane	BQL	8.20	1	5/3/2006
Trichlorofluoromethane	BQL	8.20	1	5/3/2006
1,2,3-Trichloropropane	BQL	8.20	1	5/3/2006
1,2,4-Trimethylbenzene	BQL	8.20	1	5/3/2006
1,3,5-Trimethylbenzene	BQL	8.20	1	5/3/2006
Vinyl chloride	BQL	8.20	1	5/3/2006
m-,p-Xylene	BQL	16.4	1	5/3/2006
o-Xylene	BQL	8.20	1	5/3/2006

	Spike Added	Spike Result	Percent Recovered
4-Bromofluorobenzene	50	53.3	106
1,2-Dichloroethane-d4	50	71.4	143
Toluene-d8	50	50.6	101

**Comments:**

**Flags:**

BQL = Below Quantitation Limits.

Reviewed By:



Results for Volatiles  
by GCMS 8260-5035

Client Sample ID: GP12-4  
Client Project ID: NCDOT-Yancey/R-2519A  
Lab Sample ID G106-597-12A  
Lab Project ID: G106-597  
Report Basis: Dry Weight

Analyzed By: JTF  
Date Collected: 04-20-2006 14:13  
Date Received: 4/25/2006  
Matrix: Soil  
%Solids: 68.6

Report Name Compound	Result UG/KG	Quantitation Limit UG/KG	Dilution Factor	Date Analyzed
Acetone	90.7	75.2	1	5/3/2006
Benzene	BQL	7.52	1	5/3/2006
Bromobenzene	BQL	7.52	1	5/3/2006
Bromochloromethane	BQL	7.52	1	5/3/2006
Bromodichloromethane	BQL	7.52	1	5/3/2006
Bromoform	BQL	7.52	1	5/3/2006
Bromomethane	BQL	7.52	1	5/3/2006
2-Butanone	BQL	37.6	1	5/3/2006
n-Butylbenzene	BQL	7.52	1	5/3/2006
sec-Butylbenzene	BQL	7.52	1	5/3/2006
tert-Butylbenzene	BQL	7.52	1	5/3/2006
Carbon disulfide	BQL	7.52	1	5/3/2006
Carbon tetrachloride	BQL	7.52	1	5/3/2006
Chlorobenzene	BQL	7.52	1	5/3/2006
Chloroethane	BQL	7.52	1	5/3/2006
Chloroform	BQL	7.52	1	5/3/2006
Chloromethane	BQL	7.52	1	5/3/2006
2-Chlorotoluene	BQL	7.52	1	5/3/2006
4-Chlorotoluene	BQL	7.52	1	5/3/2006
Dibromochloromethane	BQL	7.52	1	5/3/2006
1,2-Dibromo-3-chloropropane	BQL	7.52	1	5/3/2006
Dibromomethane	BQL	7.52	1	5/3/2006
1,2-Dibromoethane (EDB)	BQL	7.52	1	5/3/2006
1,2-Dichlorobenzene	BQL	7.52	1	5/3/2006
1,3-Dichlorobenzene	BQL	7.52	1	5/3/2006
1,4-Dichlorobenzene	BQL	7.52	1	5/3/2006
trans-1,4-Dichloro-2-butene	BQL	7.52	1	5/3/2006
1,1-Dichloroethane	BQL	7.52	1	5/3/2006
1,1-Dichloroethene	BQL	7.52	1	5/3/2006
1,2-Dichloroethane	BQL	7.52	1	5/3/2006
cis-1,2-Dichloroethene	BQL	7.52	1	5/3/2006
trans-1,2-dichloroethene	BQL	7.52	1	5/3/2006
1,2-Dichloropropane	BQL	7.52	1	5/3/2006
1,3-Dichloropropane	BQL	7.52	1	5/3/2006
2,2-Dichloropropane	BQL	7.52	1	5/3/2006
1,1-Dichloropropene	BQL	7.52	1	5/3/2006
cis-1,3-Dichloropropene	BQL	7.52	1	5/3/2006
trans-1,3-Dichloropropene	BQL	7.52	1	5/3/2006
Dichlorodifluoromethane	BQL	7.52	1	5/3/2006
Diisopropyl ether (DIPE)	BQL	7.52	1	5/3/2006
Ethylbenzene	BQL	7.52	1	5/3/2006
Hexachlorobutadiene	BQL	7.52	1	5/3/2006



**Results for Volatiles  
by GCMS 8260-5035**

Client Sample ID: GP12-4  
 Client Project ID: NCDOT-Yancey/R-2519A  
 Lab Sample ID G106-597-12A  
 Lab Project ID: G106-597  
 Report Basis: Dry Weight

Analyzed By: JTF  
 Date Collected: 04-20-2006 14:13  
 Date Received: 4/25/2006  
 Matrix: Soil  
 %Solids: 68.6

Report Name Compound	Result UG/KG	Quantitation Limit UG/KG	Dilution Factor	Date Analyzed
2-Hexanone	BQL	7.52	1	5/3/2006
Iodomethane	BQL	7.52	1	5/3/2006
Isopropylbenzene	BQL	7.52	1	5/3/2006
4-Isopropyltoluene	BQL	7.52	1	5/3/2006
Methylene chloride	BQL	30.1	1	5/3/2006
4-Methyl-2-pentanone	BQL	7.52	1	5/3/2006
Methyl-tert-butyl ether (MTBE)	BQL	7.52	1	5/3/2006
Naphthalene	BQL	7.52	1	5/3/2006
n-Propyl benzene	BQL	7.52	1	5/3/2006
Styrene	BQL	7.52	1	5/3/2006
1,1,1,2-Tetrachloroethane	BQL	7.52	1	5/3/2006
1,1,2,2-Tetrachloroethane	BQL	7.52	1	5/3/2006
Tetrachloroethene	BQL	7.52	1	5/3/2006
Toluene	BQL	7.52	1	5/3/2006
1,2,3-Trichlorobenzene	BQL	7.52	1	5/3/2006
1,2,4-Trichlorobenzene	BQL	7.52	1	5/3/2006
Trichloroethene	BQL	7.52	1	5/3/2006
1,1,1-Trichloroethane	BQL	7.52	1	5/3/2006
1,1,2-Trichloroethane	BQL	7.52	1	5/3/2006
Trichlorofluoromethane	BQL	7.52	1	5/3/2006
1,2,3-Trichloropropane	BQL	7.52	1	5/3/2006
1,2,4-Trimethylbenzene	BQL	7.52	1	5/3/2006
1,3,5-Trimethylbenzene	BQL	7.52	1	5/3/2006
Vinyl chloride	BQL	7.52	1	5/3/2006
m,p-Xylene	BQL	15.0	1	5/3/2006
o-Xylene	BQL	7.52	1	5/3/2006

	Spike Added	Spike Result	Percent Recovered
4-Bromofluorobenzene	50	54.6	109
1,2-Dichloroethane-d4	50	70.8	142
Toluene-d8	50	50.5	101

**Comments:**

**Flags:**

BQL = Below Quantitation Limits.

Reviewed By: EW



Results for Volatiles  
by GCMS 8260-5035

Client Sample ID: GP13-6  
Client Project ID: NCDOT-Yancey/R-2519A  
Lab Sample ID G106-597-13A  
Lab Project ID: G106-597  
Report Basis: Dry Weight

Analyzed By: JTF  
Date Collected: 04-20-2006 14:25  
Date Received: 4/25/2006  
Matrix: Soil  
%Solids: 70.9

Report Name Compound	Result UG/KG	Quantitation Limit UG/KG	Dilution Factor	Date Analyzed
Acetone	91.4	63.5	1	5/3/2006
Benzene	BQL	6.35	1	5/3/2006
Bromobenzene	BQL	6.35	1	5/3/2006
Bromochloromethane	BQL	6.35	1	5/3/2006
Bromodichloromethane	BQL	6.35	1	5/3/2006
Bromoform	BQL	6.35	1	5/3/2006
Bromomethane	BQL	6.35	1	5/3/2006
2-Butanone	BQL	31.7	1	5/3/2006
n-Butylbenzene	BQL	6.35	1	5/3/2006
sec-Butylbenzene	BQL	6.35	1	5/3/2006
tert-Butylbenzene	BQL	6.35	1	5/3/2006
Carbon disulfide	BQL	6.35	1	5/3/2006
Carbon tetrachloride	BQL	6.35	1	5/3/2006
Chlorobenzene	BQL	6.35	1	5/3/2006
Chloroethane	BQL	6.35	1	5/3/2006
Chloroform	BQL	6.35	1	5/3/2006
Chloromethane	BQL	6.35	1	5/3/2006
2-Chlorotoluene	BQL	6.35	1	5/3/2006
4-Chlorotoluene	BQL	6.35	1	5/3/2006
Dibromochloromethane	BQL	6.35	1	5/3/2006
1,2-Dibromo-3-chloropropane	BQL	6.35	1	5/3/2006
Dibromomethane	BQL	6.35	1	5/3/2006
1,2-Dibromoethane (EDB)	BQL	6.35	1	5/3/2006
1,2-Dichlorobenzene	BQL	6.35	1	5/3/2006
1,3-Dichlorobenzene	BQL	6.35	1	5/3/2006
1,4-Dichlorobenzene	BQL	6.35	1	5/3/2006
trans-1,4-Dichloro-2-butene	BQL	6.35	1	5/3/2006
1,1-Dichloroethane	BQL	6.35	1	5/3/2006
1,1-Dichloroethene	BQL	6.35	1	5/3/2006
1,2-Dichloroethane	BQL	6.35	1	5/3/2006
cis-1,2-Dichloroethene	BQL	6.35	1	5/3/2006
trans-1,2-dichloroethene	BQL	6.35	1	5/3/2006
1,2-Dichloropropane	BQL	6.35	1	5/3/2006
1,3-Dichloropropane	BQL	6.35	1	5/3/2006
2,2-Dichloropropane	BQL	6.35	1	5/3/2006
1,1-Dichloropropene	BQL	6.35	1	5/3/2006
cis-1,3-Dichloropropene	BQL	6.35	1	5/3/2006
trans-1,3-Dichloropropene	BQL	6.35	1	5/3/2006
Dichlorodifluoromethane	BQL	6.35	1	5/3/2006
Diisopropyl ether (DIPE)	BQL	6.35	1	5/3/2006
Ethylbenzene	BQL	6.35	1	5/3/2006
Hexachlorobutadiene	BQL	6.35	1	5/3/2006



**Results for Volatiles  
by GCMS 8260-5035**

Client Sample ID: GP13-6  
 Client Project ID: NCDOT-Yancey/R-2519A  
 Lab Sample ID G106-597-13A  
 Lab Project ID: G106-597  
 Report Basis: Dry Weight

Analyzed By: JTF  
 Date Collected: 04-20-2006 14:25  
 Date Received: 4/25/2006  
 Matrix: Soil  
 %Solids: 70.9

Report Name Compound	Result UG/KG	Quantitation Limit UG/KG	Dilution Factor	Date Analyzed
2-Hexanone	BQL	6.35	1	5/3/2006
Iodomethane	BQL	6.35	1	5/3/2006
Isopropylbenzene	BQL	6.35	1	5/3/2006
4-Isopropyltoluene	BQL	6.35	1	5/3/2006
Methylene chloride	BQL	25.4	1	5/3/2006
4-Methyl-2-pentanone	BQL	6.35	1	5/3/2006
Methyl-tert-butyl ether (MTBE)	BQL	6.35	1	5/3/2006
Naphthalene	BQL	6.35	1	5/3/2006
n-Propyl benzene	BQL	6.35	1	5/3/2006
Styrene	BQL	6.35	1	5/3/2006
1,1,1,2-Tetrachloroethane	BQL	6.35	1	5/3/2006
1,1,2,2-Tetrachloroethane	BQL	6.35	1	5/3/2006
Tetrachloroethene	BQL	6.35	1	5/3/2006
Toluene	BQL	6.35	1	5/3/2006
1,2,3-Trichlorobenzene	BQL	6.35	1	5/3/2006
1,2,4-Trichlorobenzene	BQL	6.35	1	5/3/2006
Trichloroethene	BQL	6.35	1	5/3/2006
1,1,1-Trichloroethane	BQL	6.35	1	5/3/2006
1,1,2-Trichloroethane	BQL	6.35	1	5/3/2006
Trichlorofluoromethane	BQL	6.35	1	5/3/2006
1,2,3-Trichloropropane	BQL	6.35	1	5/3/2006
1,2,4-Trimethylbenzene	BQL	6.35	1	5/3/2006
1,3,5-Trimethylbenzene	BQL	6.35	1	5/3/2006
Vinyl chloride	BQL	6.35	1	5/3/2006
m,p-Xylene	BQL	12.7	1	5/3/2006
o-Xylene	BQL	6.35	1	5/3/2006

	Spike Added	Spike Result	Percent Recovered
4-Bromofluorobenzene	50	52.2	104
1,2-Dichloroethane-d4	50	72.1	144
Toluene-d8	50	49.8	100

**Comments:**

**Flags:**

BQL = Below Quantitation Limits.

Reviewed By: JTF



Results for Volatiles  
by GCMS 8260-5035

Client Sample ID: GP14-6  
Client Project ID: NCDOT-Yancey/R-2519A  
Lab Sample ID G106-597-14A  
Lab Project ID: G106-597  
Report Basis: Dry Weight

Analyzed By: JTF  
Date Collected: 04-20-2006 14:40  
Date Received: 4/25/2006  
Matrix: Soil  
%Solids: 76.3

Report Name Compound	Result UG/KG	Quantitation Limit UG/KG	Dilution Factor	Date Analyzed
Acetone	BQL	54.8	1	5/3/2006
Benzene	BQL	5.48	1	5/3/2006
Bromobenzene	BQL	5.48	1	5/3/2006
Bromochloromethane	BQL	5.48	1	5/3/2006
Bromodichloromethane	BQL	5.48	1	5/3/2006
Bromoform	BQL	5.48	1	5/3/2006
Bromomethane	BQL	5.48	1	5/3/2006
2-Butanone	BQL	27.4	1	5/3/2006
n-Butylbenzene	BQL	5.48	1	5/3/2006
sec-Butylbenzene	BQL	5.48	1	5/3/2006
tert-Butylbenzene	BQL	5.48	1	5/3/2006
Carbon disulfide	BQL	5.48	1	5/3/2006
Carbon tetrachloride	BQL	5.48	1	5/3/2006
Chlorobenzene	BQL	5.48	1	5/3/2006
Chloroethane	BQL	5.48	1	5/3/2006
Chloroform	BQL	5.48	1	5/3/2006
Chloromethane	BQL	5.48	1	5/3/2006
2-Chlorotoluene	BQL	5.48	1	5/3/2006
4-Chlorotoluene	BQL	5.48	1	5/3/2006
Dibromochloromethane	BQL	5.48	1	5/3/2006
1,2-Dibromo-3-chloropropane	BQL	5.48	1	5/3/2006
Dibromomethane	BQL	5.48	1	5/3/2006
1,2-Dibromoethane (EDB)	BQL	5.48	1	5/3/2006
1,2-Dichlorobenzene	BQL	5.48	1	5/3/2006
1,3-Dichlorobenzene	BQL	5.48	1	5/3/2006
1,4-Dichlorobenzene	BQL	5.48	1	5/3/2006
trans-1,4-Dichloro-2-butene	BQL	5.48	1	5/3/2006
1,1-Dichloroethane	BQL	5.48	1	5/3/2006
1,1-Dichloroethene	BQL	5.48	1	5/3/2006
1,2-Dichloroethane	BQL	5.48	1	5/3/2006
cis-1,2-Dichloroethene	BQL	5.48	1	5/3/2006
trans-1,2-dichloroethene	BQL	5.48	1	5/3/2006
1,2-Dichloropropane	BQL	5.48	1	5/3/2006
1,3-Dichloropropane	BQL	5.48	1	5/3/2006
2,2-Dichloropropane	BQL	5.48	1	5/3/2006
1,1-Dichloropropene	BQL	5.48	1	5/3/2006
cis-1,3-Dichloropropene	BQL	5.48	1	5/3/2006
trans-1,3-Dichloropropene	BQL	5.48	1	5/3/2006
Dichlorodifluoromethane	BQL	5.48	1	5/3/2006
Diisopropyl ether (DIPE)	BQL	5.48	1	5/3/2006
Ethylbenzene	BQL	5.48	1	5/3/2006
Hexachlorobutadiene	BQL	5.48	1	5/3/2006



**Results for Volatiles  
by GCMS 8260-5035**

Client Sample ID: GP14-6  
 Client Project ID: NCDOT-Yancey/R-2519A  
 Lab Sample ID G106-597-14A  
 Lab Project ID: G106-597  
 Report Basis: Dry Weight

Analyzed By: JTF  
 Date Collected: 04-20-2006 14:40  
 Date Received: 4/25/2006  
 Matrix: Soil  
 %Solids: 76.3

Report Name Compound	Result UG/KG	Quantitation Limit UG/KG	Dilution Factor	Date Analyzed
2-Hexanone	BQL	5.48	1	5/3/2006
Iodomethane	BQL	5.48	1	5/3/2006
Isopropylbenzene	BQL	5.48	1	5/3/2006
4-Isopropyltoluene	BQL	5.48	1	5/3/2006
Methylene chloride	BQL	21.9	1	5/3/2006
4-Methyl-2-pentanone	BQL	5.48	1	5/3/2006
Methyl-tert-butyl ether (MTBE)	BQL	5.48	1	5/3/2006
Naphthalene	BQL	5.48	1	5/3/2006
n-Propyl benzene	BQL	5.48	1	5/3/2006
Styrene	BQL	5.48	1	5/3/2006
1,1,1,2-Tetrachloroethane	BQL	5.48	1	5/3/2006
1,1,2,2-Tetrachloroethane	BQL	5.48	1	5/3/2006
Tetrachloroethene	BQL	5.48	1	5/3/2006
Toluene	BQL	5.48	1	5/3/2006
1,2,3-Trichlorobenzene	BQL	5.48	1	5/3/2006
1,2,4-Trichlorobenzene	BQL	5.48	1	5/3/2006
Trichloroethene	BQL	5.48	1	5/3/2006
1,1,1-Trichloroethane	BQL	5.48	1	5/3/2006
1,1,2-Trichloroethane	BQL	5.48	1	5/3/2006
Trichlorofluoromethane	BQL	5.48	1	5/3/2006
1,2,3-Trichloropropane	BQL	5.48	1	5/3/2006
1,2,4-Trimethylbenzene	BQL	5.48	1	5/3/2006
1,3,5-Trimethylbenzene	BQL	5.48	1	5/3/2006
Vinyl chloride	BQL	5.48	1	5/3/2006
m-,p-Xylene	BQL	11.0	1	5/3/2006
o-Xylene	BQL	5.48	1	5/3/2006

	Spike Added	Spike Result	Percent Recovered
4-Bromofluorobenzene	50	51.5	103
1,2-Dichloroethane-d4	50	73.8	148
Toluene-d8	50	50.5	101

**Comments:**

**Flags:**

BQL = Below Quantitation Limits.

Reviewed By:





Results for Volatiles  
by GCMS 8260-5035

Client Sample ID: GP15-5  
Client Project ID: NCDOT-Yancey/R-2519A  
Lab Sample ID G106-597-15A  
Lab Project ID: G106-597  
Report Basis: Dry Weight

Analyzed By: JTF  
Date Collected: 04-20-2006 15:14  
Date Received: 4/25/2006  
Matrix: Soil  
%Solids: 78.4

Report Name Compound	Result UG/KG	Quantitation Limit UG/KG	Dilution Factor	Date Analyzed
Acetone	BQL	35.9	1	5/3/2006
Benzene	BQL	3.59	1	5/3/2006
Bromobenzene	BQL	3.59	1	5/3/2006
Bromochloromethane	BQL	3.59	1	5/3/2006
Bromodichloromethane	BQL	3.59	1	5/3/2006
Bromoform	BQL	3.59	1	5/3/2006
Bromomethane	BQL	3.59	1	5/3/2006
2-Butanone	BQL	18.0	1	5/3/2006
n-Butylbenzene	BQL	3.59	1	5/3/2006
sec-Butylbenzene	BQL	3.59	1	5/3/2006
tert-Butylbenzene	BQL	3.59	1	5/3/2006
Carbon disulfide	8.18	3.59	1	5/3/2006
Carbon tetrachloride	BQL	3.59	1	5/3/2006
Chlorobenzene	BQL	3.59	1	5/3/2006
Chloroethane	BQL	3.59	1	5/3/2006
Chloroform	BQL	3.59	1	5/3/2006
Chloromethane	BQL	3.59	1	5/3/2006
2-Chlorotoluene	BQL	3.59	1	5/3/2006
4-Chlorotoluene	BQL	3.59	1	5/3/2006
Dibromochloromethane	BQL	3.59	1	5/3/2006
1,2-Dibromo-3-chloropropane	BQL	3.59	1	5/3/2006
Dibromomethane	BQL	3.59	1	5/3/2006
1,2-Dibromoethane (EDB)	BQL	3.59	1	5/3/2006
1,2-Dichlorobenzene	BQL	3.59	1	5/3/2006
1,3-Dichlorobenzene	BQL	3.59	1	5/3/2006
1,4-Dichlorobenzene	BQL	3.59	1	5/3/2006
trans-1,4-Dichloro-2-butene	BQL	3.59	1	5/3/2006
1,1-Dichloroethane	BQL	3.59	1	5/3/2006
1,1-Dichloroethene	BQL	3.59	1	5/3/2006
1,2-Dichloroethane	BQL	3.59	1	5/3/2006
cis-1,2-Dichloroethene	BQL	3.59	1	5/3/2006
trans-1,2-dichloroethene	BQL	3.59	1	5/3/2006
1,2-Dichloropropane	BQL	3.59	1	5/3/2006
1,3-Dichloropropane	BQL	3.59	1	5/3/2006
2,2-Dichloropropane	BQL	3.59	1	5/3/2006
1,1-Dichloropropene	BQL	3.59	1	5/3/2006
cis-1,3-Dichloropropene	BQL	3.59	1	5/3/2006
trans-1,3-Dichloropropene	BQL	3.59	1	5/3/2006
Dichlorodifluoromethane	BQL	3.59	1	5/3/2006
Diisopropyl ether (DIPE)	BQL	3.59	1	5/3/2006
Ethylbenzene	BQL	3.59	1	5/3/2006
Hexachlorobutadiene	BQL	3.59	1	5/3/2006



**Results for Volatiles  
by GCMS 8260-5035**

Client Sample ID: GP15-5  
 Client Project ID: NCDOT-Yancey/R-2519A  
 Lab Sample ID G106-597-15A  
 Lab Project ID: G106-597  
 Report Basis: Dry Weight

Analyzed By: JTF  
 Date Collected: 04-20-2006 15:14  
 Date Received: 4/25/2006  
 Matrix: Soil  
 %Solids: 78.4

Report Name Compound	Result UG/KG	Quantitation Limit UG/KG	Dilution Factor	Date Analyzed
2-Hexanone	BQL	3.59	1	5/3/2006
Iodomethane	BQL	3.59	1	5/3/2006
Isopropylbenzene	BQL	3.59	1	5/3/2006
4-Isopropyltoluene	BQL	3.59	1	5/3/2006
Methylene chloride	BQL	14.4	1	5/3/2006
4-Methyl-2-pentanone	BQL	3.59	1	5/3/2006
Methyl-tert-butyl ether (MTBE)	BQL	3.59	1	5/3/2006
Naphthalene	BQL	3.59	1	5/3/2006
n-Propyl benzene	BQL	3.59	1	5/3/2006
Styrene	BQL	3.59	1	5/3/2006
1,1,1,2-Tetrachloroethane	BQL	3.59	1	5/3/2006
1,1,2,2-Tetrachloroethane	BQL	3.59	1	5/3/2006
Tetrachloroethene	BQL	3.59	1	5/3/2006
Toluene	BQL	3.59	1	5/3/2006
1,2,3-Trichlorobenzene	BQL	3.59	1	5/3/2006
1,2,4-Trichlorobenzene	BQL	3.59	1	5/3/2006
Trichloroethene	BQL	3.59	1	5/3/2006
1,1,1-Trichloroethane	BQL	3.59	1	5/3/2006
1,1,2-Trichloroethane	BQL	3.59	1	5/3/2006
Trichlorofluoromethane	BQL	3.59	1	5/3/2006
1,2,3-Trichloropropane	BQL	3.59	1	5/3/2006
1,2,4-Trimethylbenzene	BQL	3.59	1	5/3/2006
1,3,5-Trimethylbenzene	BQL	3.59	1	5/3/2006
Vinyl chloride	BQL	3.59	1	5/3/2006
m-,p-Xylene	BQL	7.19	1	5/3/2006
o-Xylene	BQL	3.59	1	5/3/2006

	Spike Added	Spike Result	Percent Recovered
4-Bromofluorobenzene	50	54.2	108
1,2-Dichloroethane-d4	50	74.1	148
Toluene-d8	50	50.9	102

**Comments:**

**Flags:**

BQL = Below Quantitation Limits.

Reviewed By: JTF



Results for Volatiles  
by GCMS 8260-5035

Client Sample ID: GP16-5  
Client Project ID: NCDOT-Yancey/R-2519A  
Lab Sample ID G106-597-16A  
Lab Project ID: G106-597  
Report Basis: Dry Weight

Analyzed By: JTF  
Date Collected: 04-20-2006 15:20  
Date Received: 4/25/2006  
Matrix: Soil  
%Solids: 75.4

Report Name Compound	Result UG/KG	Quantitation Limit UG/KG	Dilution Factor	Date Analyzed
Acetone	BQL	64.1	1	5/3/2006
Benzene	BQL	6.41	1	5/3/2006
Bromobenzene	BQL	6.41	1	5/3/2006
Bromochloromethane	BQL	6.41	1	5/3/2006
Bromodichloromethane	BQL	6.41	1	5/3/2006
Bromoform	BQL	6.41	1	5/3/2006
Bromomethane	BQL	6.41	1	5/3/2006
2-Butanone	BQL	32.0	1	5/3/2006
n-Butylbenzene	BQL	6.41	1	5/3/2006
sec-Butylbenzene	BQL	6.41	1	5/3/2006
tert-Butylbenzene	BQL	6.41	1	5/3/2006
Carbon disulfide	BQL	6.41	1	5/3/2006
Carbon tetrachloride	BQL	6.41	1	5/3/2006
Chlorobenzene	BQL	6.41	1	5/3/2006
Chloroethane	BQL	6.41	1	5/3/2006
Chloroform	BQL	6.41	1	5/3/2006
Chloromethane	BQL	6.41	1	5/3/2006
2-Chlorotoluene	BQL	6.41	1	5/3/2006
4-Chlorotoluene	BQL	6.41	1	5/3/2006
Dibromochloromethane	BQL	6.41	1	5/3/2006
1,2-Dibromo-3-chloropropane	BQL	6.41	1	5/3/2006
Dibromomethane	BQL	6.41	1	5/3/2006
1,2-Dibromoethane (EDB)	BQL	6.41	1	5/3/2006
1,2-Dichlorobenzene	BQL	6.41	1	5/3/2006
1,3-Dichlorobenzene	BQL	6.41	1	5/3/2006
1,4-Dichlorobenzene	BQL	6.41	1	5/3/2006
trans-1,4-Dichloro-2-butene	BQL	6.41	1	5/3/2006
1,1-Dichloroethane	BQL	6.41	1	5/3/2006
1,1-Dichloroethene	BQL	6.41	1	5/3/2006
1,2-Dichloroethane	BQL	6.41	1	5/3/2006
cis-1,2-Dichloroethene	BQL	6.41	1	5/3/2006
trans-1,2-dichloroethene	BQL	6.41	1	5/3/2006
1,2-Dichloropropane	BQL	6.41	1	5/3/2006
1,3-Dichloropropane	BQL	6.41	1	5/3/2006
2,2-Dichloropropane	BQL	6.41	1	5/3/2006
1,1-Dichloropropene	BQL	6.41	1	5/3/2006
cis-1,3-Dichloropropene	BQL	6.41	1	5/3/2006
trans-1,3-Dichloropropene	BQL	6.41	1	5/3/2006
Dichlorodifluoromethane	BQL	6.41	1	5/3/2006
Diisopropyl ether (DIPE)	BQL	6.41	1	5/3/2006
Ethylbenzene	BQL	6.41	1	5/3/2006
Hexachlorobutadiene	BQL	6.41	1	5/3/2006



**Results for Volatiles  
by GCMS 8260-5035**

Client Sample ID: GP16-5  
 Client Project ID: NCDOT-Yancey/R-2519A  
 Lab Sample ID G106-597-16A  
 Lab Project ID: G106-597  
 Report Basis: Dry Weight

Analyzed By: JTF  
 Date Collected: 04-20-2006 15:20  
 Date Received: 4/25/2006  
 Matrix: Soil  
 %Solids: 75.4

Report Name Compound	Result UG/KG	Quantitation Limit UG/KG	Dilution Factor	Date Analyzed
2-Hexanone	BQL	6.41	1	5/3/2006
Iodomethane	BQL	6.41	1	5/3/2006
Isopropylbenzene	BQL	6.41	1	5/3/2006
4-Isopropyltoluene	BQL	6.41	1	5/3/2006
Methylene chloride	BQL	25.6	1	5/3/2006
4-Methyl-2-pentanone	BQL	6.41	1	5/3/2006
Methyl-tert-butyl ether (MTBE)	BQL	6.41	1	5/3/2006
Naphthalene	BQL	6.41	1	5/3/2006
n-Propyl benzene	BQL	6.41	1	5/3/2006
Styrene	BQL	6.41	1	5/3/2006
1,1,1,2-Tetrachloroethane	BQL	6.41	1	5/3/2006
1,1,2,2-Tetrachloroethane	BQL	6.41	1	5/3/2006
Tetrachloroethene	BQL	6.41	1	5/3/2006
Toluene	BQL	6.41	1	5/3/2006
1,2,3-Trichlorobenzene	BQL	6.41	1	5/3/2006
1,2,4-Trichlorobenzene	BQL	6.41	1	5/3/2006
Trichloroethene	BQL	6.41	1	5/3/2006
1,1,1-Trichloroethane	BQL	6.41	1	5/3/2006
1,1,2-Trichloroethane	BQL	6.41	1	5/3/2006
Trichlorofluoromethane	BQL	6.41	1	5/3/2006
1,2,3-Trichloropropane	BQL	6.41	1	5/3/2006
1,2,4-Trimethylbenzene	BQL	6.41	1	5/3/2006
1,3,5-Trimethylbenzene	BQL	6.41	1	5/3/2006
Vinyl chloride	BQL	6.41	1	5/3/2006
m-,p-Xylene	BQL	12.8	1	5/3/2006
o-Xylene	BQL	6.41	1	5/3/2006

	Spike Added	Spike Result	Percent Recovered
4-Bromofluorobenzene	50	52.3	105
1,2-Dichloroethane-d4	50	70.4	141
Toluene-d8	50	50.4	101

**Comments:**

**Flags:**

BQL = Below Quantitation Limits.

Reviewed By: JTF



Results for Volatiles  
by GCMS 8260-5035

Client Sample ID: GP17-6  
Client Project ID: NCDOT-Yancey/R-2519A  
Lab Sample ID G106-597-17A  
Lab Project ID: G106-597  
Report Basis: Dry Weight

Analyzed By: JTF  
Date Collected: 04-20-2006 15:36  
Date Received: 4/25/2006  
Matrix: Soil  
%Solids: 72.3

Report Name Compound	Result UG/KG	Quantitation Limit UG/KG	Dilution Factor	Date Analyzed
Acetone	297	95.0	1	5/3/2006
Benzene	BQL	9.50	1	5/3/2006
Bromobenzene	BQL	9.50	1	5/3/2006
Bromochloromethane	BQL	9.50	1	5/3/2006
Bromodichloromethane	BQL	9.50	1	5/3/2006
Bromoform	BQL	9.50	1	5/3/2006
Bromomethane	BQL	9.50	1	5/3/2006
2-Butanone	BQL	47.5	1	5/3/2006
n-Butylbenzene	BQL	9.50	1	5/3/2006
sec-Butylbenzene	BQL	9.50	1	5/3/2006
tert-Butylbenzene	BQL	9.50	1	5/3/2006
Carbon disulfide	BQL	9.50	1	5/3/2006
Carbon tetrachloride	BQL	9.50	1	5/3/2006
Chlorobenzene	BQL	9.50	1	5/3/2006
Chloroethane	BQL	9.50	1	5/3/2006
Chloroform	BQL	9.50	1	5/3/2006
Chloromethane	BQL	9.50	1	5/3/2006
2-Chlorotoluene	BQL	9.50	1	5/3/2006
4-Chlorotoluene	BQL	9.50	1	5/3/2006
Dibromochloromethane	BQL	9.50	1	5/3/2006
1,2-Dibromo-3-chloropropane	BQL	9.50	1	5/3/2006
Dibromomethane	BQL	9.50	1	5/3/2006
1,2-Dibromoethane (EDB)	BQL	9.50	1	5/3/2006
1,2-Dichlorobenzene	BQL	9.50	1	5/3/2006
1,3-Dichlorobenzene	BQL	9.50	1	5/3/2006
1,4-Dichlorobenzene	BQL	9.50	1	5/3/2006
trans-1,4-Dichloro-2-butene	BQL	9.50	1	5/3/2006
1,1-Dichloroethane	BQL	9.50	1	5/3/2006
1,1-Dichloroethene	BQL	9.50	1	5/3/2006
1,2-Dichloroethane	BQL	9.50	1	5/3/2006
cis-1,2-Dichloroethene	BQL	9.50	1	5/3/2006
trans-1,2-dichloroethene	BQL	9.50	1	5/3/2006
1,2-Dichloropropane	BQL	9.50	1	5/3/2006
1,3-Dichloropropane	BQL	9.50	1	5/3/2006
2,2-Dichloropropane	BQL	9.50	1	5/3/2006
1,1-Dichloropropene	BQL	9.50	1	5/3/2006
cis-1,3-Dichloropropene	BQL	9.50	1	5/3/2006
trans-1,3-Dichloropropene	BQL	9.50	1	5/3/2006
Dichlorodifluoromethane	BQL	9.50	1	5/3/2006
Diisopropyl ether (DIPE)	BQL	9.50	1	5/3/2006
Ethylbenzene	BQL	9.50	1	5/3/2006
Hexachlorobutadiene	BQL	9.50	1	5/3/2006



**Results for Volatiles  
by GCMS 8260-5035**

Client Sample ID: GP17-6  
 Client Project ID: NCDOT-Yancey/R-2519A  
 Lab Sample ID G106-597-17A  
 Lab Project ID: G106-597  
 Report Basis: Dry Weight

Analyzed By: JTF  
 Date Collected: 04-20-2006 15:36  
 Date Received: 4/25/2006  
 Matrix: Soil  
 %Solids: 72.3

Report Name Compound	Result UG/KG	Quantitation Limit UG/KG	Dilution Factor	Date Analyzed
2-Hexanone	BQL	9.50	1	5/3/2006
Iodomethane	BQL	9.50	1	5/3/2006
Isopropylbenzene	BQL	9.50	1	5/3/2006
4-Isopropyltoluene	BQL	9.50	1	5/3/2006
Methylene chloride	BQL	38.0	1	5/3/2006
4-Methyl-2-pentanone	BQL	9.50	1	5/3/2006
Methyl-tert-butyl ether (MTBE)	BQL	9.50	1	5/3/2006
Naphthalene	BQL	9.50	1	5/3/2006
n-Propyl benzene	BQL	9.50	1	5/3/2006
Styrene	BQL	9.50	1	5/3/2006
1,1,1,2-Tetrachloroethane	BQL	9.50	1	5/3/2006
1,1,2,2-Tetrachloroethane	BQL	9.50	1	5/3/2006
Tetrachloroethene	BQL	9.50	1	5/3/2006
Toluene	BQL	9.50	1	5/3/2006
1,2,3-Trichlorobenzene	BQL	9.50	1	5/3/2006
1,2,4-Trichlorobenzene	BQL	9.50	1	5/3/2006
Trichloroethene	BQL	9.50	1	5/3/2006
1,1,1-Trichloroethane	BQL	9.50	1	5/3/2006
1,1,2-Trichloroethane	BQL	9.50	1	5/3/2006
Trichlorofluoromethane	BQL	9.50	1	5/3/2006
1,2,3-Trichloropropane	BQL	9.50	1	5/3/2006
1,2,4-Trimethylbenzene	BQL	9.50	1	5/3/2006
1,3,5-Trimethylbenzene	BQL	9.50	1	5/3/2006
Vinyl chloride	BQL	9.50	1	5/3/2006
m-,p-Xylene	BQL	19.0	1	5/3/2006
o-Xylene	BQL	9.50	1	5/3/2006

	Spike Added	Spike Result	Percent Recovered
4-Bromofluorobenzene	50	53.1	106
1,2-Dichloroethane-d4	50	77.1	154
Toluene-d8	50	49	98

**Comments:**

**Flags:**

BQL = Below Quantitation Limits.

Reviewed By: JTF



Results for Metals

Client Sample ID: GP1-8  
Client Project ID: NCDOT-Yancey/R-2519A  
Lab Sample ID: G106-597-1  
Lab Project ID: G106-597  
Batch ID: 5033 5039  
Report Basis: Dry

Analyzed By: PSW  
Date Collected: 4/19/2006 16:49  
Date Received: 4/25/2006  
Matrix: SOIL  
Solids 72.49

Metals	Result	RL	DF	Units	Method	Date Analyzed
Arsenic	BQL	1.35	1	MG/KG	6010B	4/29/2006
Barium	86.0	13.5	1	MG/KG	6010B	4/29/2006
Cadmium	BQL	1.35	1	MG/KG	6010B	4/29/2006
Chromium	60.4	1.35	1	MG/KG	6010B	4/29/2006
Lead	16.2	1.35	1	MG/KG	6010B	4/29/2006
Mercury	0.0559	0.0265	1	MG/KG	7471	5/1/2006
Selenium	3.06	2.70	1	MG/KG	6010B	4/29/2006
Silver	BQL	1.35	1	MG/KG	6010B	4/29/2006

Comments

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

Reviewed By: PSW  
MET\_LIMS\_4.1



Results for Metals

Client Sample ID: GP2-6
Client Project ID: NCDOT-Yancey/R-2519A
Lab Sample ID: G106-597-2
Lab Project ID: G106-597
Batch ID: 5033 5039
Report Basis: Dry

Analyzed By: PSW
Date Collected: 4/19/2006 17:10
Date Received: 4/25/2006
Matrix: SOIL
Solids 78.85

Table with 7 columns: Metals, Result, RL, DF, Units, Method, Date Analyzed. Rows include Arsenic, Barium, Cadmium, Chromium, Lead, Mercury, Selenium, and Silver with their respective values and units.

Comments

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

Reviewed By: [Signature]
MET\_LIMS\_4.1





Results for Metals

Client Sample ID: GP3-8  
Client Project ID: NCDOT-Yancey/R-2519A  
Lab Sample ID: G106-597-3  
Lab Project ID: G106-597  
Batch ID: 5033 5039  
Report Basis: Dry

Analyzed By: PSW  
Date Collected: 4/19/2006 17:25  
Date Received: 4/25/2006  
Matrix: SOIL  
Solids 72.97

Metals	Result	RL	DF	Units	Method	Date Analyzed
Arsenic	2.06	1.34	1	MG/KG	6010B	4/29/2006
Barium	122	13.4	1	MG/KG	6010B	4/29/2006
Cadmium	BQL	1.34	1	MG/KG	6010B	4/29/2006
Chromium	39.8	1.34	1	MG/KG	6010B	4/29/2006
Lead	15.9	1.34	1	MG/KG	6010B	4/29/2006
Mercury	0.0717	0.0245	1	MG/KG	7471	5/1/2006
Selenium	BQL	2.69	1	MG/KG	6010B	4/29/2006
Silver	BQL	1.34	1	MG/KG	6010B	4/29/2006

Comments

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

Reviewed By: RV  
MET\_LIMS\_4.1



Results for Metals

Client Sample ID: GP4-8  
Client Project ID: NCDOT-Yancey/R-2519A  
Lab Sample ID: G106-597-4  
Lab Project ID: G106-597  
Batch ID: 5033 5039  
Report Basis: Dry

Analyzed By: PSW  
Date Collected: 4/19/2006 17:50  
Date Received: 4/25/2006  
Matrix: SOIL  
Solids 74.16

Metals	Result	RL	DF	Units	Method	Date Analyzed
Arsenic	2.76	1.32	1	MG/KG	6010B	4/29/2006
Barium	268	13.2	1	MG/KG	6010B	4/29/2006
Cadmium	BQL	1.32	1	MG/KG	6010B	4/29/2006
Chromium	18.4	1.32	1	MG/KG	6010B	4/29/2006
Lead	4.94	1.32	1	MG/KG	6010B	4/29/2006
Mercury	0.0337	0.0270	1	MG/KG	7471	5/1/2006
Selenium	BQL	2.64	1	MG/KG	6010B	4/29/2006
Silver	BQL	1.32	1	MG/KG	6010B	4/29/2006

Comments

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

Reviewed By: PSW  
MET\_LIMS\_4.1



Results for Metals

Client Sample ID: GP5  
Client Project ID: NCDOT-Yancey/R-2519A  
Lab Sample ID: G106-597-5  
Lab Project ID: G106-597  
Batch ID: 5033 5039  
Report Basis: Dry

Analyzed By: PSW  
Date Collected: 4/20/2006 12:30  
Date Received: 4/25/2006  
Matrix: SOIL  
Solids 73.04

Metals	Result	RL	DF	Units	Method	Date Analyzed
Arsenic	1.97	1.14	1	MG/KG	6010B	4/29/2006
Barium	72.8	11.4	1	MG/KG	6010B	4/29/2006
Cadmium	BQL	1.14	1	MG/KG	6010B	4/29/2006
Chromium	68.2	1.14	1	MG/KG	6010B	4/29/2006
Lead	9.85	1.14	1	MG/KG	6010B	4/29/2006
Mercury	0.146	0.0249	1	MG/KG	7471	5/1/2006
Selenium	BQL	2.28	1	MG/KG	6010B	4/29/2006
Silver	BQL	1.14	1	MG/KG	6010B	4/29/2006

Comments

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

Reviewed By: PSW  
MET\_LIMS\_4.1



Results for Metals

Client Sample ID: GP6-6  
Client Project ID: NCDOT-Yancey/R-2519A  
Lab Sample ID: G106-597-6  
Lab Project ID: G106-597  
Batch ID: 5033 5039  
Report Basis: Dry

Analyzed By: PSW  
Date Collected: 4/20/2006 13:00  
Date Received: 4/25/2006  
Matrix: SOIL  
Solids 82.75

Metals	Result	RL	DF	Units	Method	Date Analyzed
Arsenic	1.95	1.16	1	MG/KG	6010B	4/29/2006
Barium	89.6	11.6	1	MG/KG	6010B	4/29/2006
Cadmium	BQL	1.16	1	MG/KG	6010B	4/29/2006
Chromium	58.6	1.16	1	MG/KG	6010B	4/29/2006
Lead	116	1.16	1	MG/KG	6010B	4/29/2006
Mercury	0.0248	0.0228	1	MG/KG	7471	5/1/2006
Selenium	BQL	2.32	1	MG/KG	6010B	4/29/2006
Silver	BQL	1.16	1	MG/KG	6010B	4/29/2006

Comments

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

Reviewed By: PSW  
MET\_LIMS\_4.1



Results for Metals

Client Sample ID: GP7-7  
Client Project ID: NCDOT-Yancey/R-2519A  
Lab Sample ID: G106-597-7  
Lab Project ID: G106-597  
Batch ID: 5033 5039  
Report Basis: Dry

Analyzed By: PSW  
Date Collected: 4/20/2006 13:19  
Date Received: 4/25/2006  
Matrix: SOIL  
Solids 70.92

Metals	Result	RL	DF	Units	Method	Date Analyzed
Arsenic	5.47	1.36	1	MG/KG	6010B	4/29/2006
Barium	257	13.6	1	MG/KG	6010B	4/29/2006
Cadmium	BQL	1.36	1	MG/KG	6010B	4/29/2006
Chromium	85.2	1.36	1	MG/KG	6010B	4/29/2006
Lead	4.95	1.36	1	MG/KG	6010B	4/29/2006
Mercury	BQL	0.0276	1	MG/KG	7471	5/11/2006
Selenium	BQL	2.71	1	MG/KG	6010B	4/29/2006
Silver	BQL	1.36	1	MG/KG	6010B	4/29/2006

Comments

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

Reviewed By: PSW  
MET\_LIMS\_4.1



Results for Metals

Client Sample ID: GP8-7  
Client Project ID: NCDOT-Yancey/R-2519A  
Lab Sample ID: G106-597-8  
Lab Project ID: G106-597  
Batch ID: 5033 5039  
Report Basis: Dry

Analyzed By: PSW  
Date Collected: 4/20/2006 13:30  
Date Received: 4/25/2006  
Matrix: SOIL  
Solids 61.22

Metals	Result	RL	DF	Units	Method	Date Analyzed
Arsenic	1.62	1.51	1	MG/KG	6010B	4/29/2006
Barium	271	15.1	1	MG/KG	6010B	4/29/2006
Cadmium	BQL	1.51	1	MG/KG	6010B	4/29/2006
Chromium	144	1.51	1	MG/KG	6010B	4/29/2006
Lead	4.44	1.51	1	MG/KG	6010B	4/29/2006
Mercury	BQL	0.0327	1	MG/KG	7471	5/1/2006
Selenium	BQL	3.02	1	MG/KG	6010B	4/29/2006
Silver	BQL	1.51	1	MG/KG	6010B	4/29/2006

Comments

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

Reviewed By: PSW  
MET\_LIMS\_4.1



Results for Metals

Client Sample ID: GP8-7  
Client Project ID: NCDOT-Yancey/R-2519A  
Lab Sample ID: G106-597-8  
Lab Project ID: G106-597  
Batch ID: 5033 5039  
Report Basis: Dry

Analyzed By: PSW  
Date Collected: 4/20/2006 13:30  
Date Received: 4/25/2006  
Matrix: SOIL  
Solids 61.22

Metals	Result	RL	DF	Units	Method	Date Analyzed
Arsenic	1.62	1.51	1	MG/KG	6010B	4/29/2006
Barium	271	15.1	1	MG/KG	6010B	4/29/2006
Cadmium	BQL	1.51	1	MG/KG	6010B	4/29/2006
Chromium	144	1.51	1	MG/KG	6010B	4/29/2006
Lead	4.44	1.51	1	MG/KG	6010B	4/29/2006
Mercury	BQL	0.0327	1	MG/KG	7471	5/1/2006
Selenium	BQL	3.02	1	MG/KG	6010B	4/29/2006
Silver	BQL	1.51	1	MG/KG	6010B	4/29/2006

Comments

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

Reviewed By: PSW  
MET\_LIMS\_4.1



Results for Metals

Client Sample ID: GP9-4  
Client Project ID: NCDOT-Yancey/R-2519A  
Lab Sample ID: G106-597-9  
Lab Project ID: G106-597  
Batch ID: 5033 5039  
Report Basis: Dry

Analyzed By: PSW  
Date Collected: 4/20/2006 13:42  
Date Received: 4/25/2006  
Matrix: SOIL  
Solids 79.24

Metals	Result	RL	DF	Units	Method	Date Analyzed
Arsenic	8.56	1.11	1	MG/KG	6010B	4/29/2006
Barium	198	11.1	1	MG/KG	6010B	4/29/2006
Cadmium	BQL	1.11	1	MG/KG	6010B	4/29/2006
Chromium	30.6	1.11	1	MG/KG	6010B	4/29/2006
Lead	14.4	1.11	1	MG/KG	6010B	4/29/2006
Mercury	BQL	0.0234	1	MG/KG	7471	5/1/2006
Selenium	BQL	2.21	1	MG/KG	6010B	4/29/2006
Silver	BQL	1.11	1	MG/KG	6010B	4/29/2006

Comments

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

Reviewed By: PSW  
MET\_LIMS\_4.1





Results for Metals

Client Sample ID: GP10-5  
Client Project ID: NCDOT-Yancey/R-2519A  
Lab Sample ID: G106-597-10  
Lab Project ID: G106-597  
Batch ID: 5033 5039  
Report Basis: Dry

Analyzed By: PSW  
Date Collected: 4/20/2006 13:50  
Date Received: 4/25/2006  
Matrix: SOIL  
Solids 61.70

Metals	Result	RL	DF	Units	Method	Date Analyzed
Arsenic	BQL	1.56	1	MG/KG	6010B	4/29/2006
Barium	78.3	15.6	1	MG/KG	6010B	4/29/2006
Cadmium	BQL	1.56	1	MG/KG	6010B	4/29/2006
Chromium	125	1.56	1	MG/KG	6010B	4/29/2006
Lead	BQL	1.56	1	MG/KG	6010B	4/29/2006
Mercury	BQL	0.0312	1	MG/KG	7471	5/1/2006
Selenium	BQL	3.12	1	MG/KG	6010B	4/29/2006
Silver	BQL	1.56	1	MG/KG	6010B	4/29/2006

Comments

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

Reviewed By: PSW  
MET\_LIMS\_4.1



Results for Metals

Client Sample ID: GP11-5  
Client Project ID: NCDOT-Yancey/R-2519A  
Lab Sample ID: G106-597-11  
Lab Project ID: G106-597  
Batch ID: 5033 5039  
Report Basis: Dry

Analyzed By: PSW  
Date Collected: 4/20/2006 14:00  
Date Received: 4/25/2006  
Matrix: SOIL  
Solids 59.64

Metals	Result	RL	DF	Units	Method	Date Analyzed
Arsenic	BQL	1.45	1	MG/KG	6010B	4/29/2006
Barium	87.1	14.5	1	MG/KG	6010B	4/29/2006
Cadmium	BQL	1.45	1	MG/KG	6010B	4/29/2006
Chromium	85.1	1.45	1	MG/KG	6010B	4/29/2006
Lead	2.42	1.45	1	MG/KG	6010B	4/29/2006
Mercury	BQL	0.0305	1	MG/KG	7471	5/1/2006
Selenium	BQL	2.89	1	MG/KG	6010B	4/29/2006
Silver	BQL	1.45	1	MG/KG	6010B	4/29/2006

Comments

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

Reviewed By: ew  
MET\_LIMS\_4.1



Results for Metals

Client Sample ID: GP12-4  
Client Project ID: NCDOT-Yancey/R-2519A  
Lab Sample ID: G106-597-12  
Lab Project ID: G106-597  
Batch ID: 5033 5039  
Report Basis: Dry

Analyzed By: PSW  
Date Collected: 4/20/2006 14:13  
Date Received: 4/25/2006  
Matrix: SOIL  
Solids 68.55

Metals	Result	RL	DF	Units	Method	Date Analyzed
Arsenic	BQL	1.24	1	MG/KG	6010B	4/29/2006
Barium	55.3	12.4	1	MG/KG	6010B	4/29/2006
Cadmium	BQL	1.24	1	MG/KG	6010B	4/29/2006
Chromium	32.2	1.24	1	MG/KG	6010B	4/29/2006
Lead	2.67	1.24	1	MG/KG	6010B	4/29/2006
Mercury	BQL	0.0256	1	MG/KG	7471	5/1/2006
Selenium	BQL	2.47	1	MG/KG	6010B	4/29/2006
Silver	BQL	1.24	1	MG/KG	6010B	4/29/2006

Comments

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

Reviewed By: PSW  
MET\_LIMS\_4.1



Results for Metals

Client Sample ID: GP13-6  
Client Project ID: NCDOT-Yancey/R-2519A  
Lab Sample ID: G106-597-13  
Lab Project ID: G106-597  
Batch ID: 5033 5039  
Report Basis: Dry

Analyzed By: PSW  
Date Collected: 4/20/2006 14:25  
Date Received: 4/25/2006  
Matrix: SOIL  
Solids 70.86

Metals	Result	RL	DF	Units	Method	Date Analyzed
Arsenic	5.93	1.24	1	MG/KG	6010B	4/29/2006
Barium	328	12.4	1	MG/KG	6010B	4/29/2006
Cadmium	BQL	1.24	1	MG/KG	6010B	4/29/2006
Chromium	34.6	1.24	1	MG/KG	6010B	4/29/2006
Lead	24.0	1.24	1	MG/KG	6010B	4/29/2006
Mercury	0.0581	0.0277	1	MG/KG	7471	5/1/2006
Selenium	BQL	2.48	1	MG/KG	6010B	4/29/2006
Silver	BQL	1.24	1	MG/KG	6010B	4/29/2006

Comments

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

Reviewed By:       
MET\_LIMS\_4.1



Results for Metals

Client Sample ID: GP14-6  
Client Project ID: NCDOT-Yancey/R-2519A  
Lab Sample ID: G106-597-14  
Lab Project ID: G106-597  
Batch ID: 5033 5039  
Report Basis: Dry

Analyzed By: PSW  
Date Collected: 4/20/2006 14:40  
Date Received: 4/25/2006  
Matrix: SOIL  
Solids 76.30

Metals	Result	RL	DF	Units	Method	Date Analyzed
Arsenic	2.98	1.15	1	MG/KG	6010B	4/29/2006
Barium	117	11.5	1	MG/KG	6010B	4/29/2006
Cadmium	BQL	1.15	1	MG/KG	6010B	4/29/2006
Chromium	47.6	1.15	1	MG/KG	6010B	4/29/2006
Lead	12.9	1.15	1	MG/KG	6010B	4/29/2006
Mercury	0.0522	0.0257	1	MG/KG	7471	5/1/2006
Selenium	BQL	2.30	1	MG/KG	6010B	4/29/2006
Silver	BQL	1.15	1	MG/KG	6010B	4/29/2006

Comments

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

Reviewed By:       
MET\_LIMS\_4.1



Results for Metals

Client Sample ID: GP15-5
Client Project ID: NCDOT-Yancey/R-2519A
Lab Sample ID: G106-597-15
Lab Project ID: G106-597
Batch ID: 5033 5039
Report Basis: Dry

Analyzed By: PSW
Date Collected: 4/20/2006 15:14
Date Received: 4/25/2006
Matrix: SOIL
Solids 78.35

Table with 7 columns: Metals, Result, RL, DF, Units, Method, Date Analyzed. Rows include Arsenic, Barium, Cadmium, Chromium, Lead, Mercury, Selenium, and Silver with their respective values and analysis dates.

Comments

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

Reviewed By: [Signature]
MET\_LIMS\_4.1



Results for Metals

Client Sample ID: GP16-5  
Client Project ID: NCDOT-Yancey/R-2519A  
Lab Sample ID: G106-597-16  
Lab Project ID: G106-597  
Batch ID: 5033 5039  
Report Basis: Dry

Analyzed By: PSW  
Date Collected: 4/20/2006 15:20  
Date Received: 4/25/2006  
Matrix: SOIL  
Solids 75.44

Metals	Result	RL	DF	Units	Method	Date Analyzed
Arsenic	1.51	1.21	1	MG/KG	6010B	4/29/2006
Barium	202	12.1	1	MG/KG	6010B	4/29/2006
Cadmium	BQL	1.21	1	MG/KG	6010B	4/29/2006
Chromium	42.3	1.21	1	MG/KG	6010B	4/29/2006
Lead	64.2	1.21	1	MG/KG	6010B	4/29/2006
Mercury	BQL	0.0255	1	MG/KG	7471	5/1/2006
Selenium	BQL	2.41	1	MG/KG	6010B	4/29/2006
Silver	BQL	1.21	1	MG/KG	6010B	4/29/2006

Comments

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

Reviewed By: ew  
MET\_LIMS\_4.1



Results for Metals

Client Sample ID: GP17-6  
Client Project ID: NCDOT-Yancey/R-2519A  
Lab Sample ID: G106-597-17  
Lab Project ID: G106-597  
Batch ID: 5033 5039  
Report Basis: Dry

Analyzed By: PSW  
Date Collected: 4/20/2006 15:36  
Date Received: 4/25/2006  
Matrix: SOIL  
Solids 72.26

Metals	Result	RL	DF	Units	Method	Date Analyzed
Arsenic	BQL	1.19	1	MG/KG	6010B	4/29/2006
Barium	59.9	11.9	1	MG/KG	6010B	4/29/2006
Cadmium	BQL	1.19	1	MG/KG	6010B	4/29/2006
Chromium	73.5	1.19	1	MG/KG	6010B	4/29/2006
Lead	9.28	1.19	1	MG/KG	6010B	4/29/2006
Mercury	0.102	0.0247	1	MG/KG	7471	5/1/2006
Selenium	BQL	2.39	1	MG/KG	6010B	4/29/2006
Silver	BQL	1.19	1	MG/KG	6010B	4/29/2006

Comments

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

Reviewed By:   
MET\_LIMS\_4.1



## 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

% solids = 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.



Full Service Analytical & Environmental Solutions

449 Springbrook Road • P.O. Box 240543 • Charlotte, NC 28224-0543  
Phone: 704/529-6964 • Fax: 704/525-0409

Client Company Name: EFINC

Report To/Contact Name: Bob Shurt

Reporting Address: 210 BATTLESITE DRIVE BLDG  
Suite 200 Morrisville NC 27560

Phone: 919-544-7500 Fax (Yes) (No): 919-544-2474

Email (Yes) (No) Email Address: hshurt@efi.com

EDD Type: PDF Excel Other

Site Location Name: NC001- YANCEY

Site Location Physical Address: PAR/123

706-597

# CHAIN OF CUSTODY RECORD

PAGE 1 OF 2 QUOTE # TO ENSURE PROPER BILLING:

Project Name: NC001- YANCEY / R-25RA

Short Hold Analysis: (Yes) (No) UST Project: (Yes) (No)

\*Please ATTACH any project specific reporting (QC LEVEL I III IV) provisions and/or QC Requirements

Invoice To: NC001

**LAB USE ONLY**

Sample Intact upon arrival? YES NO

Received on wet ice? YES NO

Proper Preservation indicated? YES NO

Received within holding time? YES NO

Custody seals intact? YES NO

Locktites in all moist headspace? YES NO

Proper containers used? YES NO

Purchase Order No./Billing Reference \_\_\_\_\_

Requested Due Date  1 Day  2 Days  3 Days  4 Days  5 Days

\*Working Days\*  6-9 Days  Standard 10 days

Samples received after 15:00 will be processed next business day. Turnaround time is based on business days, excluding weekends and holidays.

(SEE REVERSE FOR TERMS & CONDITIONS REGARDING SERVICES RENDERED BY PRISM LABORATORIES, INC. TO CLIENT)

TO BE FILLED IN BY CLIENT/SAMPLING PERSONNEL

Certification: NELAC USACE FL NC

Water Chlorinated: YES NO OTHER N/A

Sample Iced Upon Collection: YES NO

CLIENT SAMPLE DESCRIPTION	DATE COLLECTED	TIME COLLECTED MILITARY HOURS	MATRIX (SOIL, WATER OR SLUDGE)	SAMPLE CONTAINER			PRESERVATIVES	REMARKS	PRISM LAB ID NO.
				*TYPE SEE BELOW	NO.	SIZE			
GP1-8	4-9-06	1649	SOIL					X	
GP2-6		1710						X	
GP3-8		1725						X	
GP4-8		1750						X	
GP5	4-20-06								
GP6-6		1300							
GP7-7		1319							
GP8-7		1330							
GP9-4		1342							
GP10-5		1350							

Sampler's Signature: [Signature] Sampled By (Print Name): Robert M. Shurt Affiliation: \_\_\_\_\_

Upon relinquishing, this Chain of Custody is your authorization for Prism to proceed with the analyses as requested above. Any changes must be submitted in writing to the Prism Project Manager. There will be charges for any changes after analyses have been initialized.

Relinquished By (Signature): [Signature] Received By (Signature): [Signature] Date: 4/17/06 Military/Hours: 1030

Relinquished By (Signature): [Signature] Received By (Signature): \_\_\_\_\_ Date: \_\_\_\_\_ Military/Hours: \_\_\_\_\_

Relinquished By (Signature): \_\_\_\_\_ Received By (Signature): \_\_\_\_\_ Date: \_\_\_\_\_ Military/Hours: \_\_\_\_\_

Relinquished By (Signature): \_\_\_\_\_ Received By (Signature): \_\_\_\_\_ Date: \_\_\_\_\_ Military/Hours: \_\_\_\_\_

Method: GC NOTE: ALL SAMPLE COOLERS SHOULD BE TAPPED SHIRT WITH GUSTORY SEALS FOR TRANSPORTATION TO THE LABORATORY. SAMPLES ARE NOT ACCEPTED AND VERIFIED AGAINST COC UNTIL RECEIVED AT THE LABORATORY.

CONTAINER:  Amber  Clear  Glass  Plastic  Teflon-Lined Cap

GROUNDWATER:  Hand-delivered  Prism Field Service  Other

DRINKING WATER:  DNC  OSC

SOLID WASTE:  DNC  OSC

RCRA:  DNC  OSC

CERCLA:  DNC  OSC

LANDFILL:  DNC  OSC

OTHER:  DNC  OSC

Additional Comments: cal 1.19°C  
cal 2.0°C  
cal 4.2°C

PRESS DOWN FIRMLY - 3 COPIES

**PRISM USE ONLY**

Site Arrival Time: \_\_\_\_\_

Site Departure Time: \_\_\_\_\_

Field Tech Fee: \_\_\_\_\_

Mileage: \_\_\_\_\_

SEE REVERSE FOR TERMS & CONDITIONS

OPTIONAL



Full Service Analytical & Environmental Solutions

449 Springbrook Road • P.O. Box 240543 • Charlotte, NC 28224-0543  
Phone: 704/529-6364 • Fax: 704/525-0409

Client Company Name: ET, INC.

Report To/Contact Name: Bob Smith

Reporting Address: 2101 GARLAND DRIVE

Suite 200 MONROE, NC 27560

Phone: 919-544-7500 Fax (est) (no): 919-544-2199

Email (Yes/No) Email Address: bsmith@et.com

EDD Type: PDF Excel Other

Site Location Name: PARCEL 123

Site Location Physical Address: NCMT-YHWCY

# CHAIN OF CUSTODY RECORD

PAGE 2 OF 2 QUOTE # TO ENSURE PROPER BILLING:

Project Name: NCMT-YHWCY / R-259A

Short Hold Analysis: Yes (No) UST Project: Yes (No)

\*Please ATTACH any project specific reporting (QC LEVEL III III IV)

provisions and/or QC Requirements  
Invoice To: NCMT  
Address: \_\_\_\_\_

Purchase Order No./Billing Reference \_\_\_\_\_

Requested Due Date  1 Day  2 Days  3 Days  4 Days  5 Days

\*Working Days\*  6-9 Days  Standard 10 days

Samples received after 15:00 will be processed next business day.

Turnaround time is based on business days, excluding weekends and holidays.

(SEE REVERSE FOR TERMS & CONDITIONS REGARDING SERVICES RENDERED BY PRISM LABORATORIES, INC. TO CLIENT)

TO BE FILLED IN BY CLIENT/SAMPLING PERSONNEL  
Certification: NELAC USACE FL NC  
Water Chlorinated: YES NO OTHER N/A  
Sample Lead Upon Collection: YES NO

LAB USE ONLY  
Samples in contact upon arrival? YES NO NA  
Received at ambient temperature? YES NO NA  
PROPER PRESERVATION/TEMPERATURE MAINTAINED? YES NO NA  
Received within holding times? YES NO NA  
CUSTODY SEALS UNBROKEN? YES NO NA  
VOLATILES sealed without headspace? YES NO NA  
PROPER CONTAINERS USED? YES NO NA

CLIENT SAMPLE DESCRIPTION	DATE COLLECTED	TIME COLLECTED MILITARY HOURS	MATRIX (SOIL, WATER OR SLUDGE)	SAMPLE CONTAINER			PRESERVATION TYPES	ANALYSES REQUESTED	REMARKS	PRISM LAB ID NO.
				TYPE	NO.	SIZE				
GP11-5	4-20-06	1400	SOIL							
GP12-4		1413								
GP13-6		1425								
GP14-6		1440								
GP15-5		1514								
GP16-5		1520								
GP17-6		1536								

Sampler's Signature: [Signature] Sampled By (Print Name): ROBERT M. SMITH Affiliation: \_\_\_\_\_

Upon relinquishing this Chain of Custody is your authorization for Prism to proceed with the analyses as requested above. Any changes must be submitted in writing to the Prism Project Manager. There will be charges for any changes after analyses have been initialized.

Received By (Signature): [Signature] Date: 4/25/06 Military/Hours: 1030

Received By (Signature): \_\_\_\_\_ Date: \_\_\_\_\_ Military/Hours: \_\_\_\_\_

Received For Prism Laboratories By: \_\_\_\_\_ Date: \_\_\_\_\_

Additional Comments: cool in 1-1.9°C  
cool in 2-2.0°C  
cool in 3-4.1°C

PRESS DOWN FIRMLY - 3 COPIES

PRISM USE ONLY  
Site Arrival Time: \_\_\_\_\_  
Site Departure Time: \_\_\_\_\_  
Field Tech Fee: \_\_\_\_\_  
Mileage: \_\_\_\_\_

NOTE: ALL SAMPLE COOLERS SHOULD BE TAPPED SHUT WITH CUSTODY SEALS FOR TRANSPORTATION TO THE LABORATORY. SAMPLES ARE NOT ACCEPTED AND VERIFIED AGAINST COC UNTIL RECEIVED AT THE LABORATORY.

Method: SS  Hand-delivered  Prism Field Service  Other \_\_\_\_\_

NPDES: SS  GROUNDWATER:  DRINKING WATER:  SOLID WASTE:  RCRA:  CERCLA  LANDFILL  OTHER:

CONTAINER: SS  A = Amber C = Clear G = Glass P = Plastic TL = Teflon-Lined Cap  Volatile Organics Analysis (Zero Head Space)

SEE REVERSE FOR TERMS & CONDITIONS

OF 1

# Case Narrative



Date: 05/10/06

Company: NC Dept. of Transportation  
Contact: c/o EI / Bob Shaut  
Address: Suite 200  
2101 Gateway Centre Blvd.  
Morrisville, NC 27560

Client Project ID: Parcel 123/NC DOT-Burnsville NC  
Client Project Name or No: WBS# 356091.1  
Prism COC Group No: G0506005  
Collection Date(s): 04/26/06  
Lab Submittal Date: 04/28/06

This data package contains the analytical results for the project identified above and includes a Case Narrative, Laboratory Report and Quality Control Data totaling 28 pages. A chain-of-custody is also attached for the samples submitted to Prism for this project.

Data qualifiers are flagged individually on each sample. A Key Reference for the data qualifiers appears at the bottom of this page. Quality control statements and/or sample specific remarks are included in the sample comments section of the laboratory report for each sample affected.

Please call if you have any questions relating to this analytical report.

Data Reviewed by: Robbi A. Jones

Signature: Robbi A. Jones

Review Date: 05/10/06

Project Manager: Angela D. Overcash

Signature: Angela D. Overcash

Approval Date: 05/10/06

## Data Qualifier Key Reference:

- #: Result outside of QC Limits
- B: Compound also detected in the method blank
- DO: Compound diluted out.
- E: Estimated concentration, calibration range exceeded
- J: The analyte was positively identified but the value is estimated below the reporting limit
- JH: Estimated concentration with a high bias
- JL: Estimated concentration with a low bias
- M: A matrix effect is present
- T: Tentatively identified compound. The concentration is estimated.

Notes: This report should not be reproduced, except in its entirety, without the written consent of Prism Laboratories, Inc. The results in this report relate only to the samples submitted for analysis.

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N. C. Department of Transportation  
 Attn: Bob Shaut/EI  
 c/o Environmental Investigations, Inc  
 2101 Gateway Centre Blvd. Ste 200  
 Morrisville, NC 27560

Project Name: Burnsville, NC  
 Project ID: NCDOT - Yancey - Parcel 123  
 Project No.: WBS #356091.1  
 Sample Matrix: Water

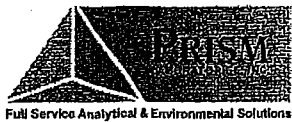
Client Sample ID: MW-1  
 Prism Sample ID: 149544  
 COC Group: G0506005  
 Time Collected: 04/26/06 8:30  
 Time Submitted: 04/28/06 16:45

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
<b><u>Aromatic and Halogenated Volatiles by GC/PID-ELCD</u></b>									
1,1,1,2-Tetrachloroethane	BRL	µg/L	0.50	0.17	1	6230D	05/04/06 12:36	erussell	Q14508
1,1,1-Trichloroethane	BRL	µg/L	0.50	0.080	1	6230D	05/04/06 12:36	erussell	Q14508
1,1,1,2-Tetrachloroethane	BRL	µg/L	0.50	0.11	1	6230D	05/04/06 12:36	erussell	Q14508
1,1,2-Trichloroethane	BRL	µg/L	0.50	0.080	1	6230D	05/04/06 12:36	erussell	Q14508
1,1-Dichloroethane	BRL	µg/L	0.50	0.11	1	6230D	05/04/06 12:36	erussell	Q14508
1,1-Dichloroethene	BRL	µg/L	0.50	0.13	1	6230D	05/04/06 12:36	erussell	Q14508
1,1-Dichloropropene	BRL	µg/L	0.50	0.090	1	6230D	05/04/06 12:36	erussell	Q14508
1,2,3-Trichlorobenzene	BRL	µg/L	0.50	0.12	1	6230D	05/04/06 12:36	erussell	Q14508
1,2,3-Trichloropropane	BRL	µg/L	0.50	0.11	1	6230D	05/04/06 12:36	erussell	Q14508
1,2,4-Trichlorobenzene	BRL	µg/L	0.50	0.040	1	6230D	05/04/06 12:36	erussell	Q14508
1,2,4-Trimethylbenzene	BRL	µg/L	0.50	0.10	1	6230D	05/04/06 12:36	erussell	Q14508
1,2-Dibromo-3-chloropropane	BRL	µg/L	0.50	0.14	1	6230D	05/04/06 12:36	erussell	Q14508
1,2-Dibromoethane (EDB)	BRL	µg/L	0.50	0.12	1	6230D	05/04/06 12:36	erussell	Q14508
1,2-Dichlorobenzene	BRL	µg/L	0.50	0.12	1	6230D	05/04/06 12:36	erussell	Q14508
1,2-Dichloroethane	BRL	µg/L	0.50	0.070	1	6230D	05/04/06 12:36	erussell	Q14508
1,2-Dichloropropane	BRL	µg/L	0.50	0.12	1	6230D	05/04/06 12:36	erussell	Q14508
1,3,5-Trimethylbenzene	BRL	µg/L	0.50	0.10	1	6230D	05/04/06 12:36	erussell	Q14508
1,3-Dichlorobenzene	BRL	µg/L	0.50	0.050	1	6230D	05/04/06 12:36	erussell	Q14508
1,3-Dichloropropane	BRL	µg/L	0.50	0.070	1	6230D	05/04/06 12:36	erussell	Q14508
1,4-Dichlorobenzene	BRL	µg/L	0.50	0.060	1	6230D	05/04/06 12:36	erussell	Q14508
2,2-Dichloropropane	BRL	µg/L	0.50	0.13	1	6230D	05/04/06 12:36	erussell	Q14508
2-Chlorotoluene	BRL	µg/L	0.50	0.21	1	6230D	05/04/06 12:36	erussell	Q14508
4-Chlorotoluene	BRL	µg/L	0.50	0.090	1	6230D	05/04/06 12:36	erussell	Q14508
Benzene	BRL	µg/L	0.50	0.060	1	6230D	05/04/06 12:36	erussell	Q14508
Bromobenzene	BRL	µg/L	0.50	0.13	1	6230D	05/04/06 12:36	erussell	Q14508
Bromochloromethane	BRL	µg/L	0.50	0.090	1	6230D	05/04/06 12:36	erussell	Q14508
Bromodichloromethane	BRL	µg/L	0.50	0.090	1	6230D	05/04/06 12:36	erussell	Q14508

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NC Certification No. 402  
 SC Certification No. 99012  
 NC Drinking Water Cert. No. 37735

# Laboratory Report

05/10/06

N. C. Department of Transportation  
 Attn: Bob Shaut/EI  
 c/o Environmental Investigations, Inc  
 2101 Gateway Centre Blvd. Ste 200  
 Morrisville, NC 27560

Project Name: Burnsville, NC  
 Project ID: NCDOT - Yancey - Parcel 123  
 Project No.: WBS #356091.1  
 Sample Matrix: Water

Client Sample ID: MW-1  
 Prism Sample ID: 149544  
 COC Group: G0506005  
 Time Collected: 04/26/06 8:30  
 Time Submitted: 04/28/06 16:45

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
Bromoform	BRL	µg/L	0.50	0.050	1	6230D	05/04/06 12:36	erussell	Q14508
Bromomethane	BRL	µg/L	0.50	0.27	1	6230D	05/04/06 12:36	erussell	Q14508
Carbon Tetrachloride	BRL	µg/L	0.50	0.060	1	6230D	05/04/06 12:36	erussell	Q14508
Chlorobenzene	BRL	µg/L	0.50	0.17	1	6230D	05/04/06 12:36	erussell	Q14508
Chloroethane	BRL	µg/L	0.50	0.41	1	6230D	05/04/06 12:36	erussell	Q14508
Chloroform	BRL	µg/L	0.50	0.060	1	6230D	05/04/06 12:36	erussell	Q14508
Chloromethane	BRL	µg/L	0.50	0.14	1	6230D	05/04/06 12:36	erussell	Q14508
cis-1,2-Dichloroethene	91	µg/L	0.50	0.13	1	6230D	05/04/06 12:36	erussell	Q14508
cis-1,3-Dichloropropene	BRL	µg/L	0.50	0.14	1	6230D	05/04/06 12:36	erussell	Q14508
Dibromochloromethane	BRL	µg/L	0.50	0.080	1	6230D	05/04/06 12:36	erussell	Q14508
Dibromomethane	BRL	µg/L	0.50	0.13	1	6230D	05/04/06 12:36	erussell	Q14508
Dichlorodifluoromethane	BRL	µg/L	0.50	0.14	1	6230D	05/04/06 12:36	erussell	Q14508
Ethylbenzene	BRL	µg/L	0.50	0.16	1	6230D	05/04/06 12:36	erussell	Q14508
Hexachlorobutadiene	BRL	µg/L	0.50	0.17	1	6230D	05/04/06 12:36	erussell	Q14508
Isopropyl ether (IPE)	BRL	µg/L	0.50	0.24	1	6230D	05/04/06 12:36	erussell	Q14508
Isopropylbenzene	BRL	µg/L	0.50	0.10	1	6230D	05/04/06 12:36	erussell	Q14508
m,p-Xylenes	BRL	µg/L	1.0	0.43	1	6230D	05/04/06 12:36	erussell	Q14508
Methyl t-butyl ether (MTBE)	BRL	µg/L	0.50	0.14	1	6230D	05/04/06 12:36	erussell	Q14508
Methylene chloride	BRL	µg/L	2.0	0.75	1	6230D	05/04/06 12:36	erussell	Q14508
n-Butylbenzene	BRL	µg/L	0.50	0.19	1	6230D	05/04/06 12:36	erussell	Q14508
n-Propylbenzene	BRL	µg/L	0.50	0.10	1	6230D	05/04/06 12:36	erussell	Q14508
Naphthalene	BRL	µg/L	0.50	0.10	1	6230D	05/04/06 12:36	erussell	Q14508
o-Xylene	BRL	µg/L	0.50	0.16	1	6230D	05/04/06 12:36	erussell	Q14508
p-Isopropyltoluene	BRL	µg/L	0.50	0.17	1	6230D	05/04/06 12:36	erussell	Q14508
sec-Butylbenzene	BRL	µg/L	0.50	0.12	1	6230D	05/04/06 12:36	erussell	Q14508
Styrene	BRL	µg/L	0.50	0.050	1	6230D	05/04/06 12:36	erussell	Q14508
tert-Butylbenzene	BRL	µg/L	0.50	0.13	1	6230D	05/04/06 12:36	erussell	Q14508
Tetrachloroethene	BRL	µg/L	0.50	0.11	1	6230D	05/04/06 12:36	erussell	Q14508

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# Laboratory Report

05/10/06

N. C. Department of Transportation  
 Attn: Bob Shaut/EI  
 c/o Environmental Investigations, Inc  
 2101 Gateway Centre Blvd. Ste 200  
 Morrisville, NC 27560

Project Name: Bumsville, NC  
 Project ID: NCDOT - Yancey - Parcel 123  
 Project No.: WBS #356091.1  
 Sample Matrix: Water  
 Client Sample ID: MW-1  
 Prism Sample ID: 149544  
 COC Group: G0506005  
 Time Collected: 04/28/06 8:30  
 Time Submitted: 04/28/06 16:45

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
Toluene	BRL	µg/L	0.50	0.11	1	6230D	05/04/06 12:36	erussell	Q14508
trans-1,2-Dichloroethene	BRL	µg/L	0.50	0.27	1	6230D	05/04/06 12:36	erussell	Q14508
trans-1,3-Dichloropropene	BRL	µg/L	0.50	0.070	1	6230D	05/04/06 12:36	erussell	Q14508
Trichloroethene	22	µg/L	0.50	0.10	1	6230D	05/04/06 12:36	erussell	Q14508
Trichlorofluoromethane	BRL	µg/L	0.50	0.19	1	6230D	05/04/06 12:36	erussell	Q14508
Vinyl chloride	BRL	µg/L	0.50	0.24	1	6230D	05/04/06 12:36	erussell	Q14508

Surrogate	% Recovery	Control Limits
Bromochlorobenzene-ELCD	103	60 - 144
1,4-Difluorobenzene-PID	95	50 - 141

**Semivolatile Organic Compounds by GC/MS**

1,2,4-Trichlorobenzene	BRL	µg/L	10	2.5	1	625	05/06/06 2:46	kelliott	Q14589
1,2-Dichlorobenzene	BRL	µg/L	10	2.7	1	625	05/06/06 2:46	kelliott	Q14589
1,3-Dichlorobenzene	BRL	µg/L	10	1.9	1	625	05/06/06 2:46	kelliott	Q14589
1,4-Dichlorobenzene	BRL	µg/L	10	2.4	1	625	05/06/06 2:46	kelliott	Q14589
2,4,5-Trichlorophenol	BRL	µg/L	10	2.6	1	625	05/06/06 2:46	kelliott	Q14589
2,4,6-Trichlorophenol	BRL	µg/L	10	1.8	1	625	05/06/06 2:46	kelliott	Q14589
2,4-Dichlorophenol	BRL	µg/L	10	1.9	1	625	05/06/06 2:46	kelliott	Q14589
2,4-Dimethylphenol	BRL	µg/L	10	0.67	1	625	05/06/06 2:46	kelliott	Q14589
2,4-Dinitrophenol	BRL	µg/L	50	0.67	1	625	05/06/06 2:46	kelliott	Q14589
2,4-Dinitrotoluene	BRL	µg/L	10	0.84	1	625	05/06/06 2:46	kelliott	Q14589
2,6-Dinitrotoluene	BRL	µg/L	10	1.6	1	625	05/06/06 2:46	kelliott	Q14589
2-Chloronaphthalene	BRL	µg/L	10	2.2	1	625	05/06/06 2:46	kelliott	Q14589
2-Chlorophenol	BRL	µg/L	10	2.2	1	625	05/06/06 2:46	kelliott	Q14589
2-Methylphenol	BRL	µg/L	10	2.8	1	625	05/06/06 2:46	kelliott	Q14589
2-Nitrophenol	BRL	µg/L	10	2.3	1	625	05/06/06 2:46	kelliott	Q14589
3&4-Methylphenol	BRL	µg/L	10	3.7	1	625	05/06/06 2:46	kelliott	Q14589

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NC Certification No. 402  
 SC Certification No. 99012  
 NC Drinking Water Cert. No. 37735

# Laboratory Report

05/10/06

N. C. Department of Transportation  
 Attn: Bob Shaut/EI  
 c/o Environmental Investigations, Inc  
 2101 Gateway Centre Blvd. Ste 200  
 Morrisville, NC 27560

Project Name: Burnsville, NC  
 Project ID: NCDOT - Yancey - Parcel 123  
 Project No.: WBS #356091.1  
 Sample Matrix: Water

Client Sample ID: MW-1  
 Prism Sample ID: 149544  
 COC Group: G0506005  
 Time Collected: 04/26/06 8:30  
 Time Submitted: 04/28/06 16:45

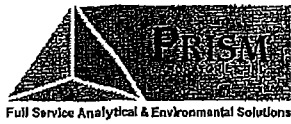
Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
3,3'-Dichlorobenzidine	BRL	µg/L	50	9.4	1	625	05/06/06 2:46	kelliott	Q14589
4,6-Dinitro-2-methylphenol	BRL	µg/L	50	0.88	1	625	05/06/06 2:46	kelliott	Q14589
4-Bromophenylphenylether	BRL	µg/L	10	2.0	1	625	05/06/06 2:46	kelliott	Q14589
4-Chloro-3-methylphenol	BRL	µg/L	10	1.7	1	625	05/06/06 2:46	kelliott	Q14589
4-Chlorophenylphenylether	BRL	µg/L	10	1.6	1	625	05/06/06 2:46	kelliott	Q14589
4-Nitrophenol	BRL	µg/L	50	0.60	1	625	05/06/06 2:46	kelliott	Q14589
Acenaphthene	BRL	µg/L	10	1.9	1	625	05/06/06 2:46	kelliott	Q14589
Acenaphthylene	BRL	µg/L	10	2.1	1	625	05/06/06 2:46	kelliott	Q14589
Anthracene	BRL	µg/L	10	0.98	1	625	05/06/06 2:46	kelliott	Q14589
Benzo(a)anthracene	BRL	µg/L	10	0.94	1	625	05/06/06 2:46	kelliott	Q14589
Benzo(a)pyrene	BRL	µg/L	10	1.0	1	625	05/06/06 2:46	kelliott	Q14589
Benzo(b)fluoranthene	BRL	µg/L	10	1.7	1	625	05/06/06 2:46	kelliott	Q14589
Benzo(g,h,i)perylene	BRL	µg/L	10	2.1	1	625	05/06/06 2:46	kelliott	Q14589
Benzo(k)fluoranthene	BRL	µg/L	10	1.9	1	625	05/06/06 2:46	kelliott	Q14589
Bis(2-chloroethoxy)methane	BRL	µg/L	10	2.2	1	625	05/06/06 2:46	kelliott	Q14589
Bis(2-chloroethyl)ether	BRL	µg/L	10	2.1	1	625	05/06/06 2:46	kelliott	Q14589
Bis(2-chloroisopropyl)ether	BRL	µg/L	10	2.4	1	625	05/06/06 2:46	kelliott	Q14589
Bis(2-ethylhexyl)phthalate	100	µg/L	10	0.71	1	625	05/06/06 2:46	kelliott	Q14589
Butylbenzylphthalate	BRL	µg/L	10	0.70	1	625	05/06/06 2:46	kelliott	Q14589
Chrysene	BRL	µg/L	10	0.57	1	625	05/06/06 2:46	kelliott	Q14589
Di-n-butylphthalate	BRL	µg/L	10	1.4	1	625	05/06/06 2:46	kelliott	Q14589
Di-n-octylphthalate	BRL	µg/L	10	2.2	1	625	05/06/06 2:46	kelliott	Q14589
Dibenzo(a,h)anthracene	BRL	µg/L	10	1.1	1	625	05/06/06 2:46	kelliott	Q14589
Dibenzofuran	BRL	µg/L	10	2.2	1	625	05/06/06 2:46	kelliott	Q14589
Diethylphthalate	BRL	µg/L	10	1.1	1	625	05/06/06 2:46	kelliott	Q14589
Dimethylphthalate	BRL	µg/L	10	1.4	1	625	05/06/06 2:46	kelliott	Q14589
Fluoranthene	BRL	µg/L	10	0.94	1	625	05/06/06 2:46	kelliott	Q14589
Fluorene	BRL	µg/L	10	1.4	1	625	05/06/06 2:46	kelliott	Q14589

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NC Certification No. 402  
 SC Certification No. 99012  
 NC Drinking Water Cert. No. 37735

# Laboratory Report

05/10/06

N. C. Department of Transportation  
 Attn: Bob Shaut/EI  
 c/o Environmental Investigations, Inc  
 2101 Gateway Centre Blvd. Ste 200  
 Morrisville, NC 27560

Project Name: Burnsville, NC  
 Project ID: NCDOT - Yancey - Parcel 123  
 Project No.: WBS #356091.1  
 Sample Matrix: Water

Client Sample ID: MW-1  
 Prism Sample ID: 149544  
 COC Group: G0506005  
 Time Collected: 04/26/06 8:30  
 Time Submitted: 04/28/06 16:45

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
Hexachlorobenzene	BRL	µg/L	10	1.3	1	625	05/06/06 2:46	kelliott	Q14589
Hexachlorobutadiene	BRL	µg/L	10	2.2	1	625	05/06/06 2:46	kelliott	Q14589
Hexachlorocyclopentadiene	BRL	µg/L	10	2.4	1	625	05/06/06 2:46	kelliott	Q14589
Hexachloroethane	BRL	µg/L	10	1.8	1	625	05/06/06 2:46	kelliott	Q14589
Indeno(1,2,3-cd)pyrene	BRL	µg/L	10	1.7	1	625	05/06/06 2:46	kelliott	Q14589
Isophorone	BRL	µg/L	10	1.6	1	625	05/06/06 2:46	kelliott	Q14589
N-Nitrosodi-n-propylamine	BRL	µg/L	10	2.2	1	625	05/06/06 2:46	kelliott	Q14589
Naphthalene	BRL	µg/L	10	2.2	1	625	05/06/06 2:46	kelliott	Q14589
Nitrobenzene	BRL	µg/L	10	1.9	1	625	05/06/06 2:46	kelliott	Q14589
Pentachlorophenol	BRL	µg/L	10	1.7	1	625	05/06/06 2:46	kelliott	Q14589
Phenanthrene	BRL	µg/L	10	0.90	1	625	05/06/06 2:46	kelliott	Q14589
Phenol	BRL	µg/L	10	0.90	1	625	05/06/06 2:46	kelliott	Q14589
Pyrene	BRL	µg/L	10	0.91	1	625	05/06/06 2:46	kelliott	Q14589

Sample Preparation: 1000 mL / 1 mL 625 05/02/06 7:00 smanivanh P15273

Surrogate	% Recovery	Control Limits
Terphenyl-d14	102	10 - 154
Phenol-d5	27	10 - 48
Nitrobenzene-d5	101	22 - 103
2-Fluorophenol	41	10 - 59
2-Fluorobiphenyl	107	29 - 112
2,4,6-Tribromophenol	99	27 - 125

TIC's By 625

Est.Conc Units

No TICs were detected.

Extractable Petroleum Hydrocarbons by GC-FID

C11-C22 Aromatics	BRL	µg/L	100	71	1	MADEP EPH	05/08/06 14:51	grappaccioli	Q14643
C19-C36 Aliphatics	BRL	µg/L	100	31	1	MADEP EPH	05/08/06 14:51	grappaccioli	Q14643

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NC Certification No. 402  
 SC Certification No. 99012  
 NC Drinking Water Cert. No. 37735

# Laboratory Report

05/10/06

N. C. Department of Transportation  
 Attn: Bob Shaut/EI  
 c/o Environmental Investigations, Inc  
 2101 Gateway Centre Blvd. Ste 200  
 Morrisville, NC 27560

Project Name: Burnsville, NC  
 Project ID: NCDOT - Yancey - Parcel 123  
 Project No.: WBS #356091.1  
 Sample Matrix: Water

Client Sample ID: MW-1  
 Prism Sample ID: 149544  
 COC Group: G0506005  
 Time Collected: 04/26/06 8:30  
 Time Submitted: 04/28/06 16:45

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
C9-C18 Aliphatics	BRL	µg/L	100	75	1	MADEP EPH	05/08/06 14:51	grappaccioli	Q14643

\* Analysis Note for C11-C22 Aromatics: Adjusted value.

Sample Preparation: 1000 mL / 2 mL EPH 05/06/06 10:00 smanivanh P15315

Surrogate	% Recovery	Control Limits
o-Terphenyl	98	40 - 140
2-Fluorobiphenyl	86	40 - 140
2-Bromonaphthalene	77	40 - 140
1-Chloro-octadecane	93	40 - 140



**Volatile Petroleum Hydrocarbons by GC-PID/FID**

C5-C8 Aliphatics	83 J	µg/L	100	50	1	MADEP VPH	05/05/06 18:39	jvogel	Q14660
C9-C10 Aromatics	BRL	µg/L	100	35	1	MADEP VPH	05/05/06 18:39	jvogel	Q14660
C9-C12 Aliphatics	BRL	µg/L	100	50	1	MADEP VPH	05/05/06 18:39	jvogel	Q14660

\* Analysis Note for C5-C8 Aliphatics: Adjusted value.

\* Analysis Note for C9-C12 Aliphatics: Adjusted value.

Surrogate	% Recovery	Control Limits
2,5-Dibromotoluene-PID	79	70 - 130
2,5-Dibromotoluene-FID	101	70 - 130

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05/10/06

N. C. Department of Transportation  
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 2101 Gateway Centre Blvd. Ste 200  
 Morrisville, NC 27560

Project Name: Burnsville, NC  
 Project ID: NCDOT - Yancey - Parcel  
 123  
 Project No.: WBS #356091.1  
 Sample Matrix: Water

Client Sample ID: MW-1  
 Prism Sample ID: 149544  
 COC Group: G0506005  
 Time Collected: 04/26/06 8:30  
 Time Submitted: 04/28/06 16:45

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
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Sample Comment(s):

*BRL = Below Reporting Limit*

*J = Estimated value between the Reporting Limit and the MDL*

*The results in this report relate only to the samples submitted for analysis and meet state certification requirements other than NELAC certification except for those instances indicated in the case narrative and/or test comments.*

Angela D. Overcash, V.P. Laboratory Services





NC Certification No. 402  
 SC Certification No. 99012  
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# Laboratory Report

05/10/06

N. C. Department of Transportation  
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 2101 Gateway Centre Blvd. Ste 200  
 Morrisville, NC 27560

Project Name: Burnsville, NC  
 Project ID: NCDOT - Yancey - Parcel 123  
 Project No.: WBS #356091.1  
 Sample Matrix: Water

Client Sample ID: MW-2  
 Prism Sample ID: 149545  
 COC Group: G0506005  
 Time Collected: 04/26/06 10:30  
 Time Submitted: 04/28/06 16:45

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
<b><u>Aromatic and Halogenated Volatiles by GC/PID-ELCD</u></b>									
1,1,1,2-Tetrachloroethane	BRL	µg/L	0.50	0.17	1	6230D	05/04/06 11:52	erussell	Q14508
1,1,1-Trichloroethane	BRL	µg/L	0.50	0.080	1	6230D	05/04/06 11:52	erussell	Q14508
1,1,2,2-Tetrachloroethane	BRL	µg/L	0.50	0.11	1	6230D	05/04/06 11:52	erussell	Q14508
1,1,2-Trichloroethane	BRL	µg/L	0.50	0.080	1	6230D	05/04/06 11:52	erussell	Q14508
1,1-Dichloroethane	BRL	µg/L	0.50	0.11	1	6230D	05/04/06 11:52	erussell	Q14508
1,1-Dichloroethene	BRL	µg/L	0.50	0.13	1	6230D	05/04/06 11:52	erussell	Q14508
1,1-Dichloropropene	BRL	µg/L	0.50	0.090	1	6230D	05/04/06 11:52	erussell	Q14508
1,2,3-Trichlorobenzene	BRL	µg/L	0.50	0.12	1	6230D	05/04/06 11:52	erussell	Q14508
1,2,3-Trichloropropane	BRL	µg/L	0.50	0.11	1	6230D	05/04/06 11:52	erussell	Q14508
1,2,4-Trichlorobenzene	BRL	µg/L	0.50	0.040	1	6230D	05/04/06 11:52	erussell	Q14508
1,2,4-Trimethylbenzene	BRL	µg/L	0.50	0.10	1	6230D	05/04/06 11:52	erussell	Q14508
1,2-Dibromo-3-chloropropane	BRL	µg/L	0.50	0.14	1	6230D	05/04/06 11:52	erussell	Q14508
1,2-Dibromoethane (EDB)	BRL	µg/L	0.50	0.12	1	6230D	05/04/06 11:52	erussell	Q14508
1,2-Dichlorobenzene	BRL	µg/L	0.50	0.12	1	6230D	05/04/06 11:52	erussell	Q14508
1,2-Dichloroethane	BRL	µg/L	0.50	0.070	1	6230D	05/04/06 11:52	erussell	Q14508
1,2-Dichloropropane	BRL	µg/L	0.50	0.12	1	6230D	05/04/06 11:52	erussell	Q14508
1,3,5-Trimethylbenzene	BRL	µg/L	0.50	0.10	1	6230D	05/04/06 11:52	erussell	Q14508
1,3-Dichlorobenzene	BRL	µg/L	0.50	0.050	1	6230D	05/04/06 11:52	erussell	Q14508
1,3-Dichloropropane	BRL	µg/L	0.50	0.070	1	6230D	05/04/06 11:52	erussell	Q14508
1,4-Dichlorobenzene	BRL	µg/L	0.50	0.060	1	6230D	05/04/06 11:52	erussell	Q14508
2,2-Dichloropropane	BRL	µg/L	0.50	0.13	1	6230D	05/04/06 11:52	erussell	Q14508
2-Chlorotoluene	BRL	µg/L	0.50	0.21	1	6230D	05/04/06 11:52	erussell	Q14508
4-Chlorotoluene	BRL	µg/L	0.50	0.090	1	6230D	05/04/06 11:52	erussell	Q14508
Benzene	BRL	µg/L	0.50	0.060	1	6230D	05/04/06 11:52	erussell	Q14508
Bromobenzene	BRL	µg/L	0.50	0.13	1	6230D	05/04/06 11:52	erussell	Q14508
Bromochloromethane	BRL	µg/L	0.50	0.090	1	6230D	05/04/06 11:52	erussell	Q14508
Bromodichloromethane	BRL	µg/L	0.50	0.090	1	6230D	05/04/06 11:52	erussell	Q14508

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N. C. Department of Transportation  
 Attn: Bob Shaut/EI  
 c/o Environmental Investigations, Inc  
 2101 Gateway Centre Blvd. Ste 200  
 Morrisville, NC 27560

Project Name: Burnsville, NC  
 Project ID: NCDOT - Yancey - Parcel  
 123  
 Project No.: WBS #356091.1  
 Sample Matrix: Water

Client Sample ID: MW-2  
 Prism Sample ID: 149545  
 COC Group: G0506005  
 Time Collected: 04/26/06 10:30  
 Time Submitted: 04/28/06 16:45

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
Bromoform	BRL	µg/L	0.50	0.050	1	6230D	05/04/06 11:52	erussell	Q14508
Bromomethane	BRL	µg/L	0.50	0.27	1	6230D	05/04/06 11:52	erussell	Q14508
Carbon Tetrachloride	BRL	µg/L	0.50	0.060	1	6230D	05/04/06 11:52	erussell	Q14508
Chlorobenzene	BRL	µg/L	0.50	0.17	1	6230D	05/04/06 11:52	erussell	Q14508
Chloroethane	BRL	µg/L	0.50	0.41	1	6230D	05/04/06 11:52	erussell	Q14508
Chloroform	BRL	µg/L	0.50	0.060	1	6230D	05/04/06 11:52	erussell	Q14508
Chloromethane	BRL	µg/L	0.50	0.14	1	6230D	05/04/06 11:52	erussell	Q14508
cis-1,2-Dichloroethene	BRL	µg/L	0.50	0.13	1	6230D	05/04/06 11:52	erussell	Q14508
cis-1,3-Dichloropropene	BRL	µg/L	0.50	0.14	1	6230D	05/04/06 11:52	erussell	Q14508
Dibromochloromethane	BRL	µg/L	0.50	0.080	1	6230D	05/04/06 11:52	erussell	Q14508
Dibromomethane	BRL	µg/L	0.50	0.13	1	6230D	05/04/06 11:52	erussell	Q14508
Dichlorodifluoromethane	BRL	µg/L	0.50	0.14	1	6230D	05/04/06 11:52	erussell	Q14508
Ethylbenzene	BRL	µg/L	0.50	0.16	1	6230D	05/04/06 11:52	erussell	Q14508
Hexachlorobutadiene	BRL	µg/L	0.50	0.17	1	6230D	05/04/06 11:52	erussell	Q14508
Isopropyl ether (IPE)	BRL	µg/L	0.50	0.24	1	6230D	05/04/06 11:52	erussell	Q14508
Isopropylbenzene	BRL	µg/L	0.50	0.10	1	6230D	05/04/06 11:52	erussell	Q14508
m,p-Xylenes	BRL	µg/L	1.0	0.43	1	6230D	05/04/06 11:52	erussell	Q14508
Methyl t-butyl ether (MTBE)	BRL	µg/L	0.50	0.14	1	6230D	05/04/06 11:52	erussell	Q14508
Methylene chloride	BRL	µg/L	2.0	0.75	1	6230D	05/04/06 11:52	erussell	Q14508
n-Butylbenzene	BRL	µg/L	0.50	0.19	1	6230D	05/04/06 11:52	erussell	Q14508
n-Propylbenzene	BRL	µg/L	0.50	0.10	1	6230D	05/04/06 11:52	erussell	Q14508
Naphthalene	BRL	µg/L	0.50	0.10	1	6230D	05/04/06 11:52	erussell	Q14508
o-Xylene	BRL	µg/L	0.50	0.16	1	6230D	05/04/06 11:52	erussell	Q14508
p-Isopropyltoluene	BRL	µg/L	0.50	0.17	1	6230D	05/04/06 11:52	erussell	Q14508
sec-Butylbenzene	BRL	µg/L	0.50	0.12	1	6230D	05/04/06 11:52	erussell	Q14508
Styrene	BRL	µg/L	0.50	0.050	1	6230D	05/04/06 11:52	erussell	Q14508
tert-Butylbenzene	BRL	µg/L	0.50	0.13	1	6230D	05/04/06 11:52	erussell	Q14508
Tetrachloroethene	BRL	µg/L	0.50	0.11	1	6230D	05/04/06 11:52	erussell	Q14508

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N. C. Department of Transportation  
 Attn: Bob Shaut/EI  
 c/o Environmental Investigations, Inc  
 2101 Gateway Centre Blvd. Ste 200  
 Morrisville, NC 27560

Project Name: Burnsville, NC  
 Project ID: NCDOT - Yancey - Parcel 123  
 Project No.: WBS #356091.1  
 Sample Matrix: Water

Client Sample ID: MW-2  
 Prism Sample ID: 149545  
 COC Group: G0506005  
 Time Collected: 04/26/06 10:30  
 Time Submitted: 04/28/06 16:45

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
Toluene	BRL	µg/L	0.50	0.11	1	6230D	05/04/06 11:52	erussell	Q14508
trans-1,2-Dichloroethene	BRL	µg/L	0.50	0.27	1	6230D	05/04/06 11:52	erussell	Q14508
trans-1,3-Dichloropropene	BRL	µg/L	0.50	0.070	1	6230D	05/04/06 11:52	erussell	Q14508
Trichloroethene	4.4	µg/L	0.50	0.10	1	6230D	05/04/06 11:52	erussell	Q14508
Trichlorofluoromethane	BRL	µg/L	0.50	0.19	1	6230D	05/04/06 11:52	erussell	Q14508
Vinyl chloride	BRL	µg/L	0.50	0.24	1	6230D	05/04/06 11:52	erussell	Q14508

Surrogate	% Recovery	Control Limits
Bromochlorobenzene-ELCD	97	60 - 144
1,4-Difluorobenzene-PID	95	50 - 141

Semivolatile Organic Compounds by GC/MS

1,2,4-Trichlorobenzene	BRL	µg/L	10	2.5	1	625	05/06/06 5:31	kelliott	Q14589
1,2-Dichlorobenzene	BRL	µg/L	10	2.7	1	625	05/06/06 5:31	kelliott	Q14589
1,3-Dichlorobenzene	BRL	µg/L	10	1.9	1	625	05/06/06 5:31	kelliott	Q14589
1,4-Dichlorobenzene	BRL	µg/L	10	2.4	1	625	05/06/06 5:31	kelliott	Q14589
2,4,5-Trichlorophenol	BRL	µg/L	10	2.6	1	625	05/06/06 5:31	kelliott	Q14589
2,4,6-Trichlorophenol	BRL	µg/L	10	1.8	1	625	05/06/06 5:31	kelliott	Q14589
2,4-Dichlorophenol	BRL	µg/L	10	1.9	1	625	05/06/06 5:31	kelliott	Q14589
2,4-Dimethylphenol	BRL	µg/L	10	0.67	1	625	05/06/06 5:31	kelliott	Q14589
2,4-Dinitrophenol	BRL	µg/L	50	0.67	1	625	05/06/06 5:31	kelliott	Q14589
2,4-Dinitrotoluene	BRL	µg/L	10	0.84	1	625	05/06/06 5:31	kelliott	Q14589
2,6-Dinitrotoluene	BRL	µg/L	10	1.6	1	625	05/06/06 5:31	kelliott	Q14589
2-Chloronaphthalene	BRL	µg/L	10	2.2	1	625	05/06/06 5:31	kelliott	Q14589
2-Chlorophenol	BRL	µg/L	10	2.2	1	625	05/06/06 5:31	kelliott	Q14589
2-Methylphenol	BRL	µg/L	10	2.8	1	625	05/06/06 5:31	kelliott	Q14589
2-Nitrophenol	BRL	µg/L	10	2.3	1	625	05/06/06 5:31	kelliott	Q14589
3&4-Methylphenol	BRL	µg/L	10	3.7	1	625	05/06/06 5:31	kelliott	Q14589

NC Certification No. 402  
 SC Certification No. 99012  
 NC Drinking Water Cert. No. 37735

# Laboratory Report

05/10/06

N. C. Department of Transportation  
 Attn: Bob Shau/EI  
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 2101 Gateway Centre Blvd. Ste 200  
 Morrisville, NC 27560

Project Name: Burnsville, NC  
 Project ID: NCDOT - Yancey - Parcel  
 123  
 Project No.: WBS #356091.1  
 Sample Matrix: Water

Client Sample ID: MW-2  
 Prism Sample ID: 149545  
 COC Group: G0506005  
 Time Collected: 04/26/06 10:30  
 Time Submitted: 04/28/06 16:45

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
3,3'-Dichlorobenzidine	BRL	µg/L	50	9.4	1	625	05/06/06 5:31	kelliot	Q14589
4,6-Dinitro-2-methylphenol	BRL	µg/L	50	0.88	1	625	05/06/06 5:31	kelliot	Q14589
4-Bromophenylphenylether	BRL	µg/L	10	2.0	1	625	05/06/06 5:31	kelliot	Q14589
4-Chloro-3-methylphenol	BRL	µg/L	10	1.7	1	625	05/06/06 5:31	kelliot	Q14589
4-Chlorophenylphenylether	BRL	µg/L	10	1.6	1	625	05/06/06 5:31	kelliot	Q14589
4-Nitrophenol	BRL	µg/L	50	0.60	1	625	05/06/06 5:31	kelliot	Q14589
Acenaphthene	BRL	µg/L	10	1.9	1	625	05/06/06 5:31	kelliot	Q14589
Acenaphthylene	BRL	µg/L	10	2.1	1	625	05/06/06 5:31	kelliot	Q14589
Anthracene	BRL	µg/L	10	0.98	1	625	05/06/06 5:31	kelliot	Q14589
Benzo(a)anthracene	BRL	µg/L	10	0.94	1	625	05/06/06 5:31	kelliot	Q14589
Benzo(a)pyrene	BRL	µg/L	10	1.0	1	625	05/06/06 5:31	kelliot	Q14589
Benzo(b)fluoranthene	BRL	µg/L	10	1.7	1	625	05/06/06 5:31	kelliot	Q14589
Benzo(g,h,i)perylene	BRL	µg/L	10	2.1	1	625	05/06/06 5:31	kelliot	Q14589
Benzo(k)fluoranthene	BRL	µg/L	10	1.9	1	625	05/06/06 5:31	kelliot	Q14589
Bis(2-chloroethoxy)methane	BRL	µg/L	10	2.2	1	625	05/06/06 5:31	kelliot	Q14589
Bis(2-chloroethyl)ether	BRL	µg/L	10	2.1	1	625	05/06/06 5:31	kelliot	Q14589
Bis(2-chloroisopropyl)ether	BRL	µg/L	10	2.4	1	625	05/06/06 5:31	kelliot	Q14589
Bis(2-ethylhexyl)phthalate	12	µg/L	10	0.71	1	625	05/06/06 5:31	kelliot	Q14589
Butylbenzylphthalate	BRL	µg/L	10	0.70	1	625	05/06/06 5:31	kelliot	Q14589
Chrysene	BRL	µg/L	10	0.57	1	625	05/06/06 5:31	kelliot	Q14589
Di-n-butylphthalate	BRL	µg/L	10	1.4	1	625	05/06/06 5:31	kelliot	Q14589
Di-n-octylphthalate	BRL	µg/L	10	2.2	1	625	05/06/06 5:31	kelliot	Q14589
Dibenzo(a,h)anthracene	BRL	µg/L	10	1.1	1	625	05/06/06 5:31	kelliot	Q14589
Dibenzofuran	BRL	µg/L	10	2.2	1	625	05/06/06 5:31	kelliot	Q14589
Diethylphthalate	BRL	µg/L	10	1.1	1	625	05/06/06 5:31	kelliot	Q14589
Dimethylphthalate	BRL	µg/L	10	1.4	1	625	05/06/06 5:31	kelliot	Q14589
Fluoranthene	BRL	µg/L	10	0.94	1	625	05/06/06 5:31	kelliot	Q14589
Fluorene	BRL	µg/L	10	1.4	1	625	05/06/06 5:31	kelliot	Q14589

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N. C. Department of Transportation  
 Attn: Bob Shaut/EI  
 c/o Environmental Investigations, Inc  
 2101 Gateway Centre Blvd. Ste 200  
 Morrisville, NC 27560

Project Name: Burnsville, NC  
 Project ID: NCDOT - Yancey - Parcel 123  
 Project No.: WBS #356091.1  
 Sample Matrix: Water

Client Sample ID: MW-2  
 Prism Sample ID: 149545  
 COC Group: G0506005  
 Time Collected: 04/26/06 10:30  
 Time Submitted: 04/28/06 16:45

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
Hexachlorobenzene	BRL	µg/L	10	1.3	1	625	05/06/06 5:31	kelliott	Q14589
Hexachlorobutadiene	BRL	µg/L	10	2.2	1	625	05/06/06 5:31	kelliott	Q14589
Hexachlorocyclopentadiene	BRL	µg/L	10	2.4	1	625	05/06/06 5:31	kelliott	Q14589
Hexachloroethane	BRL	µg/L	10	1.8	1	625	05/06/06 5:31	kelliott	Q14589
Indeno(1,2,3-cd)pyrene	BRL	µg/L	10	1.7	1	625	05/06/06 5:31	kelliott	Q14589
Isophorone	BRL	µg/L	10	1.6	1	625	05/06/06 5:31	kelliott	Q14589
N-Nitrosodi-n-propylamine	BRL	µg/L	10	2.2	1	625	05/06/06 5:31	kelliott	Q14589
Naphthalene	BRL	µg/L	10	2.2	1	625	05/06/06 5:31	kelliott	Q14589
Nitrobenzene	BRL	µg/L	10	1.9	1	625	05/06/06 5:31	kelliott	Q14589
Pentachlorophenol	BRL	µg/L	10	1.7	1	625	05/06/06 5:31	kelliott	Q14589
Phenanthrene	BRL	µg/L	10	0.90	1	625	05/06/06 5:31	kelliott	Q14589
Phenol	BRL	µg/L	10	0.90	1	625	05/06/06 5:31	kelliott	Q14589
Pyrene	BRL	µg/L	10	0.91	1	625	05/06/06 5:31	kelliott	Q14589

Surrogate recoveries were outside of the control limits. Matrix interference is suspected. Severe emulsions were noted during sample extraction.

Sample Preparation: 1000 mL / 1 mL 625 05/02/06 7:00 smanivanh P15273

Surrogate	% Recovery	Control Limits
Terphenyl-d14	80	10 - 154
Phenol-d5	4 #	10 - 48
Nitrobenzene-d5	83	22 - 103
2-Fluorophenol	5 #	10 - 59
2-Fluorobiphenyl	94	29 - 112

**TIC's By 625**

Est.Conc Units

No TICs were detected.

**Extractable Petroleum Hydrocarbons by GC-FID**

C11-C22 Aromatics	BRL	µg/L	100	71	1	MADEP EPH	05/08/06 16:35	grappaccioli	Q14643
C19-C36 Aliphatics	BRL	µg/L	100	31	1	MADEP EPH	05/08/06 16:35	grappaccioli	Q14643

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# Laboratory Report

05/10/06



N. C. Department of Transportation  
 Attn: Bob Shaut/EI  
 c/o Environmental Investigations, Inc  
 2101 Gateway Centre Blvd. Ste 200  
 Morrisville, NC 27560

Project Name: Burnsville, NC  
 Project ID: NCDOT - Yancey - Parcel 123  
 Project No.: WBS #356091.1  
 Sample Matrix: Water  
 Client Sample ID: MW-2  
 Prism Sample ID: 149545  
 COC Group: G0506005  
 Time Collected: 04/26/06 10:30  
 Time Submitted: 04/28/06 16:45

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
C9-C18 Aliphatics	BRL	µg/L	100	75	1	MADEP EPH	05/08/06 16:35	grappaccioli	Q14643

\* Analysis Note for C11-C22 Aromatics: Adjusted value.

Sample Preparation: 1000 mL / 2 mL EPH 05/06/06 10:00 smanivanh P15315

Surrogate	% Recovery	Control Limits
o-Terphenyl	81	40 - 140
2-Fluorobiphenyl	70	40 - 140
2-Bromonaphthalene	69	40 - 140
1-Chloro-octadecane	90	40 - 140

**Volatile Petroleum Hydrocarbons by GC-PID/FID**

C5-C8 Aliphatics	BRL	µg/L	100	50	1	MADEP VPH	05/05/06 16:01	jvogel	Q14660
C9-C10 Aromatics	BRL	µg/L	100	35	1	MADEP VPH	05/05/06 16:01	jvogel	Q14660
C9-C12 Aliphatics	BRL	µg/L	100	50	1	MADEP VPH	05/05/06 16:01	jvogel	Q14660

\* Analysis Note for C5-C8 Aliphatics: Adjusted value.

\* Analysis Note for C9-C12 Aliphatics: Adjusted value.

Surrogate	% Recovery	Control Limits
2,5-Dibromotoluene-PID	78	70 - 130
2,5-Dibromotoluene-FID	99	70 - 130



NC Certification No. 402  
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 NC Drinking Water Cert. No. 37735

# Laboratory Report

05/10/06

N. C. Department of Transportation  
 Attn: Bob Shaut/EI  
 c/o Environmental Investigations, Inc  
 2101 Gateway Centre Blvd. Ste 200  
 Morrisville, NC 27560

Project Name: Burnsville, NC  
 Project ID: NCDOT - Yancey - Parcel  
 123  
 Project No.: WBS #356091.1  
 Sample Matrix: Water

Client Sample ID: MW-2  
 Prism Sample ID: 149545  
 COC Group: G0506005  
 Time Collected: 04/26/06 10:30  
 Time Submitted: 04/28/06 16:45

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
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**Sample Comment(s):**

*BRL = Below Reporting Limit*

*J = Estimated value between the Reporting Limit and the MDL*

*The results in this report relate only to the samples submitted for analysis and meet state certification requirements other than NELAC certification except for those instances indicated in the case narrative and/or test comments.*

Angela D. Overcash, V.P. Laboratory Services



NC Certification No. 402  
SC Certification No. 99012  
NC Drinking Water Cert. No. 37735

# Level II QC Report

5/10/06

N. C. Department of Transportation  
Attn: Bob Shaut/EI  
c/o Environmental Investigations, Inc  
2101 Gateway Centre Blvd. Ste 200  
Morrisville, NC 27560

Project Name: Burnsville, NC      COC Group Number: G0506005  
Project ID: NCDOT - Yancey - Par      Date/Time Submitted: 4/28/06 16:45  
123  
Project No.: WBS #356091.1

## Aromatic and Halogenated Volatiles by GC/PID-ELCD, method 6230D

### Method Blank

	Result	RL	Control Limit	Units	QC Batch ID
1,1,1,2-Tetrachloroethane	ND	0.5	<0.25	µg/L	Q14508
1,1,1-Trichloroethane	ND	0.5	<0.25	µg/L	Q14508
1,1,2,2-Tetrachloroethane	ND	0.5	<0.25	µg/L	Q14508
1,1,2-Trichloroethane	ND	0.5	<0.25	µg/L	Q14508
1,1-Dichloroethane	ND	0.5	<0.25	µg/L	Q14508
1,1-Dichloroethene	ND	0.5	<0.25	µg/L	Q14508
1,1-Dichloropropene	ND	0.5	<0.25	µg/L	Q14508
1,2,3-Trichlorobenzene	ND	0.5	<0.25	µg/L	Q14508
1,2,3-Trichloropropane	ND	0.5	<0.25	µg/L	Q14508
1,2,4-Trichlorobenzene	ND	0.5	<0.25	µg/L	Q14508
1,2,4-Trimethylbenzene	ND	0.5	<0.25	µg/L	Q14508
1,2-Dibromo-3-chloropropane	ND	0.5	<0.25	µg/L	Q14508
1,2-Dibromoethane (EDB)	ND	0.5	<0.25	µg/L	Q14508
1,2-Dichlorobenzene	ND	0.5	<0.25	µg/L	Q14508
1,2-Dichloroethane	ND	0.5	<0.25	µg/L	Q14508
1,2-Dichloropropane	ND	0.5	<0.25	µg/L	Q14508
1,3,5-Trimethylbenzene	ND	0.5	<0.25	µg/L	Q14508
1,3-Dichlorobenzene	ND	0.5	<0.25	µg/L	Q14508
1,3-Dichloropropane	ND	0.5	<0.25	µg/L	Q14508
1,4-Dichlorobenzene	ND	0.5	<0.25	µg/L	Q14508
2,2-Dichloropropane	ND	0.5	<0.25	µg/L	Q14508
2-Chlorotoluene	ND	0.5	<0.25	µg/L	Q14508
4-Chlorotoluene	ND	0.5	<0.25	µg/L	Q14508
Benzene	ND	0.5	<0.25	µg/L	Q14508
Bromobenzene	ND	0.5	<0.25	µg/L	Q14508
Bromochloromethane	ND	0.5	<0.25	µg/L	Q14508
Bromodichloromethane	ND	0.5	<0.25	µg/L	Q14508
Bromoform	ND	0.5	<0.25	µg/L	Q14508
Bromomethane	ND	0.5	<0.25	µg/L	Q14508
Carbon Tetrachloride	ND	0.5	<0.25	µg/L	Q14508
Chlorobenzene	ND	0.5	<0.25	µg/L	Q14508
Chloroethane	ND	0.5	<0.25	µg/L	Q14508
Chloroform	ND	0.5	<0.25	µg/L	Q14508
Chloromethane	ND	0.5	<0.25	µg/L	Q14508
cis-1,2-Dichloroethene	ND	0.5	<0.25	µg/L	Q14508
cis-1,3-Dichloropropene	ND	0.5	<0.25	µg/L	Q14508
Dibromochloromethane	ND	0.5	<0.25	µg/L	Q14508
Dibromomethane	ND	0.5	<0.25	µg/L	Q14508
Dichlorodifluoromethane	ND	0.5	<0.25	µg/L	Q14508
Ethylbenzene	ND	0.5	<0.25	µg/L	Q14508
Hexachlorobutadiene	ND	0.5	<0.25	µg/L	Q14508
Isopropyl ether (IPE)	ND	0.5	<0.25	µg/L	Q14508

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NC Certification No. 402  
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 NC Drinking Water Cert. No. 37735

# Level II QC Report

5/10/06

N. C. Department of Transportation  
 Attn: Bob Shaut/EI  
 c/o Environmental Investigations, Inc  
 2101 Gateway Centre Blvd. Ste 200  
 Morrisville, NC 27560

Project Name: Bumsville, NC  
 Project ID: NCDOT - Yancey - Par 123  
 Project No.: WBS #356091.1  
 COC Group Number: G0506005  
 Date/Time Submitted: 4/28/06 16:45

## Method Blank

	Result	RL	Control Limit	Units	QC Batch ID
Isopropylbenzene	ND	0.5	<0.25	µg/L	Q14508
m,p-Xylenes	ND	1	<0.5	µg/L	Q14508
Methyl t-butyl ether (MTBE)	ND	0.5	<0.25	µg/L	Q14508
Methylene chloride	ND	2	<1	µg/L	Q14508
n-Butylbenzene	ND	0.5	<0.25	µg/L	Q14508
n-Propylbenzene	ND	0.5	<0.25	µg/L	Q14508
Naphthalene	ND	0.5	<0.25	µg/L	Q14508
o-Xylene	ND	0.5	<0.25	µg/L	Q14508
p-Isopropyltoluene	ND	0.5	<0.25	µg/L	Q14508
sec-Butylbenzene	ND	0.5	<0.25	µg/L	Q14508
Styrene	ND	0.5	<0.25	µg/L	Q14508
tert-Butylbenzene	ND	0.5	<0.25	µg/L	Q14508
Tetrachloroethene	ND	0.5	<0.25	µg/L	Q14508
Toluene	ND	0.5	<0.25	µg/L	Q14508
trans-1,2-Dichloroethene	ND	0.5	<0.25	µg/L	Q14508
trans-1,3-Dichloropropene	ND	0.5	<0.25	µg/L	Q14508
Trichloroethene	ND	0.5	<0.25	µg/L	Q14508
Trichlorofluoromethane	ND	0.5	<0.25	µg/L	Q14508
Vinyl chloride	ND	0.5	<0.25	µg/L	Q14508

## Laboratory Control Sample

	Result	Spike Amount	Units	Recovery %	Recovery Range %	QC Batch ID
1,1,1,2-Tetrachloroethane	40.85	40	µg/L	102	70 - 139	Q14508
1,1,1-Trichloroethane	21.709	20	µg/L	109	60 - 140	Q14508
1,1,2,2-Tetrachloroethane	21.691	20	µg/L	108	60 - 140	Q14508
1,1,2-Trichloroethane	21.439	20	µg/L	107	60 - 140	Q14508
1,1-Dichloroethane	22.529	20	µg/L	113	60 - 140	Q14508
1,1-Dichloroethene	18.442	20	µg/L	92	60 - 140	Q14508
1,1-Dichloropropene	21.893	20	µg/L	109	62 - 140	Q14508
1,2,3-Trichlorobenzene	17.333	20	µg/L	87	72 - 119	Q14508
1,2,3-Trichloropropane	20.392	20	µg/L	102	68 - 131	Q14508
1,2,4-Trichlorobenzene	18.268	20	µg/L	91	58 - 133	Q14508
1,2,4-Trimethylbenzene	18.317	20	µg/L	92	72 - 125	Q14508
1,2-Dibromo-3-chloropropane	15.977	20	µg/L	80	50 - 135	Q14508
1,2-Dibromoethane (EDB)	19.904	20	µg/L	100	66 - 130	Q14508
1,2-Dichlorobenzene	17.833	20	µg/L	89	64 - 137	Q14508
1,2-Dichloroethane	22.195	20	µg/L	111	72 - 137	Q14508
1,2-Dichloropropane	21.674	20	µg/L	108	70 - 139	Q14508
1,3,5-Trimethylbenzene	18.408	20	µg/L	92	73 - 124	Q14508
1,3-Dichlorobenzene	17.103	20	µg/L	86	60 - 137	Q14508
1,3-Dichloropropane	21.859	20	µg/L	109	67 - 131	Q14508
1,4-Dichlorobenzene	17.802	20	µg/L	89	64 - 139	Q14508
2,2-Dichloropropane	49.69	40	µg/L	124	62 - 138	Q14508
2-Chlorotoluene	20.316	20	µg/L	102	59 - 140	Q14508

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NC Certification No. 402  
 SC Certification No. 99012  
 NC Drinking Water Cert. No. 37735

# Level II QC Report

5/10/06

N. C. Department of Transportation  
 Attn: Bob Shau/El  
 c/o Environmental Investigations, Inc  
 2101 Gateway Centre Blvd. Ste 200  
 Morrisville, NC 27560

Project Name: Burnsville, NC  
 Project ID: NCDOT - Yancey - Par 123  
 Project No.: WBS #356091.1  
 COC Group Number: G0506005  
 Date/Time Submitted: 4/28/06 16:45

## Laboratory Control Sample

	Result	Spike Amount	Units	Recovery %	Recovery Range %	QC Batch ID
4-Chlorotoluene	21.353	20	µg/L	107	67 - 140	Q14508
Benzene	19.545	20	µg/L	98	68 - 130	Q14508
Bromobenzene	20.299	20	µg/L	101	62 - 133	Q14508
Bromochloromethane	22.773	20	µg/L	114	69 - 131	Q14508
Bromodichloromethane	21.94	20	µg/L	110	72 - 130	Q14508
Bromoform	19.002	20	µg/L	95	59 - 126	Q14508
Bromomethane	18.46	20	µg/L	92	55 - 138	Q14508
Carbon Tetrachloride	21.848	20	µg/L	109	70 - 144	Q14508
Chlorobenzene	18.032	20	µg/L	90	75 - 122	Q14508
Chloroethane	21.315	20	µg/L	107	63 - 145	Q14508
Chloroform	22.237	20	µg/L	111	71 - 137	Q14508
Chloromethane	18.095	20	µg/L	90	50 - 144	Q14508
cis-1,2-Dichloroethene	19.426	20	µg/L	97	62 - 138	Q14508
cis-1,3-Dichloropropene	22.131	20	µg/L	111	67 - 133	Q14508
Dibromochloromethane	21.559	20	µg/L	108	65 - 133	Q14508
Dibromomethane	22.555	20	µg/L	113	71 - 133	Q14508
Dichlorodifluoromethane	16.226	20	µg/L	81	52 - 152	Q14508
Ethylbenzene	17.575	20	µg/L	88	74 - 130	Q14508
Hexachlorobutadiene	22.61	20	µg/L	113	52 - 149	Q14508
Isopropyl ether (IPE)	20.023	20	µg/L	100	70 - 121	Q14508
Isopropylbenzene	18.102	20	µg/L	91	71 - 130	Q14508
m,p-Xylenes	35.301	40	µg/L	88	74 - 128	Q14508
Methyl t-butyl ether (MTBE)	20.38	20	µg/L	102	75 - 119	Q14508
Methylene chloride	23.433	20	µg/L	117	68 - 133	Q14508
n-Butylbenzene	18.391	20	µg/L	92	70 - 135	Q14508
n-Propylbenzene	17.855	20	µg/L	89	75 - 128	Q14508
Naphthalene	18.205	20	µg/L	91	71 - 114	Q14508
o-Xylene	18.546	20	µg/L	93	65 - 130	Q14508
p-Isopropyltoluene	18.376	20	µg/L	92	59 - 138	Q14508
sec-Butylbenzene	17.006	20	µg/L	85	66 - 136	Q14508
Styrene	16.976	20	µg/L	85	78 - 122	Q14508
tert-Butylbenzene	17.424	20	µg/L	87	65 - 133	Q14508
Tetrachloroethene	19.386	20	µg/L	97	66 - 145	Q14508
Toluene	18.463	20	µg/L	92	69 - 129	Q14508
trans-1,2-Dichloroethene	19.396	20	µg/L	97	59 - 144	Q14508
trans-1,3-Dichloropropene	21.634	20	µg/L	108	67 - 130	Q14508
Trichloroethene	17.14	20	µg/L	86	52 - 152	Q14508
Trichlorofluoromethane	20.418	20	µg/L	102	52 - 153	Q14508
Vinyl chloride	16.973	20	µg/L	85	48 - 144	Q14508

## Matrix Spike

Sample ID:		Result	Spike Amount	Units	Recovery %	Recovery Range %	QC Batch ID
149546	1,1,1,2-Tetrachloroethane	183.6	160	µg/L	115	60 - 134	Q14508
	1,1,1-Trichloroethane	96.332	80	µg/L	120	60 - 133	Q14508

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NC Certification No. 402  
 SC Certification No. 99012  
 NC Drinking Water Cert. No. 37735

# Level II QC Report

5/10/06

N. C. Department of Transportation  
 Attn: Bob Shaut/EI  
 c/o Environmental Investigations, Inc  
 2101 Gateway Centre Blvd. Ste 200  
 Morrisville, NC 27560

Project Name: Burnsville, NC  
 Project ID: NCDOT - Yancey - Par 123  
 Project No.: WBS #356091.1  
 COC Group Number: G0506005  
 Date/Time Submitted: 4/28/06 16:45

Sample ID:	Result	Spike Amount	Units	Recovery %	Recovery Range %	QC Batch ID
1,1,2,2-Tetrachloroethane	101.02	80	µg/L	126	58 - 143	Q14508
1,1,2-Trichloroethane	91.208	80	µg/L	114	58 - 138	Q14508
1,1-Dichloroethane	102.432	80	µg/L	128	57 - 131	Q14508
1,1-Dichloroethene	85.048	80	µg/L	106	53 - 141	Q14508
1,1-Dichloropropene	97.152	80	µg/L	121	53 - 135	Q14508
1,2,3-Trichlorobenzene	74.7	80	µg/L	93	53 - 129	Q14508
1,2,3-Trichloropropane	93.176	80	µg/L	116	63 - 135	Q14508
1,2,4-Trichlorobenzene	79.42	80	µg/L	99	51 - 129	Q14508
1,2,4-Trimethylbenzene	79.028	80	µg/L	99	70 - 121	Q14508
1,2-Dibromo-3-chloropropane	69.096	80	µg/L	86	46 - 137	Q14508
1,2-Dibromoethane (EDB)	89.476	80	µg/L	112	60 - 133	Q14508
1,2-Dichlorobenzene	77.712	80	µg/L	97	64 - 130	Q14508
1,2-Dichloroethane	95.22	80	µg/L	119	66 - 136	Q14508
1,2-Dichloropropane	94.94	80	µg/L	119	64 - 133	Q14508
1,3,5-Trimethylbenzene	81.108	80	µg/L	101	66 - 121	Q14508
1,3-Dichlorobenzene	74.932	80	µg/L	94	58 - 130	Q14508
1,3-Dichloropropane	92.256	80	µg/L	115	62 - 130	Q14508
1,4-Dichlorobenzene	78.056	80	µg/L	98	59 - 136	Q14508
2,2-Dichloropropane	214.88	160	µg/L	134 #	58 - 127	Q14508
2-Chlorotoluene	94.052	80	µg/L	118	56 - 134	Q14508
4-Chlorotoluene	97.836	80	µg/L	122	56 - 141	Q14508
Benzene	81.212	80	µg/L	102	69 - 122	Q14508
Bromobenzene	92.744	80	µg/L	116	61 - 128	Q14508
Bromochloromethane	98.292	80	µg/L	123	62 - 128	Q14508
Bromodichloromethane	95.236	80	µg/L	119	63 - 127	Q14508
Bromoform	86.168	80	µg/L	108	56 - 127	Q14508
Bromomethane	88.584	80	µg/L	111	57 - 134	Q14508
Carbon Tetrachloride	94.6	80	µg/L	118	64 - 133	Q14508
Chlorobenzene	77.848	80	µg/L	97	72 - 117	Q14508
Chloroethane	102.896	80	µg/L	129	57 - 143	Q14508
Chloroform	96.38	80	µg/L	120	65 - 133	Q14508
Chloromethane	94.984	80	µg/L	119	45 - 142	Q14508
cis-1,2-Dichloroethene	86.184	80	µg/L	108	58 - 127	Q14508
cis-1,3-Dichloropropene	92.376	80	µg/L	115	62 - 129	Q14508
Dibromochloromethane	94.22	80	µg/L	118	59 - 132	Q14508
Dibromomethane	99.416	80	µg/L	124	64 - 134	Q14508
Dichlorodifluoromethane	110.184	80	µg/L	138	52 - 138	Q14508
Ethylbenzene	79.052	80	µg/L	99	71 - 122	Q14508
Hexachlorobutadiene	102.944	80	µg/L	129	54 - 134	Q14508
Isopropyl ether (IPE)	87.132	80	µg/L	109	73 - 115	Q14508
Isopropylbenzene	80.784	80	µg/L	101	69 - 121	Q14508
m,p-Xylenes	155.344	160	µg/L	97	69 - 122	Q14508
Methyl t-butyl ether (MTBE)	87.144	80	µg/L	109	75 - 116	Q14508
Methylene chloride	104.252	80	µg/L	130	58 - 137	Q14508

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NC Certification No. 402  
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# Level II QC Report

5/10/06

N. C. Department of Transportation  
 Attn: Bob Shaut/EI  
 c/o Environmental Investigations, Inc  
 2101 Gateway Centre Blvd. Ste 200  
 Morrisville, NC 27560

Project Name: Burnsville, NC      COC Group Number: G0506005  
 Project ID: NCDOT - Yancey - Par 123      Date/Time Submitted: 4/28/06 16:45  
 Project No.: WBS #356091.1

## Matrix Spike

Sample ID:	Result	Spike Amount	Units	Recovery %	Recovery Range %	QC Batch ID
n-Butylbenzene	81.064	80	µg/L	101	71 - 121	Q14508
n-Propylbenzene	79.252	80	µg/L	99	73 - 119	Q14508
Naphthalene	77.948	80	µg/L	97	64 - 118	Q14508
o-Xylene	78.98	80	µg/L	99	66 - 124	Q14508
p-Isopropyltoluene	80.992	80	µg/L	101	61 - 127	Q14508
sec-Butylbenzene	75.156	80	µg/L	94	65 - 126	Q14508
Styrene	75.716	80	µg/L	95	64 - 124	Q14508
tert-Butylbenzene	79.724	80	µg/L	100	63 - 123	Q14508
Tetrachloroethene	78.336	80	µg/L	98	62 - 135	Q14508
Toluene	78.896	80	µg/L	99	71 - 120	Q14508
trans-1,2-Dichloroethene	87.228	80	µg/L	109	62 - 133	Q14508
trans-1,3-Dichloropropene	91.984	80	µg/L	115	58 - 129	Q14508
Trichloroethene	76.432	80	µg/L	96	56 - 128	Q14508
Trichlorofluoromethane	98.772	80	µg/L	123	49 - 147	Q14508
Vinyl chloride	91.072	80	µg/L	114	53 - 135	Q14508

\* Analysis Note for 2,2-Dichloropropane: MS and MSD recoveries outside the control limits. This compound was not detected in samples associated with this batch. No further action was taken.

## Matrix Spike Duplicate

Sample ID:	Result	Spike Amount	Units	Recovery %	Recovery Range %	RPD %	RPD Range %	QC Batch ID
149546 1,1,1,2-Tetrachloroethane	174.28	160	µg/L	109	60 - 134	5	0 - 20	Q14508
1,1,1-Trichloroethane	92.836	80	µg/L	116	60 - 133	4	0 - 20	Q14508
1,1,2,2-Tetrachloroethane	95.756	80	µg/L	120	58 - 143	5	0 - 20	Q14508
1,1,2-Trichloroethane	89.916	80	µg/L	112	58 - 138	1	0 - 20	Q14508
1,1-Dichloroethane	99.144	80	µg/L	124	57 - 131	3	0 - 20	Q14508
1,1-Dichloroethene	74.612	80	µg/L	93	53 - 141	13	0 - 20	Q14508
1,1-Dichloropropene	93.12	80	µg/L	116	53 - 135	4	0 - 20	Q14508
1,2,3-Trichlorobenzene	73.484	80	µg/L	92	53 - 129	2	0 - 20	Q14508
1,2,3-Trichloropropane	86.992	80	µg/L	109	63 - 135	7	0 - 20	Q14508
1,2,4-Trichlorobenzene	77.692	80	µg/L	97	51 - 129	2	0 - 20	Q14508
1,2,4-Trimethylbenzene	76.116	80	µg/L	95	70 - 121	4	0 - 20	Q14508
1,2-Dibromo-3-chloropropane	70.012	80	µg/L	88	46 - 137	1	0 - 20	Q14508
1,2-Dibromoethane (EDB)	85.008	80	µg/L	106	60 - 133	5	0 - 20	Q14508
1,2-Dichlorobenzene	76.728	80	µg/L	96	64 - 130	1	0 - 20	Q14508
1,2-Dichloroethane	94.656	80	µg/L	118	66 - 136	1	0 - 20	Q14508
1,2-Dichloropropane	91.476	80	µg/L	114	64 - 133	4	0 - 20	Q14508
1,3,5-Trimethylbenzene	77.104	80	µg/L	96	66 - 121	5	0 - 20	Q14508
1,3-Dichlorobenzene	72.26	80	µg/L	90	58 - 130	4	0 - 20	Q14508
1,3-Dichloropropane	92.292	80	µg/L	115	62 - 130	0	0 - 20	Q14508
1,4-Dichlorobenzene	75.816	80	µg/L	95	59 - 136	3	0 - 20	Q14508
2,2-Dichloropropane	206.2	160	µg/L	129 #	58 - 127	4	0 - 20	Q14508
2-Chlorotoluene	85.92	80	µg/L	107	56 - 134	9	0 - 20	Q14508
4-Chlorotoluene	85.564	80	µg/L	107	56 - 141	13	0 - 20	Q14508
Benzene	77.104	80	µg/L	96	69 - 122	5	0 - 20	Q14508

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NC Certification No. 402  
 SC Certification No. 99012  
 NC Drinking Water Cert. No. 37735

# Level II QC Report

5/10/06

N. C. Department of Transportation  
 Attn: Bob Shaut/EI  
 c/o Environmental Investigations, Inc  
 2101 Gateway Centre Blvd. Ste 200  
 Morrisville, NC 27560

Project Name: Burnsville, NC  
 Project ID: NCDOT - Yancey - Par  
 123  
 Project No.: WBS #356091.1  
 COC Group Number: G0506005  
 Date/Time Submitted: 4/28/06 16:45

## Matrix Spike Duplicate

Sample ID:	Result	Spike Amount	Units	Recovery %	Recovery Range %	RPD %	RPD Range %	QC Batch ID
Bromobenzene	85.556	80	µg/L	107	61 - 128	8	0 - 20	Q14508
Bromochloromethane	97.736	80	µg/L	122	62 - 128	1	0 - 20	Q14508
Bromodichloromethane	91.576	80	µg/L	114	63 - 127	4	0 - 20	Q14508
Bromoform	82.576	80	µg/L	103	56 - 127	4	0 - 20	Q14508
Bromomethane	85.096	80	µg/L	106	57 - 134	4	0 - 20	Q14508
Carbon Tetrachloride	90.908	80	µg/L	114	64 - 133	4	0 - 20	Q14508
Chlorobenzene	75.692	80	µg/L	95	72 - 117	3	0 - 20	Q14508
Chloroethane	95.84	80	µg/L	120	57 - 143	7	0 - 20	Q14508
Chloroform	96.148	80	µg/L	120	65 - 133	0	0 - 20	Q14508
Chloromethane	92.732	80	µg/L	116	45 - 142	2	0 - 20	Q14508
cis-1,2-Dichloroethene	81.876	80	µg/L	102	58 - 127	5	0 - 20	Q14508
cis-1,3-Dichloropropene	88.212	80	µg/L	110	62 - 129	5	0 - 20	Q14508
Dibromochloromethane	91.244	80	µg/L	114	59 - 132	3	0 - 20	Q14508
Dibromomethane	95.448	80	µg/L	119	64 - 134	4	0 - 20	Q14508
Dichlorodifluoromethane	95.284	80	µg/L	119	52 - 138	15	0 - 20	Q14508
Ethylbenzene	73.444	80	µg/L	92	71 - 122	7	0 - 20	Q14508
Hexachlorobutadiene	96.668	80	µg/L	121	54 - 134	6	0 - 20	Q14508
Isopropyl ether (IPE)	84.32	80	µg/L	105	73 - 115	3	0 - 20	Q14508
Isopropylbenzene	76.328	80	µg/L	95	69 - 121	6	0 - 20	Q14508
m,p-Xylenes	147.01	160	µg/L	92	69 - 122	6	0 - 20	Q14508
Methyl t-butyl ether (MTBE)	83.548	80	µg/L	104	75 - 116	4	0 - 20	Q14508
Methylene chloride	101.85	80	µg/L	127	58 - 137	2	0 - 20	Q14508
n-Butylbenzene	77.5	80	µg/L	97	71 - 121	4	0 - 20	Q14508
n-Propylbenzene	74.428	80	µg/L	93	73 - 119	6	0 - 20	Q14508
Naphthalene	76.572	80	µg/L	96	64 - 118	2	0 - 20	Q14508
o-Xylene	70.824	80	µg/L	89	66 - 124	11	0 - 20	Q14508
p-Isopropyltoluene	76.844	80	µg/L	96	61 - 127	5	0 - 20	Q14508
sec-Butylbenzene	70.892	80	µg/L	89	65 - 126	6	0 - 20	Q14508
Styrene	74.768	80	µg/L	93	64 - 124	1	0 - 20	Q14508
tert-Butylbenzene	74.004	80	µg/L	93	63 - 123	7	0 - 20	Q14508
Tetrachloroethene	73.448	80	µg/L	92	62 - 135	6	0 - 20	Q14508
Toluene	74.98	80	µg/L	94	71 - 120	5	0 - 20	Q14508
trans-1,2-Dichloroethene	81.592	80	µg/L	102	62 - 133	7	0 - 20	Q14508
trans-1,3-Dichloropropene	89.416	80	µg/L	112	58 - 129	3	0 - 20	Q14508
Trichloroethene	70.816	80	µg/L	89	56 - 128	8	0 - 20	Q14508
Trichlorofluoromethane	89.648	80	µg/L	112	49 - 147	10	0 - 20	Q14508
Vinyl chloride	84.968	80	µg/L	106	53 - 135	7	0 - 20	Q14508





NC Certification No. 402  
SC Certification No. 99012  
NC Drinking Water Cert. No. 37735

# Level II QC Report

5/10/06

N. C. Department of Transportation  
Attn: Bob Shau/El  
c/o Environmental Investigations, Inc  
2101 Gateway Centre Blvd. Ste 200  
Morrisville, NC 27560

Project Name: Burnsville, NC COC Group Number: G0506005  
Project ID: NCDOT - Yancey - Par 123 Date/Time Submitted: 4/28/06 16:45  
Project No.: WBS #356091.1

## Semivolatile Organic Compounds by GC/MS, method 625

### Method Blank

	Result	RL	Control Limit	Units	QC Batch ID
1,2,4-Trichlorobenzene	ND	10	<5	µg/L	Q14589
1,2-Dichlorobenzene	ND	10	<5	µg/L	Q14589
1,3-Dichlorobenzene	ND	10	<5	µg/L	Q14589
1,4-Dichlorobenzene	ND	10	<5	µg/L	Q14589
2,4,5-Trichlorophenol	ND	10	<5	µg/L	Q14589
2,4,6-Trichlorophenol	ND	10	<5	µg/L	Q14589
2,4-Dichlorophenol	ND	10	<5	µg/L	Q14589
2,4-Dimethylphenol	ND	10	<5	µg/L	Q14589
2,4-Dinitrophenol	ND	50	<25	µg/L	Q14589
2,4-Dinitrotoluene	ND	10	<5	µg/L	Q14589
2,6-Dinitrotoluene	ND	10	<5	µg/L	Q14589
2-Chloronaphthalene	ND	10	<5	µg/L	Q14589
2-Chlorophenol	ND	10	<5	µg/L	Q14589
2-Methylphenol	ND	10	<5	µg/L	Q14589
2-Nitrophenol	ND	10	<5	µg/L	Q14589
3&4-Methylphenol	ND	10	<5	µg/L	Q14589
3,3'-Dichlorobenzidine	ND	50	<25	µg/L	Q14589
4,6-Dinitro-2-methylphenol	ND	50	<25	µg/L	Q14589
4-Bromophenylphenylether	ND	10	<5	µg/L	Q14589
4-Chloro-3-methylphenol	ND	10	<5	µg/L	Q14589
4-Chlorophenylphenylether	ND	10	<5	µg/L	Q14589
4-Nitrophenol	ND	50	<25	µg/L	Q14589
Acenaphthene	ND	10	<5	µg/L	Q14589
Acenaphthylene	ND	10	<5	µg/L	Q14589
Anthracene	ND	10	<5	µg/L	Q14589
Benzo(a)anthracene	ND	10	<5	µg/L	Q14589
Benzo(a)pyrene	ND	10	<5	µg/L	Q14589
Benzo(b)fluoranthene	ND	10	<5	µg/L	Q14589
Benzo(g,h,i)perylene	ND	10	<5	µg/L	Q14589
Benzo(k)fluoranthene	ND	10	<5	µg/L	Q14589
Bis(2-chloroethoxy)methane	ND	10	<5	µg/L	Q14589
Bis(2-chloroethyl)ether	ND	10	<5	µg/L	Q14589
Bis(2-chloroisopropyl)ether	ND	10	<5	µg/L	Q14589
Bis(2-ethylhexyl)phthalate	ND	10	<5	µg/L	Q14589
Butylbenzylphthalate	ND	10	<5	µg/L	Q14589
Chrysene	ND	10	<5	µg/L	Q14589
Di-n-butylphthalate	ND	10	<5	µg/L	Q14589
Di-n-octylphthalate	ND	10	<5	µg/L	Q14589
Dibenzo(a,h)anthracene	ND	10	<5	µg/L	Q14589
Dibenzofuran	ND	10	<5	µg/L	Q14589
Diethylphthalate	ND	10	<5	µg/L	Q14589
Dimethylphthalate	ND	10	<5	µg/L	Q14589

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Page 7 of 13



N. C. Department of Transportation  
 Attn: Bob Shaut/EI  
 c/o Environmental Investigations, Inc  
 2101 Gateway Centre Blvd. Ste 200  
 Morrisville, NC 27560

Project Name: Burnsville, NC  
 Project ID: NCDOT - Yancey - Par 123  
 Project No.: WBS #356091.1  
 COC Group Number: G0506005  
 Date/Time Submitted: 4/28/06 16:45

**Method Blank**

	Result	RL	Control Limit	Units	QC Batch ID
Fluoranthene	ND	10	<5	µg/L	Q14589
Fluorene	ND	10	<5	µg/L	Q14589
Hexachlorobenzene	ND	10	<5	µg/L	Q14589
Hexachlorobutadiene	ND	10	<5	µg/L	Q14589
Hexachlorocyclopentadiene	ND	10	<5	µg/L	Q14589
Hexachloroethane	ND	10	<5	µg/L	Q14589
Indeno(1,2,3-cd)pyrene	ND	10	<5	µg/L	Q14589
Isophorone	ND	10	<5	µg/L	Q14589
N-Nitrosodi-n-propylamine	ND	10	<5	µg/L	Q14589
Naphthalene	ND	10	<5	µg/L	Q14589
Nitrobenzene	ND	10	<5	µg/L	Q14589
Pentachlorophenol	ND	10	<5	µg/L	Q14589
Phenanthrene	ND	10	<5	µg/L	Q14589
Phenol	ND	10	<5	µg/L	Q14589
Pyrene	ND	10	<5	µg/L	Q14589

**Laboratory Control Sample**

	Result	Spike Amount	Units	Recovery %	Recovery Range %	QC Batch ID
1,2,4-Trichlorobenzene	65.09	100	µg/L	65	44 - 142	Q14589
1,2-Dichlorobenzene	55.59	100	µg/L	56	32 - 129	Q14589
1,3-Dichlorobenzene	52.61	100	µg/L	53	20 - 124	Q14589
1,4-Dichlorobenzene	56.35	100	µg/L	56	20 - 124	Q14589
2,4,6-Trichlorophenol	77.57	100	µg/L	78	37 - 144	Q14589
2,4-Dichlorophenol	72.54	100	µg/L	73	39 - 135	Q14589
2,4-Dimethylphenol	69.21	100	µg/L	69	32 - 119	Q14589
2,4-Dinitrophenol	94.38	100	µg/L	94	10 - 191	Q14589
2,4-Dinitrotoluene	93.02	100	µg/L	93	39 - 139	Q14589
2,6-Dinitrotoluene	87.69	100	µg/L	88	50 - 158	Q14589
2-Chloronaphthalene	73.64	100	µg/L	74	60 - 118	Q14589
2-Chlorophenol	56.81	100	µg/L	57	23 - 134	Q14589
2-Nitrophenol	78	100	µg/L	78	29 - 182	Q14589
3,3'-Dichlorobenzidine	122.22	100	µg/L	122	10 - 262	Q14589
4,6-Dinitro-2-methylphenol	85.41	100	µg/L	85	10 - 181	Q14589
4-Bromophenylphenylether	91.4	100	µg/L	91	53 - 127	Q14589
4-Chloro-3-methylphenol	70.2	100	µg/L	70	22 - 147	Q14589
4-Chlorophenylphenylether	96.73	100	µg/L	97	25 - 158	Q14589
4-Nitrophenol	26.2	100	µg/L	26	10 - 132	Q14589
Acenaphthene	93.32	100	µg/L	93	47 - 145	Q14589
Acenaphthylene	93.57	100	µg/L	94	33 - 145	Q14589
Anthracene	89.88	100	µg/L	90	27 - 133	Q14589
Benzo(a)anthracene	100.45	100	µg/L	100	33 - 143	Q14589
Benzo(a)pyrene	103.01	100	µg/L	103	17 - 163	Q14589
Benzo(b)fluoranthene	121.63	100	µg/L	122	24 - 159	Q14589
Benzo(g,h,i)perylene	92.12	100	µg/L	92	10 - 219	Q14589

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# Level II QC Report

5/10/06

N. C. Department of Transportation  
 Attn: Bob Shaut/EI  
 c/o Environmental Investigations, Inc  
 2101 Gateway Centre Blvd. Ste 200  
 Morrisville, NC 27560

Project Name: Burnsville, NC  
 Project ID: NCDOT - Yancey - Par 123  
 Project No.: WBS #356091.1  
 COC Group Number: G0506005  
 Date/Time Submitted: 4/28/06 16:45

## Laboratory Control Sample

	Result	Spike Amount	Units	Recovery %	Recovery Range %	QC Batch ID
Benzo(k)fluoranthene	66.94	100	µg/L	67	11 - 162	Q14589
Bis(2-chloroethoxy)methane	76.44	100	µg/L	76	33 - 184	Q14589
Bis(2-chloroethyl)ether	69.85	100	µg/L	70	12 - 158	Q14589
Bis(2-chloroisopropyl)ether	69.56	100	µg/L	70	36 - 166	Q14589
Bis(2-ethylhexyl)phthalate	101.63	100	µg/L	102	10 - 158	Q14589
Butylbenzylphthalate	98.47	100	µg/L	98	10 - 152	Q14589
Chrysene	102.53	100	µg/L	103	17 - 168	Q14589
Di-n-butylphthalate	82.42	100	µg/L	82	10 - 118	Q14589
Di-n-octylphthalate	106.63	100	µg/L	107	10 - 146	Q14589
Dibenzo(a,h)anthracene	102.22	100	µg/L	102	10 - 227	Q14589
Diethylphthalate	95.37	100	µg/L	95	10 - 114	Q14589
Dimethylphthalate	75.62	100	µg/L	76	10 - 112	Q14589
Fluoranthene	89.42	100	µg/L	89	26 - 137	Q14589
Fluorene	98.11	100	µg/L	98	59 - 121	Q14589
Hexachlorobenzene	82.11	100	µg/L	82	10 - 152	Q14589
Hexachlorobutadiene	64.88	100	µg/L	65	24 - 116	Q14589
Hexachlorocyclopentadiene	95.11	100	µg/L	95	32 - 103	Q14589
Hexachloroethane	52.11	100	µg/L	52	40 - 113	Q14589
Indeno(1,2,3-cd)pyrene	93.02	100	µg/L	93	10 - 171	Q14589
Isophorone	79.04	100	µg/L	79	21 - 196	Q14589
N-Nitrosodi-n-propylamine	85.47	100	µg/L	85	10 - 230	Q14589
Naphthalene	79.48	100	µg/L	79	21 - 133	Q14589
Nitrobenzene	63.84	100	µg/L	64	35 - 180	Q14589
Pentachlorophenol	101.34	100	µg/L	101	14 - 176	Q14589
Phenanthrene	100.16	100	µg/L	100	54 - 120	Q14589
Phenol	22.88	100	µg/L	23	10 - 112	Q14589
Pyrene	96.95	100	µg/L	97	52 - 115	Q14589

## Matrix Spike

Sample ID:		Result	Spike Amount	Units	Recovery %	Recovery Range %	QC Batch ID
149544	1,2,4-Trichlorobenzene	135.44	200	µg/L	68	44 - 142	Q14589
	1,2-Dichlorobenzene	120.28	200	µg/L	60	32 - 129	Q14589
	1,3-Dichlorobenzene	120.32	200	µg/L	60	20 - 124	Q14589
	1,4-Dichlorobenzene	120.6	200	µg/L	60	20 - 124	Q14589
	2,4,6-Trichlorophenol	156.96	200	µg/L	78	37 - 144	Q14589
	2,4-Dichlorophenol	143.94	200	µg/L	72	39 - 135	Q14589
	2,4-Dimethylphenol	134.96	200	µg/L	67	32 - 119	Q14589
	2,4-Dinitrophenol	150.76	200	µg/L	75	10 - 191	Q14589
	2,4-Dinitrotoluene	185.58	200	µg/L	93	39 - 139	Q14589
	2,6-Dinitrotoluene	182.2	200	µg/L	91	50 - 158	Q14589
	2-Chloronaphthalene	153.22	200	µg/L	77	60 - 118	Q14589
	2-Chlorophenol	134.48	200	µg/L	67	23 - 134	Q14589
	2-Nitrophenol	146.94	200	µg/L	73	29 - 182	Q14589
	3,3'-Dichlorobenzidine	238.92	200	µg/L	119	10 - 262	Q14589

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# Level II QC Report

5/10/06

N. C. Department of Transportation  
 Attn: Bob Shau/El  
 c/o Environmental Investigations, Inc  
 2101 Gateway Centre Blvd. Ste 200  
 Morrisville, NC 27560

Project Name: **Bumsville, NC**      COC Group Number: **G0506005**  
 Project ID: **NCDOT - Yancey - Par 123**      Date/Time Submitted: **4/28/06 16:45**  
 Project No.: **WBS #356091.1**

Matrix Spike						
Sample ID:	Result	Spike Amount	Units	Recovery %	Recovery Range %	QC Batch ID
4,6-Dinitro-2-methylphenol	153.7	200	µg/L	77	10 - 181	Q14589
4-Bromophenylphenylether	200.32	200	µg/L	100	53 - 127	Q14589
4-Chloro-3-methylphenol	151.38	200	µg/L	76	22 - 147	Q14589
4-Chlorophenylphenylether	205.96	200	µg/L	103	25 - 158	Q14589
4-Nitrophenol	72.28	200	µg/L	36	10 - 132	Q14589
Acenaphthene	195.84	200	µg/L	98	47 - 145	Q14589
Acenaphthylene	177.52	200	µg/L	89	33 - 145	Q14589
Anthracene	188.72	200	µg/L	94	27 - 133	Q14589
Benzo(a)anthracene	176.82	200	µg/L	88	33 - 143	Q14589
Benzo(a)pyrene	214.32	200	µg/L	107	17 - 163	Q14589
Benzo(b)fluoranthene	204.46	200	µg/L	102	24 - 159	Q14589
Benzo(g,h,i)perylene	220.88	200	µg/L	110	10 - 219	Q14589
Benzo(k)fluoranthene	171.04	200	µg/L	86	11 - 162	Q14589
Bis(2-chloroethoxy)methane	163.58	200	µg/L	82	33 - 184	Q14589
Bis(2-chloroethyl)ether	147.5	200	µg/L	74	12 - 158	Q14589
Bis(2-chloroisopropyl)ether	144.74	200	µg/L	72	36 - 166	Q14589
Bis(2-ethylhexyl)phthalate	242.98	200	µg/L	70	10 - 158	Q14589
Butylbenzylphthalate	206.82	200	µg/L	103	10 - 152	Q14589
Chrysene	176.38	200	µg/L	88	17 - 168	Q14589
Di-n-butylphthalate	182.72	200	µg/L	91	10 - 118	Q14589
Di-n-octylphthalate	222.86	200	µg/L	111	10 - 146	Q14589
Dibenzo(a,h)anthracene	238.38	200	µg/L	119	10 - 227	Q14589
Diethylphthalate	187.48	200	µg/L	94	10 - 114	Q14589
Dimethylphthalate	155.04	200	µg/L	78	10 - 112	Q14589
Fluoranthene	177.04	200	µg/L	89	26 - 137	Q14589
Fluorene	193.24	200	µg/L	97	59 - 121	Q14589
Hexachlorobenzene	178.26	200	µg/L	89	10 - 152	Q14589
Hexachlorobutadiene	139.76	200	µg/L	70	24 - 116	Q14589
Hexachlorocyclopentadiene	193.14	200	µg/L	97 #	48 - 94	Q14589
Hexachloroethane	116.42	200	µg/L	58	40 - 113	Q14589
Indeno(1,2,3-cd)pyrene	216.76	200	µg/L	108	10 - 171	Q14589
Isophorone	157.68	200	µg/L	79	21 - 196	Q14589
N-Nitrosodi-n-propylamine	166.34	200	µg/L	83	10 - 230	Q14589
Naphthalene	157.6	200	µg/L	79	21 - 133	Q14589
Nitrobenzene	135.28	200	µg/L	68	35 - 180	Q14589
Pentachlorophenol	163.16	200	µg/L	82	14 - 176	Q14589
Phenanthrene	203.42	200	µg/L	102	54 - 120	Q14589
Phenol	70.4	200	µg/L	35	10 - 112	Q14589
Pyrene	213.32	200	µg/L	107	52 - 115	Q14589

Matrix Spike Duplicate									
Sample ID:		Result	Spike Amount	Units	Recovery %	Recovery Range %	RPD %	RPD Range %	QC Batch ID
149544	1,2,4-Trichlorobenzene	139.26	200	µg/L	70	44 - 142	3	0 - 36	Q14589
	1,2-Dichlorobenzene	120.56	200	µg/L	60	32 - 129	0	0 - 38	Q14589

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Phone: 704/529-6364 - Toll Free Number: 1-800/529-6364 - Fax: 704/525-0409



NC Certification No. 402  
 SC Certification No. 99012  
 NC Drinking Water Cert. No. 37735

# Level II QC Report

5/10/06

N. C. Department of Transportation  
 Attn: Bob Shaut/EI  
 c/o Environmental Investigations, Inc  
 2101 Gateway Centre Blvd. Ste 200  
 Morrisville, NC 27560

Project Name: Burnsville, NC  
 Project ID: NCDOT - Yancey - Par 123  
 Project No.: WBS #356091.1  
 COC Group Number: G0506005  
 Date/Time Submitted: 4/28/06 16:45

## Matrix Spike Duplicate

Sample ID:	Result	Spike Amount	Units	Recovery %	Recovery Range %	RPD %	RPD Range %	QC Batch ID
1,3-Dichlorobenzene	123.06	200	µg/L	62	20 - 124	2	0 - 41	Q14589
1,4-Dichlorobenzene	121.04	200	µg/L	61	20 - 124	0	0 - 36	Q14589
2,4,6-Trichlorophenol	165.18	200	µg/L	83	37 - 144	5	0 - 30	Q14589
2,4-Dichlorophenol	146.6	200	µg/L	73	39 - 135	2	0 - 31	Q14589
2,4-Dimethylphenol	135.04	200	µg/L	68	32 - 119	0	0 - 26	Q14589
2,4-Dinitrophenol	148.18	200	µg/L	74	10 - 191	2	0 - 30	Q14589
2,4-Dinitrotoluene	192.62	200	µg/L	96	39 - 139	4	0 - 29	Q14589
2,6-Dinitrotoluene	183.82	200	µg/L	92	50 - 158	1	0 - 15	Q14589
2-Chloronaphthalene	148.02	200	µg/L	74	60 - 118	3	0 - 21	Q14589
2-Chlorophenol	133.04	200	µg/L	67	23 - 134	1	0 - 35	Q14589
2-Nitrophenol	154.52	200	µg/L	77	29 - 182	5	0 - 34	Q14589
3,3'-Dichlorobenzidine	249.84	200	µg/L	125	10 - 262	4	0 - 50	Q14589
4,6-Dinitro-2-methylphenol	163.64	200	µg/L	82	10 - 181	6	0 - 19	Q14589
4-Bromophenylphenylether	201.2	200	µg/L	101	53 - 127	0	0 - 18	Q14589
4-Chloro-3-methylphenol	151.74	200	µg/L	76	22 - 147	0	0 - 33	Q14589
4-Chlorophenylphenylether	207.02	200	µg/L	104	25 - 158	1	0 - 19	Q14589
4-Nitrophenol	74.3	200	µg/L	37	10 - 132	3	0 - 50	Q14589
Acenaphthene	193.58	200	µg/L	97	47 - 145	1	0 - 20	Q14589
Acenaphthylene	180.28	200	µg/L	90	33 - 145	2	0 - 24	Q14589
Anthracene	197.52	200	µg/L	99	27 - 133	5	0 - 30	Q14589
Benzo(a)anthracene	198	200	µg/L	99	33 - 143	11	0 - 26	Q14589
Benzo(a)pyrene	218.08	200	µg/L	109	17 - 163	2	0 - 25	Q14589
Benzo(b)fluoranthene	201.18	200	µg/L	101	24 - 159	2	0 - 29	Q14589
Benzo(g,h,i)perylene	216.28	200	µg/L	108	10 - 219	2	0 - 27	Q14589
Benzo(k)fluoranthene	176.56	200	µg/L	88	11 - 162	3	0 - 11	Q14589
Bis(2-chloroethoxy)methane	161.52	200	µg/L	81	33 - 184	1	0 - 31	Q14589
Bis(2-chloroethyl)ether	140.42	200	µg/L	70	12 - 158	5	0 - 36	Q14589
Bis(2-chloroisopropyl)ether	143.16	200	µg/L	72	36 - 166	1	0 - 40	Q14589
Bis(2-ethylhexyl)phthalate	239.68	200	µg/L	68	10 - 158	1	0 - 17	Q14589
Butylbenzylphthalate	207	200	µg/L	104	10 - 152	0	0 - 15	Q14589
Chrysene	193.82	200	µg/L	97	17 - 168	9	0 - 25	Q14589
Di-n-butylphthalate	179.7	200	µg/L	90	10 - 118	2	0 - 27	Q14589
Di-n-octylphthalate	227.26	200	µg/L	114	10 - 146	2	0 - 17	Q14589
Dibenzo(a,h)anthracene	236.88	200	µg/L	118	10 - 227	1	0 - 28	Q14589
Diethylphthalate	193.66	200	µg/L	97	10 - 114	3	0 - 16	Q14589
Dimethylphthalate	149.42	200	µg/L	75	10 - 112	4	0 - 15	Q14589
Fluoranthene	183.3	200	µg/L	92	26 - 137	3	0 - 24	Q14589
Fluorene	200	200	µg/L	100	59 - 121	3	0 - 15	Q14589
Hexachlorobenzene	180.26	200	µg/L	90	10 - 152	1	0 - 18	Q14589
Hexachlorobutadiene	145.78	200	µg/L	73	24 - 116	4	0 - 34	Q14589
Hexachlorocyclopentadiene	194.9	200	µg/L	97 #	48 - 94	1	0 - 30	Q14589
Hexachloroethane	119.22	200	µg/L	60	40 - 113	2	0 - 38	Q14589
Indeno(1,2,3-cd)pyrene	233.04	200	µg/L	117	10 - 171	7	0 - 29	Q14589
Isophorone	156.28	200	µg/L	78	21 - 196	1	0 - 32	Q14589

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NC Certification No. 402  
 SC Certification No. 99012  
 NC Drinking Water Cert. No. 37735

# Level II QC Report

5/10/06

N. C. Department of Transportation  
 Attn: Bob Shaut/EI  
 c/o Environmental Investigations, Inc  
 2101 Gateway Centre Blvd. Ste 200  
 Morrisville, NC 27560

Project Name: Burnsville, NC      COC Group Number: G0506005  
 Project ID: NCDOT - Yancey - Par 123      Date/Time Submitted: 4/28/06 16:45  
 Project No.: WBS #356091.1

### Matrix Spike Duplicate

Sample ID:	Result	Spike Amount	Units	Recovery %	Recovery Range %	RPD %	RPD Range %	QC Batch ID
N-Nitrosodi-n-propylamine	164.54	200	µg/L	82	10 - 230	1	0 - 36	Q14589
Naphthalene	162.96	200	µg/L	81	21 - 133	3	0 - 42	Q14589
Nitrobenzene	136.12	200	µg/L	68	35 - 180	1	0 - 25	Q14589
Pentachlorophenol	189.1	200	µg/L	95	14 - 176	15	0 - 21	Q14589
Phenanthrene	211.72	200	µg/L	106	54 - 120	4	0 - 29	Q14589
Phenol	68.78	200	µg/L	34	10 - 112	2	0 - 39	Q14589
Pyrene	202.04	200	µg/L	101	52 - 115	5	0 - 15	Q14589

\* Analysis Note for Hexachlorocyclopentadiene: MS and MSD recoveries outside the control limits. This compound was not detected in samples associated with this batch. No further action was taken.

### Extractable Petroleum Hydrocarbons by GC-FID, method MADEP EPH

#### Method Blank

	Result	RL	Control Limit	Units	QC Batch ID
C11-C22 Aromatics	ND	100	<50	µg/L	Q14643
C19-C36 Aliphatics	ND	100	<50	µg/L	Q14643
C9-C18 Aliphatics	ND	100	<50	µg/L	Q14643

#### Laboratory Control Sample

	Result	Spike Amount	Units	Recovery %	Recovery Range %	QC Batch ID
C11-C22 Aromatics	1241	1700	µg/L	73	40 - 140	Q14643
C19-C36 Aliphatics	580.2	800	µg/L	73	40 - 140	Q14643
C9-C18 Aliphatics	391.6	600	µg/L	65	40 - 140	Q14643

#### Matrix Spike

Sample ID:		Result	Spike Amount	Units	Recovery %	Recovery Range %	QC Batch ID
149544	C11-C22 Aromatics	1236.4	1700	µg/L	73	40 - 140	Q14643
	C19-C36 Aliphatics	595.6	800	µg/L	74	40 - 140	Q14643
	C9-C18 Aliphatics	377.8	600	µg/L	63	40 - 140	Q14643

#### Matrix Spike Duplicate

Sample ID:		Result	Spike Amount	Units	Recovery %	Recovery Range %	RPD %	RPD Range %	QC Batch ID
149544	C11-C22 Aromatics	1206.2	1700	µg/L	71	40 - 140	2	0 - 50	Q14643
	C19-C36 Aliphatics	604	800	µg/L	76	40 - 140	1	0 - 50	Q14643
	C9-C18 Aliphatics	412.2	600	µg/L	69	40 - 140	9	0 - 50	Q14643



NC Certification No. 402  
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 NC Drinking Water Cert. No. 37735

# Level II QC Report

5/10/06

N. C. Department of Transportation  
 Attn: Bob Shaut/EI  
 c/o Environmental Investigations, Inc  
 2101 Gateway Centre Blvd. Ste 200  
 Morrisville, NC 27560

Project Name: Burnsville, NC      COC Group Number: G0506005  
 Project ID: NCDOT - Yancey - Par      Date/Time Submitted: 4/28/06      16:45  
 123  
 Project No.: WBS #356091.1

**Volatile Petroleum Hydrocarbons by GC-PID/FID, method MADEP, VPH**

Method Blank						QC Batch ID
	Result	RL	Control Limit	Units		
C5-C8 Aliphatics	ND	100	<50	µg/L		Q14660
C9-C10 Aromatics	ND	100	<50	µg/L		Q14660
C9-C12 Aliphatics	ND	100	<50	µg/L		Q14660

Laboratory Control Sample							QC Batch ID
	Result	Spike Amount	Units	Recovery %	Recovery Range %		
C5-C8 Aliphatics	145	150	µg/L	97	70 - 130		Q14660
C9-C10 Aromatics	41.13	50	µg/L	82	70 - 130		Q14660
C9-C12 Aliphatics	99.9	100	µg/L	100	70 - 130		Q14660

Matrix Spike								QC Batch ID
Sample ID:		Result	Spike Amount	Units	Recovery %	Recovery Range %		
149545	C5-C8 Aliphatics	163.06	150	µg/L	109	70 - 130		Q14660
	C9-C10 Aromatics	40.64	50	µg/L	81	70 - 130		Q14660
	C9-C12 Aliphatics	104.8	100	µg/L	105	70 - 130		Q14660

Matrix Spike Duplicate									QC Batch ID
Sample ID:		Result	Spike Amount	Units	Recovery %	Recovery Range %	RPD %	RPD Range %	
149545	C5-C8 Aliphatics	158.51	150	µg/L	106	70 - 130	3	0 - 25	Q14660
	C9-C10 Aromatics	38.12	50	µg/L	76	70 - 130	6	0 - 25	Q14660
	C9-C12 Aliphatics	97.18	100	µg/L	97	70 - 130	8	0 - 25	Q14660



Full Service Analytical & Environmental Solutions

449 Springbrook Road • P.O. Box 240543 • Charlotte, NC 28224-0543

Phone: 704/529-6364 • Fax: 704/525-0409

Client Company Name: ET, INC.

Report To/Contact Name: 2101 GATEWAY CENTRE DRIVE

Reporting Address: SUIT 200 MONROE ST NC 27560

Phone: 919-544-7502 Fax (No): 919-514-2199

Email (Yes)(No) Email Address: BShattal@ET.com

EDD Type: PDF Excel Other

Site Location Name: BURNSVILLE, NC

Site Location Physical Address: PHASE 1 R 123

### CHAIN OF CUSTODY RECORD

PAGE 1 OF 1 QUOTE # TO ENSURE PROPER BILLING:

Project Name: NCAOT - XANCKY

Short Hold Analysis: (Yes)(No) (No) UST Project: (Yes)(No) (Yes)

\*Please ATTACH any project specific reporting (QC LEVEL II III IV) provisions and/or QC Requirements

Invoice To: NCAOT

Address: WBS 1 35609 L.I

NC PHASE 1 R-2590A

Purchase Order No./Billing Reference

Requested Due Date  1 Day  2 Days  3 Days  4 Days  5 Days

"Working Days"  6-8 Days  Standard 10 days

Samples received after 15:00 will be processed next business day.

Turnaround time is based on business days, excluding weekends and holidays.

(SEE REVERSE FOR TERMS & CONDITIONS REGARDING SERVICES RENDERED BY PRISM LABORATORIES, INC. TO CLIENT)

LAB USE ONLY

TO BE FILLED IN BY CLIENT/SAMPLING PERSONNEL

Certification: NELAC \_\_\_\_\_ USACE \_\_\_\_\_ FL \_\_\_\_\_ NC \_\_\_\_\_

SC \_\_\_\_\_ OTHER \_\_\_\_\_ N/A \_\_\_\_\_

Water Chlorinated: YES \_\_\_\_\_ NO \_\_\_\_\_

Sample Iced Upon Collection: YES \_\_\_\_\_ NO \_\_\_\_\_

CLIENT SAMPLE DESCRIPTION	DATE COLLECTED	TIME COLLECTED MILITARY HOURS	MATRIX (SOIL, WATER OR SLUDGE)	SAMPLE CONTAINER		PRESERVATIVES	ANALYSES REQUESTED	REMARKS	PRISM LAB ID NO.
				TYPE SEE BELOW	NO. SIZE				
MW-1	4-26-06		H <sub>2</sub> O						149514
MW-2	11		" "						149545

Sampled By (Print Name) ROBERT M. SCHATZ Affiliation \_\_\_\_\_

Upon relinquishing this Chain of Custody is your authorization for Prism to proceed with the analyses as requested above. Any changes must be submitted in writing to the Prism Project Manager. There will be charges for any changes after analyses have been initialized.

Relinquished By (Signature) [Signature] Received By (Signature) [Signature] Date 04/27/06 Military/Hours 1455

Relinquished By (Signature) [Signature] Received By (Signature) [Signature] Date 4/28/06 Military/Hours 0914

Relinquished By (Signature) [Signature] Received By (Signature) [Signature] Date 4/28/06 Military/Hours 16:45

Relinquished By (Signature) [Signature] Received By (Signature) [Signature] Date 6/5/06 Military/Hours 6040

Method of shipment:  Fed Ex  UPS  Hand-delivered  Prism Field Service  Other \_\_\_\_\_

NOTE: ALL SAMPLE COOLERS SHOULD BE TAPED SHUT WITH CUSTODY SEALS FOR TRANSPORTATION TO THE LABORATORY. SAMPLES ARE NOT ACCEPTED AND VERIFIED AGAINST COC UNTIL RECEIVED AT THE LABORATORY.

Additional Comments: Collection Time MW-1 0830 MW-2 1030 wB/Prism

PRISM USE ONLY

Site Address: \_\_\_\_\_

Site Date/Time: \_\_\_\_\_

Lab Tech/ Fee: \_\_\_\_\_

Message: \_\_\_\_\_

SEE REVERSE FOR TERMS & CONDITIONS

ORIGINAL

\*CONTAINER TYPE CODES: A = Amber C = Clear G = Glass P = Plastic; TL = Teflon-Lined Cap VOA = Volatile Organics Analysis (Zero Head Space)