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MCAS CHERRY POINT
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# REPORT OF LIMITED SOIL ASSESSMENT RISK BASED RULES EVALUATION UNDERGROUND STORAGE TANK 160, BUILDING 498 AND TANKS 491 AND 487 WITH TRANSMITTAL MCAS CHERRY POINT NC

6/2/1999

LAW ENGINEERING AND ENVIRONMENTAL SERVICES, INC.

LAW

LAWGIBB Group Member

# REPORT OF LIMITED SOIL ASSESSMENT/ RISK BASED RULES EVALUATION

**UST 160, TANK 491, BUILDING 498 AND TANK 487**
**MCAS CHERRY POINT**
**CHERRY POINT, NORTH CAROLINA**

**Prepared For:**

**Atlantic Division**
**Naval Facilities Engineering Command**
**Norfolk, Virginia 23511-6287**

**Prepared By:**

**Law Engineering and Environmental Services, Inc.**
**3301 Atlantic Avenue**
**Raleigh, North Carolina 27604**

**June 2, 1999**

**LAW Project No. 30740-6-0600-56**

CATLIN LAW

ENVIRONMENTAL AND
ENGINEERING CONSULTANTS

WILMINGTON, N.C.
RALEIGH, N.C.

June 2, 1999

Commander
Atlantic Division
Naval Facilities Engineering Command
Norfolk, Virginia 23511-6287

Attention: Mr. John G. Kresky, Code 18213

Subject: **Limited Soil Assessment/Risk Based Rules Evaluation**
**UST 160, Tank 491, Building 498 and Tank 487**
**MCAS Cherry Point**
**Cherry Point, North Carolina**
**LAW Job No. 30740-6-0600, Phase 56**

Dear Mr. Kresky:

In accordance with your request, Law Engineering and Environmental Services, Inc. (LAW) is pleased to provide this report of Limited Soil Assessment/Risk Based Rules Evaluation for the above referenced sites. This work is being completed in accordance with Naval Facilities Engineering Command Order for Supplies and Services Contract No. N62470-95-6009, Delivery Order No. 56. Our objective was to determine if soil contamination is present at these site in excess of Residential or Commercial/Industrial Risk Based Corrective Action (RBCA) Maximum Soil Contaminant Concentration (MSCC) standards.

This report is intended for the exclusive property of the Atlantic Division Facilities Engineering Command. The contents should not be relied upon by any other parties without the consent of Atlantic Division Facilities Engineering Command. The findings are relevant to the dates of our site work and should not be relied upon to represent site conditions on other dates.

We appreciate the opportunity to provide environmental services on this project. If you have any questions, please contact us at (919) 876-0416.

Sincerely,

**LAW ENGINEERING & ENVIRONMENTAL SERVICES, INC.**

Jeffrey A. Mann
Project Engineer

Daniel H. Nielsen, P.E.
Principal Engineer

cc: John Myers, MCAS Cherry Point
Chris Foskey, LANTDIV (Letter Only)
Michael E. Mason, Richard Catlin & Associates, Inc.
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# 1.0 INTRODUCTION

In accordance with your request, Law Engineering and Environmental Services, Inc. (LAW) is pleased to provide this report of Limited Soil Assessment/Risk Based Rules Evaluation for UST 160, Tank 491, Building 498 and Tank 487. This work is being completed in accordance with Naval Facilities Engineering Command Order for Supplies and Services Contract No. N62470-95-6009, Delivery Order No. 56.

## 2.0 SCOPE OF SERVICES

Our objective was to determine if soil contamination is present at these sites in excess of Residential or Commercial/Industrial Risk Based Corrective Action (RBCA) Maximum Soil Contaminant Concentration (MSCC) standards. To accomplish this we advanced three soil borings at each site. The soil borings were advanced in areas where previous results indicated contamination in excess of previous regulatory standards. Geoprobe technology was used to collect the soil samples (except Tank 491). Soil borings were installed at Tank 491 using hand augers. The borings were advanced to the approximate depth of the groundwater table. Soils were visually inspected for evidence of contamination and were screened in the field using the headspace method. The soil samples from each boring which indicated the highest concentration of contamination were submitted for laboratory analysis and analyzed for Volatile Organic Compounds (VOCs) EPA 8260, Polynuclear Aromatic Hydrocarbons (PAHs) EPA 8270 and Massachusetts Department of Environmental Protection (MADEP) Extractable Petroleum Hydrocarbons (EPHs) and Volatile Petroleum Hydrocarbons (VPHs). Additionally, soil samples collected from UST 160 were analyzed for Total Metals EPA 6010.

## 3.0 FINDING AND CONCLUSIONS

The following sections summarize the laboratory results from soil samples collected at each site and provide conclusions concerning soil conditions with respect to MSCC standards.

### 3.1 UST 160

Three borings (14SB05, 14SB06 and 14SB07) were installed at the site (see Figure 3.1 in Appendix A). Laboratory results are summarized in the following table. See Appendix B for laboratory test reports and chain of custody. The tank located at the site was used to store used motor oil. A DENR memo, dated August 24, 1998, stated that pesticides and PCBs testing by EPA method 8080 was not required for site used to store only crankcase oil. Therefore, the soil samples collected from these borings were not analyzed for pesticides or PCBs.

**TABLE 3.1**
**UST 160**
**SUMMARY OF LABORATORY RESULTS**
**EPA METHODS 8260 AND 8270, MADEP EPH AND VPH AND TOTAL METALS**
**CHERRY POINT, NORTH CAROLINA**
**LAW PROJECT NO. 30740-6-0600-Phase 56**

| Contaminant Identified | ANALYTICAL TEST RESULTS (mg/kg) | | | RESIDENTIAL MSCC (mg/kg) | INDUSTRIAL/ COMMERCIAL MSCC (mg/kg) |
|---|---|---|---|---|---|
| | 14SB05 @ 5'-7' | 14SB06 @ 5'-7' | 14SB07 @ 5'-7' | | |
| EPA Method 8260 | NCD | NCD | NCD | | |
| EPA Method 8270 | NCD | NCD | NCD | | |
| Metals | | | | | |
| Chromium | 9.57 | 12.41 | 19.56 | 78 | 2000 |
| Lead | 5.25 | 19.53 | 52.34 | 400 | 400 |
| C5-C8 (VPH) | ND | ND | ND | 939 | 24528 |
| C9-C18 (VPH/EPH) (1) | ND | ND | ND | 9386 | 245280 |
| C9-C22 (VPH/EPH) (2) | ND | ND | ND | 469 | 12264 |
| C19-C36 (EPH) | ND | ND | ND | 93860 | None (Immobile) |

Shaded Cells = Concentrations exceed the residential and/or industrial/commercial MSCC.
ND = Not Detected at or above laboratory method detection limit.
NCD = No Constituents Detected for this test method at or above laboratory method detection limits.
MSCC = Maximum Soil Contaminant Concentration
MADEP = Massachusetts Department of Environmental Protection
EPH = Extractable Petroleum Hydrocarbons
VPH = Volatile Petroleum Hydrocarbons
(1) = In accordance with NCDENR memo dated March 26, 1998 C9-C18 = (C9-C12 + C9-C18)
(2) = In accordance with NCDENR memo dated March 26, 1998 C9-C22 = (C9-C10 + C11-C22)

VOCs, PAHs, EPHs and VPHs were not detected in the soil samples analyzed. Chromium and Lead were identified in the soil samples analyzed from each of the borings installed at the site. However, the concentrations detected are below respective Residential and Commercial/Industrial MSCC as listed in Table 4 of section 7.3 Risk Based Soil Cleanup Requirements of 15A NCAC 2L .0115 "The Risk Based Corrective Action Rule", effective January 2, 1998. Therefore, current soil conditions, with respect to the content of petroleum related compounds and select metals, do not warrant further evaluation and do not appear to present an obstacle in pursuing No Further Action status at the site.

## 3.2 TANK 491

Three borings (58SB01, 58SB02 and 58SB03) were installed at the site (see Figure 3.2 in Appendix A). Laboratory results are summarized in the following table. See Appendix B for laboratory test reports and chain of custody.

**TABLE 3.2**
**TANK 491**
**SUMMARY OF LABORATORY RESULTS**
**EPA METHODS 8260 AND 8270 AND MADEP EPH AND VPH**
**CHERRY POINT, NORTH CAROLINA**
**LAW PROJECT NO. 30740-6-0600-Phase 56**

| Contaminant Identified | ANALYTICAL TEST RESULTS (mg/kg) | | | RESIDENTIAL MSCC (mg/kg) | INDUSTRIAL/ COMMERCIAL MSCC (mg/kg) |
|---|---|---|---|---|---|
| | 58SB01 @ 10'-12' | 58SB02 @ 10'-12' | 58SB03 @ 10'-12' | | |
| EPA Method 8260 | NCD | NCD | NCD | | |
| EPA Method 8270 | | | | | |
| Dibenzofuran | ND | ND | 0.1295 | 62.6** | 1635** |
| Fluorene | ND | ND | 0.1648 | 620 | 16400 |
| C5-C8 (VPH) | ND | ND | ND | 939 | 24528 |
| C9-C18 (VPH/EPH) (1) | ND | ND | ND | 9386 | 245280 |
| C9-C22 (VPH/EPH) (2) | ND | ND | ND | 469 | 12264 |
| C19-C36 (EPH) | ND | ND | ND | 93860 | None (Immobile) |

Shaded Cells = Concentrations exceed the residential and/or industrial/commercial MSCC.
ND = Not Detected at or above laboratory method detection limit.
NCD = No Constituents Detected for this test method at or above laboratory method detection limits.
MSCC = Maximum Soil Contaminant Concentration
* = No established Maximum Soil Contaminant Concentration
MADEP = Massachusetts Department of Environmental Protection
EPH = Extractable Petroleum Hydrocarbons
VPH = Volatile Petroleum Hydrocarbons
(1) = In accordance with NCDENR memo dated March 26, 1998 C9-C18 = (C9-C12 + C9-C18)
(2) = In accordance with NCDENR memo dated March 26, 1998 C9-C22 = (C9-C10 + C11-C22)
** = Calculated Maximum Soil Contaminant Concentration derived from 15A NCAC 2L.0115(m)
Dibenzofuran: oral chronic reference dose = 0.004

Residential MSCC = 15,642.86 x oral chronic reference dose
= 15,642.86 x 0.004
= 62.6

Industrial/Commercial MSCC = 408,800 x oral chronic reference dose
= 408,800 x 0.004
= 1635

VOCs, EPHs and VPHs were not detected in the soil samples analyzed. PAHs were identified in the soil sample analyzed from boring 58SB03. However, the concentrations detected are below respective Residential and Commercial/Industrial MSCCs as listed in Table 4 of section 7.3 Risk Based Soil Cleanup Requirements of 15A NCAC 2L .0115 "The Risk Based Corrective Action Rule", effective January 2, 1998. Therefore, current soil conditions, with respect to the content of petroleum related compounds, do not warrant further evaluation and do not appear to present an obstacle in pursuing No Further Action status at the site.

## 3.3 BUILDING 498

Three borings (73SB09, 73SB10 and 73SB11) were installed at the site (see Figure 3.3 in Appendix A). Laboratory results are summarized in the following table. See Appendix B for laboratory test reports and chain of custody.

**TABLE 3.3**
**BUILDING 498**
**SUMMARY OF LABORATORY RESULTS**
**EPA METHODS 8260 AND 8270 AND MADEP EPH AND VPH**
**CHERRY POINT, NORTH CAROLINA**
**LAW PROJECT NO. 30740-6-0600-Phase 56**

| Contaminant Identified | ANALYTICAL TEST RESULTS (mg/kg) | | | RESIDENTIAL MSCC (mg/kg) | INDUSTRIAL/ COMMERCIAL MSCC (mg/kg) |
|---|---|---|---|---|---|
| | 73SB09 @ 4'-6' | 73SB10 @ 6'-8' | 73SB11 @ 3'-4' | | |
| EPA Method 8260 | NCD | NCD | NCD | | |
| EPA Method 8270 | NCD | NCD | NCD | | |
| C5-C8 (VPH) | ND | ND | ND | 939 | 24528 |
| C9-C18 (VPH/EPH) (1) | ND | ND | ND | 9386 | 245280 |
| C9-C22 (VPH/EPH) (2) | 12.3 | ND | 17.4 | 469 | 12264 |
| C19-C36 (EPH) | 62.1 | ND | 49.9 | 93860 | None (Immobile) |

Shaded Cells = Concentrations exceed the residential and/or industrial/commercial MSCC.
ND = Not Detected at or above laboratory method detection limit.
NCD = No Constituents Detected for this test method at or above laboratory method detection limits.
MSCC = Maximum Soil Contaminant Concentration
MADEP = Massachusetts Department of Environmental Protection
EPH = Extractable Petroleum Hydrocarbons
VPH = Volatile Petroleum Hydrocarbons
(1) = In accordance with NCDENR memo dated March 26, 1998 C9-C18 = (C9-C12 + C9-C18)
(2) = In accordance with NCDENR memo dated March 26, 1998 C9-C22 = (C9-C10 + C11-C22)

VOCs and PAHs were not detected in the soil samples analyzed. EPHs and VPHs were identified in the soil samples analyzed from borings 73SB09 and 73SB11. However, the concentrations detected are below respective Residential and Commercial/Industrial MSCCs as listed in Table 4 of section 7.3 Risk Based Soil Cleanup Requirements of 15A NCAC 2L .0115 "The Risk Based Corrective Action Rule", effective January 2, 1998. Therefore, current soil conditions, with respect to the content of petroleum related compounds, do not warrant further evaluation and do not appear to present an obstacle in pursuing No Further Action status at the site.

## 3.4 TANK 487

Three borings (63SB01, 63SB02 and 63SB03) were installed at the site (see Figure 3.4 in Appendix A). Laboratory results are summarized in the following table. See Appendix B for laboratory test reports and chain of custody.

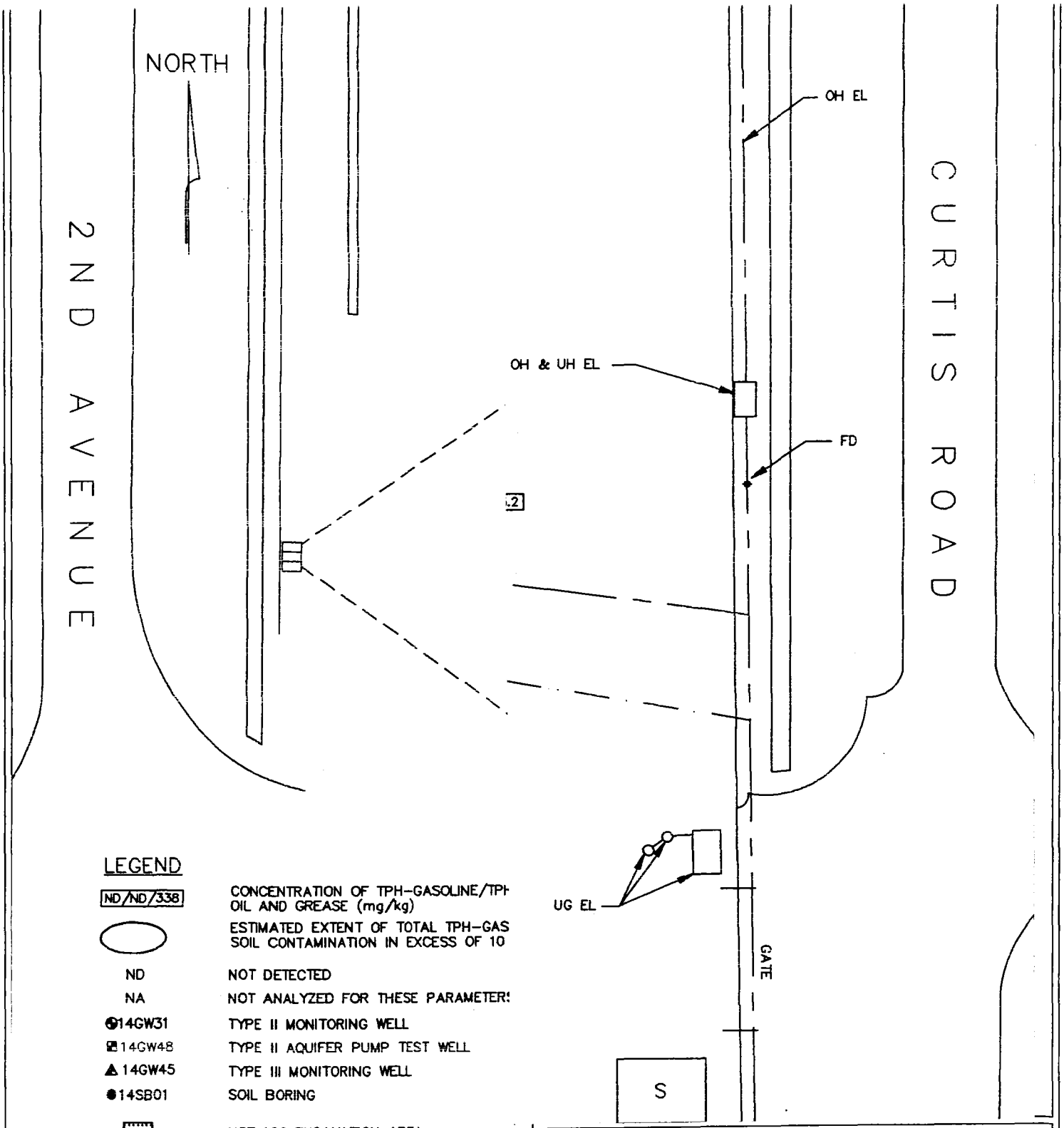
**TABLE 3.4**
**TANK 487**
**SUMMARY OF LABORATORY RESULTS**
**EPA METHODS 8260 AND 8270 AND MADEP EPH AND VPH**
**CHERRY POINT, NORTH CAROLINA**
**LAW PROJECT NO. 30740-6-0600-Phase 56**

| Contaminant Identified | ANALYTICAL TEST RESULTS (mg/kg) | | | RESIDENTIAL MSCC (mg/kg) | INDUSTRIAL/ COMMERCIAL MSCC (mg/kg) |
|---|---|---|---|---|---|
| | 63SB01 @ 3'-4' | 63SB02 @ 3'-4' | 63SB03 @ 3'-4' | | |
| EPA Method 8260 | NCD | NCD | NCD | | |
| EPA Method 8270 | NCD | NCD | NCD | | |
| C5-C8 (VPH) | ND | ND | ND | 939 | 24528 |
| C9-C18 (VPH/EPH) (1) | 4053.5 | ND | ND | 9386 | 245280 |
| C9-C22 (VPH/EPH) (2) | 443.9 | ND | ND | 469 | 12264 |
| C19-C36 (EPH) | 451.6 | ND | ND | 93860 | None (Immobile) |

Shaded Cells = Concentrations exceed the residential and/or industrial/commercial MSCC.
ND = Not Detected at or above laboratory method detection limit.
NCD = No Constituents Detected for this test method at or above laboratory method detection limits.
MSCC = Maximum Soil Contaminant Concentration
MADEP = Massachusetts Department of Environmental Protection
EPH = Extractable Petroleum Hydrocarbons
VPH = Volatile Petroleum Hydrocarbons
(1) = In accordance with NCDENR memo dated March 26, 1998 C9-C18 = (C9-C12 + C9-C18)
(2) = In accordance with NCDENR memo dated March 26, 1998 C9-C22 = (C9-C10 + C11-C22)

VOCs, PAHs and EPHs were not detected in the soil samples analyzed. VPHs were identified in the soil sample analyzed from boring 63SB01. However, the concentrations detected are below respective Residential and Commercial/Industrial MSCCs as listed in Table 4 of section 7.3 Risk Based Soil Cleanup Requirements of 15A NCAC 2L .0115 "The Risk Based Corrective Action Rule", effective January 2, 1998. Therefore, current soil conditions, with respect to the content of petroleum related compounds, do not warrant further evaluation and do not appear to present an obstacle in pursuing No Further Action status at the site.

# Figures



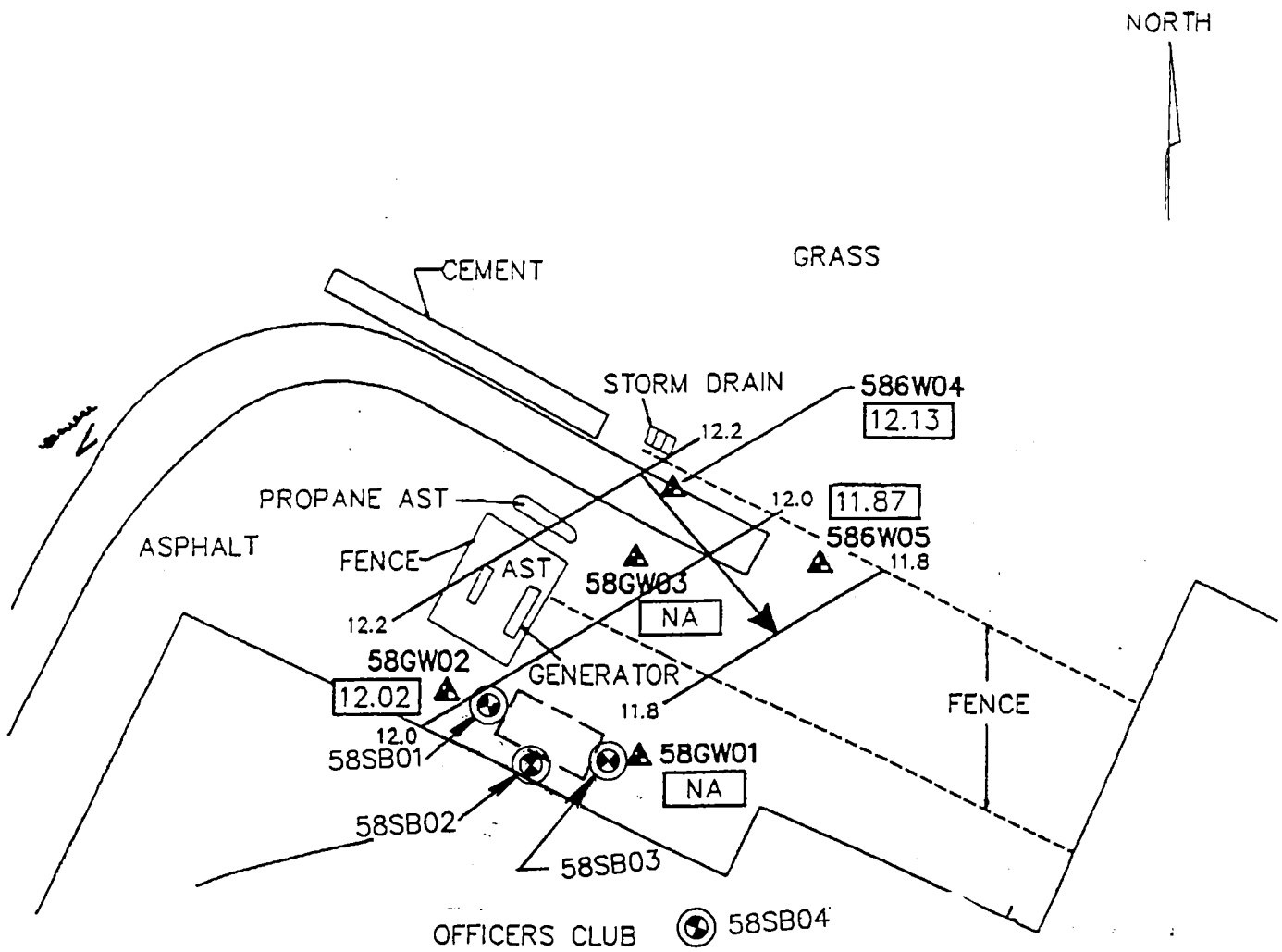

## LEGEND

| | |
|---|---|
| ND/ND/338 | CONCENTRATION OF TPH-GASOLINE/TPH OIL AND GREASE (mg/kg) |
| | ESTIMATED EXTENT OF TOTAL TPH-GAS SOIL CONTAMINATION IN EXCESS OF 10 |
| ND | NOT DETECTED |
| NA | NOT ANALYZED FOR THESE PARAMETERS |
| 14GW31 | TYPE II MONITORING WELL |
| 14GW48 | TYPE II AQUIFER PUMP TEST WELL |
| 14GW45 | TYPE III MONITORING WELL |
| 14SB01 | SOIL BORING |
| | UST 160 EXCAVATION AREA (CONCRETE PATCH) |
| | SEWER LINE |
| | WATER LINE |
| | NATURE OF UTILITY LINE UNKNOWN TO WG |
| OH EL | OVERHEAD ELECTRIC LINE |
| UG EL | UNDERGROUND ELECTRIC LINE |
| S | STEAM PIT |
| FD | FIRE DEPARTMENT GATE VALVE |
| | STORM DRAIN |
| W | SITE OF PREVIOUS UNDERGROUND WATER SUPPLY BREAK |
| | PROPOSED BORING LOCATIONS |

LAW ENGINEERING AND ENVIRONMENTAL SERVICES, INC.
RALEIGH, NORTH CAROLINA

| | |
|---|---|
| DRAWN: KRT | DATE: MAY 1999 |
| DFT CHECK: BTS | SCALE: 1"=30' |
| ENG CHECK: JAM | JOB: 30740-6-0600 |
| APPROVAL: DW | DWG: FIGURE 3.1 |

WISEMAN & TAYLOR DRAWING 70017 NBLDG160




LEGEND

| | |
|---|---|
| ▲ 58GW02 | TYPE II MONITORING WELL LOCATION |
| ▭ | APPROXIMATE LOCATION OF UNDERGROUND STORAGE TANK |
| → | ESTIMATED SHALLOW GROUNDWATER FLOW DIRECTION |
| 11.87 | WATER TABLE ELEVATION (FT) |
| — | WATER TABLE ELEVATION CONTOUR (FT) |
| NA | NOT APPLICABLE. SEE NOTE |
| ⊕ | PROPOSED BORING LOCATIONS |

NOTES:
MONITORING WELLS 568W01 AND 586W03 WERE REMOVED DURING UST CLOSURE IN AUGUST OF 1994. MONITORING WELLS 586W04 AND 586W05 WERE INSTALLED IN JANUARY OF 1995.

J9942001

LAW ENGINEERING AND ENVIRONMENTAL SERVICES, INC.
RALEIGH, NORTH CAROLINA

**WATER TABLE CONTOUR MAP**

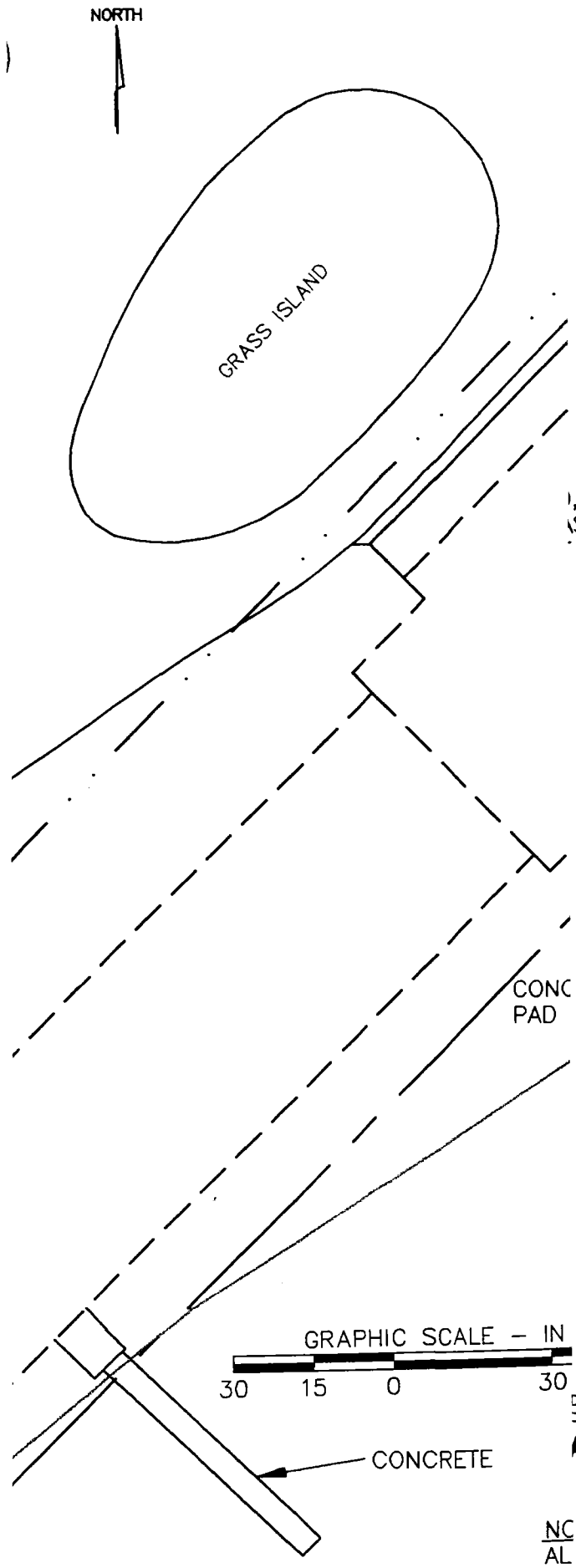
TANK 491

MARINE CORPS AIR STATION

CHERRY POINT, NORTH CAROLINA

| | |
|---|---|
| DRAWN: KRT | DATE: MAY 1999 |
| DFT CHECK: BTS | SCALE: 1"=30' |
| ENG CHECK: JAM | JOB: 30740-6-0600 |
| APPROVAL: DW | DWG: FIGURE 3.2 |

REFERENCE:




## LEGEND

| | |
|---|---|
| ND/ND/34 | CONCENTRATION OF TPH-GASOLINE/TPH DIESEL/OIL AND GREASE (mg/Kg) |
| — — 250 — — | OIL AND GREASE CONCENTRATION ISOPLETH (mg/Kg) |
| ND | NOT DETECTED |
| 73GW10 | TYPE II MONITORING WELL LOCATION |
| 73GW08 | TYPE III MONITORING WELL LOCATION |
| 73GW05 | TYPE II AQUIFER PUMP TEST WELL LOCATION |
| SB01 | SOIL BORING LOCATION |
| | WATER LINE AND MANHOLE |
| | SEWER LINE |
| | CONDENSATE RETURN LINE |
| | HIGH VOLTAGE CABLE |

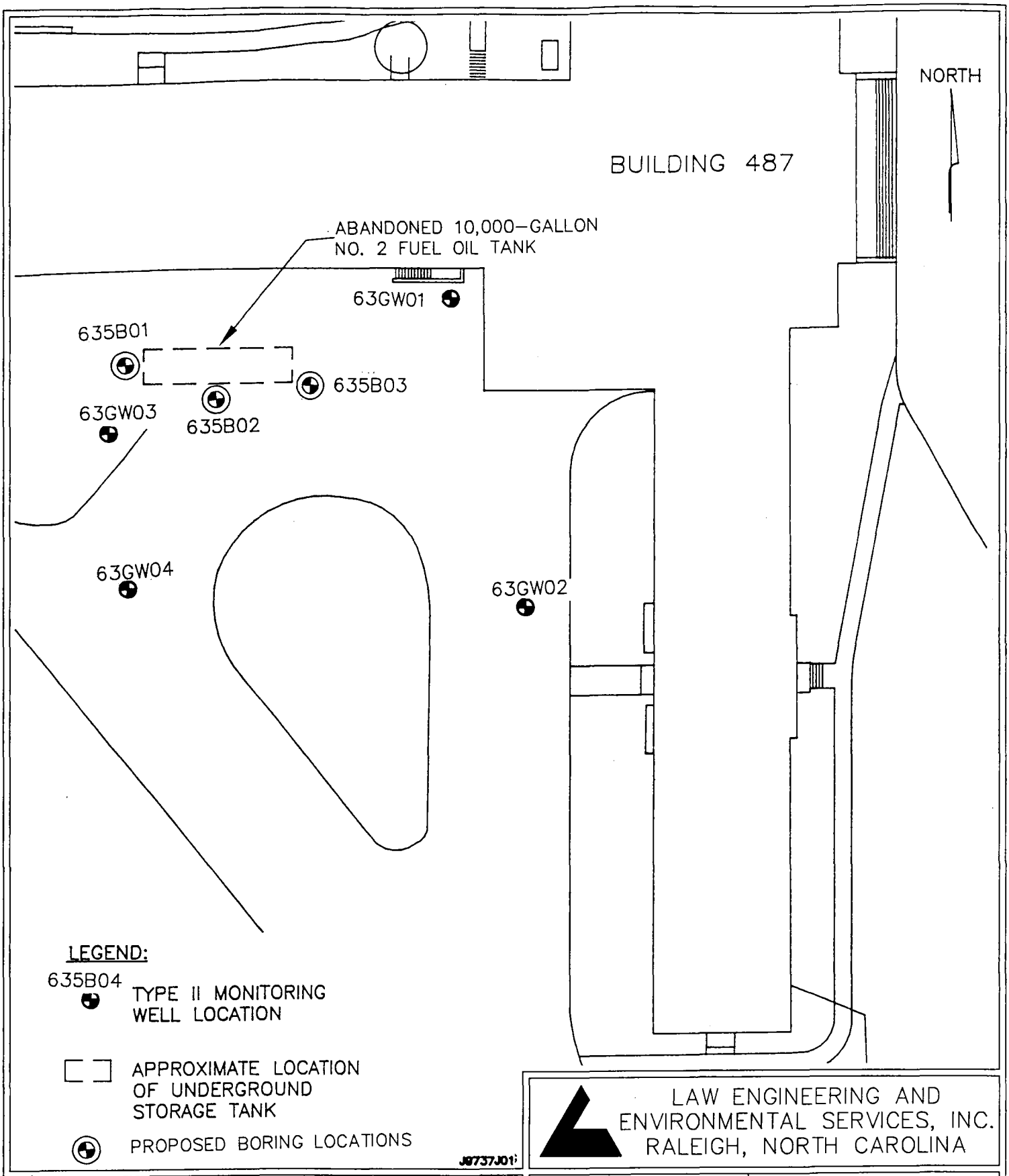
* THE NORTH CAROLINA GROUNDWATER QUALITY STANDARD FOR TPH-GASOLINE, TPH-DIESEL, AND OIL AND GREASE ARE 10 mg/Kg, 40 mg/Kg, AND 250 mg/Kg RESPECTIVELY.

PROPOSED BORING LOCATIONS

LAW ENGINEERING AND ENVIRONMENTAL SERVICES, INC.
RALEIGH, NORTH CAROLINA

| | |
|---|---|
| DRAWN: KRT | DATE: MAY 1999 |
| DFT CHECK: BTS | SCALE: 1"=30' |
| ENG CHECK: JAM | JOB: 30740-6-0600 |
| APPROVAL: DN | DWG: FIGURE 3.3 |

DWG
AP
NC
AL
HA
AS
SEMANN, & TAYLOR

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ENVIRONMENTAL SERVICES, INC.
RALEIGH, NORTH CAROLINA

**MONITORING WELL LOCATION MAP**
TANK 487
MARINE CORPS AIR STATION
CHERRY POINT, NORTH CAROLINA

| | |
|---|---|
| DRAWN: KRT | DATE: MAY 1999 |
| DFT CHECK: BTS | SCALE: 1"=20' |
| ENG CHECK: JAM | JOB: 30740-6-0600 |
| APPROVAL: DAN | DWG: FIGURE 3.4 |

REFERENCE: MASTER SHORE STATION DEVELOPMENT PLAN, AREA 32 AND SURVEY DATA FROM GTI REPORT, FEB. 1993.

# Laboratory Results and Chain of Custody

# GeoChem, Incorporated

## Environmental Laboratories

## Certified Analytical Laboratory

*NC # 37745 ,NC # 336, NC # 461, EPA ID # 155*

***Client Project Manager***
*Jeff Tyberski*
***Site Name:***
*Cherry Point*
*90740-0-0600 UST 160*

*Law Engineering*
*3301 Atlantic Avenue*
*Raleigh NC*
*27604*

***Report Date***
*Wednesday, May 19, 1999*
***PO #***
***Date Received in lab:***
*Thursday, May 06, 1999*

## GCI Project #: 9905-011

## Summary of requested analytical work

| *Sample type code #s :* | *1 = solid samples;* | *2 = liquid samples;* | *3 = Air samples;* | *4 = sludges/unknowns* |
|---|---|---|---|---|
| *Field Number:* 145B05 | *Lab ID* 1207 | *Sample Type:* 1 | *Date Analyzed:* 5/11/99 | *for 8260 soil* |
| *Date Sampled* 5/5/99 | | | *Proper Preservation* | Yes |
| *Field Number:* 145B05 | *Lab ID* 1207 | *Sample Type:* 1 | *Date Analyzed:* 5/17/99 | *for 8270 BNA soil* |
| *Date Sampled* 5/5/99 | | | *Proper Preservation* | Yes |
| *Field Number:* 145B05 | *Lab ID* 1207 | *Sample Type:* 1 | *Date Analyzed:* 5/12/99 | *for Cr by Fl* |
| *Date Sampled* 5/5/99 | | | *Proper Preservation* | Yes |
| *Field Number:* 145B05 | *Lab ID* 1207 | *Sample Type:* 1 | *Date Analyzed:* 5/12/99 | *for EPH soil* |
| *Date Sampled* 5/5/99 | | | *Proper Preservation* | Yes |
| *Field Number:* 145B05 | *Lab ID* 1207 | *Sample Type:* 1 | *Date Analyzed:* | *for Pb by Fl* |
| *Date Sampled* 5/5/99 | | | *Proper Preservation* | Yes |
| *Field Number:* 145B05 | *Lab ID* 1207 | *Sample Type:* 1 | *Date Analyzed:* 5/10/99 | *for VPH soil* |
| *Date Sampled* 5/5/99 | | | *Proper Preservation* | Yes |
| *Field Number:* 145B06 | *Lab ID* 1208 | *Sample Type:* 1 | *Date Analyzed:* 5/11/99 | *for 8260 soil* |
| *Date Sampled* 5/5/99 | | | *Proper Preservation* | Yes |
| *Field Number:* 145B06 | *Lab ID* 1208 | *Sample Type:* 1 | *Date Analyzed:* 5/12/99 | *for 8270 BNA soil* |
| *Date Sampled* 5/5/99 | | | *Proper Preservation* | Yes |
| *Field Number:* 145B06 | *Lab ID* 1208 | *Sample Type:* 1 | *Date Analyzed:* 5/12/99 | *for Cr by Fl* |
| *Date Sampled* 5/5/99 | | | *Proper Preservation* | Yes |

I Here by certify that I have Reviewed and approve this data set

**2500 Gate Way Centre Blvd., Suite 300 • Morrisville, NC 27560**
**Telephone: 919-460-8093 • FAX: 919-460-0167**

# GeoChem, Incorporated

## Environmental Laboratories

## Certified Analytical Laboratory

*NC # 37745 ,NC # 336, NC # 461, EPA ID # 155*

***Client Project Manager***
*Jeff Tyberski*
***Site Name:***
*Cherry Point*
*90740-0-0600 UST 160*

*Law Engineering*
*3301 Atlantic Avenue*
*Raleigh NC*
*27604*

***Report Date***
*Wednesday, May 19, 1999*
***PO #***
***Date Received in lab:***
*Thursday, May 06, 1999*

## GCI Project #: 9905-011

## Summary of requested analytical work

| *Sample type code #s :* | *1 = solid samples;* | *2 = liquid samples;* | *3 = Air samples;* | *4 = sludges/unknowns* |
|---|---|---|---|---|
| *Field Number:* 145B06 | *Lab ID* 1208 | *Sample Type:* 1 | *Date Analyzed:* 5/12/99 | *for EPH soil* |
| *Date Sampled* 5/5/99 | | | *Proper Preservation* | Yes |
| *Field Number:* 145B06 | *Lab ID* 1208 | *Sample Type:* 1 | *Date Analyzed:* 5/12/99 | *for Pb by Fl* |
| *Date Sampled* 5/5/99 | | | *Proper Preservation* | Yes |
| *Field Number:* 145B06 | *Lab ID* 1208 | *Sample Type:* 1 | *Date Analyzed:* 5/10/99 | *for VPH soil* |
| *Date Sampled* 5/5/99 | | | *Proper Preservation* | Yes |
| *Field Number:* 145B07 | *Lab ID* 1209 | *Sample Type:* 1 | *Date Analyzed:* 5/11/99 | *for 8260 soil* |
| *Date Sampled* 5/5/99 | | | *Proper Preservation* | Yes |
| *Field Number:* 145B07 | *Lab ID* 1209 | *Sample Type:* 1 | *Date Analyzed:* 5/12/99 | *for 8270 BNA soil* |
| *Date Sampled* 5/5/99 | | | *Proper Preservation* | Yes |
| *Field Number:* 145B07 | *Lab ID* 1209 | *Sample Type:* 1 | *Date Analyzed:* 5/12/99 | *for Cr by Fl* |
| *Date Sampled* 5/5/99 | | | *Proper Preservation* | Yes |
| *Field Number:* 145B07 | *Lab ID* 1209 | *Sample Type:* 1 | *Date Analyzed:* 5/12/99 | *for EPH soil* |
| *Date Sampled* 5/5/99 | | | *Proper Preservation* | Yes |
| *Field Number:* 145B07 | *Lab ID* 1209 | *Sample Type:* 1 | *Date Analyzed:* 5/12/99 | *for Pb by Fl* |
| *Date Sampled* 5/5/99 | | | *Proper Preservation* | Yes |
| *Field Number:* 145B07 | *Lab ID* 1209 | *Sample Type:* 1 | *Date Analyzed:* 5/10/99 | *for VPH soil* |
| *Date Sampled* 5/5/99 | | | *Proper Preservation* | Yes |

I Kevin Belm Here by certify that I have Reviewed and approve this data set

2500 Gate Way Centre Blvd., Suite 300 • Morrisville, NC 27560
Telephone: 919-460-8093 • FAX: 919-460-0167

# GeoChem Incorporated Certified Analytical Laboratory

*Site Name:*
*Cherry Point*

*NC # 37745 , NC # 336, EPA ID # 155*
*Wednesday, May 19, 1999*

*GCI Project # 9905-011*

Field ID **145B05** *Date Analyzed: 5/11/99*
*Lab ID* ***1207***
**8260 soil**

| | Conc. in ug/kg | lowest detection on sample PQL in ug/kg | Dilution Factor |
|---|---|---|---|
| Dry wt % | 86.0 | | |
| MTBE | **BDL** | 5.0 | 1.0 |
| IPE | **BDL** | 5.0 | 1.0 |
| n-Butylbenzene | **BDL** | 5.0 | 1.0 |
| Dichlorodifluoromethane | **BDL** | 10.0 | 1.0 |
| Chloromethane | **BDL** | 10.0 | 1.0 |
| Vinyl Chloride | **BDL** | 5.0 | 1.0 |
| Bromomethane | **BDL** | 10.0 | 1.0 |
| Chloroethane | **BDL** | 10.0 | 1.0 |
| Trichlorofluoromethane | **BDL** | 10.0 | 1.0 |
| Acrolein | **BDL** | 100.4 | 1.0 |
| Acetone | **BDL** | 50.2 | 1.0 |
| 1,1-Dichloroethene | **BDL** | 5.0 | 1.0 |
| Iodomethane | **BDL** | 5.0 | 1.0 |
| Carbon Disulfide | **BDL** | 5.0 | 1.0 |
| Methylene Chloride | **BDL** | 5.0 | 1.0 |
| Acrylonitrile | **BDL** | 5.0 | 1.0 |
| trans-1,2-Dichloroethene | **BDL** | 5.0 | 1.0 |
| 1,1-Dichloroethane | **BDL** | 5.0 | 1.0 |
| Vinyl Acetate | **BDL** | 10.0 | 1.0 |
| 2,2-Dichloropropane | **BDL** | 5.0 | 1.0 |
| cis-1,2-Dichloroethene | **BDL** | 5.0 | 1.0 |
| 2-Butanone | **BDL** | 50.2 | 1.0 |
| Bromochloromethane | **BDL** | 5.0 | 1.0 |
| Chloroform | **BDL** | 5.0 | 1.0 |
| 1,1,1-Trichloroethane | **BDL** | 5.0 | 1.0 |
| 1,1-Dichloropropene | **BDL** | 5.0 | 1.0 |
| Carbon Tetrachloride | **BDL** | 5.0 | 1.0 |
| Benzene | **BDL** | 5.0 | 1.0 |
| 1,2-Dichloroethane | **BDL** | 5.0 | 1.0 |
| Trichloroethene | **BDL** | 5.0 | 1.0 |
| 1,2-Dichloropropane | **BDL** | 5.0 | 1.0 |
| Dibromomethane | **BDL** | 5.0 | 1.0 |
| Bromodichloromethane | **BDL** | 5.0 | 1.0 |
| 2-Chloroethylvinylether | **BDL** | 10.0 | 1.0 |
| cis-1,3-Dichloropropene | **BDL** | 5.0 | 1.0 |
| 4-Methyl-2-pentanone | **BDL** | 50.2 | 1.0 |
| Toluene | **BDL** | 5.0 | 1.0 |
| trans-1,3-Dichloropropene | **BDL** | 5.0 | 1.0 |
| 1,1,2-Trichloroethane | **BDL** | 5.0 | 1.0 |
| Ethylmethacrylate | **BDL** | 5.0 | 1.0 |
| Tetrachloroethene | **BDL** | 5.0 | 1.0 |

# GeoChem Incorporated Certified Analytical Laboratory

*Site Name:*
*Cherry Point*

*NC # 37745 , NC # 336, EPA ID # 155*
*Wednesday, May 19, 1999*

*GCI Project # 9905-011*

| | Conc. in ug/kg | lowest detection on sample PQL in ug/kg | Dilution Factor |
|---|---|---|---|
| 1,3-Dichloropropane | BDL | 5.0 | 1.0 |
| 2-Hexanone | BDL | 50.2 | 1.0 |
| Chlorodibromomethane | BDL | 5.0 | 1.0 |
| 1,2-Dibromoethane | BDL | 5.0 | 1.0 |
| Chlorobenzene | BDL | 5.0 | 1.0 |
| 1,1,1,2-Tetrachloroethane | BDL | 5.0 | 1.0 |
| Ethylbenzene | BDL | 5.0 | 1.0 |
| m,p-Xylene | BDL | 5.0 | 1.0 |
| o-Xylene | BDL | 5.0 | 1.0 |
| Styrene | BDL | 5.0 | 1.0 |
| Bromoform | BDL | 5.0 | 1.0 |
| Isopropylbenzene | BDL | 5.0 | 1.0 |
| Bromobenzene | BDL | 5.0 | 1.0 |
| 1,2,3-Trichloropropane | BDL | 10.0 | 1.0 |
| 1,1,2,2-Tetrachloroethane | BDL | 5.0 | 1.0 |
| n-Propylbenzene | BDL | 5.0 | 1.0 |
| 2-Chlorotoluene | BDL | 5.0 | 1.0 |
| 1,4-Dichloro-2-butene | BDL | 10.0 | 1.0 |
| 4-Chlorotoluene | BDL | 5.0 | 1.0 |
| 1,3,5-Trimethylbenzene | BDL | 5.0 | 1.0 |
| tert-Butylbenzene | BDL | 5.0 | 1.0 |
| 1,2,4-Trimethylbenzene | BDL | 5.0 | 1.0 |
| sec-Butylbenzene | BDL | 5.0 | 1.0 |
| 1,3-Dichlorobenzene | BDL | 5.0 | 1.0 |
| 1,4-Dichlorobenzene | BDL | 5.0 | 1.0 |
| 4-Isopropyltoluene | BDL | 5.0 | 1.0 |
| 1,2-Dichlorobenzene | BDL | 5.0 | 1.0 |
| 1,2-Dibromo-3-chloropropan | BDL | 5.0 | 1.0 |
| 1,2,4-Trichlorobenzene | BDL | 5.0 | 1.0 |
| Naphthalene | BDL | 5.0 | 1.0 |
| Hexachlorobutadiene | BDL | 5.0 | 1.0 |
| 1,2,3-Trichlorobenzene | BDL | 5.0 | 1.0 |

*End of **8260 soil***

**8270 BNA soil**

| | | | |
|---|---|---|---|
| n-Nitrosodimethylamine | BDL | 100.0 | 1.0 |
| Aniline | BDL | 100.0 | 1.0 |
| Bis(2-chloroethyl)ether | BDL | 100.0 | 1.0 |
| 2-Chlorophenol | BDL | 100.0 | 1.0 |
| Phenol | BDL | 100.0 | 1.0 |
| 1,3-Dichlorobenzene | BDL | 100.0 | 1.0 |
| 1,4-Dichlorobenzene | BDL | 100.0 | 1.0 |
| 1,2-Dichlorobenzene | BDL | 100.0 | 1.0 |
| Benzyl Alcohol | BDL | 200.0 | 1.0 |
| Bis(2-chloroisopropyl)ether | BDL | 100.0 | 1.0 |

# GeoChem Incorporated Certified Analytical Laboratory

*Site Name:*
*Cherry Point*

*NC # 37745 , NC # 336, EPA ID # 155*
*Wednesday, May 19, 1999*

*GCI Project # 9905-011*

| | Conc. in ug/kg | *lowest detection on sample* PQL in ug/kg | Dilution Factor |
|---|---|---|---|
| 2-Methylphenol (o-cresol) | BDL | 100.0 | 1.0 |
| Hexachloroethane | BDL | 100.0 | 1.0 |
| n-Nitrosodipropylamine | BDL | 100.0 | 1.0 |
| Nitrobenzene | BDL | 100.0 | 1.0 |
| 4-Methylphenol (p-cresol) | BDL | 100.0 | 1.0 |
| Isophorone | BDL | 100.0 | 1.0 |
| 2-Nitrophenol | BDL | 100.0 | 1.0 |
| 2,4-Dimethylphenol | BDL | 100.0 | 1.0 |
| Bis(2-chloroethoxy)methane | BDL | 100.0 | 1.0 |
| 2,4-Dichlorophenol | BDL | 100.0 | 1.0 |
| 1,2,4-Trichlorobenzene | BDL | 100.0 | 1.0 |
| Naphthalene | BDL | 100.0 | 1.0 |
| Benzoic acid | BDL | 500.0 | 1.0 |
| 4-Chloroaniline | BDL | 100.0 | 1.0 |
| Hexachlorobutadiene | BDL | 100.0 | 1.0 |
| 2-Methylnaphthalene | BDL | 100.0 | 1.0 |
| 4-Chloro-3-methylphenol | BDL | 200.0 | 1.0 |
| Hexachlorocyclopentadiene | BDL | 100.0 | 1.0 |
| 2,4,6-Trichlorophenol | BDL | 100.0 | 1.0 |
| 2,4,5-Trichlorophenol | BDL | 100.0 | 1.0 |
| 2-Chloronaphthalene | BDL | 100.0 | 1.0 |
| 2-Nitroaniline | BDL | 500.0 | 1.0 |
| Acenaphthylene | BDL | 100.0 | 1.0 |
| Dimethylphthalate | BDL | 100.0 | 1.0 |
| 2,6-Dinitrotoluene | BDL | 100.0 | 1.0 |
| Acenaphthene | BDL | 100.0 | 1.0 |
| 3-Nitroaniline | BDL | 500.0 | 1.0 |
| 2,4-Dinitrophenol | BDL | 100.0 | 1.0 |
| Dibenzofuran | BDL | 100.0 | 1.0 |
| 2,4-Dinitrotoluene | BDL | 100.0 | 1.0 |
| 4-Nitrophenol | BDL | 500.0 | 1.0 |
| Fluorene | BDL | 100.0 | 1.0 |
| 4-Chlorophenyl Phenyl Ether | BDL | 100.0 | 1.0 |
| Diethylphthalate | BDL | 100.0 | 1.0 |
| 4-Nitroaniline | BDL | 500.0 | 1.0 |
| 4,6-Dinitro-2-methylphenol | BDL | 100.0 | 1.0 |
| n-Nitrosodiphenylamine | BDL | 100.0 | 1.0 |
| 4-Bromophenyl Phenyl Ether | BDL | 100.0 | 1.0 |
| Hexachlorobenzene | BDL | 100.0 | 1.0 |
| Benzidine | BDL | 500.0 | 1.0 |
| Pentachlorophenol | BDL | 100.0 | 1.0 |
| Phenanthrene | BDL | 100.0 | 1.0 |
| Anthracene | BDL | 100.0 | 1.0 |
| Di-n-butylphthalate | BDL | 100.0 | 1.0 |

# GeoChem Incorporated Certified Analytical Laboratory

*Site Name:*
*Cherry Point*

*NC # 37745 , NC # 336, EPA ID # 155*
*Wednesday, May 19, 1999*

*GCI Project # 9905-011*

| | Conc. in ug/kg | lowest detection on sample PQL in ug/kg | Dilution Factor |
|---|---|---|---|
| Fluoranthene | **BDL** | 100.0 | 1.0 |
| Pyrene | **BDL** | 100.0 | 1.0 |
| Butyl Benzyl Phthalate | **BDL** | 200.0 | 1.0 |
| Benzo(a)anthracene | **BDL** | 100.0 | 1.0 |
| 3,3'-Dichlorobenzidine | **BDL** | 200.0 | 1.0 |
| Chrysene | **BDL** | 50.0 | 1.0 |
| Bis(2-ethylhexyl)phthalate | **BDL** | 100.0 | 1.0 |
| Di-n-octylphthalate | **BDL** | 100.0 | 1.0 |
| Benzo(b)fluoranthene | **BDL** | 100.0 | 1.0 |
| Benzo(k)fluoranthene | **BDL** | 100.0 | 1.0 |
| Benzo(a)pyrene | **BDL** | 100.0 | 1.0 |
| Indeno(1,2,3-cd)pyrene | **BDL** | 100.0 | 1.0 |
| Dibenz(a,h)anthracene | **BDL** | 100.0 | 1.0 |
| Benzo(g,h,i)perylene | **BDL** | 100.0 | 1.0 |

*End of **8270 BNA soil***

# GeoChem Incorporated Certified Analytical Laboratory

*Site Name:*
*Cherry Point*

*NC # 37745 , NC # 336, EPA ID # 155*
*Wednesday, May 19, 1999*

*GCI Project # 9905-011*

Field ID **145B06** *Date Analyzed: 5/11/99* Dry wt % 86.5

*Lab ID* ***1208***

**8260 soil**

| | Conc. in ug/kg | lowest detection on sample PQL in ug/kg | Dilution Factor |
|---|---|---|---|
| MTBE | **BDL** | 5.1 | 1.0 |
| IPE | **BDL** | 5.1 | 1.0 |
| n-Butylbenzene | **BDL** | 5.1 | 1.0 |
| Dichlorodifluoromethane | **BDL** | 10.1 | 1.0 |
| Chloromethane | **BDL** | 10.1 | 1.0 |
| Vinyl Chloride | **BDL** | 5.1 | 1.0 |
| Bromomethane | **BDL** | 10.1 | 1.0 |
| Chloroethane | **BDL** | 10.1 | 1.0 |
| Trichlorofluoromethane | **BDL** | 10.1 | 1.0 |
| Acrolein | **BDL** | 101.0 | 1.0 |
| Acetone | **BDL** | 50.5 | 1.0 |
| 1,1-Dichloroethene | **BDL** | 5.1 | 1.0 |
| Iodomethane | **BDL** | 5.1 | 1.0 |
| Carbon Disulfide | **BDL** | 5.1 | 1.0 |
| Methylene Chloride | **BDL** | 5.1 | 1.0 |
| Acrylonitrile | **BDL** | 5.1 | 1.0 |
| trans-1,2-Dichloroethene | **BDL** | 5.1 | 1.0 |
| 1,1-Dichloroethane | **BDL** | 5.1 | 1.0 |
| Vinyl Acetate | **BDL** | 10.1 | 1.0 |
| 2,2-Dichloropropane | **BDL** | 5.1 | 1.0 |
| cis-1,2-Dichloroethene | **BDL** | 5.1 | 1.0 |
| 2-Butanone | **BDL** | 50.5 | 1.0 |
| Bromochloromethane | **BDL** | 5.1 | 1.0 |
| Chloroform | **BDL** | 5.1 | 1.0 |
| 1,1,1-Trichloroethane | **BDL** | 5.1 | 1.0 |
| 1,1-Dichloropropene | **BDL** | 5.1 | 1.0 |
| Carbon Tetrachloride | **BDL** | 5.1 | 1.0 |
| Benzene | **BDL** | 5.1 | 1.0 |
| 1,2-Dichloroethane | **BDL** | 5.1 | 1.0 |
| Trichloroethene | **BDL** | 5.1 | 1.0 |
| 1,2-Dichloropropane | **BDL** | 5.1 | 1.0 |
| Dibromomethane | **BDL** | 5.1 | 1.0 |
| Bromodichloromethane | **BDL** | 5.1 | 1.0 |
| 2-Chloroethylvinylether | **BDL** | 10.1 | 1.0 |
| cis-1,3-Dichloropropene | **BDL** | 5.1 | 1.0 |
| 4-Methyl-2-pentanone | **BDL** | 50.5 | 1.0 |
| Toluene | **BDL** | 5.1 | 1.0 |
| trans-1,3-Dichloropropene | **BDL** | 5.1 | 1.0 |
| 1,1,2-Trichloroethane | **BDL** | 5.1 | 1.0 |
| Ethylmethacrylate | **BDL** | 5.1 | 1.0 |
| Tetrachloroethene | **BDL** | 5.1 | 1.0 |

# GeoChem Incorporated Certified Analytical Laboratory

*Site Name:*
*Cherry Point*

*NC # 37745 , NC # 336, EPA ID # 155*
*Wednesday, May 19, 1999*

*GCI Project # 9905-011*

| | Conc. in ug/kg | lowest detection on sample PQL in ug/kg | Dilution Factor |
|---|---|---|---|
| 1,3-Dichloropropane | BDL | 5.1 | 1.0 |
| 2-Hexanone | BDL | 50.5 | 1.0 |
| Chlorodibromomethane | BDL | 5.1 | 1.0 |
| 1,2-Dibromoethane | BDL | 5.1 | 1.0 |
| Chlorobenzene | BDL | 5.1 | 1.0 |
| 1,1,1,2-Tetrachloroethane | BDL | 5.1 | 1.0 |
| Ethylbenzene | BDL | 5.1 | 1.0 |
| m,p-Xylene | BDL | 5.1 | 1.0 |
| o-Xylene | BDL | 5.1 | 1.0 |
| Styrene | BDL | 5.1 | 1.0 |
| Bromoform | BDL | 5.1 | 1.0 |
| Isopropylbenzene | BDL | 5.1 | 1.0 |
| Bromobenzene | BDL | 5.1 | 1.0 |
| 1,2,3-Trichloropropane | BDL | 10.1 | 1.0 |
| 1,1,2,2-Tetrachloroethane | BDL | 5.1 | 1.0 |
| n-Propylbenzene | BDL | 5.1 | 1.0 |
| 2-Chlorotoluene | BDL | 5.1 | 1.0 |
| 1,4-Dichloro-2-butene | BDL | 10.1 | 1.0 |
| 4-Chlorotoluene | BDL | 5.1 | 1.0 |
| 1,3,5-Trimethylbenzene | BDL | 5.1 | 1.0 |
| tert-Butylbenzene | BDL | 5.1 | 1.0 |
| 1,2,4-Trimethylbenzene | BDL | 5.1 | 1.0 |
| sec-Butylbenzene | BDL | 5.1 | 1.0 |
| 1,3-Dichlorobenzene | BDL | 5.1 | 1.0 |
| 1,4-Dichlorobenzene | BDL | 5.1 | 1.0 |
| 4-Isopropyltoluene | BDL | 5.1 | 1.0 |
| 1,2-Dichlorobenzene | BDL | 5.1 | 1.0 |
| 1,2-Dibromo-3-chloropropan | BDL | 5.1 | 1.0 |
| 1,2,4-Trichlorobenzene | BDL | 5.1 | 1.0 |
| Naphthalene | BDL | 5.1 | 1.0 |
| Hexachlorobutadiene | BDL | 5.1 | 1.0 |
| 1,2,3-Trichlorobenzene | BDL | 5.1 | 1.0 |

*End of **8260 soil***

**8270 BNA soil**

| | | | |
|---|---|---|---|
| n-Nitrosodimethylamine | BDL | 100.0 | 1.0 |
| Aniline | BDL | 100.0 | 1.0 |
| Bis(2-chloroethyl)ether | BDL | 100.0 | 1.0 |
| 2-Chlorophenol | BDL | 100.0 | 1.0 |
| Phenol | BDL | 100.0 | 1.0 |
| 1,3-Dichlorobenzene | BDL | 100.0 | 1.0 |
| 1,4-Dichlorobenzene | BDL | 100.0 | 1.0 |
| 1,2-Dichlorobenzene | BDL | 100.0 | 1.0 |
| Benzyl Alcohol | BDL | 200.0 | 1.0 |
| Bis(2-chloroisopropyl)ether | BDL | 100.0 | 1.0 |

# GeoChem Incorporated Certified Analytical Laboratory

*Site Name:*
*Cherry Point*

*NC # 37745 , NC # 336, EPA ID # 155*
*Wednesday, May 19, 1999*

*GCI Project # 9905-011*

| | Conc. in ug/kg | *lowest detection on sample* PQL in ug/kg | Dilution Factor |
|---|---|---|---|
| 2-Methylphenol (o-cresol) | BDL | 100.0 | 1.0 |
| Hexachloroethane | BDL | 100.0 | 1.0 |
| n-Nitrosodipropylamine | BDL | 100.0 | 1.0 |
| Nitrobenzene | BDL | 100.0 | 1.0 |
| 4-Methylphenol (p-cresol) | BDL | 100.0 | 1.0 |
| Isophorone | BDL | 100.0 | 1.0 |
| 2-Nitrophenol | BDL | 100.0 | 1.0 |
| 2,4-Dimethylphenol | BDL | 100.0 | 1.0 |
| Bis(2-chloroethoxy)methane | BDL | 100.0 | 1.0 |
| 2,4-Dichlorophenol | BDL | 100.0 | 1.0 |
| 1,2,4-Trichlorobenzene | BDL | 100.0 | 1.0 |
| Naphthalene | BDL | 100.0 | 1.0 |
| Benzoic acid | BDL | 500.0 | 1.0 |
| 4-Chloroaniline | BDL | 100.0 | 1.0 |
| Hexachlorobutadiene | BDL | 100.0 | 1.0 |
| 2-Methylnaphthalene | BDL | 100.0 | 1.0 |
| 4-Chloro-3-methylphenol | BDL | 200.0 | 1.0 |
| Hexachlorocyclopentadiene | BDL | 100.0 | 1.0 |
| 2,4,6-Trichlorophenol | BDL | 100.0 | 1.0 |
| 2,4,5-Trichlorophenol | BDL | 100.0 | 1.0 |
| 2-Chloronaphthalene | BDL | 100.0 | 1.0 |
| 2-Nitroaniline | BDL | 500.0 | 1.0 |
| Acenaphthylene | BDL | 100.0 | 1.0 |
| Dimethylphthalate | BDL | 100.0 | 1.0 |
| 2,6-Dinitrotoluene | BDL | 100.0 | 1.0 |
| Acenaphthene | BDL | 100.0 | 1.0 |
| 3-Nitroaniline | BDL | 500.0 | 1.0 |
| 2,4-Dinitrophenol | BDL | 100.0 | 1.0 |
| Dibenzofuran | BDL | 100.0 | 1.0 |
| 2,4-Dinitrotoluene | BDL | 100.0 | 1.0 |
| 4-Nitrophenol | BDL | 500.0 | 1.0 |
| Fluorene | BDL | 100.0 | 1.0 |
| 4-Chlorophenyl Phenyl Ether | BDL | 100.0 | 1.0 |
| Diethylphthalate | BDL | 100.0 | 1.0 |
| 4-Nitroaniline | BDL | 500.0 | 1.0 |
| 4,6-Dinitro-2-methylphenol | BDL | 100.0 | 1.0 |
| n-Nitrosodiphenylamine | BDL | 100.0 | 1.0 |
| 4-Bromophenyl Phenyl Ether | BDL | 100.0 | 1.0 |
| Hexachlorobenzene | BDL | 100.0 | 1.0 |
| Benzidine | BDL | 500.0 | 1.0 |
| Pentachlorophenol | BDL | 100.0 | 1.0 |
| Phenanthrene | BDL | 100.0 | 1.0 |
| Anthracene | BDL | 100.0 | 1.0 |
| Di-n-butylphthalate | BDL | 100.0 | 1.0 |

# GeoChem Incorporated Certified Analytical Laboratory

*Site Name:*
*Cherry Point*

*NC # 37745 , NC # 336, EPA ID # 155*
*Wednesday, May 19, 1999*

*GCI Project # 9905-011*

| | Conc. in ug/kg | lowest detection on sample PQL in ug/kg | Dilution Factor |
|---|---|---|---|
| Fluoranthene | **BDL** | 100.0 | 1.0 |
| Pyrene | **BDL** | 100.0 | 1.0 |
| Butyl Benzyl Phthalate | **BDL** | 200.0 | 1.0 |
| Benzo(a)anthracene | **BDL** | 100.0 | 1.0 |
| 3,3'-Dichlorobenzidine | **BDL** | 200.0 | 1.0 |
| Chrysene | **BDL** | 50.0 | 1.0 |
| Bis(2-ethylhexyl)phthalate | **BDL** | 100.0 | 1.0 |
| Di-n-octylphthalate | **BDL** | 100.0 | 1.0 |
| Benzo(b)fluoranthene | **BDL** | 100.0 | 1.0 |
| Benzo(k)fluoranthene | **BDL** | 100.0 | 1.0 |
| Benzo(a)pyrene | **BDL** | 100.0 | 1.0 |
| Indeno(1,2,3-cd)pyrene | **BDL** | 100.0 | 1.0 |
| Dibenz(a,h)anthracene | **BDL** | 100.0 | 1.0 |
| Benzo(g,h,i)perylene | **BDL** | 100.0 | 1.0 |

*End of **8270 BNA soil***

# GeoChem Incorporated Certified Analytical Laboratory

*Site Name:*
*Cherry Point*

*NC # 37745 , NC # 336, EPA ID # 155*
*Wednesday, May 19, 1999*

*GCI Project # 9905-011*

Field ID **145B07** *Date Analyzed: 5/11/99* Dry wt % 90.6

*Lab ID* ***1209***

**8260 soil**

| | Conc. in ug/kg | lowest detection on sample PQL in ug/kg | Dilution Factor |
|---|---|---|---|
| MTBE | **BDL** | 5.0 | 1.0 |
| IPE | **BDL** | 5.0 | 1.0 |
| n-Butylbenzene | **BDL** | 5.0 | 1.0 |
| Dichlorodifluoromethane | **BDL** | 9.9 | 1.0 |
| Chloromethane | **BDL** | 9.9 | 1.0 |
| Vinyl Chloride | **BDL** | 5.0 | 1.0 |
| Bromomethane | **BDL** | 9.9 | 1.0 |
| Chloroethane | **BDL** | 9.9 | 1.0 |
| Trichlorofluoromethane | **BDL** | 9.9 | 1.0 |
| Acrolein | **BDL** | 99.4 | 1.0 |
| Acetone | **BDL** | 49.7 | 1.0 |
| 1,1-Dichloroethene | **BDL** | 5.0 | 1.0 |
| Iodomethane | **BDL** | 5.0 | 1.0 |
| Carbon Disulfide | **BDL** | 5.0 | 1.0 |
| Methylene Chloride | **BDL** | 5.0 | 1.0 |
| Acrylonitrile | **BDL** | 5.0 | 1.0 |
| trans-1,2-Dichloroethene | **BDL** | 5.0 | 1.0 |
| 1,1-Dichloroethane | **BDL** | 5.0 | 1.0 |
| Vinyl Acetate | **BDL** | 9.9 | 1.0 |
| 2,2-Dichloropropane | **BDL** | 5.0 | 1.0 |
| cis-1,2-Dichloroethene | **BDL** | 5.0 | 1.0 |
| 2-Butanone | **BDL** | 49.7 | 1.0 |
| Bromochloromethane | **BDL** | 5.0 | 1.0 |
| Chloroform | **BDL** | 5.0 | 1.0 |
| 1,1,1-Trichloroethane | **BDL** | 5.0 | 1.0 |
| 1,1-Dichloropropene | **BDL** | 5.0 | 1.0 |
| Carbon Tetrachloride | **BDL** | 5.0 | 1.0 |
| Benzene | **BDL** | 5.0 | 1.0 |
| 1,2-Dichloroethane | **BDL** | 5.0 | 1.0 |
| Trichloroethene | **BDL** | 5.0 | 1.0 |
| 1,2-Dichloropropane | **BDL** | 5.0 | 1.0 |
| Dibromomethane | **BDL** | 5.0 | 1.0 |
| Bromodichloromethane | **BDL** | 5.0 | 1.0 |
| 2-Chloroethylvinylether | **BDL** | 9.9 | 1.0 |
| cis-1,3-Dichloropropene | **BDL** | 5.0 | 1.0 |
| 4-Methyl-2-pentanone | **BDL** | 49.7 | 1.0 |
| Toluene | **BDL** | 5.0 | 1.0 |
| trans-1,3-Dichloropropene | **BDL** | 5.0 | 1.0 |
| 1,1,2-Trichloroethane | **BDL** | 5.0 | 1.0 |
| Ethylmethacrylate | **BDL** | 5.0 | 1.0 |
| Tetrachloroethene | **BDL** | 5.0 | 1.0 |

# GeoChem Incorporated Certified Analytical Laboratory

*Site Name:*
*Cherry Point*

*NC # 37745 , NC # 336, EPA ID # 155*
*Wednesday, May 19, 1999*

*GCI Project # 9905-011*

| | Conc. in ug/kg | lowest detection on sample PQL in ug/kg | Dilution Factor |
|---|---|---|---|
| 1,3-Dichloropropane | BDL | 5.0 | 1.0 |
| 2-Hexanone | BDL | 49.7 | 1.0 |
| Chlorodibromomethane | BDL | 5.0 | 1.0 |
| 1,2-Dibromoethane | BDL | 5.0 | 1.0 |
| Chlorobenzene | BDL | 5.0 | 1.0 |
| 1,1,1,2-Tetrachloroethane | BDL | 5.0 | 1.0 |
| Ethylbenzene | BDL | 5.0 | 1.0 |
| m,p-Xylene | BDL | 5.0 | 1.0 |
| o-Xylene | BDL | 5.0 | 1.0 |
| Styrene | BDL | 5.0 | 1.0 |
| Bromoform | BDL | 5.0 | 1.0 |
| Isopropylbenzene | BDL | 5.0 | 1.0 |
| Bromobenzene | BDL | 5.0 | 1.0 |
| 1,2,3-Trichloropropane | BDL | 9.9 | 1.0 |
| 1,1,2,2-Tetrachloroethane | BDL | 5.0 | 1.0 |
| n-Propylbenzene | BDL | 5.0 | 1.0 |
| 2-Chlorotoluene | BDL | 5.0 | 1.0 |
| 1,4-Dichloro-2-butene | BDL | 9.9 | 1.0 |
| 4-Chlorotoluene | BDL | 5.0 | 1.0 |
| 1,3,5-Trimethylbenzene | BDL | 5.0 | 1.0 |
| tert-Butylbenzene | BDL | 5.0 | 1.0 |
| 1,2,4-Trimethylbenzene | BDL | 5.0 | 1.0 |
| sec-Butylbenzene | BDL | 5.0 | 1.0 |
| 1,3-Dichlorobenzene | BDL | 5.0 | 1.0 |
| 1,4-Dichlorobenzene | BDL | 5.0 | 1.0 |
| 4-Isopropyltoluene | BDL | 5.0 | 1.0 |
| 1,2-Dichlorobenzene | BDL | 5.0 | 1.0 |
| 1,2-Dibromo-3-chloropropan | BDL | 5.0 | 1.0 |
| 1,2,4-Trichlorobenzene | BDL | 5.0 | 1.0 |
| Naphthalene | BDL | 5.0 | 1.0 |
| Hexachlorobutadiene | BDL | 5.0 | 1.0 |
| 1,2,3-Trichlorobenzene | BDL | 5.0 | 1.0 |

*End of **8260 soil***

**8270 BNA soil**

| | | | |
|---|---|---|---|
| n-Nitrosodimethylamine | BDL | 100.0 | 1.0 |
| Aniline | BDL | 100.0 | 1.0 |
| Bis(2-chloroethyl)ether | BDL | 100.0 | 1.0 |
| 2-Chlorophenol | BDL | 100.0 | 1.0 |
| Phenol | BDL | 100.0 | 1.0 |
| 1,3-Dichlorobenzene | BDL | 100.0 | 1.0 |
| 1,4-Dichlorobenzene | BDL | 100.0 | 1.0 |
| 1,2-Dichlorobenzene | BDL | 100.0 | 1.0 |
| Benzyl Alcohol | BDL | 200.0 | 1.0 |
| Bis(2-chloroisopropyl)ether | BDL | 100.0 | 1.0 |

# GeoChem Incorporated Certified Analytical Laboratory

*Site Name:*
*Cherry Point*

*NC # 37745 , NC # 336, EPA ID # 155*
*Wednesday, May 19, 1999*

*GCI Project # 9905-011*

| | Conc. in ug/kg | lowest detection on sample PQL in ug/kg | Dilution Factor |
|---|---|---|---|
| 2-Methylphenol (o-cresol) | BDL | 100.0 | 1.0 |
| Hexachloroethane | BDL | 100.0 | 1.0 |
| n-Nitrosodipropylamine | BDL | 100.0 | 1.0 |
| Nitrobenzene | BDL | 100.0 | 1.0 |
| 4-Methylphenol (p-cresol) | BDL | 100.0 | 1.0 |
| Isophorone | BDL | 100.0 | 1.0 |
| 2-Nitrophenol | BDL | 100.0 | 1.0 |
| 2,4-Dimethylphenol | BDL | 100.0 | 1.0 |
| Bis(2-chloroethoxy)methane | BDL | 100.0 | 1.0 |
| 2,4-Dichlorophenol | BDL | 100.0 | 1.0 |
| 1,2,4-Trichlorobenzene | BDL | 100.0 | 1.0 |
| Naphthalene | BDL | 100.0 | 1.0 |
| Benzoic acid | BDL | 500.0 | 1.0 |
| 4-Chloroaniline | BDL | 100.0 | 1.0 |
| Hexachlorobutadiene | BDL | 100.0 | 1.0 |
| 2-Methylnaphthalene | BDL | 100.0 | 1.0 |
| 4-Chloro-3-methylphenol | BDL | 200.0 | 1.0 |
| Hexachlorocyclopentadiene | BDL | 100.0 | 1.0 |
| 2,4,6-Trichlorophenol | BDL | 100.0 | 1.0 |
| 2,4,5-Trichlorophenol | BDL | 100.0 | 1.0 |
| 2-Chloronaphthalene | BDL | 100.0 | 1.0 |
| 2-Nitroaniline | BDL | 500.0 | 1.0 |
| Acenaphthylene | BDL | 100.0 | 1.0 |
| Dimethylphthalate | BDL | 100.0 | 1.0 |
| 2,6-Dinitrotoluene | BDL | 100.0 | 1.0 |
| Acenaphthene | BDL | 100.0 | 1.0 |
| 3-Nitroaniline | BDL | 500.0 | 1.0 |
| 2,4-Dinitrophenol | BDL | 100.0 | 1.0 |
| Dibenzofuran | BDL | 100.0 | 1.0 |
| 2,4-Dinitrotoluene | BDL | 100.0 | 1.0 |
| 4-Nitrophenol | BDL | 500.0 | 1.0 |
| Fluorene | BDL | 100.0 | 1.0 |
| 4-Chlorophenyl Phenyl Ether | BDL | 100.0 | 1.0 |
| Diethylphthalate | BDL | 100.0 | 1.0 |
| 4-Nitroaniline | BDL | 500.0 | 1.0 |
| 4,6-Dinitro-2-methylphenol | BDL | 100.0 | 1.0 |
| n-Nitrosodiphenylamine | BDL | 100.0 | 1.0 |
| 4-Bromophenyl Phenyl Ether | BDL | 100.0 | 1.0 |
| Hexachlorobenzene | BDL | 100.0 | 1.0 |
| Benzidine | BDL | 500.0 | 1.0 |
| Pentachlorophenol | BDL | 100.0 | 1.0 |
| Phenanthrene | BDL | 100.0 | 1.0 |
| Anthracene | BDL | 100.0 | 1.0 |
| Di-n-butylphthalate | BDL | 100.0 | 1.0 |

# GeoChem Incorporated Certified Analytical Laboratory

*Site Name:*
*Cherry Point*

*NC # 37745 , NC # 336, EPA ID # 155*
*Wednesday, May 19, 1999*

*GCI Project # 9905-011*

| | Conc. in ug/kg | lowest detection on sample PQL in ug/kg | Dilution Factor |
|---|---|---|---|
| Fluoranthene | **BDL** | 100.0 | 1.0 |
| Pyrene | **BDL** | 100.0 | 1.0 |
| Butyl Benzyl Phthalate | **BDL** | 200.0 | 1.0 |
| Benzo(a)anthracene | **BDL** | 100.0 | 1.0 |
| 3,3'-Dichlorobenzidine | **BDL** | 200.0 | 1.0 |
| Chrysene | **BDL** | 50.0 | 1.0 |
| Bis(2-ethylhexyl)phthalate | **BDL** | 100.0 | 1.0 |
| Di-n-octylphthalate | **BDL** | 100.0 | 1.0 |
| Benzo(b)fluoranthene | **BDL** | 100.0 | 1.0 |
| Benzo(k)fluoranthene | **BDL** | 100.0 | 1.0 |
| Benzo(a)pyrene | **BDL** | 100.0 | 1.0 |
| Indeno(1,2,3-cd)pyrene | **BDL** | 100.0 | 1.0 |
| Dibenz(a,h)anthracene | **BDL** | 100.0 | 1.0 |
| Benzo(g,h,i)perylene | **BDL** | 100.0 | 1.0 |

*End of **8270 BNA soil***

# GeoChem Incorporated Certified Analytical Laboratory

*NC # 37745 , NC # 336, EPA ID # 155*

*Wednesday, May 19, 1999*

***Site Name:***

***Cherry Point***

***GCI Project # 9905-011***

| | | Conc. in mg/kg | lowest detect on sample PQL in mg/kg | Dilution Factor |
|---|---|---|---|---|
| Field ID **145B05** | *Date Analyzed:* | | | |
| *Lab ID 1207* | *5/12/99* | | | |
| **Cr by Fl** | | | | |
| | Chromium | **9.57** | 1.862 | 21.6 |
| **Pb by Fl** | | | | |
| | Lead | **5.25** | 0.559 | 18.6 |
| Field ID **145B06** | *Date Analyzed:* | | | |
| *Lab ID 1208* | *5/12/99* | | | |
| **Cr by Fl** | | | | |
| | Chromium | **12.41** | 1.996 | 23.1 |
| **Pb by Fl** | | | | |
| | Lead | **19.53** | 0.599 | 23.2 |
| Field ID **145B07** | *Date Analyzed:* | | | |
| *Lab ID 1209* | *5/12/99* | | | |
| **Cr by Fl** | | | | |
| | Chromium | **19.56** | 1.972 | 21.8 |
| **Pb by Fl** | | | | |
| | Lead | **52.34** | 0.592 | 22.8 |

# GeoChem Incorporated Certified Analytical Laboratory

*NC # 37745 , NC # 336, EPA ID # 155*

*Wednesday, May 19, 1999*

*GCI Project* *9905-011*

*Site Name:*

*Cherry Point*

| | | Conc. in mg/kg | PQL in mg/kg | Dilution Factor |
|---|---|---|---|---|
| Field ID **145B05** | *Lab ID 1207* | | | |
| *Date Analyzed: 5/12/99* | *Dry Wt %: 0.86* | | | |
| | *Analysis:* | **EPH soil** | | |
| | **C9-C18 Aliphatics** | **BDL** | 11.622 | 1.0 |
| | **C19-C36 Aliphatics** | **BDL** | 11.622 | 1.0 |
| | **C11-C22 Aromatics** | **BDL** | 11.622 | 1.0 |
| Field ID **145B06** | *Lab ID 1208* | | | |
| *Date Analyzed: 5/12/99* | *Dry Wt %: 0.87* | | | |
| | *Analysis:* | **EPH soil** | | |
| | **C9-C18 Aliphatics** | **BDL** | 11.558 | 1.0 |
| | **C19-C36 Aliphatics** | **BDL** | 11.558 | 1.0 |
| | **C11-C22 Aromatics** | **BDL** | 11.558 | 1.0 |
| Field ID **145B07** | *Lab ID 1209* | | | |
| *Date Analyzed: 5/12/99* | *Dry Wt %: 0.91* | | | |
| | *Analysis:* | **EPH soil** | | |
| | **C9-C18 Aliphatics** | **BDL** | 11.041 | 1.0 |
| | **C19-C36 Aliphatics** | **BDL** | 11.041 | 1.0 |
| | **C11-C22 Aromatics** | **BDL** | 11.041 | 1.0 |

# GeoChem Incorporated Certified Analytical Laboratory

*NC # 37745 , NC # 336, EPA ID # 155*

***GCI Project 9905-011*** ***Wednesday, May 19, 1999***

***Site Name:***

***Cherry Point***

| | | Conc. in mg/kg | PQL in mg/kg | Dilution Factor |
|---|---|---|---|---|
| Field ID **145B05** | *Lab ID 1207* | | | |
| *Date Analyzed: 5/10/99* | *Dry Wt %: 0.86* | | | |
| | **VPH soil** | | | |
| | **C5-C8 Aliphatics** | **BQL** | 11.622 | 1.0 |
| | **C9-C12 Aliphatics** | **BQL** | 11.622 | 1.0 |
| | **C9-C10 Aromatics** | **BQL** | 11.622 | 1.0 |
| Field ID **145B06** | *Lab ID 1208* | | | |
| *Date Analyzed: 5/10/99* | *Dry Wt %: 0.87* | | | |
| | **VPH soil** | | | |
| | **C5-C8 Aliphatics** | **BQL** | 11.558 | 1.0 |
| | **C9-C12 Aliphatics** | **BQL** | 11.558 | 1.0 |
| | **C9-C10 Aromatics** | **BQL** | 11.558 | 1.0 |
| Field ID **145B07** | *Lab ID 1209* | | | |
| *Date Analyzed: 5/10/99* | *Dry Wt %: 0.91* | | | |
| | **VPH soil** | | | |
| | **C5-C8 Aliphatics** | **BQL** | 11.041 | 1.0 |
| | **C9-C12 Aliphatics** | **BQL** | 11.041 | 1.0 |
| | **C9-C10 Aromatics** | **BQL** | 11.041 | 1.0 |

# GeoChem Incorporated Quality Control Results

*NC # 37745 , NC # 336, EPA ID # 155*

*GCI Project #* 9905-011

*Wednesday, May 19, 1999*

*lowest detection @ ideal conditions*

| | Percent Recovery | Lab Blank: | MDL. in ug/l |
|---|---|---|---|
| **8260 soil** | | | |
| 1,1-Dichloroethene | **88** | 0 | 0.88 |
| Benzene | **101** | 0 | 0.72 |
| Trichloroethene | **105** | 0 | 0.71 |
| Toluene | **102** | 0 | 0.64 |
| Chlorobenzene | **98** | 0 | 0.49 |
| | *End of* ***8260 soil*** | | |
| **8270 BNA soil** | | | |
| 2-Chlorophenol | **83** | 0 | 2.39 |
| Phenol | **68** | 0 | 2.44 |
| 1,4-Dichlorobenzene | **71** | 0 | 2.96 |
| n-Nitrosodipropylamine | **95** | 0 | 4.77 |
| 1,2,4-Trichlorobenzene | **88** | 0 | 2.68 |
| 4-Chloro-3-methylphenol | **82** | 0 | 2.45 |
| Acenaphthene | **67** | 0 | 6.83 |
| 2,4-Dinitrotoluene | **100** | 0 | 2.48 |
| 4-Nitrophenol | **95** | 0 | 6.65 |
| Pentachlorophenol | **117** | 0 | 2.4 |
| Pyrene | **92** | 0 | 3.34 |
| | *End of* ***8270 BNA soil*** | | |

# GeoChem Incorporated Quality Control Results

*NC # 37745 , NC # 336, EPA ID # 155*

*GCI Project # 9905-011*

*Wednesday, May 19, 1999*

**Cr by Fl**

| | Percent Recovery | Lab Blank: | lowest detect @ ideal conditions MDL. in mg/kg |
|---|---|---|---|
| Chromium | 107 | 0 | 0.5 |
| Lead | 104 | 0 | 0.015 |

# GeoChem Incorporated Quality Control Results

*NC # 37745 , NC # 336, EPA ID # 155*

*9905-011*

*Wednesday, May 19, 1999*

| VPH soil | *Percent Recovery* | *Lab Blank* | *MDL. in mg/kg* |
|---|---|---|---|
| C5-C8 Aliphatics | **92.7** | 0 | 0.013 |
| C9-C12 Aliphatics | **91.6** | 0 | 0.004 |
| C9-C10 Aromatics | **121.3** | 0 | 0.003 |

**Report To:**
JEFF Tyberski
LAW - Raleigh
3301 ATLANTIC AVE
Raleigh, NC 27604

# GeoChem, Incorporated

Environmental Laboratories

**2500 Gate Way Centre Blvd., Suite 300**
**Morrisville, NC 27560**

**Bill To:**
SAME

# Chain of Custody Record

PROJECT SITE NUMBER:
PO#:
SITE NAME: CHERRY POINT
COLLECTED BY (Signature): William Pahl
GEOCHEM PROJECT #: 9905-011/9905-012/9905-013
DATE DUE:
VERBAL/FAX/HARDCOPY:

| FIELD SAMPLE ID | TURNAROUND IN DAYS | SAMPLE MATRIX | DATE AND TIME COLLECTED | NO. OF CONTAINERS PER LOCATION | METALS | MADEP | EPH & VPH | 8260 (BTEX) | 8270 (BTEX) | | | | | | REMARKS | LAB ID NO. (for lab use only) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 30740- | 6-0600 | PH 56 | | | | | | | | | | | | | | |
| UST 160 | | | | | | | | | | | | | | | | |
| 145B05 | STANDARD | Soil | 5/5 1:45 | 2 | x | x | x | x | x | | | | | | ~~0'-4'~~ 5'-8' | 1207 |
| 145B06 | STD | Soil | 5/5 2:45 | 2 | x | x | x | x | x | | | | | | 0'-4' | 1208 |
| 145B07 | STD | Soil | 5/5 1:00 | 2 | x | x | x | x | x | | | | | | 4-6' ANY QUESTIONS | 1209 |
| | | | | | | | | | | | | | | | CALL JEFF Tyberski | |
| 30740- | 6-0600 | PH 57 | | | | | | | | | | | | | 1-800-648-8928 | |
| UST 3907 | | | | | | | | | | | | | | | | |
| 775B01 | STD | Soil | 5/5 11:00 | 1 | | x | x | x | x | | | | | | 0-4' | 1210 |
| 775B02 | STD | Soil | 5/5 10:15 | 1 | | x | x | x | x | | | | | | 0'-4' | 1211 |
| 775B03 | STD | Soil | 5/5 9:30 | 1 | | x | x | x | x | | | | | | 0'-4' | 1212 |
| 545B36 | STD | Soil | 5/5 4:20 | 1 | | x | x | x | x | | | | | | 4'-4.5' | 1213 |

REMARKS:

| RELINQUISHED BY: | DATE | TIME |
|---|---|---|
| | | |

| RECEIVED BY: | DATE | TIME | RELINQUISHED BY: | DATE | TIME | RECEIVED BY: | DATE | TIME | RELINQUISHED BY: | DATE | TIME |
|---|---|---|---|---|---|---|---|---|---|---|---|
| FEDERAL EXPRESS | 5/5/99 | 6:00 pm | | | | Amy L. Portig | 5/6/99 | 11:25 | | | |

UST 178.6
30740-6-0600

This Chain of Custody is considered a written contract to perform the services requested in the analyses section of this document.

# GeoChem, Incorporated

## Environmental Laboratories

## Certified Analytical Laboratory

*NC # 37745 ,NC # 336, NC # 461, EPA ID # 155*

***Client Project Manager***
*Jeff Tyburski*
***Site Name:***
*30740-6-0600*
*491*

*Law Engineering*
*3301 Atlantic Avenue*
*Raleigh NC*
*27604*

***Report Date***
*Wednesday, May 19, 1999*
***PO #***
***Date Received in lab:***
*Monday, May 10, 1999*

## GCI Project #: 9905-018

## Summary of requested analytical work

| *Sample type code #s :* | *1 = solid samples;* | *2 = liquid samples;* | *3 = Air samples;* | *4 = sludges/unknowns* |
|---|---|---|---|---|
| *Field Number:* 585B01 | *Lab ID* 1221 | *Sample Type:* 1 | *Date Analyzed:* 5/14/99 | *for 8260 soil* |
| *Date Sampled* 5/6/99 | | | *Proper Preservation* | Yes |
| *Field Number:* 585B01 | *Lab ID* 1221 | *Sample Type:* 1 | *Date Analyzed:* 5/17/99 | *for 8270 BNA soil* |
| *Date Sampled* 5/6/99 | | | *Proper Preservation* | Yes |
| *Field Number:* 585B01 | *Lab ID* 1221 | *Sample Type:* 1 | *Date Analyzed:* 5/18/99 | *for EPH soil* |
| *Date Sampled* 5/6/99 | | | *Proper Preservation* | Yes |
| *Field Number:* 585B01 | *Lab ID* 1221 | *Sample Type:* 1 | *Date Analyzed:* 5/10/99 | *for VPH soil* |
| *Date Sampled* 5/6/99 | | | *Proper Preservation* | Yes |
| *Field Number:* 585B02 | *Lab ID* 1222 | *Sample Type:* 1 | *Date Analyzed:* 5/14/99 | *for 8260 soil* |
| *Date Sampled* 5/6/99 | | | *Proper Preservation* | Yes |
| *Field Number:* 585B02 | *Lab ID* 1222 | *Sample Type:* 1 | *Date Analyzed:* 5/13/99 | *for 8270 BNA soil* |
| *Date Sampled* 5/6/99 | | | *Proper Preservation* | Yes |
| *Field Number:* 585B02 | *Lab ID* 1222 | *Sample Type:* 1 | *Date Analyzed:* 5/14/99 | *for EPH soil* |
| *Date Sampled* 5/6/99 | | | *Proper Preservation* | Yes |
| *Field Number:* 585B02 | *Lab ID* 1222 | *Sample Type:* 1 | *Date Analyzed:* 5/10/99 | *for VPH soil* |
| *Date Sampled* 5/6/99 | | | *Proper Preservation* | Yes |
| *Field Number:* 858B03 | *Lab ID* 1223 | *Sample Type:* 1 | *Date Analyzed:* 5/14/99 | *for 8260 soil* |
| *Date Sampled* 5/6/99 | | | *Proper Preservation* | Yes |

I Kevin Bell Here by certify that I have Reviewed and approve this data set

2500 Gate Way Centre Blvd., Suite 300 • Morrisville, NC 27560
Telephone: 919-460-8093 • FAX: 919-460-0167

# GeoChem, Incorporated

## Environmental Laboratories

## Certified Analytical Laboratory

*NC # 37745 ,NC # 336, NC # 461, EPA ID # 155*

***Client Project Manager***
*Jeff Tyburski*
***Site Name:***
*30740-6-0600*
*491*

*Law Engineering*
*3301 Atlantic Avenue*
*Raleigh NC*
*27604*

***Report Date***
*Wednesday, May 19, 1999*
***PO #***
***Date Received in lab:***
*Monday, May 10, 1999*

## GCI Project #: 9905-018

## Summary of requested analytical work

| *Sample type code #s :* | *1 = solid samples;* | *2 = liquid samples;* | *3 = Air samples;* | *4 = sludges/unknowns* |
|---|---|---|---|---|
| *Field Number:* 858B03 | *Lab ID* 1223 | *Sample Type:* 1 | *Date Analyzed:* 5/17/99 | *for 8270 BNA soil* |
| *Date Sampled* 5/6/99 | | | *Proper Preservation* | Yes |
| *Field Number:* 858B03 | *Lab ID* 1223 | *Sample Type:* 1 | *Date Analyzed:* 5/14/99 | *for EPH soil* |
| *Date Sampled* 5/6/99 | | | *Proper Preservation* | Yes |
| *Field Number:* 858B03 | *Lab ID* 1223 | *Sample Type:* 1 | *Date Analyzed:* 5/12/99 | *for VPH soil* |
| *Date Sampled* 5/6/99 | | | *Proper Preservation* | Yes |

I Here by certify that I have Reviewed and approve this data set

2500 Gate Way Centre Blvd., Suite 300 • Morrisville, NC 27560
Telephone: 919-460-8093 • FAX: 919-460-0167

# GeoChem Incorporated Certified Analytical Laboratory

*Site Name:*
*30740-6-0600*

*NC # 37745 , NC # 336, EPA ID # 155*
*Wednesday, May 19, 1999*

*GCI Project # 9905-018*

Field ID **585B01** *Date Analyzed: 5/14/99*
*Lab ID 1221*
**8260 soil**

| | Conc. in ug/kg | | lowest detection on sample PQL in ug/kg | Dilution Factor |
|---|---|---|---|---|
| | Dry wt % | 80.7 | | |
| MTBE | BDL | | 5.1 | 1.0 |
| IPE | BDL | | 5.1 | 1.0 |
| n-Butylbenzene | BDL | | 5.1 | 1.0 |
| Dichlorodifluoromethane | BDL | | 10.1 | 1.0 |
| Chloromethane | BDL | | 10.1 | 1.0 |
| Vinyl Chloride | BDL | | 5.1 | 1.0 |
| Bromomethane | BDL | | 10.1 | 1.0 |
| Chloroethane | BDL | | 10.1 | 1.0 |
| Trichlorofluoromethane | BDL | | 10.1 | 1.0 |
| Acrolein | BDL | | 101.0 | 1.0 |
| Acetone | BDL | | 50.5 | 1.0 |
| 1,1-Dichloroethene | BDL | | 5.1 | 1.0 |
| Iodomethane | BDL | | 5.1 | 1.0 |
| Carbon Disulfide | BDL | | 5.1 | 1.0 |
| Methylene Chloride | BDL | | 5.1 | 1.0 |
| Acrylonitrile | BDL | | 5.1 | 1.0 |
| trans-1,2-Dichloroethene | BDL | | 5.1 | 1.0 |
| 1,1-Dichloroethane | BDL | | 5.1 | 1.0 |
| Vinyl Acetate | BDL | | 10.1 | 1.0 |
| 2,2-Dichloropropane | BDL | | 5.1 | 1.0 |
| cis-1,2-Dichloroethene | BDL | | 5.1 | 1.0 |
| 2-Butanone | BDL | | 50.5 | 1.0 |
| Bromochloromethane | BDL | | 5.1 | 1.0 |
| Chloroform | BDL | | 5.1 | 1.0 |
| 1,1,1-Trichloroethane | BDL | | 5.1 | 1.0 |
| 1,1-Dichloropropene | BDL | | 5.1 | 1.0 |
| Carbon Tetrachloride | BDL | | 5.1 | 1.0 |
| Benzene | BDL | | 5.1 | 1.0 |
| 1,2-Dichloroethane | BDL | | 5.1 | 1.0 |
| Trichloroethene | BDL | | 5.1 | 1.0 |
| 1,2-Dichloropropane | BDL | | 5.1 | 1.0 |
| Dibromomethane | BDL | | 5.1 | 1.0 |
| Bromodichloromethane | BDL | | 5.1 | 1.0 |
| 2-Chloroethylvinylether | BDL | | 10.1 | 1.0 |
| cis-1,3-Dichloropropene | BDL | | 5.1 | 1.0 |
| 4-Methyl-2-pentanone | BDL | | 50.5 | 1.0 |
| Toluene | BDL | | 5.1 | 1.0 |
| trans-1,3-Dichloropropene | BDL | | 5.1 | 1.0 |
| 1,1,2-Trichloroethane | BDL | | 5.1 | 1.0 |
| Ethylmethacrylate | BDL | | 5.1 | 1.0 |
| Tetrachloroethene | BDL | | 5.1 | 1.0 |

# GeoChem Incorporated Certified Analytical Laboratory

*Site Name:*
*30740-6-0600*

*NC # 37745 , NC # 336, EPA ID # 155*
*Wednesday, May 19, 1999*

*GCI Project # 9905-018*

| | Conc. in ug/kg | lowest detection on sample PQL in ug/kg | Dilution Factor |
|---|---|---|---|
| 1,3-Dichloropropane | BDL | 5.1 | 1.0 |
| 2-Hexanone | BDL | 50.5 | 1.0 |
| Chlorodibromomethane | BDL | 5.1 | 1.0 |
| 1,2-Dibromoethane | BDL | 5.1 | 1.0 |
| Chlorobenzene | BDL | 5.1 | 1.0 |
| 1,1,1,2-Tetrachloroethane | BDL | 5.1 | 1.0 |
| Ethylbenzene | BDL | 5.1 | 1.0 |
| m,p-Xylene | BDL | 5.1 | 1.0 |
| o-Xylene | BDL | 5.1 | 1.0 |
| Styrene | BDL | 5.1 | 1.0 |
| Bromoform | BDL | 5.1 | 1.0 |
| Isopropylbenzene | BDL | 5.1 | 1.0 |
| Bromobenzene | BDL | 5.1 | 1.0 |
| 1,2,3-Trichloropropane | BDL | 10.1 | 1.0 |
| 1,1,2,2-Tetrachloroethane | BDL | 5.1 | 1.0 |
| n-Propylbenzene | BDL | 5.1 | 1.0 |
| 2-Chlorotoluene | BDL | 5.1 | 1.0 |
| 1,4-Dichloro-2-butene | BDL | 10.1 | 1.0 |
| 4-Chlorotoluene | BDL | 5.1 | 1.0 |
| 1,3,5-Trimethylbenzene | BDL | 5.1 | 1.0 |
| tert-Butylbenzene | BDL | 5.1 | 1.0 |
| 1,2,4-Trimethylbenzene | BDL | 5.1 | 1.0 |
| sec-Butylbenzene | BDL | 5.1 | 1.0 |
| 1,3-Dichlorobenzene | BDL | 5.1 | 1.0 |
| 1,4-Dichlorobenzene | BDL | 5.1 | 1.0 |
| 4-Isopropyltoluene | BDL | 5.1 | 1.0 |
| 1,2-Dichlorobenzene | BDL | 5.1 | 1.0 |
| 1,2-Dibromo-3-chloropropan | BDL | 5.1 | 1.0 |
| 1,2,4-Trichlorobenzene | BDL | 5.1 | 1.0 |
| Naphthalene | BDL | 5.1 | 1.0 |
| Hexachlorobutadiene | BDL | 5.1 | 1.0 |
| 1,2,3-Trichlorobenzene | BDL | 5.1 | 1.0 |

*End of **8260 soil***

**8270 BNA soil**

| | | | |
|---|---|---|---|
| n-Nitrosodimethylamine | BDL | 100.0 | 1.0 |
| Aniline | BDL | 100.0 | 1.0 |
| Bis(2-chloroethyl)ether | BDL | 100.0 | 1.0 |
| 2-Chlorophenol | BDL | 100.0 | 1.0 |
| Phenol | BDL | 100.0 | 1.0 |
| 1,3-Dichlorobenzene | BDL | 100.0 | 1.0 |
| 1,4-Dichlorobenzene | BDL | 100.0 | 1.0 |
| 1,2-Dichlorobenzene | BDL | 100.0 | 1.0 |
| Benzyl Alcohol | BDL | 200.0 | 1.0 |
| Bis(2-chloroisopropyl)ether | BDL | 100.0 | 1.0 |

# GeoChem Incorporated Certified Analytical Laboratory

*Site Name:*
*30740-6-0600*

*NC # 37745 , NC # 336, EPA ID # 155*
*Wednesday, May 19, 1999*

*GCI Project # 9905-018*

| | Conc. in ug/kg | lowest detection on sample PQL in ug/kg | Dilution Factor |
|---|---|---|---|
| 2-Methylphenol (o-cresol) | BDL | 100.0 | 1.0 |
| Hexachloroethane | BDL | 100.0 | 1.0 |
| n-Nitrosodipropylamine | BDL | 100.0 | 1.0 |
| Nitrobenzene | BDL | 100.0 | 1.0 |
| 4-Methylphenol (p-cresol) | BDL | 100.0 | 1.0 |
| Isophorone | BDL | 100.0 | 1.0 |
| 2-Nitrophenol | BDL | 100.0 | 1.0 |
| 2,4-Dimethylphenol | BDL | 100.0 | 1.0 |
| Bis(2-chloroethoxy)methane | BDL | 100.0 | 1.0 |
| 2,4-Dichlorophenol | BDL | 100.0 | 1.0 |
| 1,2,4-Trichlorobenzene | BDL | 100.0 | 1.0 |
| Naphthalene | BDL | 100.0 | 1.0 |
| Benzoic acid | BDL | 500.0 | 1.0 |
| 4-Chloroaniline | BDL | 100.0 | 1.0 |
| Hexachlorobutadiene | BDL | 100.0 | 1.0 |
| 2-Methylnaphthalene | BDL | 100.0 | 1.0 |
| 4-Chloro-3-methylphenol | BDL | 200.0 | 1.0 |
| Hexachlorocyclopentadiene | BDL | 100.0 | 1.0 |
| 2,4,6-Trichlorophenol | BDL | 100.0 | 1.0 |
| 2,4,5-Trichlorophenol | BDL | 100.0 | 1.0 |
| 2-Chloronaphthalene | BDL | 100.0 | 1.0 |
| 2-Nitroaniline | BDL | 500.0 | 1.0 |
| Acenaphthylene | BDL | 100.0 | 1.0 |
| Dimethylphthalate | BDL | 100.0 | 1.0 |
| 2,6-Dinitrotoluene | BDL | 100.0 | 1.0 |
| Acenaphthene | BDL | 100.0 | 1.0 |
| 3-Nitroaniline | BDL | 500.0 | 1.0 |
| 2,4-Dinitrophenol | BDL | 100.0 | 1.0 |
| Dibenzofuran | BDL | 100.0 | 1.0 |
| 2,4-Dinitrotoluene | BDL | 100.0 | 1.0 |
| 4-Nitrophenol | BDL | 500.0 | 1.0 |
| Fluorene | BDL | 100.0 | 1.0 |
| 4-Chlorophenyl Phenyl Ether | BDL | 100.0 | 1.0 |
| Diethylphthalate | BDL | 100.0 | 1.0 |
| 4-Nitroaniline | BDL | 500.0 | 1.0 |
| 4,6-Dinitro-2-methylphenol | BDL | 100.0 | 1.0 |
| n-Nitrosodiphenylamine | BDL | 100.0 | 1.0 |
| 4-Bromophenyl Phenyl Ether | BDL | 100.0 | 1.0 |
| Hexachlorobenzene | BDL | 100.0 | 1.0 |
| Benzidine | BDL | 500.0 | 1.0 |
| Pentachlorophenol | BDL | 100.0 | 1.0 |
| Phenanthrene | BDL | 100.0 | 1.0 |
| Anthracene | BDL | 100.0 | 1.0 |
| Di-n-butylphthalate | BDL | 100.0 | 1.0 |

# GeoChem Incorporated Certified Analytical Laboratory

*Site Name:*
*30740-6-0600*

*NC # 37745 , NC # 336, EPA ID # 155*
*Wednesday, May 19, 1999*

*GCI Project # 9905-018*

| | Conc. in ug/kg | lowest detection on sample PQL in ug/kg | Dilution Factor |
|---|---|---|---|
| Fluoranthene | BDL | 100.0 | 1.0 |
| Pyrene | BDL | 100.0 | 1.0 |
| Butyl Benzyl Phthalate | BDL | 200.0 | 1.0 |
| Benzo(a)anthracene | BDL | 100.0 | 1.0 |
| 3,3'-Dichlorobenzidine | BDL | 200.0 | 1.0 |
| Chrysene | BDL | 50.0 | 1.0 |
| Bis(2-ethylhexyl)phthalate | BDL | 100.0 | 1.0 |
| Di-n-octylphthalate | BDL | 100.0 | 1.0 |
| Benzo(b)fluoranthene | BDL | 100.0 | 1.0 |
| Benzo(k)fluoranthene | BDL | 100.0 | 1.0 |
| Benzo(a)pyrene | BDL | 100.0 | 1.0 |
| Indeno(1,2,3-cd)pyrene | BDL | 100.0 | 1.0 |
| Dibenz(a,h)anthracene | BDL | 100.0 | 1.0 |
| Benzo(g,h,i)perylene | BDL | 100.0 | 1.0 |

*End of **8270 BNA soil***

# GeoChem Incorporated Certified Analytical Laboratory

*Site Name:*
*30740-6-0600*

*NC # 37745 , NC # 336, EPA ID # 155*
*Wednesday, May 19, 1999*

*GCI Project # 9905-018*

Field ID **585B02** *Date Analyzed: 5/14/99*
*Lab ID 1222*
**8260 soil**

| | Conc. in ug/kg | lowest detection on sample PQL in ug/kg | Dilution Factor |
|---|---|---|---|
| | Dry wt % 86.3 | | |
| MTBE | BDL | 5.0 | 1.0 |
| IPE | BDL | 5.0 | 1.0 |
| n-Butylbenzene | BDL | 5.0 | 1.0 |
| Dichlorodifluoromethane | BDL | 10.0 | 1.0 |
| Chloromethane | BDL | 10.0 | 1.0 |
| Vinyl Chloride | BDL | 5.0 | 1.0 |
| Bromomethane | BDL | 10.0 | 1.0 |
| Chloroethane | BDL | 10.0 | 1.0 |
| Trichlorofluoromethane | BDL | 10.0 | 1.0 |
| Acrolein | BDL | 100.0 | 1.0 |
| Acetone | BDL | 50.0 | 1.0 |
| 1,1-Dichloroethene | BDL | 5.0 | 1.0 |
| Iodomethane | BDL | 5.0 | 1.0 |
| Carbon Disulfide | BDL | 5.0 | 1.0 |
| Methylene Chloride | BDL | 5.0 | 1.0 |
| Acrylonitrile | BDL | 5.0 | 1.0 |
| trans-1,2-Dichloroethene | BDL | 5.0 | 1.0 |
| 1,1-Dichloroethane | BDL | 5.0 | 1.0 |
| Vinyl Acetate | BDL | 10.0 | 1.0 |
| 2,2-Dichloropropane | BDL | 5.0 | 1.0 |
| cis-1,2-Dichloroethene | BDL | 5.0 | 1.0 |
| 2-Butanone | BDL | 50.0 | 1.0 |
| Bromochloromethane | BDL | 5.0 | 1.0 |
| Chloroform | BDL | 5.0 | 1.0 |
| 1,1,1-Trichloroethane | BDL | 5.0 | 1.0 |
| 1,1-Dichloropropene | BDL | 5.0 | 1.0 |
| Carbon Tetrachloride | BDL | 5.0 | 1.0 |
| Benzene | BDL | 5.0 | 1.0 |
| 1,2-Dichloroethane | BDL | 5.0 | 1.0 |
| Trichloroethene | BDL | 5.0 | 1.0 |
| 1,2-Dichloropropane | BDL | 5.0 | 1.0 |
| Dibromomethane | BDL | 5.0 | 1.0 |
| Bromodichloromethane | BDL | 5.0 | 1.0 |
| 2-Chloroethylvinylether | BDL | 10.0 | 1.0 |
| cis-1,3-Dichloropropene | BDL | 5.0 | 1.0 |
| 4-Methyl-2-pentanone | BDL | 50.0 | 1.0 |
| Toluene | BDL | 5.0 | 1.0 |
| trans-1,3-Dichloropropene | BDL | 5.0 | 1.0 |
| 1,1,2-Trichloroethane | BDL | 5.0 | 1.0 |
| Ethylmethacrylate | BDL | 5.0 | 1.0 |
| Tetrachloroethene | BDL | 5.0 | 1.0 |

# GeoChem Incorporated Certified Analytical Laboratory

*Site Name:*
*30740-6-0600*

*NC # 37745 , NC # 336, EPA ID # 155*
*Wednesday, May 19, 1999*

*GCI Project # 9905-018*

| | Conc. in ug/kg | lowest detection on sample PQL in ug/kg | Dilution Factor |
|---|---|---|---|
| 1,3-Dichloropropane | BDL | 5.0 | 1.0 |
| 2-Hexanone | BDL | 50.0 | 1.0 |
| Chlorodibromomethane | BDL | 5.0 | 1.0 |
| 1,2-Dibromoethane | BDL | 5.0 | 1.0 |
| Chlorobenzene | BDL | 5.0 | 1.0 |
| 1,1,1,2-Tetrachloroethane | BDL | 5.0 | 1.0 |
| Ethylbenzene | BDL | 5.0 | 1.0 |
| m,p-Xylene | BDL | 5.0 | 1.0 |
| o-Xylene | BDL | 5.0 | 1.0 |
| Styrene | BDL | 5.0 | 1.0 |
| Bromoform | BDL | 5.0 | 1.0 |
| Isopropylbenzene | BDL | 5.0 | 1.0 |
| Bromobenzene | BDL | 5.0 | 1.0 |
| 1,2,3-Trichloropropane | BDL | 10.0 | 1.0 |
| 1,1,2,2-Tetrachloroethane | BDL | 5.0 | 1.0 |
| n-Propylbenzene | BDL | 5.0 | 1.0 |
| 2-Chlorotoluene | BDL | 5.0 | 1.0 |
| 1,4-Dichloro-2-butene | BDL | 10.0 | 1.0 |
| 4-Chlorotoluene | BDL | 5.0 | 1.0 |
| 1,3,5-Trimethylbenzene | BDL | 5.0 | 1.0 |
| tert-Butylbenzene | BDL | 5.0 | 1.0 |
| 1,2,4-Trimethylbenzene | BDL | 5.0 | 1.0 |
| sec-Butylbenzene | BDL | 5.0 | 1.0 |
| 1,3-Dichlorobenzene | BDL | 5.0 | 1.0 |
| 1,4-Dichlorobenzene | BDL | 5.0 | 1.0 |
| 4-Isopropyltoluene | BDL | 5.0 | 1.0 |
| 1,2-Dichlorobenzene | BDL | 5.0 | 1.0 |
| 1,2-Dibromo-3-chloropropan | BDL | 5.0 | 1.0 |
| 1,2,4-Trichlorobenzene | BDL | 5.0 | 1.0 |
| Naphthalene | BDL | 5.0 | 1.0 |
| Hexachlorobutadiene | BDL | 5.0 | 1.0 |
| 1,2,3-Trichlorobenzene | BDL | 5.0 | 1.0 |

*End of **8260 soil***

**8270 BNA soil**

| | | | |
|---|---|---|---|
| n-Nitrosodimethylamine | BDL | 100.0 | 1.0 |
| Aniline | BDL | 100.0 | 1.0 |
| Bis(2-chloroethyl)ether | BDL | 100.0 | 1.0 |
| 2-Chlorophenol | BDL | 100.0 | 1.0 |
| Phenol | BDL | 100.0 | 1.0 |
| 1,3-Dichlorobenzene | BDL | 100.0 | 1.0 |
| 1,4-Dichlorobenzene | BDL | 100.0 | 1.0 |
| 1,2-Dichlorobenzene | BDL | 100.0 | 1.0 |
| Benzyl Alcohol | BDL | 200.0 | 1.0 |
| Bis(2-chloroisopropyl)ether | BDL | 100.0 | 1.0 |

# GeoChem Incorporated Certified Analytical Laboratory

*Site Name:*
*30740-6-0600*

*NC # 37745 , NC # 336, EPA ID # 155*
*Wednesday, May 19, 1999*

*GCI Project # 9905-018*

| | Conc. in ug/kg | lowest detection on sample PQL in ug/kg | Dilution Factor |
|---|---|---|---|
| 2-Methylphenol (o-cresol) | BDL | 100.0 | 1.0 |
| Hexachloroethane | BDL | 100.0 | 1.0 |
| n-Nitrosodipropylamine | BDL | 100.0 | 1.0 |
| Nitrobenzene | BDL | 100.0 | 1.0 |
| 4-Methylphenol (p-cresol) | BDL | 100.0 | 1.0 |
| Isophorone | BDL | 100.0 | 1.0 |
| 2-Nitrophenol | BDL | 100.0 | 1.0 |
| 2,4-Dimethylphenol | BDL | 100.0 | 1.0 |
| Bis(2-chloroethoxy)methane | BDL | 100.0 | 1.0 |
| 2,4-Dichlorophenol | BDL | 100.0 | 1.0 |
| 1,2,4-Trichlorobenzene | BDL | 100.0 | 1.0 |
| Naphthalene | BDL | 100.0 | 1.0 |
| Benzoic acid | BDL | 500.0 | 1.0 |
| 4-Chloroaniline | BDL | 100.0 | 1.0 |
| Hexachlorobutadiene | BDL | 100.0 | 1.0 |
| 2-Methylnaphthalene | BDL | 100.0 | 1.0 |
| 4-Chloro-3-methylphenol | BDL | 200.0 | 1.0 |
| Hexachlorocyclopentadiene | BDL | 100.0 | 1.0 |
| 2,4,6-Trichlorophenol | BDL | 100.0 | 1.0 |
| 2,4,5-Trichlorophenol | BDL | 100.0 | 1.0 |
| 2-Chloronaphthalene | BDL | 100.0 | 1.0 |
| 2-Nitroaniline | BDL | 500.0 | 1.0 |
| Acenaphthylene | BDL | 100.0 | 1.0 |
| Dimethylphthalate | BDL | 100.0 | 1.0 |
| 2,6-Dinitrotoluene | BDL | 100.0 | 1.0 |
| Acenaphthene | BDL | 100.0 | 1.0 |
| 3-Nitroaniline | BDL | 500.0 | 1.0 |
| 2,4-Dinitrophenol | BDL | 100.0 | 1.0 |
| Dibenzofuran | BDL | 100.0 | 1.0 |
| 2,4-Dinitrotoluene | BDL | 100.0 | 1.0 |
| 4-Nitrophenol | BDL | 500.0 | 1.0 |
| Fluorene | BDL | 100.0 | 1.0 |
| 4-Chlorophenyl Phenyl Ether | BDL | 100.0 | 1.0 |
| Diethylphthalate | BDL | 100.0 | 1.0 |
| 4-Nitroaniline | BDL | 500.0 | 1.0 |
| 4,6-Dinitro-2-methylphenol | BDL | 100.0 | 1.0 |
| n-Nitrosodiphenylamine | BDL | 100.0 | 1.0 |
| 4-Bromophenyl Phenyl Ether | BDL | 100.0 | 1.0 |
| Hexachlorobenzene | BDL | 100.0 | 1.0 |
| Benzidine | BDL | 500.0 | 1.0 |
| Pentachlorophenol | BDL | 100.0 | 1.0 |
| Phenanthrene | BDL | 100.0 | 1.0 |
| Anthracene | BDL | 100.0 | 1.0 |
| Di-n-butylphthalate | BDL | 100.0 | 1.0 |

# GeoChem Incorporated Certified Analytical Laboratory

*Site Name:*
*30740-6-0600*

*NC # 37745 , NC # 336, EPA ID # 155*
*Wednesday, May 19, 1999*

*GCI Project # 9905-018*

| | Conc. in ug/kg | lowest detection on sample PQL in ug/kg | Dilution Factor |
|---|---|---|---|
| Fluoranthene | **BDL** | 100.0 | 1.0 |
| Pyrene | **BDL** | 100.0 | 1.0 |
| Butyl Benzyl Phthalate | **BDL** | 200.0 | 1.0 |
| Benzo(a)anthracene | **BDL** | 100.0 | 1.0 |
| 3,3'-Dichlorobenzidine | **BDL** | 200.0 | 1.0 |
| Chrysene | **BDL** | 50.0 | 1.0 |
| Bis(2-ethylhexyl)phthalate | **BDL** | 100.0 | 1.0 |
| Di-n-octylphthalate | **BDL** | 100.0 | 1.0 |
| Benzo(b)fluoranthene | **BDL** | 100.0 | 1.0 |
| Benzo(k)fluoranthene | **BDL** | 100.0 | 1.0 |
| Benzo(a)pyrene | **BDL** | 100.0 | 1.0 |
| Indeno(1,2,3-cd)pyrene | **BDL** | 100.0 | 1.0 |
| Dibenz(a,h)anthracene | **BDL** | 100.0 | 1.0 |
| Benzo(g,h,i)perylene | **BDL** | 100.0 | 1.0 |

*End of **8270 BNA soil***

# GeoChem Incorporated Certified Analytical Laboratory

*Site Name:*
*30740-6-0600*

*NC # 37745 , NC # 336, EPA ID # 155*
*Wednesday, May 19, 1999*

*GCI Project # 9905-018*

Field ID **858B03** *Date Analyzed: 5/14/99* Dry wt % 85.0
*Lab ID 1223*
**8260 soil**

| | Conc. in ug/kg | lowest detection on sample PQL in ug/kg | Dilution Factor |
|---|---|---|---|
| MTBE | BDL | 5.0 | 1.0 |
| IPE | BDL | 5.0 | 1.0 |
| n-Butylbenzene | BDL | 5.0 | 1.0 |
| Dichlorodifluoromethane | BDL | 10.0 | 1.0 |
| Chloromethane | BDL | 10.0 | 1.0 |
| Vinyl Chloride | BDL | 5.0 | 1.0 |
| Bromomethane | BDL | 10.0 | 1.0 |
| Chloroethane | BDL | 10.0 | 1.0 |
| Trichlorofluoromethane | BDL | 10.0 | 1.0 |
| Acrolein | BDL | 99.8 | 1.0 |
| Acetone | BDL | 49.9 | 1.0 |
| 1,1-Dichloroethene | BDL | 5.0 | 1.0 |
| Iodomethane | BDL | 5.0 | 1.0 |
| Carbon Disulfide | BDL | 5.0 | 1.0 |
| Methylene Chloride | BDL | 5.0 | 1.0 |
| Acrylonitrile | BDL | 5.0 | 1.0 |
| trans-1,2-Dichloroethene | BDL | 5.0 | 1.0 |
| 1,1-Dichloroethane | BDL | 5.0 | 1.0 |
| Vinyl Acetate | BDL | 10.0 | 1.0 |
| 2,2-Dichloropropane | BDL | 5.0 | 1.0 |
| cis-1,2-Dichloroethene | BDL | 5.0 | 1.0 |
| 2-Butanone | BDL | 49.9 | 1.0 |
| Bromochloromethane | BDL | 5.0 | 1.0 |
| Chloroform | BDL | 5.0 | 1.0 |
| 1,1,1-Trichloroethane | BDL | 5.0 | 1.0 |
| 1,1-Dichloropropene | BDL | 5.0 | 1.0 |
| Carbon Tetrachloride | BDL | 5.0 | 1.0 |
| Benzene | BDL | 5.0 | 1.0 |
| 1,2-Dichloroethane | BDL | 5.0 | 1.0 |
| Trichloroethene | BDL | 5.0 | 1.0 |
| 1,2-Dichloropropane | BDL | 5.0 | 1.0 |
| Dibromomethane | BDL | 5.0 | 1.0 |
| Bromodichloromethane | BDL | 5.0 | 1.0 |
| 2-Chloroethylvinylether | BDL | 10.0 | 1.0 |
| cis-1,3-Dichloropropene | BDL | 5.0 | 1.0 |
| 4-Methyl-2-pentanone | BDL | 49.9 | 1.0 |
| Toluene | BDL | 5.0 | 1.0 |
| trans-1,3-Dichloropropene | BDL | 5.0 | 1.0 |
| 1,1,2-Trichloroethane | BDL | 5.0 | 1.0 |
| Ethylmethacrylate | BDL | 5.0 | 1.0 |
| Tetrachloroethene | BDL | 5.0 | 1.0 |

# GeoChem Incorporated Certified Analytical Laboratory

*Site Name:*
*30740-6-0600*

*NC # 37745 , NC # 336, EPA ID # 155*
*Wednesday, May 19, 1999*

*GCI Project # 9905-018*

| | Conc. in ug/kg | lowest detection on sample PQL in ug/kg | Dilution Factor |
|---|---|---|---|
| 1,3-Dichloropropane | BDL | 5.0 | 1.0 |
| 2-Hexanone | BDL | 49.9 | 1.0 |
| Chlorodibromomethane | BDL | 5.0 | 1.0 |
| 1,2-Dibromoethane | BDL | 5.0 | 1.0 |
| Chlorobenzene | BDL | 5.0 | 1.0 |
| 1,1,1,2-Tetrachloroethane | BDL | 5.0 | 1.0 |
| Ethylbenzene | BDL | 5.0 | 1.0 |
| m,p-Xylene | BDL | 5.0 | 1.0 |
| o-Xylene | BDL | 5.0 | 1.0 |
| Styrene | BDL | 5.0 | 1.0 |
| Bromoform | BDL | 5.0 | 1.0 |
| Isopropylbenzene | BDL | 5.0 | 1.0 |
| Bromobenzene | BDL | 5.0 | 1.0 |
| 1,2,3-Trichloropropane | BDL | 10.0 | 1.0 |
| 1,1,2,2-Tetrachloroethane | BDL | 5.0 | 1.0 |
| n-Propylbenzene | BDL | 5.0 | 1.0 |
| 2-Chlorotoluene | BDL | 5.0 | 1.0 |
| 1,4-Dichloro-2-butene | BDL | 10.0 | 1.0 |
| 4-Chlorotoluene | BDL | 5.0 | 1.0 |
| 1,3,5-Trimethylbenzene | BDL | 5.0 | 1.0 |
| tert-Butylbenzene | BDL | 5.0 | 1.0 |
| 1,2,4-Trimethylbenzene | BDL | 5.0 | 1.0 |
| sec-Butylbenzene | BDL | 5.0 | 1.0 |
| 1,3-Dichlorobenzene | BDL | 5.0 | 1.0 |
| 1,4-Dichlorobenzene | BDL | 5.0 | 1.0 |
| 4-Isopropyltoluene | BDL | 5.0 | 1.0 |
| 1,2-Dichlorobenzene | BDL | 5.0 | 1.0 |
| 1,2-Dibromo-3-chloropropan | BDL | 5.0 | 1.0 |
| 1,2,4-Trichlorobenzene | BDL | 5.0 | 1.0 |
| Naphthalene | BDL | 5.0 | 1.0 |
| Hexachlorobutadiene | BDL | 5.0 | 1.0 |
| 1,2,3-Trichlorobenzene | BDL | 5.0 | 1.0 |

*End of **8260 soil***

**8270 BNA soil**

| | | | |
|---|---|---|---|
| n-Nitrosodimethylamine | BDL | 100.0 | 1.0 |
| Aniline | BDL | 100.0 | 1.0 |
| Bis(2-chloroethyl)ether | BDL | 100.0 | 1.0 |
| 2-Chlorophenol | BDL | 100.0 | 1.0 |
| Phenol | BDL | 100.0 | 1.0 |
| 1,3-Dichlorobenzene | BDL | 100.0 | 1.0 |
| 1,4-Dichlorobenzene | BDL | 100.0 | 1.0 |
| 1,2-Dichlorobenzene | BDL | 100.0 | 1.0 |
| Benzyl Alcohol | BDL | 200.0 | 1.0 |
| Bis(2-chloroisopropyl)ether | BDL | 100.0 | 1.0 |

# GeoChem Incorporated Certified Analytical Laboratory

*Site Name:*
*30740-6-0600*

*NC # 37745 , NC # 336, EPA ID # 155*
*Wednesday, May 19, 1999*

*GCI Project # 9905-018*

| | Conc. in ug/kg | lowest detection on sample PQL in ug/kg | Dilution Factor |
|---|---|---|---|
| 2-Methylphenol (o-cresol) | **BDL** | 100.0 | 1.0 |
| Hexachloroethane | **BDL** | 100.0 | 1.0 |
| n-Nitrosodipropylamine | **BDL** | 100.0 | 1.0 |
| Nitrobenzene | **BDL** | 100.0 | 1.0 |
| 4-Methylphenol (p-cresol) | **BDL** | 100.0 | 1.0 |
| Isophorone | **BDL** | 100.0 | 1.0 |
| 2-Nitrophenol | **BDL** | 100.0 | 1.0 |
| 2,4-Dimethylphenol | **BDL** | 100.0 | 1.0 |
| Bis(2-chloroethoxy)methane | **BDL** | 100.0 | 1.0 |
| 2,4-Dichlorophenol | **BDL** | 100.0 | 1.0 |
| 1,2,4-Trichlorobenzene | **BDL** | 100.0 | 1.0 |
| Naphthalene | **BDL** | 100.0 | 1.0 |
| Benzoic acid | **BDL** | 500.0 | 1.0 |
| 4-Chloroaniline | **BDL** | 100.0 | 1.0 |
| Hexachlorobutadiene | **BDL** | 100.0 | 1.0 |
| 2-Methylnaphthalene | **BDL** | 100.0 | 1.0 |
| 4-Chloro-3-methylphenol | **BDL** | 200.0 | 1.0 |
| Hexachlorocyclopentadiene | **BDL** | 100.0 | 1.0 |
| 2,4,6-Trichlorophenol | **BDL** | 100.0 | 1.0 |
| 2,4,5-Trichlorophenol | **BDL** | 100.0 | 1.0 |
| 2-Chloronaphthalene | **BDL** | 100.0 | 1.0 |
| 2-Nitroaniline | **BDL** | 500.0 | 1.0 |
| Acenaphthylene | **BDL** | 100.0 | 1.0 |
| Dimethylphthalate | **BDL** | 100.0 | 1.0 |
| 2,6-Dinitrotoluene | **BDL** | 100.0 | 1.0 |
| Acenaphthene | **BDL** | 100.0 | 1.0 |
| 3-Nitroaniline | **BDL** | 500.0 | 1.0 |
| 2,4-Dinitrophenol | **BDL** | 100.0 | 1.0 |
| Dibenzofuran | **129.5** | 100.0 | 1.0 |
| 2,4-Dinitrotoluene | **BDL** | 100.0 | 1.0 |
| 4-Nitrophenol | **BDL** | 500.0 | 1.0 |
| Fluorene | **164.8** | 100.0 | 1.0 |
| 4-Chlorophenyl Phenyl Ether | **BDL** | 100.0 | 1.0 |
| Diethylphthalate | **BDL** | 100.0 | 1.0 |
| 4-Nitroaniline | **BDL** | 500.0 | 1.0 |
| 4,6-Dinitro-2-methylphenol | **BDL** | 100.0 | 1.0 |
| n-Nitrosodiphenylamine | **BDL** | 100.0 | 1.0 |
| 4-Bromophenyl Phenyl Ether | **BDL** | 100.0 | 1.0 |
| Hexachlorobenzene | **BDL** | 100.0 | 1.0 |
| Benzidine | **BDL** | 500.0 | 1.0 |
| Pentachlorophenol | **BDL** | 100.0 | 1.0 |
| Phenanthrene | **BDL** | 100.0 | 1.0 |
| Anthracene | **BDL** | 100.0 | 1.0 |
| Di-n-butylphthalate | **BDL** | 100.0 | 1.0 |

# GeoChem Incorporated Certified Analytical Laboratory

*Site Name:*
*30740-6-0600*

*NC # 37745 , NC # 336, EPA ID # 155*
*Wednesday, May 19, 1999*

*GCI Project # 9905-018*

| | Conc. in ug/kg | lowest detection on sample PQL in ug/kg | Dilution Factor |
|---|---|---|---|
| Fluoranthene | **BDL** | 100.0 | 1.0 |
| Pyrene | **BDL** | 100.0 | 1.0 |
| Butyl Benzyl Phthalate | **BDL** | 200.0 | 1.0 |
| Benzo(a)anthracene | **BDL** | 100.0 | 1.0 |
| 3,3'-Dichlorobenzidine | **BDL** | 200.0 | 1.0 |
| Chrysene | **BDL** | 50.0 | 1.0 |
| Bis(2-ethylhexyl)phthalate | **BDL** | 100.0 | 1.0 |
| Di-n-octylphthalate | **BDL** | 100.0 | 1.0 |
| Benzo(b)fluoranthene | **BDL** | 100.0 | 1.0 |
| Benzo(k)fluoranthene | **BDL** | 100.0 | 1.0 |
| Benzo(a)pyrene | **BDL** | 100.0 | 1.0 |
| Indeno(1,2,3-cd)pyrene | **BDL** | 100.0 | 1.0 |
| Dibenz(a,h)anthracene | **BDL** | 100.0 | 1.0 |
| Benzo(g,h,i)perylene | **BDL** | 100.0 | 1.0 |

*End of **8270 BNA soil***

# GeoChem Incorporated Certified Analytical Laboratory

*NC # 37745 , NC # 336, EPA ID # 155*

*Wednesday, May 19, 1999*

*GCI Project* *9905-018*

*Site Name:*

*30740-6-0600*

| | | Conc. in mg/kg | PQL in mg/kg | Dilution Factor |
|---|---|---|---|---|
| Field ID **585B01** | *Lab ID 1221* | | | |
| *Date Analyzed: 5/18/99* | *Dry Wt %: 0.81* | | | |
| | *Analysis:* | **EPH soil** | | |
| | **C9-C18 Aliphatics** | **BDL** | 12.389 | 1.0 |
| | **C19-C36 Aliphatics** | **BDL** | 12.389 | 1.0 |
| | **C11-C22 Aromatics** | **BDL** | 12.389 | 1.0 |
| Field ID **585B02** | *Lab ID 1222* | | | |
| *Date Analyzed: 5/14/99* | *Dry Wt %: 0.86* | | | |
| | *Analysis:* | **EPH soil** | | |
| | **C9-C18 Aliphatics** | **BDL** | 11.582 | 1.0 |
| | **C19-C36 Aliphatics** | **BDL** | 11.582 | 1.0 |
| | **C11-C22 Aromatics** | **BDL** | 11.582 | 1.0 |
| Field ID **858B03** | *Lab ID 1223* | | | |
| *Date Analyzed: 5/14/99* | *Dry Wt %: 0.85* | | | |
| | *Analysis:* | **EPH soil** | | |
| | **C9-C18 Aliphatics** | **BDL** | 11.77 | 1.0 |
| | **C19-C36 Aliphatics** | **BDL** | 11.77 | 1.0 |
| | **C11-C22 Aromatics** | **BDL** | 11.77 | 1.0 |

# GeoChem Incorporated Certified Analytical Laboratory

*NC # 37745 , NC # 336, EPA ID # 155*

***GCI Project 9905-018*** ***Wednesday, May 19, 1999***

***Site Name:***

***30740-6-0600***

| | | Conc. in mg/kg | PQL in mg/kg | Dilution Factor |
|---|---|---|---|---|
| Field ID **585B01** | *Lab ID 1221* | | | |
| *Date Analyzed: 5/10/99* | *Dry Wt %: 0.81* | | | |
| | **VPH soil** | | | |
| | **C5-C8 Aliphatics** | **BQL** | 12.389 | 1.0 |
| | **C9-C12 Aliphatics** | **BQL** | 12.389 | 1.0 |
| | **C9-C10 Aromatics** | **BQL** | 12.389 | 1.0 |
| Field ID **585B02** | *Lab ID 1222* | | | |
| *Date Analyzed: 5/10/99* | *Dry Wt %: 0.86* | | | |
| | **VPH soil** | | | |
| | **C5-C8 Aliphatics** | **BQL** | 11.582 | 1.0 |
| | **C9-C12 Aliphatics** | **BQL** | 11.582 | 1.0 |
| | **C9-C10 Aromatics** | **BQL** | 11.582 | 1.0 |
| Field ID **858B03** | *Lab ID 1223* | | | |
| *Date Analyzed: 5/12/99* | *Dry Wt %: 0.85* | | | |
| | **VPH soil** | | | |
| | **C5-C8 Aliphatics** | **BQL** | 11.77 | 1.0 |
| | **C9-C12 Aliphatics** | **BQL** | 11.77 | 1.0 |
| | **C9-C10 Aromatics** | **BQL** | 11.77 | 1.0 |

# GeoChem Incorporated Quality Control Results

*NC # 37745 , NC # 336, EPA ID # 155*

*GCI Project #* **9905-018**

*Wednesday, May 19, 1999*

*lowest detection @ ideal conditions*

| | Percent Recovery | Lab Blank: | MDL. in ug/l |
|---|---|---|---|
| **8260 soil** | | | |
| 1,1-Dichloroethene | **95** | 0 | 0.88 |
| Benzene | **100** | 0 | 0.72 |
| Trichloroethene | **99** | 0 | 0.71 |
| Toluene | **94** | 0 | 0.64 |
| Chlorobenzene | **98** | 0 | 0.49 |
| | *End of* ***8260 soil*** | | |
| **8270 BNA soil** | | | |
| 2-Chlorophenol | **83** | 0 | 2.39 |
| Phenol | **68** | 0 | 2.44 |
| 1,4-Dichlorobenzene | **71** | 0 | 2.96 |
| n-Nitrosodipropylamine | **95** | 0 | 4.77 |
| 1,2,4-Trichlorobenzene | **88** | 0 | 2.68 |
| 4-Chloro-3-methylphenol | **82** | 0 | 2.45 |
| Acenaphthene | **67** | 0 | 6.83 |
| 2,4-Dinitrotoluene | **100** | 0 | 2.48 |
| 4-Nitrophenol | **95** | 0 | 6.65 |
| Pentachlorophenol | **117** | 0 | 2.4 |
| Pyrene | **92** | 0 | 3.34 |
| | *End of* ***8270 BNA soil*** | | |

# GeoChem Incorporated Quality Control Results

*NC # 37745 , NC # 336, EPA ID # 155*

*9905-018*

*Wednesday, May 19, 1999*

| VPH soil | *Percent Recovery* | *Lab Blank* | *MDL in mg/kg* |
|---|---|---|---|
| C5-C8 Aliphatics | **113.5** | 0 | 0.013 |
| C9-C12 Aliphatics | **106.6** | 0 | 0.004 |
| C9-C10 Aromatics | **121.1** | 0 | 0.003 |

**Report To:**

JEFF Tybunski
LAW - Raleigh
3301 ATLANTIC AVE
Raleigh, NC 27604

# GeoChem, Incorporated

Environmental Laboratories

**2500 Gate Way Centre Blvd., Suite 300**
**Morrisville, NC 27560**

**Bill To:**

SAME

# Chain of Custody Record

PROJECT SITE NUMBER: 491
PO#:
SITE NAME:
COLLECTED BY (Signature): William Fabian
GEOCHEM PROJECT #: 9905 - 018
DATE DUE:
VERBAL/FAX/HARDCOPY:

ANALYSES

| FIELD SAMPLE ID | TURNAROUND IN DAYS | SAMPLE MATRIX | DATE AND TIME COLLECTED | NO. OF CONTAINERS PER LOCATION | MADER | EPH & VPH | 8260 BN & AE | 8270 BN & AE | | | | | | | REMARKS | LAB ID NO. (for lab use only) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 58580 L | STD 4'-6' | Soil | 12:30 5/6/99 | 1 | X | X | X | X | | | | | | | ANY QUESTIONS CALL | 1221 |
| 58580 2 | STD 4'-6' | Soil | 1:00 5/6/99 | 1 | X | X | X | X | | | | | | | JEFF Tybenski | 1222 |
| 58580 3 | STD 4'-6' | Soil | 1:20 5/6/99 | 1 | X | X | X | X | | | | | | | 1-800-648-8928 | 1223 |
| | | | | | | | | | | | | | | | | |
| 30740- | 6-0600 | PH56 | | | | | | | | | | | | | | |
| SITE: 491 | | | | | | | | | | | | | | | | |
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| | | | | | | | | | | | | | | | | |

REMARKS:

| RECEIVED BY: | DATE | TIME | RELINQUISHED BY: | DATE | TIME | RECEIVED BY: | DATE | TIME | RELINQUISHED BY: | DATE | TIME |
|---|---|---|---|---|---|---|---|---|---|---|---|
| FEDERAL EXPRESS | 5/6/99 | 5:00 | | | | J.A. Edwards | 5/7 | 2:30 | | | |

RELINQUISHED BY: DATE 5/6 TIME 4:45

This Chain of Custody is considered a written contract to perform the services requested in the analyses section of this document.

# GeoChem, Incorporated

Environmental Laboratories

## Certified Analytical Laboratory

*NC # 37745 ,NC # 336, NC # 461, EPA ID # 155*

***Client Project Manager***
*Jeff Tyburski*
***Site Name:***
*498 and 487*
*30740-6-0600*

*Law Engineering*
*3301 Atlantic Avenue*
*Raleigh NC*
*27604*

***Report Date***
*Tuesday, May 18, 1999*
***PO #***
***Date Received in lab:***
*Wednesday, May 05, 1999*

## *GCI Project #: 9905-006*

## Summary of requested analytical work

| *Sample type code #s :* | *1 = solid samples;* | *2 = liquid samples;* | *3 = Air samples;* | *4 = sludges/unknowns* |
|---|---|---|---|---|
| *Field Number:* 735B11 | *Lab ID* 1183 | *Sample Type:* 1 | *Date Analyzed:* 5/11/99 | *for 8270 BNA soil* |
| *Date Sampled* 5/4/99 | | | *Proper Preservation* | Yes |
| *Field Number:* 735B11 | *Lab ID* 1183 | *Sample Type:* 1 | *Date Analyzed:* 5/12/99 | *for EPH soil* |
| *Date Sampled* 5/4/99 | | | *Proper Preservation* | Yes |
| *Field Number:* 735B11 | *Lab ID* 1183 | *Sample Type:* 1 | *Date Analyzed:* 5/6/99 | *for VPH soil* |
| *Date Sampled* 5/4/99 | | | *Proper Preservation* | Yes |
| *Field Number:* 635B01 | *Lab ID* 1184 | *Sample Type:* 1 | *Date Analyzed:* 5/5/99 | *for 8260 soil* |
| *Date Sampled* 5/4/99 | | | *Proper Preservation* | Yes |
| *Field Number:* 635B01 | *Lab ID* 1184 | *Sample Type:* 1 | *Date Analyzed:* 5/11/99 | *for 8270 BNA soil* |
| *Date Sampled* 5/4/99 | | | *Proper Preservation* | Yes |
| *Field Number:* 635B01 | *Lab ID* 1184 | *Sample Type:* 1 | *Date Analyzed:* 5/12/99 | *for EPH soil* |
| *Date Sampled* 5/4/99 | | | *Proper Preservation* | Yes |
| *Field Number:* 635B01 | *Lab ID* 1184 | *Sample Type:* 1 | *Date Analyzed:* 5/6/99 | *for VPH soil* |
| *Date Sampled* 5/4/99 | | | *Proper Preservation* | Yes |
| *Field Number:* 635B02 | *Lab ID* 1185 | *Sample Type:* 1 | *Date Analyzed:* 5/5/99 | *for 8260 soil* |
| *Date Sampled* 5/4/99 | | | *Proper Preservation* | Yes |
| *Field Number:* 635B02 | *Lab ID* 1185 | *Sample Type:* 1 | *Date Analyzed:* 5/11/99 | *for 8270 BNA soil* |
| *Date Sampled* 5/4/99 | | | *Proper Preservation* | Yes |

I Kevin Bell Here by certify that I have Reviewed and approve this data set

2500 Gate Way Centre Blvd., Suite 300 • Morrisville, NC 27560
Telephone: 919-460-8093 • FAX: 919-460-0167

# GeoChem, Incorporated

## Environmental Laboratories

## Certified Analytical Laboratory

*NC # 37745 ,NC # 336, NC # 461, EPA ID # 155*

***Client Project Manager***
*Jeff Tyburski*
***Site Name:***
*498 and 487*
*30740-6-0600*

*Law Engineering*
*3301 Atlantic Avenue*
*Raleigh NC*
*27604*

***Report Date***
*Tuesday, May 18, 1999*
***PO #***
***Date Received in lab:***
*Wednesday, May 05, 1999*

## GCI Project #: 9905-006

## Summary of requested analytical work

| *Sample type code #s :* | *1 = solid samples;* | *2 = liquid samples;* | *3 = Air samples;* | *4 = sludges/unknowns* |
|---|---|---|---|---|
| *Field Number:* 635B02 | *Lab ID* 1185 | *Sample Type:* 1 | *Date Analyzed:* 5/12/99 | *for EPH soil* |
| *Date Sampled* 5/4/99 | | | *Proper Preservation* | Yes |
| *Field Number:* 635B02 | *Lab ID* 1185 | *Sample Type:* 1 | *Date Analyzed:* 5/6/99 | *for VPH soil* |
| *Date Sampled* 5/4/99 | | | *Proper Preservation* | Yes |
| *Field Number:* 635B03 | *Lab ID* 1186 | *Sample Type:* 1 | *Date Analyzed:* 5/5/99 | *for 8260 soil* |
| *Date Sampled* 5/4/99 | | | *Proper Preservation* | Yes |
| *Field Number:* 35B03 | *Lab ID* 1186 | *Sample Type:* 1 | *Date Analyzed:* 5/11/99 | *for 8270 BNA soil* |
| *Date Sampled* 5/4/99 | | | *Proper Preservation* | Yes |
| *Field Number:* 635B03 | *Lab ID* 1186 | *Sample Type:* 1 | *Date Analyzed:* 5/12/99 | *for EPH soil* |
| *Date Sampled* 5/4/99 | | | *Proper Preservation* | Yes |
| *Field Number:* 635B03 | *Lab ID* 1186 | *Sample Type:* 1 | *Date Analyzed:* 5/6/99 | *for VPH soil* |
| *Date Sampled* 5/4/99 | | | *Proper Preservation* | Yes |

I Kevin Bulen Here by certify that I have Reviewed and approve this data set

2500 Gate Way Centre Blvd., Suite 300 • Morrisville, NC 27560
Telephone: 919-460-8093 • FAX: 919-460-0167

# GeoChem Incorporated Certified Analytical Laboratory

*Site Name:*
*498 and 487*

*NC # 37745 , NC # 336, EPA ID # 155*
*Tuesday, May 18, 1999*

*GCI Project # 9905-006*

Field ID **735B10** *Date Analyzed: 5/5/99* Dry wt % 83.0

*Lab ID* ***1181***

**8260 soil**

| | Conc. in ug/kg | lowest detection on sample PQL in ug/kg | Dilution Factor |
|---|---|---|---|
| MTBE | **BDL** | 5.0 | 1.0 |
| IPE | **BDL** | 5.0 | 1.0 |
| n-Butylbenzene | **BDL** | 5.0 | 1.0 |
| Dichlorodifluoromethane | **BDL** | 9.9 | 1.0 |
| Chloromethane | **BDL** | 9.9 | 1.0 |
| Vinyl Chloride | **BDL** | 5.0 | 1.0 |
| Bromomethane | **BDL** | 9.9 | 1.0 |
| Chloroethane | **BDL** | 9.9 | 1.0 |
| Trichlorofluoromethane | **BDL** | 9.9 | 1.0 |
| Acrolein | **BDL** | 99.2 | 1.0 |
| Acetone | **BDL** | 49.6 | 1.0 |
| 1,1-Dichloroethene | **BDL** | 5.0 | 1.0 |
| Iodomethane | **BDL** | 5.0 | 1.0 |
| Carbon Disulfide | **BDL** | 5.0 | 1.0 |
| Methylene Chloride | **BDL** | 5.0 | 1.0 |
| Acrylonitrile | **BDL** | 5.0 | 1.0 |
| trans-1,2-Dichloroethene | **BDL** | 5.0 | 1.0 |
| 1,1-Dichloroethane | **BDL** | 5.0 | 1.0 |
| Vinyl Acetate | **BDL** | 9.9 | 1.0 |
| 2,2-Dichloropropane | **BDL** | 5.0 | 1.0 |
| cis-1,2-Dichloroethene | **BDL** | 5.0 | 1.0 |
| 2-Butanone | **BDL** | 49.6 | 1.0 |
| Bromochloromethane | **BDL** | 5.0 | 1.0 |
| Chloroform | **BDL** | 5.0 | 1.0 |
| 1,1,1-Trichloroethane | **BDL** | 5.0 | 1.0 |
| 1,1-Dichloropropene | **BDL** | 5.0 | 1.0 |
| Carbon Tetrachloride | **BDL** | 5.0 | 1.0 |
| Benzene | **BDL** | 5.0 | 1.0 |
| 1,2-Dichloroethane | **BDL** | 5.0 | 1.0 |
| Trichloroethene | **BDL** | 5.0 | 1.0 |
| 1,2-Dichloropropane | **BDL** | 5.0 | 1.0 |
| Dibromomethane | **BDL** | 5.0 | 1.0 |
| Bromodichloromethane | **BDL** | 5.0 | 1.0 |
| 2-Chloroethylvinylether | **BDL** | 9.9 | 1.0 |
| cis-1,3-Dichloropropene | **BDL** | 5.0 | 1.0 |
| 4-Methyl-2-pentanone | **BDL** | 49.6 | 1.0 |
| Toluene | **BDL** | 5.0 | 1.0 |
| trans-1,3-Dichloropropene | **BDL** | 5.0 | 1.0 |
| 1,1,2-Trichloroethane | **BDL** | 5.0 | 1.0 |
| Ethylmethacrylate | **BDL** | 5.0 | 1.0 |
| Tetrachloroethene | **BDL** | 5.0 | 1.0 |

# GeoChem Incorporated Certified Analytical Laboratory

*Site Name:*
*498 and 487*

*NC # 37745 , NC # 336, EPA ID # 155*
*Tuesday, May 18, 1999*

*GCI Project # 9905-006*

| | Conc. in ug/kg | lowest detection on sample PQL in ug/kg | Dilution Factor |
|---|---|---|---|
| 1,3-Dichloropropane | BDL | 5.0 | 1.0 |
| 2-Hexanone | BDL | 49.6 | 1.0 |
| Chlorodibromomethane | BDL | 5.0 | 1.0 |
| 1,2-Dibromoethane | BDL | 5.0 | 1.0 |
| Chlorobenzene | BDL | 5.0 | 1.0 |
| 1,1,1,2-Tetrachloroethane | BDL | 5.0 | 1.0 |
| Ethylbenzene | BDL | 5.0 | 1.0 |
| m,p-Xylene | BDL | 5.0 | 1.0 |
| o-Xylene | BDL | 5.0 | 1.0 |
| Styrene | BDL | 5.0 | 1.0 |
| Bromoform | BDL | 5.0 | 1.0 |
| Isopropylbenzene | BDL | 5.0 | 1.0 |
| Bromobenzene | BDL | 5.0 | 1.0 |
| 1,2,3-Trichloropropane | BDL | 9.9 | 1.0 |
| 1,1,2,2-Tetrachloroethane | BDL | 5.0 | 1.0 |
| n-Propylbenzene | BDL | 5.0 | 1.0 |
| 2-Chlorotoluene | BDL | 5.0 | 1.0 |
| 1,4-Dichloro-2-butene | BDL | 9.9 | 1.0 |
| 4-Chlorotoluene | BDL | 5.0 | 1.0 |
| 1,3,5-Trimethylbenzene | BDL | 5.0 | 1.0 |
| tert-Butylbenzene | BDL | 5.0 | 1.0 |
| 1,2,4-Trimethylbenzene | BDL | 5.0 | 1.0 |
| sec-Butylbenzene | BDL | 5.0 | 1.0 |
| 1,3-Dichlorobenzene | BDL | 5.0 | 1.0 |
| 1,4-Dichlorobenzene | BDL | 5.0 | 1.0 |
| 4-Isopropyltoluene | BDL | 5.0 | 1.0 |
| 1,2-Dichlorobenzene | BDL | 5.0 | 1.0 |
| 1,2-Dibromo-3-chloropropan | BDL | 5.0 | 1.0 |
| 1,2,4-Trichlorobenzene | BDL | 5.0 | 1.0 |
| Naphthalene | BDL | 5.0 | 1.0 |
| Hexachlorobutadiene | BDL | 5.0 | 1.0 |
| 1,2,3-Trichlorobenzene | BDL | 5.0 | 1.0 |
| | *End of **8260 soil*** | | |
| **8270 BNA soil** | | | |
| n-Nitrosodimethylamine | BQL | 500.0 | 5.0 |
| Aniline | BQL | 500.0 | 5.0 |
| Bis(2-chloroethyl)ether | BQL | 500.0 | 5.0 |
| 2-Chlorophenol | BQL | 500.0 | 5.0 |
| Phenol | BQL | 500.0 | 5.0 |
| 1,3-Dichlorobenzene | BQL | 500.0 | 5.0 |
| 1,4-Dichlorobenzene | BQL | 500.0 | 5.0 |
| 1,2-Dichlorobenzene | BQL | 500.0 | 5.0 |
| Benzyl Alcohol | BQL | 1000.0 | 5.0 |
| Bis(2-chloroisopropyl)ether | BQL | 500.0 | 5.0 |

# GeoChem, Incorporated

## Environmental Laboratories

## Certified Analytical Laboratory

*NC # 37745 ,NC # 336, NC # 461, EPA ID # 155*

***Client Project Manager***
*Jeff Tyburski*
***Site Name:***
*498 and 487*
*30740-6-0600*

*Law Engineering*
*3301 Atlantic Avenue*
*Raleigh NC*
*27604*

***Report Date***
*Tuesday, May 18, 1999*
***PO #***
***Date Received in lab:***
*Wednesday, May 05, 1999*

## GCI Project #: 9905-006

## Summary of requested analytical work

***Sample type code #s :*** ***1 = solid samples;*** ***2 = liquid samples;*** ***3 = Air samples;*** ***4 = sludges/unknowns***

| | | | | |
|---|---|---|---|---|
| *Field Number:* 735B10 | *Lab ID* 1181 | *Sample Type:* 1 | *Date Analyzed:* 5/5/99 | *for 8260 soil* |
| *Date Sampled* 5/4/99 | | | *Proper Preservation* | Yes |
| *Field Number:* 735B10 | *Lab ID* 1181 | *Sample Type:* 1 | *Date Analyzed:* 5/11/99 | *for 8270 BNA soil* |
| *Date Sampled* 5/4/99 | | | *Proper Preservation* | Yes |
| *Field Number:* 735B10 | *Lab ID* 1181 | *Sample Type:* 1 | *Date Analyzed:* 5/12/99 | *for EPH soil* |
| *Date Sampled* 5/4/99 | | | *Proper Preservation* | Yes |
| *Field Number:* 735B10 | *Lab ID* 1181 | *Sample Type:* 1 | *Date Analyzed:* 5/6/99 | *for VPH soil* |
| *Date Sampled* 5/4/99 | | | *Proper Preservation* | Yes |
| *Field Number:* 735B09 | *Lab ID* 1182 | *Sample Type:* 1 | *Date Analyzed:* 5/5/99 | *for 8260 soil* |
| *Date Sampled* 5/4/99 | | | *Proper Preservation* | Yes |
| *Field Number:* 735B09 | *Lab ID* 1182 | *Sample Type:* 1 | *Date Analyzed:* 5/11/99 | *for 8270 BNA soil* |
| *Date Sampled* 5/4/99 | | | *Proper Preservation* | Yes |
| *Field Number:* 735B09 | *Lab ID* 1182 | *Sample Type:* 1 | *Date Analyzed:* 5/12/99 | *for EPH soil* |
| *Date Sampled* 5/4/99 | | | *Proper Preservation* | Yes |
| *Field Number:* 735B09 | *Lab ID* 1182 | *Sample Type:* 1 | *Date Analyzed:* 5/6/99 | *for VPH soil* |
| *Date Sampled* 5/4/99 | | | *Proper Preservation* | Yes |
| *Field Number:* 735B11 | *Lab ID* 1183 | *Sample Type:* 1 | *Date Analyzed:* 5/5/99 | *for 8260 soil* |
| *Date Sampled* 5/4/99 | | | *Proper Preservation* | Yes |

I Kevin Bell Here by certify that I have Reviewed and approve this data set

2500 Gate Way Centre Blvd., Suite 300 • Morrisville, NC 27560
Telephone: 919-460-8093 • FAX: 919-460-0167

# GeoChem Incorporated Certified Analytical Laboratory

*Site Name:*
*498 and 487*

*NC # 37745 , NC # 336, EPA ID # 155*
*Tuesday, May 18, 1999*

*GCI Project # 9905-006*

| | Conc. in ug/kg | lowest detection on sample PQL in ug/kg | Dilution Factor |
|---|---|---|---|
| 2-Methylphenol (o-cresol) | BQL | 500.0 | 5.0 |
| Hexachloroethane | BQL | 500.0 | 5.0 |
| n-Nitrosodipropylamine | BQL | 500.0 | 5.0 |
| Nitrobenzene | BQL | 500.0 | 5.0 |
| 4-Methylphenol (p-cresol) | BQL | 500.0 | 5.0 |
| Isophorone | BQL | 500.0 | 5.0 |
| 2-Nitrophenol | BQL | 500.0 | 5.0 |
| 2,4-Dimethylphenol | BQL | 500.0 | 5.0 |
| Bis(2-chloroethoxy)methane | BQL | 500.0 | 5.0 |
| 2,4-Dichlorophenol | BQL | 500.0 | 5.0 |
| 1,2,4-Trichlorobenzene | BQL | 500.0 | 5.0 |
| Naphthalene | BQL | 500.0 | 5.0 |
| Benzoic acid | BQL | 2500.0 | 5.0 |
| 4-Chloroaniline | BQL | 500.0 | 5.0 |
| Hexachlorobutadiene | BQL | 500.0 | 5.0 |
| 2-Methylnaphthalene | BQL | 500.0 | 5.0 |
| 4-Chloro-3-methylphenol | BQL | 1000.0 | 5.0 |
| Hexachlorocyclopentadiene | BQL | 500.0 | 5.0 |
| 2,4,6-Trichlorophenol | BQL | 500.0 | 5.0 |
| 2,4,5-Trichlorophenol | BQL | 500.0 | 5.0 |
| 2-Chloronaphthalene | BQL | 500.0 | 5.0 |
| 2-Nitroaniline | BQL | 2500.0 | 5.0 |
| Acenaphthylene | BQL | 500.0 | 5.0 |
| Dimethylphthalate | BQL | 500.0 | 5.0 |
| 2,6-Dinitrotoluene | BQL | 500.0 | 5.0 |
| Acenaphthene | BQL | 500.0 | 5.0 |
| 3-Nitroaniline | BQL | 2500.0 | 5.0 |
| 2,4-Dinitrophenol | BQL | 500.0 | 5.0 |
| Dibenzofuran | BQL | 500.0 | 5.0 |
| 2,4-Dinitrotoluene | BQL | 500.0 | 5.0 |
| 4-Nitrophenol | BQL | 2500.0 | 5.0 |
| Fluorene | BQL | 500.0 | 5.0 |
| 4-Chlorophenyl Phenyl Ether | BQL | 500.0 | 5.0 |
| Diethylphthalate | BQL | 500.0 | 5.0 |
| 4-Nitroaniline | BQL | 2500.0 | 5.0 |
| 4,6-Dinitro-2-methylphenol | BQL | 500.0 | 5.0 |
| n-Nitrosodiphenylamine | BQL | 500.0 | 5.0 |
| 4-Bromophenyl Phenyl Ether | BQL | 500.0 | 5.0 |
| Hexachlorobenzene | BQL | 500.0 | 5.0 |
| Benzidine | BQL | 2500.0 | 5.0 |
| Pentachlorophenol | BQL | 500.0 | 5.0 |
| Phenanthrene | BQL | 500.0 | 5.0 |
| Anthracene | BQL | 500.0 | 5.0 |
| Di-n-butylphthalate | BQL | 500.0 | 5.0 |

# GeoChem Incorporated Certified Analytical Laboratory

*Site Name:*
*498 and 487*

*NC # 37745 , NC # 336, EPA ID # 155*
*Tuesday, May 18, 1999*

*GCI Project # 9905-006*

| | Conc. in ug/kg | lowest detection on sample PQL in ug/kg | Dilution Factor |
|---|---|---|---|
| Fluoranthene | **BQL** | 500.0 | 5.0 |
| Pyrene | **BQL** | 500.0 | 5.0 |
| Butyl Benzyl Phthalate | **BQL** | 1000.0 | 5.0 |
| Benzo(a)anthracene | **BQL** | 500.0 | 5.0 |
| 3,3'-Dichlorobenzidine | **BQL** | 1000.0 | 5.0 |
| Chrysene | **BQL** | 250.0 | 5.0 |
| Bis(2-ethylhexyl)phthalate | **BQL** | 500.0 | 5.0 |
| Di-n-octylphthalate | **BQL** | 500.0 | 5.0 |
| Benzo(b)fluoranthene | **BQL** | 500.0 | 5.0 |
| Benzo(k)fluoranthene | **BQL** | 500.0 | 5.0 |
| Benzo(a)pyrene | **BQL** | 500.0 | 5.0 |
| Indeno(1,2,3-cd)pyrene | **BQL** | 500.0 | 5.0 |
| Dibenz(a,h)anthracene | **BQL** | 500.0 | 5.0 |
| Benzo(g,h,i)perylene | **BQL** | 500.0 | 5.0 |

*End of **8270 BNA soil***

# GeoChem Incorporated Certified Analytical Laboratory

*Site Name:*
*498 and 487*

*NC # 37745 , NC # 336, EPA ID # 155*
*Tuesday, May 18, 1999*

*GCI Project # 9905-006*

Field ID **735B09** *Date Analyzed: 5/5/99* Dry wt % 85.6

*Lab ID* ***1182***

**8260 soil**

| | Conc. in ug/kg | lowest detection on sample PQL in ug/kg | Dilution Factor |
|---|---|---|---|
| MTBE | **BDL** | 5.1 | 1.0 |
| IPE | **BDL** | 5.1 | 1.0 |
| n-Butylbenzene | **BDL** | 5.1 | 1.0 |
| Dichlorodifluoromethane | **BDL** | 10.1 | 1.0 |
| Chloromethane | **BDL** | 10.1 | 1.0 |
| Vinyl Chloride | **BDL** | 5.1 | 1.0 |
| Bromomethane | **BDL** | 10.1 | 1.0 |
| Chloroethane | **BDL** | 10.1 | 1.0 |
| Trichlorofluoromethane | **BDL** | 10.1 | 1.0 |
| Acrolein | **BDL** | 101.0 | 1.0 |
| Acetone | **BDL** | 50.5 | 1.0 |
| 1,1-Dichloroethene | **BDL** | 5.1 | 1.0 |
| Iodomethane | **BDL** | 5.1 | 1.0 |
| Carbon Disulfide | **BDL** | 5.1 | 1.0 |
| Methylene Chloride | **BDL** | 5.1 | 1.0 |
| Acrylonitrile | **BDL** | 5.1 | 1.0 |
| trans-1,2-Dichloroethene | **BDL** | 5.1 | 1.0 |
| 1,1-Dichloroethane | **BDL** | 5.1 | 1.0 |
| Vinyl Acetate | **BDL** | 10.1 | 1.0 |
| 2,2-Dichloropropane | **BDL** | 5.1 | 1.0 |
| cis-1,2-Dichloroethene | **BDL** | 5.1 | 1.0 |
| 2-Butanone | **BDL** | 50.5 | 1.0 |
| Bromochloromethane | **BDL** | 5.1 | 1.0 |
| Chloroform | **BDL** | 5.1 | 1.0 |
| 1,1,1-Trichloroethane | **BDL** | 5.1 | 1.0 |
| 1,1-Dichloropropene | **BDL** | 5.1 | 1.0 |
| Carbon Tetrachloride | **BDL** | 5.1 | 1.0 |
| Benzene | **BDL** | 5.1 | 1.0 |
| 1,2-Dichloroethane | **BDL** | 5.1 | 1.0 |
| Trichloroethene | **BDL** | 5.1 | 1.0 |
| 1,2-Dichloropropane | **BDL** | 5.1 | 1.0 |
| Dibromomethane | **BDL** | 5.1 | 1.0 |
| Bromodichloromethane | **BDL** | 5.1 | 1.0 |
| 2-Chloroethylvinylether | **BDL** | 10.1 | 1.0 |
| cis-1,3-Dichloropropene | **BDL** | 5.1 | 1.0 |
| 4-Methyl-2-pentanone | **BDL** | 50.5 | 1.0 |
| Toluene | **BDL** | 5.1 | 1.0 |
| trans-1,3-Dichloropropene | **BDL** | 5.1 | 1.0 |
| 1,1,2-Trichloroethane | **BDL** | 5.1 | 1.0 |
| Ethylmethacrylate | **BDL** | 5.1 | 1.0 |
| Tetrachloroethene | **BDL** | 5.1 | 1.0 |

# GeoChem Incorporated Certified Analytical Laboratory

*Site Name:*
*498 and 487*

*NC # 37745 , NC # 336, EPA ID # 155*
*Tuesday, May 18, 1999*

*GCI Project # 9905-006*

| | Conc. in ug/kg | lowest detection on sample PQL in ug/kg | Dilution Factor |
|---|---|---|---|
| 1,3-Dichloropropane | BDL | 5.1 | 1.0 |
| 2-Hexanone | BDL | 50.5 | 1.0 |
| Chlorodibromomethane | BDL | 5.1 | 1.0 |
| 1,2-Dibromoethane | BDL | 5.1 | 1.0 |
| Chlorobenzene | BDL | 5.1 | 1.0 |
| 1,1,1,2-Tetrachloroethane | BDL | 5.1 | 1.0 |
| Ethylbenzene | BDL | 5.1 | 1.0 |
| m,p-Xylene | BDL | 5.1 | 1.0 |
| o-Xylene | BDL | 5.1 | 1.0 |
| Styrene | BDL | 5.1 | 1.0 |
| Bromoform | BDL | 5.1 | 1.0 |
| Isopropylbenzene | BDL | 5.1 | 1.0 |
| Bromobenzene | BDL | 5.1 | 1.0 |
| 1,2,3-Trichloropropane | BDL | 10.1 | 1.0 |
| 1,1,2,2-Tetrachloroethane | BDL | 5.1 | 1.0 |
| n-Propylbenzene | BDL | 5.1 | 1.0 |
| 2-Chlorotoluene | BDL | 5.1 | 1.0 |
| 1,4-Dichloro-2-butene | BDL | 10.1 | 1.0 |
| 4-Chlorotoluene | BDL | 5.1 | 1.0 |
| 1,3,5-Trimethylbenzene | BDL | 5.1 | 1.0 |
| tert-Butylbenzene | BDL | 5.1 | 1.0 |
| 1,2,4-Trimethylbenzene | BDL | 5.1 | 1.0 |
| sec-Butylbenzene | BDL | 5.1 | 1.0 |
| 1,3-Dichlorobenzene | BDL | 5.1 | 1.0 |
| 1,4-Dichlorobenzene | BDL | 5.1 | 1.0 |
| 4-Isopropyltoluene | BDL | 5.1 | 1.0 |
| 1,2-Dichlorobenzene | BDL | 5.1 | 1.0 |
| 1,2-Dibromo-3-chloropropan | BDL | 5.1 | 1.0 |
| 1,2,4-Trichlorobenzene | BDL | 5.1 | 1.0 |
| Naphthalene | BDL | 5.1 | 1.0 |
| Hexachlorobutadiene | BDL | 5.1 | 1.0 |
| 1,2,3-Trichlorobenzene | BDL | 5.1 | 1.0 |

*End of **8260 soil***

**8270 BNA soil**

| | | | |
|---|---|---|---|
| n-Nitrosodimethylamine | BQL | 500.0 | 5.0 |
| Aniline | BQL | 500.0 | 5.0 |
| Bis(2-chloroethyl)ether | BQL | 500.0 | 5.0 |
| 2-Chlorophenol | BQL | 500.0 | 5.0 |
| Phenol | BQL | 500.0 | 5.0 |
| 1,3-Dichlorobenzene | BQL | 500.0 | 5.0 |
| 1,4-Dichlorobenzene | BQL | 500.0 | 5.0 |
| 1,2-Dichlorobenzene | BQL | 500.0 | 5.0 |
| Benzyl Alcohol | BQL | 1000.0 | 5.0 |
| Bis(2-chloroisopropyl)ether | BQL | 500.0 | 5.0 |

# GeoChem Incorporated Certified Analytical Laboratory

*Site Name:*
*498 and 487*

*NC # 37745 , NC # 336, EPA ID # 155*
*Tuesday, May 18, 1999*

*GCI Project # 9905-006*

| | Conc. in ug/kg | lowest detection on sample PQL in ug/kg | Dilution Factor |
|---|---|---|---|
| 2-Methylphenol (o-cresol) | BQL | 500.0 | 5.0 |
| Hexachloroethane | BQL | 500.0 | 5.0 |
| n-Nitrosodipropylamine | BQL | 500.0 | 5.0 |
| Nitrobenzene | BQL | 500.0 | 5.0 |
| 4-Methylphenol (p-cresol) | BQL | 500.0 | 5.0 |
| Isophorone | BQL | 500.0 | 5.0 |
| 2-Nitrophenol | BQL | 500.0 | 5.0 |
| 2,4-Dimethylphenol | BQL | 500.0 | 5.0 |
| Bis(2-chloroethoxy)methane | BQL | 500.0 | 5.0 |
| 2,4-Dichlorophenol | BQL | 500.0 | 5.0 |
| 1,2,4-Trichlorobenzene | BQL | 500.0 | 5.0 |
| Naphthalene | BQL | 500.0 | 5.0 |
| Benzoic acid | BQL | 2500.0 | 5.0 |
| 4-Chloroaniline | BQL | 500.0 | 5.0 |
| Hexachlorobutadiene | BQL | 500.0 | 5.0 |
| 2-Methylnaphthalene | BQL | 500.0 | 5.0 |
| 4-Chloro-3-methylphenol | BQL | 1000.0 | 5.0 |
| Hexachlorocyclopentadiene | BQL | 500.0 | 5.0 |
| 2,4,6-Trichlorophenol | BQL | 500.0 | 5.0 |
| 2,4,5-Trichlorophenol | BQL | 500.0 | 5.0 |
| 2-Chloronaphthalene | BQL | 500.0 | 5.0 |
| 2-Nitroaniline | BQL | 2500.0 | 5.0 |
| Acenaphthylene | BQL | 500.0 | 5.0 |
| Dimethylphthalate | BQL | 500.0 | 5.0 |
| 2,6-Dinitrotoluene | BQL | 500.0 | 5.0 |
| Acenaphthene | BQL | 500.0 | 5.0 |
| 3-Nitroaniline | BQL | 2500.0 | 5.0 |
| 2,4-Dinitrophenol | BQL | 500.0 | 5.0 |
| Dibenzofuran | BQL | 500.0 | 5.0 |
| 2,4-Dinitrotoluene | BQL | 500.0 | 5.0 |
| 4-Nitrophenol | BQL | 2500.0 | 5.0 |
| Fluorene | BQL | 500.0 | 5.0 |
| 4-Chlorophenyl Phenyl Ether | BQL | 500.0 | 5.0 |
| Diethylphthalate | BQL | 500.0 | 5.0 |
| 4-Nitroaniline | BQL | 2500.0 | 5.0 |
| 4,6-Dinitro-2-methylphenol | BQL | 500.0 | 5.0 |
| n-Nitrosodiphenylamine | BQL | 500.0 | 5.0 |
| 4-Bromophenyl Phenyl Ether | BQL | 500.0 | 5.0 |
| Hexachlorobenzene | BQL | 500.0 | 5.0 |
| Benzidine | BQL | 2500.0 | 5.0 |
| Pentachlorophenol | BQL | 500.0 | 5.0 |
| Phenanthrene | BQL | 500.0 | 5.0 |
| Anthracene | BQL | 500.0 | 5.0 |
| Di-n-butylphthalate | BQL | 500.0 | 5.0 |

# GeoChem Incorporated Certified Analytical Laboratory

*Site Name:*
*498 and 487*

*NC # 37745 , NC # 336, EPA ID # 155*
*Tuesday, May 18, 1999*

*GCI Project # 9905-006*

| | Conc. in ug/kg | lowest detection on sample PQL in ug/kg | Dilution Factor |
|---|---|---|---|
| Fluoranthene | **BQL** | 500.0 | 5.0 |
| Pyrene | **BQL** | 500.0 | 5.0 |
| Butyl Benzyl Phthalate | **BQL** | 1000.0 | 5.0 |
| Benzo(a)anthracene | **BQL** | 500.0 | 5.0 |
| 3,3'-Dichlorobenzidine | **BQL** | 1000.0 | 5.0 |
| Chrysene | **BQL** | 250.0 | 5.0 |
| Bis(2-ethylhexyl)phthalate | **BQL** | 500.0 | 5.0 |
| Di-n-octylphthalate | **BQL** | 500.0 | 5.0 |
| Benzo(b)fluoranthene | **BQL** | 500.0 | 5.0 |
| Benzo(k)fluoranthene | **BQL** | 500.0 | 5.0 |
| Benzo(a)pyrene | **BQL** | 500.0 | 5.0 |
| Indeno(1,2,3-cd)pyrene | **BQL** | 500.0 | 5.0 |
| Dibenz(a,h)anthracene | **BQL** | 500.0 | 5.0 |
| Benzo(g,h,i)perylene | **BQL** | 500.0 | 5.0 |

*End of **8270 BNA soil***

# GeoChem Incorporated Certified Analytical Laboratory

*Site Name:*
*498 and 487*

*NC # 37745 , NC # 336, EPA ID # 155*
*Tuesday, May 18, 1999*

*GCI Project # 9905-006*

Field ID **735B11** *Date Analyzed: 5/5/99* Dry wt % 86.8
*Lab ID 1183*

**8260 soil**

| | Conc. in ug/kg | *lowest detection on sample* PQL in ug/kg | Dilution Factor |
|---|---|---|---|
| MTBE | **BDL** | 5.1 | 1.0 |
| IPE | **BDL** | 5.1 | 1.0 |
| n-Butylbenzene | **BDL** | 5.1 | 1.0 |
| Dichlorodifluoromethane | **BDL** | 10.1 | 1.0 |
| Chloromethane | **BDL** | 10.1 | 1.0 |
| Vinyl Chloride | **BDL** | 5.1 | 1.0 |
| Bromomethane | **BDL** | 10.1 | 1.0 |
| Chloroethane | **BDL** | 10.1 | 1.0 |
| Trichlorofluoromethane | **BDL** | 10.1 | 1.0 |
| Acrolein | **BDL** | 101.0 | 1.0 |
| Acetone | **BDL** | 50.5 | 1.0 |
| 1,1-Dichloroethene | **BDL** | 5.1 | 1.0 |
| Iodomethane | **BDL** | 5.1 | 1.0 |
| Carbon Disulfide | **BDL** | 5.1 | 1.0 |
| Methylene Chloride | **BDL** | 5.1 | 1.0 |
| Acrylonitrile | **BDL** | 5.1 | 1.0 |
| trans-1,2-Dichloroethene | **BDL** | 5.1 | 1.0 |
| 1,1-Dichloroethane | **BDL** | 5.1 | 1.0 |
| Vinyl Acetate | **BDL** | 10.1 | 1.0 |
| 2,2-Dichloropropane | **BDL** | 5.1 | 1.0 |
| cis-1,2-Dichloroethene | **BDL** | 5.1 | 1.0 |
| 2-Butanone | **BDL** | 50.5 | 1.0 |
| Bromochloromethane | **BDL** | 5.1 | 1.0 |
| Chloroform | **BDL** | 5.1 | 1.0 |
| 1,1,1-Trichloroethane | **BDL** | 5.1 | 1.0 |
| 1,1-Dichloropropene | **BDL** | 5.1 | 1.0 |
| Carbon Tetrachloride | **BDL** | 5.1 | 1.0 |
| Benzene | **BDL** | 5.1 | 1.0 |
| 1,2-Dichloroethane | **BDL** | 5.1 | 1.0 |
| Trichloroethene | **BDL** | 5.1 | 1.0 |
| 1,2-Dichloropropane | **BDL** | 5.1 | 1.0 |
| Dibromomethane | **BDL** | 5.1 | 1.0 |
| Bromodichloromethane | **BDL** | 5.1 | 1.0 |
| 2-Chloroethylvinylether | **BDL** | 10.1 | 1.0 |
| cis-1,3-Dichloropropene | **BDL** | 5.1 | 1.0 |
| 4-Methyl-2-pentanone | **BDL** | 50.5 | 1.0 |
| Toluene | **BDL** | 5.1 | 1.0 |
| trans-1,3-Dichloropropene | **BDL** | 5.1 | 1.0 |
| 1,1,2-Trichloroethane | **BDL** | 5.1 | 1.0 |
| Ethylmethacrylate | **BDL** | 5.1 | 1.0 |
| Tetrachloroethene | **BDL** | 5.1 | 1.0 |

# GeoChem Incorporated Certified Analytical Laboratory

*Site Name:*
*498 and 487*

*NC # 37745 , NC # 336, EPA ID # 155*
*Tuesday, May 18, 1999*

*GCI Project # 9905-006*

| | Conc. in ug/kg | lowest detection on sample PQL in ug/kg | Dilution Factor |
|---|---|---|---|
| 1,3-Dichloropropane | BDL | 5.1 | 1.0 |
| 2-Hexanone | BDL | 50.5 | 1.0 |
| Chlorodibromomethane | BDL | 5.1 | 1.0 |
| 1,2-Dibromoethane | BDL | 5.1 | 1.0 |
| Chlorobenzene | BDL | 5.1 | 1.0 |
| 1,1,1,2-Tetrachloroethane | BDL | 5.1 | 1.0 |
| Ethylbenzene | BDL | 5.1 | 1.0 |
| m,p-Xylene | BDL | 5.1 | 1.0 |
| o-Xylene | BDL | 5.1 | 1.0 |
| Styrene | BDL | 5.1 | 1.0 |
| Bromoform | BDL | 5.1 | 1.0 |
| Isopropylbenzene | BDL | 5.1 | 1.0 |
| Bromobenzene | BDL | 5.1 | 1.0 |
| 1,2,3-Trichloropropane | BDL | 10.1 | 1.0 |
| 1,1,2,2-Tetrachloroethane | BDL | 5.1 | 1.0 |
| n-Propylbenzene | BDL | 5.1 | 1.0 |
| 2-Chlorotoluene | BDL | 5.1 | 1.0 |
| 1,4-Dichloro-2-butene | BDL | 10.1 | 1.0 |
| 4-Chlorotoluene | BDL | 5.1 | 1.0 |
| 1,3,5-Trimethylbenzene | BDL | 5.1 | 1.0 |
| tert-Butylbenzene | BDL | 5.1 | 1.0 |
| 1,2,4-Trimethylbenzene | BDL | 5.1 | 1.0 |
| sec-Butylbenzene | BDL | 5.1 | 1.0 |
| 1,3-Dichlorobenzene | BDL | 5.1 | 1.0 |
| 1,4-Dichlorobenzene | BDL | 5.1 | 1.0 |
| 4-Isopropyltoluene | BDL | 5.1 | 1.0 |
| 1,2-Dichlorobenzene | BDL | 5.1 | 1.0 |
| 1,2-Dibromo-3-chloropropan | BDL | 5.1 | 1.0 |
| 1,2,4-Trichlorobenzene | BDL | 5.1 | 1.0 |
| Naphthalene | BDL | 5.1 | 1.0 |
| Hexachlorobutadiene | BDL | 5.1 | 1.0 |
| 1,2,3-Trichlorobenzene | BDL | 5.1 | 1.0 |

*End of **8260 soil***

**8270 BNA soil**

| | | | |
|---|---|---|---|
| n-Nitrosodimethylamine | BQL | 500.0 | 5.0 |
| Aniline | BQL | 500.0 | 5.0 |
| Bis(2-chloroethyl)ether | BQL | 500.0 | 5.0 |
| 2-Chlorophenol | BQL | 500.0 | 5.0 |
| Phenol | BQL | 500.0 | 5.0 |
| 1,3-Dichlorobenzene | BQL | 500.0 | 5.0 |
| 1,4-Dichlorobenzene | BQL | 500.0 | 5.0 |
| 1,2-Dichlorobenzene | BQL | 500.0 | 5.0 |
| Benzyl Alcohol | BQL | 1000.0 | 5.0 |
| Bis(2-chloroisopropyl)ether | BQL | 500.0 | 5.0 |

# GeoChem Incorporated Certified Analytical Laboratory

*Site Name:*
*498 and 487*

*NC # 37745 , NC # 336, EPA ID # 155*
*Tuesday, May 18, 1999*

*GCI Project # 9905-006*

| | Conc. in ug/kg | lowest detection on sample PQL in ug/kg | Dilution Factor |
|---|---|---|---|
| 2-Methylphenol (o-cresol) | BQL | 500.0 | 5.0 |
| Hexachloroethane | BQL | 500.0 | 5.0 |
| n-Nitrosodipropylamine | BQL | 500.0 | 5.0 |
| Nitrobenzene | BQL | 500.0 | 5.0 |
| 4-Methylphenol (p-cresol) | BQL | 500.0 | 5.0 |
| Isophorone | BQL | 500.0 | 5.0 |
| 2-Nitrophenol | BQL | 500.0 | 5.0 |
| 2,4-Dimethylphenol | BQL | 500.0 | 5.0 |
| Bis(2-chloroethoxy)methane | BQL | 500.0 | 5.0 |
| 2,4-Dichlorophenol | BQL | 500.0 | 5.0 |
| 1,2,4-Trichlorobenzene | BQL | 500.0 | 5.0 |
| Naphthalene | BQL | 500.0 | 5.0 |
| Benzoic acid | BQL | 2500.0 | 5.0 |
| 4-Chloroaniline | BQL | 500.0 | 5.0 |
| Hexachlorobutadiene | BQL | 500.0 | 5.0 |
| 2-Methylnaphthalene | BQL | 500.0 | 5.0 |
| 4-Chloro-3-methylphenol | BQL | 1000.0 | 5.0 |
| Hexachlorocyclopentadiene | BQL | 500.0 | 5.0 |
| 2,4,6-Trichlorophenol | BQL | 500.0 | 5.0 |
| 2,4,5-Trichlorophenol | BQL | 500.0 | 5.0 |
| 2-Chloronaphthalene | BQL | 500.0 | 5.0 |
| 2-Nitroaniline | BQL | 2500.0 | 5.0 |
| Acenaphthylene | BQL | 500.0 | 5.0 |
| Dimethylphthalate | BQL | 500.0 | 5.0 |
| 2,6-Dinitrotoluene | BQL | 500.0 | 5.0 |
| Acenaphthene | BQL | 500.0 | 5.0 |
| 3-Nitroaniline | BQL | 2500.0 | 5.0 |
| 2,4-Dinitrophenol | BQL | 500.0 | 5.0 |
| Dibenzofuran | BQL | 500.0 | 5.0 |
| 2,4-Dinitrotoluene | BQL | 500.0 | 5.0 |
| 4-Nitrophenol | BQL | 2500.0 | 5.0 |
| Fluorene | BQL | 500.0 | 5.0 |
| 4-Chlorophenyl Phenyl Ether | BQL | 500.0 | 5.0 |
| Diethylphthalate | BQL | 500.0 | 5.0 |
| 4-Nitroaniline | BQL | 2500.0 | 5.0 |
| 4,6-Dinitro-2-methylphenol | BQL | 500.0 | 5.0 |
| n-Nitrosodiphenylamine | BQL | 500.0 | 5.0 |
| 4-Bromophenyl Phenyl Ether | BQL | 500.0 | 5.0 |
| Hexachlorobenzene | BQL | 500.0 | 5.0 |
| Benzidine | BQL | 2500.0 | 5.0 |
| Pentachlorophenol | BQL | 500.0 | 5.0 |
| Phenanthrene | BQL | 500.0 | 5.0 |
| Anthracene | BQL | 500.0 | 5.0 |
| Di-n-butylphthalate | BQL | 500.0 | 5.0 |

# GeoChem Incorporated Certified Analytical Laboratory

*Site Name:*
*498 and 487*

*NC # 37745 , NC # 336, EPA ID # 155*
*Tuesday, May 18, 1999*

*GCI Project # 9905-006*

| | Conc. in ug/kg | lowest detection on sample PQL in ug/kg | Dilution Factor |
|---|---|---|---|
| Fluoranthene | **BQL** | 500.0 | 5.0 |
| Pyrene | **BQL** | 500.0 | 5.0 |
| Butyl Benzyl Phthalate | **BQL** | 1000.0 | 5.0 |
| Benzo(a)anthracene | **BQL** | 500.0 | 5.0 |
| 3,3'-Dichlorobenzidine | **BQL** | 1000.0 | 5.0 |
| Chrysene | **BQL** | 250.0 | 5.0 |
| Bis(2-ethylhexyl)phthalate | **BQL** | 500.0 | 5.0 |
| Di-n-octylphthalate | **BQL** | 500.0 | 5.0 |
| Benzo(b)fluoranthene | **BQL** | 500.0 | 5.0 |
| Benzo(k)fluoranthene | **BQL** | 500.0 | 5.0 |
| Benzo(a)pyrene | **BQL** | 500.0 | 5.0 |
| Indeno(1,2,3-cd)pyrene | **BQL** | 500.0 | 5.0 |
| Dibenz(a,h)anthracene | **BQL** | 500.0 | 5.0 |
| Benzo(g,h,i)perylene | **BQL** | 500.0 | 5.0 |

*End of **8270 BNA soil***

# GeoChem Incorporated Certified Analytical Laboratory

*Site Name:*
*498 and 487*

*NC # 37745 , NC # 336, EPA ID # 155*
*Tuesday, May 18, 1999*

*GCI Project # 9905-006*

Field ID **635B01** *Date Analyzed: 5/5/99* Dry wt % 87.2
*Lab ID 1184*

**8260 soil**

| | Conc. in ug/kg | lowest detection on sample PQL in ug/kg | Dilution Factor |
|---|---|---|---|
| MTBE | BQL | 500.0 | 100.0 |
| IPE | BQL | 500.0 | 100.0 |
| n-Butylbenzene | BQL | 500.0 | 100.0 |
| Dichlorodifluoromethane | BQL | 1000.0 | 100.0 |
| Chloromethane | BQL | 1000.0 | 100.0 |
| Vinyl Chloride | BQL | 500.0 | 100.0 |
| Bromomethane | BQL | 1000.0 | 100.0 |
| Chloroethane | BQL | 1000.0 | 100.0 |
| Trichlorofluoromethane | BQL | 1000.0 | 100.0 |
| Acrolein | BQL | 10000.0 | 100.0 |
| Acetone | BQL | 5000.0 | 100.0 |
| 1,1-Dichloroethene | BQL | 500.0 | 100.0 |
| Iodomethane | BQL | 500.0 | 100.0 |
| Carbon Disulfide | BQL | 500.0 | 100.0 |
| Methylene Chloride | BQL | 500.0 | 100.0 |
| Acrylonitrile | BQL | 500.0 | 100.0 |
| trans-1,2-Dichloroethene | BQL | 500.0 | 100.0 |
| 1,1-Dichloroethane | BQL | 500.0 | 100.0 |
| Vinyl Acetate | BQL | 1000.0 | 100.0 |
| 2,2-Dichloropropane | BQL | 500.0 | 100.0 |
| cis-1,2-Dichloroethene | BQL | 500.0 | 100.0 |
| 2-Butanone | BQL | 5000.0 | 100.0 |
| Bromochloromethane | BQL | 500.0 | 100.0 |
| Chloroform | BQL | 500.0 | 100.0 |
| 1,1,1-Trichloroethane | BQL | 500.0 | 100.0 |
| 1,1-Dichloropropene | BQL | 500.0 | 100.0 |
| Carbon Tetrachloride | BQL | 500.0 | 100.0 |
| Benzene | BQL | 500.0 | 100.0 |
| 1,2-Dichloroethane | BQL | 500.0 | 100.0 |
| Trichloroethene | BQL | 500.0 | 100.0 |
| 1,2-Dichloropropane | BQL | 500.0 | 100.0 |
| Dibromomethane | BQL | 500.0 | 100.0 |
| Bromodichloromethane | BQL | 500.0 | 100.0 |
| 2-Chloroethylvinylether | BQL | 1000.0 | 100.0 |
| cis-1,3-Dichloropropene | BQL | 500.0 | 100.0 |
| 4-Methyl-2-pentanone | BQL | 5000.0 | 100.0 |
| Toluene | BQL | 500.0 | 100.0 |
| trans-1,3-Dichloropropene | BQL | 500.0 | 100.0 |
| 1,1,2-Trichloroethane | BQL | 500.0 | 100.0 |
| Ethylmethacrylate | BQL | 500.0 | 100.0 |
| Tetrachloroethene | BQL | 500.0 | 100.0 |

# GeoChem Incorporated Certified Analytical Laboratory

*Site Name:*
*498 and 487*

*NC # 37745 , NC # 336, EPA ID # 155*
*Tuesday, May 18, 1999*

*GCI Project # 9905-006*

| | Conc. in ug/kg | lowest detection on sample PQL in ug/kg | Dilution Factor |
|---|---|---|---|
| 1,3-Dichloropropane | BQL | 500.0 | 100.0 |
| 2-Hexanone | BQL | 5000.0 | 100.0 |
| Chlorodibromomethane | BQL | 500.0 | 100.0 |
| 1,2-Dibromoethane | BQL | 500.0 | 100.0 |
| Chlorobenzene | BQL | 500.0 | 100.0 |
| 1,1,1,2-Tetrachloroethane | BQL | 500.0 | 100.0 |
| Ethylbenzene | BQL | 500.0 | 100.0 |
| m,p-Xylene | BQL | 500.0 | 100.0 |
| o-Xylene | BQL | 500.0 | 100.0 |
| Styrene | BQL | 500.0 | 100.0 |
| Bromoform | BQL | 500.0 | 100.0 |
| Isopropylbenzene | BQL | 500.0 | 100.0 |
| Bromobenzene | BQL | 500.0 | 100.0 |
| 1,2,3-Trichloropropane | BQL | 1000.0 | 100.0 |
| 1,1,2,2-Tetrachloroethane | BQL | 500.0 | 100.0 |
| n-Propylbenzene | BQL | 500.0 | 100.0 |
| 2-Chlorotoluene | BQL | 500.0 | 100.0 |
| 1,4-Dichloro-2-butene | BQL | 1000.0 | 100.0 |
| 4-Chlorotoluene | BQL | 500.0 | 100.0 |
| 1,3,5-Trimethylbenzene | BQL | 500.0 | 100.0 |
| tert-Butylbenzene | BQL | 500.0 | 100.0 |
| 1,2,4-Trimethylbenzene | BQL | 500.0 | 100.0 |
| sec-Butylbenzene | BQL | 500.0 | 100.0 |
| 1,3-Dichlorobenzene | BQL | 500.0 | 100.0 |
| 1,4-Dichlorobenzene | BQL | 500.0 | 100.0 |
| 4-Isopropyltoluene | BQL | 500.0 | 100.0 |
| 1,2-Dichlorobenzene | BQL | 500.0 | 100.0 |
| 1,2-Dibromo-3-chloropropan | BQL | 500.0 | 100.0 |
| 1,2,4-Trichlorobenzene | BQL | 500.0 | 100.0 |
| Naphthalene | BQL | 500.0 | 100.0 |
| Hexachlorobutadiene | BQL | 500.0 | 100.0 |
| 1,2,3-Trichlorobenzene | BQL | 500.0 | 100.0 |

*End of **8260 soil***

**8270 BNA soil**

| | | | |
|---|---|---|---|
| n-Nitrosodimethylamine | BQL | 1000.0 | 10.0 |
| Aniline | BQL | 1000.0 | 10.0 |
| Bis(2-chloroethyl)ether | BQL | 1000.0 | 10.0 |
| 2-Chlorophenol | BQL | 1000.0 | 10.0 |
| Phenol | BQL | 1000.0 | 10.0 |
| 1,3-Dichlorobenzene | BQL | 1000.0 | 10.0 |
| 1,4-Dichlorobenzene | BQL | 1000.0 | 10.0 |
| 1,2-Dichlorobenzene | BQL | 1000.0 | 10.0 |
| Benzyl Alcohol | BQL | 2000.0 | 10.0 |
| Bis(2-chloroisopropyl)ether | BQL | 1000.0 | 10.0 |

# GeoChem Incorporated Certified Analytical Laboratory

*Site Name:*
*498 and 487*

*NC # 37745 , NC # 336, EPA ID # 155*
*Tuesday, May 18, 1999*

*GCI Project # 9905-006*

| | Conc. in ug/kg | lowest detection on sample PQL in ug/kg | Dilution Factor |
|---|---|---|---|
| 2-Methylphenol (o-cresol) | BQL | 1000.0 | 10.0 |
| Hexachloroethane | BQL | 1000.0 | 10.0 |
| n-Nitrosodipropylamine | BQL | 1000.0 | 10.0 |
| Nitrobenzene | BQL | 1000.0 | 10.0 |
| 4-Methylphenol (p-cresol) | BQL | 1000.0 | 10.0 |
| Isophorone | BQL | 1000.0 | 10.0 |
| 2-Nitrophenol | BQL | 1000.0 | 10.0 |
| 2,4-Dimethylphenol | BQL | 1000.0 | 10.0 |
| Bis(2-chloroethoxy)methane | BQL | 1000.0 | 10.0 |
| 2,4-Dichlorophenol | BQL | 1000.0 | 10.0 |
| 1,2,4-Trichlorobenzene | BQL | 1000.0 | 10.0 |
| Naphthalene | BQL | 1000.0 | 10.0 |
| Benzoic acid | BQL | 5000.0 | 10.0 |
| 4-Chloroaniline | BQL | 1000.0 | 10.0 |
| Hexachlorobutadiene | BQL | 1000.0 | 10.0 |
| 2-Methylnaphthalene | BQL | 1000.0 | 10.0 |
| 4-Chloro-3-methylphenol | BQL | 2000.0 | 10.0 |
| Hexachlorocyclopentadiene | BQL | 1000.0 | 10.0 |
| 2,4,6-Trichlorophenol | BQL | 1000.0 | 10.0 |
| 2,4,5-Trichlorophenol | BQL | 1000.0 | 10.0 |
| 2-Chloronaphthalene | BQL | 1000.0 | 10.0 |
| 2-Nitroaniline | BQL | 5000.0 | 10.0 |
| Acenaphthylene | BQL | 1000.0 | 10.0 |
| Dimethylphthalate | BQL | 1000.0 | 10.0 |
| 2,6-Dinitrotoluene | BQL | 1000.0 | 10.0 |
| Acenaphthene | BQL | 1000.0 | 10.0 |
| 3-Nitroaniline | BQL | 5000.0 | 10.0 |
| 2,4-Dinitrophenol | BQL | 1000.0 | 10.0 |
| Dibenzofuran | BQL | 1000.0 | 10.0 |
| 2,4-Dinitrotoluene | BQL | 1000.0 | 10.0 |
| 4-Nitrophenol | BQL | 5000.0 | 10.0 |
| Fluorene | BQL | 1000.0 | 10.0 |
| 4-Chlorophenyl Phenyl Ether | BQL | 1000.0 | 10.0 |
| Diethylphthalate | BQL | 1000.0 | 10.0 |
| 4-Nitroaniline | BQL | 5000.0 | 10.0 |
| 4,6-Dinitro-2-methylphenol | BQL | 1000.0 | 10.0 |
| n-Nitrosodiphenylamine | BQL | 1000.0 | 10.0 |
| 4-Bromophenyl Phenyl Ether | BQL | 1000.0 | 10.0 |
| Hexachlorobenzene | BQL | 1000.0 | 10.0 |
| Benzidine | BQL | 5000.0 | 10.0 |
| Pentachlorophenol | BQL | 1000.0 | 10.0 |
| Phenanthrene | BQL | 1000.0 | 10.0 |
| Anthracene | BQL | 1000.0 | 10.0 |
| Di-n-butylphthalate | BQL | 1000.0 | 10.0 |

# GeoChem Incorporated Certified Analytical Laboratory

*Site Name:*
*498 and 487*

*NC # 37745 , NC # 336, EPA ID # 155*
*Tuesday, May 18, 1999*

*GCI Project # 9905-006*

| | Conc. in ug/kg | lowest detection on sample PQL in ug/kg | Dilution Factor |
|---|---|---|---|
| Fluoranthene | **BQL** | 1000.0 | 10.0 |
| Pyrene | **BQL** | 1000.0 | 10.0 |
| Butyl Benzyl Phthalate | **BQL** | 2000.0 | 10.0 |
| Benzo(a)anthracene | **BQL** | 1000.0 | 10.0 |
| 3,3'-Dichlorobenzidine | **BQL** | 2000.0 | 10.0 |
| Chrysene | **BQL** | 500.0 | 10.0 |
| Bis(2-ethylhexyl)phthalate | **BQL** | 1000.0 | 10.0 |
| Di-n-octylphthalate | **BQL** | 1000.0 | 10.0 |
| Benzo(b)fluoranthene | **BQL** | 1000.0 | 10.0 |
| Benzo(k)fluoranthene | **BQL** | 1000.0 | 10.0 |
| Benzo(a)pyrene | **BQL** | 1000.0 | 10.0 |
| Indeno(1,2,3-cd)pyrene | **BQL** | 1000.0 | 10.0 |
| Dibenz(a,h)anthracene | **BQL** | 1000.0 | 10.0 |
| Benzo(g,h,i)perylene | **BQL** | 1000.0 | 10.0 |

*End of **8270 BNA soil***

# GeoChem Incorporated Certified Analytical Laboratory

*Site Name:*
*498 and 487*

*NC # 37745 , NC # 336, EPA ID # 155*
*Tuesday, May 18, 1999*

*GCI Project # 9905-006*

Field ID **635B02** *Date Analyzed: 5/5/99* Dry wt % 88.9
*Lab ID* ***1185***
**8260 soil**

| | Conc. in ug/kg | *lowest detection on sample* PQL in ug/kg | Dilution Factor |
|---|---|---|---|
| MTBE | **BDL** | 5.0 | 1.0 |
| IPE | **BDL** | 5.0 | 1.0 |
| n-Butylbenzene | **BDL** | 5.0 | 1.0 |
| Dichlorodifluoromethane | **BDL** | 10.0 | 1.0 |
| Chloromethane | **BDL** | 10.0 | 1.0 |
| Vinyl Chloride | **BDL** | 5.0 | 1.0 |
| Bromomethane | **BDL** | 10.0 | 1.0 |
| Chloroethane | **BDL** | 10.0 | 1.0 |
| Trichlorofluoromethane | **BDL** | 10.0 | 1.0 |
| Acrolein | **BDL** | 100.2 | 1.0 |
| Acetone | **BDL** | 50.1 | 1.0 |
| 1,1-Dichloroethene | **BDL** | 5.0 | 1.0 |
| Iodomethane | **BDL** | 5.0 | 1.0 |
| Carbon Disulfide | **BDL** | 5.0 | 1.0 |
| Methylene Chloride | **BDL** | 5.0 | 1.0 |
| Acrylonitrile | **BDL** | 5.0 | 1.0 |
| trans-1,2-Dichloroethene | **BDL** | 5.0 | 1.0 |
| 1,1-Dichloroethane | **BDL** | 5.0 | 1.0 |
| Vinyl Acetate | **BDL** | 10.0 | 1.0 |
| 2,2-Dichloropropane | **BDL** | 5.0 | 1.0 |
| cis-1,2-Dichloroethene | **BDL** | 5.0 | 1.0 |
| 2-Butanone | **BDL** | 50.1 | 1.0 |
| Bromochloromethane | **BDL** | 5.0 | 1.0 |
| Chloroform | **BDL** | 5.0 | 1.0 |
| 1,1,1-Trichloroethane | **BDL** | 5.0 | 1.0 |
| 1,1-Dichloropropene | **BDL** | 5.0 | 1.0 |
| Carbon Tetrachloride | **BDL** | 5.0 | 1.0 |
| Benzene | **BDL** | 5.0 | 1.0 |
| 1,2-Dichloroethane | **BDL** | 5.0 | 1.0 |
| Trichloroethene | **BDL** | 5.0 | 1.0 |
| 1,2-Dichloropropane | **BDL** | 5.0 | 1.0 |
| Dibromomethane | **BDL** | 5.0 | 1.0 |
| Bromodichloromethane | **BDL** | 5.0 | 1.0 |
| 2-Chloroethylvinylether | **BDL** | 10.0 | 1.0 |
| cis-1,3-Dichloropropene | **BDL** | 5.0 | 1.0 |
| 4-Methyl-2-pentanone | **BDL** | 50.1 | 1.0 |
| Toluene | **BDL** | 5.0 | 1.0 |
| trans-1,3-Dichloropropene | **BDL** | 5.0 | 1.0 |
| 1,1,2-Trichloroethane | **BDL** | 5.0 | 1.0 |
| Ethylmethacrylate | **BDL** | 5.0 | 1.0 |
| Tetrachloroethene | **BDL** | 5.0 | 1.0 |

# GeoChem Incorporated Certified Analytical Laboratory

*Site Name:*
*498 and 487*

*NC # 37745 , NC # 336, EPA ID # 155*
*Tuesday, May 18, 1999*

*GCI Project # 9905-006*

| | Conc. in ug/kg | lowest detection on sample PQL in ug/kg | Dilution Factor |
|---|---|---|---|
| 1,3-Dichloropropane | BDL | 5.0 | 1.0 |
| 2-Hexanone | BDL | 50.1 | 1.0 |
| Chlorodibromomethane | BDL | 5.0 | 1.0 |
| 1,2-Dibromoethane | BDL | 5.0 | 1.0 |
| Chlorobenzene | BDL | 5.0 | 1.0 |
| 1,1,1,2-Tetrachloroethane | BDL | 5.0 | 1.0 |
| Ethylbenzene | BDL | 5.0 | 1.0 |
| m,p-Xylene | BDL | 5.0 | 1.0 |
| o-Xylene | BDL | 5.0 | 1.0 |
| Styrene | BDL | 5.0 | 1.0 |
| Bromoform | BDL | 5.0 | 1.0 |
| Isopropylbenzene | BDL | 5.0 | 1.0 |
| Bromobenzene | BDL | 5.0 | 1.0 |
| 1,2,3-Trichloropropane | BDL | 10.0 | 1.0 |
| 1,1,2,2-Tetrachloroethane | BDL | 5.0 | 1.0 |
| n-Propylbenzene | BDL | 5.0 | 1.0 |
| 2-Chlorotoluene | BDL | 5.0 | 1.0 |
| 1,4-Dichloro-2-butene | BDL | 10.0 | 1.0 |
| 4-Chlorotoluene | BDL | 5.0 | 1.0 |
| 1,3,5-Trimethylbenzene | BDL | 5.0 | 1.0 |
| tert-Butylbenzene | BDL | 5.0 | 1.0 |
| 1,2,4-Trimethylbenzene | BDL | 5.0 | 1.0 |
| sec-Butylbenzene | BDL | 5.0 | 1.0 |
| 1,3-Dichlorobenzene | BDL | 5.0 | 1.0 |
| 1,4-Dichlorobenzene | BDL | 5.0 | 1.0 |
| 4-Isopropyltoluene | BDL | 5.0 | 1.0 |
| 1,2-Dichlorobenzene | BDL | 5.0 | 1.0 |
| 1,2-Dibromo-3-chloropropan | BDL | 5.0 | 1.0 |
| 1,2,4-Trichlorobenzene | BDL | 5.0 | 1.0 |
| Naphthalene | BDL | 5.0 | 1.0 |
| Hexachlorobutadiene | BDL | 5.0 | 1.0 |
| 1,2,3-Trichlorobenzene | BDL | 5.0 | 1.0 |

*End of **8260 soil***

**8270 BNA soil**

| | | | |
|---|---|---|---|
| n-Nitrosodimethylamine | BQL | 500.0 | 5.0 |
| Aniline | BQL | 500.0 | 5.0 |
| Bis(2-chloroethyl)ether | BQL | 500.0 | 5.0 |
| 2-Chlorophenol | BQL | 500.0 | 5.0 |
| Phenol | BQL | 500.0 | 5.0 |
| 1,3-Dichlorobenzene | BQL | 500.0 | 5.0 |
| 1,4-Dichlorobenzene | BQL | 500.0 | 5.0 |
| 1,2-Dichlorobenzene | BQL | 500.0 | 5.0 |
| Benzyl Alcohol | BQL | 1000.0 | 5.0 |
| Bis(2-chloroisopropyl)ether | BQL | 500.0 | 5.0 |

# GeoChem Incorporated Certified Analytical Laboratory

*Site Name:*
*498 and 487*

*NC # 37745 , NC # 336, EPA ID # 155*
*Tuesday, May 18, 1999*

*GCI Project # 9905-006*

| | Conc. in ug/kg | lowest detection on sample PQL in ug/kg | Dilution Factor |
|---|---|---|---|
| 2-Methylphenol (o-cresol) | BQL | 500.0 | 5.0 |
| Hexachloroethane | BQL | 500.0 | 5.0 |
| n-Nitrosodipropylamine | BQL | 500.0 | 5.0 |
| Nitrobenzene | BQL | 500.0 | 5.0 |
| 4-Methylphenol (p-cresol) | BQL | 500.0 | 5.0 |
| Isophorone | BQL | 500.0 | 5.0 |
| 2-Nitrophenol | BQL | 500.0 | 5.0 |
| 2,4-Dimethylphenol | BQL | 500.0 | 5.0 |
| Bis(2-chloroethoxy)methane | BQL | 500.0 | 5.0 |
| 2,4-Dichlorophenol | BQL | 500.0 | 5.0 |
| 1,2,4-Trichlorobenzene | BQL | 500.0 | 5.0 |
| Naphthalene | BQL | 500.0 | 5.0 |
| Benzoic acid | BQL | 2500.0 | 5.0 |
| 4-Chloroaniline | BQL | 500.0 | 5.0 |
| Hexachlorobutadiene | BQL | 500.0 | 5.0 |
| 2-Methylnaphthalene | BQL | 500.0 | 5.0 |
| 4-Chloro-3-methylphenol | BQL | 1000.0 | 5.0 |
| Hexachlorocyclopentadiene | BQL | 500.0 | 5.0 |
| 2,4,6-Trichlorophenol | BQL | 500.0 | 5.0 |
| 2,4,5-Trichlorophenol | BQL | 500.0 | 5.0 |
| 2-Chloronaphthalene | BQL | 500.0 | 5.0 |
| 2-Nitroaniline | BQL | 2500.0 | 5.0 |
| Acenaphthylene | BQL | 500.0 | 5.0 |
| Dimethylphthalate | BQL | 500.0 | 5.0 |
| 2,6-Dinitrotoluene | BQL | 500.0 | 5.0 |
| Acenaphthene | BQL | 500.0 | 5.0 |
| 3-Nitroaniline | BQL | 2500.0 | 5.0 |
| 2,4-Dinitrophenol | BQL | 500.0 | 5.0 |
| Dibenzofuran | BQL | 500.0 | 5.0 |
| 2,4-Dinitrotoluene | BQL | 500.0 | 5.0 |
| 4-Nitrophenol | BQL | 2500.0 | 5.0 |
| Fluorene | BQL | 500.0 | 5.0 |
| 4-Chlorophenyl Phenyl Ether | BQL | 500.0 | 5.0 |
| Diethylphthalate | BQL | 500.0 | 5.0 |
| 4-Nitroaniline | BQL | 2500.0 | 5.0 |
| 4,6-Dinitro-2-methylphenol | BQL | 500.0 | 5.0 |
| n-Nitrosodiphenylamine | BQL | 500.0 | 5.0 |
| 4-Bromophenyl Phenyl Ether | BQL | 500.0 | 5.0 |
| Hexachlorobenzene | BQL | 500.0 | 5.0 |
| Benzidine | BQL | 2500.0 | 5.0 |
| Pentachlorophenol | BQL | 500.0 | 5.0 |
| Phenanthrene | BQL | 500.0 | 5.0 |
| Anthracene | BQL | 500.0 | 5.0 |
| Di-n-butylphthalate | BQL | 500.0 | 5.0 |

# GeoChem Incorporated Certified Analytical Laboratory

*Site Name:*
*498 and 487*

*NC # 37745 , NC # 336, EPA ID # 155*
*Tuesday, May 18, 1999*

*GCI Project # 9905-006*

| | Conc. in ug/kg | lowest detection on sample PQL in ug/kg | Dilution Factor |
|---|---|---|---|
| Fluoranthene | **BQL** | 500.0 | 5.0 |
| Pyrene | **BQL** | 500.0 | 5.0 |
| Butyl Benzyl Phthalate | **BQL** | 1000.0 | 5.0 |
| Benzo(a)anthracene | **BQL** | 500.0 | 5.0 |
| 3,3'-Dichlorobenzidine | **BQL** | 1000.0 | 5.0 |
| Chrysene | **BQL** | 250.0 | 5.0 |
| Bis(2-ethylhexyl)phthalate | **BQL** | 500.0 | 5.0 |
| Di-n-octylphthalate | **BQL** | 500.0 | 5.0 |
| Benzo(b)fluoranthene | **BQL** | 500.0 | 5.0 |
| Benzo(k)fluoranthene | **BQL** | 500.0 | 5.0 |
| Benzo(a)pyrene | **BQL** | 500.0 | 5.0 |
| Indeno(1,2,3-cd)pyrene | **BQL** | 500.0 | 5.0 |
| Dibenz(a,h)anthracene | **BQL** | 500.0 | 5.0 |
| Benzo(g,h,i)perylene | **BQL** | 500.0 | 5.0 |

*End of **8270 BNA soil***

# GeoChem Incorporated Certified Analytical Laboratory

*Site Name:*
*498 and 487*

*NC # 37745 , NC # 336, EPA ID # 155*
*Tuesday, May 18, 1999*

*GCI Project # 9905-006*

Field ID **635B03** *Date Analyzed: 5/5/99* Dry wt % 89.7

*Lab ID* ***1186***

**8260 soil**

| | Conc. in ug/kg | lowest detection on sample PQL in ug/kg | Dilution Factor |
|---|---|---|---|
| MTBE | **BDL** | 5.0 | 1.0 |
| IPE | **BDL** | 5.0 | 1.0 |
| n-Butylbenzene | **BDL** | 5.0 | 1.0 |
| Dichlorodifluoromethane | **BDL** | 10.0 | 1.0 |
| Chloromethane | **BDL** | 10.0 | 1.0 |
| Vinyl Chloride | **BDL** | 5.0 | 1.0 |
| Bromomethane | **BDL** | 10.0 | 1.0 |
| Chloroethane | **BDL** | 10.0 | 1.0 |
| Trichlorofluoromethane | **BDL** | 10.0 | 1.0 |
| Acrolein | **BDL** | 99.6 | 1.0 |
| Acetone | **BDL** | 49.8 | 1.0 |
| 1,1-Dichloroethene | **BDL** | 5.0 | 1.0 |
| Iodomethane | **BDL** | 5.0 | 1.0 |
| Carbon Disulfide | **BDL** | 5.0 | 1.0 |
| Methylene Chloride | **BDL** | 5.0 | 1.0 |
| Acrylonitrile | **BDL** | 5.0 | 1.0 |
| trans-1,2-Dichloroethene | **BDL** | 5.0 | 1.0 |
| 1,1-Dichloroethane | **BDL** | 5.0 | 1.0 |
| Vinyl Acetate | **BDL** | 10.0 | 1.0 |
| 2,2-Dichloropropane | **BDL** | 5.0 | 1.0 |
| cis-1,2-Dichloroethene | **BDL** | 5.0 | 1.0 |
| 2-Butanone | **BDL** | 49.8 | 1.0 |
| Bromochloromethane | **BDL** | 5.0 | 1.0 |
| Chloroform | **BDL** | 5.0 | 1.0 |
| 1,1,1-Trichloroethane | **BDL** | 5.0 | 1.0 |
| 1,1-Dichloropropene | **BDL** | 5.0 | 1.0 |
| Carbon Tetrachloride | **BDL** | 5.0 | 1.0 |
| Benzene | **BDL** | 5.0 | 1.0 |
| 1,2-Dichloroethane | **BDL** | 5.0 | 1.0 |
| Trichloroethene | **BDL** | 5.0 | 1.0 |
| 1,2-Dichloropropane | **BDL** | 5.0 | 1.0 |
| Dibromomethane | **BDL** | 5.0 | 1.0 |
| Bromodichloromethane | **BDL** | 5.0 | 1.0 |
| 2-Chloroethylvinylether | **BDL** | 10.0 | 1.0 |
| cis-1,3-Dichloropropene | **BDL** | 5.0 | 1.0 |
| 4-Methyl-2-pentanone | **BDL** | 49.8 | 1.0 |
| Toluene | **BDL** | 5.0 | 1.0 |
| trans-1,3-Dichloropropene | **BDL** | 5.0 | 1.0 |
| 1,1,2-Trichloroethane | **BDL** | 5.0 | 1.0 |
| Ethylmethacrylate | **BDL** | 5.0 | 1.0 |
| Tetrachloroethene | **BDL** | 5.0 | 1.0 |

# GeoChem Incorporated Certified Analytical Laboratory

*Site Name:*
*498 and 487*

*NC # 37745 , NC # 336, EPA ID # 155*
*Tuesday, May 18, 1999*

*GCI Project # 9905-006*

| | Conc. in ug/kg | lowest detection on sample PQL in ug/kg | Dilution Factor |
|---|---|---|---|
| 1,3-Dichloropropane | **BDL** | 5.0 | 1.0 |
| 2-Hexanone | **BDL** | 49.8 | 1.0 |
| Chlorodibromomethane | **BDL** | 5.0 | 1.0 |
| 1,2-Dibromoethane | **BDL** | 5.0 | 1.0 |
| Chlorobenzene | **BDL** | 5.0 | 1.0 |
| 1,1,1,2-Tetrachloroethane | **BDL** | 5.0 | 1.0 |
| Ethylbenzene | **BDL** | 5.0 | 1.0 |
| m,p-Xylene | **BDL** | 5.0 | 1.0 |
| o-Xylene | **BDL** | 5.0 | 1.0 |
| Styrene | **BDL** | 5.0 | 1.0 |
| Bromoform | **BDL** | 5.0 | 1.0 |
| Isopropylbenzene | **BDL** | 5.0 | 1.0 |
| Bromobenzene | **BDL** | 5.0 | 1.0 |
| 1,2,3-Trichloropropane | **BDL** | 10.0 | 1.0 |
| 1,1,2,2-Tetrachloroethane | **BDL** | 5.0 | 1.0 |
| n-Propylbenzene | **BDL** | 5.0 | 1.0 |
| 2-Chlorotoluene | **BDL** | 5.0 | 1.0 |
| 1,4-Dichloro-2-butene | **BDL** | 10.0 | 1.0 |
| 4-Chlorotoluene | **BDL** | 5.0 | 1.0 |
| 1,3,5-Trimethylbenzene | **BDL** | 5.0 | 1.0 |
| tert-Butylbenzene | **BDL** | 5.0 | 1.0 |
| 1,2,4-Trimethylbenzene | **BDL** | 5.0 | 1.0 |
| sec-Butylbenzene | **BDL** | 5.0 | 1.0 |
| 1,3-Dichlorobenzene | **BDL** | 5.0 | 1.0 |
| 1,4-Dichlorobenzene | **BDL** | 5.0 | 1.0 |
| 4-Isopropyltoluene | **BDL** | 5.0 | 1.0 |
| 1,2-Dichlorobenzene | **BDL** | 5.0 | 1.0 |
| 1,2-Dibromo-3-chloropropan | **BDL** | 5.0 | 1.0 |
| 1,2,4-Trichlorobenzene | **BDL** | 5.0 | 1.0 |
| Naphthalene | **BDL** | 5.0 | 1.0 |
| Hexachlorobutadiene | **BDL** | 5.0 | 1.0 |
| 1,2,3-Trichlorobenzene | **BDL** | 5.0 | 1.0 |
| | *End of* ***8260 soil*** | | |
| **8270 BNA soil** | | | |
| n-Nitrosodimethylamine | **BQL** | 500.0 | 5.0 |
| Aniline | **BQL** | 500.0 | 5.0 |
| Bis(2-chloroethyl)ether | **BQL** | 500.0 | 5.0 |
| 2-Chlorophenol | **BQL** | 500.0 | 5.0 |
| Phenol | **BQL** | 500.0 | 5.0 |
| 1,3-Dichlorobenzene | **BQL** | 500.0 | 5.0 |
| 1,4-Dichlorobenzene | **BQL** | 500.0 | 5.0 |
| 1,2-Dichlorobenzene | **BQL** | 500.0 | 5.0 |
| Benzyl Alcohol | **BQL** | 1000.0 | 5.0 |
| Bis(2-chloroisopropyl)ether | **BQL** | 500.0 | 5.0 |

# GeoChem Incorporated Certified Analytical Laboratory

*Site Name:*
*498 and 487*

*NC # 37745 , NC # 336, EPA ID # 155*
*Tuesday, May 18, 1999*

*GCI Project # 9905-006*

| | Conc. in ug/kg | lowest detection on sample PQL in ug/kg | Dilution Factor |
|---|---|---|---|
| 2-Methylphenol (o-cresol) | BQL | 500.0 | 5.0 |
| Hexachloroethane | BQL | 500.0 | 5.0 |
| n-Nitrosodipropylamine | BQL | 500.0 | 5.0 |
| Nitrobenzene | BQL | 500.0 | 5.0 |
| 4-Methylphenol (p-cresol) | BQL | 500.0 | 5.0 |
| Isophorone | BQL | 500.0 | 5.0 |
| 2-Nitrophenol | BQL | 500.0 | 5.0 |
| 2,4-Dimethylphenol | BQL | 500.0 | 5.0 |
| Bis(2-chloroethoxy)methane | BQL | 500.0 | 5.0 |
| 2,4-Dichlorophenol | BQL | 500.0 | 5.0 |
| 1,2,4-Trichlorobenzene | BQL | 500.0 | 5.0 |
| Naphthalene | BQL | 500.0 | 5.0 |
| Benzoic acid | BQL | 2500.0 | 5.0 |
| 4-Chloroaniline | BQL | 500.0 | 5.0 |
| Hexachlorobutadiene | BQL | 500.0 | 5.0 |
| 2-Methylnaphthalene | BQL | 500.0 | 5.0 |
| 4-Chloro-3-methylphenol | BQL | 1000.0 | 5.0 |
| Hexachlorocyclopentadiene | BQL | 500.0 | 5.0 |
| 2,4,6-Trichlorophenol | BQL | 500.0 | 5.0 |
| 2,4,5-Trichlorophenol | BQL | 500.0 | 5.0 |
| 2-Chloronaphthalene | BQL | 500.0 | 5.0 |
| 2-Nitroaniline | BQL | 2500.0 | 5.0 |
| Acenaphthylene | BQL | 500.0 | 5.0 |
| Dimethylphthalate | BQL | 500.0 | 5.0 |
| 2,6-Dinitrotoluene | BQL | 500.0 | 5.0 |
| Acenaphthene | BQL | 500.0 | 5.0 |
| 3-Nitroaniline | BQL | 2500.0 | 5.0 |
| 2,4-Dinitrophenol | BQL | 500.0 | 5.0 |
| Dibenzofuran | BQL | 500.0 | 5.0 |
| 2,4-Dinitrotoluene | BQL | 500.0 | 5.0 |
| 4-Nitrophenol | BQL | 2500.0 | 5.0 |
| Fluorene | BQL | 500.0 | 5.0 |
| 4-Chlorophenyl Phenyl Ether | BQL | 500.0 | 5.0 |
| Diethylphthalate | BQL | 500.0 | 5.0 |
| 4-Nitroaniline | BQL | 2500.0 | 5.0 |
| 4,6-Dinitro-2-methylphenol | BQL | 500.0 | 5.0 |
| n-Nitrosodiphenylamine | BQL | 500.0 | 5.0 |
| 4-Bromophenyl Phenyl Ether | BQL | 500.0 | 5.0 |
| Hexachlorobenzene | BQL | 500.0 | 5.0 |
| Benzidine | BQL | 2500.0 | 5.0 |
| Pentachlorophenol | BQL | 500.0 | 5.0 |
| Phenanthrene | BQL | 500.0 | 5.0 |
| Anthracene | BQL | 500.0 | 5.0 |
| Di-n-butylphthalate | BQL | 500.0 | 5.0 |

# GeoChem Incorporated Certified Analytical Laboratory

*Site Name:*
*498 and 487*

*NC # 37745 , NC # 336, EPA ID # 155*
*Tuesday, May 18, 1999*

*GCI Project # 9905-006*

| | Conc. in ug/kg | lowest detection on sample PQL in ug/kg | Dilution Factor |
|---|---|---|---|
| Fluoranthene | **BQL** | 500.0 | 5.0 |
| Pyrene | **BQL** | 500.0 | 5.0 |
| Butyl Benzyl Phthalate | **BQL** | 1000.0 | 5.0 |
| Benzo(a)anthracene | **BQL** | 500.0 | 5.0 |
| 3,3'-Dichlorobenzidine | **BQL** | 1000.0 | 5.0 |
| Chrysene | **BQL** | 250.0 | 5.0 |
| Bis(2-ethylhexyl)phthalate | **BQL** | 500.0 | 5.0 |
| Di-n-octylphthalate | **BQL** | 500.0 | 5.0 |
| Benzo(b)fluoranthene | **BQL** | 500.0 | 5.0 |
| Benzo(k)fluoranthene | **BQL** | 500.0 | 5.0 |
| Benzo(a)pyrene | **BQL** | 500.0 | 5.0 |
| Indeno(1,2,3-cd)pyrene | **BQL** | 500.0 | 5.0 |
| Dibenz(a,h)anthracene | **BQL** | 500.0 | 5.0 |
| Benzo(g,h,i)perylene | **BQL** | 500.0 | 5.0 |

*End of **8270 BNA soil***

# GeoChem Incorporated Certified Analytical Laboratory

*NC # 37745 , NC # 336, EPA ID # 155*

*Tuesday, May 18, 1999*

*GCI Project* *9905-006*
*Site Name:*
*498 and 487*

| | | Conc. in mg/kg | PQL in mg/kg | Dilution Factor |
|---|---|---|---|---|
| Field ID **735B10** | *Lab ID 1181* | | | |
| *Date Analyzed: 5/12/99* | *Dry Wt %: 0.83* | | | |
| | ***Analysis:*** | **EPH soil** | | |
| | **C9-C18 Aliphatics** | **BDL** | 12.051 | 1.0 |
| | **C19-C36 Aliphatics** | **BDL** | 12.051 | 1.0 |
| | **C11-C22 Aromatics** | **BDL** | 12.051 | 1.0 |
| Field ID **735B09** | *Lab ID 1182* | | | |
| *Date Analyzed: 5/12/99* | *Dry Wt %: 0.86* | | | |
| | ***Analysis:*** | **EPH soil** | | |
| | **C9-C18 Aliphatics** | **BDL** | 11.684 | 1.0 |
| | **C19-C36 Aliphatics** | **62.1** | 11.684 | 1.0 |
| | **C11-C22 Aromatics** | **12.3** | 11.684 | 1.0 |
| Field ID **735B11** | *Lab ID 1183* | | | |
| *Date Analyzed: 5/12/99* | *Dry Wt %: 0.87* | | | |
| | ***Analysis:*** | **EPH soil** | | |
| | **C9-C18 Aliphatics** | **BDL** | 11.516 | 1.0 |
| | **C19-C36 Aliphatics** | **49.9** | 11.516 | 1.0 |
| | **C11-C22 Aromatics** | **17.4** | 11.516 | 1.0 |
| Field ID **635B01** | *Lab ID 1184* | | | |
| *Date Analyzed: 5/12/99* | *Dry Wt %: 0.87* | | | |
| | ***Analysis:*** | **EPH soil** | | |
| | **C9-C18 Aliphatics** | **1,053.5** | 11.467 | 1.0 |
| | **C19-C36 Aliphatics** | **451.6** | 11.467 | 1.0 |
| | **C11-C22 Aromatics** | **443.9** | 11.467 | 1.0 |
| Field ID **635B02** | *Lab ID 1185* | | | |
| *Date Analyzed: 5/12/99* | *Dry Wt %: 0.89* | | | |
| | ***Analysis:*** | **EPH soil** | | |
| | **C9-C18 Aliphatics** | **BDL** | 11.247 | 1.0 |
| | **C19-C36 Aliphatics** | **BDL** | 11.247 | 1.0 |
| | **C11-C22 Aromatics** | **BDL** | 11.247 | 1.0 |
| Field ID **635B03** | *Lab ID 1186* | | | |
| *Date Analyzed: 5/12/99* | *Dry Wt %: 0.9* | | | |
| | ***Analysis:*** | **EPH soil** | | |
| | **C9-C18 Aliphatics** | **BDL** | 11.15 | 1.0 |
| | **C19-C36 Aliphatics** | **BDL** | 11.15 | 1.0 |
| | **C11-C22 Aromatics** | **BDL** | 11.15 | 1.0 |

# GeoChem Incorporated Certified Analytical Laboratory

*NC # 37745 , NC # 336, EPA ID # 155*

*GCI Project 9905-006* *Tuesday, May 18, 1999*

*Site Name:*

*498 and 487*

| | | Conc. in mg/kg | PQL in mg/kg | Dilution Factor |
|---|---|---|---|---|
| Field ID **735B10** | *Lab ID 1181* | | | |
| *Date Analyzed: 5/6/99* | *Dry Wt %: 0.83* | | | |
| | **VPH soil** | | | |
| | **C5-C8 Aliphatics** | **BQL** | 12.051 | 1.0 |
| | **C9-C12 Aliphatics** | **BQL** | 12.051 | 1.0 |
| | **C9-C10 Aromatics** | **BQL** | 12.051 | 1.0 |
| Field ID **735B09** | *Lab ID 1182* | | | |
| *Date Analyzed: 5/6/99* | *Dry Wt %: 0.86* | | | |
| | **VPH soil** | | | |
| | **C5-C8 Aliphatics** | **BQL** | 11.684 | 1.0 |
| | **C9-C12 Aliphatics** | **BQL** | 11.684 | 1.0 |
| | **C9-C10 Aromatics** | **BQL** | 11.684 | 1.0 |
| Field ID **735B11** | *Lab ID 1183* | | | |
| *Date Analyzed: 5/6/99* | *Dry Wt %: 0.87* | | | |
| | **VPH soil** | | | |
| | **C5-C8 Aliphatics** | **BQL** | 11.516 | 1.0 |
| | **C9-C12 Aliphatics** | **BQL** | 11.516 | 1.0 |
| | **C9-C10 Aromatics** | **BQL** | 11.516 | 1.0 |
| Field ID **635B01** | *Lab ID 1184* | | | |
| *Date Analyzed: 5/6/99* | *Dry Wt %: 0.87* | | | |
| | **VPH soil** | | | |
| | **C5-C8 Aliphatics** | **BQL** | 11.467 | 1.0 |
| | **C9-C12 Aliphatics** | **BQL** | 11.467 | 1.0 |
| | **C9-C10 Aromatics** | **BQL** | 11.467 | 1.0 |
| Field ID **635B02** | *Lab ID 1185* | | | |
| *Date Analyzed: 5/6/99* | *Dry Wt %: 0.89* | | | |
| | **VPH soil** | | | |
| | **C5-C8 Aliphatics** | **BQL** | 11.247 | 1.0 |
| | **C9-C12 Aliphatics** | **BQL** | 11.247 | 1.0 |
| | **C9-C10 Aromatics** | **BQL** | 11.247 | 1.0 |
| Field ID **635B03** | *Lab ID 1186* | | | |
| *Date Analyzed: 5/6/99* | *Dry Wt %: 0.9* | | | |
| | **VPH soil** | | | |
| | **C5-C8 Aliphatics** | **BQL** | 11.15 | 1.0 |
| | **C9-C12 Aliphatics** | **BQL** | 11.15 | 1.0 |
| | **C9-C10 Aromatics** | **BQL** | 11.15 | 1.0 |

# GeoChem Incorporated Quality Control Results

*NC # 37745 , NC # 336, EPA ID # 155*

*GCI Project #* **9905-006**

*Tuesday, May 18, 1999*

*lowest detection @ ideal conditions*

| | Percent Recovery | Lab Blank: | MDL. in ug/l |
|---|---|---|---|
| **8260 soil** | | | |
| 1,1-Dichloroethene | **87** | 0 | 0.88 |
| Benzene | **100** | 0 | 0.72 |
| Trichloroethene | **97** | 0 | 0.71 |
| Toluene | **101** | 0 | 0.64 |
| Chlorobenzene | **102** | 0 | 0.49 |
| | *End of* ***8260 soil*** | | |
| **8270 BNA soil** | | | |
| 2-Chlorophenol | **83** | 0 | 2.39 |
| Phenol | **68** | 0 | 2.44 |
| 1,4-Dichlorobenzene | **95** | 0 | 2.96 |
| n-Nitrosodipropylamine | **95** | 0 | 4.77 |
| 1,2,4-Trichlorobenzene | **88** | 0 | 2.68 |
| 4-Chloro-3-methylphenol | **82** | 0 | 2.45 |
| Acenaphthene | **67** | 0 | 6.83 |
| 2,4-Dinitrotoluene | **100** | 0 | 2.48 |
| 4-Nitrophenol | **95** | 0 | 6.65 |
| Pentachlorophenol | **117** | 0 | 2.4 |
| Pyrene | **92** | 0 | 3.34 |
| | *End of* ***8270 BNA soil*** | | |

**Report To:**
JEFF Tyburski
LAW - Raleigh
3301 ATLANTIC AVE
Raleigh, NC 27604

# GeoChem, Incorporated

Environmental Laboratories

**2500 Gate Way Centre Blvd., Suite 300**
**Morrisville, NC 27560**

**Bill To:**
SAME

# Chain of Custody Record

PROJECT SITE NUMBER: 30740-6-0600
PO#:
SITE NAME: 498 & 487
COLLECTED BY (Signature): William J. Fabri
GEOCHEM PROJECT #: 9905-006
DATE DUE:
VERBAL/FAX/HARDCOPY:

| FIELD SAMPLE ID | TURNAROUND IN DAYS | SAMPLE MATRIX | DATE AND TIME COLLECTED | NO. OF CONTAINERS PER LOCATION | MADEP | EPH & VPH | 8260 (BN & HE) | 8270 (BN & HE) | | | | | | REMARKS | LAB ID NO. (for lab use only) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 735B10 | STD | Soil | 5/4/99 9:30 AM | 2 | X | X | X | X | | | | | | ANY QUESTIONS | 1181 |
| 735B09 | STD | Soil | 5/4/99 11:00 AM | 1 | X | X | X | X | | | | | | CALL JEFF Tyburski | 1182 |
| 735B11 | STD | Soil | 5/4/99 12:10 PM | 1 | X | X | X | X | | | | | | 1-800-648-8928 | 1183 |
| | | | | | | | | | | | | | | | ~~1184~~ |
| 635B01 | STD | Soil | 5/4/99 1:50 PM | 1 | X | X | X | X | | | | | | | 1184 |
| 635B02 | STD | Soil | 5/4/99 2:30 PM | 1 | X | X | X | X | | | | | | | 1185 |
| 635B03 | STD | Soil | 5/4/99 3:00 PM | 1 | X | X | X | X | | | | | | | 1186 |
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REMARKS:

| RELINQUISHED BY: | DATE | TIME |
|---|---|---|
| William J. Fabri | | |

| RECEIVED BY: | DATE | TIME | RELINQUISHED BY: | DATE | TIME | RECEIVED BY: | DATE | TIME | RELINQUISHED BY: | DATE | TIME |
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| FEDERAL EXPRESS | 5/4/99 | 4:30 | | | | Angel Perez | 5/5/99 | 11:00 | | | |

This Chain of Custody is considered a written contract to perform the services requested in the analyses section of this document.