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December 31, 2008

FILE COPY

North Carolina Department of Environment and Natural Resources
Division of Waste Management
Underground Storage Tank Section
1637 Mail Service Center
Raleigh, North Carolina 27699

Attn: Mr. Hassan Osman:

RE: **Underground Storage Tank Closure Report**
Four Underground Storage Tanks
Former Esso/Exxon (Register Property)
Incident # 31413
1709 US Highway 17 North
New Bern, Craven County, North Carolina
W&R Project No. 02060548

RECEIVED / DENR
DWM UST SECTION
08 DEC 31 PM 2:33

Dear Mr. Osman:

Withers & Ravenel (W&R) has completed an Underground Storage Tank (UST) Closure Report for the above referenced UST. The enclosed report documents site conditions and field activities along with presenting the results of laboratory analyses.

Please call if you have any questions or comments.

Sincerely,

WITHERS & RAVENEL, INC.



David P. Kwiatkowski, P.G.
Project Manager



Christopher M. Fay
Staff Geologist

Underground Storage Tank Closure Report

December 31, 2008

Former Esso/Exxon (Register Property)
1709 US Highway 17 North
New Bern, Craven County, North Carolina 28560

Groundwater Incident #
31413

Current Property Owner
NC DOT

Prepared for:
Mr. Hassan Osman
North Carolina Department of Environment and Natural Resources
Division of Waste Management
UST Section – Trust Fund
1637 Mail Service Center
Raleigh, North Carolina 27699-1637

Prepared by:
Withers & Ravenel, Inc.
111 MacKenan Drive
Cary, North Carolina 27511
(919) 460-6006

Discovery Date: December 28, 2004
Release Quantity: Unknown
Cause of Release: Unknown
Source of Release: UST/Piping/Overfill
Latitude: N 35° 08' 45.16"
Longitude: W 77° 01' 56.33"

UST Size and Content
(1) 1,200 gallon – Gasoline
(3) 3,000 gallon -- Gasoline

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Appendix D	Site Photos
Appendix E	Laboratory Analytical Reports and Chain-of-Custody
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1.0 GENERAL INFORMATION

1.1 Introduction

The following report, prepared by Withers & Ravenel (W&R), provides information concerning documentation of the closure of one 1,200-gallon and three 3,000-gallon underground storage tanks (UST) at the Former Esso/Exxon (Register Property) site. The site property is currently vacant and is located at 1709 US Highway 17 North in New Bern, Craven County, North Carolina (**Figure 1**). Included in this report is: limited background information; a summary of the UST closure procedures; laboratory test results; and W&R's conclusions and recommendations.

The site was investigated by Weston Solutions, Inc. (Weston) in December 2004 on behalf of the NCDOT. These assessment activities were conducted in advance of proposed roadway widening activities of Highway 17 by the NCDOT. The results of these activities were presented in the "Preliminary Site Assessment" report prepared by Weston. Included in these assessment activities were: a geophysical survey to locate potential USTs at the site; soil sampling activities; and groundwater sampling activities. Based upon the results of these activities: four to five potential USTs were identified; soil sample analytical results indicated impacts by TPH-DRO at concentrations above "Action Levels"; and groundwater analytical results indicated impacts by targeted compounds above 2L Standards (standards).

The following is a summary of the site history after the completion of the initial assessment report:

- On January 25, 2005, NCDOT submit report to the North Carolina Department of Environment and Natural Resources – Division of Waste Management – UST Section (NCDENR-DWM-UST).
- February 4, 2005, a Notice of Regulatory Requirements (NORR) is issued to the current property owner, Ms. Juanita Register, requesting UST closure and the completion of an LSA. Ms. Register responds indicating she is the property owner but is not the responsible party.
- February 28, 2005, a NORR is issued to Exxon/Mobile, requesting UST closure and the completion of an LSA.
- May 17, 2005, UST Section inspects the site.
- April 19, 2006, a Notice of Violation (NOV) is issued to Exxon/Mobile requesting an LSA be completed.
- May 16, 2006, Exxon/Mobile responds indicating they are not the responsible party.
- June 1, 2006, the site is referred to the State Lead program because the responsible party is deceased.
- In October 2006, W&R performed a Phase I LSA and concluded that there were four USTs onsite. In addition, analytical results showed impact from targeted

compounds in groundwater. During the LSA no water supply wells were identified within 1,500 feet of the site

Removal of the UST was performed in general accordance with the American Petroleum Institute (API) Recommended Practice 1604 "Removal and Disposal of Used Underground Petroleum Storage Tanks."

1.2 Ownership of UST

The USTs were last owned and operated by Pearl and Ettie Fowler who are now deceased. The USTs were located within the NCDOT right of way in the vicinity of the foundation (concrete pad) of the former onsite store. The locations of the former USTs are detailed on **Figure 2**.

1.3 Facility Information

Former Esso/Exxon (Register Property)
1709 US Highway 17 North
New Bern, Craven County, North Carolina
Facility I.D. # 31413

1.4 Contacts

Primary Contact: Mr. David P. Kwiatkowski, P.G.
Withers & Ravenel
111 MacKenan Drive
Cary, North Carolina 27511
919-460-6006

Closure Contractor: Evo Environmental and Industrial Resources, Corporation.
1703 Vargave Street
Winston-Salem, North Carolina
336-725-5844

Consultant: Withers & Ravenel
111 MacKenan Drive
Cary, North Carolina 27511
Mr. David Kwiatkowski, P.G.
919-460-6006

Laboratories: Environmental Science Corporation
 12065 Lebanon Road
 Mt. Juliet, TN 37122
 800-767-5859
 State Certification No. 375

1.5 UST Information

Tank No.	Const. Type	Installation Date	Size Gallons	Tank Dimensions	Last Contents	Previous Contents
1	Steel	1950's	3,000	46" (Dia) x 12.5'	Gasoline	N/A
2	Steel	1950's	3,000	64" (Dia) x 18'	Gasoline	N/A
3	Steel	1950's	3,000	64" (Dia) x 18'	Gasoline	N/A
4	Steel	1950's	1,200	64" (Dia) x 18'	Gasoline	N/A

1.6 Site Characteristics

The subject site is a former gas station/store located at 1709 US Highway 17 North, New Bern, Craven County, North Carolina (**Figure 1**). The site is currently vacant.

2.0 CLOSURE PROCEDURES

2.1 Pre-Closure Procedures

W&R requested bids from three subcontractors for removal and disposal of the UST system and excavation and the disposal of associated petroleum impacted soil. Evo Environmental and Industrial Resources, Corporation (Evo) and A&D Environmental returned bids. Evo was awarded the bid based upon cost comparison for closure/excavation activities at the site. A Copy of the bids are included in **Appendix A**.

2.2 Tank Removal Procedures

W&R personnel mobilized to the site on December 15 and 16, 2008 to supervise the removal of four USTs (Tank #1 through Tank #4) by Evo. Prior to removing the USTs, the contents were removed using a vac truck. A total of 4,004 gallons of liquid (1,797 gallons water and 2,207 gallons of product) was removed from the USTs. The fluid was transported by Evo to their disposal facility in Winston-Salem, North Carolina. A copy of the Waste Manifests is included in **Appendix B**.

Excavation began by removing the overburden from the USTs until enough soil was removed to exhume the tanks from the ground. The USTs were buried approximately one foot below ground surface (BGS). The USTs were removed from the tank beds using a track mounted excavator. Tank #1 and Tank #2 were removed from tank bed 1 (TB-1), Tank #3 was removed from tank bed 2 (TB-2) and Tank #4 was removed from tank bed 3 (TB-3). **Figure 3** presents the location of the USTs and the tank beds. W&R personnel screened the soils with an organic vapor analyzer (OVA) during excavation activities (see **Table 1**). Soils encountered during tank removal activities consisted mainly of clayey, silty, fine sand. After the tank removal was completed, the excavation was backfilled with clean fill material to a level flush with the surrounding ground surface. No soil was removed during tank closure activities.

W&R personnel visually inspected the tanks thoroughly for evidence of corrosion or structural failure. W&R personnel noted numerous small pits but no holes. The USTs were transported to Atlantic Scrap and Processing located in Winston-Salem, North Carolina for disposal. **Appendix C** includes photos taken during removal activities. A copy of the Certificates of Disposal is included in **Appendix D**.

3.0 SITE INVESTIGATION

3.1 Field Screening Techniques

During the excavation, soil was collected and scanned for the presence of volatilized organic vapors using the OVA. The OVA readings were used in addition to observations to determine any indications of a release (see **Table 1**). The OVA was also used to monitor air quality during the excavation.

3.2 Soil Sampling Procedures

No soil samples were collected from below the USTs due to the presence of groundwater. Upon completion of tank removal activities, 24 soil samples (SS-1 through SS-24) were collected from the sidewalls of the tank beds at a depth of 3 feet below land surface. **Figure 3** presents the soil sample locations.

3.3 Quality Control Measures

During collection of the soil samples, W&R wore new nitrile, non-latex gloves for sample collection. The soil samples were placed into a clean, laboratory-supplied, individual glass container, then placed on ice in an insulated cooler and transported under chain of custody to Environmental Science Corp. (ESC) for analysis. The soil samples collected were analyzed for total petroleum hydrocarbons (TPH) gasoline range organics (GRO) and diesel range organics (DRO).

3.4 Soil Investigative Results

Analytical results showed SS-15 and SS-16 contained both TPH DRO and GRO, while SS-4 contained TPH GRO only, above the Action Levels. No other soil samples contained TPH DRO or GRO above the Action Levels. A summary of the analytical results is presented in **Table 2**. **Figure 3** presents the soil sample locations and the results. A copy of the analytical report and chain of custody is included in **Appendix E**.

3.5 Groundwater Investigation

W&R personnel were on site December 11, 2008 to sample two existing groundwater monitoring wells (MW-1 and MW-2). The locations of the wells are presented in **Figure 2**.

Prior to sampling, depth to water measurements were collected from the wells using a decontaminated electronic water level meter. The depth to water measurements were collected to determine the well volumes. The depth to water was measured in MW-1 and MW-2 at 4.73 and 5.01 feet below top of casing, respectively. The monitoring wells were then purged by removing at least three well volumes of groundwater using new, dedicated disposable bailers and new nylon cord. The wells were then allowed to recharge prior to collecting the samples. The samples were collected using the dedicated bailers and nylon cord, transferred to laboratory prepared containers, immediately placed on ice in a cooler and transported under chain of custody to ESC laboratory for analysis. The samples were analyzed for volatile organics by EPA Method 6200, for semi-volatiles by EPA Method 625, for aliphatics and aromatics by MADEP EPH/VPH and for lead by EPA Method 6010B (3030C extraction). Due to a slow recharge rate in MW-1, MADEP EPH was not collected.

3.6 Groundwater Investigative Results

Based on the laboratory analytical report, targeted petroleum compounds were not detected above 2L Standards or Gross Contamination Levels (GCL's) in monitoring wells MW-1 and MW-2. A summary of the analytical results is presented in **Table 3** and on **Figure 4**. The laboratory analytical report and chain of custody is included in **Appendix E**.

4.0 CONCLUSIONS AND RECOMMENDATIONS

W&R concludes the following:

- W&R successfully completed the closure by removal of one 1,200 gallon UST and three 3,000 gallon USTs at the Former Esso/Exxon site.
- Prior to removal, the liquid contents of the UST's were removed and properly disposed. A total of 4,004 gallons of fluids were removed and disposed.
- Based on the analytical report, three soil samples contained TPH above the NCDENR action levels. SS-4 contained TPH GRO at 59 mg/kg. In addition SS-15 and SS-16 contained TPH GRO at 280 mg/kg and 1,200 mg/kg and TPH DRO at 160 mg/kg and 220 mg/kg, respectively.
- Depth to groundwater at the site is approximately five feet BGS.
- Analytical results from groundwater samples showed no targeted compounds above the 2L standard in MW-1 or MW-2.
- Monitoring well MW-2 was located between the two USTs located in tank bed TB-1. The tanks were observed to be sound with no holes or leaks. The groundwater analytical results for MW-2 do not reflect the release observed in the sidewall soil samples collected from this tank bed (SS-15 and SS-16). The impact to soil is likely a reflection of an impacted groundwater smear zone down-gradient of the tank bed or a surface spill.
- The site was purchased by NC DOT in anticipation of expanding US Hwy 17.
- During a Phase I LSA site assessment in 2006, no private water supply wells were identified within 1,500 feet of the site.

W&R recommends the following:

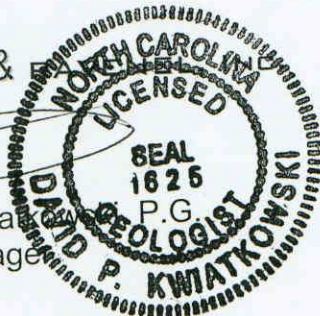
- Soil and groundwater assessment for delineation of the smear zone in the soil and delineation of the impact to groundwater at the site.

If you have any questions or need additional information, please call on me at your earliest convenience.

Sincerely,

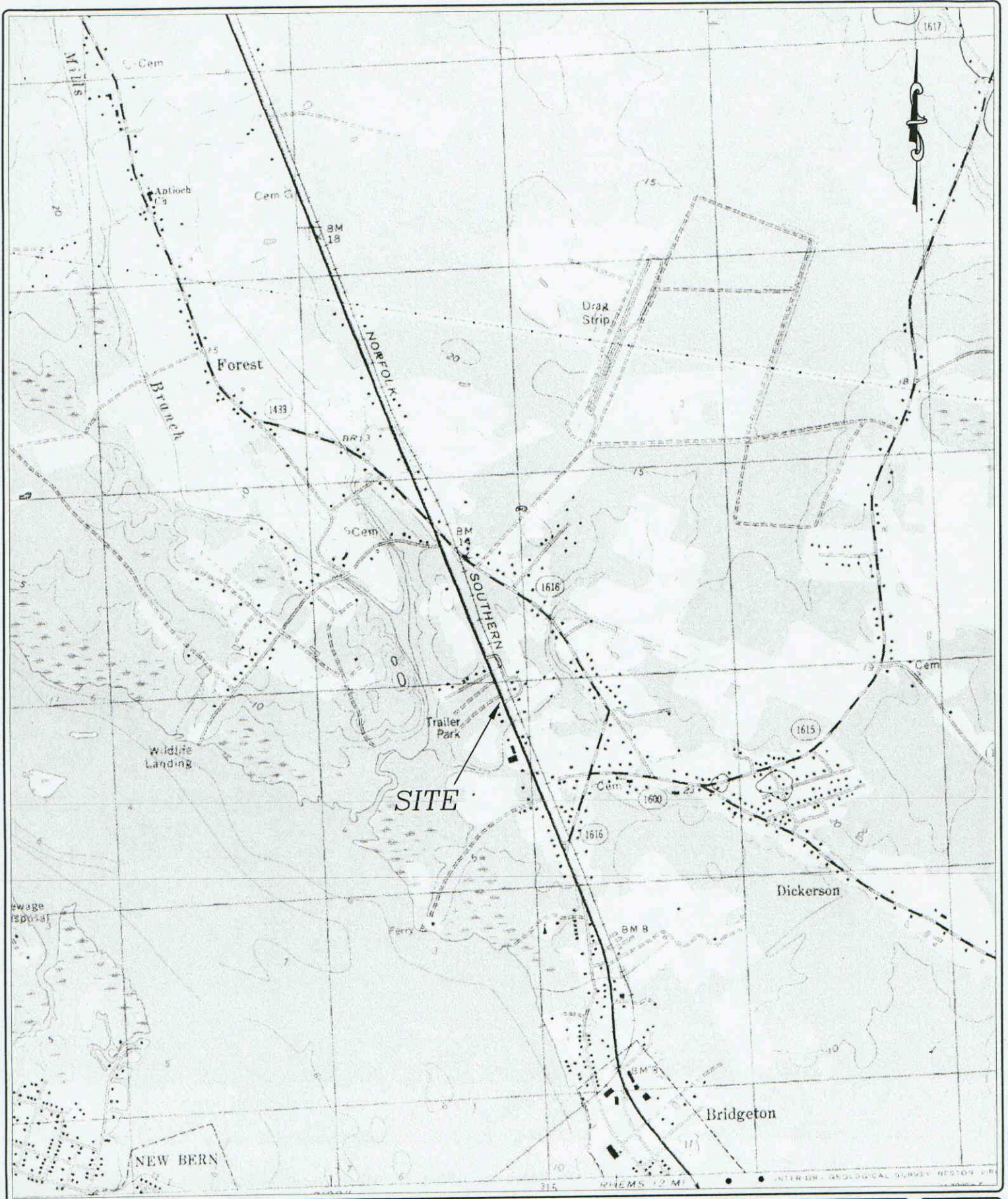
WITHERS & ASSOCIATES

David P. Kwiatkowski
Project Manager



Christopher M. Fay
Staff Geologist

FIGURES



WITHERS & RAVENEL

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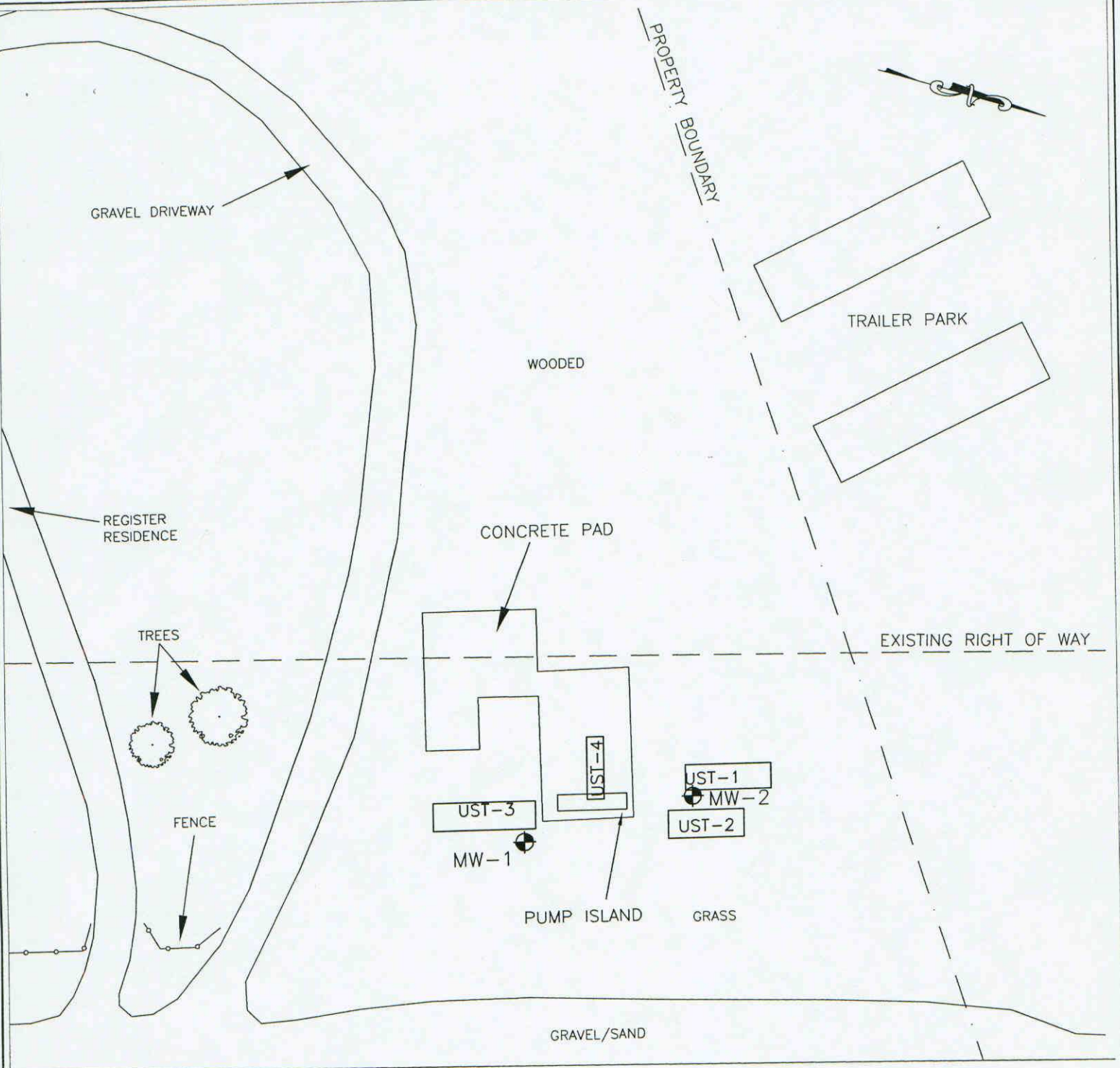
111 MacKenon Drive Cary, North Carolina 27511 www.wITHERSRAVENEL.com

tel: 919-460-6006 fax: 919-535-4545

GENERAL LOCATION MAP
FORMER ESSO/EXXON(REGISTER PROPERTY)
BRIDGETON, BEAUFORT COUNTY, NC
USGS ASKIN, NC
7.5 min. Quadrangle

DRAWN BY:	SCALE:
JAK	1"=2000'
APPROVED BY:	DATE:
DK	10/4/06

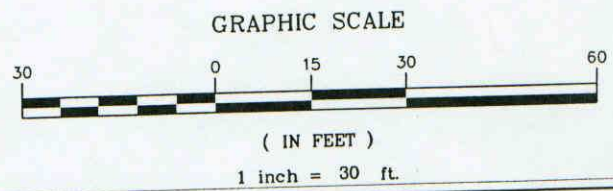
FIGURE NO.
1
JOB NO:
02060548.0



LEGEND

MONITORING WELL LOCATION

MAP SOURCE: WESTON SOLUTIONS



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 tel: 919-460-6006 fax: 919-535-4545

FORMER ESSO/EXXON(REGISTER PROPERTY)
 BRIDGETON, CRAVEN COUNTY, NC

SITE MAP

Drawn By JAK	Scale 1" = 30'	Job No. 02060548.0
Checked By DPK	Date 10/4/06	Figure No. 2

GRAVEL DRIVEWAY

REGISTER RESIDENCE

TREES

FENCE

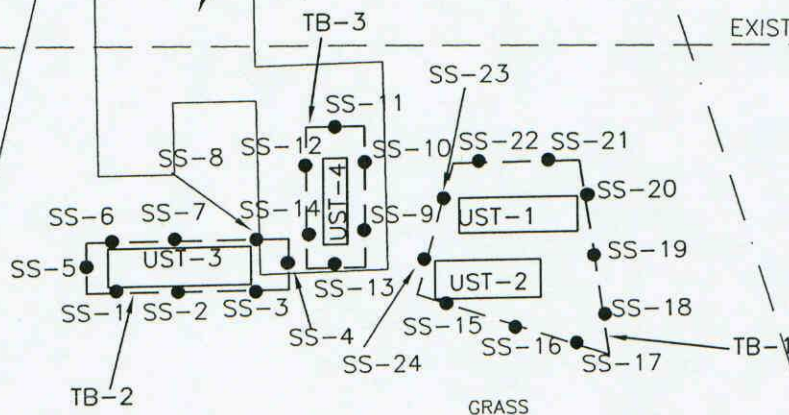
WOODED

PROPERTY BOUNDARY

TRAILER PARK

Soil Sample Results		
Sample ID	TPH GRO (mg/kg)	TPH DRO (mg/kg)
SS-4	59	ND
SS-15	280	160
SS-16	1200	220

EXISTING RIGHT OF WAY



GRAVEL/SAND

U.S. HIGHWAY 17

LEGEND

● SOIL SAMPLE LOCATION

GRAPHIC SCALE



1 inch = 30 ft.

MAP SOURCE: WESTON SOLUTIONS

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 Tel: 919-460-6006 Fax: 919-535-4545

FORMER ESSO/EXXON (REGISTER PROPERTY)
 NEW BERN, CRAVEN COUNTY, NC

**SOIL SAMPLE LOCATIONS
 WITH RESULTS MAP**

Drawn By CF	Scale 1" = 30'	Job No. 02060548
Checked By DK	Date 12/29/08	Figure No. 3

SUMMARY OF SOIL SAMPLING RESULTS
Former Esso/Exxon (Register Property)
 New Bern, Craven County, NC
 February 2009

Compound	Depth BGS (in feet)	SS-25	SS-26	SS-27	Soil-to-Water Maximum Contaminant Concentrations
Volatile Organic Compounds (VOCs)					
Acetone	3	0.21	BDL	BDL	2.8
n-Propylbenzene	3	BDL	0.11	BDL	1.7
1,2,4 Trimethylbenzene	3	BDL	0.99	0.0024	7.5
1,3,5 Trimethylbenzene	3	BDL	0.52	BDL	7.3
Volatile Petroleum Hydrocarbons					
Aliphatics C19-C36	3	BDL	12	BDL	NL
Aromatics C9-C22	3	BDL	8.5	BDL	34

Note:
 all results in mg/kg
 Bold indicates results exceeded the NC DENR Maximum Soil-to-Groundwater Standard
 BDL=Below Laboratory Detection Limits
 NL=Not Listed

GRAVEL DRIVE

REGISTER RESIDENCE

TREES

FENCE

TB-3

EXISTING RIGHT OF WAY

TB-2

SS-4

SS-15

SS-26

SS-16

SS-27

TB-1

GRASS

Soil Sample Results 12-08

Sample ID	TPH GRO (mg/kg)	TPH DRO (mg/kg)
SS-4	59	ND
SS-15	280	160
SS-16	1200	220

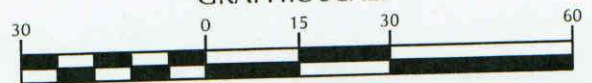
GRAVEL/SAND

U.S. HIGHWAY 17

LEGEND

● SOIL SAMPLE LOCATION

GRAPHIC SCALE



1 inch = 30 ft.

MAP SOURCE: WESTON SOLUTIONS

WITHERS & RAVENEL
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 Tel: 919-460-8006 Fax: 919-535-4545

FORMER ESSO/EXXON (REGISTER PROPERTY)
 NEW BERN, CRAVEN COUNTY, NC

SOIL SAMPLE LOCATIONS WITH RESULTS MAP

Drawn By CF	Scale 1" = 30'	Job No. 02060548
Checked By DK	Date 12/29/08	Figure No. 3

PROPERTY BOUNDARY



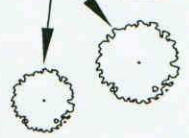
GRAVEL DRIVEWAY

Compound	2L Standard (µg/L)	Gross Contamination Levels (µg/L)	Well ID/Sample Date/ Concentration (µg/L)	
			MW-1 12/11/2008	MW-2 12/11/2008
VOCs by 6200B				
Benzene	1	5,000	BDL	BDL
Ethylbenzene	550	84,500	2.2	BDL
Isopropylbenzene	70	25,00	1.2	BDL
p-Isopropyltoluene	NL	NL	1.5	BDL
MTBE	200	200,000	BDL	BDL
n-Propylbenzene	70	30,000	4.0	BDL
1,2,4 Trimethylbenzene	350	28,500	22	BDL
1,3,5 Trimethylbenzene	350	25,000	5.9	BDL
Xylene (total)	530	87,500	4.7	BDL
SVOCs by 625				
Naphthalene	21	15,500	BDL	3.0
MADEP VPH/EPH Aliphatics and Aromatics				
C5-C8 VPH Aliphatics	420	NL	BDL	BDL
C9-C18 VPH/EPH Aliphatics	4,200	NL	BDL	100
C9-C22 VPH/EPH Aromatics	210	NL	BDL	120
Metals by 3030C				
Lead	15	15,000	BDL	6.4

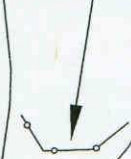
TRAILER PARK

REGISTER RESIDENCE

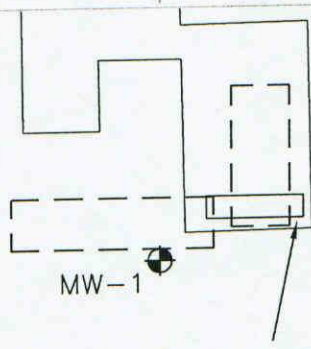
TREES



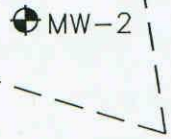
FENCE



MW-1



PUMP ISLAND



GRASS

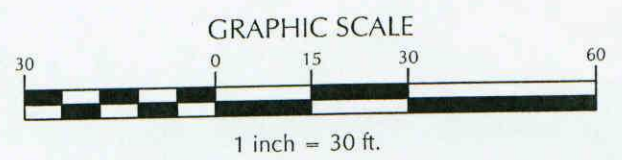
GRAVEL/SAND

EXISTING RIGHT OF WAY

U.S. HIGHWAY 17

LEGEND

MONITORING WELL LOCATION



MAP SOURCE: WESTON SOLUTIONS

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 tel: 919-460-6006 fax: 919-535-4545

FORMER ESSO/EXXON (REGISTER PROPERTY)
 NEW BERN, CRAVEN COUNTY, NC

VOC CONCENTRATIONS
 IN GROUNDWATER MAP

Drawn By CF	Scale 1" = 30'	Job No. 02060548
Checked By DK	Date 12/30/08	Figure No. 4

TABLES

TABLE 1
SUMMARY OF FIELD SCREENING RESULTS
Former Esso/Exxon (Register Property)
New Bern, Craven County, NC

Sample Identification	Depth BGS (in feet)	Results in ppm
SS-1	3	ND
SS-2	3	ND
SS-3	3	ND
SS-4	3	ND
SS-5	3	ND
SS-6	3	ND
SS-7	3	ND
SS-8	3	ND
SS-9	3	ND
SS-10	3	ND
SS-11	3	ND
SS-12	3	ND
SS-13	3	ND
SS-14	3	ND
SS-15	3	290
SS-16	3	<10,000
SS-17	3	ND
SS-18	3	ND
SS-19	3	ND
SS-20	3	ND
SS-21	3	ND
SS-22	3	ND
SS-23	3	1.5
SS-24	3	ND

Note:
BGS=Below Ground Surface
ppm=parts pre million
ND=Not Detected

TABLE 2
SUMMARY OF SOIL SAMPLING RESULTS
Former Esso/Exxon (Register Property)
New Bern, Craven County, NC

Sample Identification	Depth BGS (in feet)	TPH GRO	TPH DRO
SS-1	3	BDL	BDL
SS-2	3	BDL	BDL
SS-3	3	BDL	BDL
SS-4	3	59	BDL
SS-5	3	BDL	BDL
SS-6	3	BDL	BDL
SS-7	3	BDL	BDL
SS-8	3	BDL	BDL
SS-9	3	BDL	BDL
SS-10	3	BDL	BDL
SS-11	3	BDL	BDL
SS-12	3	BDL	BDL
SS-13	3	BDL	BDL
SS-14	3	BDL	BDL
SS-15	3	280	160
SS-16	3	1200	220
SS-17	3	BDL	BDL
SS-18	3	BDL	BDL
SS-19	3	BDL	BDL
SS-20	3	BDL	BDL
SS-21	3	BDL	BDL
SS-22	3	BDL	BDL
SS-23	3	BDL	BDL
SS-24	3	BDL	BDL

Note:

Bold indicates results exceeded the NC DENR Action Level of 10 mg/L

BDL=Below Laboratory Detection Limits

TABLE 3
SUMMARY OF GROUNDWATER SAMPLING RESULTS
Former Esso/Exxon (Register Property)
New Bern, Craven County, North Carolina

Compound	2L Standard	Gross Contamination Levels	Well ID/Sample Date/ Concentration (µg/L)	
			MW-1	MW-2
	(µg/L)	(µg/L)	12/11/2008	12/11/2008
VOCs by 6200B				
Benzene	1	5,000	BDL	BDL
Ethylbenzene	550	84,500	2.2	BDL
Isopropylbenzene	70	25,00	1.2	BDL
p-Isopropyltoluene	NL	NL	1.5	BDL
MTBE	200	200,000	BDL	BDL
n-Propylbenzene	70	30,000	4.0	BDL
1,2,4 Trimethylbenzene	350	28,500	22	BDL
1,3,5 Trimethylbenzene	350	25,000	5.9	BDL
Xylene (total)	530	87,500	4.7	BDL
SVOCs by 625				
Naphthalene	21	15,500	BDL	3.0
MADEP VPH/EPH Aliphatics and Aromatics				
C5-C8 VPH Aliphatics	420	NL	BDL	BDL
C9-C18 VPH/EPH Aliphatics	4,200	NL	BDL	100
C9-C22 VPH/EPH Aromatics	210	NL	BDL	120
Metals by 3030C				
Lead	15	15,000	BDL	6.4
<i>Note:</i> <i>NL=No Standard</i> <i>Bold indicates 2L standard violation</i> <i>Shaded indicates a GCL violation</i>				

SUMMARY OF SOIL SAMPLING RESULTS
Former Esso/Exxon (Register Property)
New Bern, Craven County, NC
February 2009

Compound	Depth BGS (in feet)	SS-25	SS-26	SS-27	Soil-to-Water Maximum Contaminant Concentrations
Volatile Organic Compounds (VOCs)					
Acetone	3	0.21	BDL	BDL	2.8
n-Propylbenzene	3	BDL	0.11	BDL	1.7
1,2,4 Trimethylbenzene	3	BDL	0.99	0.0024	7.5
1,3,5 Trimethylbenzene	3	BDL	0.52	BDL	7.3
Volatile Petroleum Hydrocarbons					
Aliphatics C19-C36	3	BDL	12	BDL	NL
Aromatics C9-C22	3	BDL	8.5	BDL	34

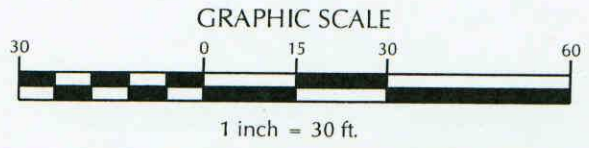
Note:
 all results in mg/kg
 Bold indicates results exceeded the NC DENR Maximum Soil-to-Groundwater Standard
 BDL=Below Laboratory Detection Limits
 NL=Not Listed

Soil Sample Results 12-08

Sample ID	TPH GRO (mg/kg)	TPH DRO (mg/kg)
SS-4	59	ND
SS-15	280	160
SS-16	1200	220

U.S. HIGHWAY 17

LEGEND
 ● SOIL SAMPLE LOCATION



MAP SOURCE: WESTON SOLUTIONS

WITHERS & RAVENEL
 ENGINEERS | PLANNERS | SURVEYORS
 111 Maclean Drive Cary, North Carolina 27511 www.witersravenel.com
 tel: 919-460-0006 fax: 919-535-4545

FORMER ESSO/EXXON (REGISTER PROPERTY)
 NEW BERN, CRAVEN COUNTY, NC

SOIL SAMPLE LOCATIONS WITH RESULTS MAP

Drawn By CF	Scale 1" = 30'	Job No. 02060548
Checked By DK	Date 12/29/08	Figure No. 3

APPENDIX A
SUBCONTRACTOR BIDS



David Kwiatkowski
Withers & Ravenel Environmental Engineering, Inc.
111 MacKenan Drive
Cary, NC 27511

Re: Tank Removals
Highway 17
Bridgeton, North Carolina

Scope of Work

Evo Corporation (Evo) agrees to provide Withers & Ravenel Environmental Engineering, Inc. the following environmental services: Evo will provide all labor, materials, equipment services and supervision to excavate, remove and dispose of four (4) 2,000 gallon gasoline underground storage tanks (UST's) and all accessible piping. All work will be performed in accordance with the specifications listed below and all applicable federal, state and local laws and regulations. Evo assumes that the area is accessible to our equipment and personnel, there are no overhead or underground utilities or structure that would impede the progress of excavation and removal activities and the tanks contain less than 1/2 of 1% of the tank volume in residual materials. Evo assumes the tanks are steel tanks, not coated or lined with fiberglass. If fiberglass is found to be part of the tanks, additional charges will apply. This tank removal is assumed to be a clean closure and the tank is covered with concrete of no more than 6" in thickness and without rebar. Withers & Ravenel Environmental Engineering, Inc. is responsible for all underground utility identification and location and regulatory notification.

Health and Safety Requirements

Evo shall not perform any excavation without the presence and authorization of Withers & Ravenel Environmental Engineering, Inc. or their designated representative.

Evo is advised that the existing underground storage tanks may contain residual product during the course of this project. Evo shall not perform any hot work nor use any tools which may create sparks. Evo's personnel shall not smoke on the project site.

Permitting

Withers & Ravenel Environmental Engineering, Inc. will obtain all required permitting from the local Fire Department.

Withers & Ravenel Environmental Engineering, Inc. will contact both the City Fire Department and the County Emergency Services to arrange site inspections prior to tank removal, if necessary.

Regulatory Notification and Field Screening

All regulatory notification will be the responsibility of Withers & Ravenel Environmental Engineering, Inc.

Underground Storage Tank Removal

The following underground storage tanks are scheduled to be excavated, removed and properly disposed of:

<u>Tank Qty.</u>	<u>Est. Capacity</u>	<u>Comments</u>	<u>Site Location</u>
4	2,000 Gallons	Steel/Gasoline	Bridgeton, NC

The vapors in the tanks shall be made inert by adding solid carbon dioxide (dry ice) at a rate of 1.5 pounds per 100 gallons of tank capacity; the dry ice should be crushed and distributed evenly over the greatest area. All available tank openings should be open during this procedure. The work area should be free from sources of ignition.

Evo shall test the tank vapor space by placing the Combustible Gas Indicator (CGI) probe into the fill opening. Readings should be taken at the bottom, middle and upper portions of each tank. After each test, and before reinsertion of the probe into the tank, the instrument reading should be cleared. Readings of 10 percent or less of the Lower Explosive Limit (LEL) must be obtained before the tank is considered safe for removal from the ground. If the LEL is not achieved, the purging process should be repeated. Evo shall utilize equipment of sufficient size and power to facilitate each tank excavation and removal from pit.

The tank will be excavated and removed. Upon removal from the excavation, the tank will be cleaned of overburden soil and loaded onto a trailer. A tank disposal manifest will be initiated to accompany the tank during transport to the tank disposal facility. A Tank Disposal Certificate will be supplied to Withers & Ravenel Environmental Engineering, Inc. upon the complete destruction of each UST.

Backfill Compaction and Site Restoration

Backfill will be transported on site to replace volume of the tanks. The clean overburden will also be used as backfill material. Backfill will be placed and compacted with a backhoe/trachoe bucket. Evo will not provide construction grade compaction or compaction testing and will not be responsible for backfill settlement.

Price Quotation

The price quoted is based on the above stated scope of work. The contract price for the mobilization/demobilization, excavation, removal, tank disposal, tank volume backfill, and backfill placement shall be:

\$ 4,395.00 flat

Evo will provide a backhoe with operator to dig test pits to locate and measure tank size before actual tank removal activities begin. If requested, Evo will also provide a vacuum truck to pump tanks as they are located. Evo will provide the above services for:

Mobilization	\$ 900.00 flat
Backhoe with Operator	\$ 595.00 per day
Vacuum Truck (Portal to Portal)	\$ 90.00 per hour
Wastewater Disposal	\$ 0.29 per gallon

Initial _____

1703 Vargrave Street Winston-Salem, NC 27107
336-725-5844 p / 336-725-6244 f

Should liquids be encountered, Evo will provide a vacuum truck, operator and disposal at a fully permitted disposal facility in Winston-Salem, North Carolina.

Vacuum Truck (Portal to Portal)	\$ 90.00 per hour
Tanker Truck	\$ 85.00 per hour
Waste Water Disposal	\$ 0.29 per gallon
Product Disposal	\$ 0.75 per gallon
Sludge Disposal	\$ 0.90 per gallon

Estimation:

Vacuum Truck (Portal to Portal)	11 hrs @ \$90.00/hr	\$ 990.00
Tanker Truck	11 hrs @ \$85.00/hr	\$ 935.00
Wastewater Disposal	7,500 gal @ \$0.29/gal	\$ 2,175.00
Sludge Disposal	500 gal @ \$0.90/gal	\$ 450.00
Estimation Total		\$ 4,550.00

Any additional services due to contamination or a change in the scope of work will be billed at the rates listed below.

Excavation and Loading	\$ 10.50 per ton
Transportation and Soil Disposal	\$ 30.00 per ton (20 ton min/load)
Backfill Supply and Transportation	\$ 10.95 per ton
ABC Stone Supply and Transportation	\$ 24.95 per ton
Backfill and Stone Placement	\$ 7.55 per ton
Plastic (40' x 100')	\$ 250.00 per roll
Straw Bales	\$ 6.00 per bale
Asphalt and/or Concrete Disposal	\$ 150.00 per load

Prices above include all fuel and insurance surcharges.

Note: The above pricing excludes all environmental consulting services normally required by the NCDENR. The above pricing is based on good access to the site, no obstructions in the area and excludes soil sampling and reports. Excavation quotations are based on normal soil conditions. In the event contamination and/or underground structures, cables, conduit, electrical lines, telephone lines, water lines, sewer lines, gas lines or debris are encountered, destroyed or damaged during the performance of this contract, Evo will not be held responsible. Cost of repairs shall be borne by the customer. **Due to the extreme volatility of fuel costs, prices are valid for 30 days from date of quote.**

Qualifications

All personnel assigned to this project have completed a baseline medical examination in accordance with our Medical Monitoring Program which exceeds the requirements of 29CFR1910.120.

All personnel assigned to this project have completed 40 hours of health and safety training in accordance with 29CFR1910.120, "Hazardous Waste Operations and Emergency Response."

Initial _____

All Evo excavation personnel have completed competent person training in accordance with 29CFR1926.652, "Excavation and Trenching Training."

All excavations will be in accordance with 29CFR1926.652, "Requirements for Protective Systems."

Payment

Evo is not accepting trust fund co-payment. Payment will be *due and payable within thirty (30) days* of invoice date. Evo will invoice Withers & Ravenel Environmental Engineering, Inc. in full after the project is complete. A finance charge of 18% per annum will be assessed on unpaid balances over 15 days past due. In the event that Evo employs the services of an attorney and/or collection agency to institute legal action to collect any sums due under this contract/agreement, Withers & Ravenel Environmental Engineering, Inc. responsible for all costs of such legal action including reasonable attorney fees and/or collection fees incurred by Evo in the collection of such sums. The terms of this agreement are effective and binding on Withers & Ravenel Environmental Engineering, Inc. and Evo upon written execution or initiation of performance of this proposal.

Accepted

Withers & Ravenel Environmental Engineering, Inc.

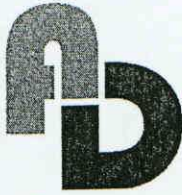
Evo Corporation

Name: _____

Position: _____

Date / P.O. #: _____
p2112108

11/21/2008 Revision



A&D Environmental

August 27, 2008

Withers & Ravenel
Mr. David Kwaitkowski
111 MacKenan Drive
Cary, NC 27511
Telephone: 919-535-5206
Fax: 919-535-4545
E-Mail: dkwaitkowski@withersravenel.com
Reference: Underground Storage Tank Removal
1709/1707 NC Hwy. 17

A&D Proposal # 85354

Dear Mr. Kwaitkowski,

Thank you for the opportunity to submit this proposal for the removal of four (4) 2,000 gallon single-wall/unlined/uncoated steel gasoline underground storage tanks and underground piping under concrete and soil near Bridgeton, NC. We assume that there are no utilities in the work area.

The enclosed proposal outlines the product removal and tank closure at the request of Withers & Ravenel. This proposal and costs associated with this project are based on the data supplied by Withers & Ravenel.

A&D will be pleased to accommodate any necessary amendments or supplements to this plan. The costs associated with this project are based on A&D's best judgment and estimate. Personnel assigned to this project meet or exceed the training requirements for both 29 CFR 1910.120 Hazardous Waste Operations and 29 CFR 1910.146 Confined Space Entry. Safety will be observed as top priority during this project.

Mr. Kwaitkowski, if you have any questions please contact my office at 336-434-7750. A&D appreciates the opportunity to quote this work and we are looking forward to working with you on this project.

Sincerely,

J. Scott Pearce

P.O. Box 484 High Point, NC 27261 Tel: 336.434.7750 Fax: 336.434.7752 spearce@adenviro.com

Codes and Standards

Included in this section are the applicable local, state and federal codes and standards that may apply to this project.

1. American Petroleum Institute, API 1604, "Recommended Practice for Abandonment or Removal of Used Underground Service Station Tanks"
2. American Petroleum Institute API 2015 "Cleaning Petroleum Storage Tanks"
3. 29 CFR part 1910.120 U.S. Dept. of Labor OSHA "Hazardous Waste Operations and Emergency Response"
4. 29 CFR part 1910.146 U.S. Dept. of Labor OSHA "Confined Space Entry"
5. NFPA Volume 30 and 304 "Flammable and Combustible Liquids Codes"

Site Health and Safety

1. A&D will be solely responsible for initiating, maintaining and supervising safety precautions and programs in connection with the product removal, excavation, disposal of the tanks, and backfilling of the excavation.
2. A&D will provide necessary safety equipment and supplies to protect personnel and our client's interest during this project.
3. Barricade tape will be placed around open excavation during removal phase of this project

Scope of Work

1. The remaining residual materials will be removed from the tank by others. Vacuum Truck services will not be required.
2. The atmosphere in the storage tanks will be tested for flammability. Any tanks registering over 10% of the lower explosive limit (LEL) will be degassed or inerted. Vapor purging and monitoring procedures will be conducted in accordance with NFPA Volume 327 and section 3.16.2 of API 1604.
3. A&D will excavate the concrete and soils necessary to remove the tanks. Soils will be stockpiled on site next to the excavation. The associated piping will be removed at the unit rate price listed. Concrete and debris will be disposed of at the unit rate price listed. A&D will not be responsible for damages to broken concrete/asphalt pavement due to the use of heavy equipment.
4. During the excavation soils will be visually examined for contamination. If soils are suspected of contamination, A&D will notify the Withers & Ravenel project manager.
5. A&D will backfill the excavation to grade with clean soil backfill necessary to replace tank volume at the separate price quoted. Overburden from tank excavation will be used as backfill. The surface area will be topped with seed and straw.
6. Following removal of the storage tanks, the vessels will be secured onto a trailer, properly labeled and transported for proper disposal. A Tank Disposal Manifest will be supplied to Withers & Ravenel.
7. A&D will provide additional excavating / backfilling services for the removal non-hazardous petroleum impacted soils.

Pricing Schedule

1. A&D will remove 4 x 2,000 gallon steel petroleum underground storage tank, remove remaining product at the unit rates listed below and backfill the excavation equal to the tank volume for the price listed herein.

Quoted Price:	
Mobilization (each)	\$ 500.00
Permit	Cost Plus 15%
Tank Removal:	\$ 4,950.00
Piping Removal (per lin. ft.)	\$ 10.00
Concrete / Debris Disposal (per tandem load)	\$ 275.00

2. Disposal of non-hazardous liquids.

Quoted Price Per Gallon (Non-Flammable)	\$ 0.35
--	----------------

3. Disposal of non-hazardous sludges.

Quoted Price Per 55 Gallon Drum	\$ 125.00
--	------------------

4. A&D will provide vacuum truck services for the price listed herein.

Quoted Price Per Hour/Straight Time	\$ 95.00
--	-----------------

5. A&D will provide additional excavating services for the price listed herein.

Non-Hazardous Soil Disposal	
Excavate and Stockpile Contaminated Soil (per ton)	\$ 8.50
Load from Stockpile, Transport and Dispose TPH Soils (per ton) (minimum 16 tons per load)	\$ 44.50
Import and Place Clean Soil Backfill and Compact w/ Bucket (per ton)	\$ 14.50
Import and Place Crushed Limestone Backfill (per ton)	\$ 29.50

Note: Excavation quotations are based on normal soil conditions. In the event contamination and/or underground or above ground structures, including but not limited to footings, foundation or structural damage, cables, conduit, debris, rock, water or running sand are encountered, destroyed, or damaged during the performance of the contract, A&D shall not be held responsible. Additional cost shall be borne by the customer but shall in no case exceed existing rate scales for labor and materials had the quote been originally based on time and materials.

Note: During tank removal, excavated soils will be used as backfill material if determined clean. If excavated soils are determined unsuitable for compaction, new aggregates will be utilized and provided at time and material rates.

Note: Soil samples, state report, and utility notification are not included in the scope of work or the quoted price. Analytical for waste placement by Withers & Ravenel. Quoted Price are good for 30 days from date of proposal.

APPENDIX B
WASTE MANIFESTS

EVO CORPORATION

1703 Vargrave Street, Winston-Salem, NC 27107

www.evocorp.net

NON-HAZARDOUS MATERIALS MANIFEST

Load #

Manifest No.

GENERATOR INFORMATION

Generator: MOBILE

Phone: 336-725-5844

Site Address: 1703 Vargrave St

City/State: Bridgeton, NC 28562

Contact: Hassan Osman

MATERIAL DESCRIPTION / QUANTITY / WEIGHT

Gross Weight (lbs): _____

Material: Product

Empty Weight (lbs): _____

Contaminant: Gasoline

Net Weight (lbs): _____

Quantity

2207

Tons Drums Pails Sacs Yards Other: Gallons

TRANSPORTER INFORMATION

Transporter: Evo Corporation

Phone: 336-725-5844

Truck #: _____

Contact: Tony Disher

As the transporter, I certify that the materials described above being shipped under this non-hazardous materials manifest are properly classified, packaged, labeled, secured and are in proper condition for transport in commerce under the applicable regulations governing transportation, and I hereby receive this material for delivery to the facility designate.

Driver Signature: 

Date: 12/15/08

FACILITY INFORMATION

EVO CORPORATION
1703 Vargrave Street
Winston-Salem, NC 27107

Evo Project #: 120810

Phone: (336) 725-5844

Contact: Tony Disher

I certify that the carrier has delivered the materials described above to this facility, and I hereby accept this material for treatment and/or disposal in a manner that has been authorized by the State of North Carolina.

Facility Signature: 

Date: 12-15-2008

White/Facility

Canary/Invoice

Goldenrod/Generator

Pink/Carrier

**APPENDIX C
SITE PHOTOS**



02060548 Former Esso/Exxon (Register Property)
Site looking south prior to UST removal



02060548 Former Esso/Exxon (Register Property)
Begin removing liquid from USTs



02060548 Former Esso/Exxon (Register Property)
Unearthing Tank #1 and Tank #2



02060548 Former Esso/Exxon (Register Property)
Tilted USTs to remove remaining liquid



02060548 Former Esso/Exxon (Register Property)
Tank #4-No holes, good condition



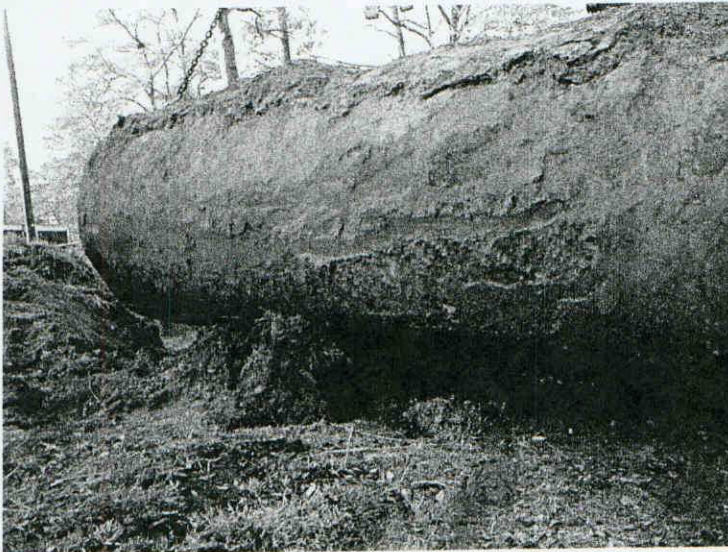
02060548 Former Esso/Exxon (Register Property)
Loading Tank #4- Measured 46"X12'



02060548 Former Esso/Exxon (Register Property)
Tank #2-No holes, good condition



02060548 Former Esso/Exxon (Register Property)
Tank #2- 64"X18'



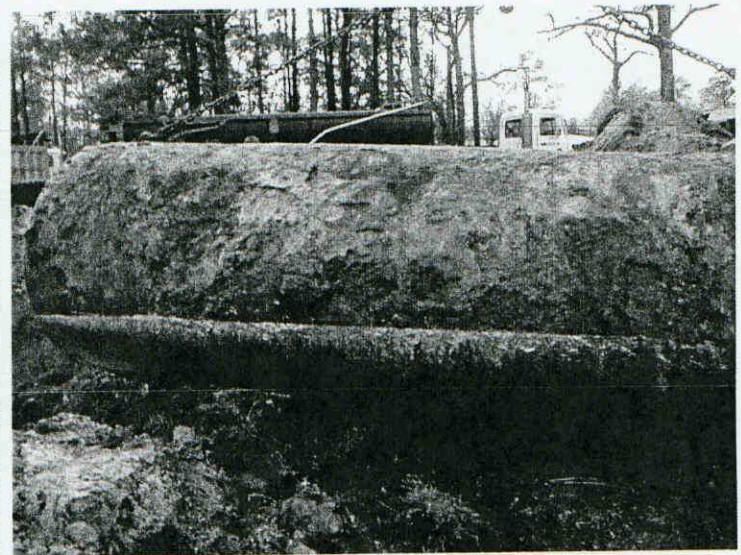
02060548 Former Esso/Exxon (Register Property)
Tank #2



02060548 Former Esso/Exxon (Register Property)
Tank #2-All USTs had small pits but no holes



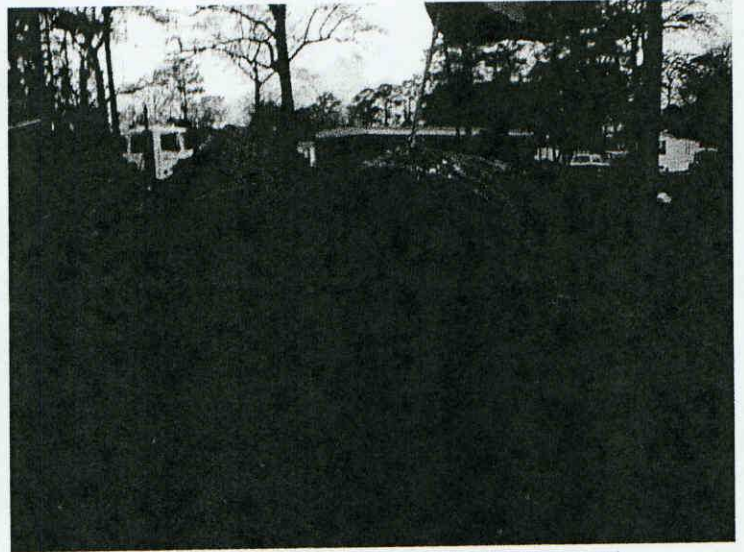
02060548 Former Esso/Exxon (Register Property)
Tank #1-No holes, good condition



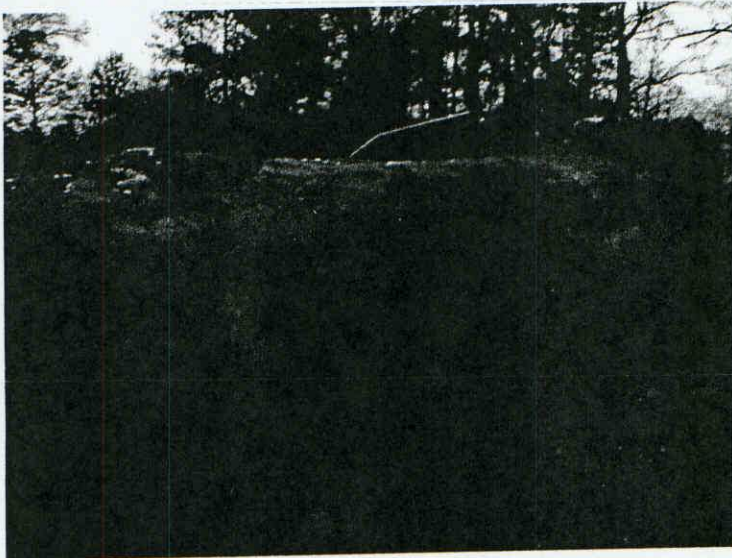
02060548 Former Esso/Exxon (Register Property)
Tank #1- 64"X18'



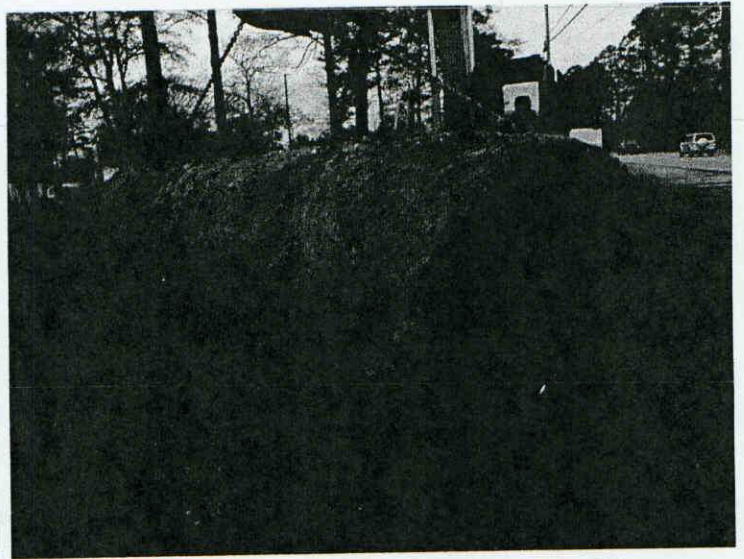
02060548 Former Esso/Exxon (Register Property)
Tank #1



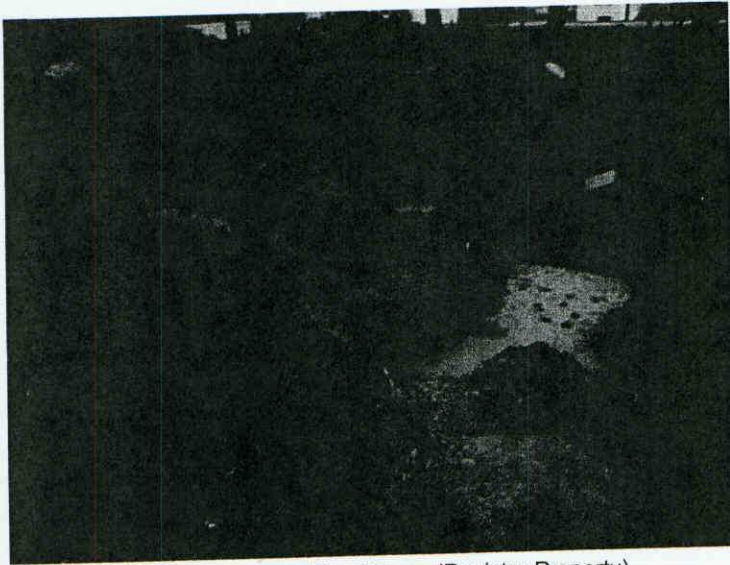
02060548 Former Esso/Exxon (Register Property)
Tank #3-No holes, good condition



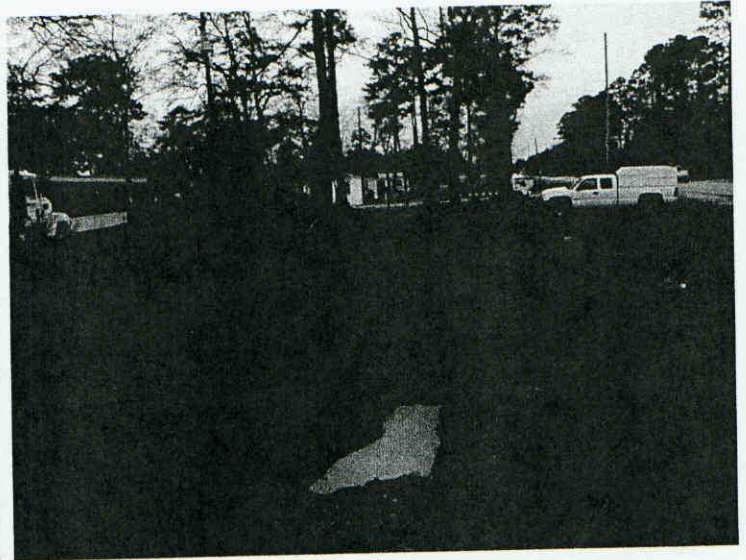
02060548 Former Esso/Exxon (Register Property)
Tank #3 64"X18'



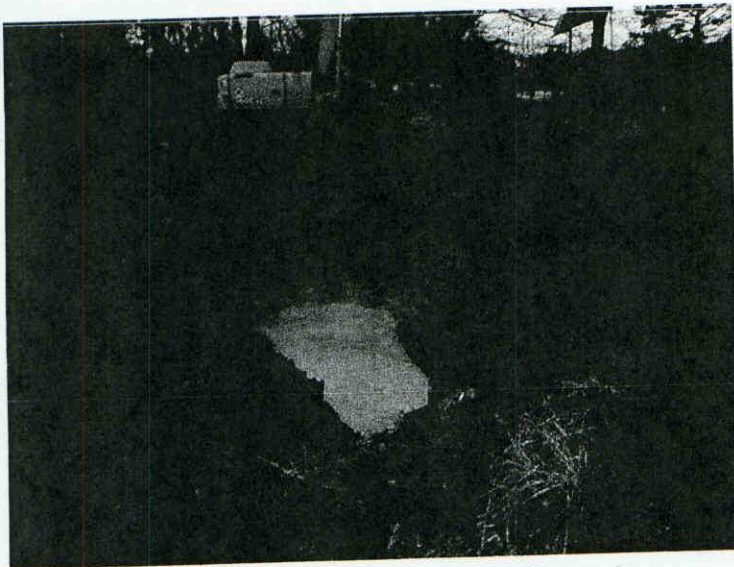
02060548 Former Esso/Exxon (Register Property)
Tank #3



02060548 Former Esso/Exxon (Register Property)
All tank beds contained groundwater



02060548 Former Esso/Exxon (Register Property)
Site looking north



02060548 Former Esso/Exxon (Register Property)



02060548 Former Esso/Exxon (Register Property)
All tank beds backfilled

**APPENDIX D
CERTIFICATE OF TANK DISPOSAL**



ENVIRONMENTAL AND INDUSTRIAL RESOURCES

1703 Vargrave Street
Winston-Salem, NC 27107
ph 336-725-5844
fax 336-725-6244

CERTIFICATE OF DISPOSAL

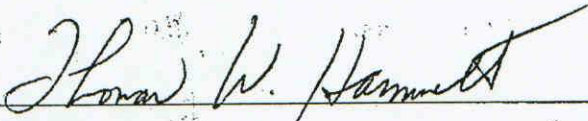
Evo Corporation does hereby certify that 1,797 gallons of non-hazardous contaminated water received on 12/15/2008 from:

Generator: NCDENR

Originating at: 1709 US NC Hwy. 17
Bridgeton, NC

EC Waste ID #: 120810

has been disposed of by Evo Corporation in a manner approved by the North Carolina Department of Environment and Natural Resources.



Signature

Thomas W. Hammett
CEO
Evo Corporation



1703 Vargrave Street
Winston-Salem, NC 27107
ph 336-725-5844
fax 336-725-6244

CERTIFICATE OF DISPOSAL

Evo Corporation does hereby certify that 2,207 gallons of product received on 12/15/2008 from:

Generator: NCDENR
Originating at: 1709 US NC Hwy. 17
Bridgeton, NC
SSI Waste ID #: 120810

has been disposed of by Evo Corporation in a manner approved by the North Carolina Department of Environment and Natural Resources.

Signature

Thomas W. Hammett
CEO
Evo Corporation



1703 Vargrave Street
 Winston-Salem, NC 27107
 ph 336-725-5844
 fax 336-725-6244

TANKS DISPOSAL CERTIFICATE

Tank Owner: NCDENR

Site Address: 1709 US NC Hwy. 17
 Bridgeton, NC

Description of Tanks:

<u>Tank Number</u>	<u>Size of Tank</u>	<u>Contents</u>
1	3,000 Gallons	Gasoline
2	3,000 Gallons	Gasoline
3	3,000 Gallons	Gasoline
4	1,200 Gallons	Gasoline

Transporter: Evo Corporation

EC Project #: 120810

Disposal Certification:

Evo Corporation does hereby certify that the above named storage tanks were transported to Atlantic Scrap and Processing in Winston-Salem, NC for proper disposal and recycling.

Signature

Thomas W. Hammett
 CEO
 Evo Corporation

APPENDIX E
LABORATORY ANALYTICAL REPORTS AND CHAIN-OF-CUSTODY

APPENDIX F

UST-2 FORM

UST-2 Site Investigation Report for Permanent Closure or Change-in-Service of UST

Return completed form to:

The DWM Regional Office located in the area where the facility is located. Send a copy to the Central Office in Raleigh so that the status of the tank may be changed to "PERMANENTLY CLOSED" and your tank fee account can be closed out. SEE MAP ON THE BACK OF THIS FORM FOR THE CENTRAL AND REGIONAL OFFICE ADDRESSES.

STATE USE ONLY:
I.D. # _____
Date Received _____

INSTRUCTIONS (READ THIS FIRST)

For more than five UST systems you may attach additional forms as needed.
Permanent closure – For permanent closure, complete all sections of this form.

Change-in-service – For change-in-service where UST systems will be converted from containing a regulated substance to storing a non-regulated substance, complete sections I, II, III, IV, and VIII

Effective February 1, 1995, all UST closure/change-in-service reports must be submitted in the format provided in the UST-12 form. UST closure and change-in-services must be completed in accordance with the latest version of the *Guidelines for Tank Closure*. A copy of the UST-12 form and the *Guidelines for Tank Closure* can be obtained at www.wastenotnc.org.

You must make sure that USTs removed from your property are disposed of properly. When choosing a closure contractor, ask where the tank(s) will be taken for disposal. Usually, USTs are cleaned and cut up for scrap metal. This is dangerous work and must be performed by a qualified company. Tanks disposed of illegally in fields or other dumpsites can leak petroleum products and sludge into the environment. If your tanks are disposed of improperly, you could be held responsible for the cleanup of any environmental damage that occurs.

NOTE: If a release from the tank(s) has occurred, the site assessment portion of the tank closure must be conducted under the supervision of a P.E. or L.G., with all closure site assessment reports bearing the signature and seal of the P.E. or L.G.

I. OWNERSHIP OF TANKS

Owner Name (Corporation, Individual, Public Agency, or Other Entity)
Pearl and Ettie Fowler

Facility Name or Company
Former Esso/Exxon (Register Property)

Street Address
Deceased

Facility ID # (If known)
31413

City _____ County _____

Street Address
1709 US Hwy 17 N

State _____ Zip Code _____

City _____ County _____ Zip Code _____
New Bern Craven

Phone Number _____

Phone Number _____

II. LOCATION OF TANKS

III. CONTACT PERSONNEL

Contact for Facility:
None

Job Title: _____

Phone. No: _____

Closure Contractor Name:
Tony Disher

Closure Contractor Company:
Evo Corp.

Address:
Winston-Salem, NC

Phone. No:
(336) 725-5844

Primary Consultant Name:
David Kwaitkowski

Primary Consultant Company:
Wither and Ravenel

Address:
Cary, NC

Phone. No:
(919) 469-3340

IV. UST INFORMATION FOR REGISTERED UST SYSTEMS

Tank ID No.	Size in Gallons	Tank Dimensions	Last Contents	Last Use Date	Permanent Close Date	Change-in-Service Date	Water in excavation		Free product		Notable odor or visible soil contamination	
							Yes	No	Yes	No	Yes	No
1	3,000	64"X18'	Gasoline	1977	12/16/2008		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
2	3,000	64"X18'	Gasoline	1977	12/16/2008		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
3	3,000	64"X18'	Gasoline	1977	12/16/2008		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
4	1,200	46"X12'	Gasoline	1977	12/16/2008		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
							<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

V. EXCAVATION CONDITION

VI. UST INFORMATION FOR UNREGISTERED UST SYSTEMS

Tank ID No.	Size in Gallons	Tank Dimensions	Last Contents	Last Use Date	Permanent Close Date	Tank Owner Name *	Water in excavation		Free product		Notable odor or visible soil contamination	
							Yes	No	Yes	No	Yes	No
							<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
							<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
							<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
							<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
							<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

VII. EXCAVATION CONDITION

* If the tank owner address is different from the one listed in Section I., then enter the street address, city, state, zip code and telephone no. below:

VIII. CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true accurate and complete.

Print name and official title of owner or owner's authorized representative _____

Signature _____

Date Signed _____



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Est. 1970

Chris Fay
Withers & Ravenel Eng. - State Lead
111 MacKenan Drive
Cary, NC 27511

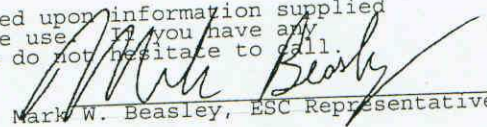
Report Summary

Wednesday December 24, 2008

Report Number: L379236
Samples Received: 12/12/08
Client Project: 02060548
Description: Register

The analytical results in this report are based upon information supplied by you, the client, and are for your exclusive use. If you have any questions regarding this data package, please do not hesitate to call.

Entire Report Reviewed By:


Mark W. Beasley, ESC Representative

Laboratory Certification Numbers

A2LA - 1461-01, AIHA - 100789, AL - 40660, CA - I-2327, CT - PH-0197, FL - E87487
GA - 923, IN - C-TN-01, KY - 90010, KYUST - 0016, NC - ENV375, DW21704, ND - R-140
NJ - TN002, SC - 84004, TN - 2006, VA - 00109, WV - 233
AZ - 0612, MN - 047-999-395, NY - 11742, WI - 998093910

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Where applicable, sampling conducted by ESC is performed per guidance provided
in laboratory standard operating procedures: 060302, 060303, and 060304.

2 Samples Reported: 12/24/08 17:17 Printed: 12/24/08 17:18
Page 1 of 24



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REPORT OF ANALYSIS

December 24, 2008

Chris Fay
Withers & Ravenel Eng. - State Lead
111 MacKenan Drive
Cary, NC 27511

ESC Sample # : L379236-01

Date Received : December 12, 2008
Description : Register

Site ID :

Sample ID : MW-1

Project # : 02060548

Collected By : Chris Fay
Collection Date : 12/11/08 10:45

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Lead	BDL	5.0	ug/l	6010B	12/15/08	1
Volatile Petroleum Hydrocarbons	BDL	100	ug/l	MADEPV	12/18/08	1
C5-C8 Aliphatics	BDL	100	ug/l	MADEPV	12/18/08	1
C9-C12 Aliphatics	BDL	100	ug/l	MADEPV	12/18/08	1
C9-C10 Aromatics	BDL	100	ug/l	MADEPV	12/18/08	1
Surrogate Recovery	102.		% Rec.	MADEPV	12/18/08	1
2,5-Dibromotoluene (FID)	99.7		% Rec.	MADEPV	12/18/08	1
2,5-Dibromotoluene (PID)						
Volatile Organics	BDL	50.	ug/l	6200B	12/12/08	1
Acetone	BDL	50.	ug/l	6200B	12/12/08	1
Acrolein	BDL	10.	ug/l	6200B	12/12/08	1
Acrylonitrile	BDL	1.0	ug/l	6200B	12/12/08	1
Benzene	BDL	1.0	ug/l	6200B	12/12/08	1
Bromobenzene	BDL	1.0	ug/l	6200B	12/12/08	1
Bromodichloromethane	BDL	1.0	ug/l	6200B	12/12/08	1
Bromoform	BDL	5.0	ug/l	6200B	12/12/08	1
Bromomethane	BDL	1.0	ug/l	6200B	12/12/08	1
n-Butylbenzene	BDL	1.0	ug/l	6200B	12/12/08	1
sec-Butylbenzene	BDL	1.0	ug/l	6200B	12/12/08	1
tert-Butylbenzene	BDL	1.0	ug/l	6200B	12/12/08	1
Carbon tetrachloride	BDL	1.0	ug/l	6200B	12/12/08	1
Chlorobenzene	BDL	1.0	ug/l	6200B	12/12/08	1
Chlorodibromomethane	BDL	5.0	ug/l	6200B	12/12/08	1
Chloroethane	BDL	5.0	ug/l	6200B	12/12/08	1
Chloroform	BDL	2.5	ug/l	6200B	12/12/08	1
Chloromethane	BDL	1.0	ug/l	6200B	12/12/08	1
2-Chlorotoluene	BDL	1.0	ug/l	6200B	12/12/08	1
4-Chlorotoluene	BDL	5.0	ug/l	6200B	12/12/08	1
1,2-Dibromo-3-Chloropropane	BDL	1.0	ug/l	6200B	12/12/08	1
1,2-Dibromoethane	BDL	1.0	ug/l	6200B	12/12/08	1
Dibromomethane	BDL	1.0	ug/l	6200B	12/12/08	1
1,2-Dichlorobenzene	BDL	1.0	ug/l	6200B	12/12/08	1
1,3-Dichlorobenzene	BDL	1.0	ug/l	6200B	12/12/08	1
1,4-Dichlorobenzene	BDL	5.0	ug/l	6200B	12/12/08	1
Dichlorodifluoromethane	BDL	1.0	ug/l	6200B	12/12/08	1
1,1-Dichloroethane	BDL	1.0	ug/l	6200B	12/12/08	1
1,2-Dichloroethane	BDL	1.0	ug/l	6200B	12/12/08	1
1,1-Dichloroethene	BDL	1.0	ug/l	6200B	12/12/08	1
cis-1,2-Dichloroethene	BDL	1.0	ug/l	6200B	12/12/08	1
trans-1,2-Dichloroethene	BDL	1.0	ug/l	6200B	12/12/08	1
1,2-Dichloropropane	BDL	1.0	ug/l	6200B	12/12/08	1
1,1-Dichloropropene	BDL	1.0	ug/l	6200B	12/12/08	1

BDL - Below Detection Limit
Det. Limit - Practical Quantitation Limit (PQL)



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REPORT OF ANALYSIS

December 24, 2008

Chris Fay
Withers & Ravenel Eng. - State Lead
111 MacKenan Drive
Cary, NC 27511

Date Received : December 12, 2008
Description : Register
Sample ID : MW-1
Collected By : Chris Fay
Collection Date : 12/11/08 10:45

ESC Sample # : L379236-01

Site ID :

Project # : 02060548

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
1,3-Dichloropropane	BDL	1.0	ug/l	6200B	12/12/08	1
2,2-Dichloropropane	BDL	1.0	ug/l	6200B	12/12/08	1
Di-isopropyl ether	BDL	1.0	ug/l	6200B	12/12/08	1
Ethylbenzene	2.2	1.0	ug/l	6200B	12/12/08	1
Hexachloro-1,3-butadiene	BDL	1.0	ug/l	6200B	12/12/08	1
Isopropylbenzene	1.2	1.0	ug/l	6200B	12/12/08	1
p-Isopropyltoluene	1.5	1.0	ug/l	6200B	12/12/08	1
2-Butanone (MEK)	BDL	10.	ug/l	6200B	12/12/08	1
Methylene Chloride	BDL	5.0	ug/l	6200B	12/12/08	1
4-Methyl-2-pentanone (MIBK)	BDL	10.	ug/l	6200B	12/12/08	1
Methyl tert-butyl ether	BDL	1.0	ug/l	6200B	12/12/08	1
Naphthalene	BDL	5.0	ug/l	6200B	12/12/08	1
n-Propylbenzene	4.0	1.0	ug/l	6200B	12/12/08	1
Styrene	BDL	1.0	ug/l	6200B	12/12/08	1
1,1,1,2-Tetrachloroethane	BDL	1.0	ug/l	6200B	12/12/08	1
1,1,2,2-Tetrachloroethane	BDL	1.0	ug/l	6200B	12/12/08	1
Tetrachloroethene	BDL	1.0	ug/l	6200B	12/12/08	1
Toluene	BDL	5.0	ug/l	6200B	12/12/08	1
1,2,3-Trichlorobenzene	BDL	1.0	ug/l	6200B	12/12/08	1
1,2,4-Trichlorobenzene	BDL	1.0	ug/l	6200B	12/12/08	1
1,1,1-Trichloroethane	BDL	1.0	ug/l	6200B	12/12/08	1
1,1,2-Trichloroethane	BDL	1.0	ug/l	6200B	12/12/08	1
Trichloroethene	BDL	1.0	ug/l	6200B	12/12/08	1
Trichlorofluoromethane	BDL	5.0	ug/l	6200B	12/12/08	1
1,2,3-Trichloropropane	BDL	1.0	ug/l	6200B	12/12/08	1
1,2,4-Trimethylbenzene	22.	1.0	ug/l	6200B	12/12/08	1
1,3,5-Trimethylbenzene	5.9	1.0	ug/l	6200B	12/12/08	1
Vinyl chloride	BDL	1.0	ug/l	6200B	12/12/08	1
o-Xylene	BDL	1.0	ug/l	6200B	12/12/08	1
m&p-Xylenes	4.7	2.0	ug/l	6200B	12/12/08	1
Surrogate Recovery						
Toluene-d8	101.		% Rec.	6200B	12/12/08	1
Dibromofluoromethane	103.		% Rec.	6200B	12/12/08	1
a,a,a-Trifluorotoluene	106.		% Rec.	6200B	12/12/08	1
4-Bromofluorobenzene	92.0		% Rec.	6200B	12/12/08	1
625 Base/Neutrals w/ TIC						
Acenaphthene	BDL	1.2	ug/l	625	12/18/08	1.25
Acenaphthylene	BDL	1.2	ug/l	625	12/18/08	1.25
Anthracene	BDL	1.2	ug/l	625	12/18/08	1.25
Benzidine	BDL	62.	ug/l	625	12/18/08	1.25
Benzo(a)anthracene	BDL	1.2	ug/l	625	12/18/08	1.25
Benzo(b)fluoranthene	BDL	1.2	ug/l	625	12/18/08	1.25
Benzo(k)fluoranthene	BDL	1.2	ug/l	625	12/18/08	1.25

BDL - Below Detection Limit
Det. Limit - Practical Quantitation Limit (PQL)



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REPORT OF ANALYSIS

Chris Fay
Withers & Ravenel Eng. - State Lead
111 MacKenan Drive
Cary, NC 27511

December 24, 2008

Date Received : December 12, 2008
Description : Register
Sample ID : MW-1
Collected By : Chris Fay
Collection Date : 12/11/08 10:45

ESC Sample # : L379236-01

Site ID :

Project # : 02060548

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Benzo(g,h,i)perylene	BDL	1.2	ug/l	625		
Benzo(a)pyrene	BDL	1.2	ug/l	625	12/18/08	1.25
Bis(2-chlorethoxy)methane	BDL	12.	ug/l	625	12/18/08	1.25
Bis(2-chloroethyl)ether	BDL	12.	ug/l	625	12/18/08	1.25
Bis(2-chloroisopropyl)ether	BDL	12.	ug/l	625	12/18/08	1.25
4-Bromophenyl-phenylether	BDL	12.	ug/l	625	12/18/08	1.25
2-Chloronaphthalene	BDL	12.	ug/l	625	12/18/08	1.25
4-Chlorophenyl-phenylether	BDL	12.	ug/l	625	12/18/08	1.25
Chrysene	BDL	1.2	ug/l	625	12/18/08	1.25
Dibenz(a,h)anthracene	BDL	1.2	ug/l	625	12/18/08	1.25
3,3-Dichlorobenzidine	BDL	12.	ug/l	625	12/18/08	1.25
2,4-Dinitrotoluene	BDL	12.	ug/l	625	12/18/08	1.25
2,6-Dinitrotoluene	BDL	12.	ug/l	625	12/18/08	1.25
Fluoranthene	BDL	1.2	ug/l	625	12/18/08	1.25
Fluorene	BDL	1.2	ug/l	625	12/18/08	1.25
Hexachlorobenzene	BDL	12.	ug/l	625	12/18/08	1.25
Hexachloro-1,3-butadiene	BDL	12.	ug/l	625	12/18/08	1.25
Hexachlorocyclopentadiene	BDL	12.	ug/l	625	12/18/08	1.25
Hexachloroethane	BDL	12.	ug/l	625	12/18/08	1.25
Indeno(1,2,3-cd)pyrene	BDL	12.	ug/l	625	12/18/08	1.25
Isophorone	BDL	12.	ug/l	625	12/18/08	1.25
Naphthalene	BDL	1.2	ug/l	625	12/18/08	1.25
Nitrobenzene	BDL	12.	ug/l	625	12/18/08	1.25
n-Nitrosodimethylamine	BDL	62.	ug/l	625	12/18/08	1.25
n-Nitrosodiphenylamine	BDL	12.	ug/l	625	12/18/08	1.25
n-Nitrosodi-n-propylamine	BDL	12.	ug/l	625	12/18/08	1.25
Phenanthrene	BDL	1.2	ug/l	625	12/18/08	1.25
Benzylbutyl phthalate	BDL	12.	ug/l	625	12/18/08	1.25
Bis(2-ethylhexyl)phthalate	BDL	12.	ug/l	625	12/18/08	1.25
Di-n-butyl phthalate	BDL	12.	ug/l	625	12/18/08	1.25
Diethyl phthalate	BDL	12.	ug/l	625	12/18/08	1.25
Dimethyl phthalate	BDL	12.	ug/l	625	12/18/08	1.25
Di-n-octyl phthalate	BDL	1.2	ug/l	625	12/18/08	1.25
Pyrene	BDL	12.	ug/l	625	12/18/08	1.25
1,2,4-Trichlorobenzene	BDL	12.	ug/l	625	12/18/08	1.25
Acid Extractables						
4-Chloro-3-methylphenol	BDL	12.	ug/l	625	12/18/08	1.25
2-Chlorophenol	BDL	12.	ug/l	625	12/18/08	1.25
2,4-Dichlorophenol	BDL	12.	ug/l	625	12/18/08	1.25
2,4-Dimethylphenol	BDL	12.	ug/l	625	12/18/08	1.25
4,6-Dinitro-2-methylphenol	BDL	12.	ug/l	625	12/18/08	1.25
2,4-Dinitrophenol	BDL	12.	ug/l	625	12/18/08	1.25
2-Nitrophenol	BDL	12.	ug/l	625	12/18/08	1.25
4-Nitrophenol	BDL	12.	ug/l	625	12/18/08	1.25

BDL - Below Detection Limit
Det. Limit - Practical Quantitation Limit (PQL)



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REPORT OF ANALYSIS

December 24, 2008

Chris Fay
Withers & Ravenel Eng. - State Lead
111 MacKenan Drive
Cary, NC 27511

Date Received : December 12, 2008
Description : Register
Sample ID : MW-1
Collected By : Chris Fay
Collection Date : 12/11/08 10:45

ESC Sample # : L379236-01

Site ID :

Project # : 02060548

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Pentachlorophenol	BDL	12.	ug/l	625	12/18/08	1.25
Phenol	BDL	12.	ug/l	625	12/18/08	1.25
2,4,6-Trichlorophenol	BDL	12.	ug/l	625	12/18/08	1.25
Surrogate Recovery						
Nitrobenzene-d5	69.8		% Rec.	625	12/18/08	1.25
2-Fluorobiphenyl	79.8		% Rec.	625	12/18/08	1.25
p-Terphenyl-d14	113.		% Rec.	625	12/18/08	1.25
Phenol-d5	31.0		% Rec.	625	12/18/08	1.25
2-Fluorophenol	42.5		% Rec.	625	12/18/08	1.25
2,4,6-Tribromophenol	76.4		% Rec.	625	12/18/08	1.25

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit (PQL)

Note:

The reported analytical results relate only to the sample submitted.

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111 Mackenan Drive
Cary, NC 27511

REPORT OF ANALYSIS

December 24, 2008

Date Received : December 12, 2008
Description : Register
Sample ID : MW-2
Collected By : Chris Fay
Collection Date : 12/11/08 09:30

ESC Sample # : L379236-02
Site ID :
Project # : 02060548

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Lead	6.4	5.0	ug/l	6010B	12/15/08	1
Volatile Petroleum Hydrocarbons	100	100	ug/l	MADEPV	12/18/08	1
C5-C8 Aliphatics	BDL	100	ug/l	MADEPV	12/18/08	1
C9-C12 Aliphatics	100	100	ug/l	MADEPV	12/18/08	1
C9-C10 Aromatics	BDL	100	ug/l	MADEPV	12/18/08	1
Surrogate Recovery	105.	100	ug/l	MADEPV	12/18/08	1
2,5-Dibromotoluene (FID)	103.		% Rec.	MADEPV	12/18/08	1
2,5-Dibromotoluene (PID)			% Rec.	MADEPV	12/18/08	1
Volatile Organics						
Acetone	BDL	50.	ug/l	6200B	12/12/08	1
Acrolein	BDL	50.	ug/l	6200B	12/12/08	1
Acrylonitrile	BDL	10.	ug/l	6200B	12/12/08	1
Benzene	BDL	1.0	ug/l	6200B	12/12/08	1
Bromobenzene	BDL	1.0	ug/l	6200B	12/12/08	1
Bromodichloromethane	BDL	1.0	ug/l	6200B	12/12/08	1
Bromoform	BDL	1.0	ug/l	6200B	12/12/08	1
Bromomethane	BDL	1.0	ug/l	6200B	12/12/08	1
n-Butylbenzene	BDL	5.0	ug/l	6200B	12/12/08	1
sec-Butylbenzene	BDL	1.0	ug/l	6200B	12/12/08	1
tert-Butylbenzene	BDL	1.0	ug/l	6200B	12/12/08	1
Carbon tetrachloride	BDL	1.0	ug/l	6200B	12/12/08	1
Chlorobenzene	BDL	1.0	ug/l	6200B	12/12/08	1
Chlorodibromomethane	BDL	1.0	ug/l	6200B	12/12/08	1
Chloroethane	BDL	1.0	ug/l	6200B	12/12/08	1
Chloroform	BDL	5.0	ug/l	6200B	12/12/08	1
Chloromethane	BDL	5.0	ug/l	6200B	12/12/08	1
2-Chlorotoluene	BDL	2.5	ug/l	6200B	12/12/08	1
4-Chlorotoluene	BDL	1.0	ug/l	6200B	12/12/08	1
1,2-Dibromo-3-Chloropropane	BDL	1.0	ug/l	6200B	12/12/08	1
1,2-Dibromoethane	BDL	5.0	ug/l	6200B	12/12/08	1
Dibromomethane	BDL	1.0	ug/l	6200B	12/12/08	1
1,2-Dichlorobenzene	BDL	1.0	ug/l	6200B	12/12/08	1
1,3-Dichlorobenzene	BDL	1.0	ug/l	6200B	12/12/08	1
1,4-Dichlorobenzene	BDL	1.0	ug/l	6200B	12/12/08	1
Dichlorodifluoromethane	BDL	1.0	ug/l	6200B	12/12/08	1
1,1-Dichloroethane	BDL	5.0	ug/l	6200B	12/12/08	1
1,2-Dichloroethane	BDL	1.0	ug/l	6200B	12/12/08	1
1,1-Dichloroethene	BDL	1.0	ug/l	6200B	12/12/08	1
cis-1,2-Dichloroethene	BDL	1.0	ug/l	6200B	12/12/08	1
trans-1,2-Dichloroethene	BDL	1.0	ug/l	6200B	12/12/08	1
1,2-Dichloropropane	BDL	1.0	ug/l	6200B	12/12/08	1
1,1-Dichloropropene	BDL	1.0	ug/l	6200B	12/12/08	1
	BDL	1.0	ug/l	6200B	12/12/08	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit (PQL)

L379236-02 (EPHNC) - Previous run also had low SURR recovery. Matrix effect.



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REPORT OF ANALYSIS

Chris Fay
Withers & Ravenel Eng. - State Lead
111 MacKenan Drive
Cary, NC 27511

December 24, 2008

Date Received : December 12, 2008
Description : Register
Sample ID : MW-2
Collected By : Chris Fay
Collection Date : 12/11/08 09:30

ESC Sample # : L379236-02
Site ID :
Project # : 02060548

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
1,3-Dichloropropane	BDL	1.0	ug/l	6200B	12/12/08	1
2,2-Dichloropropane	BDL	1.0	ug/l	6200B	12/12/08	1
Di-isopropyl ether	BDL	1.0	ug/l	6200B	12/12/08	1
Ethylbenzene	BDL	1.0	ug/l	6200B	12/12/08	1
Hexachloro-1,3-butadiene	BDL	1.0	ug/l	6200B	12/12/08	1
Isopropylbenzene	BDL	1.0	ug/l	6200B	12/12/08	1
p-Isopropyltoluene	BDL	1.0	ug/l	6200B	12/12/08	1
2-Butanone (MEK)	BDL	1.0	ug/l	6200B	12/12/08	1
Methylene Chloride	BDL	10.	ug/l	6200B	12/12/08	1
4-Methyl-2-pentanone (MIBK)	BDL	5.0	ug/l	6200B	12/12/08	1
Methyl tert-butyl ether	BDL	10.	ug/l	6200B	12/12/08	1
Naphthalene	BDL	1.0	ug/l	6200B	12/12/08	1
n-Propylbenzene	BDL	5.0	ug/l	6200B	12/12/08	1
Styrene	BDL	1.0	ug/l	6200B	12/12/08	1
1,1,1,2-Tetrachloroethane	BDL	1.0	ug/l	6200B	12/12/08	1
1,1,2,2-Tetrachloroethane	BDL	1.0	ug/l	6200B	12/12/08	1
Tetrachloroethene	BDL	1.0	ug/l	6200B	12/12/08	1
Toluene	BDL	1.0	ug/l	6200B	12/12/08	1
1,2,3-Trichlorobenzene	BDL	5.0	ug/l	6200B	12/12/08	1
1,2,4-Trichlorobenzene	BDL	1.0	ug/l	6200B	12/12/08	1
1,1,1-Trichloroethane	BDL	1.0	ug/l	6200B	12/12/08	1
1,1,2-Trichloroethane	BDL	1.0	ug/l	6200B	12/12/08	1
Trichloroethene	BDL	1.0	ug/l	6200B	12/12/08	1
Trichlorofluoromethane	BDL	1.0	ug/l	6200B	12/12/08	1
1,2,3-Trichloropropane	BDL	5.0	ug/l	6200B	12/12/08	1
1,2,4-Trimethylbenzene	BDL	1.0	ug/l	6200B	12/12/08	1
1,3,5-Trimethylbenzene	BDL	1.0	ug/l	6200B	12/12/08	1
Vinyl chloride	BDL	1.0	ug/l	6200B	12/12/08	1
o-Xylene	BDL	1.0	ug/l	6200B	12/12/08	1
m&p-Xylenes	BDL	1.0	ug/l	6200B	12/12/08	1
Surrogate Recovery	BDL	2.0	ug/l	6200B	12/12/08	1
Toluene-d8	100.					
Dibromofluoromethane	63.5		% Rec.	6200B	12/12/08	1
a,a,a-Trifluorotoluene	108.		% Rec.	6200B	12/12/08	1
4-Bromofluorobenzene	81.0		% Rec.	6200B	12/12/08	1
Extractable Petroleum Hydrocarb	120	100				
C9-C18 Aliphatics	BDL	100	ug/l	MADEPE	12/24/08	1
C19-C36 Aliphatics	BDL	100	ug/l	MADEPE	12/24/08	1
C11-C22 Aromatics	120	100	ug/l	MADEPE	12/24/08	1
Surrogate Recovery						
o-Terphenyl				MADEPE	12/19/08	1
1-Chloro-octadecane	60.7		% Rec.	MADEPE	12/19/08	1
2-Fluorobiphenyl	34.9		% Rec.	MADEPE	12/24/08	1
	105.		% Rec.	MADEPE	12/19/08	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit (PQL)

L379236-02 (EPHNC) - Previous run also had low SURR recovery. Matrix effect.



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Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

Chris Fay
Withers & Ravenel Eng. - State Lead
111 MacKenan Drive
Cary, NC 27511

December 24, 2008

Date Received : December 12, 2008
Description : Register
Sample ID : MW-2
Collected By : Chris Fay
Collection Date : 12/11/08 09:30

ESC Sample # : L379236-02
Site ID :
Project # : 02060548

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
2-Bromonaphthanene	77.7					
625 Base/Neutrals w/ TIC			% Rec.	MADEPE	12/19/08	1
Acenaphthene	BDL	1.2	ug/l	625	12/18/08	1.18
Acenaphthylene	BDL	1.2	ug/l	625	12/18/08	1.18
Anthracene	BDL	1.2	ug/l	625	12/18/08	1.18
Benzidine	BDL	59.	ug/l	625	12/18/08	1.18
Benzo(a)anthracene	BDL	1.2	ug/l	625	12/18/08	1.18
Benzo(b)fluoranthene	BDL	1.2	ug/l	625	12/18/08	1.18
Benzo(k)fluoranthene	BDL	1.2	ug/l	625	12/18/08	1.18
Benzo(g,h,i)perylene	BDL	1.2	ug/l	625	12/18/08	1.18
Benzo(a)pyrene	BDL	1.2	ug/l	625	12/18/08	1.18
Bis(2-chlorethoxy)methane	BDL	12.	ug/l	625	12/18/08	1.18
Bis(2-chloroethyl)ether	BDL	12.	ug/l	625	12/18/08	1.18
Bis(2-chloroisopropyl)ether	BDL	12.	ug/l	625	12/18/08	1.18
4-Bromophenyl-phenylether	BDL	12.	ug/l	625	12/18/08	1.18
2-Chloronaphthalene	BDL	12.	ug/l	625	12/18/08	1.18
4-Chlorophenyl-phenylether	BDL	12.	ug/l	625	12/18/08	1.18
Chrysene	BDL	1.2	ug/l	625	12/18/08	1.18
Dibenz(a,h)anthracene	BDL	1.2	ug/l	625	12/18/08	1.18
3,3-Dichlorobenzidine	BDL	1.2	ug/l	625	12/18/08	1.18
2,4-Dinitrotoluene	BDL	12.	ug/l	625	12/18/08	1.18
2,6-Dinitrotoluene	BDL	12.	ug/l	625	12/18/08	1.18
Fluoranthene	BDL	1.2	ug/l	625	12/18/08	1.18
Fluorene	BDL	1.2	ug/l	625	12/18/08	1.18
Hexachlorobenzene	BDL	12.	ug/l	625	12/18/08	1.18
Hexachloro-1,3-butadiene	BDL	12.	ug/l	625	12/18/08	1.18
Hexachlorocyclopentadiene	BDL	12.	ug/l	625	12/18/08	1.18
Hexachloroethane	BDL	12.	ug/l	625	12/18/08	1.18
Indeno(1,2,3-cd)pyrene	BDL	12.	ug/l	625	12/18/08	1.18
Isophorone	BDL	12.	ug/l	625	12/18/08	1.18
Naphthalene	3.0	1.2	ug/l	625	12/18/08	1.18
Nitrobenzene	BDL	12.	ug/l	625	12/18/08	1.18
n-Nitrosodimethylamine	BDL	59.	ug/l	625	12/18/08	1.18
n-Nitrosodiphenylamine	BDL	12.	ug/l	625	12/18/08	1.18
n-Nitrosodi-n-propylamine	BDL	12.	ug/l	625	12/18/08	1.18
Phenanthrene	BDL	1.2	ug/l	625	12/18/08	1.18
Benzylbutyl phthalate	BDL	12.	ug/l	625	12/18/08	1.18
Bis(2-ethylhexyl)phthalate	BDL	12.	ug/l	625	12/18/08	1.18
Di-n-butyl phthalate	BDL	12.	ug/l	625	12/18/08	1.18
Diethyl phthalate	BDL	12.	ug/l	625	12/18/08	1.18
Dimethyl phthalate	BDL	12.	ug/l	625	12/18/08	1.18
Di-n-octyl phthalate	BDL	12.	ug/l	625	12/18/08	1.18
Pyrene	BDL	1.2	ug/l	625	12/18/08	1.18

BDL - Below Detection Limit
Det. Limit - Practical Quantitation Limit(PQL)
L379236-02 (EPHNC) - Previous run also had low SURR recovery. Matrix effect.



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Est. 1970

REPORT OF ANALYSIS

Chris Fay
Withers & Ravenel Eng. - State Lead
111 MacKenan Drive
Cary, NC 27511

December 24, 2008

Date Received : December 12, 2008
Description : Register

ESC Sample # : L379236-02

Sample ID : MW-2

Site ID :

Collected By : Chris Fay
Collection Date : 12/11/08 09:30

Project # : 02060548

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
1,2,4-Trichlorobenzene	BDL	12.	ug/l	625	12/18/08	1.18
Acid Extractables						
4-Chloro-3-methylphenol	BDL	12.	ug/l	625	12/18/08	1.18
2-Chlorophenol	BDL	12.	ug/l	625	12/18/08	1.18
2,4-Dichlorophenol	BDL	12.	ug/l	625	12/18/08	1.18
2,4-Dimethylphenol	BDL	12.	ug/l	625	12/18/08	1.18
4,6-Dinitro-2-methylphenol	BDL	12.	ug/l	625	12/18/08	1.18
2,4-Dinitrophenol	BDL	12.	ug/l	625	12/18/08	1.18
2-Nitrophenol	BDL	12.	ug/l	625	12/18/08	1.18
4-Nitrophenol	BDL	12.	ug/l	625	12/18/08	1.18
Pentachlorophenol	BDL	12.	ug/l	625	12/18/08	1.18
Phenol	BDL	12.	ug/l	625	12/18/08	1.18
2,4,6-Trichlorophenol	BDL	12.	ug/l	625	12/18/08	1.18
Surrogate Recovery						
Nitrobenzene-d5	74.9		% Rec.	625	12/18/08	1.18
2-Fluorobiphenyl	80.8		% Rec.	625	12/18/08	1.18
p-Terphenyl-d14	104.		% Rec.	625	12/18/08	1.18
Phenol-d5	33.0		% Rec.	625	12/18/08	1.18
2-Fluorophenol	44.9		% Rec.	625	12/18/08	1.18
2,4,6-Tribromophenol	86.9		% Rec.	625	12/18/08	1.18

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit (PQL)

Note:

The reported analytical results relate only to the sample submitted.

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Reported: 12/24/08 17:17 Printed: 12/24/08 17:18

L379236-02 (EPHNC) - Previous run also had low SURR recovery. Matrix effect.

Attachment A
List of Analytes with QC Qualifiers

Sample Number	Work Group	Sample Type	Analyte	Run ID	Qualifier
L379236-02	WG399494	SAMP	1-Chloro-octadecane	R572533	J2
	WG398171	SAMP	Dibromofluoromethane	R561027	J2

Attachment B
Explanation of QC Qualifier Codes

Qualifier	Meaning
J2	Surrogate recovery limits have been exceeded; values are outside lower control limits

Qualifier Report Information

ESC utilizes sample and result qualifiers as set forth by the EPA Contract Laboratory Program and as required by most certifying bodies including NELAC. In addition to the EPA qualifiers adopted by ESC, we have implemented ESC qualifiers to provide more information pertaining to our analytical results. Each qualifier is designated in the qualifier explanation as either EPA or ESC. Data qualifiers are intended to provide the ESC client with more detailed information concerning the potential bias of reported data. Because of the wide range of constituents and variety of matrices incorporated by most EPA methods, it is common for some compounds to fall outside of established ranges. These exceptions are evaluated and all reported data is valid and useable unless qualified as 'R' (Rejected).

Definitions

- Accuracy - The relationship of the observed value of a known sample to the true value of a known sample. Represented by percent recovery and relevant to samples such as: control samples, matrix spike recoveries, surrogate recoveries, etc.
- Precision - The agreement between a set of samples or between duplicate samples. Relates to how close together the results are and is represented by Relative Percent Difference.
- Surrogate - Organic compounds that are similar in chemical composition, extraction, and chromatography to analytes of interest. The surrogates are used to determine the probable response of the group of analytes that are chemically related to the surrogate compound. Surrogates are added to the sample and carried through all stages of preparation and analyses.
- TIC - Tentatively Identified Compound: Compounds detected in samples that are not target compounds, internal standards, system monitoring compounds, or surrogates.

Summary of Remarks For Samples Printed
12/24/08 at 17:18:18

TSR Signing Reports: 134
R5 - Desired TAT

Log all V6230 as V6210, waters in ppb

Sample: L379236-01 Account: WITHRAV Received: 12/12/08 07:45 Due Date: 12/19/08 00:00 RPT Date: 12/24/08 17:17

Sample: L379236-02 Account: WITHRAV Received: 12/12/08 07:45 Due Date: 12/19/08 00:00 RPT Date: 12/24/08 17:17



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Chris Fay
111 Mackenan Drive
Cary, NC 27511

Quality Assurance Report
Level II

L379236

December 24, 2008

Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
1,1,1,2-Tetrachloroethane	< .001	mg/l			WG398171	12/12/08 16:31
1,1,1-Trichloroethane	< .001	mg/l			WG398171	12/12/08 16:31
1,1,2,2-Tetrachloroethane	< .001	mg/l			WG398171	12/12/08 16:31
1,1,2-Trichloroethane	< .001	mg/l			WG398171	12/12/08 16:31
1,1-Dichloroethane	< .001	mg/l			WG398171	12/12/08 16:31
1,1-Dichloroethene	< .001	mg/l			WG398171	12/12/08 16:31
1,1-Dichloropropene	< .001	mg/l			WG398171	12/12/08 16:31
1,2,3-Trichlorobenzene	< .001	mg/l			WG398171	12/12/08 16:31
1,2,3-Trichloropropane	< .001	mg/l			WG398171	12/12/08 16:31
1,2,4-Trichlorobenzene	< .001	mg/l			WG398171	12/12/08 16:31
1,2,4-Trimethylpropane	< .001	mg/l			WG398171	12/12/08 16:31
1,2-Dibromo-3-Chloropropane	< .001	mg/l			WG398171	12/12/08 16:31
1,2-Dibromoethane	< .005	mg/l			WG398171	12/12/08 16:31
1,2-Dichlorobenzene	< .001	mg/l			WG398171	12/12/08 16:31
1,2-Dichloroethane	< .001	mg/l			WG398171	12/12/08 16:31
1,2-Dichloropropane	< .001	mg/l			WG398171	12/12/08 16:31
1,3,5-Trimethylbenzene	< .001	mg/l			WG398171	12/12/08 16:31
1,3-Dichlorobenzene	< .001	mg/l			WG398171	12/12/08 16:31
1,3-Dichloropropane	< .001	mg/l			WG398171	12/12/08 16:31
1,4-Dichlorobenzene	< .001	mg/l			WG398171	12/12/08 16:31
2,2-Dichloropropane	< .001	mg/l			WG398171	12/12/08 16:31
2-Butanone (MEK)	< .001	mg/l			WG398171	12/12/08 16:31
2-Chlorotoluene	< .01	mg/l			WG398171	12/12/08 16:31
4-Chlorotoluene	< .001	mg/l			WG398171	12/12/08 16:31
4-Methyl-2-pentanone (MIBK)	< .001	mg/l			WG398171	12/12/08 16:31
Acetone	< .01	mg/l			WG398171	12/12/08 16:31
Acrolein	< .05	mg/l			WG398171	12/12/08 16:31
Acrylonitrile	< .05	mg/l			WG398171	12/12/08 16:31
Benzene	< .01	mg/l			WG398171	12/12/08 16:31
Bromobenzene	< .001	mg/l			WG398171	12/12/08 16:31
Bromodichloromethane	< .001	mg/l			WG398171	12/12/08 16:31
Bromoform	< .001	mg/l			WG398171	12/12/08 16:31
Bromomethane	< .001	mg/l			WG398171	12/12/08 16:31
Carbon tetrachloride	< .005	mg/l			WG398171	12/12/08 16:31
Chlorobenzene	< .001	mg/l			WG398171	12/12/08 16:31
Chlorodibromomethane	< .001	mg/l			WG398171	12/12/08 16:31
Chloroethane	< .001	mg/l			WG398171	12/12/08 16:31
Chloroform	< .001	mg/l			WG398171	12/12/08 16:31
Chloromethane	< .005	mg/l			WG398171	12/12/08 16:31
cis-1,2-Dichloroethene	< .001	mg/l			WG398171	12/12/08 16:31
Di-isopropyl ether	< .001	mg/l			WG398171	12/12/08 16:31
Dibromomethane	< .001	mg/l			WG398171	12/12/08 16:31
Dichlorodifluoromethane	< .001	mg/l			WG398171	12/12/08 16:31
Ethylbenzene	< .005	mg/l			WG398171	12/12/08 16:31
Hexachloro-1,3-butadiene	< .001	mg/l			WG398171	12/12/08 16:31
Isopropylbenzene	< .001	mg/l			WG398171	12/12/08 16:31
m&p-Xylenes	< .001	mg/l			WG398171	12/12/08 16:31
Methyl tert-butyl ether	< .002	mg/l			WG398171	12/12/08 16:31
Methylene Chloride	< .001	mg/l			WG398171	12/12/08 16:31
n-Butylbenzene	< .005	mg/l			WG398171	12/12/08 16:31
n-Propylbenzene	< .001	mg/l			WG398171	12/12/08 16:31
Naphthalene	< .001	mg/l			WG398171	12/12/08 16:31
o-Xylene	< .005	mg/l			WG398171	12/12/08 16:31
p-Isopropyltoluene	< .001	mg/l			WG398171	12/12/08 16:31
sec-Butylbenzene	< .001	mg/l			WG398171	12/12/08 16:31
Styrene	< .001	mg/l			WG398171	12/12/08 16:31
tert-Butylbenzene	< .001	mg/l			WG398171	12/12/08 16:31
Tetrachloroethane	< .001	mg/l			WG398171	12/12/08 16:31
	< .001	mg/l			WG398171	12/12/08 16:31

* Performance of this Analyte is outside of established criteria.
For additional information, please see Attachment A 'List of Analytes with QC Qualifiers.'



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Chris Fay
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Cary, NC 27511

Quality Assurance Report
Level II

L379236

December 24, 2008

Tax I.D. 62-0814289
Est. 1970

Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
Toluene	< .005	mg/l				
trans-1,2-Dichloroethene	< .001	mg/l			WG398171	12/12/08 16:31
Trichloroethene	< .001	mg/l			WG398171	12/12/08 16:31
Trichlorofluoromethane	< .005	mg/l			WG398171	12/12/08 16:31
Vinyl chloride	< .001	mg/l			WG398171	12/12/08 16:31
4-Bromofluorobenzene	< .001	mg/l			WG398171	12/12/08 16:31
Dibromofluoromethane		% Rec.	84.32	75-128	WG398171	12/12/08 16:31
Toluene-d8		% Rec.	103.2	79-125	WG398171	12/12/08 16:31
a,a,a-Trifluorotoluene		% Rec.	99.70	87-114	WG398171	12/12/08 16:31
		% Rec.	107.2	84-114	WG398171	12/12/08 16:31
Lead	< .005	mg/l				
1,2,4-Trichlorobenzene	< .01	ppm			WG398198	12/16/08 01:03
2,4,6-Trichlorophenol	< .01	ppm			WG398404	12/16/08 16:51
2,4-Dichlorophenol	< .01	ppm			WG398404	12/16/08 16:51
2,4-Dimethylphenol	< .01	ppm			WG398404	12/16/08 16:51
2,4-Dinitrophenol	< .01	ppm			WG398404	12/16/08 16:51
2,4-Dinitrotoluene	< .01	ppm			WG398404	12/16/08 16:51
2,6-Dinitrotoluene	< .01	ppm			WG398404	12/16/08 16:51
2-Chloronaphthalene	< .01	ppm			WG398404	12/16/08 16:51
2-Chlorophenol	< .01	ppm			WG398404	12/16/08 16:51
2-Nitrophenol	< .01	ppm			WG398404	12/16/08 16:51
3,3-Dichlorobenzidine	< .01	ppm			WG398404	12/16/08 16:51
4,6-Dinitro-2-methylphenol	< .01	ppm			WG398404	12/16/08 16:51
4-Bromophenyl-phenylether	< .01	ppm			WG398404	12/16/08 16:51
4-Chloro-3-methylphenol	< .01	ppm			WG398404	12/16/08 16:51
4-Chlorophenyl-phenylether	< .01	ppm			WG398404	12/16/08 16:51
4-Nitrophenol	< .01	ppm			WG398404	12/16/08 16:51
Acenaphthene	< .01	ppm			WG398404	12/16/08 16:51
Acenaphthylene	< .01	ppm			WG398404	12/16/08 16:51
Anthracene	< .01	ppm			WG398404	12/16/08 16:51
Benzidine	< .01	ppm			WG398404	12/16/08 16:51
Benzo(a)anthracene	< .01	ppm			WG398404	12/16/08 16:51
Benzo(a)pyrene	< .01	ppm			WG398404	12/16/08 16:51
Benzo(b)fluoranthene	< .01	ppm			WG398404	12/16/08 16:51
Benzo(g,h,i)perylene	< .01	ppm			WG398404	12/16/08 16:51
Benzo(k)fluoranthene	< .01	ppm			WG398404	12/16/08 16:51
Benzylbutyl phthalate	< .01	ppm			WG398404	12/16/08 16:51
Bis(2-chloroethoxy)methane	< .01	ppm			WG398404	12/16/08 16:51
Bis(2-chloroethyl) ether	< .01	ppm			WG398404	12/16/08 16:51
Bis(2-chloroisopropyl) ether	< .01	ppm			WG398404	12/16/08 16:51
Bis(2-ethylhexyl) phthalate	< .01	ppm			WG398404	12/16/08 16:51
Chrysene	< .01	ppm			WG398404	12/16/08 16:51
Di-n-butyl phthalate	< .01	ppm			WG398404	12/16/08 16:51
Di-n-octyl phthalate	< .01	ppm			WG398404	12/16/08 16:51
Dibenz(a,h)anthracene	< .01	ppm			WG398404	12/16/08 16:51
Diethyl phthalate	< .01	ppm			WG398404	12/16/08 16:51
Dimethyl phthalate	< .01	ppm			WG398404	12/16/08 16:51
Fluoranthene	< .01	ppm			WG398404	12/16/08 16:51
Fluorene	< .01	ppm			WG398404	12/16/08 16:51
Hexachloro-1,3-butadiene	< .01	ppm			WG398404	12/16/08 16:51
Hexachlorobenzene	< .01	ppm			WG398404	12/16/08 16:51
Hexachlorocyclopentadiene	< .01	ppm			WG398404	12/16/08 16:51
Hexachloroethane	< .01	ppm			WG398404	12/16/08 16:51
Indeno(1,2,3-cd)pyrene	< .01	ppm			WG398404	12/16/08 16:51
Isophorone	< .01	ppm			WG398404	12/16/08 16:51

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Tax I.D. 62-0814289

Est. 1970

Withers & Ravenel Eng. - State Lead
Chris Fay
111 MacKenan Drive
Cary, NC 27511

Quality Assurance Report
Level II

L379236

December 24, 2008

Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
n-Nitrosodi-n-propylamine	< .01	ppm			WG398404	12/16/08 16:51
n-Nitrosodimethylamine	< .05	ppm			WG398404	12/16/08 16:51
n-Nitrosodiphenylamine	< .01	ppm			WG398404	12/16/08 16:51
Napthalene	< .01	ppm			WG398404	12/16/08 16:51
Nitrobenzene	< .01	ppm			WG398404	12/16/08 16:51
Pentachlorophenol	< .01	ppm			WG398404	12/16/08 16:51
Phenanthrene	< .01	ppm			WG398404	12/16/08 16:51
Phenol	< .01	ppm			WG398404	12/16/08 16:51
Pyrene	< .01	ppm			WG398404	12/16/08 16:51
2,4,6-Tribromophenol		ppm			WG398404	12/16/08 16:51
2-Fluorobiphenyl	% Rec.	87.09	10-148		WG398404	12/16/08 16:51
2-Fluorophenol	% Rec.	90.01	26-122		WG398404	12/16/08 16:51
Nitrobenzene-d5	% Rec.	42.06	10-87		WG398404	12/16/08 16:51
Phenol-d5	% Rec.	68.94	12-120		WG398404	12/16/08 16:51
p-Terphenyl-d14	% Rec.	30.46	10-67		WG398404	12/16/08 16:51
	% Rec.	95.62	34-149		WG398404	12/16/08 16:51

Analyte	Units	Duplicate			Limit	Ref Samp	Batch
		Result	Duplicate	RPD			
Lead	mg/l	0.00	0.00	0.00	20	L379236-01	WG398198

Analyte	Units	Laboratory Control Sample		% Rec	Limit	Batch
		Known Val	Result			
1,1,1,2-Tetrachloroethane	mg/l	.05	0.0546	109.	75-134	WG398171
1,1,1-Trichloroethane	mg/l	.05	0.0567	113.	67-137	WG398171
1,1,2,2-Tetrachloroethane	mg/l	.05	0.0419	83.8	72-128	WG398171
1,1,2-Trichloroethane	mg/l	.05	0.0448	89.7	79-123	WG398171
1,1-Dichloroethane	mg/l	.05	0.0515	103.	67-133	WG398171
1,1-Dichloroethene	mg/l	.05	0.0541	108.	60-130	WG398171
1,1-Dichloropropene	mg/l	.05	0.0574	115.	68-132	WG398171
1,2,3-Trichlorobenzene	mg/l	.05	0.0445	89.1	63-138	WG398171
1,2,3-Trichloropropane	mg/l	.05	0.0430	86.0	68-130	WG398171
1,2,4-Trichlorobenzene	mg/l	.05	0.0474	94.8	65-137	WG398171
1,2,4-Trimethylbenzene	mg/l	.05	0.0554	111.	72-135	WG398171
1,2-Dibromo-3-Chloropropane	mg/l	.05	0.0326	65.2	55-134	WG398171
1,2-Dibromoethane	mg/l	.05	0.0427	85.4	75-126	WG398171
1,2-Dichlorobenzene	mg/l	.05	0.0485	97.0	75-122	WG398171
1,2-Dichloroethane	mg/l	.05	0.0457	91.5	63-137	WG398171
1,2-Dichloropropane	mg/l	.05	0.0502	100.	74-122	WG398171
1,3,5-Trimethylbenzene	mg/l	.05	0.0571	114.	73-134	WG398171
1,3-Dichlorobenzene	mg/l	.05	0.0517	103.	73-131	WG398171
1,3-Dichloropropane	mg/l	.05	0.0433	86.5	77-119	WG398171
1,4-Dichlorobenzene	mg/l	.05	0.0490	98.0	70-121	WG398171
2,2-Dichloropropane	mg/l	.05	0.0535	107.	46-151	WG398171
2-Butanone (MEK)	mg/l	.25	0.179	71.5	60-142	WG398171
2-Chlorotoluene	mg/l	.05	0.183	73.3	53-132	WG398171
4-Chlorotoluene	mg/l	.05	0.0540	108.	74-128	WG398171
4-Methyl-2-pentanone (MIBK)	mg/l	.25	0.0535	107.	74-130	WG398171
Acetone	mg/l	.25	0.167	66.7	48-134	WG398171
Acrolein	mg/l	.25	0.140	56.2	6-182	WG398171
Acrylonitrile	mg/l	.25	0.181	72.3	60-140	WG398171
Benzene	mg/l	.05	0.0487	97.5	67-126	WG398171
Bromobenzene	mg/l	.05	0.0505	101.	76-123	WG398171
Bromodichloromethane	mg/l	.05	0.0514	103.	68-133	WG398171
Bromoform	mg/l	.05	0.0461	92.2	60-139	WG398171
Bromomethane	mg/l	.05	0.0627	125.	45-175	WG398171
Carbon tetrachloride	mg/l	.05	0.0591	118.	64-141	WG398171

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Quality Assurance Report
Level II

L379236

December 24, 2008

Analyte	Laboratory Control		Sample Result	% Rec	Limit	Batch
	Units	Known Val				
Chlorobenzene	mg/l	.05	0.0523	105.	77-125	WG398171
Chlorodibromomethane	mg/l	.05	0.0488	97.6	73-138	WG398171
Chloroethane	mg/l	.05	0.0598	120.	49-155	WG398171
Chloroform	mg/l	.05	0.0509	102.	66-126	WG398171
Chloromethane	mg/l	.05	0.0557	111.	45-152	WG398171
cis-1,2-Dichloroethene	mg/l	.05	0.0504	101.	72-128	WG398171
Di-isopropyl ether	mg/l	.05	0.0452	90.4	63-139	WG398171
Dibromomethane	mg/l	.05	0.0433	86.7	73-125	WG398171
Dichlorodifluoromethane	mg/l	.05	0.0589	118.	39-189	WG398171
Ethylbenzene	mg/l	.05	0.0554	111.	76-129	WG398171
Hexachloro-1,3-butadiene	mg/l	.05	0.0553	111.	67-135	WG398171
Isopropylbenzene	mg/l	.05	0.0565	113.	73-132	WG398171
m&p-Xylenes	mg/l	.1	0.112	112.	74-128	WG398171
Methyl tert-butyl ether	mg/l	.05	0.0393	78.6	51-142	WG398171
Methylene Chloride	mg/l	.05	0.0451	90.3	64-125	WG398171
n-Butylbenzene	mg/l	.05	0.0577	115.	63-142	WG398171
n-Propylbenzene	mg/l	.05	0.0570	114.	71-132	WG398171
Naphthalene	mg/l	.05	0.0362	72.5	56-145	WG398171
o-Xylene	mg/l	.05	0.0539	108.	78-128	WG398171
p-Isopropyltoluene	mg/l	.05	0.0579	116.	68-138	WG398171
sec-Butylbenzene	mg/l	.05	0.0576	115.	70-135	WG398171
Styrene	mg/l	.05	0.0521	104.	78-130	WG398171
tert-Butylbenzene	mg/l	.05	0.0575	115.	72-134	WG398171
Tetrachloroethene	mg/l	.05	0.0589	118.	67-135	WG398171
Toluene	mg/l	.05	0.0512	102.	72-122	WG398171
trans-1,2-Dichloroethene	mg/l	.05	0.0532	106.	67-129	WG398171
Trichloroethene	mg/l	.05	0.0526	105.	74-126	WG398171
Trichlorofluoromethane	mg/l	.05	0.0765	153.	54-156	WG398171
Vinyl chloride	mg/l	.05	0.0514	103.	55-153	WG398171
4-Bromofluorobenzene				96.98	75-128	WG398171
Dibromofluoromethane				97.53	79-125	WG398171
Toluene-d8				101.6	87-114	WG398171
a, a, a-Trifluorotoluene				105.1	84-114	WG398171
Lead	mg/l	1.13	1.06	93.8	85-115	WG398198
1,2,4-Trichlorobenzene	ppm	.01	0.00714	71.4	26-103	WG398404
2,4,6-Trichlorophenol	ppm	.01	0.00884	88.4	49-118	WG398404
2,4-Dichlorophenol	ppm	.01	0.00797	79.7	46-115	WG398404
2,4-Dimethylphenol	ppm	.01	0.0112	112.	40-124	WG398404
2,4-Dinitrophenol	ppm	.01	0.00710	71.0	10-125	WG398404
2,4-Dinitrotoluene	ppm	.01	0.00835	83.5	56-128	WG398404
2,6-Dinitrotoluene	ppm	.01	0.00852	85.2	56-128	WG398404
2-Chloronaphthalene	ppm	.01	0.00843	84.3	56-121	WG398404
2-Chlorophenol	ppm	.01	0.00784	78.4	44-110	WG398404
2-Nitrophenol	ppm	.01	0.00769	76.9	38-114	WG398404
3,3-Dichlorobenzidine	ppm	.01	0.00911	91.1	35-118	WG398404
4,6-Dinitro-2-methylphenol	ppm	.01	0.00623	62.3	46-145	WG398404
4-Bromophenyl-phenylether	ppm	.01	0.00943	94.3	24-119	WG398404
4-Chloro-3-methylphenol	ppm	.01	0.00765	76.5	45-105	WG398404
4-Chlorophenyl-phenylether	ppm	.01	0.00979	97.9	47-116	WG398404
4-Nitrophenol	ppm	.01	0.00979	97.9	49-116	WG398404
Acenaphthene	ppm	.01	0.00226	22.6	10-66	WG398404
Acenaphthylene	ppm	.01	0.00829	82.9	48-110	WG398404
Anthracene	ppm	.01	0.00914	91.4	48-113	WG398404
Benzidine	ppm	.01	0.00974	97.4	55-127	WG398404
				4.90	0-46	WG398404

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Quality Assurance Report
Level II
L379236

December 24, 2008

Analyte	Laboratory Control		Sample	% Rec	Limit	Batch
	Units	Known Val	Result			
Benzo(a)anthracene	ppm	.01	0.00954	95.4	57-115	WG398404
Benzo(a)pyrene	ppm	.01	0.00958	95.8	63-125	WG398404
Benzo(b)fluoranthene	ppm	.01	0.00832	83.2	50-123	WG398404
Benzo(g,h,i)perylene	ppm	.01	0.00915	91.5	39-143	WG398404
Benzo(k)fluoranthene	ppm	.01	0.0103	103.	45-126	WG398404
Benzylbutyl phthalate	ppm	.01	0.00611	61.1	22-154	WG398404
Bis(2-chlorethoxy)methane	ppm	.01	0.00934	93.4	42-116	WG398404
Bis(2-chloroethyl)ether	ppm	.01	0.00773	77.3	26-115	WG398404
Bis(2-chloroisopropyl)ether	ppm	.01	0.00830	83.0	32-115	WG398404
Bis(2-ethylhexyl)phthalate	ppm	.01	0.00979	97.9	47-143	WG398404
Chrysene	ppm	.01	0.00975	97.5	58-113	WG398404
Di-n-butyl phthalate	ppm	.01	0.00854	85.4	51-131	WG398404
Di-n-octyl phthalate	ppm	.01	0.00942	94.2	51-138	WG398404
Dibenz(a,h)anthracene	ppm	.01	0.00906	90.6	39-144	WG398404
Diethyl phthalate	ppm	.01	0.00715	71.5	36-128	WG398404
Dimethyl phthalate	ppm	.01	0.00461	46.1	10-135	WG398404
Fluoranthene	ppm	.01	0.00979	97.9	53-119	WG398404
Fluorene	ppm	.01	0.00878	87.8	49-116	WG398404
Hexachloro-1,3-butadiene	ppm	.01	0.00806	80.6	21-116	WG398404
Hexachlorobenzene	ppm	.01	0.00985	98.5	51-121	WG398404
Hexachlorocyclopentadiene	ppm	.01	0.00679	67.9	4-126	WG398404
Hexachloroethane	ppm	.01	0.00636	63.6	15-109	WG398404
Indeno(1,2,3-cd)pyrene	ppm	.01	0.00915	91.5	40-143	WG398404
Isophorone	ppm	.01	0.00779	77.9	48-126	WG398404
n-Nitrosodi-n-propylamine	ppm	.01	0.00960	96.0	47-122	WG398404
n-Nitrosodimethylamine	ppm	.01	0.00513	51.3	11-69	WG398404
n-Nitrosodiphenylamine	ppm	.01	0.0102	102.	59-143	WG398404
Naphthalene	ppm	.01	0.00763	76.3	29-103	WG398404
Nitrobenzene	ppm	.01	0.00712	71.2	31-105	WG398404
Pentachlorophenol	ppm	.01	0.00721	72.1	20-122	WG398404
Phenanthrene	ppm	.01	0.00946	94.6	54-112	WG398404
Phenol	ppm	.01	0.00339	33.9	17-52	WG398404
Pyrene	ppm	.01	0.00935	93.5	46-130	WG398404
2,4,6-Tribromophenol				93.11	10-148	WG398404
2-Fluorobiphenyl				86.35	26-122	WG398404
2-Fluorophenol				41.34	10-87	WG398404
Nitrobenzene-d5				73.20	12-120	WG398404
Phenol-d5				28.35	10-67	WG398404
p-Terphenyl-d14				95.81	34-149	WG398404

Analyte	Laboratory Control		Sample Duplicate	Limit	RPD	Limit	Batch
	Units	Result	Ref %Rec				
1,1,1,2-Tetrachloroethane	mg/l	0.053	0.054 106.	75-134	2.71	20	WG398171
1,1,1-Trichloroethane	mg/l	0.057	0.056 115.	67-137	1.50	20	WG398171
1,1,2,2-Tetrachloroethane	mg/l	0.041	0.041 82.0	72-128	1.74	20	WG398171
1,1,2-Trichloroethane	mg/l	0.044	0.044 90.0	79-123	0.154	20	WG398171
1,1-Dichloroethane	mg/l	0.052	0.051 104.	67-133	1.20	20	WG398171
1,1-Dichloroethene	mg/l	0.054	0.054 109.	60-130	1.12	20	WG398171
1,1-Dichloropropene	mg/l	0.057	0.057 114.	68-132	0.788	20	WG398171
1,2,3-Trichlorobenzene	mg/l	0.046	0.044 94.0	63-138	4.96	20	WG398171
1,2,3-Trichloropropane	mg/l	0.042	0.043 84.0	68-130	2.02	20	WG398171
1,2,4-Trichlorobenzene	mg/l	0.048	0.047 97.0	65-137	2.44	20	WG398171
1,2,4-Trimethylbenzene	mg/l	0.053	0.055 107.	72-135	3.29	20	WG398171
1,2-Dibromo-3-Chloropropane	mg/l	0.034	0.032 70.0	55-134	6.65	20	WG398171
1,2-Dibromoethane	mg/l	0.042	0.042 85.0	75-126	0.584	20	WG398171
1,2-Dichlorobenzene	mg/l	0.048	0.048 98.0	75-122	0.557	20	WG398171
1,2-Dichloroethane	mg/l	0.046	0.045 92.0	63-137	0.612	20	WG398171

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Quality Assurance Report
Level II

L379236

December 24, 2008

Analyte	Laboratory Control		Sample Duplicate		Limit	RPD	Limit	Batch
	Units	Result	Ref	%Rec				
1,2-Dichloropropane	mg/l	0.050	0.050	101.	74-122	1.18	20	WG398171
1,3,5-Trimethylbenzene	mg/l	0.055	0.057	111.	73-134	2.96	20	WG398171
1,3-Dichlorobenzene	mg/l	0.049	0.051	100.	73-131	3.68	20	WG398171
1,3-Dichloropropane	mg/l	0.043	0.043	87.0	77-119	0.068	20	WG398171
1,4-Dichlorobenzene	mg/l	0.049	0.049	99.0	70-121	0.518	20	WG398171
2,2-Dichloropropane	mg/l	0.054	0.053	109.	46-151	1.53	20	WG398171
2-Butanone (MEK)	mg/l	0.194	0.183	78.0	53-132	5.60	20	WG398171
2-Chlorotoluene	mg/l	0.052	0.054	105.	74-128	2.69	20	WG398171
4-Chlorotoluene	mg/l	0.051	0.053	102.	74-130	4.62	20	WG398171
4-Methyl-2-pentanone (MIBK)	mg/l	0.186	0.179	74.0	60-142	3.97	20	WG398171
Acetone	mg/l	0.175	0.167	70.0	48-134	4.63	20	WG398171
Acrolein	mg/l	0.148	0.140	59.0	6-182	5.16	39	WG398171
Acrylonitrile	mg/l	0.190	0.181	76.0	60-140	4.82	20	WG398171
Benzene	mg/l	0.049	0.048	99.0	67-126	1.32	20	WG398171
Bromobenzene	mg/l	0.049	0.050	99.0	76-123	2.20	20	WG398171
Bromodichloromethane	mg/l	0.051	0.051	102.	68-133	0.762	20	WG398171
Bromoform	mg/l	0.046	0.046	92.0	60-139	0.125	20	WG398171
Bromomethane	mg/l	0.063	0.062	127.	45-175	1.03	20	WG398171
Carbon tetrachloride	mg/l	0.059	0.059	118.	64-141	0.249	20	WG398171
Chlorobenzene	mg/l	0.051	0.052	103.	77-125	1.55	20	WG398171
Chlorodibromomethane	mg/l	0.048	0.048	97.0	73-138	0.758	20	WG398171
Chloroethane	mg/l	0.058	0.059	117.	49-155	1.81	20	WG398171
Chloroform	mg/l	0.051	0.050	102.	66-126	0.601	20	WG398171
Chloromethane	mg/l	0.056	0.055	113.	45-152	1.39	20	WG398171
cis-1,2-Dichloroethene	mg/l	0.051	0.050	102.	72-128	1.64	20	WG398171
Di-isopropyl ether	mg/l	0.046	0.045	92.0	63-139	1.63	20	WG398171
Dibromomethane	mg/l	0.044	0.043	89.0	73-125	2.63	20	WG398171
Dichlorodifluoromethane	mg/l	0.059	0.058	118.	39-189	0.135	24	WG398171
Ethylbenzene	mg/l	0.054	0.055	109.	76-129	1.42	20	WG398171
Hexachloro-1,3-butadiene	mg/l	0.055	0.055	112.	67-135	1.19	20	WG398171
Isopropylbenzene	mg/l	0.055	0.056	110.	73-132	2.52	20	WG398171
m&p-Xylenes	mg/l	0.110	0.112	110.	74-128	1.92	20	WG398171
Methyl tert-butyl ether	mg/l	0.040	0.039	80.0	51-142	2.02	20	WG398171
Methylene Chloride	mg/l	0.045	0.045	92.0	64-125	1.62	20	WG398171
n-Butylbenzene	mg/l	0.057	0.057	115.	63-142	0.549	20	WG398171
n-Propylbenzene	mg/l	0.055	0.057	110.	71-132	3.34	20	WG398171
Naphthalene	mg/l	0.040	0.036	80.0	56-145	9.85	20	WG398171
o-Xylene	mg/l	0.053	0.053	106.	78-128	1.53	20	WG398171
p-Isopropyltoluene	mg/l	0.055	0.057	111.	68-138	4.21	20	WG398171
sec-Butylbenzene	mg/l	0.055	0.057	112.	70-135	3.05	20	WG398171
Styrene	mg/l	0.051	0.052	102.	78-130	2.31	20	WG398171
tert-Butylbenzene	mg/l	0.055	0.057	111.	72-134	3.69	20	WG398171
Tetrachloroethene	mg/l	0.057	0.058	114.	67-135	2.99	20	WG398171
Toluene	mg/l	0.051	0.051	102.	72-122	0.220	20	WG398171
trans-1,2-Dichloroethene	mg/l	0.053	0.053	107.	67-129	0.722	20	WG398171
Trichloroethene	mg/l	0.053	0.052	108.	74-126	2.15	20	WG398171
Trichlorofluoromethane	mg/l	0.074	0.076	148.	54-156	3.14	20	WG398171
Vinyl chloride	mg/l	0.051	0.051	103.	55-153	0.022	20	WG398171
4-Bromofluorobenzene			94.92		75-128			WG398171
Dibromofluoromethane			98.63		79-125			WG398171
Toluene-d8			101.8		87-114			WG398171
a,a,a-Trifluorotoluene			105.3		84-114			WG398171
1,2,4-Trichlorobenzene	ppm	0.007	0.007	73.0	26-103	1.53	38	WG398404
2,4,6-Trichlorophenol	ppm	0.008	0.008	88.0	49-118	0.00	28	WG398404
2,4-Dichlorophenol	ppm	0.008	0.007	82.0	46-115	3.21	28	WG398404
2,4-Dimethylphenol	ppm	0.011	0.011	117.	40-124	4.80	36	WG398404

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Tax I.D. 62-0814289

Est. 1970

Withers & Ravenel Eng. - State Lead
Chris Fay
111 MacKenan Drive
Cary, NC 27511

Quality Assurance Report
Level II

L379236

December 24, 2008

Analyte	Laboratory Control		Sample Duplicate		Limit	RPD	Limit	Batch
	Units	Result	Ref	%Rec				
2,4-Dinitrophenol	ppm	0.008	0.007	84.0	10-125	16.2	50	WG398404
2,4-Dinitrotoluene	ppm	0.008	0.008	87.0	56-128	4.34	24	WG398404
2,6-Dinitrotoluene	ppm	0.008	0.008	88.0	56-121	3.35	23	WG398404
2-Chloronaphthalene	ppm	0.008	0.008	86.0	44-110	1.53	30	WG398404
2-Chlorophenol	ppm	0.007	0.007	77.0	38-114	1.28	36	WG398404
2-Nitrophenol	ppm	0.007	0.007	80.0	35-118	3.83	35	WG398404
3,3-Dichlorobenzidine	ppm	0.009	0.009	94.0	46-145	2.60	31	WG398404
4,6-Dinitro-2-methylphenol	ppm	0.007	0.006	71.0	24-119	12.8	50	WG398404
4-Bromophenyl-phenylether	ppm	0.009	0.009	90.0	45-105	4.56	26	WG398404
4-Chloro-3-methylphenol	ppm	0.007	0.007	79.0	47-116	3.34	22	WG398404
4-Chlorophenyl-phenylether	ppm	0.009	0.009	98.0	49-116	0.409	26	WG398404
4-Nitrophenol	ppm	0.002	0.002	27.0	10-66	16.3	37	WG398404
Acenaphthene	ppm	0.008	0.008	84.0	48-110	1.56	26	WG398404
Acenaphthylene	ppm	0.009	0.009	93.0	48-113	1.30	28	WG398404
Anthracene	ppm	0.009	0.009	97.0	55-127	0.103	24	WG398404
Benidine	ppm	0.000	0.000	6.00	0-46	18.5	50	WG398404
Benzo(a)anthracene	ppm	0.009	0.009	94.0	57-115	1.37	20	WG398404
Benzo(a)pyrene	ppm	0.009	0.009	93.0	63-125	2.97	22	WG398404
Benzo(b)fluoranthene	ppm	0.008	0.008	98.0	50-123	16.2	32	WG398404
Benzo(g,h,i)perylene	ppm	0.008	0.009	87.0	39-143	4.93	31	WG398404
Benzo(k)fluoranthene	ppm	0.007	0.010	78.0	45-126	28.1	37	WG398404
Benzylbutyl phthalate	ppm	0.005	0.006	52.0	22-154	16.3	29	WG398404
Bis(2-chloroethoxy)methane	ppm	0.009	0.009	96.0	42-116	3.06	38	WG398404
Bis(2-chloroethyl)ether	ppm	0.007	0.007	77.0	26-115	0.519	50	WG398404
Bis(2-chloroisopropyl)ether	ppm	0.008	0.008	84.0	32-115	1.44	47	WG398404
Bis(2-ethylhexyl)phthalate	ppm	0.009	0.009	92.0	47-143	6.43	24	WG398404
Chrysene	ppm	0.009	0.009	99.0	58-113	1.63	21	WG398404
Di-n-butyl phthalate	ppm	0.007	0.008	76.0	51-131	11.3	22	WG398404
Di-n-octyl phthalate	ppm	0.008	0.009	86.0	51-138	8.99	22	WG398404
Dibenz(a,h)anthracene	ppm	0.008	0.009	87.0	39-144	4.40	30	WG398404
Diethyl phthalate	ppm	0.006	0.007	64.0	36-128	10.9	27	WG398404
Dimethyl phthalate	ppm	0.003	0.004	36.0	10-135	25.4	33	WG398404
Fluoranthene	ppm	0.010	0.009	101.	53-119	3.62	28	WG398404
Fluorene	ppm	0.009	0.008	91.0	49-116	2.91	25	WG398404
Hexachloro-1,3-butadiene	ppm	0.008	0.008	81.0	21-116	0.00	50	WG398404
Hexachlorobenzene	ppm	0.009	0.009	94.0	51-121	4.89	23	WG398404
Hexachlorocyclopentadiene	ppm	0.007	0.006	73.0	4-126	6.83	50	WG398404
Hexachloroethane	ppm	0.006	0.006	65.0	15-109	2.48	50	WG398404
Indeno(1,2,3-cd)pyrene	ppm	0.008	0.009	87.0	40-143	4.81	30	WG398404
Isophorone	ppm	0.008	0.007	82.0	48-126	4.88	31	WG398404
n-Nitrosodi-n-propylamine	ppm	0.009	0.009	99.0	47-122	2.77	33	WG398404
n-Nitrosodimethylamine	ppm	0.004	0.005	48.0	11-69	6.65	50	WG398404
n-Nitrosodiphenylamine	ppm	0.010	0.010	104.	59-143	2.23	23	WG398404
Naphthalene	ppm	0.007	0.007	79.0	29-103	2.97	45	WG398404
Nitrobenzene	ppm	0.007	0.007	76.0	31-105	5.86	43	WG398404
Pentachlorophenol	ppm	0.007	0.007	79.0	20-122	9.13	50	WG398404
Phenanthrene	ppm	0.009	0.009	97.0	54-112	2.51	22	WG398404
Phenol	ppm	0.003	0.003	35.0	17-52	2.91	33	WG398404
Pyrene	ppm	0.009	0.009	94.0	46-130	0.746	28	WG398404
2,4,6-Tribromophenol				89.79	10-148			WG398404
2-Fluorobiphenyl				85.30	26-122			WG398404
2-Fluorophenol				42.01	10-87			WG398404
Nitrobenzene-d5				78.17	12-120			WG398404
Phenol-d5				28.10	10-67			WG398404
p-Terphenyl-d14				89.87	34-149			WG398404

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Quality Assurance Report
Level II
L379236

December 24, 2008

Analyte	Matrix Spike		TV	% Rec	Limit	Ref Samp	Batch	
	Units MS Res	Ref Res						
1,1,1,2-Tetrachloroethane	mg/l	0.052	0.00	.05	104.	45-152	L379144-19	WG398171
1,1,1-Trichloroethane	mg/l	0.047	0.00	.05	95.4	31-161	L379144-19	WG398171
1,1,2,2-Tetrachloroethane	mg/l	0.046	0.00	.05	93.3	49-149	L379144-19	WG398171
1,1,2-Trichloroethane	mg/l	0.045	0.00	.05	90.4	46-145	L379144-19	WG398171
1,1-Dichloroethane	mg/l	0.044	0.00	.05	89.3	30-159	L379144-19	WG398171
1,1-Dichloroethane	mg/l	0.033	0.00	.05	66.5	10-162	L379144-19	WG398171
1,1-Dichloroethane	mg/l	0.038	0.00	.05	76.1	14-162	L379144-19	WG398171
1,1-Dichloropropene	mg/l	0.047	0.00	.05	95.3	32-143	L379144-19	WG398171
1,2,3-Trichlorobenzene	mg/l	0.045	0.00	.05	91.3	48-148	L379144-19	WG398171
1,2,3-Trichloropropane	mg/l	0.049	0.00	.05	99.5	27-142	L379144-19	WG398171
1,2,4-Trichlorobenzene	mg/l	0.047	0.00	.05	94.6	29-153	L379144-19	WG398171
1,2,4-Trimethylbenzene	mg/l	0.040	0.00	.05	80.0	37-148	L379144-19	WG398171
1,2-Dibromo-3-Chloropropane	mg/l	0.038	0.00	.05	76.8	41-149	L379144-19	WG398171
1,2-Dibromoethane	mg/l	0.049	0.00	.05	99.2	40-139	L379144-19	WG398171
1,2-Dichlorobenzene	mg/l	0.041	0.00	.05	82.8	29-167	L379144-19	WG398171
1,2-Dichloroethane	mg/l	0.046	0.00	.05	92.8	39-148	L379144-19	WG398171
1,2-Dichloropropane	mg/l	0.048	0.00	.05	96.6	33-149	L379144-19	WG398171
1,3,5-Trimethylbenzene	mg/l	0.047	0.00	.05	94.0	32-148	L379144-19	WG398171
1,3-Dichlorobenzene	mg/l	0.041	0.00	.05	83.3	44-142	L379144-19	WG398171
1,3-Dichloropropane	mg/l	0.048	0.00	.05	97.2	32-136	L379144-19	WG398171
1,4-Dichlorobenzene	mg/l	0.047	0.00	.05	94.6	14-158	L379144-19	WG398171
2,2-Dichloropropane	mg/l	0.200	0.00	.25	80.0	32-151	L379144-19	WG398171
2-Butanone (MEK)	mg/l	0.047	0.00	.05	94.6	35-147	L379144-19	WG398171
2-Chlorotoluene	mg/l	0.046	0.00	.05	93.0	33-147	L379144-19	WG398171
4-Chlorotoluene	mg/l	0.210	0.00	.25	84.0	40-160	L379144-19	WG398171
4-Methyl-2-pentanone (MIBK)	mg/l	0.193	0.00	.25	77.2	25-157	L379144-19	WG398171
Acetone	mg/l	0.127	0.00	.25	50.8	0-179	L379144-19	WG398171
Acrolein	mg/l	0.217	0.00	.25	87.0	37-162	L379144-19	WG398171
Acrylonitrile	mg/l	0.038	0.00	.05	76.3	16-158	L379144-19	WG398171
Benzene	mg/l	0.045	0.00	.05	90.9	37-147	L379144-19	WG398171
Bromobenzene	mg/l	0.050	0.00	.05	99.9	45-147	L379144-19	WG398171
Bromodichloromethane	mg/l	0.048	0.00	.05	96.8	38-152	L379144-19	WG398171
Bromoform	mg/l	0.032	0.00	.05	64.6	0-191	L379144-19	WG398171
Bromomethane	mg/l	0.045	0.00	.05	91.4	22-168	L379144-19	WG398171
Carbon tetrachloride	mg/l	0.045	0.00	.05	90.0	33-148	L379144-19	WG398171
Chlorobenzene	mg/l	0.048	0.00	.05	96.8	48-151	L379144-19	WG398171
Chlorodibromomethane	mg/l	0.035	0.00	.05	70.8	4-176	L379144-19	WG398171
Chloroethane	mg/l	0.048	0.00	.05	96.6	37-147	L379144-19	WG398171
Chloroform	mg/l	0.027	0.00	.05	53.9	10-174	L379144-19	WG398171
Chloromethane	mg/l	0.046	0.002	.05	87.4	29-156	L379144-19	WG398171
cis-1,2-Dichloroethene	mg/l	0.046	0.00	.05	93.3	39-160	L379144-19	WG398171
Di-isopropyl ether	mg/l	0.039	0.00	.05	78.7	36-152	L379144-19	WG398171
Dibromomethane	mg/l	0.030	0.00	.05	61.8	0-200	L379144-19	WG398171
Dichlorodifluoromethane	mg/l	0.044	0.00	.05	89.6	29-150	L379144-19	WG398171
Ethylbenzene	mg/l	0.055	0.00	.05	111.	28-144	L379144-19	WG398171
Hexachloro-1,3-butadiene	mg/l	0.048	0.00	.05	96.0	35-147	L379144-19	WG398171
Isopropylbenzene	mg/l	0.087	0.00	.1	87.6	24-151	L379144-19	WG398171
m&p-Xylenes	mg/l	0.042	0.00	.05	84.6	24-167	L379144-19	WG398171
Methyl tert-butyl ether	mg/l	0.035	0.00	.05	70.5	23-151	L379144-19	WG398171
Methylene Chloride	mg/l	0.054	0.00	.05	108.	22-151	L379144-19	WG398171
n-Butylbenzene	mg/l	0.047	0.00	.05	95.2	26-150	L379144-19	WG398171
n-Propylbenzene	mg/l	0.041	0.00	.05	83.2	24-160	L379144-19	WG398171
Naphthalene	mg/l	0.045	0.00	.05	90.4	32-151	L379144-19	WG398171
o-Xylene	mg/l	0.050	0.00	.05	100.	28-151	L379144-19	WG398171
p-Isopropyltoluene	mg/l	0.050	0.00	.05	102.	32-149	L379144-19	WG398171
sec-Butylbenzene	mg/l	0.044	0.00	.05	89.2	38-149	L379144-19	WG398171
Styrene	mg/l	0.051	0.00	.05	102.	36-149	L379144-19	WG398171
tert-Butylbenzene	mg/l	0.264	0.240	.05	48.5	13-157	L379144-19	WG398171
Tetrachloroethene	mg/l	0.040	0.00	.05	80.0	22-152	L379144-19	WG398171
Toluene	mg/l	0.040	0.00	.05	80.0	22-152	L379144-19	WG398171

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Quality Assurance Report
Level II

December 24, 2008

L379236

Analyte	Matrix Spike				TV	% Rec	Limit	Ref Samp	Batch
	Units	MS Res	Ref Res	Res					
trans-1,2-Dichloroethene	mg/l	0.031	0.00	.05	62.6	11-160	L379144-19	WG398171	
Trichloroethene	mg/l	0.047	0.008	.05	77.8	18-163	L379144-19	WG398171	
Trichlorofluoromethane	mg/l	0.047	0.00	.05	95.5	10-177	L379144-19	WG398171	
Vinyl chloride	mg/l	0.026	0.00	.05	52.3	0-179	L379144-19	WG398171	
4-Bromofluorobenzene					92.73	75-128		WG398171	
Dibromofluoromethane					100.4	79-125		WG398171	
Toluene-d8					98.75	87-114		WG398171	
a,a,a-Trifluorotoluene					105.4	84-114		WG398171	
Lead	mg/l	1.04	0.00	1.13	92.0	75-125	L379236-01	WG398198	
1,2,4-Trichlorobenzene	ppm	0.007	0.00	.01	75.1	18-105	L379432-02	WG398404	
2,4,6-Trichlorophenol	ppm	0.007	0.00	.01	77.6	10-137	L379432-02	WG398404	
2,4-Dichlorophenol	ppm	0.007	0.00	.01	79.1	10-133	L379432-02	WG398404	
2,4-Dimethylphenol	ppm	0.000	0.00	.01	3.10*	10-142	L379432-02	WG398404	
2,4-Dinitrophenol	ppm	0.006	0.00	.01	60.3	10-150	L379432-02	WG398404	
2,4-Dinitrotoluene	ppm	0.009	0.00	.01	90.6	32-137	L379432-02	WG398404	
2,6-Dinitrotoluene	ppm	0.008	0.00	.01	88.8	35-123	L379432-02	WG398404	
2-Chloronaphthalene	ppm	0.008	0.00	.01	82.7	33-109	L379432-02	WG398404	
2-Chlorophenol	ppm	0.006	0.00	.01	66.7	10-155	L379432-02	WG398404	
2-Nitrophenol	ppm	0.008	0.00	.01	85.8	12-121	L379432-02	WG398404	
3,3-Dichlorobenzidine	ppm	0.002	0.00	.01	29.3	10-135	L379432-02	WG398404	
4,6-Dinitro-2-methylphenol	ppm	0.002	0.00	.01	29.8	0-138	L379432-02	WG398404	
4-Bromophenyl-phenylether	ppm	0.008	0.00	.01	87.2	35-102	L379432-02	WG398404	
4-Chloro-3-methylphenol	ppm	0.006	0.00	.01	67.9	10-136	L379432-02	WG398404	
4-Chlorophenyl-phenylether	ppm	0.009	0.00	.01	95.6	39-116	L379432-02	WG398404	
4-Nitrophenol	ppm	0.002	0.00	.01	26.1	13-59	L379432-02	WG398404	
Acenaphthene	ppm	0.009	0.00	.01	90.6	39-112	L379432-02	WG398404	
Acenaphthylene	ppm	0.009	0.00	.01	90.8	37-114	L379432-02	WG398404	
Anthracene	ppm	0.008	0.00	.01	89.5	44-136	L379432-02	WG398404	
Benzidine	ppm	0.000	0.00	.01	0.100	0-25	L379432-02	WG398404	
Benzo(a)anthracene	ppm	0.008	0.00	.01	85.5	43-117	L379432-02	WG398404	
Benzo(a)pyrene	ppm	0.007	0.00	.01	71.8	33-137	L379432-02	WG398404	
Benzo(b)fluoranthene	ppm	0.009	0.00	.01	95.2	35-128	L379432-02	WG398404	
Benzo(g,h,i)perylene	ppm	0.003	0.00	.01	37.1	10-139	L379432-02	WG398404	
Benzo(k)fluoranthene	ppm	0.008	0.00	.01	84.9	36-119	L379432-02	WG398404	
Benzylbutyl phthalate	ppm	0.009	0.00	.01	92.8	47-121	L379432-02	WG398404	
Bis(2-chloroethoxy)methane	ppm	0.010	0.00	.01	101.	21-135	L379432-02	WG398404	
Bis(2-chloroethyl)ether	ppm	0.008	0.00	.01	85.6	10-134	L379432-02	WG398404	
Bis(2-chloroisopropyl)ether	ppm	0.009	0.00	.01	95.2	14-124	L379432-02	WG398404	
Bis(2-ethylhexyl)phthalate	ppm	0.011	0.00	.01	113.	10-115	L379432-02	WG398404	
Chrysene	ppm	0.008	0.00	.01	81.8	41-117	L379432-02	WG398404	
Di-n-butyl phthalate	ppm	0.010	0.00	.01	105.	46-121	L379432-02	WG398404	
Di-n-octyl phthalate	ppm	0.008	0.00	.01	84.4	22-109	L379432-02	WG398404	
Dibenz(a,h)anthracene	ppm	0.004	0.00	.01	47.2	10-145	L379432-02	WG398404	
Diethyl phthalate	ppm	0.008	0.00	.01	87.8	23-132	L379432-02	WG398404	
Dimethyl phthalate	ppm	0.007	0.00	.01	75.0	42-107	L379432-02	WG398404	
Fluoranthene	ppm	0.009	0.00	.01	99.7	36-130	L379432-02	WG398404	
Fluorene	ppm	0.009	0.00	.01	91.6	37-120	L379432-02	WG398404	
Hexachloro-1,3-butadiene	ppm	0.008	0.00	.01	81.4	16-118	L379432-02	WG398404	
Hexachlorobenzene	ppm	0.008	0.00	.01	85.4	41-114	L379432-02	WG398404	
Hexachlorocyclopentadiene	ppm	0.002	0.00	.01	29.2	0-132	L379432-02	WG398404	
Hexachloroethane	ppm	0.130	0.00	.01	1300*	10-125	L379432-02	WG398404	
Indeno(1,2,3-cd)pyrene	ppm	0.004	0.00	.01	45.6	10-138	L379432-02	WG398404	
Isophorone	ppm	0.009	0.00	.01	93.8	32-131	L379432-02	WG398404	
n-Nitrosodi-n-propylamine	ppm	0.012	0.00	.01	123.	20-145	L379432-02	WG398404	

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Quality Assurance Report
Level II
L379236

December 24, 2008

Analyte	Units	Matrix Spike			% Rec	Limit	Ref Samp	Batch
		MS Res	Ref Res	TV				
n-Nitrosodimethylamine	ppm	0.006	0.00	.01	60.5	0-75	L379432-02	WG398404
n-Nitrosodiphenylamine	ppm	0.009	0.00	.01	94.4	10-171	L379432-02	WG398404
Naphthalene	ppm	0.031	0.024	.01	75.0	14-114	L379432-02	WG398404
Nitrobenzene	ppm	0.009	0.00	.01	99.5	14-122	L379432-02	WG398404
Pentachlorophenol	ppm	0.007	0.00	.01	79.3	0-137	L379432-02	WG398404
Phenanthrene	ppm	0.009	0.00	.01	99.3	38-121	L379432-02	WG398404
Phenol	ppm	0.002	0.00	.01	29.8	10-68	L379432-02	WG398404
Pyrene	ppm	0.008	0.00	.01	88.2	27-136	L379432-02	WG398404
2,4,6-Tribromophenol					74.64	10-148		WG398404
2-Fluorobiphenyl					85.64	26-122		WG398404
2-Fluorophenol					32.98	10-87		WG398404
Nitrobenzene-d5					77.35	12-120		WG398404
Phenol-d5					29.52	10-67		WG398404
p-Terphenyl-d14					83.05	34-149		WG398404

Analyte	Units	Matrix Spike Duplicate			Limit	RPD	Limit	Ref Samp	Batch
		MSD	Ref	%Rec					
1,1,1,2-Tetrachloroethane	mg/l	0.05	0.05	103.	45-152	1.91	21	L379144-19	WG398171
1,1,1-Trichloroethane	mg/l	0.04	0.04	94.0	31-161	1.47	23	L379144-19	WG398171
1,1,2,2-Tetrachloroethane	mg/l	0.04	0.04	92.0	49-149	1.38	22	L379144-19	WG398171
1,1,2-Trichloroethane	mg/l	0.04	0.04	91.4	46-145	1.02	20	L379144-19	WG398171
1,1-Dichloroethane	mg/l	0.04	0.04	87.9	30-159	1.50	21	L379144-19	WG398171
1,1-Dichloroethene	mg/l	0.03	0.03	65.3	10-162	1.82	23	L379144-19	WG398171
1,1-Dichloropropene	mg/l	0.03	0.03	75.0	14-162	1.45	23	L379144-19	WG398171
1,2,3-Trichlorobenzene	mg/l	0.04	0.04	96.4	32-143	1.17	33	L379144-19	WG398171
1,2,3-Trichloropropane	mg/l	0.04	0.04	88.7	48-148	2.92	23	L379144-19	WG398171
1,2,4-Trichlorobenzene	mg/l	0.05	0.04	100.	27-142	0.47	30	L379144-19	WG398171
1,2,4-Trimethylbenzene	mg/l	0.04	0.04	92.9	29-153	1.82	27	L379144-19	WG398171
1,2-Dibromo-3-Chloropropane	mg/l	0.03	0.04	78.0	37-148	2.56	27	L379144-19	WG398171
1,2-Dibromoethane	mg/l	0.03	0.03	76.6	41-149	0.22	21	L379144-19	WG398171
1,2-Dichlorobenzene	mg/l	0.04	0.04	96.7	40-139	2.60	23	L379144-19	WG398171
1,2-Dichloroethane	mg/l	0.04	0.04	80.8	29-167	2.53	21	L379144-19	WG398171
1,2-Dichloropropene	mg/l	0.04	0.04	92.2	39-148	0.64	20	L379144-19	WG398171
1,2-Dichloropropane	mg/l	0.04	0.04	94.4	33-149	2.31	26	L379144-19	WG398171
1,3,5-Trimethylbenzene	mg/l	0.04	0.04	94.4	32-148	1.28	24	L379144-19	WG398171
1,3-Dichlorobenzene	mg/l	0.04	0.04	92.8	32-148	1.89	20	L379144-19	WG398171
1,3-Dichloropropane	mg/l	0.04	0.04	81.8	44-142	1.89	20	L379144-19	WG398171
1,4-Dichlorobenzene	mg/l	0.04	0.04	93.5	32-136	3.81	23	L379144-19	WG398171
2,2-Dichloropropane	mg/l	0.04	0.04	94.2	14-158	0.37	23	L379144-19	WG398171
2-Butanone (MEK)	mg/l	0.19	0.20	78.8	32-151	1.59	26	L379144-19	WG398171
2-Chlorotoluene	mg/l	0.04	0.04	93.0	35-147	1.73	24	L379144-19	WG398171
4-Chlorotoluene	mg/l	0.04	0.04	91.2	33-147	1.92	25	L379144-19	WG398171
4-Methyl-2-pentanone (MIBK)	mg/l	0.20	0.21	83.7	40-160	0.38	28	L379144-19	WG398171
Acetone	mg/l	0.18	0.19	74.4	25-157	3.69	26	L379144-19	WG398171
Acrolein	mg/l	0.12	0.12	49.8	0-179	1.99	39	L379144-19	WG398171
Acrylonitrile	mg/l	0.21	0.21	84.4	37-162	3.01	24	L379144-19	WG398171
Benzene	mg/l	0.03	0.03	75.5	16-158	1.04	21	L379144-19	WG398171
Bromobenzene	mg/l	0.04	0.04	88.9	37-147	2.24	23	L379144-19	WG398171
Bromodichloromethane	mg/l	0.04	0.05	98.3	45-147	1.67	20	L379144-19	WG398171
Bromoform	mg/l	0.04	0.04	96.2	38-152	0.67	20	L379144-19	WG398171
Bromomethane	mg/l	0.03	0.03	62.1	0-191	4.02	35	L379144-19	WG398171
Carbon tetrachloride	mg/l	0.04	0.04	89.5	22-168	2.14	24	L379144-19	WG398171
Chlorobenzene	mg/l	0.04	0.04	88.7	33-148	1.45	22	L379144-19	WG398171
Chlorodibromomethane	mg/l	0.04	0.04	97.0	48-151	0.22	21	L379144-19	WG398171
Chloroethane	mg/l	0.03	0.03	69.7	4-176	1.65	27	L379144-19	WG398171
Chloroform	mg/l	0.04	0.04	95.5	37-147	1.10	21	L379144-19	WG398171
Chloromethane	mg/l	0.02	0.02	50.5	10-174	6.63	28	L379144-19	WG398171
cis-1,2-Dichloroethene	mg/l	0.04	0.04	85.1	29-156	2.52	22	L379144-19	WG398171

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Chris Fay
111 MacKenan Drive
Cary, NC 27511

**Quality Assurance Report
Level II**

December 24, 2008

L379236

Analyte	Matrix Spike Duplicate		Limit	RPD	Limit	Ref Samp	Batch
	Units MSD	Ref %Rec					
Di-isopropyl ether	mg/l	0.04	0.04	90.9	39-160	2.57 21	L379144-19 WG398171
Dibromomethane	mg/l	0.03	0.03	78.5	36-152	0.24 20	L379144-19 WG398171
Dichlorodifluoromethane	mg/l	0.02	0.03	59.2	0-200	4.29 26	L379144-19 WG398171
Ethylbenzene	mg/l	0.04	0.04	87.8	29-150	2.00 24	L379144-19 WG398171
Hexachloro-1,3-butadiene	mg/l	0.05	0.05	108.	28-144	2.91 33	L379144-19 WG398171
Isopropylbenzene	mg/l	0.04	0.04	94.5	35-147	1.56 25	L379144-19 WG398171
m&p-Xylenes	mg/l	0.08	0.08	86.7	24-151	1.07 23	L379144-19 WG398171
Methyl tert-butyl ether	mg/l	0.04	0.04	84.1	24-167	0.58 22	L379144-19 WG398171
Methylene Chloride	mg/l	0.03	0.03	69.6	23-151	1.24 21	L379144-19 WG398171
n-Butylbenzene	mg/l	0.05	0.05	105.	22-151	3.66 29	L379144-19 WG398171
n-Propylbenzene	mg/l	0.04	0.04	94.5	26-150	0.79 25	L379144-19 WG398171
Napthalene	mg/l	0.04	0.04	85.5	24-160	2.69 37	L379144-19 WG398171
o-Xylene	mg/l	0.04	0.04	90.3	32-151	0.14 23	L379144-19 WG398171
p-Isopropyltoluene	mg/l	0.04	0.05	98.9	28-151	1.52 27	L379144-19 WG398171
sec-Butylbenzene	mg/l	0.04	0.05	100.	32-149	1.59 26	L379144-19 WG398171
Styrene	mg/l	0.05	0.04	89.2	38-149	0.06 23	L379144-19 WG398171
tert-Butylbenzene	mg/l	0.05	0.05	101.	36-149	1.54 26	L379144-19 WG398171
Tetrachloroethene	mg/l	0.25	0.26	32.0	13-157	3.16 24	L379144-19 WG398171
Toluene	mg/l	0.03	0.04	78.1	22-152	2.33 22	L379144-19 WG398171
trans-1,2-Dichloroethene	mg/l	0.03	0.03	61.9	11-160	1.16 23	L379144-19 WG398171
Trichloroethene	mg/l	0.04	0.04	77.7	18-163	0.16 21	L379144-19 WG398171
Trichlorofluoromethane	mg/l	0.04	0.04	91.8	10-177	3.88 24	L379144-19 WG398171
Vinyl chloride	mg/l	0.02	0.02	50.3	0-179	3.77 26	L379144-19 WG398171
4-Bromofluorobenzene				93.1	75-128		WG398171
Dibromofluoromethane				98.0	79-125		WG398171
Toluene-d8				99.9	87-114		WG398171
a, a, a-Trifluorotoluene				105.9	84-114		WG398171
Lead	mg/l	1.05	1.04	92.9	75-125	0.95 20	L379236-01 WG398198
1,2,4-Trichlorobenzene	ppm	0.00	0.00	73.4	18-105	2.29 50	L379432-02 WG398404
2,4,6-Trichlorophenol	ppm	0.00	0.00	75.5	10-137	2.74 42	L379432-02 WG398404
2,4-Dichlorophenol	ppm	0.00	0.00	74.3	10-133	6.26 50	L379432-02 WG398404
2,4-Dimethylphenol	ppm	0.00	0.00	18.5	10-142	143.* 36	L379432-02 WG398404
2,4-Dinitrophenol	ppm	0.00	0.00	60.4	10-150	0.16 50	L379432-02 WG398404
2,4-Dinitrotoluene	ppm	0.00	0.00	84.0	32-137	7.56 36	L379432-02 WG398404
2,6-Dinitrotoluene	ppm	0.00	0.00	86.9	35-123	2.16 37	L379432-02 WG398404
2-Chloronaphthalene	ppm	0.00	0.00	84.1	33-109	1.68 39	L379432-02 WG398404
2-Chlorophenol	ppm	0.00	0.00	62.7	10-155	6.18 50	L379432-02 WG398404
2-Nitrophenol	ppm	0.00	0.00	84.6	12-121	1.41 48	L379432-02 WG398404
3,3-Dichlorobenzidine	ppm	0.00	0.00	27.7	10-135	5.61 40	L379432-02 WG398404
4,6-Dinitro-2-methylphenol	ppm	0.00	0.00	29.5	0-138	1.01 50	L379432-02 WG398404
4-Bromophenyl-phenylether	ppm	0.00	0.00	86.1	35-102	1.27 23	L379432-02 WG398404
4-Chloro-3-methylphenol	ppm	0.00	0.00	67.5	10-136	0.59 29	L379432-02 WG398404
4-Chlorophenyl-phenylether	ppm	0.00	0.00	95.2	39-116	0.41 32	L379432-02 WG398404
4-Nitrophenol	ppm	0.00	0.00	25.9	13-59	0.76 50	L379432-02 WG398404
Acenaphthene	ppm	0.00	0.00	88.2	39-112	2.68 37	L379432-02 WG398404
Acenaphthylene	ppm	0.00	0.00	88.2	37-114	2.91 35	L379432-02 WG398404
Anthracene	ppm	0.00	0.00	90.5	44-136	1.11 24	L379432-02 WG398404
Benzidine	ppm	0.00	0.00	0.500	0-25	133.* 50	L379432-02 WG398404
Benzo(a)anthracene	ppm	0.00	0.00	83.5	43-117	2.37 25	L379432-02 WG398404
Benzo(a)pyrene	ppm	0.00	0.00	63.9	33-137	11.6 34	L379432-02 WG398404
Benzo(b)fluoranthene	ppm	0.00	0.00	95.8	35-128	0.62 50	L379432-02 WG398404
Benzo(g,h,i)perylene	ppm	0.00	0.00	39.7	10-139	6.77 50	L379432-02 WG398404
Benzo(k)fluoranthene	ppm	0.00	0.00	92.3	36-119	8.35 40	L379432-02 WG398404
Benzybutyl phthalate	ppm	0.00	0.00	90.1	47-121	2.95 28	L379432-02 WG398404

* Performance of this Analyte is outside of established criteria.
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Est. 1970

Withers & Ravenel Eng. - State Lead
Chris Fay
111 MacKenan Drive
Cary, NC 27511

Quality Assurance Report
Level II

December 24, 2008

L379236

Analyte	Units	Matrix Spike		Duplicate %Rec	Limit	RPD	Limit	Ref Samp	Batch
		MSD	Ref						
Bis(2-chlorethoxy)methane	ppm	0.00	0.01	97.1	21-135	3.74	39	L379432-02	WG398404
Bis(2-chloroethyl)ether	ppm	0.00	0.00	78.8	10-134	8.27	50	L379432-02	WG398404
Bis(2-chloroisopropyl)ether	ppm	0.00	0.00	93.6	14-124	1.69	40	L379432-02	WG398404
Bis(2-ethylhexyl)phthalate	ppm	0.01	0.01	156.6	10-115	32.0	33	L379432-02	WG398404
Chrysene	ppm	0.00	0.00	78.4	41-117	4.24	24	L379432-02	WG398404
Di-n-butyl phthalate	ppm	0.01	0.01	100.	46-121	4.78	27	L379432-02	WG398404
Di-n-octyl phthalate	ppm	0.00	0.00	98.8	22-109	15.7	31	L379432-02	WG398404
Dibenz(a,h)anthracene	ppm	0.00	0.00	51.9	10-145	9.49	50	L379432-02	WG398404
Diethyl phthalate	ppm	0.00	0.00	85.2	23-132	3.01	35	L379432-02	WG398404
Dimethyl phthalate	ppm	0.00	0.00	73.3	42-107	2.29	27	L379432-02	WG398404
Fluoranthene	ppm	0.00	0.00	96.1	36-130	3.68	27	L379432-02	WG398404
Fluorene	ppm	0.00	0.00	88.6	37-120	3.33	30	L379432-02	WG398404
Hexachloro-1,3-butadiene	ppm	0.00	0.00	81.2	16-118	0.24	50	L379432-02	WG398404
Hexachlorobenzene	ppm	0.00	0.00	85.8	41-114	0.46	28	L379432-02	WG398404
Hexachlorocyclopentadiene	ppm	0.00	0.00	29.5	0-132	1.02	50	L379432-02	WG398404
Hexachloroethane	ppm	0.13	0.13	1319.	10-125	1.63	50	L379432-02	WG398404
Indeno(1,2,3-cd)pyrene	ppm	0.00	0.00	49.6	10-138	8.40	50	L379432-02	WG398404
Isophorone	ppm	0.00	0.00	95.2	32-131	1.48	38	L379432-02	WG398404
n-Nitrosodi-n-propylamine	ppm	0.01	0.01	121.	20-145	1.15	43	L379432-02	WG398404
n-Nitrosodimethylamine	ppm	0.00	0.00	60.3	0-75	0.33	50	L379432-02	WG398404
n-Nitrosodiphenylamine	ppm	0.00	0.00	98.8	10-171	4.55	34	L379432-02	WG398404
Naphthalene	ppm	0.03	0.03	82.4	14-114	2.32	50	L379432-02	WG398404
Nitrobenzene	ppm	0.00	0.00	94.7	14-122	4.94	46	L379432-02	WG398404
Pentachlorophenol	ppm	0.00	0.00	83.2	0-137	4.80	50	L379432-02	WG398404
Phenanthrene	ppm	0.00	0.00	98.4	38-121	0.91	26	L379432-02	WG398404
Phenol	ppm	0.00	0.00	27.7	10-68	7.30	32	L379432-02	WG398404
Pyrene	ppm	0.00	0.00	86.5	27-136	1.95	33	L379432-02	WG398404
2,4,6-Tribromophenol				81.5	10-148				WG398404
2-Fluorobiphenyl				85.5	26-122				WG398404
2-Fluorophenol				37.3	10-87				WG398404
Nitrobenzene-d5				74.5	12-120				WG398404
Phenol-d5				25.5	10-67				WG398404
p-Terphenyl-d14				83.5	34-149				WG398404

Batch number / Run number / Sample number cross reference

WG398171: R561027: L379236-01 02
 WG398198: R563425: L379236-01 02
 WG398404: R564806: L379236-01 02
 WG398809: R566385: L379236-01 02
 WG398858: R566585: L379236-02
 WG399494: R572533: L379236-02

* * Calculations are performed prior to rounding of reported values
 * Performance of this Analyte is outside of established criteria.
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Quality Assurance Report
Level II
L379236

December 24, 2008

The data package includes a summary of the analytic results of the quality control samples required by the SW-846 or CWA methods. The quality control samples include a method blank, a laboratory control sample, and the matrix spike/matrix spike duplicate analysis. If a target parameter is outside the method limits, every sample that is effected is flagged with the appropriate qualifier in Appendix B of the analytic report.

Method Blank - an aliquot of reagent water carried through the entire analytic process. The method blank results indicate if any possible contamination exposure during the sample handling, digestion or extraction process, and analysis. Concentrations of target analytes above the reporting limit in the method blank are qualified with the "B" qualifier.

Laboratory Control Sample - is a sample of known concentration that is carried through the digestion/extraction and analysis process. The percent recovery, expressed as a percentage of the theoretical concentration, has statistical control limits indicating that the analytic process is "in control". If a target analyte is outside the control limits for the laboratory control sample or any other control sample, the parameter is flagged with a "J4" qualifier for all effected samples.

Matrix Spike and Matrix Spike Duplicate - is two aliquots of an environmental sample that is spiked with known concentrations of target analytes. The percent recovery of the target analytes also has statistical control limits. If any recoveries that are outside the method control limits, the sample that was selected for matrix spike/matrix spike duplicate analysis is flagged with either a "J5" or a "J6". The relative percent difference (%RPD) between the matrix spike and the matrix spike duplicate recoveries is all calculated. If the RPD is above the method limit, the effected samples are flagged with a "J3" qualifier.



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Chris Fay
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111 MacKenan Drive

Cary, NC 27511

Report Summary

Tuesday December 23, 2008

Report Number: L380346
Samples Received: 12/18/08
Client Project: 02060548

Description: Register

The analytical results in this report are based upon information supplied by you, the client, and are for your exclusive use. If you have any questions regarding this data package, please do not hesitate to call.

Entire Report Reviewed By:


Mark W. Beasley, ESC Representative

Laboratory Certification Numbers

A2LA - 1461-01, AIHA - 100789, AL - 40660, CA - I-2327, CT - PH-0197, FL - E87487
GA - 923, IN - C-TN-01, KY - 90010, KYUST - 0016, NC - ENV375, DW21704, ND - R-140
NJ - TN002, SC - 84004, TN - 2006, VA - 00109, WV - 233
AZ - 0612, MN - 047-999-395, NY - 11742, WI - 998093910

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Where applicable, sampling conducted by ESC is performed per guidance provided
in laboratory standard operating procedures: 060302, 060303, and 060304.

24 Samples Reported: 12/23/08 14:19 Printed: 12/23/08 14:19
Page 1 of 29



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REPORT OF ANALYSIS

December 23, 2008

Chris Fay
Withers & Ravenel Eng. - State Lead
111 MacKenan Drive
Cary, NC 27511

Date Received : December 18, 2008
Description : Register
Sample ID : SS-2 3 FT
Collected By : CF
Collection Date : 12/16/08 08:50

ESC Sample # : L380346-02

Site ID :

Project # : 02060548

Parameter	Dry Result	Det. Limit	Units	Method	Date	Dil.
Total Solids	85.3		%	2540G	12/23/08	1
TPH (GC/FID) Low Fraction	BDL	4.8	mg/kg	GRO	12/20/08	41
Surrogate Recovery-% a,a,a-Trifluorotoluene(FID)	95.3		% Rec.	GRO	12/20/08	41
TPH (GC/FID) High Fraction	BDL	4.7	mg/kg	3546/DRO	12/20/08	1
Surrogate recovery(%) o-Terphenyl	71.7		% Rec.	3546/DRO	12/20/08	1

Results listed are dry weight basis.

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit (PQL)

Note:

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The reported analytical results relate only to the sample submitted

Reported: 12/23/08 14:19 Printed: 12/23/08 14:20



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REPORT OF ANALYSIS

December 23, 2008

Chris Fay
Withers & Ravenel Eng. - State Lead
111 MacKenan Drive
Cary, NC 27511

Date Received : December 18, 2008
Description : Register
Sample ID : SS-4 3 FT
Collected By : CF
Collection Date : 12/16/08#09:00

ESC Sample # : L380346-04

Site ID :

Project # : 02060548

Parameter	Dry Result	Det. Limit	Units	Method	Date	Dil.
Total Solids	79.5		%	2540G	12/23/08	1
TPH (GC/FID) Low Fraction	59.	11.	mg/kg	GRO	12/20/08	90
Surrogate Recovery-% a,a,a-Trifluorotoluene(FID)	94.0		% Rec.	GRO	12/20/08	90
TPH (GC/FID) High Fraction	BDL	5.0	mg/kg	3546/DRO	12/20/08	1
Surrogate recovery(%) o-Terphenyl	69.9		% Rec.	3546/DRO	12/20/08	1

Results listed are dry weight basis.

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

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REPORT OF ANALYSIS

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111 MacKenan Drive
Cary, NC 27511

December 23, 2008

Date Received : December 18, 2008
Description : Register
Sample ID : SS-6 3 FT
Collected By : CF
Collection Date : 12/16/08 09:10

ESC Sample # : L380346-06

Site ID :

Project # : 02060548

Parameter	Dry Result	Det. Limit	Units	Method	Date	Dil.
Total Solids	90.0		%	2540G	12/20/08	1
TPH (GC/FID) Low Fraction	BDL	5.0	mg/kg	GRO	12/20/08	45
Surrogate Recovery-% a,a,a-Trifluorotoluene(FID)	93.3		% Rec.	GRO	12/20/08	45
TPH (GC/FID) High Fraction	BDL	4.4	mg/kg	3546/DRO	12/20/08	1
Surrogate recovery(%) o-Terphenyl	70.6		% Rec.	3546/DRO	12/20/08	1

Results listed are dry weight basis.

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Det. Limit - Practical Quantitation Limit(PQL)

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December 23, 2008

Date Received : December 18, 2008
Description : Register
Sample ID : SS-8 3 FT
Collected By : CF
Collection Date : 12/16/08 09:20

ESC Sample # : L380346-08

Site ID :

Project # : 02060548

Parameter	Dry Result	Det. Limit	Units	Method	Date	Dil.
Total Solids	88.1		%	2540G	12/20/08	1
TPH (GC/FID) Low Fraction	BDL	4.6	mg/kg	GRO	12/20/08	41
Surrogate Recovery-% a,a,a-Trifluorotoluene(FID)	93.0		% Rec.	GRO	12/20/08	41
TPH (GC/FID) High Fraction	BDL	4.5	mg/kg	3546/DRO	12/20/08	1
Surrogate recovery(%) o-Terphenyl	66.8		% Rec.	3546/DRO	12/20/08	1

Results listed are dry weight basis.
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Det. Limit - Practical Quantitation Limit (PQL)
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December 23, 2008

Date Received : December 18, 2008
Description : Register
Sample ID : SS-10 3 FT
Collected By : CF
Collection Date : 12/16/08 10:00

ESC Sample # : L380346-10

Site ID :

Project # : 02060548

Parameter	Dry Result	Det. Limit	Units	Method	Date	Dil.
Total Solids	89.0		%	2540G	12/20/08	1
TPH (GC/FID) Low Fraction	BDL	5.1	mg/kg	GRO	12/20/08	45.5
Surrogate Recovery-% a,a,a-Trifluorotoluene(FID)	92.0		% Rec.	GRO	12/20/08	45.5
TPH (GC/FID) High Fraction	BDL	4.5	mg/kg	3546/DRO	12/20/08	1
Surrogate recovery(%) o-Terphenyl	76.8		% Rec.	3546/DRO	12/20/08	1

Results listed are dry weight basis.
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Det. Limit - Practical Quantitation Limit(PQL)
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REPORT OF ANALYSIS

December 23, 2008

Date Received : December 18, 2008
Description : Register
Sample ID : SS-12 3 FT
Collected By : CF
Collection Date : 12/16/08 10:10

ESC Sample # : L380346-12

Site ID :

Project # : 02060548

Parameter	Dry Result	Det. Limit	Units	Method	Date	Dil.
Total Solids	87.0		%	2540G	12/20/08	1
TPH (GC/FID) Low Fraction Surrogate Recovery-% a,a,a-Trifluorotoluene (FID)	BDL	5.3	mg/kg	GRO	12/21/08	46.5
TPH (GC/FID) High Fraction Surrogate recovery(%) o-Terphenyl	BDL	4.6	% Rec. mg/kg	GRO 3546/DRO	12/21/08 12/20/08	46.5 1
	73.1		% Rec.	3546/DRO	12/20/08	1

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Det. Limit - Practical Quantitation Limit (PQL)

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REPORT OF ANALYSIS

December 23, 2008

Date Received : December 18, 2008
Description : Register
Sample ID : SS-14 3 FT
Collected By : CF
Collection Date : 12/16/08 10:20

ESC Sample # : L380346-14
Site ID :
Project # : 02060548

Parameter	Dry Result	Det. Limit	Units	Method	Date	Dil.
Total Solids	86.8		%	2540G	12/20/08	1
TPH (GC/FID) Low Fraction	BDL	4.6	mg/kg	GRO	12/21/08	39.5
Surrogate Recovery-% a,a,a-Trifluorotoluene(FID)	89.0		% Rec.	GRO	12/21/08	39.5
TPH (GC/FID) High Fraction	BDL	4.6	mg/kg	3546/DRO	12/20/08	1
Surrogate recovery(%) o-Terphenyl	76.7		% Rec.	3546/DRO	12/20/08	1

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REPORT OF ANALYSIS

December 23, 2008

Date Received : December 18, 2008
Description : Register
Sample ID : SS-16 3 FT
Collected By : CF
Collection Date : 12/16/08 11:05

ESC Sample # : L380346-16

Site ID :

Project # : 02060548

Parameter	Dry Result	Det. Limit	Units	Method	Date	Dil.
Total Solids	87.3		%	2540G	12/20/08	1
TPH (GC/FID) Low Fraction Surrogate Recovery-% a,a,a-Trifluorotoluene (FID)	1200 89.6	93.	mg/kg	GRO	12/20/08	810
TPH (GC/FID) High Fraction Surrogate recovery(%) o-Terphenyl	220 71.7	4.6	% Rec. mg/kg	GRO 3546/DRO	12/20/08	810 1
			% Rec.	3546/DRO	12/20/08	1

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December 23, 2008

Date Received : December 18, 2008
Description : Register
Sample ID : SS-18 3 FT
Collected By : CF
Collection Date : 12/16/08 11:15

ESC Sample # : L380346-18

Site ID :

Project # : 02060548

Parameter	Dry Result	Det. Limit	Units	Method	Date	Dil.
Total Solids	86.3		%	2540G	12/20/08	1
TPH (GC/FID) Low Fraction	BDL	4.8	mg/kg	GRO	12/21/08	41
Surrogate Recovery-% a,a,a-Trifluorotoluene (FID)	88.9		% Rec.	GRO	12/21/08	41
TPH (GC/FID) High Fraction	BDL	4.6	mg/kg	3546/DRO	12/20/08	1
Surrogate recovery(%) o-Terphenyl	67.8		% Rec.	3546/DRO	12/20/08	1

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December 23, 2008

Date Received : December 18, 2008
Description : Register
Sample ID : SS-20 3 FT
Collected By : CF
Collection Date : 12/16/08 11:25

ESC Sample # : L380346-20

Site ID :

Project # : 02060548

Parameter	Dry Result	Det. Limit	Units	Method	Date	Dil.
Total Solids	86.8		%	2540G	12/20/08	1
TPH (GC/FID) Low Fraction	BDL	5.1	mg/kg	GRO	12/21/08	44
Surrogate Recovery-% a,a,a-Trifluorotoluene (FID)	89.3		% Rec.	GRO	12/21/08	44
TPH (GC/FID) High Fraction	BDL	4.6	mg/kg	3546/DRO	12/20/08	1
Surrogate recovery (%) o-Terphenyl	65.7		% Rec.	3546/DRO	12/20/08	1

Results listed are dry weight basis.

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December 23, 2008

Date Received : December 18, 2008
Description : Register
Sample ID : SS-22 3 FT
Collected By : CF
Collection Date : 12/16/08 11:35

ESC Sample # : L380346-22

Site ID :

Project # : 02060548

Parameter	Dry Result	Det. Limit	Units	Method	Date	Dil.
Total Solids	88.8					
TPH (GC/FID) Low Fraction	BDL		%	2540G	12/20/08	1
Surrogate Recovery-% a,a,a-Trifluorotoluene(FID)	94.9	4.5	mg/kg	GRO	12/20/08	40
TPH (GC/FID) High Fraction	BDL		% Rec.	GRO	12/20/08	40
Surrogate recovery(%) o-Terphenyl	60.6	4.5	mg/kg	3546/DRO	12/22/08	1
			% Rec.	3546/DRO	12/22/08	1

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Det. Limit - Practical Quantitation Limit (PQL)
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REPORT OF ANALYSIS

December 23, 2008

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ESC Sample # : L380346-24

Date Received : December 18, 2008
Description : Register

Site ID :

Sample ID : SS-24 3 FT

Project # : 02060548

Collected By : CF
Collection Date : 12/16/08 11:45

Parameter	Dry Result	Det. Limit	Units	Method	Date	Dil.
Total Solids	87.6		%	2540G	12/20/08	1
TPH (GC/FID) Low Fraction	BDL	5.5	mg/kg	GRO	12/20/08	48.5
Surrogate Recovery-% a,a,a-Trifluorotoluene (FID)	94.6		% Rec.	GRO	12/20/08	48.5
TPH (GC/FID) High Fraction	BDL	4.6	mg/kg	3546/DRO	12/22/08	1
Surrogate recovery(%) o-Terphenyl	69.2		% Rec.	3546/DRO	12/22/08	1

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ENVIRONMENTAL
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Quality Assurance Report
Level II
L380346

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December 23, 2008

Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
TPH (GC/FID) Low Fraction a,a,a-Trifluorotoluene (FID) a,a,a-Trifluorotoluene (PID)	< .1	mg/kg				
		% Rec.	93.89	59-128	WG399302	12/19/08 18:21
		% Rec.	100.3	54-114	WG399302	12/19/08 18:21
Total Solids	< .1	%			WG399302	12/19/08 18:21
Total Solids	< .1	%			WG399330	12/20/08 14:57
TPH (GC/FID) Low Fraction a,a,a-Trifluorotoluene (FID)	< .1	mg/kg			WG399331	12/20/08 14:48
TPH (GC/FID) High Fraction o-Terphenyl	< 4	% Rec.	88.34	59-128	WG399468	12/20/08 18:20
		% Rec.	78.00	50-150	WG399468	12/20/08 18:20
TPH (GC/FID) High Fraction o-Terphenyl	< 4	ppm			WG399358	12/22/08 03:27
		% Rec.	76.77	50-150	WG399358	12/22/08 03:27
TPH (GC/FID) Low Fraction a,a,a-Trifluorotoluene (FID) a,a,a-Trifluorotoluene (PID)	< .1	ppm			WG399300	12/19/08 23:25
		% Rec.	95.62	59-128	WG399300	12/19/08 23:25
		% Rec.	103.0	54-114	WG399537	12/20/08 18:57
Total Solids	< .1	%			WG399537	12/20/08 18:57
		%			WG399329	12/23/08 10:19

Analyte	Units	Duplicate		Limit	Ref Samp	Batch
		Result	Duplicate RPD			
Total Solids	%	87.4	87.0	0.510	5	L380346-12 WG399330
Total Solids	%	86.1	86.3	0.234	5	L380346-18 WG399331
Total Solids	%	81.1	78.8	2.84	5	L380340-06 WG399329

Analyte	Units	Laboratory Control Sample		% Rec	Limit	Batch
		Known Val	Result			
TPH (GC/FID) Low Fraction a,a,a-Trifluorotoluene (FID) a,a,a-Trifluorotoluene (PID)	mg/kg	5.5	5.97			
				109.	67-135	WG399302
				109.0	59-128	WG399302
				125.5*	54-114	WG399302
Total Solids	%	50	50.1	100.	85-115	WG399330
Total Solids	%	50	50.0	100.	85-115	WG399331
TPH (GC/FID) Low Fraction a,a,a-Trifluorotoluene (FID)	mg/kg	5.5	5.01			
				91.0	67-135	WG399468
				105.1	59-128	WG399468

* Performance of this Analyte is outside of established criteria.
For additional information, please see Attachment A 'List of Analytes with QC Qualifiers.'



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Quality Assurance Report
Level II
L380346

December 23, 2008

Analyte	Units	Matrix Spike		TV	% Rec	Limit	Ref Samp	Batch
		MS Res	Ref Res					
TPH (GC/FID) Low Fraction	mg/kg	22.6	0.064	5.5	82.0	55-109	L380591-05	WG399537
a,a,a-Trifluorotoluene(FID)					106.5	59-128		WG399537
a,a,a-Trifluorotoluene(PID)					130.8*	54-114		WG399537

Analyte	Units	Matrix Spike Duplicate		Limit	RPD	Limit	Ref Samp	Batch	
		MSD	Ref						
TPH (GC/FID) Low Fraction	mg/kg	215.	209.	90.0	55-109	3.15	20	L380346-01	WG399302
a,a,a-Trifluorotoluene(FID)				106.6	59-128				WG399302
a,a,a-Trifluorotoluene(PID)				122.6	54-114				WG399302
TPH (GC/FID) Low Fraction	mg/kg	20.0	19.8	66.1	55-109	1.09	20	L380502-01	WG399468
a,a,a-Trifluorotoluene(FID)				95.7	59-128				WG399468
TPH (GC/FID) High Fraction	ppm	40.9	41.0	68.2	50-150	0.08	25	L380346-20	WG399300
o-Terphenyl				62.1	50-150				WG399300
TPH (GC/FID) High Fraction	ppm	42.5	41.0	70.8	50-150	3.49	25	L380300-05	WG399358
o-Terphenyl				80.8	50-150				WG399358
TPH (GC/FID) Low Fraction	mg/kg	21.7	22.6	78.5	55-109	4.30	20	L380591-05	WG399537
a,a,a-Trifluorotoluene(FID)				106.0	59-128				WG399537
a,a,a-Trifluorotoluene(PID)				131.8	54-114				WG399537

Batch number /Run number / Sample number cross reference

WG399302: R568366: L380346-01 02 03 04 05 06 07 08 09 10
 WG399330: R568665: L380346-05 06 07 08 09 10 11 12 13 14
 WG399331: R568668: L380346-15 16 17 18 19 20 21 22 23 24
 WG399468: R569086: L380346-11 12 13 14 15 16 17 18 19 20
 WG399358: R569289: L380346-21 22 23 24
 WG399300: R569545: L380346-01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20
 WG399537: R569846: L380346-21 22 23 24
 WG399329: R570574: L380346-01 02 03 04

* * Calculations are performed prior to rounding of reported values .
 * Performance of this Analyte is outside of established criteria.
 For additional information, please see Attachment A 'List of Analytes with QC Qualifiers.'

