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NC DENR

Division of Waste Management - Solid Waste

Environmental Monitoring Reporting Form

Notice: This form and any information attached to it are "Public Records" as defined in NC General Statute 132-1. As such, these documents are available for inspection and examination by any person upon request (NC General Statute 132-6).

Instructions:

- Prepare one form for each individually monitored unit.
- Please type or print legibly.
- Attach a notification table with values that attain or exceed NC 2L groundwater standards or NC 2B surface water standards. The notification must include a preliminary analysis of the cause and significance of each value. (e.g. naturally occurring, off-site source, pre-existing condition, etc.).
- Attach a notification table of any groundwater or surface water values that equal or exceed the reporting limits.
- Attach a notification table of any methane gas values that attain or exceed explosive gas levels. This includes any structures on or nearby the facility (NCAC 13B .1629 (4)(a)(i)).
- Send the original signed and sealed form, any tables, and Electronic Data Deliverable to: Compliance Unit, NCDENR-DWM, Solid Waste Section, 1646 Mail Service Center, Raleigh, NC 27699-1646.

Solid Waste Monitoring Data Submittal Information

Name of entity submitting data (laboratory, consultant, facility owner):

AECOM

Contact for questions about data formatting. Include data preparer's name, telephone number and E-mail address:

Name: Bryon Dahlgren

Phone: 404 965 9657

E-mail: bryon.dahlgren@aecom.com

Facility name:	Facility Address:	Facility Permit #	NC Landfill Rule: (.0500 or .1600)	Actual sampling dates (e.g., October 20-24, 2006)
Needmore Road Landfill	345 Messick Farm Road Salisbury, NC 28144 Rowan County	80-02	.0500	May 18-19, 2009

Environmental Status: (Check all that apply)

☐ Initial/Background Monitoring ☒ Detection Monitoring ☐ Assessment Monitoring ☐ Corrective Action

Type of data submitted: (Check all that apply)

☒ Groundwater monitoring data from monitoring wells ☐ Methane gas monitoring data
☐ Groundwater monitoring data from private water supply wells ☐ Corrective action data (specify) _____
☐ Leachate monitoring data ☐ Other(specify) _____
☒ Surface water monitoring data

Notification attached?

- ☐ No. No groundwater or surface water standards were exceeded.
- ☒ Yes, a notification of values exceeding a groundwater or surface water standard is attached. It includes a list of groundwater and surface water monitoring points, dates, analytical values, NC 2L groundwater standard, NC 2B surface water standard or NC Solid Waste GWPS and preliminary analysis of the cause and significance of any concentration.
- ☐ Yes, a notification of values exceeding an explosive methane gas limit is attached. It includes the methane monitoring points, dates, sample values and explosive methane gas limits.

Certification

To the best of my knowledge, the information reported and statements made on this data submittal and attachments are true and correct. Furthermore, I have attached complete notification of any sampling values meeting or exceeding groundwater standards or explosive gas levels, and a preliminary analysis of the cause and significance of concentrations exceeding groundwater standards. I am aware that there are significant penalties for making any false statement, representation, or certification including the possibility of a fine and imprisonment.

Bryon Dahlgren

Project Manager

404 965 9657

Facility Representative Name (Print)

Title

(Area Code) Telephone Number

Affix NC Licensed/ Professional Geologist Seal

Signature

Date



Environment

Submitted to:
CNA Holdings, Inc.
Dallas, Texas

Submitted by:
AECOM
Atlanta, Georgia
60135443
November 2009

May 2009 Semiannual Report

**Needmore Road Landfill Facility
Salisbury, North Carolina**



Environment

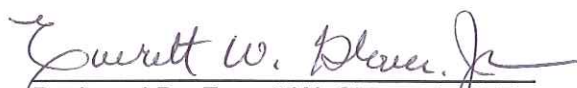
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May 2009 Semiannual Report



Prepared By: Bryon Dahlgren



Reviewed By: Everett W. Glover, Jr., P.E.

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List of Acronyms

2L	North Carolina Administrative Code Title 15A, Subchapter 2L
CAP	Corrective Action Plan
mg/L	milligrams per liter
MNA	monitored natural attenuation
NCDENR	North Carolina Department of Environment and Natural Resources
NPDES	National Pollutant Discharge Elimination System
NRLF	Needmore Road Landfill Facility
PQL	practical quantitation limit

1.0 Introduction

This report has been prepared to present the results of monitoring activities conducted during the May 2009 sampling event and activities completed since that time for the Needmore Road Landfill Facility (NRLF). This report includes a summary of new data and findings at the NRLF site. Additionally, this report presents the status of the monitored natural attenuation (MNA) and phytoremediation programs established in the Corrective Action Plan (CAP).

1.1 Site Background

The NRLF site, located at 345 Messick Farm Road, Salisbury, Rowan County, North Carolina, and shown on Figure 1, was used until 1990 to dispose of by-products of polyester resin manufacturing from the Hoechst Celanese plant located on US Route 70 near Salisbury, North Carolina. These by-products primarily included waste materials containing ethylene glycol with some other impurities, including 1,4-dioxane, 1,1-biphenyl, and biphenyl ether. There were four main disposal areas at this site, referred to as Taylor's Pit, the 14-Acre Site, the 16-Acre Site, and the Secondary Site. Taylor's Pit was consolidated into the main part of the landfill prior to final landfill closure. The NRLF site consists of an approximately 243-acre tract of land that is bounded by the Yadkin River to the east. The current North Carolina Department of Environment and Natural Resources (NCDENR) status of the site is "closed."

The landfill lies within the central portion of the Charlotte Metamorphic Belt of the Piedmont Physiographic Province. Bedrock in this area is composed of a complex series of meta-sedimentary, meta-volcanic, and igneous intrusive rock types. This geologic matrix has undergone repeated cycles of folding, faulting, metamorphism, and intrusions, which have resulted in regional northeasterly strike and southeasterly dip directions.

A basic understanding of the geology at the landfill has been established during several phases of work, during which numerous monitoring and extraction wells were installed. Based on an evaluation of the subsurface boring logs, the site is underlain by diorite, gabbro, and granite bedrock. Some localized gneissic and schistose metamorphism has been noted in several of the borings drilled at the site. These profiles are generally well weathered and occur in the zone above competent rock.

Remedial activities that were completed at the landfill prior to 2004 included the installation of an impermeable cover on the landfill, regrading of the surface of the landfill (to improve surface drainage), and the installation of groundwater extraction wells. Groundwater was extracted and treated by a UV/peroxide oxidation process and discharged under a National Pollutant Discharge Elimination System (NPDES) permit. Groundwater extraction was suspended in June 2002.

Soon after the deactivation of the extraction system, a groundwater seep manifested itself as surface flow traveling from a sump located at the toe of the landfill. The seep area is located at the northeast end of the landfill within the buffered area southwest of the Yadkin River. The surface flow meandered across the flat area between the landfill and the South Yadkin River and appeared to re-enter the shallow groundwater near the river bank. This occurrence also coincided with an end to a period of extreme drought and a return to normal rainfall patterns. The origin of this seep was believed to be associated with the presence of a drain system at the toe of the landfill. During 2004, modifications were made to the drain system, including the installation of 40 feet of solid pipe to replace a section of perforated pipe and the installation of an anti-seepage concrete collar around the drain pipe.

The installation of the collar appeared to eliminate the original seep; however, several weeks after the drain system modifications were made, a new, lower volume surface water flow was observed coming out of a culvert pipe further downgradient and after leaving the culvert pipe, meandered across the cleared area toward the river, and infiltrated into the ground prior to reaching the river. Based on the shallow groundwater elevations in this area, it was interpreted that this surface water flow was the partial re-establishment of a natural creek that existed prior to the installation of the extraction system.

Groundwater monitoring data in the reports submitted semiannually from November 2004 until the present have demonstrated that the existing groundwater impact has been generally contained and is not expanding, and biological activity is present in the source areas. Additionally, the levels of impact in groundwater are not anticipated to exceed surface water quality standards nor pose an unacceptable risk to the receptors. Based on these data, the reports concluded that MNA with phytoremediation is a viable remedy.

Biological degradation has been a significant component of natural attenuation of ethylene glycol and DowTherm A™ components at the site. The original MNA parameters supplemented with the additional sampling requested by NCDENR indicate that biological degradation is occurring at the site to control the ethylene glycol and DowTherm A™ plume. Phytoremediation is currently being utilized to supplement the MNA in order to treat the 1,4-dioxane plume through evapotranspiration while also providing additional hydraulic control.

Groundwater and surface water monitoring, as well as regular inspections of the phytoremediation system and landfill cap, have been ongoing at the site following the schedule detailed in the CAP and subsequently updated in April 2009. The May 2009 event was focused on key wells with historic detections of site parameters. The full sampling program presented in the CAP is scheduled for completion in November 2009. The May sampling plan, as agreed to in April 2009, is presented in Table 1. The November sampling plan is presented in Table 2.

2.0 Summary of Monitoring Activities

The MNA/phytoremediation ongoing activities for the NRLF site include the following:

- Semiannual groundwater and surface water sampling and analyses;
- Continued ongoing maintenance and monthly inspection of the landfill cap; and
- Continued ongoing maintenance and inspection of the phytoremediation tree farm.

Groundwater and surface water sampling was conducted using methodologies detailed in the CAP and revised as presented in the November 2008 semiannual report. A sample location map is included as Figure 2. Laboratory analytical reports for groundwater and surface water sampling are included in Appendix A. Completed monthly inspection forms for the phytoremediation system for May 2009 through September 2009 are included in Appendix B.

3.0 Summary of May 2009 Monitoring Results

Nine groundwater monitoring wells along with surface water from three locations were sampled during the May 2009 monitoring event. Laboratory analytical reports for groundwater and surface water sampling are presented in Tables 3 and 4, respectively.

3.1 Ethylene Glycol

The results from the May 2009 sampling event displayed non-detect concentrations for samples collected at each of the sampled monitoring wells. This result is consistent with the data collected in recent events. The historic data support the CAP conclusions of natural attenuation of ethylene glycol. The landfill cap has significantly reduced or eliminated the transport of contaminants from the landfill into groundwater. Contaminants that had entered the groundwater prior to the installation of the cap are being degraded or attenuated (CAP). Because ethylene glycol is fully miscible in water and mobile, additional detections may possibly be observed in future samples, but the extent and magnitude of ethylene glycol mass outside of the landfill cap has been substantially reduced.

Historic data summaries for ethylene glycol and other site parameters are presented in Table 5. Concentration trend plots are presented in Table 6. Since all ethylene glycol data collected since 2007 are non-detect, the trend plots are declining. Because there were no detections, a plume map was not prepared for ethylene glycol.

3.2 1,4-Dioxane

1,4-Dioxane has been historically detected in wells near all of the four former disposal sites. A plume map for 1,4-dioxane is included as Figure 3, and data used to generate these plots can be found in Table 3. 1,4-Dioxane concentration trend plots are presented in Table 7. The highest 1,4-dioxane concentration in May 2009 was present at well B-17C (2.81 milligrams per liter (mg/L)). As shown in the trends in Table 7, the detections reported at the site in May are within the recent historic range.

The extent of impact presented on Figure 3 represents the interpretation established based on the November 2008 data because a larger number of wells were sampled. The May 2009 data suggests that this interpretation remains valid. A small area of impact to the southwest of the main area is also included on Figure 3. This area indicates an isolated location of impact near the former Taylor's Pit area. This location is based on historic data from well B-32B, which was not sampled during the May event. The larger list of wells will be sampled again in November 2009.

As shown in Table 7, the site-wide 1,4-dioxane trends were generally stable or declining.

Concentrations reported at well B-01 in November 2008 and May 2009 were comparable to the concentrations reported in the prior two semiannual events (November 2007 and May 2008); however, a long-term declining trend is apparent in the data between November 2006 and the most recent data. Data prior to 2007 was generally between 3 and 4 mg/L but has remained in the 2 to 3 mg/L range over the past two years. None of the wells monitored in May 2009 have demonstrated increasing trends over the past several years.

These results indicate that the release of 1,4-dioxane from the former disposal sites is being controlled by the landfill cover. The trends shown in Table 7 indicate that the site has become stable.

3.3 DowTherm A™

During May of 2009, groundwater samples for DowTherm A™ components were collected from wells B-10 and B-12.

3.3.1 1,1-Biphenyl

Since 2003, 1,1-biphenyl has only been detected in samples collected from monitoring well B-10. The result from well B-10 in May 2009 was 0.319 mg/L (Table 3). The North Carolina Administrative Code Title 15A, Subchapter 2L (2L) standard for 1,1-biphenyl is 0.35 mg/L. The result at this well is consistent with data collected in recent years. Between 2005 and 2008, the concentration has ranged from 0.0163 mg/L to 0.405 mg/L. The historic maximum was 0.461 mg/L, reported in 1999.

3.3.2 Biphenyl Ether

NCDENR has not developed a 2L standard for biphenyl ether; therefore, the practical quantitation limit (PQL) has been used as the screening criteria for this constituent present at the site. Biphenyl ether has been historically detected at wells located near the former disposal sites and at the downgradient wells. The sample collected from well B-10 reported a result of 3.09 mg/L, and the sample collected from well B-12 reported a result of 0.0108 mg/L. These results are consistent with historic data. The historic biphenyl ether concentration trends are stable and are presented in Table 8.

The data continue to indicate that migration of 1,1-biphenyl and biphenyl ether is being controlled by the landfill cap and through natural attenuation mechanisms.

3.3.3 Surface Water Sampling Results

Surface water monitoring was conducted at three surface water monitoring locations. The surface water results are summarized in Table 4. 1,4-Dioxane was detected at CSW-1 (0.163 mg/L) and CSW-2 (0.0705 mg/L). Concentrations of 1,4-dioxane at SW-5 in the South Yadkin River was below the detection level.

CSW-1 and CSW-2 are monitoring locations associated with the surface water seep. Since the phytoremediation program was initiated, each of these locations has been dry for the majority of the sampling events. CSW-1 is located at the initial discharge point of the seep, and CSW-2 is located downstream in the creek bed fed by the seep.

Prior monitoring events in June 2004 and May 2005 indicated concentrations of 1,4-dioxane at CSW-1 of 0.542 mg/L and 0.504 mg/L, respectively, and lower concentrations at downgradient CSW-2. Between the second half of 2005 and the end of 2007, the locations were dry. Since the phytoremediation system was implemented, these locations have consistently either been dry or have reported concentrations more than 50% to an order of magnitude lower than before the system was installed.

Concentrations of 1,4-dioxane, ethylene glycol, biphenyl ether, and 1,1-biphenyl at surface water locations SW-5 were below detection levels.

3.3.4 Phytoremediation System

Monthly inspections of the phytoremediation system and landfill cap were conducted for the period of May 2009 through September 2009 and are presented in Appendix B. Based on these inspections, the trees remain in good health. As described above, the associated surface water sampling has demonstrated that the treatment system is effective. Groundwater concentrations of 1,4-dioxane in the vicinity of the treatment system have also remained stable or declining. As the trees continue to grow and establish, the treatment effectiveness is expected to continue and is likely to further improve.

Regular inspections and sampling will continue as detailed in the CAP.

4.0 Conclusions

The CAP was submitted in November 2007 and subsequent semiannual reports have reported declining or stabilized concentrations and extent for the various plumes within the NRLF site. A focused monitoring event was completed in May 2009, and regular inspections of the phytoremediation system were conducted for the period of May to October 2009. Results of the monitoring show that one of the primary constituents of concern, ethylene glycol, was not detected. 1,1-Biphenyl was detected at monitoring well B-10, and the data indicate a stable trend. Biphenyl ether and 1,4-dioxane remain as the primary site constituents. Data at the monitoring wells with detectable levels of 1,4-dioxane indicate concentrations exceeding the 2L standard; however, concentrations remain well below historical levels observed at the site with stable to declining trends.

A surface water sample was collected from location SW-5 in the South Yadkin River. Data from this location is consistent with historic data indicating that no site parameters have been observed to impact the South Yadkin River.

Data gathered associated with the phytoremediation has shown continued health of the system and effective treatment. The conclusions and recommendations of the CAP continue to be supported.

Groundwater and surface water monitoring, as well as regular inspections of the phytoremediation system and landfill cap, will be continued as indicated in the CAP and revised in April of this year. The next monitoring event is scheduled for November 2009 and will complete the original sampling plan presented in the CAP (Table 2). The next semiannual report will be submitted in May 2010.

Table 1
May Groundwater and Surface Water Sampling Plan
CNA Holdings, Inc. - Needmore Road Landfill Facility
AECOM Project No. 79891

Location	1,4-Dioxane	Dowtherm A	Ethylene Glycol	MNA*
B-01	X		X	X
B-09C	X		X	X
B-10	X	X	X	X
B-12	X	X		X
B-17C	X			X
B-22B	X			X
B-23A	X		X	X
B-23B	X		X	X
B-24A	X			X
SW-5	X	X	X	
CSW-1	X			
CSW-2	X			

* MNA: alkalinity, nitrate, phosphate, sulfate, DO, ORP, Ferrous iron

Table 2
November Groundwater and Surface Water Sampling Plan
To Be Retained in November
CNA Holdings, Inc. - Needmore Road Landfill Facility
AECOM Project No. 79891

Location	1,4-Dioxane	Dowtherm A	Ethylene Glycol	VOCs*	MNA**	Expanded MNA***
B-01	X	X	X	X	X	X
B-09C	X	X	X	X	X	
B-10	X	X	X	X	X	X
B-12	X	X			X	
B-17B	X	X			X	X
B-17C	X	X			X	X
B-21B	X				X	
B-22A	X	X		X	X	X
B-22B	X	X		X	X	X
B-23A	X	X	X	X	X	X
B-23B	X	X	X	X	X	X
B-24A	X	X		X	X	
B-24B	X	X		X	X	
B-32B	X	X	X		X	X
CSW-1	X					
CSW-2	X					
SW-3	X	X	X			
SW-5	X	X	X			
SW-7	X	X	X			
SW-8	X	X	X			

* VOCs to be analyzed annually (November only - revised from CAP schedule of May only)

** MNA: alkalinity, nitrate, phosphate, sulfate, DO, ORP, Ferrous iron

*** Expanded MNA: TOC, ethane, ethene, methane, carbon dioxide, hydrogen, and volatile fatty acids

Table 3
Groundwater Analytical Summary
CMA Holdings, Inc. - Needmore Road Landfill Facility
AECOM Project No. 79891

Chemical Name	Unit	NC 2L Standard	B-01 5/19/2009	B-09C 5/18/2009	B-10 5/19/2009	B-10 Dup 5/19/2009	B-12 5/18/2009	B-17C 5/18/2009	B-22B 5/19/2009	B-23A 5/19/2009	B-23B 5/19/2009	B-24A 5/18/2009
alkalinity	mg/L	--	3300	4970	981	994	256	324	602	2920	3040	414
1,1-biphenyl	mg/L	0.35	NA	NA	0.319	0.324	<0.01	NA	NA	NA	NA	NA
biphenyl ether	mg/L	PQL*	NA	NA	3.09	3.06	0.0108	NA	NA	NA	NA	NA
1,4-dioxane	mg/L	0.007	2.26	0.873	0.412	0.437	0.105	2.81	2.39	1.34	1.77	0.113
ethylene glycol	mg/L	14	<7	<7	<7	<7	NA	NA	NA	<7	<7	NA
orthophosphate phosphorus	mg/L	--	0.96	0.22	<0.03	<0.03	0.039	0.09	0.09	0.098	0.12	0.081
sulfate	mg/L	250	2.9	0.5	<0.5	<0.5	<0.5	2.8	0.76	0.64	<0.5	1.4
Field Parameters												
dissolved oxygen	mg/L	--	0.3	0.1	0.3	0.3	2.4	0.3	0.2	0.3	0.2	0.3
ferrous iron	mg/L	--	4.1	3	2.4	2.4	<0.2	<0.2	2.2	1.4	1.4	1.3
groundwater elevation	feet MSL	--	695.79	674.11	703.09	703.09	659.08	659.46	658.58	656.37	656.88	654.61
ORP	mV	--	93	-83	-51	-51	-12	124	-61	-1	-30	43
pH	su	--	5.4	5.8	6.5	6.5	6.9	6.6	6.7	6.6	6.5	6.6
specific conductance	umhos/cm	--	7710	10000	2180	2180	509	738	1240	5600	5830	764
temperature	degrees C	--	18	15	17	17	16	17	16	16	15	14
turbidity	NTU	--	20	1	27	27	1	1	3	17	14	1

PQL - Practical Quantitation Limit

* - Site Specific target chemical

no standard specified under 15A NCAC 2L.0202

mg/L - milligrams per liter

mV - millivolts

su - standard units

umhos/cm - micromhos/cm

degrees C - degrees Celsius

feet MSL - feet above mean sea level

NTU - nephelometric turbidity units

NA - not analyzed

Table 4
Surface Water Analytical Summary
CNA Holdings, Inc. - Needmore Road Landfill Facility
AECOM Project No. 79891

Chemical Name	Unit	CSW-1 5/18/2009	CSW-2 5/18/2009	SW-5 5/18/2009
1,1-biphenyl	mg/L	NA	NA	<0.01
biphenyl ether	mg/L	NA	NA	<0.01
1,4-dioxane	mg/L	0.163	0.0705	<0.01
ethylene glycol	mg/L	NA	NA	<7
dissolved oxygen	mg/L	4.7	5.7	9.7
ORP	mV	71	35	6.7
pH	su	6.6	7.2	7.4
specific conductance	umhos/cm	543	342	84
temperature	degrees C	17	17	18
turbidity	NTU	23	38	37

mg/L - milligrams per liter

mV - millivolts

su - standard units

umhos/cm - micromhos/cm

degrees C - degrees Celsius

NA - Not Available

NTU - nephelometric turbidity units

Table 5
Summary of Detected Constituents in Groundwater
CNA Holdings, Inc. - Needmore Road Landfill Facility
AECOM Project No. 79891

Parameter	1,1-biphenyl	biphenyl ether	1,4-dioxane	ethylene glycol
Unit	mg/L	mg/L	mg/L	mg/L
NC 2L Standard	PQL	PQL	0.007	14
B-01				
Feb-04				
May-04				
Jun-04	<0.05	0.0723	4.07	<28
Nov-04	<0.01	0.0211	0.202	492
May-05	<2.5	<2.5	2.93	1160
Nov-05	<0.01	0.02	3.69	<70
May-06	<0.02	0.0419	2.75	93.9
Nov-06	<0.01	0.0446	4.68	2000
May-07	<0.01	0.0716	3.43	<140
Nov-07	<0.04	0.0662	3.01	<7
May-08	<0.04	0.0635	2.15	<7
Nov-08	<0.01	0.0565	3.31	<7
May-09			2.26	<7
B-09C				
Feb-04				
May-04				
Jun-04	<0.5	<0.5	0.791	<70
Nov-04	<0.05	0.0545	1.04	1420
May-05	<0.2	<0.2	0.776	<70
Nov-05	<0.01	0.0324	1.31	363
May-06	<0.02	0.0492	0.668	85.8
Nov-06	<0.01	<0.01	1.29	2020
May-07	<0.01	0.0377	1.11	<140
Nov-07	<0.01	0.0352	0.995	<7
May-08	<0.01	0.0312	0.486	<7
Nov-08	<0.01	0.0438	1.11	<7
May-09			0.873	<7
B-10				
Feb-04				
May-04				
Jun-04	<1	4.63	0.723	<28
Nov-04	<0.4	3.33	0.592	354
May-05	0.02	0.193	0.419	647
Nov-05	0.31	3.62	0.62	57.5
May-06	0.29	3.01	0.328	<7
Nov-06	0.28	3.12	0.509	284
May-07	0.28	3.26	0.564	<28
Nov-07	0.31	3.46	0.413	<7
May-08	0.405	3.22	0.461	<7
Nov-08	0.352	3.12	0.481	<7
May-09	0.319	3.09	0.412	<7

Table 5
Summary of Detected Constituents in Groundwater
CNA Holdings, Inc. - Needmore Road Landfill Facility
AECOM Project No. 79891

Parameter	1,1-biphenyl	biphenyl ether	1,4-dioxane	ethylene glycol
Unit	mg/L	mg/L	mg/L	mg/L
NC 2L Standard	PQL	PQL	0.007	14
B-12				
Feb-04	<0.01	<0.01	0.315	<7
May-04	<0.01	<0.01	0.521	<7
Jun-04	<0.01	0.0102	0.775	<7
Nov-04	<0.01	0.0115	0.942	<7
May-05	<0.01	0.0108	0.222	<7
Nov-05	<0.01	<0.01	0.165	<7
May-06	<0.01	<0.01	0.151	
Nov-06	<0.01	<0.01	0.216	
May-07	<0.01	<0.01	0.118	
Nov-07	<0.01	<0.01	0.169	
May-08	<0.01	<0.01	0.121	<7
Nov-08	<0.01	<0.01	0.102	
May-09	<0.01	0.0108	0.105	
B-17C				
Feb-04	<0.01	<0.01	3.29	<7
May-04	<0.01	<0.01	2.21	<7
Jun-04	<0.01	<0.01	3.01	<7
Nov-04	<0.01	0.0117	3.22	<7
May-05	<0.01	<0.01	2.51	<8.5
Nov-05	<0.01	<0.01	2.44	<7
May-06	<0.01	<0.01	2.68	
Nov-06	<0.01	<0.01	2.92	
May-07	<0.01	<0.01	2.93	
Nov-07	<0.01	<0.01	3.06	
May-08	<0.01	<0.01	2.90	<7
Nov-08	<0.01	<0.01	2.10	
May-99			2.81	
B-22B				
Feb-04	<0.01	0.0323	2.64	<7
May-04	<0.01	0.0346	1.9	<7
Jun-04	<0.01	0.033	2.78	<7
Nov-04	<0.01	0.0362	2.72	<7
May-05	<0.01	0.0351	2.32	<10.8
Nov-05	<0.01	0.0365	1.22	<7
May-06	<0.01	0.0329	2.46	
Nov-06	<0.01	0.028	2.33	
May-07	<0.01	0.0284	2.79	
Nov-07	<0.01	0.0295	2.62	
May-08	<0.01	0.023	2.42	<7
Nov-08	<0.01	0.0236	1.87	
May-09			2.39	

Table 5
Summary of Detected Constituents in Groundwater
CNA Holdings, Inc. - Needmore Road Landfill Facility
AECOM Project No. 79891

Parameter	1,1-biphenyl	biphenyl ether	1,4-dioxane	ethylene glycol
Unit	mg/L	mg/L	mg/L	mg/L
NC 2L Standard	PQL	PQL	0.007	14
B-23A				
Feb-04	<0.01	0.115	1.5	<7
May-04	<0.01	0.0928	1.21	<7
Jun-04	<0.01	0.0911	2.03	<7
Nov-04	<0.01	0.0769	1.45	227
May-05	<0.01	0.0108	1.41	278
Nov-05	<0.01	0.0919	1.29	<70
May-06	<0.01	0.0823	0.711	286
Nov-06	<0.01	0.0791	2.01	255
May-07	<0.01	0.0768	1.51	<70
Nov-07	<0.01	0.112	1.45	<7
May-08	<0.01	0.0936	1.91	
Nov-08	<0.01	0.0711	1.97	<7
May-09			1.34	<7
B-23B				
Feb-04	<0.01	0.124	1.67	594
May-04	<0.01	0.115	1.14	<7
Jun-04	<0.01	0.101	1.76	<35
Nov-04	<0.01	0.0857	1.82	393
May-05	<0.2	<0.2	1.29	<35
Nov-05	<0.01	0.129	1.33	<35
May-06	<0.01	0.116	0.891	51.9
Nov-06	<0.02	0.128	1.7	907
May-07	<0.02	0.0973	2.29	<70
Nov-07	<0.01	0.128	1.94	<7
May-08	<0.01	0.123	2.31	<7
Nov-08	<0.01	0.112	2.54	<7
May-09			1.77	<7
B-24A				
Feb-04	<0.01	<0.01	0.0548	7.8
May-04	<0.01	<0.01	0.022	<7
Jun-04	<0.01	<0.01	0.0625	<7
Nov-04	<0.01	<0.01	0.0796	<7
May-05	<0.01	<0.01	0.0885	<7
Nov-05	<0.01	0.0111	0.0726	<7
May-06	<0.01	0.0102	0.105	
Nov-06	<0.01	0.0126	0.158	
May-07	<0.01	<0.01	0.141	
Nov-07	<0.01	0.0124	0.161	
May-08	<0.01	<0.01	0.159	<7
Nov-08	<0.01	0.0124	0.125	
May-09			0.113	

Table 6
Time vs. Concentration Plots - Ethylene Glycol
CNA Holdings, Inc. - Needmore Road Landfill Facility
AECOM Project No. 79891

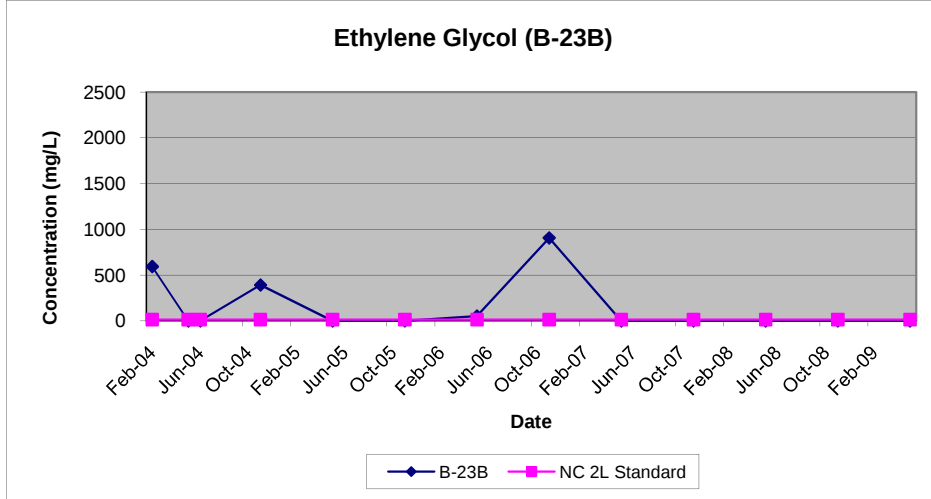
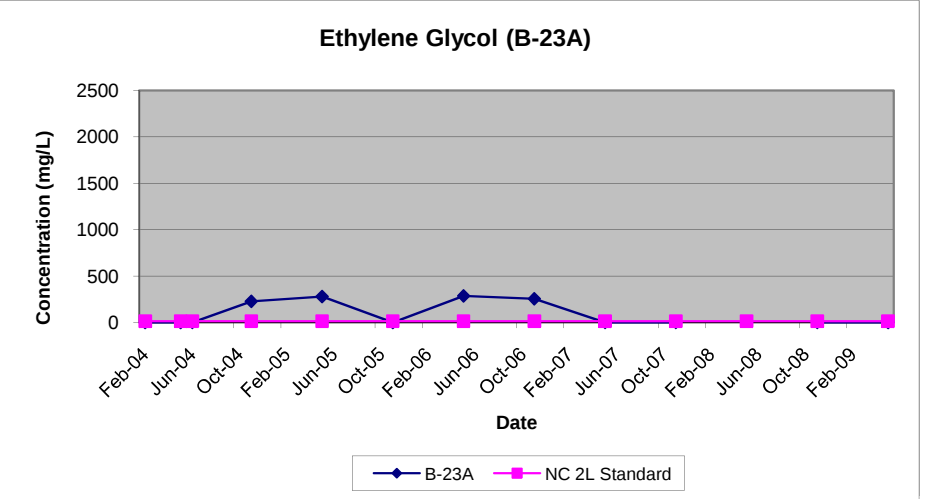
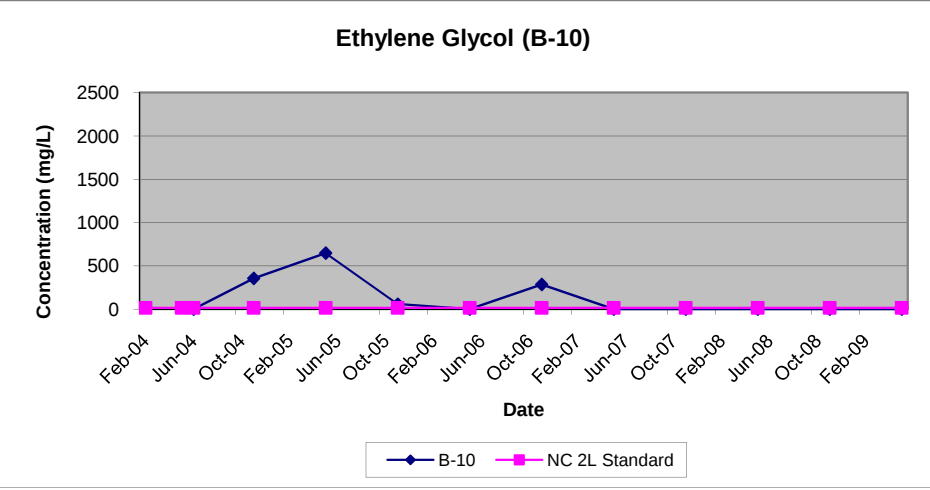
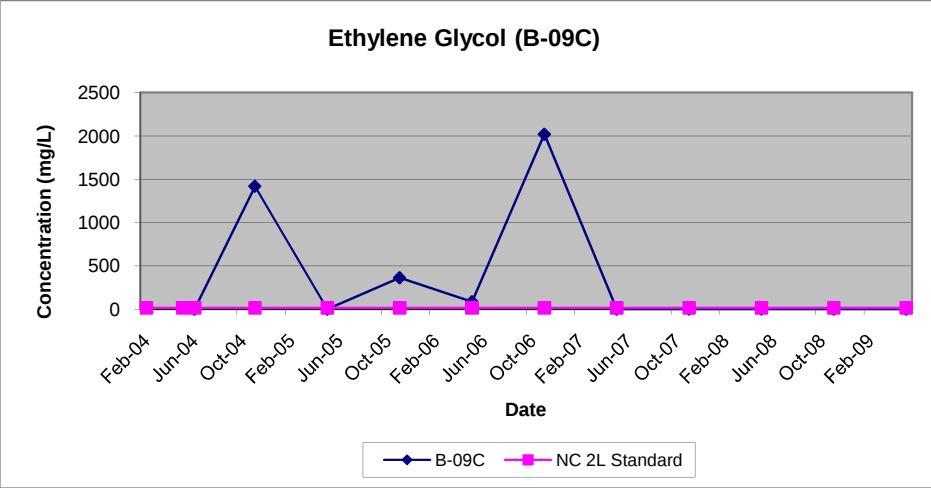
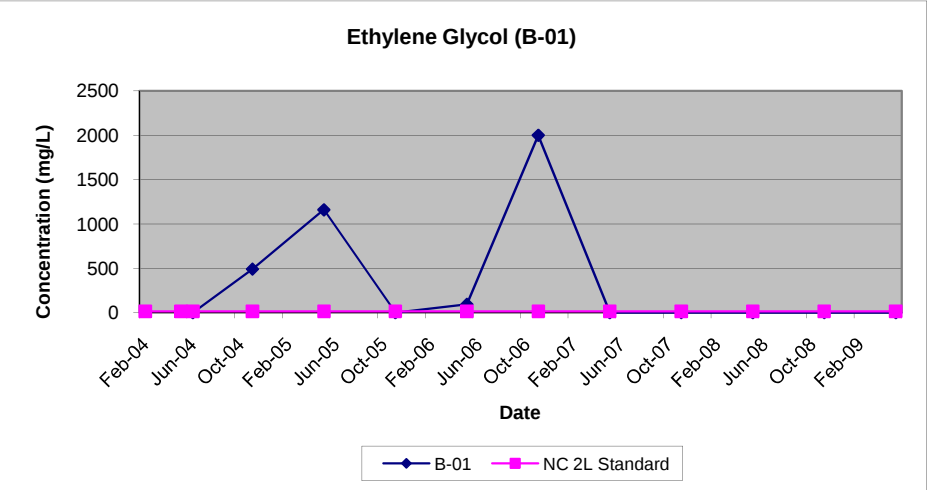


Table 7
Time vs. Concentration Plots - 1,4-Dioxane
CNA Holdings, Inc. - Needmore Road Landfill Facility
AECOM Project No. 79891

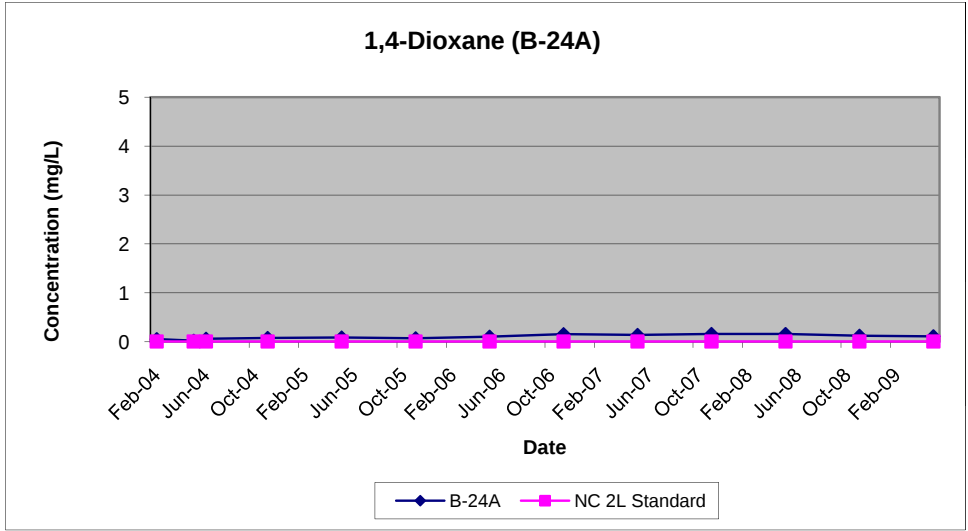
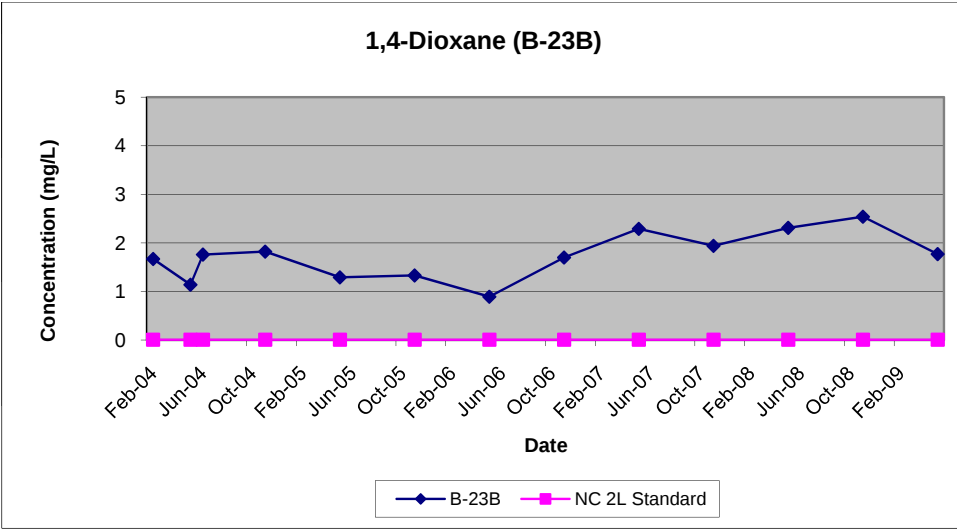
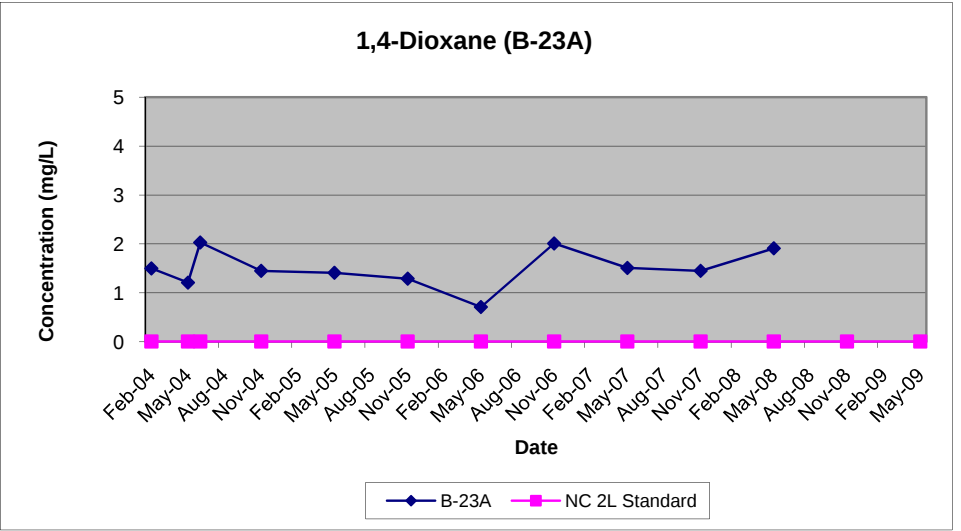
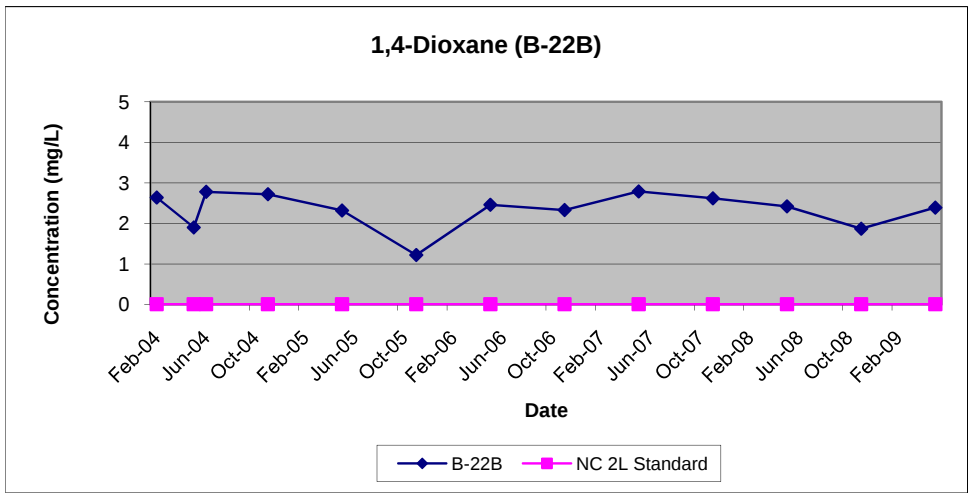
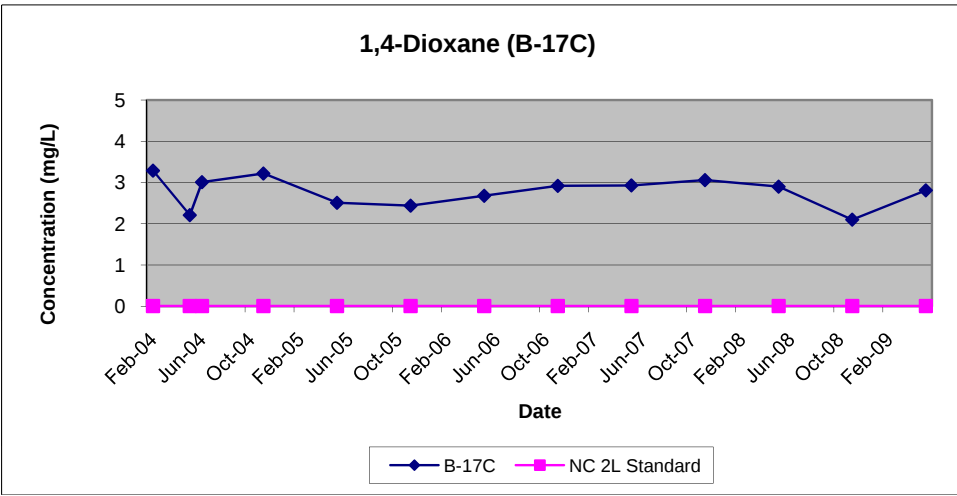
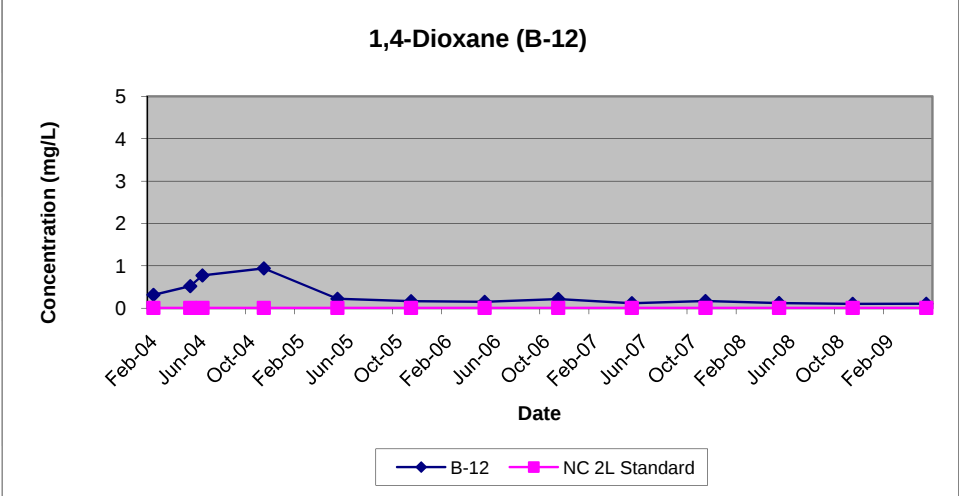
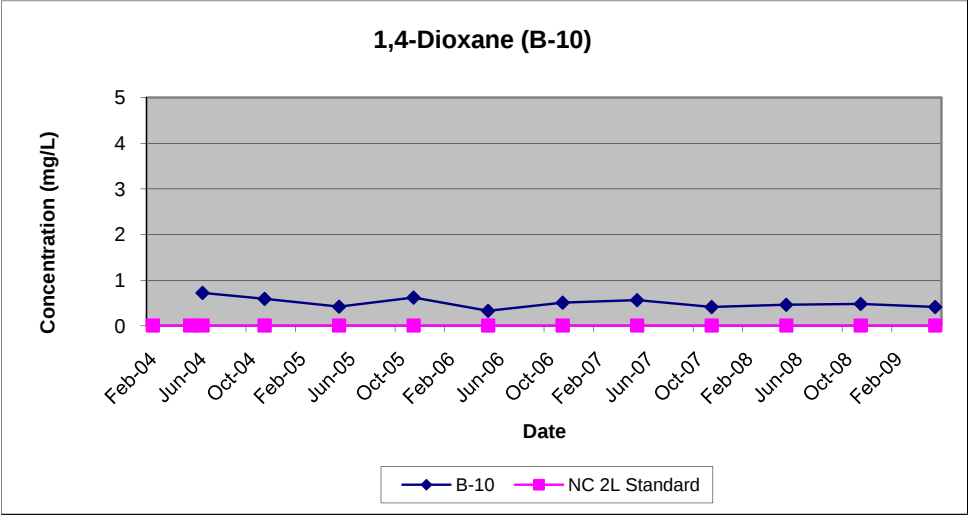
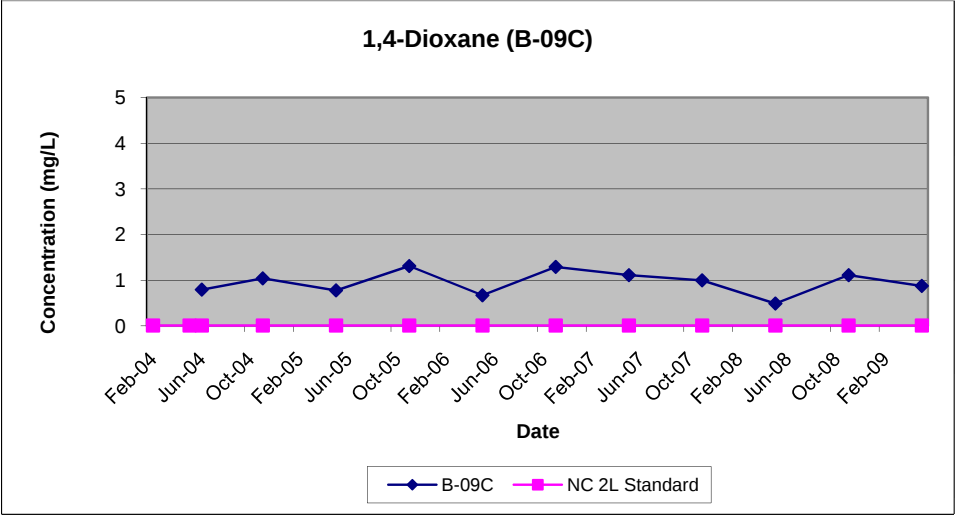
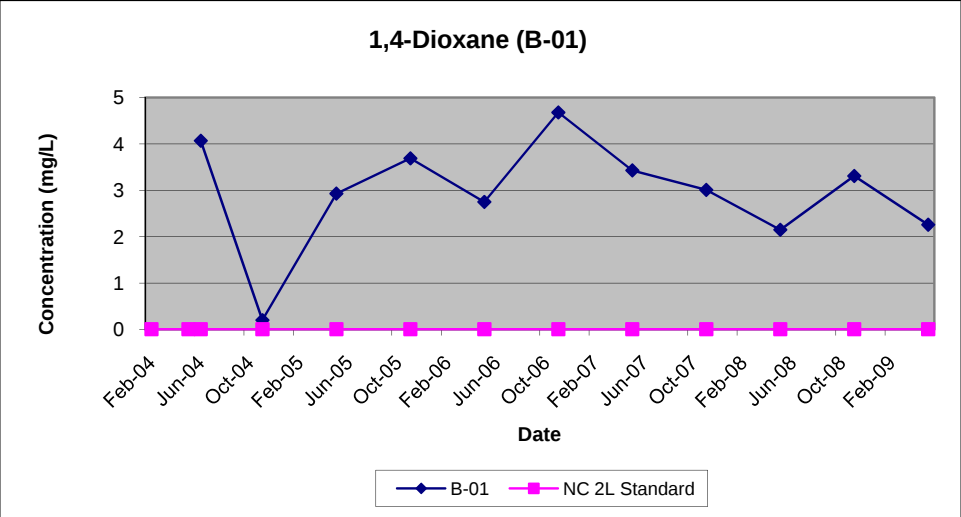
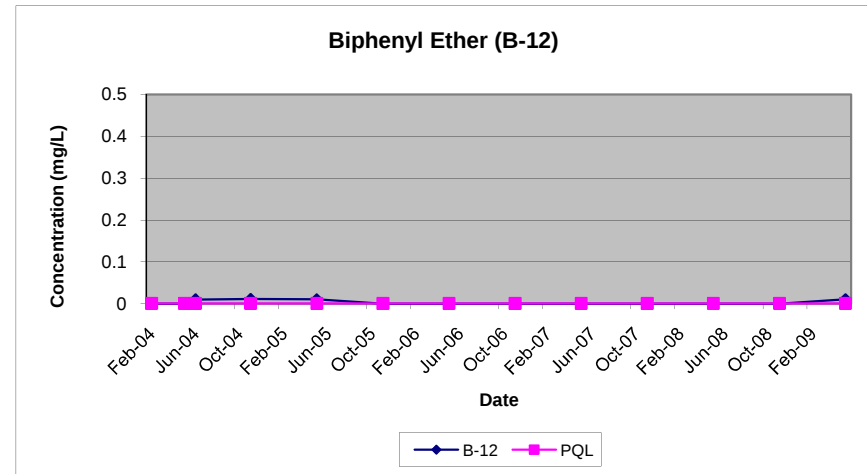
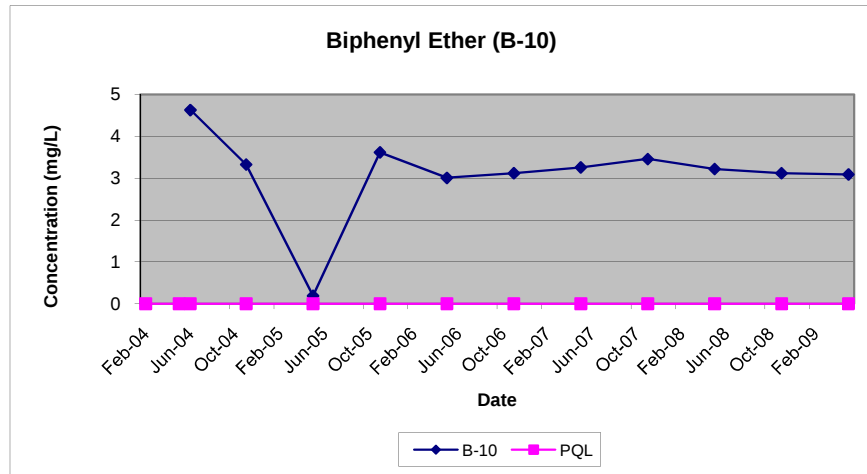
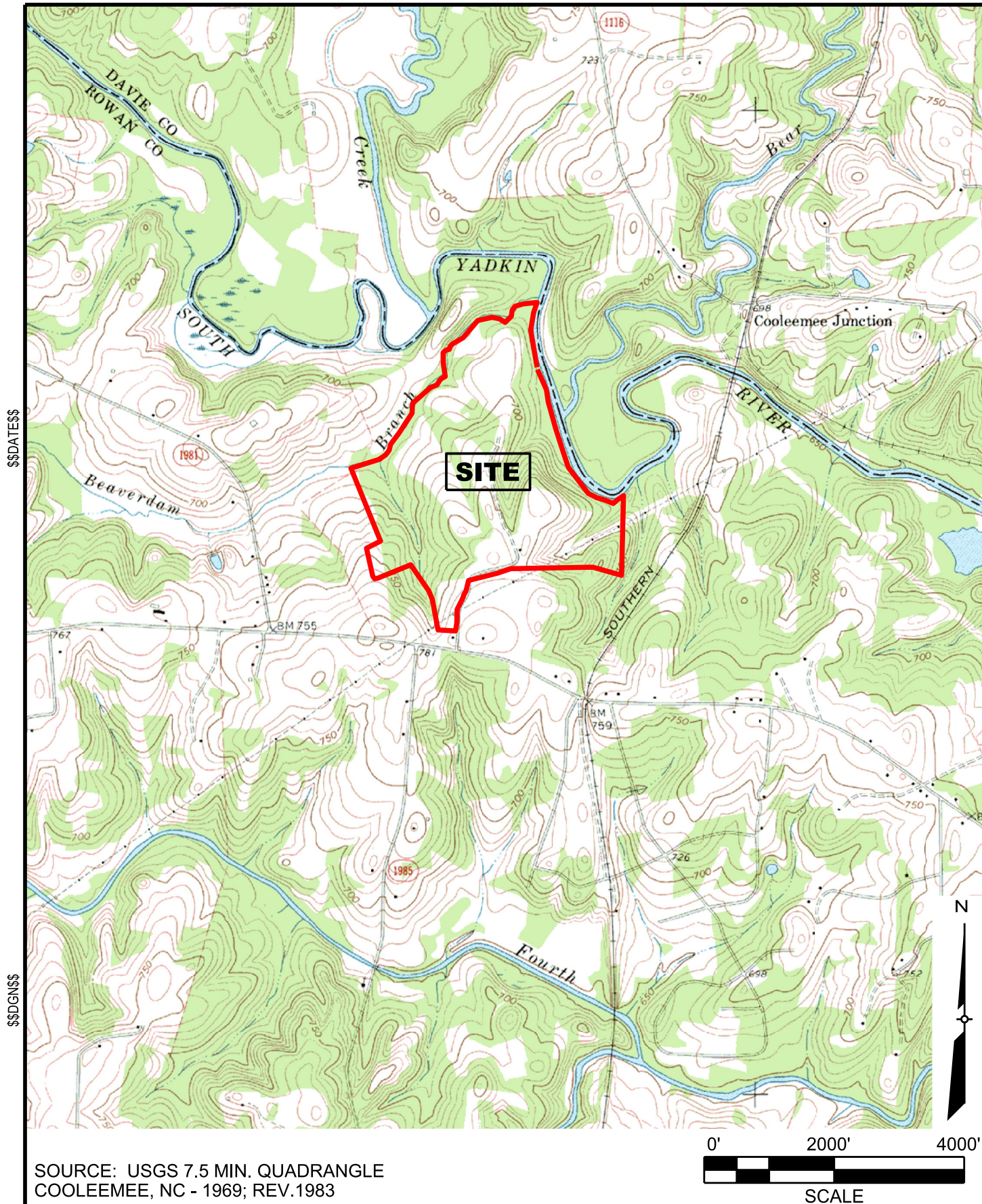


Table 8
Time vs. Concentration Plots - Biphenyl Ether
CNA Holdings, Inc. - Needmore Road Landfill Facility
AECOM Project No. 79891





SOURCE: USGS 7.5 MIN. QUADRANGLE
COOLEEMEE, NC - 1969; REV. 1983

AECOM

FIGURE 1
SITE LOCATION MAP

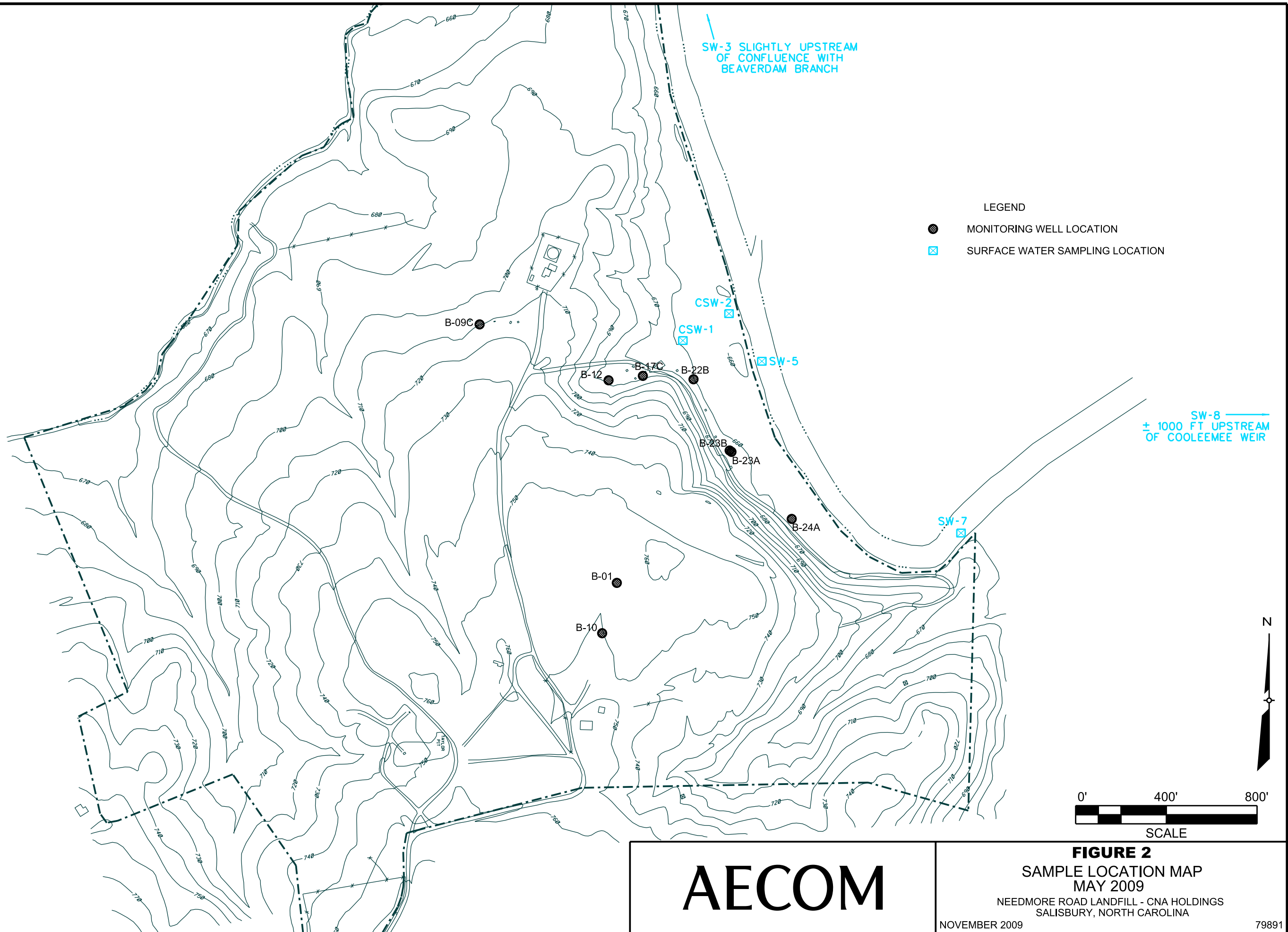
NEEDMORE ROAD LANDFILL - CNA HOLDINGS
SALISBURY, NORTH CAROLINA

NOVEMBER 2009

79891

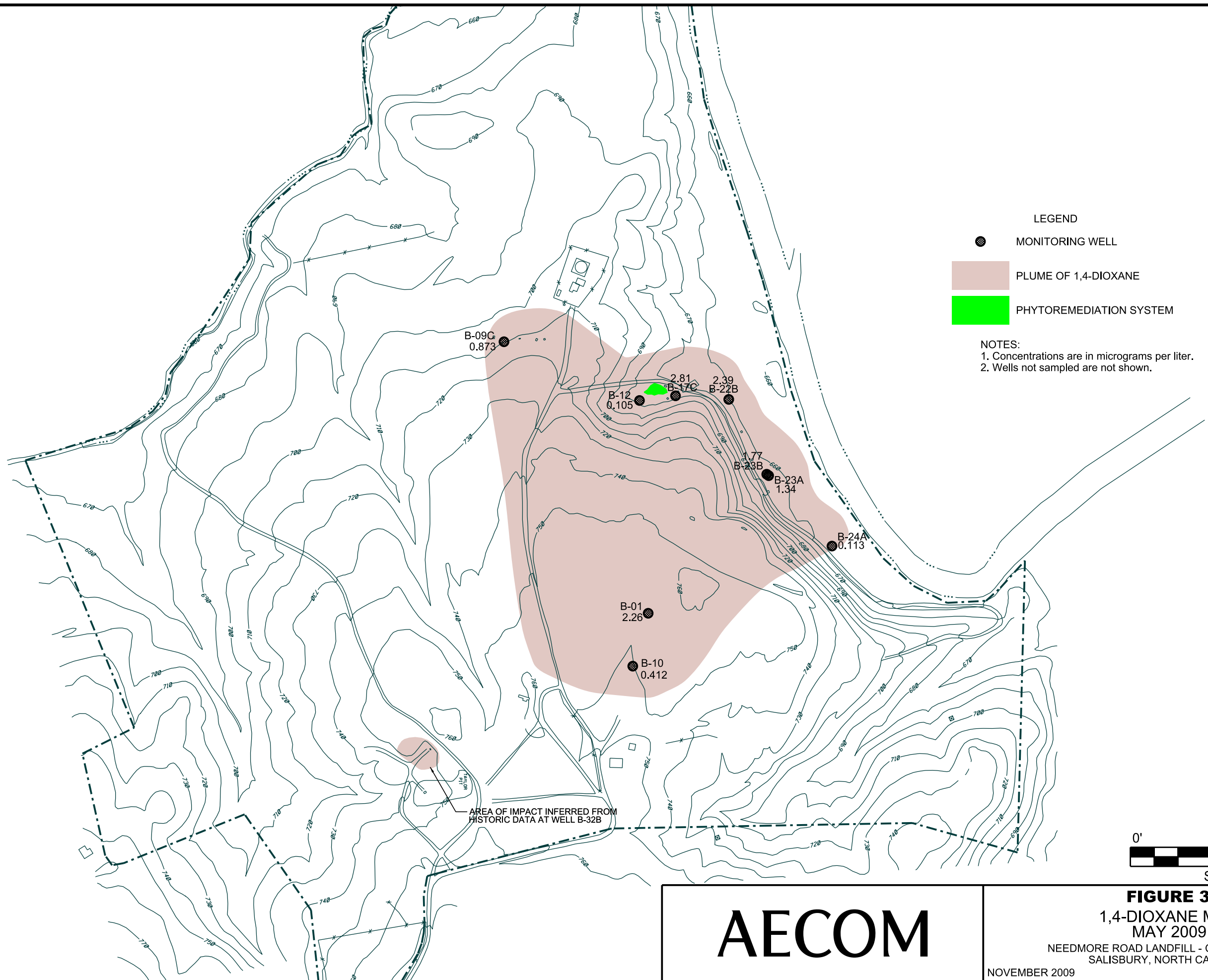
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\$\$\$DGN\$\$\$



\$\$\$DATE\$\$\$

\$\$\$DGN\$\$\$



AECOM

Appendix A

May 2009 Laboratory Analytical Reports

June 15, 2009

BRYON DAHLGREN
AECOM
1455 OLD ALABAMA ROAD
SUITE 170
ROSWELL, GA 30076

Report ID : AG1219
Page 1 of 49

Login Number	:L09052003
Project Number	:61242.12
Description	:NRLF

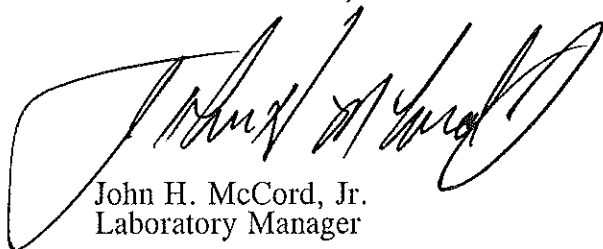
Dear Bryon Dahlgren:

We are pleased to provide the enclosed analytical results for the samples received by Davis & Floyd, Inc. on May 20, 2009.

A formal Quality Assurance/Quality Control program is maintained by Davis & Floyd, which is designed to meet or exceed the EPA, NELAC or other appropriate regulatory requirements. All analytical analyses for this project met QA/QC criteria and the results are within the 99% confidence interval for each method unless otherwise stated in the footnotes. This report is to be reproduced only in full.

Feel free to contact our Client Services Representative at (864) 229-4413 if further explanation of the analysis is required. Unless other arrangements have been made, samples will be disposed of or returned 14 days from the date of the report. We appreciate the opportunity to provide services to your firm.

Sincerely,
DAVIS & FLOYD, INC.



John H. McCord, Jr.
Laboratory Manager

SC Certification Number: 24110001

Client : AECOM
1455 OLD ALABAMA ROAD
SUITE 170
ROSWELL, GA 30076
Contact : BRYON DAHLGREN

Project Number: 61242.12

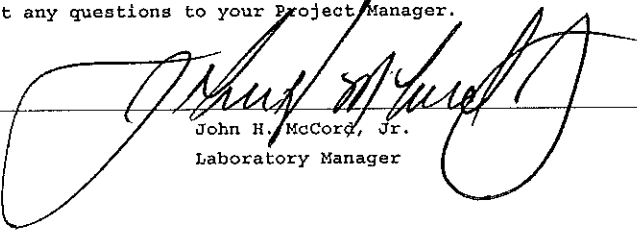
Report Date : June 15, 2009
Page 2 of 49 Report ID: AG1219

Certificate of Analysis Report

Sample ID	Client ID	Date Collected	Date Received
L09052003-01	CSW-1	05/18/2009 1445	05/20/2009
L09052003-02	CSW-2	05/18/2009 1505	05/20/2009
L09052003-03	SW-5	05/18/2009 1530	05/20/2009
L09052003-04	B-17C	05/18/2009 1712	05/20/2009
L09052003-05	B-24A	05/18/2009 1808	05/20/2009
L09052003-06	B-09C	05/18/2009 1827	05/20/2009
L09052003-07	B-12	05/18/2009 1900	05/20/2009
L09052003-08	B-23B	05/19/2009 0957	05/20/2009
L09052003-09	B-23A	05/19/2009 1205	05/20/2009
L09052003-10	B-22B	05/19/2009 1315	05/20/2009
L09052003-11	B-10	05/19/2009 1355	05/20/2009
L09052003-12	B-10 DUP.	05/19/2009 1355	05/20/2009
L09052003-13	B-01	05/19/2009 1505	05/20/2009

This data report has been prepared and reviewed in accordance with standard operating procedures. Test results relate only to the sample tested.
Please direct any questions to your Project Manager.

Reviewed by



John H. McCord, Jr.
Laboratory Manager



LABORATORY ANALYSIS REPORT

SC Certification Number: 24110001

Client : AECOM
1455 OLD ALABAMA ROAD
SUITE 170
ROSWELL, GA 30076
Contact : BRYON DAHLGREN

Project Number: 61242.12

Report Date : June 15, 2009
Page 3 of 49 Report ID: AG1219

Certificate of Analysis

Client ID: CSW-1
Sample ID: L09052003-01

Date Collected: 05/18/2009 1445
Date Received : 05/20/2009

Parameter	Result	Qual	RDL	Units	Analyst	Date	Time
Matrix : GW/ChemW							
Field Data							
EPA 170.1							
TEMPERATURE	17.0		1.0	degrees C		05/18/2009	1445
EPA 180.1							
TURBIDITY	23.0		1.0	NTU		05/18/2009	1445
SM 2580B							
REDOX POTENTIAL	+ 71			mV		05/18/2009	1445
SM 4500-O G							
DISSOLVED OXYGEN	4.7		0.10	mg/l		05/18/2009	1445
SW846 9040C							
PH	6.6		0.50	su		05/18/2009	1445
SW846 9050A							
SPECIFIC CONDUCTIVITY	543		1.0	umhos/cm		05/18/2009	1445
Volatile Organics							
SW846 8260C							
1,4-DIOXANE	163		10.0	ug/l	JMT	05/21/2009	1343

SC Certification Number: 24110001

Client : AECOM
1455 OLD ALABAMA ROAD
SUITE 170
ROSWELL, GA 30076
Contact : BRYON DAHLGREN

Project Number: 61242.12

Report Date : June 15, 2009
Page 4 of 49 Report ID: AG1219

Certificate of Analysis

Client ID: CSW-2
Sample ID: L09052003-02

Date Collected: 05/18/2009 1505
Date Received : 05/20/2009

Parameter	Result	Qual	RDL	Units	Analyst	Date	Time
Matrix : GW/ChemW							
Field Data							
EPA 170.1							
TEMPERATURE	17.0		1.0	degrees C		05/18/2009	1505
EPA 180.1							
TURBIDITY	38.0		1.0	NTU		05/18/2009	1505
SM 2580B							
REDOX POTENTIAL	+ 35			mV		05/18/2009	1505
SM 4500-O G							
DISSOLVED OXYGEN	5.7		0.10	mg/l		05/18/2009	1505
SW846 9040C							
PH	7.2		0.50	su		05/18/2009	1505
SW846 9050A							
SPECIFIC CONDUCTIVITY	342		1.0	umhos/cm		05/18/2009	1505
Volatile Organics							
SW846 8260C							
1,4-DIOXANE	70.5		10.0	ug/l	JMT	05/21/2009	1319

LABORATORY ANALYSIS REPORT

SC Certification Number: 24110001

Client : AECOM
1455 OLD ALABAMA ROAD
SUITE 170
ROSWELL, GA 30076
Contact : BRYON DAHLGREN

Project Number: 61242.12
Report Date : June 15, 2009
Page 5 of 49 Report ID: AG1219

Certificate of Analysis

Client ID: SW-5
Sample ID: L09052003-03

Date Collected: 05/18/2009 1530
Date Received : 05/20/2009

Parameter	Result	Qual	RDL	Units	Analyst	Date	Time
Matrix : GW/ChemW							
Field Data							
EPA 170.1							
TEMPERATURE	18.0		1.0	degrees C		05/18/2009	1530
EPA 180.1							
TURBIDITY	37.0		1.0	NTU		05/18/2009	1530
SM 2580B							
REDOX POTENTIAL	+ 6.7			mV		05/18/2009	1530
SM 4500-O G							
DISSOLVED OXYGEN	9.7		0.10	mg/l		05/18/2009	1530
SW846 9040C							
PH	7.4		0.50	su		05/18/2009	1530
SW846 9050A							
SPECIFIC CONDUCTIVITY	84.0		1.0	umhos/cm		05/18/2009	1530
Gas Chromatography							
SW846 8015C							
ETHYLENE GLYCOL	<	7.0 U	7.0	mg/l	JMT	05/28/2009	1950
Semivolatile Organics							
SW846 8270D							
1,1'-BIPHENYL	<	10.0 U	10.0	ug/l	PAP	05/27/2009	1632
BIPHENYL ETHER	<	10.0 U	10.0	ug/l	PAP	05/27/2009	1632
Volatile Organics							
SW846 8260C							
1,4-DIOXANE	<	10.0 U	10.0	ug/l	JMT	05/21/2009	1255

Prep Procedure	Method	Analyst	Prep Date
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Analytical Prep Procedures:

DOWTHERM SW846 3510C DBC 05/20/2009 0900

LABORATORY ANALYSIS REPORT

SC Certification Number: 24110001

Client : AECOM
1455 OLD ALABAMA ROAD
SUITE 170
ROSWELL, GA 30076
Contact : BRYON DAHLGREN

Project Number: 61242.12
Report Date : June 15, 2009
Page 6 of 49 Report ID: AG1219

Certificate of Analysis

Client ID: B-17C
Sample ID: L09052003-04

Date Collected: 05/18/2009 1712
Date Received : 05/20/2009

Parameter	Result	Qual	RDL	Units	Analyst	Date	Time
Matrix : GW/ChemW							
Field Data							
EPA 170.1							
TEMPERATURE	17.0		1.0	degrees C		05/18/2009	1712
EPA 180.1							
TURBIDITY	1.0		1.0	NTU		05/18/2009	1712
HACH IR-18C							
FERROUS, IRON	< 0.20	U	0.20	mg/l		05/18/2009	1712
SM 2580B							
REDOX POTENTIAL	+ 124			mV		05/18/2009	1712
SM 4500-O G							
DISSOLVED OXYGEN	0.30		0.10	mg/l		05/18/2009	1712
SW846 9040C							
PH	6.6		0.50	su		05/18/2009	1712
SW846 9050A							
SPECIFIC CONDUCTIVITY	738		1.0	umhos/cm		05/18/2009	1712
GROUND WATER ELEVATION	659.46		.01	feet MSL		05/18/2009	1712
Volatile Organics							
SW846 8260C							
1,4-DIOXANE	2810		200	ug/l	JMT	05/21/2009	1455
Wet Chemistry							
SM 2320B							
ALKALINITY, TOTAL	324		2.0	mg/l	MPM	05/20/2009	1850
ENDPOINT PH	4.5		1.0	su	MPM	05/20/2009	1850
SM 4500PE							
ORTHO PHOSPHATE (AS P)	0.090		0.030	mg/l	CDC	05/20/2009	1622
SW846 9056							
NITRATE NITROGEN (AS N)	< 0.10	U	0.10	mg/l	EIC	05/20/2009	1141
NITRITE NITROGEN (AS N)	< 0.10	U	0.10	mg/l	EIC	05/20/2009	1141
SULFATE	2.8		0.50	mg/l	EIC	05/20/2009	1141



LABORATORY ANALYSIS REPORT

SC Certification Number: 24110001

Client : AECOM
1455 OLD ALABAMA ROAD
SUITE 170
ROSWELL, GA 30076
Contact : BRYON DAHLGREN

Project Number: 61242.12

Report Date : June 15, 2009
Page 7 of 49 Report ID: AG1219

Certificate of Analysis

Client ID: B-24A
Sample ID: L09052003-05

Date Collected: 05/18/2009 1808
Date Received : 05/20/2009

Parameter	Result	Qual	RDL	Units	Analyst	Date	Time
Matrix : GW/ChemW							
Field Data							
EPA 170.1							
TEMPERATURE	14.0		1.0	degrees C		05/18/2009	1808
EPA 180.1							
TURBIDITY	1.0		1.0	NTU		05/18/2009	1808
HACH IR-18C							
FERROUS, IRON	1.3		0.20	mg/l		05/18/2009	1808
SM 2580B							
REDOX POTENTIAL	+ 43			mV		05/18/2009	1808
SM 4500-O G							
DISSOLVED OXYGEN	0.30		0.10	mg/l		05/18/2009	1808
SW846 9040C							
PH	6.6		0.50	su		05/18/2009	1808
SW846 9050A							
SPECIFIC CONDUCTIVITY	764		1.0	umhos/cm		05/18/2009	1808
GROUND WATER ELEVATION	654.61		.01	feet MSL		05/18/2009	1808
Volatile Organics							
SW846 8260C							
1,4-DIOXANE	113		10.0	ug/l	JMT	05/21/2009	1431
Wet Chemistry							
SM 2320B							
ALKALINITY, TOTAL	414		2.0	mg/l	MPM	05/20/2009	1858
ENDPOINT PH	4.5		1.0	su	MPM	05/20/2009	1858
SM 4500PE							
ORTHO PHOSPHATE (AS P)	0.081		0.030	mg/l	CDC	05/20/2009	1622
SW846 9056							
NITRATE NITROGEN (AS N)	< 0.10	U	0.10	mg/l	EIC	05/20/2009	1223
NITRITE NITROGEN (AS N)	< 0.10	U	0.10	mg/l	EIC	05/20/2009	1223
SULFATE	1.4		0.50	mg/l	EIC	05/20/2009	1223



LABORATORY ANALYSIS REPORT

SC Certification Number: 24110001

Client : AECOM
1455 OLD ALABAMA ROAD
SUITE 170
ROSWELL, GA 30076
Contact : BRYON DAHLGREN

Project Number: 61242.12
Report Date : June 15, 2009
Page 8 of 49 Report ID: AG1219

Certificate of Analysis

Client ID: B-09C
Sample ID: L09052003-06

Date Collected: 05/18/2009 1827
Date Received : 05/20/2009

Parameter	Result	Qual	RDL	Units	Analyst	Date	Time
Matrix : GW/ChemW							
Field Data							
EPA 170.1							
TEMPERATURE	15.0		1.0	degrees C		05/18/2009	1827
EPA 180.1							
TURBIDITY	1.0		1.0	NTU		05/18/2009	1827
HACH IR-18C							
FERROUS, IRON	3.0		0.20	mg/l		05/18/2009	1827
SM 2580B							
REDOX POTENTIAL	- 83			mV		05/18/2009	1827
SM 4500-O G							
DISSOLVED OXYGEN	0.10		0.10	mg/l		05/18/2009	1827
SW846 9040C							
PH	5.8		0.50	su		05/18/2009	1827
SW846 9050A							
SPECIFIC CONDUCTIVITY	10000		1.0	umhos/cm		05/18/2009	1827
GROUND WATER ELEVATION	674.11		.01	feet MSL		05/18/2009	1827
Gas Chromatography							
SW846 8015C							
ETHYLENE GLYCOL	<	7.0 U	7.0	mg/l	JMT	05/28/2009	2117
Volatile Organics							
SW846 8260C							
1,4-DIOXANE	873		50.0	ug/l	JMT	05/21/2009	1656
Wet Chemistry							
SM 2320B							
ALKALINITY, TOTAL	4970		50.0	mg/l	MPM	05/20/2009	1910
ENDPOINT PH	4.5		1.0	su	MPM	05/20/2009	1910
SM 4500PE							
ORTHO PHOSPHATE (AS P)	0.22		0.030	mg/l	CDC	05/20/2009	1623
SW846 9056							
NITRATE NITROGEN (AS N)	<	0.10 U	0.10	mg/l	EIC	05/20/2009	1251
NITRITE NITROGEN (AS N)	<	0.10 U	0.10	mg/l	EIC	05/20/2009	1251
SULFATE	0.50		0.50	mg/l	EIC	05/20/2009	1251



LABORATORY ANALYSIS REPORT

SC Certification Number: 24110001

Client : AECOM
1455 OLD ALABAMA ROAD
SUITE 170
ROSWELL, GA 30076
Contact : BRYON DAHLGREN

Project Number: 61242.12
Report Date : June 15, 2009
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Certificate of Analysis

Client ID: B-12
Sample ID: L09052003-07

Date Collected: 05/18/2009 1900
Date Received : 05/20/2009

Parameter	Result	Qual	RDL	Units	Analyst	Date	Time
Matrix : GW/ChemW							
Field Data							
EPA 170.1							
TEMPERATURE	16.0		1.0	degrees C		05/18/2009	1900
EPA 180.1							
TURBIDITY	1.0		1.0	NTU		05/18/2009	1900
HACH IR-18C							
FERROUS, IRON	< 0.20	U	0.20	mg/l		05/18/2009	1900
SM 2580B							
REDOX POTENTIAL	- 12			mV		05/18/2009	1900
SM 4500-O G							
DISSOLVED OXYGEN	2.4		0.10	mg/l		05/18/2009	1900
SW846 9040C							
PH	6.9		0.50	su		05/18/2009	1900
SW846 9050A							
SPECIFIC CONDUCTIVITY	509		1.0	umhos/cm		05/18/2009	1900
GROUND WATER ELEVATION	659.08		.01	feet MSL		05/18/2009	1900
Semivolatile Organics							
SW846 8270D							
1,1'-BIPHENYL	< 10.0	U	10.0	ug/l	PAP	05/27/2009	1708
BIPHENYL ETHER	10.8		10.0	ug/l	PAP	05/27/2009	1708
Volatile Organics							
SW846 8260C							
1,4-DIOXANE	105		10.0	ug/l	JMT	05/21/2009	1407
Wet Chemistry							
SM 2320B							
ALKALINITY, TOTAL	256		2.0	mg/l	MPM	05/20/2009	1921
ENDPOINT PH	4.5		1.0	su	MPM	05/20/2009	1921
SM 4500PE							
ORTHO PHOSPHATE (AS P)	0.039		0.030	mg/l	CDC	05/20/2009	1623
SW846 9056							
NITRATE NITROGEN (AS N)	< 0.10	U	0.10	mg/l	EIC	05/20/2009	1346
NITRITE NITROGEN (AS N)	< 0.10	U	0.10	mg/l	EIC	05/20/2009	1346
SULFATE	< 0.50	U	0.50	mg/l	EIC	05/20/2009	1346



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Client ID: B-12
Sample ID: L09052003-07

Date Collected: 05/18/2009 1900
Date Received : 05/20/2009

Prep Procedure	Method	Analyst	Prep Date
Analytical Prep Procedures: DOWTHERM	SW846 3510C	DBC	05/20/2009 0900

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Client ID: B-23B
Sample ID: L09052003-08

Date Collected: 05/19/2009 0957
Date Received : 05/20/2009

Parameter	Result	Qual	RDL	Units	Analyst	Date	Time
Matrix : GW/ChemW							
Field Data							
EPA 170.1							
TEMPERATURE	15.0		1.0	degrees C		05/19/2009	0957
EPA 180.1							
TURBIDITY	14.0		1.0	NTU		05/19/2009	0957
HACH IR-18C							
FERROUS, IRON	1.4		0.20	mg/l		05/19/2009	0957
SM 2580B							
REDOX POTENTIAL	- 30			mV		05/19/2009	0957
SM 4500-O G							
DISSOLVED OXYGEN	0.20		0.10	mg/l		05/19/2009	0957
SW846 9040C							
PH	6.5		0.50	su		05/19/2009	0957
SW846 9050A							
SPECIFIC CONDUCTIVITY	5830		1.0	umhos/cm		05/19/2009	0957
GROUND WATER ELEVATION	656.88		.01	feet MSL		05/19/2009	0957
Gas Chromatography							
SW846 8015C							
ETHYLENE GLYCOL	<	7.0	U	7.0	mg/l	JMT	05/28/2009 2215
Volatile Organics							
SW846 8260C							
1,4-DIOXANE	1770		200	ug/l	JMT	05/21/2009	1519
Wet Chemistry							
SM 2320B							
ALKALINITY, TOTAL	3040		40.0	mg/l	MPM	05/20/2009	1929
ENDPOINT PH	4.5		1.0	su	MPM	05/20/2009	1929
SM 4500PE							
ORTHO PHOSPHATE (AS P)	0.12		0.030	mg/l	CDC	05/20/2009	1624
SW846 9056							
NITRATE NITROGEN (AS N)	<	0.10	U	0.10	mg/l	EIC	05/20/2009 1414
NITRITE NITROGEN (AS N)	<	0.10	U	0.10	mg/l	EIC	05/20/2009 1414
SULFATE	<	0.50	U	0.50	mg/l	EIC	05/20/2009 1414

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Certificate of Analysis

Client ID: B-23A
Sample ID: L09052003-09

Date Collected: 05/19/2009 1205
Date Received : 05/20/2009

Parameter	Result	Qual	RDL	Units	Analyst	Date	Time
Matrix : GW/ChemW							
Field Data							
EPA 170.1							
TEMPERATURE	16.0		1.0	degrees C		05/19/2009	1205
EPA 180.1							
TURBIDITY	17.0		1.0	NTU		05/19/2009	1205
HACH IR-18C							
FERROUS, IRON	1.4		0.20	mg/l		05/19/2009	1205
SM 2580B							
REDOX POTENTIAL	- 1.0			mV		05/19/2009	1205
SM 4500-O G							
DISSOLVED OXYGEN	0.30		0.10	mg/l		05/19/2009	1205
SW846 9040C							
PH	6.6		0.50	su		05/19/2009	1205
SW846 9050A							
SPECIFIC CONDUCTIVITY	5600		1.0	umhos/cm		05/19/2009	1205
GROUND WATER ELEVATION	656.37		.01	feet MSL		05/19/2009	1205
Gas Chromatography							
SW846 8015C							
ETHYLENE GLYCOL	< 7.0	U	7.0	mg/l	JMT	05/28/2009	2312
Volatile Organics							
SW846 8260C							
1,4-DIOXANE	1340		100	ug/l	JMT	05/21/2009	1632
Wet Chemistry							
SM 2320B							
ALKALINITY, TOTAL	2920		40.0	mg/l	MPM	05/20/2009	1937
ENDPOINT PH	1.0		1.0	su	MPM	05/20/2009	1937
SM 4500PE							
ORTHO PHOSPHATE (AS P)	0.098		0.030	mg/l	CDC	05/20/2009	1625
SW846 9056							
NITRATE NITROGEN (AS N)	< 0.10	U	0.10	mg/l	EIC	05/20/2009	1509
NITRITE NITROGEN (AS N)	< 0.10	U	0.10	mg/l	EIC	05/20/2009	1509
SULFATE	0.64		0.50	mg/l	EIC	05/20/2009	1509



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Certificate of Analysis

Client ID: B-22B
Sample ID: L09052003-10

Date Collected: 05/19/2009 1315
Date Received : 05/20/2009

Parameter	Result	Qual	RDL	Units	Analyst	Date	Time
Matrix : GW/ChemW							
Field Data							
EPA 170.1							
TEMPERATURE	16.0		1.0	degrees C		05/19/2009	1315
EPA 180.1							
TURBIDITY	3.0		1.0	NTU		05/19/2009	1315
HACH IR-18C							
FERROUS, IRON	2.2		0.20	mg/l		05/19/2009	1315
SM 2580B							
REDOX POTENTIAL	- 61			mV		05/19/2009	1315
SM 4500-O G							
DISSOLVED OXYGEN	0.20		0.10	mg/l		05/19/2009	1315
SW846 9040C							
PH	6.7		0.50	su		05/19/2009	1315
SW846 9050A							
SPECIFIC CONDUCTIVITY	1240		1.0	umhos/cm		05/19/2009	1315
GROUND WATER ELEVATION	658.58		.01	feet MSL		05/19/2009	1315
Volatile Organics							
SW846 8260C							
1,4-DIOXANE	2390		200	ug/l	JMT	05/21/2009	1544
Wet Chemistry							
SM 2320B							
ALKALINITY, TOTAL	602		4.0	mg/l	MPM	05/20/2009	1946
ENDPOINT PH	4.5		1.0	su	MPM	05/20/2009	1946
SM 4500PE							
ORTHO PHOSPHATE (AS P)	0.090		0.030	mg/l	CDC	05/20/2009	1626
SW846 9056							
NITRATE NITROGEN (AS N)	< 0.10	U	0.10	mg/l	EIC	05/20/2009	1659
NITRITE NITROGEN (AS N)	< 0.10	U	0.10	mg/l	EIC	05/20/2009	1659
SULFATE	0.76		0.50	mg/l	EIC	05/20/2009	1659



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Client ID: B-10
Sample ID: L09052003-11

Date Collected: 05/19/2009 1355
Date Received : 05/20/2009

Parameter	Result	Qual	RDL	Units	Analyst	Date	Time
Matrix : GW/ChemW							
Field Data							
EPA 170.1							
TEMPERATURE	17.0		1.0	degrees C		05/19/2009	1355
EPA 180.1							
TURBIDITY	27.0		1.0	NTU		05/19/2009	1355
HACH IR-18C							
FERROUS, IRON	2.4		0.20	mg/l		05/19/2009	1355
SM 2580B							
REDOX POTENTIAL	- 51			mV		05/19/2009	1355
SM 4500-O G							
DISSOLVED OXYGEN	0.30		0.10	mg/l		05/19/2009	1355
SW846 9040C							
PH	6.5		0.50	su		05/19/2009	1355
SW846 9050A							
SPECIFIC CONDUCTIVITY	2180		1.0	umhos/cm		05/19/2009	1355
GROUND WATER ELEVATION	703.09		.01	feet MSL		05/19/2009	1355
Gas Chromatography							
SW846 8015C							
ETHYLENE GLYCOL	< 7.0	U	7.0	mg/l	JMT	05/29/2009	0010
Semivolatile Organics							
SW846 8270D							
1,1'-BIPHENYL	319		50.0	ug/l	PAP	05/28/2009	0824
BIPHENYL ETHER	3090		1000	ug/l	PAP	05/28/2009	0901
Volatile Organics							
SW846 8260C							
1,4-DIOXANE	412		50.0	ug/l	JMT	05/21/2009	1720
Wet Chemistry							
SM 2320B							
ALKALINITY, TOTAL	981		8.0	mg/l	MPM	05/20/2009	1954
ENDPOINT PH	4.5		1.0	su	MPM	05/20/2009	1954

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Client ID: B-10
Sample ID: L09052003-11

Date Collected: 05/19/2009 1355
Date Received : 05/20/2009

Parameter	Result	Qual	RDL	Units	Analyst	Date	Time
SM 4500PE							
ORTHO PHOSPHATE (AS P)	<	0.030	U	0.030	mg/l	CDC	05/20/2009 1626
SW846 9056							
NITRATE NITROGEN (AS N)	<	0.10	U	0.10	mg/l	EIC	05/20/2009 1727
NITRITE NITROGEN (AS N)	<	0.10	U	0.10	mg/l	EIC	05/20/2009 1727
SULFATE	<	0.50	U	0.50	mg/l	EIC	05/20/2009 1727

Prep Procedure	Method	Analyst	Prep Date
Analytical Prep Procedures:			
DOWTHERM	SW846 3510C	DBC	05/20/2009 0900



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Client ID: B-10 DUP.
Sample ID: L09052003-12

Date Collected: 05/19/2009 1355
Date Received : 05/20/2009

Parameter	Result	Qual	RDL	Units	Analyst	Date	Time
Matrix : GW/ChemW							
Field Data							
EPA 170.1							
TEMPERATURE	17.0		1.0	degrees C		05/19/2009	1355
EPA 180.1							
TURBIDITY	27.0		1.0	NTU		05/19/2009	1355
HACH IR-18C							
FERROUS, IRON	2.4		0.20	mg/l		05/19/2009	1355
SM 2580B							
REDOX POTENTIAL	- 51			mV		05/19/2009	1355
SM 4500-O G							
DISSOLVED OXYGEN	0.30		0.10	mg/l		05/19/2009	1355
SW846 9040C							
PH	6.5		0.50	su		05/19/2009	1355
SW846 9050A							
SPECIFIC CONDUCTIVITY	2180		1.0	umhos/cm		05/19/2009	1355
GROUND WATER ELEVATION	703.09		.01	feet MSL		05/19/2009	1355
Gas Chromatography							
SW846 8015C							
ETHYLENE GLYCOL	<	7.0	U	7.0	mg/l	JMT	05/29/2009 0108
Semivolatile Organics							
SW846 8270D							
1,1'-BIPHENYL	324		50.0	ug/l	PAP	05/28/2009	0936
BIPHENYL ETHER	3060		1000	ug/l	PAP	05/28/2009	1012
Volatile Organics							
SW846 8260C							
1,4-DIOXANE	437		50.0	ug/l	JMT	05/21/2009	1744
Wet Chemistry							
SM 2320B							
ALKALINITY, TOTAL	994		8.0	mg/l	MPM	05/20/2009	2000
ENDPOINT PH	4.5		1.0	su	MPM	05/20/2009	2000

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Client ID: B-10 DUP.
Sample ID: L09052003-12

Date Collected: 05/19/2009 1355
Date Received : 05/20/2009

Parameter	Result	Qual	RDL	Units	Analyst	Date	Time
SM 4500PE							
ORTHO PHOSPHATE (AS P)	<	0.030 U	0.030	mg/l	CDC	05/20/2009	1627
SW846 9056							
NITRATE NITROGEN (AS N)	<	0.10 U	0.10	mg/l	EIC	05/20/2009	1822
NITRITE NITROGEN (AS N)	<	0.10 U	0.10	mg/l	EIC	05/20/2009	1822
SULFATE	<	0.50 U	0.50	mg/l	EIC	05/20/2009	1822

Prep Procedure	Method	Analyst	Prep Date
Analytical Prep Procedures:			
DOWTHERM	SW846 3510C	DBC	05/20/2009 0900

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Client ID: B-01
Sample ID: L09052003-13

Date Collected: 05/19/2009 1505
Date Received : 05/20/2009

Parameter	Result	Qual	RDL	Units	Analyst	Date	Time
Matrix : GW/ChemW							
Field Data							
EPA 170.1							
TEMPERATURE	18.0		1.0	degrees C		05/19/2009	1505
EPA 180.1							
TURBIDITY	20.0		1.0	NTU		05/19/2009	1505
HACH IR-18C							
FERROUS, IRON	4.1		0.20	mg/l		05/19/2009	1505
SM 2580B							
REDOX POTENTIAL	+ 93			mV		05/19/2009	1505
SM 4500-O G							
DISSOLVED OXYGEN	0.30		0.10	mg/l		05/19/2009	1505
SW846 9040C							
PH	5.4		0.50	su		05/19/2009	1505
SW846 9050A							
SPECIFIC CONDUCTIVITY	7710		1.0	umhos/cm		05/19/2009	1505
GROUND WATER ELEVATION	695.79		.01	feet MSL		05/19/2009	1505
Gas Chromatography							
SW846 8015C							
ETHYLENE GLYCOL	<	7.0	U	7.0	mg/l	JMT	05/29/2009 0205
Volatile Organics							
SW846 8260C							
1,4-DIOXANE	2260		200	ug/l	JMT	05/21/2009	1608
Wet Chemistry							
SM 2320B							
ALKALINITY, TOTAL	3300		8.0	mg/l	MPM	05/20/2009	2050
ENDPOINT PH	4.5		1.0	su	MPM	05/20/2009	2050
SM 4500PE							
ORTHO PHOSPHATE (AS P)	0.96		0.15	mg/l	CDC	05/20/2009	1627
SW846 9056							
NITRATE NITROGEN (AS N)	<	0.10	U	0.10	mg/l	EIC	05/20/2009 1917
NITRITE NITROGEN (AS N)	<	0.10	U	0.10	mg/l	EIC	05/20/2009 1917
SULFATE	2.9		0.50	mg/l	EIC	05/20/2009	1917

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QC Summary Data

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QC Batch Report - Batch Sample List

WorkGroup : WG53647
Description: VO/DIOXANE

Matrix : GW/ChemW
Prep Method :
Analytical Method: SW846 8260C

Sample ID	Client ID	Run#	PREP Date Time	ANALYTICAL Date Time	Analyst	Dilution
L09052003-01	CSW-1	1		05/21/2009 1343	JMT	1
L09052003-02	CSW-2	1		05/21/2009 1319	JMT	1
L09052003-03	SW-5	1		05/21/2009 1255	JMT	1
L09052003-04	B-17C	1		05/21/2009 1455	JMT	20
L09052003-05	B-24A	1		05/21/2009 1431	JMT	1
L09052003-06	B-09C	1		05/21/2009 1656	JMT	5
L09052003-07	B-12	1		05/21/2009 1407	JMT	1
L09052003-08	B-23B	1		05/21/2009 1519	JMT	20
L09052003-09	B-23A	1		05/21/2009 1632	JMT	10
L09052003-10	B-22B	1		05/21/2009 1544	JMT	20
L09052003-11	B-10	1		05/21/2009 1720	JMT	5
L09052003-12	B-10 DUP.	1		05/21/2009 1744	JMT	5
L09052003-13	B-01	1		05/21/2009 1608	JMT	20
MB53647:1	Method Blank	1		05/21/2009 1231	JMT	1
LCS53647:1	Laboratory Control Spike	1		05/21/2009 1856	JMT	1
MS09052003-03:53647	Matrix Spike	1		05/21/2009 1808	JMT	1
MSD09052003-03:53647	Matrix Spike Duplicate	1		05/21/2009 1832	JMT	1

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QC Batch Report - Surrogates % Recovery

WorkGroup: WG53647

Matrix : GW/ChemW
Prep Method :
Analytical Method: SW846 8260C

SampleNumber	MeasureDate	DCA
		70-136
L09052003-01	05/21/2009 1343	93
L09052003-02	05/21/2009 1319	100
L09052003-03	05/21/2009 1255	101
L09052003-04	05/21/2009 1455	103
L09052003-05	05/21/2009 1431	100
L09052003-06	05/21/2009 1656	76
L09052003-07	05/21/2009 1407	98
L09052003-08	05/21/2009 1519	103
L09052003-09	05/21/2009 1632	95
L09052003-10	05/21/2009 1544	106
L09052003-11	05/21/2009 1720	98
L09052003-12	05/21/2009 1744	98
L09052003-13	05/21/2009 1608	75
MB53647:1	05/21/2009 1231	105
LCS53647:1	05/21/2009 1856	90
MS09052003-03:53647	05/21/2009 1808	89
MSD09052003-03:53647	05/21/2009 1832	92

DCA - 1,2-DICHLOROETHANE-D4

SC Certification Number: 24110001

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QC Batch Report - Method Blanks

WorkGroup: WG53647
Blank : MB53647:1

Parameter	Result	Qual	RDL	Units	Analyst	Date	Time
Matrix : GW/ChemW							
Volatile Organics							
SW846 8260C							
1,4-DIOXANE	<	10.0	U	10.0	ug/l	JMT	05/21/2009 1231

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QC Batch Report - Matrix Spikes and Duplicates

WorkGroup: WG53647
MS/MSD : MS09052003-03:53647
MSD09052003-03:53647

Matrix : GW/ChemW
Prep Method :
Analytical Method: SW846 8260C

Parameter	Spike Added	Sample Conc	MS Conc	Units	MS %REC	Limits %REC
1,4-DIOXANE	100.0	< 10.00	84.22	ug/l	84	60-141

Parameter	Spike Added	MSD Conc	Units	MSD %REC	%RPD	Limits %RPD	%REC
1,4-DIOXANE	100.0	94.22	ug/l	94	11	29	60-141

NOTE: MS/MSD % recoveries are not evaluated if the sample concentration is greater than four times the spike added.



LABORATORY ANALYSIS REPORT

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Client : AECOM
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ROSWELL, GA 30076
Contact : BRYON DAHLGREN

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QC Batch Report - Laboratory Control Standards and Duplicates

WorkGroup: WG53647
LCS : LCS53647:1

Matrix : GW/ChemW
Prep Method :
Analytical Method: SW846 8260C

Parameter	Spike Added	LCS Conc	Units	LCS %REC	Limits %REC
1,4-DIOXANE	100.0	93.55	ug/l	94	43-155

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QC Batch Report - Batch Sample List

WorkGroup : WG53643
Description: sv/dow

Matrix : GW/ChemW
Prep Method : SW846 3510C
Analytical Method: SW846 8270D

Sample ID	Client ID	Run#	PREP	ANALYTICAL	Analyst	Dilution
			Date Time	Date Time		
L09052003-03	SW-5	1	05/20/2009 0900	05/27/2009 1632	PAP	1
L09052003-07	B-12	1	05/20/2009 0900	05/27/2009 1708	PAP	1
L09052003-11	B-10	1	05/20/2009 0900	05/28/2009 0824	PAP	5
L09052003-11	B-10	2	05/20/2009 0900	05/28/2009 0901	PAP	100
L09052003-12	B-10 DUP.	1	05/20/2009 0900	05/28/2009 0936	PAP	5
L09052003-12	B-10 DUP.	2	05/20/2009 0900	05/28/2009 1012	PAP	100
MB53643:1	Method Blank	1	05/20/2009 0900	05/27/2009 1521	PAP	1
LCS53643:1	Laboratory Control Spike	1	05/20/2009 0900	05/27/2009 1556	PAP	1
MS09052003-07:53643	Matrix Spike	1	05/20/2009 0900	05/27/2009 1744	PAP	1
MSD09052003-07:53643	Matrix Spike Duplicate	1	05/20/2009 0900	05/27/2009 1819	PAP	1

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QC Batch Report - Surrogates % Recovery

WorkGroup: WG53643

Matrix : GM/ChemW
Prep Method : SW846 3510C
Analytical Method: SW846 8270D

SampleNumber	MeasureDate	FBP
		28-104
L09052003-03	05/27/2009 1632	60
L09052003-07	05/27/2009 1708	56
L09052003-11	05/28/2009 0824	*NE
L09052003-12	05/28/2009 0936	*NE
MB53643:1	05/27/2009 1521	62
LCS53643:1	05/27/2009 1556	57
MS09052003-07:53643	05/27/2009 1744	56
MSD09052003-07:53643	05/27/2009 1819	67

FBP - 2-FLUOROBIPHENYL

NOTE: * - Result flagged with 'D' to indicate that sample extract dilution was required.

NOTE: *NE - Result was not evaluated.

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QC Batch Report - Method Blanks

WorkGroup: WG53643
Blank : MB53643:1

Parameter	Result	Qual	RDL	Units	Analyst	Date	Time
Matrix : GW/ChemW							
Semivolatile Organics							
SW846 8270D							
1,1'-BIPHENYL	<	10.0 U	10.0	ug/l	PAP	05/27/2009	1521
BIPHENYL ETHER	<	10.0 U	10.0	ug/l	PAP	05/27/2009	1521

Prep Procedure	Method	Analyst	Prep Date
Analytical Prep Procedures:			
DOWTHERM	SW846 3510C	DBC	05/20/2009 0900

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QC Batch Report - Matrix Spikes and Duplicates

WorkGroup: WG53643
MS/MSD : MS09052003-07:53643
MSD09052003-07:53643

Matrix : GW/ChemW
Prep Method : SW846 3510C
Analytical Method: SW846 8270D

Parameter	Spike Added	Sample Conc	MS Conc	Units	MS %REC	Limits %REC
1,1'-BIPHENYL	50.00	< 10.00	29.58	ug/l	59	10-109
BIPHENYL ETHER	50.00	10.80	40.40	ug/l	59	11-111

Parameter	Spike Added	MSD Conc	Units	MSD %REC	%RPD	Limits %RPD	%REC
1,1'-BIPHENYL	50.00	33.47	ug/l	67	12	52	10-109
BIPHENYL ETHER	50.00	45.88	ug/l	70	13	51	11-111

NOTE: MS/MSD % recoveries are not evaluated if the sample concentration is greater than four times the spike added.

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QC Batch Report - Laboratory Control Standards and Duplicates

WorkGroup: WG53643
LCS : LCS53643:1

Matrix : GW/ChemW
Prep Method : SW846 3510C
Analytical Method: SW846 8270D

Parameter	Spike Added	LCS Conc	Units	LCS %REC	Limits %REC
1,1'-BIPHENYL	50.00	29.03	ug/l	58	44-90
BIPHENYL ETHER	50.00	30.37	ug/l	61	45-88

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QC Batch Report - Batch Sample List

WorkGroup : WG53670
Description: GC/EG -- 0528JA

Matrix : GW/ChemW
Prep Method :
Analytical Method: SW846 8015C

Sample ID	Client ID	Run#	PREP Date Time	ANALYTICAL Date Time	Analyst	Dilution
L09052003-03	SW-5	1		05/28/2009 1950	JMT	1
L09052003-06	B-09C	1		05/28/2009 2117	JMT	1
L09052003-08	B-23B	1		05/28/2009 2215	JMT	1
L09052003-09	B-23A	1		05/28/2009 2312	JMT	1
L09052003-11	B-10	1		05/29/2009 0010	JMT	1
L09052003-12	B-10 DUP.	1		05/29/2009 0108	JMT	1
L09052003-13	B-01	1		05/29/2009 0205	JMT	1
MB53670;1	Method Blank	1		05/28/2009 1852	JMT	1
LCS53670;1	Laboratory Control Spike	1		05/28/2009 1921	JMT	1
MS09052003-03:53670	Matrix Spike	1		05/28/2009 2019	JMT	1
MSD09052003-03:53670	Matrix Spike Duplicate	1		05/28/2009 2048	JMT	1

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QC Batch Report - Method Blanks

WorkGroup: WG53670
Blank : MB53670:1

Parameter	Result	Qual	RDL	Units	Analyst	Date	Time
Matrix : GW/ChemW							
Gas Chromatography							
SW846 8015C							
ETHYLENE GLYCOL	<	7.0 U	7.0	mg/l	JMT	05/28/2009	1852

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QC Batch Report - Matrix Spikes and Duplicates

WorkGroup: WG53670
MS/MSD : MS09052003-03:53670
MSD09052003-03:53670

Matrix : GW/ChemW
Prep Method :
Analytical Method: SW846 8015C

Parameter	Spike Added	Sample Conc	MS Conc	Units	MS %REC	Limits %REC
ETHYLENE GLYCOL	50.00	< 7.00	50.11	mg/l	100	86-124

Parameter	Spike Added	MSD Conc	Units	MSD %REC	%RPD	Limits %RPD	%REC
ETHYLENE GLYCOL	50.00	50.67	mg/l	101	1	12	86-124

NOTE: MS/MSD % recoveries are not evaluated if the sample concentration is greater than four times the spike added.



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QC Batch Report - Laboratory Control Standards and Duplicates

WorkGroup: WG53670
LCS : LCS53670:1

Matrix : GW/ChemW
Prep Method :
Analytical Method: SW846 8015C

Parameter	Spike Added	LCS Conc	Units	LCS %REC	Limits %REC
ETHYLENE GLYCOL	50.00	48.71	mg/l	97	81-122

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QC Batch Report - Batch Sample List

WorkGroup : WG53667
Description: Total Alkalinity

Matrix : GW/ChemW
Prep Method :
Analytical Method: SM 2320B

Sample ID	Client ID	Run#	PREP Date Time	ANALYTICAL Date Time	Analyst	Dilution
L09052003-04	B-17C	1		05/20/2009 1850	MPM	1
L09052003-05	B-24A	1		05/20/2009 1858	MPM	1
L09052003-06	B-09C	1		05/20/2009 1910	MPM	1
L09052003-07	B-12	1		05/20/2009 1921	MPM	1
L09052003-08	B-23B	1		05/20/2009 1929	MPM	1
L09052003-09	B-23A	1		05/20/2009 1937	MPM	1
L09052003-10	B-22B	1		05/20/2009 1946	MPM	1
L09052003-11	B-10	1		05/20/2009 1954	MPM	1
L09052003-12	B-10 DUP.	1		05/20/2009 2000	MPM	1
L09052003-13	B-01	1		05/20/2009 2050	MPM	1
D09052003-06:53667	Duplicate	1		05/20/2009 2101	MPM	1
MB53667:1	Method Blank	1		05/20/2009 1832	MPM	1
LCS53667:1	Laboratory Control Spike	1		05/20/2009 1610	MPM	1
LCS53667:2	Laboratory Control Spike	1		05/20/2009 1624	MPM	1
LCS53667:3	Laboratory Control Spike	1		05/20/2009 1630	MPM	1
LCS53667:4	Laboratory Control Spike	1		05/20/2009 1637	MPM	1
LCS53667:5	Laboratory Control Spike	1		05/20/2009 1837	MPM	1

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QC Batch Report - Method Blanks

WorkGroup: WG53667
Blank : MB53667:1

Parameter	Result	Qual	RDL	Units	Analyst	Date	Time
Matrix : GW/ChemW							
Wet Chemistry							
SM 2320B							
ALKALINITY, TOTAL	<	1.0 U	1.0	mg/l	MPM	05/20/2009	1832
ENDPOINT PH		4.2	1.0	su	MPM	05/20/2009	1832

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QC Batch Report - Laboratory Control Standards and Duplicates

WorkGroup: WG53667
LCS : LCS53667:1

Matrix : GW/ChemW
Prep Method :
Analytical Method: SM 2320B

Parameter	Spike Added	LCS Conc	Units	LCS %REC	Limits %REC
ALKALINITY, TOTAL	1000	952.2	mg/l	95	90-110



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QC Batch Report - Laboratory Control Standards and Duplicates

WorkGroup: WG53667
LCS : LCS53667:2

Matrix : GW/ChemW
Prep Method :
Analytical Method: SM 2320B

Parameter	Spike Added	LCS Conc	Units	LCS %REC	Limits %REC
ALKALINITY, TOTAL	1000	962.6	mg/l	96	90-110



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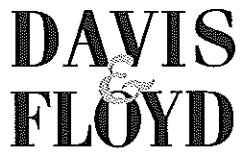
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QC Batch Report - Laboratory Control Standards and Duplicates

WorkGroup: WG53667
LCS : LCS53667:3

Matrix : GW/ChemW
Prep Method :
Analytical Method: SM 2320B

Parameter	Spike Added	LCS Conc	Units	LCS %REC	Limits %REC
ALKALINITY, TOTAL	1000	972.9	mg/l	97	90-110



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QC Batch Report - Laboratory Control Standards and Duplicates

WorkGroup: WG53667
LCS : LCS53667+4

Matrix : GW/ChemW
Prep Method :
Analytical Method: SM 2320B

Parameter	Spike Added	LCS Conc	Units	LCS %REC	Limits %REC
ALKALINITY, TOTAL	1000	962.6	mg/l	96	90-110

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QC Batch Report - Laboratory Control Standards and Duplicates

WorkGroup: WG53667
LCS : LCS53667:5

Matrix : GW/ChemW
Prep Method :
Analytical Method: SM 2320B

Parameter	Spike Added	LCS Conc	Units	LCS %REC	Limits %REC
ALKALINITY, TOTAL	1000	962.6	mg/l	96	90-110

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QC Batch Report - Sample Duplicates

WorkGroup: WG53667
Duplicate: D09052003-06:53667

Matrix : GW/ChemW
Prep Method :
Analytical Method: SM 2320B

Parameter	Sample Conc	DUP Conc	RDL	Units	%RPD	RPD
ALKALINITY, TOTAL	4968	4916	50.0	mg/l	1	10

NOTE: Calculation of %RPD is not required for concentrations less than 10X the RDL.

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QC Batch Report - Batch Sample List

WorkGroup : WG53698
Description: PO4-Ortho

Matrix : GW/ChemW
Prep Method :
Analytical Method: SM 4500PE

Sample ID	Client ID	Run#	PREP Date Time	ANALYTICAL Date Time	Analyst	Dilution
L09052003-04	B-17C	1		05/20/2009 1622	CDC	1
L09052003-05	B-24A	1		05/20/2009 1622	CDC	1
L09052003-06	B-09C	1		05/20/2009 1623	CDC	1
L09052003-07	B-12	1		05/20/2009 1623	CDC	1
L09052003-08	B-23B	1		05/20/2009 1624	CDC	1
L09052003-09	B-23A	1		05/20/2009 1625	CDC	1
L09052003-10	B-22B	1		05/20/2009 1626	CDC	1
L09052003-11	B-10	1		05/20/2009 1626	CDC	1
L09052003-12	B-10 DUP.	1		05/20/2009 1627	CDC	1
L09052003-13	B-01	1		05/20/2009 1627	CDC	5
MB53698:1	Method Blank	1		05/20/2009 1632	CDC	1
LCS53698:1	Laboratory Control Spike	1		05/20/2009 1621	CDC	1
MS09052003-05:53698	Matrix Spike	1		05/20/2009 1628	CDC	1
MSD09052003-05:53698	Matrix Spike Duplicate	1		05/20/2009 1629	CDC	1

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QC Batch Report - Method Blanks

WorkGroup: WG53698
Blank : MB53698:1

Parameter	Result	Qual	RDL	Units	Analyst	Date	Time
Matrix : GW/ChemW							
Wet Chemistry							
SM 4500PE							
ORTHO PHOSPHATE (AS P)	<	0.030 U	0.030	mg/l	CDC	05/20/2009	1632

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QC Batch Report - Matrix Spikes and Duplicates

WorkGroup: WG53698
MS/MSD : MS09052003-05:53698
MSD09052003-05:53698

Matrix : GW/ChemW
Prep Method :
Analytical Method: SM 4500PE

Parameter	Spike Added	Sample Conc	MS Conc	Units	MS %REC	Limits %REC
ORTHO PHOSPHATE (AS P)	0.500	0.0811	0.580	mg/l	100	90-110

Parameter	Spike Added	MSD Conc	Units	MSD %REC	%RPD	Limits %RPD	%REC
ORTHO PHOSPHATE (AS P)	0.500	0.581	mg/l	100	0	10	90-110

NOTE: MS/MSD % recoveries are not evaluated if the sample concentration is greater than four times the spike added.



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QC Batch Report - Laboratory Control Standards and Duplicates

WorkGroup: WG53698
LCS : LCS53698:1

Matrix : GW/ChemW
Prep Method :
Analytical Method: SM 4500PE

Parameter	Spike Added	LCS Conc	Units	LCS %REC	Limits %REC
ORTHO PHOSPHATE (AS P)	0.500	0.501	mg/l	100	90-110

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QC Batch Report - Batch Sample List

WorkGroup : WG53641
Description: IC RUN GW

Matrix : GW/ChemW
Prep Method :
Analytical Method: SW846 9056

Sample ID	Client ID	Run#	PREP	ANALYTICAL	Analyst	Dilution
			Date Time	Date Time		
L09052003-04	B-17C	1		05/20/2009 1141	EIC	1
L09052003-05	B-24A	1		05/20/2009 1223	EIC	1
L09052003-06	B-09C	1		05/20/2009 1251	EIC	1
L09052003-07	B-12	1		05/20/2009 1346	EIC	1
L09052003-08	B-23B	1		05/20/2009 1414	EIC	1
L09052003-09	B-23A	1		05/20/2009 1509	EIC	1
L09052003-10	B-22B	1		05/20/2009 1659	EIC	1
L09052003-11	B-10	1		05/20/2009 1727	EIC	1
L09052003-12	B-10 DUP.	1		05/20/2009 1822	EIC	1
L09052003-13	B-01	1		05/20/2009 1917	EIC	1
MB53641:1	Method Blank	1		05/20/2009 0855	EIC	1
LCS53641:1	Laboratory Control Spike	1		05/20/2009 0923	EIC	1
MS09052003-07:53641	Matrix Spike	1		05/20/2009 2012	EIC	1.05
MSD09052003-07:53641	Matrix Spike Duplicate	1		05/20/2009 2040	EIC	1.05



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QC Batch Report - Method Blanks

WorkGroup: WG53641
Blank : MB53641:1

Parameter	Result	Qual	RDL	Units	Analyst	Date	Time
Matrix : GW/ChemW							
Wet Chemistry							
SW846 9056							
NITRATE NITROGEN (AS N)	<	0.10	U	0.10	mg/l	EIC	05/20/2009 0855
NITRITE NITROGEN (AS N)	<	0.10	U	0.10	mg/l	EIC	05/20/2009 0855
SULFATE	<	0.50	U	0.50	mg/l	EIC	05/20/2009 0855

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QC Batch Report - Matrix Spikes and Duplicates

WorkGroup: WG53641
MS/MSD : MS09052003-07:53641
MSD09052003-07:53641

Matrix : GW/ChemW
Prep Method :
Analytical Method: SW846 9056

Parameter	Spike Added	Sample Conc	MS Conc	Units	MS %REC	Limits %REC
NITRATE NITROGEN (AS N)	5.25	< 0.100	5.52	mg/l	105	85-114
NITRITE NITROGEN (AS N)	5.25	< 0.100	5.57	mg/l	106	84-115
SULFATE	5.25	< 0.500	5.63	mg/l	107	80-120

Parameter	Spike Added	MSD Conc	Units	MSD %REC	%RPD	Limits %RPD	%REC
NITRATE NITROGEN (AS N)	5.25	5.53	mg/l	105	0	10	85-114
NITRITE NITROGEN (AS N)	5.25	5.56	mg/l	106	0	10	84-115
SULFATE	5.25	5.62	mg/l	107	0	10	80-120

NOTE: MS/MSD % recoveries are not evaluated if the sample concentration is greater than four times the spike added.



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QC Batch Report - Laboratory Control Standards and Duplicates

WorkGroup: WG53641
LCS : LCS53641:1

Matrix : GW/ChemW
Prep Method :
Analytical Method: SW846 9056

Parameter	Spike Added	LCS Conc	Units	LCS %REC	Limits %REC
NITRATE NITROGEN (AS N)	5.00	4.79	mg/l	96	88-110
NITRITE NITROGEN (AS N)	5.00	4.78	mg/l	96	84-110
SULFATE	5.00	4.74	mg/l	95	84-110

Chain of Custody Record

Client C.N.A. Holdings, Inc. Salisbury, NC		Project / Site Location 61242.12 NRLF		Laboratory Certification Numbers: SC - 24710, NC - 25, NE/LAP - E87633, TN - 2923, VA - 77 816 E. Durst Avenue, Greenwood, SC 29649 (864) 229-4413 Fax: (864) 229-7119 Email: Laboratory@davisfloyd.com Internet: www.davisfloyd.com		Office Use Only Laboratory Work Request	
Contact Bryon Dahlgren		Report To Bryon Dahlgren		Copy To		PO / Quote Number	
Collected By Bryon Dahlgren		Atmospheric Conditions		Reporting Requirements: [] Standard [] Rush (Specify _____) Required Parameters: Containers and Preservatives (P-)		Special Instructions	
NOTICE: John McLaughlin		(Optional)		CONTAINERS		State	
Sample Description		Sample Collection Date		Time sampling initiated (composite only)		Composite	
Grab		Matrix Type		Number of Containers		PARAMETERS	
pH, Sp. Cond, Temp, DO, ORP, Fe+2		Field		4x40 G TFE		2.5 L G	
1,4-Dioxane		A		Ethylene Glycol		1x40 G TFE	
Dow-A		A		NO3		500 P	
ALK, SO4, NO2, PO4-O		A		500 P		Indicate any known or expected hazards with a "X".	
HOT		Comments		Fraction		01	
C5H12-1		5/10/04 1445		X 2 5		02	
C5H12-2		1505		X 2 5		03	
5W-5		1530		X 2 7		04	
B-17c		1712		X 5 7		05	
B-24A		1808		X 5 7		06	
B-09c		1827		X 5 8		07	
B-12		1900		X 5 8		08	
B-23B		5/14/04 0957		X 5 8		09	
B-23A		1206		X 5 8		10	
B-22B		1315		X 5 7		11	
B-10		1355		X 5 9		12	
B-10 D4p		1355		X 5 9		13	
B-01		1505		X 5 8			
Relinquished By		Date		Time		Relinquished By	
Date		Time		Date		Time	
Received By		Date		Time		Received In Laboratory By	
Date		Time		Date		Time	
Comments		Flow Measurement (Note 1)		Note: Indicate immediate delivery for those shipments in which the temperature does not have adequate time to reach 4°C.		Receipt Information	
Samples degassed - no preservative		Beginning		Ending		Cooler ID (if available)	
		Start Date		End Date		On Ice (Yes/No)	
		Multiplier				Temp (C)	
						Immediate Delivery: Yes/No	
						Intact / Broken	
						Custody Seal: Intact / Broken	
						Davis & Floyd, Inc.	
						FLO2_02 (04/05)	



Field Analysis Sheet

Client	C.N.A. Holdings, Inc.
Address	
City	Salisbury
State	NC ZIP

Location	NRLF
Project	61242.1012
Contact	Bryon Dahlgren
Report To	

[illegible]

Field Analyst: J. M.

Date: 5-18-09

Note any free-product or samples suspected of high levels of contamination in comment field.

Notes

[illegible]

Sample Description and Header information are populated from the Project Description and Sheet Set-up pages.

Davis & Floyd, Inc.
FL04_01 (04/05)

Field Data for Groundwater Sample Collection
 Groundwater Measurements

Well ID: B-17C

Client: C.N.A. Holdings, Inc / NRLF
 Site Name: Salisbury, NC Job No.: 61242.12
 Date: 5/18/09 LWR submitted by: _____
 Sampling Personnel: JLM
 Regulatory Personnel: N/A
 Weather Conditions: Clear Breeze Temp. (°C): 25
 Well Diameter: 2.0 in.
 (A) Top of Well Elevation: 677.06 ft. msl (yes / no)
 (B) Depth to Immiscible Layer: N/A ft.
 (C) Immiscible Layer Elevation: (A) - (B) = N/A ft. msl (yes / no)
 (D) Depth to Groundwater: 17.60 ft.
 (E) Groundwater Elevation: (A) - (D) = 659.46 ft. msl (yes / no) ✓
 (F) Total Well Depth: 102.50 ft.
 (G) Length of Water Column: (F) - (D) = 84.9 ft.
 Casing Volume = (G) Volume in gal./ft. = 13.8 gals.
 Method of Well Evacuation PUMP Start Time: 1540
 Method of Sample Collection PUMP Time: 1712
 Chain of Custody Started: (yes) (no)

Source(s) of Well ID MAP ID Label (yes) / (no)
 Well Completion: Protective Casing (yes) / (no) Flush (yes / no)
 Flush-Mount Cover Seal Intact (yes) / (no) Locking Cap (yes) / (no)
 Locked at Arrival (yes) / (no) Departure (yes) / (no)
 Well Casing (height above / depth below) ground: 2.5 ft.
 Casing Type (PVC) (steel) (Other) _____
 Dedicated Pump or Bailor (yes) / (no) Type _____
 Protective Post / Abutment (yes / no) Concrete Pad (yes) / (no)
 Well Integrity: Satisfactory (yes) / (no) If no, explain below.
 Well Yield (low / moderate / high)

WELL VOLUME DATA			
Diameter of Tubing (in.)	Volume (gal. / ft.)	Diameter of Pipe (in.)	Volume (gal. / ft.)
1/8	0.0006	1.0	0.041
3/16	0.0014	2.0	0.163
1/4	0.0025	3.0	0.367
5/16	0.0039	4.0	0.653
3/8	0.0050	5.0	1.020
1/2	0.0100	6.0	1.470
3/4	0.0230	1 gallon/ft. = 3.8 liters/ft.	

Cylinder Volume (gal./ft.) = $\pi r^2 h \times 0.0043$
 Radius (r) and height (h) measured in inches.

FIELD ANALYSES						
Measurements	First	Second	Third	Fourth	Fifth	()
Volume Purged (gallons)	<u>14</u>	<u>28</u>	<u>42</u>			
Time (military)	<u>1610</u>	<u>1640</u>	<u>1710</u>			
pH (S.U.)	<u>6.6</u>	<u>6.6</u>	<u>6.6</u>			
Specific Conductance (µmhos/cm)	<u>763</u>	<u>741</u>	<u>738</u>			
Water Temp. (°C)	<u>17</u>	<u>17</u>	<u>17</u>			
Odor (subjective) *	<u>1</u>	<u>1</u>	<u>1</u>			
Turbidity (NTU)	<u>1.0</u>	<u>1.0</u>	<u>1.0</u>			
DO	<u>6.4</u>	<u>0.3</u>	<u>0.3</u>			
ORP	<u>114</u>	<u>119</u>	<u>124</u>			

* (1)None (2)Slight (3)Moderate (4)Strong ** (1)Clear (2)Slightly Turbid (3)Moderately Turbid (4)Very Turbid (5)Extremely Turbid

Comments/Observations/Recommendations: Ferrous Iron: <0.2 mg/L

Completed by: [Signature] Date: 5-18-09
 Signature Date

Field Data for Groundwater Sample Collection
Groundwater Measurements

Well ID: B-24A

Client: C.N.A. Holdings, Inc. / NRLF

Site Name: Salisbury, NC Job No.: 61242.12

Date: 5/18/09 LWR submitted by: _____

Sampling Personnel: JLM

Regulatory Personnel: N/A

Weather Conditions: Clear Temp. (°C): 23

Well Diameter: 2.0 in.

(A) Top of Well Elevation: 659.10 ft. msl (yes / no)

(B) Depth to Immiscible Layer: N/A ft.

(C) Immiscible Layer Elevation: (A) - (B) = N/A ft. msl (yes / no)

(D) Depth to Groundwater: 4.49 ft.

(E) Groundwater Elevation: (A) - (D) = 654.61 ft. msl (yes / no)

(F) Total Well Depth: 31.5 ft.

(G) Length of Water Column: (F) - (D) = 27.01 ft.

Casing Volume = (G) Volume in gal./ft. = 4.4 gals.

Method of Well Evacuation PUMP Start Time: 1740

Method of Sample Collection PUMP Time: 1808

Chain of Custody Started: (yes / no)

Source(s) of Well ID MAP ID Label (yes / no)

Well Completion: Protective Casing (yes / no) Flush (yes / no)

Flush-Mount Cover Seal Intact (yes / no) Locking Cap (yes / no)

Locked at Arrival (yes / no) Departure (yes / no)

Well Casing (height above / depth below) ground: 2.5 ft.

Casing Type (PVC) (Steel) (Other) _____

Dedicated Pump or Bailer (yes / no) Type _____

Protective Post / Abutment (yes / no) Concrete Pad (yes / no)

Well Integrity: Satisfactory (yes / no) If no, explain below.

Well Yield (low / moderate / high) (high)

WELL VOLUME DATA			
Diameter of Tubing (in.)	Volume (gal. / ft.)	Diameter of Pipe (in.)	Volume (gal. / ft.)
1/8	0.0006	1.0	0.041
3/16	0.0014	2.0	0.163
1/4	0.0025	3.0	0.367
5/16	0.0039	4.0	0.653
3/8	0.0050	5.0	1.020
1/2	0.0100	6.0	1.470
3/4	0.0230	1 gallon/ft. = 3.8 liters/ft.	

Cylinder Volume (gal./ft.) = $\pi r^2 h \times 0.0043$

Radius (r) and height (h) measured in inches.

Measurements	FIELD ANALYSES					
	First	Second	Third	Fourth	Fifth	()
Volume Purged (gallons)	<u>4.4</u>	<u>8.8</u>	<u>13.2</u>			
Time (military)	<u>1750</u>	<u>1755</u>	<u>1805</u>			
pH (S.U.)	<u>6.6</u>	<u>6.6</u>	<u>6.6</u>			
Specific Conductance (µmhos/cm)	<u>734</u>	<u>751</u>	<u>764</u>			
Water Temp. (°C)	<u>14</u>	<u>14</u>	<u>14</u>			
Odor (subjective) *	<u>2</u>	<u>2</u>	<u>2</u>			
Turbidity (NTU)	<u>7.0</u>	<u>1.0</u>	<u>1.0</u>			
DO	<u>0.3</u>	<u>0.3</u>	<u>0.3</u>			
ORP	<u>57</u>	<u>44</u>	<u>43</u>			

* (1)None (2)Slight (3)Moderate (4)Strong

** (1)Clear (2)Slightly Turbid (3)Moderately Turbid (4)Very Turbid (5)Extremely Turbid

Comments/Observations/Recommendations: Ferrous Iron: 1.3 mg/L

Completed by: [Signature] Date: 5-18-09

Davis & Floyd, Inc.
FL07_00 (01/01)

Field Data for Groundwater Sample Collection
 Groundwater Measurements

Well ID: B-09C

Client: C.N.A. Holdings, Inc. / NRLF
 Site Name: Salisbury, NC Job No.: 61242.12
 Date: 5/18/09 LWR submitted by: _____
 Sampling Personnel: JLM
 Regulatory Personnel: N/A
 Weather Conditions: clear Temp. (°C): 22
 Well Diameter: 2.0 in.
 (A) Top of Well Elevation: 713.44 ft. msl (yes / no)
 (B) Depth to Immiscible Layer: N/A ft.
 (C) Immiscible Layer Elevation: (A) - (B) = N/A ft. msl (yes / no)
 (D) Depth to Groundwater: 39.33 ft.
 (E) Groundwater Elevation: (A) - (D) = 674.11 ft. msl (yes / no) ✓
 (F) Total Well Depth: 154.00 ft.
 (G) Length of Water Column: (F) - (D) = 114.67 ft.
 Casing Volume = (G) Volume in gal./ft. = 19.0 gals.
 Method of Well Evacuation PUMP Start Time: 1247
 Method of Sample Collection PUMP Time: 1827
 Chain of Custody Started: (yes / no)

Source(s) of Well ID MAP ID Label (yes / no)
 Well Completion: Protective Casing (yes / no) Flush (yes / no)
 Flush-Mount Cover Seal Intact (yes / no) Locking Cap (yes / no)
 Locked at Arrival (yes / no) Departure (yes / no)
 Well Casing (height above / depth below) ground: 2.5 ft.
 Casing Type (PVC) (Steel) (Other) _____
 Dedicated Pump or Bailor (yes / no) Type _____
 Protective Post / Abutment (yes / no) Concrete Pad (yes / no)
 Well Integrity: Satisfactory (yes / no) If no, explain below.
 Well Yield (low / moderate / high) _____

WELL VOLUME DATA			
Diameter of Tubing (in.)	Volume (gal. / ft.)	Diameter of Pipe (in.)	Volume (gal. / ft.)
1/8	0.0006	1.0	0.041
3/16	0.0014	2.0	0.163
1/4	0.0025	3.0	0.367
5/16	0.0039	4.0	0.653
3/8	0.0050	5.0	1.020
1/2	0.0100	6.0	1.470
3/4	0.0230	1 gallon/ft. = 3.8 liters/ft.	

Cylinder Volume (gal./ft.) = $\pi r^2 h \times 0.0043$
 Radius (r) and height (h) measured in inches.

FIELD ANALYSES						
Measurements	First	Second	Third	Fourth	Fifth	()
Volume Purged (gallons)	19	38	57			
Time (military)	1337	1427	1517			
pH (S.U.)	5.9	5.9	5.8			
Specific Conductance (µmhos/cm)	11350	10140	10040			
Water Temp. (°C)	14	15	15			
Odor (subjective) *	4	4	4			
Turbidity (NTU)	21	1.0	1.0			
DO	0.1	0.1	0.1			
ORP	-81	-80	-83			

* (1)None (2)Slight (3)Moderate (4)Strong ** (1)Clear (2)Slightly Turbid (3)Moderately Turbid (4)Very Turbid (5)Extremely Turbid

Comments/Observations/Recommendations: Ferrous Iron : 3.0 mg/L 75 psi R-D/D-B 1/2

Completed by: [Signature] 5/18/09
 Signature Date
 Davis & Floyd, Inc.
 FL07_00 (01/01)

Field Data for Groundwater Sample Collection
 Groundwater Measurements

Well ID: B-12

Client: C.N.A. Holdings, Inc. / NRLF
 Site Name: Salisbury, NC Job No.: 61242.12
 Date: 5/18/09 LWR submitted by: _____
 Sampling Personnel: JLM
 Regulatory Personnel: N/A
 Weather Conditions: Clear Temp. (°C): 23
 Well Diameter: 2.0 in.
 (A) Top of Well Elevation: 677.11 ft. msl (yes / no)
 (B) Depth to Immiscible Layer: N/A ft.
 (C) Immiscible Layer Elevation: (A) - (B) = N/A ft. msl (yes / no)
 (D) Depth to Groundwater: 18.03 ft.
 (E) Groundwater Elevation: (A) - (D) = 659.08 ft. msl (yes / no) ✓
 (F) Total Well Depth: 35.64 ft.
 (G) Length of Water Column: (F) - (D) = 17.61 ft.
 Casing Volume = (G) Volume in gal./ft. = 2.9 gals.
 Method of Well Evacuation PUMP Start Time: 1318
 Method of Sample Collection PUMP Time: 1900
 Chain of Custody Started: (yes / no)

Source(s) of Well ID MAP ID Label (yes / no)
 Well Completion: Protective Casing (yes / no) Flush (yes / no)
 Flush-Mount Cover Seal Intact (yes / no) Locking Cap (yes / no)
 Locked at Arrival (yes / no) Departure (yes / no)
 Well Casing (height above / depth below) ground: 5.0 ft.
 Casing Type (PVC) (steel) (Other) _____
 Dedicated Pump or Bailer (yes / no) Type _____
 Protective Post / Abutment (yes / no) Concrete Pad (yes / no)
 Well Integrity: Satisfactory (yes / no) If no, explain below.
 Well Yield (low) / moderate / high)

WELL VOLUME DATA			
Diameter of Tubing (in.)	Volume (gal. / ft.)	Diameter of Pipe (in.)	Volume (gal. / ft.)
1/8	0.0006	1.0	0.041
3/16	0.0014	2.0	0.163
1/4	0.0025	3.0	0.367
5/16	0.0039	4.0	0.653
3/8	0.0050	5.0	1.020
1/2	0.0100	6.0	1.470
3/4	0.0230	1 gallon/ft. = 3.8 liters/ft.	

Cylinder Volume (gal./ft.) = $\pi r^2 h \times 0.0043$
 Radius (r) and height (h) measured in inches.

Measurements	FIELD ANALYSES				
	First	Second	Third	Fourth	Fifth ()
Volume Purged (gallons)	<u>3.0</u>	<u>6.0</u>	<u>DRY @</u>	<u>7.5 gal</u>	
Time (military)	<u>1337</u>	<u>1355</u>	<u>1411</u>		
pH (S.U.)	<u>6.5</u>	<u>6.9</u>	<u>6.9</u>		
Specific Conductance (µmhos/cm)	<u>533</u>	<u>521</u>	<u>509</u>		
Water Temp. (°C)	<u>16</u>	<u>16</u>	<u>16</u>		
Odor (subjective) *	<u>1</u>	<u>1</u>	<u>1</u>		
Turbidity (NTU)	<u>19</u>	<u>18</u>	<u>10</u>		
DO	<u>2.7</u>	<u>2.6</u>	<u>2.4</u>		
ORP	<u>-5</u>	<u>-9</u>	<u>-12</u>		

* (1)None (2)Slight (3)Moderate (4)Strong

** (1)Clear (2)Slightly Turbid (3)Moderately Turbid (4)Very Turbid (5)Extremely Turbid

Comments/Observations/Recommendations: Ferrous Iron: <0.2 mg/l

Completed by: _____

Signature

Date

Field Data for Groundwater Sample Collection
Groundwater Measurements

Well ID: B-23B

Client: C.N.A. Holdings, Inc. / NRLF

Site Name: Salisbury, NC Job No.: 61242.12

Date: 5/19/09 LWR submitted by: _____

Sampling Personnel: JLM

Regulatory Personnel: N/A

Weather Conditions: Clear Temp. (°C): 12

Well Diameter: 2.0 in.

(A) Top of Well Elevation: 665.74 ft. msl (yes / no)

(B) Depth to Immiscible Layer: N/A ft.

(C) Immiscible Layer Elevation: (A) - (B) = N/A ft. msl (yes / no)

(D) Depth to Groundwater: 8.86 ft.

(E) Groundwater Elevation: (A) - (D) = 656.88 ft. msl (yes / no) ✓

(F) Total Well Depth: 97.5 ft.

(G) Length of Water Column: (F) - (D) = 88.64 ft.

Casing Volume = (G) Volume in gal./ft. = 14.5 gals.

Method of Well Evacuation PUMP Start Time: 0635

Method of Sample Collection PUMP Time: 0957

Chain of Custody Started: (yes / no) (yes)

Source(s) of Well ID MAP ID Label (yes / no) (yes)

Well Completion: Protective Casing (yes / no) (yes) Flush (yes / no) (no)

Flush-Mount Cover Seal Intact (yes / no) (yes) Locking Cap (yes / no) (no)

Locked at Arrival (yes / no) (yes) Departure (yes / no) (yes)

Well Casing (height above / depth below) ground: 2.0 ft.

Casing Type (PVC) (Steel) (Other) _____

Dedicated Pump or Bailer (yes / no) Type _____

Protective Post / Abutment (yes / no) (no) Concrete Pad (yes / no) (yes)

Well Integrity: Satisfactory (yes / no) (yes) If no, explain below.

Well Yield (low / moderate / high) (high)

WELL VOLUME DATA			
Diameter of Tubing (in.)	Volume (gal. / ft.)	Diameter of Pipe (in.)	Volume (gal. / ft.)
1/8	0.0006	1.0	0.041
3/16	0.0014	2.0	0.163
1/4	0.0025	3.0	0.367
5/16	0.0039	4.0	0.653
3/8	0.0050	5.0	1.020
1/2	0.0100	6.0	1.470
3/4	0.0230	1 gallon/ft. = 3.8 liters/ft.	

Cylinder Volume (gal./ft.) = $\pi r^2 h \times 0.0043$

Radius (r) and height (h) measured in inches.

Measurements	FIELD ANALYSES					
	First	Second	Third	Fourth	Fifth	()
Volume Purged (gallons)	<u>14.5</u>	<u>29</u>	<u>43.5</u>			
Time (military)	<u>0740</u>	<u>0843</u>	<u>0945</u>			
pH (S.U.)	<u>6.6</u>	<u>6.6</u>	<u>6.5</u>			
Specific Conductance (µmhos/cm)	<u>5830</u>	<u>5845</u>	<u>5830</u>			
Water Temp. (°C)	<u>15</u>	<u>15</u>	<u>15</u>			
Odor (subjective) *	<u>3</u>	<u>3</u>	<u>3</u>			
Turbidity (NTU)	<u>21</u>	<u>17</u>	<u>14</u>			
DO	<u>0.2</u>	<u>0.2</u>	<u>0.2</u>			
ORP	<u>-20</u>	<u>-27</u>	<u>-30</u>			

* (1)None (2)Slight (3)Moderate (4)Strong ** (1)Clear (2)Slightly Turbid (3)Moderately Turbid (4)Very Turbid (5)Extremely Turbid

Comments/Observations/Recommendations: Ferrous Iron: 1.4 mg/L

Completed by: John M. Mahan 5-29-09
Signature Date

Davis & Floyd, Inc.
FL07_00 (01/01)

Field Data for Groundwater Sample Collection
Groundwater Measurements

Well ID: B-23A

Client: C.N.A. Holdings, Inc. / NRLF
Site Name: Salisbury, NC Job No.: 61242.12
Date: 5/19/09 LWR submitted by: _____
Sampling Personnel: JLM
Regulatory Personnel: N/A
Weather Conditions: Clear Temp. (°C): 12
Well Diameter: 2.0 in.
(A) Top of Well Elevation: 665.75 ft. msl (yes/no)
(B) Depth to Immiscible Layer: N/A ft.
(C) Immiscible Layer Elevation: (A) - (B) = N/A ft. msl (yes/no)
(D) Depth to Groundwater: 9.38 ft.
(E) Groundwater Elevation: (A) - (D) = 656.37 ft. msl (yes/no) ✓
(F) Total Well Depth: 77.00 ft.
(G) Length of Water Column: (F) - (D) = 67.62 ft.
Casing Volume = (G) Volume in gal./ft. = 11.02 gals.
Method of Well Evacuation PUMP Start Time: 1000
Method of Sample Collection PUMP Time: 1205
Chain of Custody Started: (yes/no)

Source(s) of Well ID MAP ID Label (yes/no)
Well Completion: Protective Casing (yes/no) Flush (yes/no)
Flush-Mount Cover Seal Intact (yes/no) Locking Cap (yes/no)
Locked at Arrival (yes/no) Departure (yes/no)
Well Casing (height above / depth below) ground: 2.0 ft.
Casing Type (PVC) (Steel) (Other) _____
Dedicated Pump or Bailer (yes/no) Type _____
Protective Post / Abutment (yes/no) Concrete Pad (yes/no)
Well Integrity: Satisfactory (yes/no) If no, explain below.
Well Yield (low / moderate / high)

WELL VOLUME DATA

Diameter of Tubing (in.)	Volume (gal. / ft.)	Diameter of Pipe (in.)	Volume (gal. / ft.)
1/8	0.0006	1.0	0.041
3/16	0.0014	2.0	0.163
1/4	0.0025	3.0	0.367
5/16	0.0039	4.0	0.653
3/8	0.0050	5.0	1.020
1/2	0.0100	6.0	1.470
3/4	0.0230		
1 gallon/ft. = 3.8 liters/ft.			

Cylinder Volume (gal./ft.) = $\pi r^2 h \times 0.0043$

Radius (r) and height (h) measured in inches.

FIELD ANALYSES

Measurements	First	Second	Third	Fourth	Fifth	()
Volume Purged (gallons)	<u>11</u>	<u>22</u>	<u>33</u>			
Time (military)	<u>1036</u>	<u>1117</u>	<u>1157</u>			
pH (S.U.)	<u>6.6</u>	<u>6.5</u>	<u>6.6</u>			
Specific Conductance (µmhos/cm)	<u>5580</u>	<u>5820</u>	<u>5600</u>			
Water Temp. (°C)	<u>15</u>	<u>16</u>	<u>16</u>			
Odor (subjective) *	<u>3</u>	<u>3</u>	<u>3</u>			
Turbidity (NTU)	<u>27</u>	<u>20</u>	<u>17</u>			
DO	<u>0.3</u>	<u>0.3</u>	<u>0.3</u>			
ORP	<u>-7.1</u>	<u>6.0</u>	<u>-1.0</u>			

* (1)None (2)Slight (3)Moderate (4)Strong

** (1)Clear (2)Slightly Turbid (3)Moderately Turbid (4)Very Turbid (5)Extremely Turbid

Comments/Observations/Recommendations: Ferrous Iron: 1.4 mg/l

Completed by: Jahid M. Khan

Signature

Date

Field Data for Groundwater Sample Collection
Groundwater Measurements

Well ID: B-22B

Client: C.N.A. Holdings, Inc. / NRLF

Site Name: Salisbury, NC Job No.: 61242.12

Date: 5/19/09 LWR submitted by: _____

Sampling Personnel: JLM

Regulatory Personnel: N/A

Weather Conditions: Clear Temp. (°C): 16

Well Diameter: 2.0 in.

(A) Top of Well Elevation: 660.15 ft. msl (yes / no)

(B) Depth to Immiscible Layer: N/A ft.

(C) Immiscible Layer Elevation: (A) - (B) = N/A ft. msl (yes / no)

(D) Depth to Groundwater: 1.57 ft.

(E) Groundwater Elevation: (A) - (D) = 658.58 ft. msl (yes / no) ✓

(F) Total Well Depth: 6.500 ft.

(G) Length of Water Column: (F) - (D) = 63.43 ft.

Casing Volume = (G) Volume in gal./ft. = 10.34 gals.

Method of Well Evacuation PUMP Start Time: 1220

Method of Sample Collection PUMP Time: 1315

Chain of Custody Started: (yes / no) (yes)

Source(s) of Well ID MAP ID Label (yes / no) (yes)

Well Completion: Protective Casing (yes / no) (yes) Flush (yes / no) (no)

Flush-Mount Cover Seal Intact (yes / no) (yes) Locking Cap (yes / no) (yes)

Locked at Arrival (yes / no) (yes) Departure (yes / no) (yes)

Well Casing (height above / depth below) ground: 3.0 ft.

Casing Type (PVC) (Steel) (Other) _____

Dedicated Pump or Bailer (yes / no) Type _____

Protective Post / Abutment (yes / no) (yes) Concrete Pad (yes / no) (yes)

Well Integrity: Satisfactory (yes / no) (yes) If no, explain below.

Well Yield (low / moderate / high) (high)

WELL VOLUME DATA			
Diameter of Tubing (in.)	Volume (gal. / ft.)	Diameter of Pipe (in.)	Volume (gal. / ft.)
1/8	0.0006	1.0	0.041
3/16	0.0014	2.0	0.163
1/4	0.0025	3.0	0.367
5/16	0.0039	4.0	0.653
3/8	0.0050	5.0	1.020
1/2	0.0100	6.0	1.470
3/4	0.0230	1 gallon/ft. = 3.8 liters/ft.	

Cylinder Volume (gal./ft.) = $\pi r^2 h \times 0.0043$

Radius (r) and height (h) measured in inches.

Measurements	FIELD ANALYSES					
	First	Second	Third	Fourth	Fifth	()
Volume Purged (gallons)	<u>100.3</u>	<u>20.6</u>	<u>30.9</u>			
Time (military)	<u>1235</u>	<u>1250</u>	<u>1310</u>			
pH (S.U.)	<u>6.7</u>	<u>6.7</u>	<u>6.7</u>			
Specific Conductance (µmhos/cm)	<u>1220</u>	<u>1244</u>	<u>1242</u>			
Water Temp. (°C)	<u>18</u>	<u>16</u>	<u>16</u>			
Odor (subjective) *	<u>2</u>	<u>2</u>	<u>2</u>			
Turbidity (NTU)	<u>7.0</u>	<u>3.0</u>	<u>3.0</u>			
DO	<u>0.2</u>	<u>0.2</u>	<u>0.2</u>			
ORP	<u>-47</u>	<u>-57</u>	<u>-61</u>			

* (1)None (2)Slight (3)Moderate (4)Strong

** (1)Clear (2)Slightly Turbid (3)Moderately Turbid (4)Very Turbid (5)Extremely Turbid

Comments/Observations/Recommendations: Ferrous Iron : 2.2 mg/L

Completed by: J. M. Floyd

Signature

Date

Field Data for Groundwater Sample Collection
Groundwater Measurements

Well ID: B-10

Client: C.N.A. Holdings, Inc. / NRLF

Site Name: Salisbury, NC Job No.: 61242.12

Date: 5/19/09 LWR submitted by: _____

Sampling Personnel: JLM

Regulatory Personnel: N/A

Weather Conditions: Clear, Windy Temp. (°C): 20

Well Diameter: 2.0 in.

(A) Top of Well Elevation: 751.80 ft. msl (yes / no)

(B) Depth to Immiscible Layer: N/A ft.

(C) Immiscible Layer Elevation: (A) - (B) = N/A ft. msl (yes / no)

(D) Depth to Groundwater: 48.71 ft.

(E) Groundwater Elevation: (A) - (D) = 703.09 ft. msl (yes / no) ✓

(F) Total Well Depth: 60.00 ft.

(G) Length of Water Column: (F) - (D) = 11.29 ft.

Casing Volume = (G) Volume in gal./ft. = 1.84 gals.

Method of Well Evacuation PUMP Start Time: 1333

Method of Sample Collection PUMP Time: 1355

Chain of Custody Started: (yes/no)

Source(s) of Well ID MAP ID Label (yes/no)

Well Completion: Protective Casing (yes/no) Flush (yes/no)

Flush-Mount Cover Seal Intact (yes/no) Locking Cap (yes/no)

Locked at Arrival (yes/no) Departure (yes/no)

Well Casing (height above / depth below) ground: 1.0 ft.

Casing Type (PVC) (steel) (Other) _____

Dedicated Pump or Bailer (yes/no) Type _____

Protective Post / Abutment (yes/no) Concrete Pad (yes/no)

Well Integrity: Satisfactory (yes/no) If no, explain below.

Well Yield (low / moderate / high)

WELL VOLUME DATA

Diameter of Tubing (in.)	Volume (gal. / ft.)	Diameter of Pipe (in.)	Volume (gal. / ft.)
1/8	0.0006	1.0	0.041
3/16	0.0014	2.0	0.163
1/4	0.0025	3.0	0.367
5/16	0.0039	4.0	0.653
3/8	0.0050	5.0	1.020
1/2	0.0100	6.0	1.470
3/4	0.0230	1 gallon/ft. = 3.8 liters/ft.	

Cylinder Volume (gal./ft.) = $\pi r^2 h \times 0.0043$

Radius (r) and height (h) measured in inches.

Measurements	FIELD ANALYSES					
	First	Second	Third	Fourth	Fifth	()
Volume Purged (gallons)	<u>1.9</u>	<u>3.8</u>	<u>6.0</u>			
Time (military)	<u>1338</u>	<u>1345</u>	<u>1351</u>			
pH (S.U.)	<u>6.5</u>	<u>6.5</u>	<u>6.5</u>			
Specific Conductance (µmhos/cm)	<u>2670</u>	<u>2140</u>	<u>2180</u>			
Water Temp. (°C)	<u>18</u>	<u>17</u>	<u>17</u>			
Odor (subjective) *	<u>3</u>	<u>3</u>	<u>2</u>			
Turbidity (NTU)	<u>52</u>	<u>37</u>	<u>27</u>			
DO	<u>0.3</u>	<u>0.3</u>	<u>0.3</u>			
ORP	<u>-37</u>	<u>-47</u>	<u>-51</u>			

* (1)None (2)Slight (3)Moderate (4)Strong

** (1)Clear (2)Slightly Turbid (3)Moderately Turbid (4)Very Turbid (5)Extremely Turbid

Comments/Observations/Recommendations: Ferrous Iron : 2.4 mg/L

Completed by: JLM

Signature

5-19-09
Date

Field Data for Groundwater Sample Collection
 Groundwater Measurements

Well ID: B-01

Client: C.N.A. Holdings, Inc. / NRLF

Site Name: Salisbury, NC Job No.: 61242.12

Date: 5/17/09 LWR submitted by: _____

Sampling Personnel: JLM

Regulatory Personnel: N/A

Weather Conditions: Clear Windy Temp. (°C): 22

Well Diameter: 2.0 in.

(A) Top of Well Elevation: 756.55 ft. msl (yes / no)

(B) Depth to Immiscible Layer: N/A ft.

(C) Immiscible Layer Elevation: (A) - (B) = N/A ft. msl (yes / no)

(D) Depth to Groundwater: 60.76 ft.

(E) Groundwater Elevation: (A) - (D) = 695.79 ft. msl (yes / no) ✓

(F) Total Well Depth: 69.0 ft.

(G) Length of Water Column: (F) - (D) = 8.24 ft.

Casing Volume = (G) Volume in gal./ft. = 1.34 gals.

Method of Well Evacuation PUMP Start Time: 1426

Method of Sample Collection PUMP Time: 1505

Chain of Custody Started: (yes / no) (yes)

Source(s) of Well ID MAP ID Label (yes / no) (yes)

Well Completion: Protective Casing (yes / no) (yes) Flush (yes / no) (no)

Flush-Mount Cover Seal Intact (yes / no) (yes) Locking Cap (yes / no) (no)

Locked at Arrival (yes / no) (no) Departure (yes / no) (no)

Well Casing (height above / depth below) ground: _____ ft.

Casing Type (PVC) (Steel) (Other) _____

Dedicated Pump or Bailer (yes / no) Type _____

Protective Post / Abutment (yes / no) (no) Concrete Pad (yes / no) (yes)

Well Integrity: Satisfactory (yes / no) (yes) If no, explain below.

Well Yield (low / moderate / high) _____

WELL VOLUME DATA			
Diameter of Tubing (in.)	Volume (gal. / ft.)	Diameter of Pipe (in.)	Volume (gal. / ft.)
1/8	0.0006	1.0	0.041
3/16	0.0014	2.0	0.163
1/4	0.0025	3.0	0.367
5/16	0.0039	4.0	0.653
3/8	0.0050	5.0	1.020
1/2	0.0100	6.0	1.470
3/4	0.0230	1 gallon/ft. = 3.8 liters/ft.	

Cylinder Volume (gal./ft.) = $\pi r^2 h \times 0.0043$

Radius (r) and height (h) measured in inches.

FIELD ANALYSES						
Measurements	First	Second	Third	Fourth	Fifth	()
Volume Purged (gallons)	<u>1.4</u>	<u>2.8</u>	<u>4.2</u>			
Time (minutes)	<u>1430</u>	<u>1445</u>	<u>1501</u>			
pH (S.U.)	<u>5.2</u>	<u>5.3</u>	<u>5.4</u>			
Specific Conductance (µmhos/cm)	<u>7310</u>	<u>7540</u>	<u>7710</u>			
Water Temp. (°C)	<u>18</u>	<u>18</u>	<u>18</u>			
Odor (subjective) *	<u>3</u>	<u>3</u>	<u>3</u>			
Turbidity (NTU)	<u>3.7</u>	<u>2.3</u>	<u>2.0</u>			
DO	<u>0.3</u>	<u>0.3</u>	<u>0.3</u>			
ORP	<u>109</u>	<u>98</u>	<u>93</u>			

* (1)None (2)Slight (3)Moderate (4)Strong ** (1)Clear (2)Slightly Turbid (3)Moderately Turbid (4)Very Turbid (5) Extremely Turbid

Comments/Observations/Recommendations: Ferrous Iron : 4.1 mg / L

Completed by: [Signature] Date: 05-19-09

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

RDL	Report Detection Limit	MDL	Method Detection Limit
TIC	Tentatively Identified Compounds	MSL	Mean Sea Level
TNTC	Too Numerous To Count	MPN	Most Probable Number
BTU	British Thermal Units	NTU	Nephelometric Turbidity Units
C	Degrees Centigrade	F	Degrees Fahrenheit
umhos/cm	micromhos/cm	meq	milliequivalents
kg	kilogram(s)	g	gram(s)
mg	milligram(s)	ug	microgram(s)
l	liter(s)	ml	milliliters(s)
ul	microliter(s)	m3	cubic meter(s)
lb	pound(s)	ft3	cubic foot(feet)
ft	foot(feet)	su	Standard Units

mg/l, mg/kg Units of concentration in milligrams per liter for liquids and milligrams per kilogram for solids. Also referred to as Parts Per Million or "ppm" when the assumption is made that the specific gravity or density is one (1 g/ml).

ug/l, ug/kg Units of concentration in micrograms per liter for liquids and micrograms per kilograms for solids. Also referred to as Parts Per Billion or "ppb" when the assumption is made that the specific gravity or density is one (1 g/ml).

wt% Units of concentration expressed on a weight/weight basis (e.g. grams per 100 grams).

< Less Than – The number following the sign is the limit of quantitation, the smallest amount of analyte that can be reliably determined using this test.

> Greater Than

Data Qualifiers:

- A** TIC is a possible aldol-condensation product resulting from sample extraction, (Organics)
- B** Analyte also detected in the method blank.
- C** Amendable Cyanide is a negative value due to an unknown interference.
- E** Estimated concentration due to interference.
- J** Estimated value below RDL or estimated value for TIC. (Organics)
- P** Concentration difference between primary and confirmation columns >25%. (Organics) The lower result is reported.
- U** Final concentration is below the detection limit.
- X** Matrix interference which requires dilution or prevents the reporting of a result. Detection limits have been adjusted where applicable.
- *** Defined in report comments.

Solid samples (i.e. soil, sludge, and solid waste) are reported on a dry weight basis unless otherwise noted.

Test results relate only to the sample tested. Clients should be aware that a critical step in a chemical or biological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of the material involved, the test results will be meaningless. If you have any questions regarding the proper techniques of collecting samples, please contact us. However, we cannot be held responsible for sample integrity unless sampling has been performed by a member of our staff.

REPRESENTATION AND LIMITATION OF LIABILITY – The accuracy of all analytical results for samples begins as it is received by the laboratory. Integrity of the sample begins at the time it is placed in the possession of authorized Davis & Floyd, Inc. Laboratories personnel. All other warranties, expressed or implied, are disclaimed. Liability is limited to the cost of the analysis.

*Davis & Floyd, Inc.
AD07_03 (12/06)*

Appendix B

Completed Inspection Forms for Landfill CAP and Phytoremediation System

PROJECT:	Celanese Needmore Road Landfill Site Seep Remediation	JOB NUMBER:	Earth Tech - 79891
LOCATION:	Salisbury, NC	DATE:	5/29/09
CLIENT:	CNA	INSPECTED BY:	L. Brooks

General Site Conditions			
Site Conditions:	Dry	☐	Wet
		☒	
Water Flow From Culvert:	Yes	☒	No
		☐	
		Weather: cloudy	

Rain Gauge Readings (unit in inches)				
Date	5/1/09	5/8/09	5/15/09	5/22/09
Reading	2/10"	1 7/10"	8/10"	4/10"

5/29/09
2 0/10"

Tree Farm Inspection																													
Tree Observation:	Change in Tree Health Observed: ☒ Improving/Positive ☐ Declining ☐ No Change																												
	Area of Declining Health (if any):																												
Tree Status:	<table border="1"> <tr> <td>Tree Identification:</td> <td>R2T3</td> <td>R6T6</td> <td>R9T3</td> <td>R13T10</td> </tr> <tr> <td>Circumference</td> <td>17 1/2</td> <td>22 1/2</td> <td>10</td> <td>8</td> </tr> <tr> <td>Trunk Size (Diameter in inch)</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Approx Tree Height</td> <td>30 +</td> <td>30 +</td> <td>20</td> <td>20</td> </tr> <tr> <td>Foliage Condition</td> <td>good</td> <td>good</td> <td>good</td> <td>good</td> </tr> </table>				Tree Identification:	R2T3	R6T6	R9T3	R13T10	Circumference	17 1/2	22 1/2	10	8	Trunk Size (Diameter in inch)					Approx Tree Height	30 +	30 +	20	20	Foliage Condition	good	good	good	good
Tree Identification:	R2T3	R6T6	R9T3	R13T10																									
Circumference	17 1/2	22 1/2	10	8																									
Trunk Size (Diameter in inch)																													
Approx Tree Height	30 +	30 +	20	20																									
Foliage Condition	good	good	good	good																									
Other Observations:	none																												
(attach additional pages if needed)																													

Tree Farm Maintenance				
Notes: (Please provide the chemical brand name when applicable)				
Grass Seeding:	Yes	☐	No	☒
Grass Mowing:	Yes	☐	No	☒
Fertilize the Tree:	Yes	☐	No	☒
Site Irrigation:	Yes	☐	No	☒
Apply Herbicide:	Yes	☐	No	☒
Tree Prune:	Yes	☐	No	☒
Fence Condition:	Intact	☒	Damaged	☐
			Repaired	☐
Evidence of Grazing:	Yes	☐	No	☒
Photos Taken:	Yes	☐	No	☒
Tree Growth Audit by Others:	Yes	☐	No	☒

PROJECT:	Celanese Needmore Road Landfill Site Seep Remediation	JOB NUMBER:	
LOCATION:	Salisbury, NC	DATE:	5/29/09
CLIENT:	CNA	INSPECTED BY:	L. Brooks

Landfill Cap Inspection	
Landfill Cap Observation:	good condition
Landfill Cap Maintenance Activities:	none

Other Activities	none

Form Reviewed By: _____
Date: _____

PROJECT:	Celanese Needmore Road Landfill Site Seep Remediation	JOB NUMBER:	Earth Tech - 79891
LOCATION:	Salisbury, NC	DATE:	6/26/09
CLIENT:	CNA	INSPECTED BY:	L. Brooks

General Site Conditions			
Site Conditions:	Dry ☐	Wet ☒	Weather: clear
Water Flow From Culvert:	Yes ☒	No ☐	

Rain Gauge Readings (unit in inches)				
Date	6/5/09	6/12/09	6/19/09	6/26/09
Reading	4.5"	1.2"	.5"	0

Tree Farm Inspection																								
Tree Observation:	Change in Tree Health Observed: ☒ Improving/Positive ☐ Declining ☐ No Change																							
	Area of Declining Health (if any):																							
Tree Status:	<table border="1"> <tr> <td>Tree Identification:</td> <td>R2T3</td> <td>R6T6</td> <td>R9T3</td> <td>R13T10</td> </tr> <tr> <td>Trunk Size (Diameter in inch)</td> <td>18"</td> <td>23"</td> <td>10</td> <td>8</td> </tr> <tr> <td>Approx Tree Height</td> <td>30+</td> <td>30+</td> <td>20</td> <td>20</td> </tr> <tr> <td>Foliage Condition</td> <td>good</td> <td>good</td> <td>good</td> <td>good</td> </tr> </table>				Tree Identification:	R2T3	R6T6	R9T3	R13T10	Trunk Size (Diameter in inch)	18"	23"	10	8	Approx Tree Height	30+	30+	20	20	Foliage Condition	good	good	good	good
Tree Identification:	R2T3	R6T6	R9T3	R13T10																				
Trunk Size (Diameter in inch)	18"	23"	10	8																				
Approx Tree Height	30+	30+	20	20																				
Foliage Condition	good	good	good	good																				
Other Observations:	noticed some worms in foliage - overall very little damage																							

Tree Farm Maintenance				
Notes: (Please provide the chemical brand name when applicable)				
Grass Seeding:	Yes ☐	No ☒		
Grass Mowing:	Yes ☒	No ☐		
Fertilize the Tree:	Yes ☐	No ☒		
Site Irrigation:	Yes ☐	No ☒		
Apply Herbicide:	Yes ☐	No ☒		
Tree Prune:	Yes ☐	No ☒		
Fence Condition:	Intact ☒	Damaged ☐	Repaired ☐	
Evidence of Grazing:	Yes ☐	No ☒		
Photos Taken:	Yes ☐	No ☒		
Tree Growth Audit by Others:	Yes ☐	No ☒		

PROJECT:	Celanese Needmore Road Landfill Site Seep Remediation	JOB NUMBER:	
LOCATION:	Salisbury, NC	DATE:	6/26/09
CLIENT:	CNA	INSPECTED BY:	L. Brooks

Landfill Cap Inspection	
Landfill Cap Observation:	good condition
Landfill Cap Maintenance Activities:	mowing

Other Activities
none

Form Reviewed By: _____
Date: _____

PROJECT:	Celanese Needmore Road Landfill Site Seep Remediation	JOB NUMBER:	Earth Tech - 79891
LOCATION:	Salisbury, NC	DATE:	7/24/09
CLIENT:	CNA	INSPECTED BY:	L. Brooks

General Site Conditions

Site Conditions: Dry ☒ Wet ☐ Weather: clear

Water Flow From Culvert: Yes ☐ No ☒

Rain Gauge Readings (unit in inches)

Date	7/3/09	7/16/09	7/17/09	7/24/09
Reading	0	1/10"	5/10"	2/10"

7/31/09
1 6/10"

Tree Farm Inspection

Tree Observation: Change in Tree Health Observed: ☒ Improving/Positive ☐ Declining ☐ No Change

Area of Declining Health (if any): _____

Tree Status:

Tree Identification:	R2T3	R6T6	R9T3	R13T10
<i>Circumference</i> Trunk Size (Diameter in inch)	18 1/2	23 1/2	10	8 1/4
Approx Tree Height	30+	30+	20	20
Foliage Condition	good	good	good	good

Other Observations: _____
(attach additional pages if needed)

Tree Farm Maintenance

Notes: (Please provide the chemical brand name when applicable)

Grass Seeding:	Yes ☐	No ☒	
Grass Mowing:	Yes ☐	No ☒	
Fertilize the Tree:	Yes ☐	No ☒	
Site Irrigation:	Yes ☐	No ☒	
Apply Herbicide:	Yes ☐	No ☒	
Tree Prune:	Yes ☐	No ☒	
Fence Condition:	Intact ☒	Damaged ☐	Repaired ☐
Evidence of Grazing:	Yes ☐	No ☒	
Photos Taken:	Yes ☐	No ☒	
Tree Growth Audit by Others:	Yes ☐	No ☒	

PROJECT:	Celanese Needmore Road Landfill Site Seep Remediation	JOB NUMBER:	
LOCATION:	Salisbury, NC	DATE:	7/24/09
CLIENT:	CNA	INSPECTED BY:	L. Brooks

Landfill Cap Inspection	
Landfill Cap Observation:	good condition
Landfill Cap Maintenance Activities:	none

Other Activities
none

Form Reviewed By: _____
Date: _____

PROJECT:	Celanese Needmore Road Landfill Site Seep Remediation	JOB NUMBER:	Earth Tech - 79891
LOCATION:	Salisbury, NC	DATE:	8/28/09
CLIENT:	CNA	INSPECTED BY:	L. Brooks

General Site Conditions			
Site Conditions:	Dry	☐	Wet
			☒
Weather:	cloudy		
Water Flow From Culvert:	Yes	☒	No
			☐

Rain Gauge Readings (unit in inches)				
Date	8/7/09	8/14/09	8/21/09	8/28/09
Reading	2 3/10"	3/10"	6/10"	9/10"

Tree Farm Inspection																								
Tree Observation:	Change in Tree Health Observed: ☒ Improving/Positive ☒ Declining ☐ No Change																							
	Area of Declining Health (if any):																							
Tree Status:	<table border="1"> <tr> <td>Tree Identification:</td> <td>R2T3</td> <td>R6T6</td> <td>R9T3</td> <td>R13T10</td> </tr> <tr> <td>Trunk Size (Diameter in inch)</td> <td>19</td> <td>24</td> <td>10 1/4</td> <td>8 1/4</td> </tr> <tr> <td>Approx Tree Height</td> <td>30 +</td> <td>30 +</td> <td>20</td> <td>20</td> </tr> <tr> <td>Foliage Condition</td> <td>good</td> <td>good</td> <td>good</td> <td>good</td> </tr> </table>				Tree Identification:	R2T3	R6T6	R9T3	R13T10	Trunk Size (Diameter in inch)	19	24	10 1/4	8 1/4	Approx Tree Height	30 +	30 +	20	20	Foliage Condition	good	good	good	good
Tree Identification:	R2T3	R6T6	R9T3	R13T10																				
Trunk Size (Diameter in inch)	19	24	10 1/4	8 1/4																				
Approx Tree Height	30 +	30 +	20	20																				
Foliage Condition	good	good	good	good																				
Other Observations:	(attach additional pages if needed)																							

Tree Farm Maintenance				
Notes: (Please provide the chemical brand name when applicable)				
Grass Seeding:	Yes	☐	No	☒
Grass Mowing:	Yes	☐	No	☒
Fertilize the Tree:	Yes	☐	No	☒
Site Irrigation:	Yes	☐	No	☒
Apply Herbicide:	Yes	☐	No	☒
Tree Prune:	Yes	☐	No	☒
Fence Condition:	Intact	☒	Damaged	☐
			Repaired	☐
Evidence of Grazing:	Yes	☐	No	☒
Photos Taken:	Yes	☐	No	☒
Tree Growth Audit by Others:	Yes	☐	No	☒

PROJECT:	Celanese Needmore Road Landfill Site Seep Remediation	JOB NUMBER:	
LOCATION:	Salisbury, NC	DATE:	8/28/09
CLIENT:	CNA	INSPECTED BY:	L. Brooks

Landfill Cap Inspection	
Landfill Cap Observation:	good conditions
Landfill Cap Maintenance Activities:	mowing

Other Activities
none

Form Reviewed By: _____
Date: _____

PROJECT:	Celanese Needmore Road Landfill Site Seep Remediation	JOB NUMBER:	Earth Tech - 79891
LOCATION:	Salisbury, NC	DATE:	9/25/09
CLIENT:	CNA	INSPECTED BY:	C. Brooks

General Site Conditions			
Site Conditions:	Dry ☐	Wet ☒	Weather: <u>raining</u>
Water Flow From Culvert:	Yes ☒	No ☐	

Rain Gauge Readings (unit in inches)				
Date	9/4/09	9/11/09	9/18/09	9/25/09
Reading	1.75"	.2"	1.1"	.75"

Tree Farm Inspection																								
Tree Observation:	Change in Tree Health Observed: ☒ Improving/Positive ☐ Declining ☐ No Change																							
	Area of Declining Health (if any): _____																							
Tree Status:	<table border="1"> <tr> <td>Tree Identification:</td> <td>R2 T3</td> <td>R6 T6</td> <td>R9 T3</td> <td>R13 T10</td> </tr> <tr> <td>Trunk Size (Diameter in inch)</td> <td>19 1/4</td> <td>24 1/2</td> <td>10 1/4</td> <td>8 1/2</td> </tr> <tr> <td>Approx Tree Height</td> <td>30+</td> <td>30+</td> <td>20</td> <td>20</td> </tr> <tr> <td>Foliage Condition</td> <td>good</td> <td>good</td> <td>good</td> <td>good</td> </tr> </table>				Tree Identification:	R2 T3	R6 T6	R9 T3	R13 T10	Trunk Size (Diameter in inch)	19 1/4	24 1/2	10 1/4	8 1/2	Approx Tree Height	30+	30+	20	20	Foliage Condition	good	good	good	good
Tree Identification:	R2 T3	R6 T6	R9 T3	R13 T10																				
Trunk Size (Diameter in inch)	19 1/4	24 1/2	10 1/4	8 1/2																				
Approx Tree Height	30+	30+	20	20																				
Foliage Condition	good	good	good	good																				
Other Observations:	<u>leaves falling</u>																							
(attach additional pages if needed)																								

Tree Farm Maintenance				
Notes: (Please provide the chemical brand name when applicable)				
Grass Seeding:	Yes ☐	No ☒		
Grass Mowing:	Yes ☒	No ☐		
Fertilize the Tree:	Yes ☐	No ☒		
Site Irrigation:	Yes ☐	No ☒		
Apply Herbicide:	Yes ☐	No ☒		
Tree Prune:	Yes ☐	No ☒		
Fence Condition:	Intact ☒	Damaged ☐	Repaired ☐	
Evidence of Grazing:	Yes ☐	No ☒		
Photos Taken:	Yes ☐	No ☒		
Tree Growth Audit by Others:	Yes ☐	No ☒		

PROJECT:	Celanese Needmore Road Landfill Site Seep Remediation	JOB NUMBER:	
LOCATION:	Salisbury, NC	DATE:	9/25/09
CLIENT:	CNA	INSPECTED BY:	L. Brooks

Landfill Cap Inspection	
Landfill Cap Observation:	good condition
Landfill Cap Maintenance Activities:	none

Other Activities

Form Reviewed By: _____
Date: _____

Notification Table

Results Exceeding 2L Standards for Needmore Road Landfill

May-09

Parameter	Well	Result (mg/L)
1,4-dioxane	B-17C	2.81
1,4-dioxane	B-24A	0.113
1,4-dioxane	B-09C	0.873
1,4-dioxane	B-12	0.105
1,4-dioxane	B-23B	1.77
1,4-dioxane	B-23A	1.34
1,4-dioxane	B-22B	2.39
1,4-dioxane	B-10	0.412
1,4-dioxane	B-01	2.26

June 15, 2009

BRYON DAHLGREN
AECOM
1455 OLD ALABAMA ROAD
SUITE 170
ROSWELL, GA 30076

Report ID : AG1219
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Login Number	:L09052003
Project Number	:61242.12
Description	:NRLF

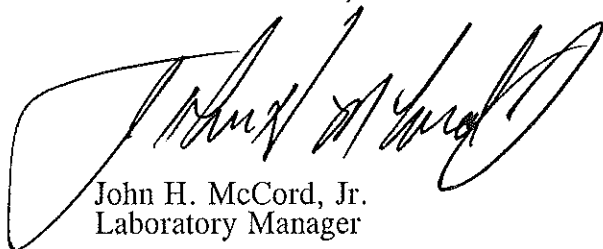
Dear Bryon Dahlgren:

We are pleased to provide the enclosed analytical results for the samples received by Davis & Floyd, Inc. on May 20, 2009.

A formal Quality Assurance/Quality Control program is maintained by Davis & Floyd, which is designed to meet or exceed the EPA, NELAC or other appropriate regulatory requirements. All analytical analyses for this project met QA/QC criteria and the results are within the 99% confidence interval for each method unless otherwise stated in the footnotes. This report is to be reproduced only in full.

Feel free to contact our Client Services Representative at (864) 229-4413 if further explanation of the analysis is required. Unless other arrangements have been made, samples will be disposed of or returned 14 days from the date of the report. We appreciate the opportunity to provide services to your firm.

Sincerely,
DAVIS & FLOYD, INC.



John H. McCord, Jr.
Laboratory Manager

SC Certification Number: 24110001

Client : AECOM
1455 OLD ALABAMA ROAD
SUITE 170
ROSWELL, GA 30076
Contact : BRYON DAHLGREN

Project Number: 61242.12

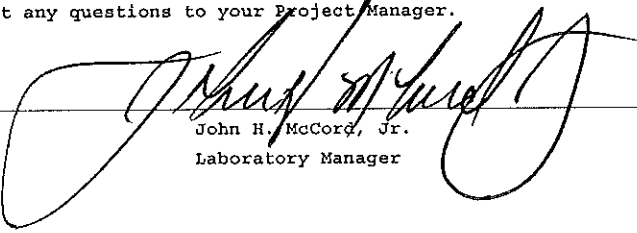
Report Date : June 15, 2009
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Certificate of Analysis Report

Sample ID	Client ID	Date Collected	Date Received
L09052003-01	CSW-1	05/18/2009 1445	05/20/2009
L09052003-02	CSW-2	05/18/2009 1505	05/20/2009
L09052003-03	SW-5	05/18/2009 1530	05/20/2009
L09052003-04	B-17C	05/18/2009 1712	05/20/2009
L09052003-05	B-24A	05/18/2009 1808	05/20/2009
L09052003-06	B-09C	05/18/2009 1827	05/20/2009
L09052003-07	B-12	05/18/2009 1900	05/20/2009
L09052003-08	B-23B	05/19/2009 0957	05/20/2009
L09052003-09	B-23A	05/19/2009 1205	05/20/2009
L09052003-10	B-22B	05/19/2009 1315	05/20/2009
L09052003-11	B-10	05/19/2009 1355	05/20/2009
L09052003-12	B-10 DUP.	05/19/2009 1355	05/20/2009
L09052003-13	B-01	05/19/2009 1505	05/20/2009

This data report has been prepared and reviewed in accordance with standard operating procedures. Test results relate only to the sample tested.
Please direct any questions to your Project Manager.

Reviewed by


John H. McCord, Jr.
Laboratory Manager



LABORATORY ANALYSIS REPORT

SC Certification Number: 24110001

Client : AECOM
1455 OLD ALABAMA ROAD
SUITE 170
ROSWELL, GA 30076
Contact : BRYON DAHLGREN

Project Number: 61242.12

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Certificate of Analysis

Client ID: CSW-1
Sample ID: L09052003-01

Date Collected: 05/18/2009 1445
Date Received : 05/20/2009

Parameter	Result	Qual	RDL	Units	Analyst	Date	Time
Matrix : GW/ChemW							
Field Data							
EPA 170.1							
TEMPERATURE	17.0		1.0	degrees C		05/18/2009	1445
EPA 180.1							
TURBIDITY	23.0		1.0	NTU		05/18/2009	1445
SM 2580B							
REDOX POTENTIAL	+ 71			mV		05/18/2009	1445
SM 4500-O G							
DISSOLVED OXYGEN	4.7		0.10	mg/l		05/18/2009	1445
SW846 9040C							
PH	6.6		0.50	su		05/18/2009	1445
SW846 9050A							
SPECIFIC CONDUCTIVITY	543		1.0	umhos/cm		05/18/2009	1445
Volatile Organics							
SW846 8260C							
1,4-DIOXANE	163		10.0	ug/l	JMT	05/21/2009	1343

SC Certification Number: 24110001

Client : AECOM
1455 OLD ALABAMA ROAD
SUITE 170
ROSWELL, GA 30076
Contact : BRYON DAHLGREN

Project Number: 61242.12

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Certificate of Analysis

Client ID: CSW-2
Sample ID: L09052003-02

Date Collected: 05/18/2009 1505
Date Received : 05/20/2009

Parameter	Result	Qual	RDL	Units	Analyst	Date	Time
Matrix : GW/ChemW							
Field Data							
EPA 170.1							
TEMPERATURE	17.0		1.0	degrees C		05/18/2009	1505
EPA 180.1							
TURBIDITY	38.0		1.0	NTU		05/18/2009	1505
SM 2580B							
REDOX POTENTIAL	+ 35			mV		05/18/2009	1505
SM 4500-O G							
DISSOLVED OXYGEN	5.7		0.10	mg/l		05/18/2009	1505
SW846 9040C							
PH	7.2		0.50	su		05/18/2009	1505
SW846 9050A							
SPECIFIC CONDUCTIVITY	342		1.0	umhos/cm		05/18/2009	1505
Volatile Organics							
SW846 8260C							
1,4-DIOXANE	70.5		10.0	ug/l	JMT	05/21/2009	1319

LABORATORY ANALYSIS REPORT

SC Certification Number: 24110001

Client : AECOM
1455 OLD ALABAMA ROAD
SUITE 170
ROSWELL, GA 30076
Contact : BRYON DAHLGREN

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Certificate of Analysis

Client ID: SW-5
Sample ID: L09052003-03

Date Collected: 05/18/2009 1530
Date Received : 05/20/2009

Parameter	Result	Qual	RDL	Units	Analyst	Date	Time
Matrix : GW/ChemW							
Field Data							
EPA 170.1							
TEMPERATURE	18.0		1.0	degrees C		05/18/2009	1530
EPA 180.1							
TURBIDITY	37.0		1.0	NTU		05/18/2009	1530
SM 2580B							
REDOX POTENTIAL	+ 6.7			mV		05/18/2009	1530
SM 4500-O G							
DISSOLVED OXYGEN	9.7		0.10	mg/l		05/18/2009	1530
SW846 9040C							
PH	7.4		0.50	su		05/18/2009	1530
SW846 9050A							
SPECIFIC CONDUCTIVITY	84.0		1.0	umhos/cm		05/18/2009	1530
Gas Chromatography							
SW846 8015C							
ETHYLENE GLYCOL	<	7.0 U	7.0	mg/l	JMT	05/28/2009	1950
Semivolatile Organics							
SW846 8270D							
1,1'-BIPHENYL	<	10.0 U	10.0	ug/l	PAP	05/27/2009	1632
BIPHENYL ETHER	<	10.0 U	10.0	ug/l	PAP	05/27/2009	1632
Volatile Organics							
SW846 8260C							
1,4-DIOXANE	<	10.0 U	10.0	ug/l	JMT	05/21/2009	1255

Prep Procedure	Method	Analyst	Prep Date
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Analytical Prep Procedures:

DOWTHERM SW846 3510C DBC 05/20/2009 0900

LABORATORY ANALYSIS REPORT

SC Certification Number: 24110001

Client : AECOM
1455 OLD ALABAMA ROAD
SUITE 170
ROSWELL, GA 30076
Contact : BRYON DAHLGREN

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Certificate of Analysis

Client ID: B-17C
Sample ID: L09052003-04

Date Collected: 05/18/2009 1712
Date Received : 05/20/2009

Parameter	Result	Qual	RDL	Units	Analyst	Date	Time
Matrix : GW/ChemW							
Field Data							
EPA 170.1							
TEMPERATURE	17.0		1.0	degrees C		05/18/2009	1712
EPA 180.1							
TURBIDITY	1.0		1.0	NTU		05/18/2009	1712
HACH IR-18C							
FERROUS, IRON	< 0.20	U	0.20	mg/l		05/18/2009	1712
SM 2580B							
REDOX POTENTIAL	+ 124			mV		05/18/2009	1712
SM 4500-O G							
DISSOLVED OXYGEN	0.30		0.10	mg/l		05/18/2009	1712
SW846 9040C							
PH	6.6		0.50	su		05/18/2009	1712
SW846 9050A							
SPECIFIC CONDUCTIVITY	738		1.0	umhos/cm		05/18/2009	1712
GROUND WATER ELEVATION	659.46		.01	feet MSL		05/18/2009	1712
Volatile Organics							
SW846 8260C							
1,4-DIOXANE	2810		200	ug/l	JMT	05/21/2009	1455
Wet Chemistry							
SM 2320B							
ALKALINITY, TOTAL	324		2.0	mg/l	MPM	05/20/2009	1850
ENDPOINT PH	4.5		1.0	su	MPM	05/20/2009	1850
SM 4500PE							
ORTHO PHOSPHATE (AS P)	0.090		0.030	mg/l	CDC	05/20/2009	1622
SW846 9056							
NITRATE NITROGEN (AS N)	< 0.10	U	0.10	mg/l	EIC	05/20/2009	1141
NITRITE NITROGEN (AS N)	< 0.10	U	0.10	mg/l	EIC	05/20/2009	1141
SULFATE	2.8		0.50	mg/l	EIC	05/20/2009	1141



LABORATORY ANALYSIS REPORT

SC Certification Number: 24110001

Client : AECOM
1455 OLD ALABAMA ROAD
SUITE 170
ROSWELL, GA 30076
Contact : BRYON DAHLGREN

Project Number: 61242.12

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Certificate of Analysis

Client ID: B-24A
Sample ID: L09052003-05

Date Collected: 05/18/2009 1808
Date Received : 05/20/2009

Parameter	Result	Qual	RDL	Units	Analyst	Date	Time
Matrix : GW/ChemW							
Field Data							
EPA 170.1							
TEMPERATURE	14.0		1.0	degrees C		05/18/2009	1808
EPA 180.1							
TURBIDITY	1.0		1.0	NTU		05/18/2009	1808
HACH IR-18C							
FERROUS, IRON	1.3		0.20	mg/l		05/18/2009	1808
SM 2580B							
REDOX POTENTIAL	+ 43			mV		05/18/2009	1808
SM 4500-O G							
DISSOLVED OXYGEN	0.30		0.10	mg/l		05/18/2009	1808
SW846 9040C							
PH	6.6		0.50	su		05/18/2009	1808
SW846 9050A							
SPECIFIC CONDUCTIVITY	764		1.0	umhos/cm		05/18/2009	1808
GROUND WATER ELEVATION	654.61		.01	feet MSL		05/18/2009	1808
Volatile Organics							
SW846 8260C							
1,4-DIOXANE	113		10.0	ug/l	JMT	05/21/2009	1431
Wet Chemistry							
SM 2320B							
ALKALINITY, TOTAL	414		2.0	mg/l	MPM	05/20/2009	1858
ENDPOINT PH	4.5		1.0	su	MPM	05/20/2009	1858
SM 4500PE							
ORTHO PHOSPHATE (AS P)	0.081		0.030	mg/l	CDC	05/20/2009	1622
SW846 9056							
NITRATE NITROGEN (AS N)	< 0.10	U	0.10	mg/l	EIC	05/20/2009	1223
NITRITE NITROGEN (AS N)	< 0.10	U	0.10	mg/l	EIC	05/20/2009	1223
SULFATE	1.4		0.50	mg/l	EIC	05/20/2009	1223



LABORATORY ANALYSIS REPORT

SC Certification Number: 24110001

Client : AECOM
1455 OLD ALABAMA ROAD
SUITE 170
ROSWELL, GA 30076
Contact : BRYON DAHLGREN

Project Number: 61242.12
Report Date : June 15, 2009
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Certificate of Analysis

Client ID: B-09C
Sample ID: L09052003-06

Date Collected: 05/18/2009 1827
Date Received : 05/20/2009

Parameter	Result	Qual	RDL	Units	Analyst	Date	Time
Matrix : GW/ChemW							
Field Data							
EPA 170.1							
TEMPERATURE	15.0		1.0	degrees C		05/18/2009	1827
EPA 180.1							
TURBIDITY	1.0		1.0	NTU		05/18/2009	1827
HACH IR-18C							
FERROUS, IRON	3.0		0.20	mg/l		05/18/2009	1827
SM 2580B							
REDOX POTENTIAL	- 83			mV		05/18/2009	1827
SM 4500-O G							
DISSOLVED OXYGEN	0.10		0.10	mg/l		05/18/2009	1827
SW846 9040C							
PH	5.8		0.50	su		05/18/2009	1827
SW846 9050A							
SPECIFIC CONDUCTIVITY	10000		1.0	umhos/cm		05/18/2009	1827
GROUND WATER ELEVATION	674.11		.01	feet MSL		05/18/2009	1827
Gas Chromatography							
SW846 8015C							
ETHYLENE GLYCOL	<	7.0 U	7.0	mg/l	JMT	05/28/2009	2117
Volatile Organics							
SW846 8260C							
1,4-DIOXANE	873		50.0	ug/l	JMT	05/21/2009	1656
Wet Chemistry							
SM 2320B							
ALKALINITY, TOTAL	4970		50.0	mg/l	MPM	05/20/2009	1910
ENDPOINT PH	4.5		1.0	su	MPM	05/20/2009	1910
SM 4500PE							
ORTHO PHOSPHATE (AS P)	0.22		0.030	mg/l	CDC	05/20/2009	1623
SW846 9056							
NITRATE NITROGEN (AS N)	<	0.10 U	0.10	mg/l	EIC	05/20/2009	1251
NITRITE NITROGEN (AS N)	<	0.10 U	0.10	mg/l	EIC	05/20/2009	1251
SULFATE	0.50		0.50	mg/l	EIC	05/20/2009	1251



LABORATORY ANALYSIS REPORT

SC Certification Number: 24110001

Client : AECOM
1455 OLD ALABAMA ROAD
SUITE 170
ROSWELL, GA 30076
Contact : BRYON DAHLGREN

Project Number: 61242.12
Report Date : June 15, 2009
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Certificate of Analysis

Client ID: B-12
Sample ID: L09052003-07

Date Collected: 05/18/2009 1900
Date Received : 05/20/2009

Parameter	Result	Qual	RDL	Units	Analyst	Date	Time
Matrix : GW/ChemW							
Field Data							
EPA 170.1							
TEMPERATURE	16.0		1.0	degrees C		05/18/2009	1900
EPA 180.1							
TURBIDITY	1.0		1.0	NTU		05/18/2009	1900
HACH IR-18C							
FERROUS, IRON	< 0.20	U	0.20	mg/l		05/18/2009	1900
SM 2580B							
REDOX POTENTIAL	- 12			mV		05/18/2009	1900
SM 4500-O G							
DISSOLVED OXYGEN	2.4		0.10	mg/l		05/18/2009	1900
SW846 9040C							
PH	6.9		0.50	su		05/18/2009	1900
SW846 9050A							
SPECIFIC CONDUCTIVITY	509		1.0	umhos/cm		05/18/2009	1900
GROUND WATER ELEVATION	659.08		.01	feet MSL		05/18/2009	1900
Semivolatile Organics							
SW846 8270D							
1,1'-BIPHENYL	< 10.0	U	10.0	ug/l	PAP	05/27/2009	1708
BIPHENYL ETHER	10.8		10.0	ug/l	PAP	05/27/2009	1708
Volatile Organics							
SW846 8260C							
1,4-DIOXANE	105		10.0	ug/l	JMT	05/21/2009	1407
Wet Chemistry							
SM 2320B							
ALKALINITY, TOTAL	256		2.0	mg/l	MPM	05/20/2009	1921
ENDPOINT PH	4.5		1.0	su	MPM	05/20/2009	1921
SM 4500PE							
ORTHO PHOSPHATE (AS P)	0.039		0.030	mg/l	CDC	05/20/2009	1623
SW846 9056							
NITRATE NITROGEN (AS N)	< 0.10	U	0.10	mg/l	EIC	05/20/2009	1346
NITRITE NITROGEN (AS N)	< 0.10	U	0.10	mg/l	EIC	05/20/2009	1346
SULFATE	< 0.50	U	0.50	mg/l	EIC	05/20/2009	1346

SC Certification Number: 24110001

Client : AECOM
1455 OLD ALABAMA ROAD
SUITE 170
ROSWELL, GA 30076
Contact : BRYON DAHLGREN

Project Number: 61242.12
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Certificate of Analysis

Client ID: B-12
Sample ID: L09052003-07

Date Collected: 05/18/2009 1900
Date Received : 05/20/2009

Prep Procedure	Method	Analyst	Prep Date
Analytical Prep Procedures: DOWTHERM	SW846 3510C	DBC	05/20/2009 0900

SC Certification Number: 24110001

Client : AECOM
1455 OLD ALABAMA ROAD
SUITE 170
ROSWELL, GA 30076
Contact : BRYON DAHLGREN

Project Number: 61242.12
Report Date : June 15, 2009
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Certificate of Analysis

Client ID: B-23B
Sample ID: L09052003-08

Date Collected: 05/19/2009 0957
Date Received : 05/20/2009

Parameter	Result	Qual	RDL	Units	Analyst	Date	Time
Matrix : GW/ChemW							
Field Data							
EPA 170.1							
TEMPERATURE	15.0		1.0	degrees C		05/19/2009	0957
EPA 180.1							
TURBIDITY	14.0		1.0	NTU		05/19/2009	0957
HACH IR-18C							
FERROUS, IRON	1.4		0.20	mg/l		05/19/2009	0957
SM 2580B							
REDOX POTENTIAL	- 30			mV		05/19/2009	0957
SM 4500-O G							
DISSOLVED OXYGEN	0.20		0.10	mg/l		05/19/2009	0957
SW846 9040C							
PH	6.5		0.50	su		05/19/2009	0957
SW846 9050A							
SPECIFIC CONDUCTIVITY	5830		1.0	umhos/cm		05/19/2009	0957
GROUND WATER ELEVATION	656.88		.01	feet MSL		05/19/2009	0957
Gas Chromatography							
SW846 8015C							
ETHYLENE GLYCOL	<	7.0	U	7.0	mg/l	JMT	05/28/2009 2215
Volatile Organics							
SW846 8260C							
1,4-DIOXANE	1770		200	ug/l	JMT	05/21/2009	1519
Wet Chemistry							
SM 2320B							
ALKALINITY, TOTAL	3040		40.0	mg/l	MPM	05/20/2009	1929
ENDPOINT PH	4.5		1.0	su	MPM	05/20/2009	1929
SM 4500PE							
ORTHO PHOSPHATE (AS P)	0.12		0.030	mg/l	CDC	05/20/2009	1624
SW846 9056							
NITRATE NITROGEN (AS N)	<	0.10	U	0.10	mg/l	EIC	05/20/2009 1414
NITRITE NITROGEN (AS N)	<	0.10	U	0.10	mg/l	EIC	05/20/2009 1414
SULFATE	<	0.50	U	0.50	mg/l	EIC	05/20/2009 1414

LABORATORY ANALYSIS REPORT

SC Certification Number: 24110001

Client : AECOM
1455 OLD ALABAMA ROAD
SUITE 170
ROSWELL, GA 30076
Contact : BRYON DAHLGREN

Project Number: 61242.12
Report Date : June 15, 2009
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Certificate of Analysis

Client ID: B-23A
Sample ID: L09052003-09

Date Collected: 05/19/2009 1205
Date Received : 05/20/2009

Parameter	Result	Qual	RDL	Units	Analyst	Date	Time
Matrix : GW/ChemW							
Field Data							
EPA 170.1							
TEMPERATURE	16.0		1.0	degrees C		05/19/2009	1205
EPA 180.1							
TURBIDITY	17.0		1.0	NTU		05/19/2009	1205
HACH IR-18C							
FERROUS, IRON	1.4		0.20	mg/l		05/19/2009	1205
SM 2580B							
REDOX POTENTIAL	- 1.0			mV		05/19/2009	1205
SM 4500-O G							
DISSOLVED OXYGEN	0.30		0.10	mg/l		05/19/2009	1205
SW846 9040C							
PH	6.6		0.50	su		05/19/2009	1205
SW846 9050A							
SPECIFIC CONDUCTIVITY	5600		1.0	umhos/cm		05/19/2009	1205
GROUND WATER ELEVATION	656.37		.01	feet MSL		05/19/2009	1205
Gas Chromatography							
SW846 8015C							
ETHYLENE GLYCOL	< 7.0	U	7.0	mg/l	JMT	05/28/2009	2312
Volatile Organics							
SW846 8260C							
1,4-DIOXANE	1340		100	ug/l	JMT	05/21/2009	1632
Wet Chemistry							
SM 2320B							
ALKALINITY, TOTAL	2920		40.0	mg/l	MPM	05/20/2009	1937
ENDPOINT PH	1.0		1.0	su	MPM	05/20/2009	1937
SM 4500PE							
ORTHO PHOSPHATE (AS P)	0.098		0.030	mg/l	CDC	05/20/2009	1625
SW846 9056							
NITRATE NITROGEN (AS N)	< 0.10	U	0.10	mg/l	EIC	05/20/2009	1509
NITRITE NITROGEN (AS N)	< 0.10	U	0.10	mg/l	EIC	05/20/2009	1509
SULFATE	0.64		0.50	mg/l	EIC	05/20/2009	1509



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1455 OLD ALABAMA ROAD
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Certificate of Analysis

Client ID: B-22B
Sample ID: L09052003-10

Date Collected: 05/19/2009 1315
Date Received : 05/20/2009

Parameter	Result	Qual	RDL	Units	Analyst	Date	Time
Matrix : GW/ChemW							
Field Data							
EPA 170.1							
TEMPERATURE	16.0		1.0	degrees C		05/19/2009	1315
EPA 180.1							
TURBIDITY	3.0		1.0	NTU		05/19/2009	1315
HACH IR-18C							
FERROUS, IRON	2.2		0.20	mg/l		05/19/2009	1315
SM 2580B							
REDOX POTENTIAL	- 61			mV		05/19/2009	1315
SM 4500-O G							
DISSOLVED OXYGEN	0.20		0.10	mg/l		05/19/2009	1315
SW846 9040C							
PH	6.7		0.50	su		05/19/2009	1315
SW846 9050A							
SPECIFIC CONDUCTIVITY	1240		1.0	umhos/cm		05/19/2009	1315
GROUND WATER ELEVATION	658.58		.01	feet MSL		05/19/2009	1315
Volatile Organics							
SW846 8260C							
1,4-DIOXANE	2390		200	ug/l	JMT	05/21/2009	1544
Wet Chemistry							
SM 2320B							
ALKALINITY, TOTAL	602		4.0	mg/l	MPM	05/20/2009	1946
ENDPOINT PH	4.5		1.0	su	MPM	05/20/2009	1946
SM 4500PE							
ORTHO PHOSPHATE (AS P)	0.090		0.030	mg/l	CDC	05/20/2009	1626
SW846 9056							
NITRATE NITROGEN (AS N)	< 0.10	U	0.10	mg/l	EIC	05/20/2009	1659
NITRITE NITROGEN (AS N)	< 0.10	U	0.10	mg/l	EIC	05/20/2009	1659
SULFATE	0.76		0.50	mg/l	EIC	05/20/2009	1659



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Client ID: B-10
Sample ID: L09052003-11

Date Collected: 05/19/2009 1355
Date Received : 05/20/2009

Parameter	Result	Qual	RDL	Units	Analyst	Date	Time
Matrix : GW/ChemW							
Field Data							
EPA 170.1							
TEMPERATURE	17.0		1.0	degrees C		05/19/2009	1355
EPA 180.1							
TURBIDITY	27.0		1.0	NTU		05/19/2009	1355
HACH IR-18C							
FERROUS, IRON	2.4		0.20	mg/l		05/19/2009	1355
SM 2580B							
REDOX POTENTIAL	- 51			mV		05/19/2009	1355
SM 4500-O G							
DISSOLVED OXYGEN	0.30		0.10	mg/l		05/19/2009	1355
SW846 9040C							
PH	6.5		0.50	su		05/19/2009	1355
SW846 9050A							
SPECIFIC CONDUCTIVITY	2180		1.0	umhos/cm		05/19/2009	1355
GROUND WATER ELEVATION	703.09		.01	feet MSL		05/19/2009	1355
Gas Chromatography							
SW846 8015C							
ETHYLENE GLYCOL	< 7.0	U	7.0	mg/l	JMT	05/29/2009	0010
Semivolatile Organics							
SW846 8270D							
1,1'-BIPHENYL	319		50.0	ug/l	PAP	05/28/2009	0824
BIPHENYL ETHER	3090		1000	ug/l	PAP	05/28/2009	0901
Volatile Organics							
SW846 8260C							
1,4-DIOXANE	412		50.0	ug/l	JMT	05/21/2009	1720
Wet Chemistry							
SM 2320B							
ALKALINITY, TOTAL	981		8.0	mg/l	MPM	05/20/2009	1954
ENDPOINT PH	4.5		1.0	su	MPM	05/20/2009	1954

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Client ID: B-10
Sample ID: L09052003-11

Date Collected: 05/19/2009 1355
Date Received : 05/20/2009

Parameter	Result	Qual	RDL	Units	Analyst	Date	Time
SM 4500PE							
ORTHO PHOSPHATE (AS P)	<	0.030	U	0.030	mg/l	CDC	05/20/2009 1626
SW846 9056							
NITRATE NITROGEN (AS N)	<	0.10	U	0.10	mg/l	EIC	05/20/2009 1727
NITRITE NITROGEN (AS N)	<	0.10	U	0.10	mg/l	EIC	05/20/2009 1727
SULFATE	<	0.50	U	0.50	mg/l	EIC	05/20/2009 1727

Prep Procedure	Method	Analyst	Prep Date
Analytical Prep Procedures:			
DOWTHERM	SW846 3510C	DBC	05/20/2009 0900



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Client ID: B-10 DUP.
Sample ID: L09052003-12

Date Collected: 05/19/2009 1355
Date Received : 05/20/2009

Parameter	Result	Qual	RDL	Units	Analyst	Date	Time
Matrix : GW/ChemW							
Field Data							
EPA 170.1							
TEMPERATURE	17.0		1.0	degrees C		05/19/2009	1355
EPA 180.1							
TURBIDITY	27.0		1.0	NTU		05/19/2009	1355
HACH IR-18C							
FERROUS, IRON	2.4		0.20	mg/l		05/19/2009	1355
SM 2580B							
REDOX POTENTIAL	- 51			mV		05/19/2009	1355
SM 4500-O G							
DISSOLVED OXYGEN	0.30		0.10	mg/l		05/19/2009	1355
SW846 9040C							
PH	6.5		0.50	su		05/19/2009	1355
SW846 9050A							
SPECIFIC CONDUCTIVITY	2180		1.0	umhos/cm		05/19/2009	1355
GROUND WATER ELEVATION	703.09		.01	feet MSL		05/19/2009	1355
Gas Chromatography							
SW846 8015C							
ETHYLENE GLYCOL	<	7.0	U	7.0	mg/l	JMT	05/29/2009 0108
Semivolatile Organics							
SW846 8270D							
1,1'-BIPHENYL	324		50.0	ug/l	PAP	05/28/2009	0936
BIPHENYL ETHER	3060		1000	ug/l	PAP	05/28/2009	1012
Volatile Organics							
SW846 8260C							
1,4-DIOXANE	437		50.0	ug/l	JMT	05/21/2009	1744
Wet Chemistry							
SM 2320B							
ALKALINITY, TOTAL	994		8.0	mg/l	MPM	05/20/2009	2000
ENDPOINT PH	4.5		1.0	su	MPM	05/20/2009	2000

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Client ID: B-10 DUP.
Sample ID: L09052003-12

Date Collected: 05/19/2009 1355
Date Received : 05/20/2009

Parameter	Result	Qual	RDL	Units	Analyst	Date	Time
SM 4500PE							
ORTHO PHOSPHATE (AS P)	<	0.030 U	0.030	mg/l	CDC	05/20/2009	1627
SW846 9056							
NITRATE NITROGEN (AS N)	<	0.10 U	0.10	mg/l	EIC	05/20/2009	1822
NITRITE NITROGEN (AS N)	<	0.10 U	0.10	mg/l	EIC	05/20/2009	1822
SULFATE	<	0.50 U	0.50	mg/l	EIC	05/20/2009	1822

Prep Procedure	Method	Analyst	Prep Date
Analytical Prep Procedures:			
DOWTHERM	SW846 3510C	DBC	05/20/2009 0900



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Client ID: B-01
Sample ID: L09052003-13

Date Collected: 05/19/2009 1505
Date Received : 05/20/2009

Parameter	Result	Qual	RDL	Units	Analyst	Date	Time
Matrix : GW/ChemW							
Field Data							
EPA 170.1							
TEMPERATURE	18.0		1.0	degrees C		05/19/2009	1505
EPA 180.1							
TURBIDITY	20.0		1.0	NTU		05/19/2009	1505
HACH IR-18C							
FERROUS, IRON	4.1		0.20	mg/l		05/19/2009	1505
SM 2580B							
REDOX POTENTIAL	+ 93			mV		05/19/2009	1505
SM 4500-O G							
DISSOLVED OXYGEN	0.30		0.10	mg/l		05/19/2009	1505
SW846 9040C							
PH	5.4		0.50	su		05/19/2009	1505
SW846 9050A							
SPECIFIC CONDUCTIVITY	7710		1.0	umhos/cm		05/19/2009	1505
GROUND WATER ELEVATION	695.79		.01	feet MSL		05/19/2009	1505
Gas Chromatography							
SW846 8015C							
ETHYLENE GLYCOL	<	7.0	U	7.0	mg/l	JMT	05/29/2009 0205
Volatile Organics							
SW846 8260C							
1,4-DIOXANE	2260		200	ug/l	JMT	05/21/2009	1608
Wet Chemistry							
SM 2320B							
ALKALINITY, TOTAL	3300		8.0	mg/l	MPM	05/20/2009	2050
ENDPOINT PH	4.5		1.0	su	MPM	05/20/2009	2050
SM 4500PE							
ORTHO PHOSPHATE (AS P)	0.96		0.15	mg/l	CDC	05/20/2009	1627
SW846 9056							
NITRATE NITROGEN (AS N)	<	0.10	U	0.10	mg/l	EIC	05/20/2009 1917
NITRITE NITROGEN (AS N)	<	0.10	U	0.10	mg/l	EIC	05/20/2009 1917
SULFATE	2.9		0.50	mg/l	EIC	05/20/2009	1917

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QC Summary Data

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QC Batch Report - Batch Sample List

WorkGroup : WG53647
Description: VO/DIOXANE

Matrix : GW/ChemW
Prep Method :
Analytical Method: SW846 8260C

Sample ID	Client ID	Run#	PREP Date Time	ANALYTICAL Date Time	Analyst	Dilution
L09052003-01	CSW-1	1		05/21/2009 1343	JMT	1
L09052003-02	CSW-2	1		05/21/2009 1319	JMT	1
L09052003-03	SW-5	1		05/21/2009 1255	JMT	1
L09052003-04	B-17C	1		05/21/2009 1455	JMT	20
L09052003-05	B-24A	1		05/21/2009 1431	JMT	1
L09052003-06	B-09C	1		05/21/2009 1656	JMT	5
L09052003-07	B-12	1		05/21/2009 1407	JMT	1
L09052003-08	B-23B	1		05/21/2009 1519	JMT	20
L09052003-09	B-23A	1		05/21/2009 1632	JMT	10
L09052003-10	B-22B	1		05/21/2009 1544	JMT	20
L09052003-11	B-10	1		05/21/2009 1720	JMT	5
L09052003-12	B-10 DUP.	1		05/21/2009 1744	JMT	5
L09052003-13	B-01	1		05/21/2009 1608	JMT	20
MB53647:1	Method Blank	1		05/21/2009 1231	JMT	1
LCS53647:1	Laboratory Control Spike	1		05/21/2009 1856	JMT	1
MS09052003-03:53647	Matrix Spike	1		05/21/2009 1808	JMT	1
MSD09052003-03:53647	Matrix Spike Duplicate	1		05/21/2009 1832	JMT	1

SC Certification Number: 24110001

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QC Batch Report - Surrogates % Recovery

WorkGroup: WG53647

Matrix : GW/ChemW
Prep Method :
Analytical Method: SW846 8260C

SampleNumber	MeasureDate	DCA
		70-136
L09052003-01	05/21/2009 1343	93
L09052003-02	05/21/2009 1319	100
L09052003-03	05/21/2009 1255	101
L09052003-04	05/21/2009 1455	103
L09052003-05	05/21/2009 1431	100
L09052003-06	05/21/2009 1656	76
L09052003-07	05/21/2009 1407	98
L09052003-08	05/21/2009 1519	103
L09052003-09	05/21/2009 1632	95
L09052003-10	05/21/2009 1544	106
L09052003-11	05/21/2009 1720	98
L09052003-12	05/21/2009 1744	98
L09052003-13	05/21/2009 1608	75
MB53647:1	05/21/2009 1231	105
LCS53647:1	05/21/2009 1856	90
MS09052003-03:53647	05/21/2009 1808	89
MSD09052003-03:53647	05/21/2009 1832	92

DCA - 1,2-DICHLOROETHANE-D4

SC Certification Number: 24110001

Client : ARCOM
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QC Batch Report - Method Blanks

WorkGroup: WG53647
Blank : MB53647:1

Parameter	Result	Qual	RDL	Units	Analyst	Date	Time
Matrix : GW/ChemW							
Volatile Organics							
SW846 8260C							
1,4-DIOXANE	<	10.0	U	10.0	ug/l	JMT	05/21/2009 1231

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Client : AECOM
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QC Batch Report - Matrix Spikes and Duplicates

WorkGroup: WG53647
MS/MSD : MS09052003-03:53647
MSD09052003-03:53647

Matrix : GW/ChemW
Prep Method :
Analytical Method: SW846 8260C

Parameter	Spike Added	Sample Conc	MS Conc	Units	MS %REC	Limits %REC
1,4-DIOXANE	100.0	< 10.00	84.22	ug/l	84	60-141

Parameter	Spike Added	MSD Conc	Units	MSD %REC	%RPD	Limits %RPD	%REC
1,4-DIOXANE	100.0	94.22	ug/l	94	11	29	60-141

NOTE: MS/MSD % recoveries are not evaluated if the sample concentration is greater than four times the spike added.



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QC Batch Report - Laboratory Control Standards and Duplicates

WorkGroup: WG53647
LCS : LCS53647:1

Matrix : GW/ChemW
Prep Method :
Analytical Method: SW846 8260C

Parameter	Spike Added	LCS Conc	Units	LCS %REC	Limits %REC
1,4-DIOXANE	100.0	93.55	ug/l	94	43-155

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QC Batch Report - Batch Sample List

WorkGroup : WG53643
Description: sv/dow

Matrix : GW/ChemW
Prep Method : SW846 3510C
Analytical Method: SW846 8270D

Sample ID	Client ID	Run#	PREP	ANALYTICAL		Analyst	Dilution
			Date Time	Date Time			
L09052003-03	SW-5	1	05/20/2009 0900	05/27/2009 1632		PAP	1
L09052003-07	B-12	1	05/20/2009 0900	05/27/2009 1708		PAP	1
L09052003-11	B-10	1	05/20/2009 0900	05/28/2009 0824		PAP	5
L09052003-11	B-10	2	05/20/2009 0900	05/28/2009 0901		PAP	100
L09052003-12	B-10 DUP.	1	05/20/2009 0900	05/28/2009 0936		PAP	5
L09052003-12	B-10 DUP.	2	05/20/2009 0900	05/28/2009 1012		PAP	100
MB53643:1	Method Blank	1	05/20/2009 0900	05/27/2009 1521		PAP	1
LCS53643:1	Laboratory Control Spike	1	05/20/2009 0900	05/27/2009 1556		PAP	1
MS09052003-07:53643	Matrix Spike	1	05/20/2009 0900	05/27/2009 1744		PAP	1
MSD09052003-07:53643	Matrix Spike Duplicate	1	05/20/2009 0900	05/27/2009 1819		PAP	1

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QC Batch Report - Surrogates % Recovery

WorkGroup: WG53643

Matrix : GM/ChemW
Prep Method : SW846 3510C
Analytical Method: SW846 8270D

SampleNumber	MeasureDate	FBP
		28-104
L09052003-03	05/27/2009 1632	60
L09052003-07	05/27/2009 1708	56
L09052003-11	05/28/2009 0824	*NE
L09052003-12	05/28/2009 0936	*NE
MB53643:1	05/27/2009 1521	62
LCS53643:1	05/27/2009 1556	57
MS09052003-07:53643	05/27/2009 1744	56
MSD09052003-07:53643	05/27/2009 1819	67

FBP - 2-FLUOROBIPHENYL

NOTE: * - Result flagged with 'D' to indicate that sample extract dilution was required.

NOTE: *NE - Result was not evaluated.

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QC Batch Report - Method Blanks

WorkGroup: WG53643
Blank : MB53643:1

Parameter	Result	Qual	RDL	Units	Analyst	Date	Time
Matrix : GW/ChemW							
Semivolatile Organics							
SW846 8270D							
1,1'-BIPHENYL	<	10.0 U	10.0	ug/l	PAP	05/27/2009	1521
BIPHENYL ETHER	<	10.0 U	10.0	ug/l	PAP	05/27/2009	1521

Prep Procedure	Method	Analyst	Prep Date
Analytical Prep Procedures:			
DOWTHERM	SW846 3510C	DBC	05/20/2009 0900

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QC Batch Report - Matrix Spikes and Duplicates

WorkGroup: WG53643
MS/MSD : MS09052003-07:53643
MSD09052003-07:53643

Matrix : GW/ChemW
Prep Method : SW846 3510C
Analytical Method: SW846 8270D

Parameter	Spike Added	Sample Conc	MS Conc	Units	MS %REC	Limits %REC
1,1'-BIPHENYL	50.00	< 10.00	29.58	ug/l	59	10-109
BIPHENYL ETHER	50.00	10.80	40.40	ug/l	59	11-111

Parameter	Spike Added	MSD Conc	Units	MSD %REC	%RPD	Limits %RPD	%REC
1,1'-BIPHENYL	50.00	33.47	ug/l	67	12	52	10-109
BIPHENYL ETHER	50.00	45.88	ug/l	70	13	51	11-111

NOTE: MS/MSD % recoveries are not evaluated if the sample concentration is greater than four times the spike added.

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QC Batch Report - Laboratory Control Standards and Duplicates

WorkGroup: WG53643
LCS : LCS53643:1

Matrix : GW/ChemW
Prep Method : SW846 3510C
Analytical Method: SW846 8270D

Parameter	Spike Added	LCS Conc	Units	LCS %REC	Limits %REC
1,1'-BIPHENYL	50.00	29.03	ug/l	58	44-90
BIPHENYL ETHER	50.00	30.37	ug/l	61	45-88

SC Certification Number: 24110001

Client : AECOM
1455 OLD ALABAMA ROAD
SUITE 170
ROSWELL, GA 30076
Contact : BRYON DAHLGREN

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QC Batch Report - Batch Sample List

WorkGroup : WG53670
Description: GC/EG -- 0528JA

Matrix : GW/ChemW
Prep Method :
Analytical Method: SW846 8015C

Sample ID	Client ID	Run#	PREP	ANALYTICAL	Analyst	Dilution
			Date Time	Date Time		
L09052003-03	SW-5	1		05/28/2009 1950	JMT	1
L09052003-06	B-09C	1		05/28/2009 2117	JMT	1
L09052003-08	B-23B	1		05/28/2009 2215	JMT	1
L09052003-09	B-23A	1		05/28/2009 2312	JMT	1
L09052003-11	B-10	1		05/29/2009 0010	JMT	1
L09052003-12	B-10 DUP.	1		05/29/2009 0108	JMT	1
L09052003-13	B-01	1		05/29/2009 0205	JMT	1
MB53670;1	Method Blank	1		05/28/2009 1852	JMT	1
LCS53670;1	Laboratory Control Spike	1		05/28/2009 1921	JMT	1
MS09052003-03:53670	Matrix Spike	1		05/28/2009 2019	JMT	1
MSD09052003-03:53670	Matrix Spike Duplicate	1		05/28/2009 2048	JMT	1

SC Certification Number: 24110001

Client : AECOM
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QC Batch Report - Method Blanks

WorkGroup: WG53670
Blank : MB53670:1

Parameter	Result	Qual	RDL	Units	Analyst	Date	Time
Matrix : GW/ChemW							
Gas Chromatography							
SW846 8015C							
ETHYLENE GLYCOL	<	7.0 U	7.0	mg/l	JMT	05/28/2009	1852

SC Certification Number: 24110001

Client : AECOM
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QC Batch Report - Matrix Spikes and Duplicates

WorkGroup: WG53670
MS/MSD : MS09052003-03:53670
MSD09052003-03:53670

Matrix : GW/ChemW
Prep Method :
Analytical Method: SW846 8015C

Parameter	Spike Added	Sample Conc	MS Conc	Units	MS %REC	Limits %REC
ETHYLENE GLYCOL	50.00	< 7.00	50.11	mg/l	100	86-124

Parameter	Spike Added	MSD Conc	Units	MSD %REC	%RPD	Limits %RPD	%REC
ETHYLENE GLYCOL	50.00	50.67	mg/l	101	1	12	86-124

NOTE: MS/MSD % recoveries are not evaluated if the sample concentration is greater than four times the spike added.



LABORATORY ANALYSIS REPORT

SC Certification Number: 24110001

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QC Batch Report - Laboratory Control Standards and Duplicates

WorkGroup: WG53670
LCS : LCS53670:1

Matrix : GW/ChemW
Prep Method :
Analytical Method: SW846 8015C

Parameter	Spike Added	LCS Conc	Units	LCS %REC	Limits %REC
ETHYLENE GLYCOL	50.00	48.71	mg/l	97	81-122

LABORATORY ANALYSIS REPORT

SC Certification Number: 24110001

Client : AECOM
1455 OLD ALABAMA ROAD
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QC Batch Report - Batch Sample List

WorkGroup : WG53667
Description: Total Alkalinity

Matrix : GW/ChemW
Prep Method :
Analytical Method: SM 2320B

Sample ID	Client ID	Run#	PREP Date Time	ANALYTICAL Date Time	Analyst	Dilution
L09052003-04	B-17C	1		05/20/2009 1850	MPM	1
L09052003-05	B-24A	1		05/20/2009 1858	MPM	1
L09052003-06	B-09C	1		05/20/2009 1910	MPM	1
L09052003-07	B-12	1		05/20/2009 1921	MPM	1
L09052003-08	B-23B	1		05/20/2009 1929	MPM	1
L09052003-09	B-23A	1		05/20/2009 1937	MPM	1
L09052003-10	B-22B	1		05/20/2009 1946	MPM	1
L09052003-11	B-10	1		05/20/2009 1954	MPM	1
L09052003-12	B-10 DUP.	1		05/20/2009 2000	MPM	1
L09052003-13	B-01	1		05/20/2009 2050	MPM	1
D09052003-06:53667	Duplicate	1		05/20/2009 2101	MPM	1
MB53667:1	Method Blank	1		05/20/2009 1832	MPM	1
LCS53667:1	Laboratory Control Spike	1		05/20/2009 1610	MPM	1
LCS53667:2	Laboratory Control Spike	1		05/20/2009 1624	MPM	1
LCS53667:3	Laboratory Control Spike	1		05/20/2009 1630	MPM	1
LCS53667:4	Laboratory Control Spike	1		05/20/2009 1637	MPM	1
LCS53667:5	Laboratory Control Spike	1		05/20/2009 1837	MPM	1

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QC Batch Report - Method Blanks

WorkGroup: WG53667
Blank : MB53667:1

Parameter	Result	Qual	RDL	Units	Analyst	Date	Time
Matrix : GW/ChemW							
Wet Chemistry							
SM 2320B							
ALKALINITY, TOTAL	<	1.0 U	1.0	mg/l	MPM	05/20/2009	1832
ENDPOINT PH		4.2	1.0	su	MPM	05/20/2009	1832

LABORATORY ANALYSIS REPORT

SC Certification Number: 24110001

Client : AECOM
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QC Batch Report - Laboratory Control Standards and Duplicates

WorkGroup: WG53667
LCS : LCS53667:1

Matrix : GW/ChemW
Prep Method :
Analytical Method: SM 2320B

Parameter	Spike Added	LCS Conc	Units	LCS %REC	Limits %REC
ALKALINITY, TOTAL	1000	952.2	mg/l	95	90-110



LABORATORY ANALYSIS REPORT

SC Certification Number: 24110001

Client : AECOM
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SUITE 170
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QC Batch Report - Laboratory Control Standards and Duplicates

WorkGroup: WG53667
LCS : LCS53667:2

Matrix : GW/ChemW
Prep Method :
Analytical Method: SM 2320B

Parameter	Spike Added	LCS Conc	Units	LCS %REC	Limits %REC
ALKALINITY, TOTAL	1000	962.6	mg/l	96	90-110

LABORATORY ANALYSIS REPORT

SC Certification Number: 24110001

Client : AECOM
1455 OLD ALABAMA ROAD
SUITE 170
ROSWELL, GA 30076
Contact : BRYON DAHLGREN

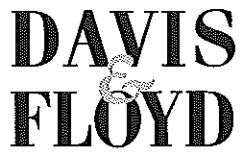
Project Number: 61242.12
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QC Batch Report - Laboratory Control Standards and Duplicates

WorkGroup: WG53667
LCS : LCS53667:3

Matrix : GW/ChemW
Prep Method :
Analytical Method: SM 2320B

Parameter	Spike Added	LCS Conc	Units	LCS %REC	Limits %REC
ALKALINITY, TOTAL	1000	972.9	mg/l	97	90-110



LABORATORY ANALYSIS REPORT

SC Certification Number: 24110001

Client : AECOM
1455 OLD ALABAMA ROAD
SUITE 170
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QC Batch Report - Laboratory Control Standards and Duplicates

WorkGroup: WG53667
LCS : LCS53667.4

Matrix : GW/ChemW
Prep Method :
Analytical Method: SM 2320B

Parameter	Spike Added	LCS Conc	Units	LCS %REC	Limits %REC
ALKALINITY, TOTAL	1000	962.6	mg/l	96	90-110

LABORATORY ANALYSIS REPORT

SC Certification Number: 24110001

Client : AECOM
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QC Batch Report - Laboratory Control Standards and Duplicates

WorkGroup: WG53667
LCS : LCS53667:5

Matrix : GW/ChemW
Prep Method :
Analytical Method: SM 2320B

Parameter	Spike Added	LCS Conc	Units	LCS %REC	Limits %REC
ALKALINITY, TOTAL	1000	962.6	mg/l	96	90-110

SC Certification Number: 24110001

Client : AECOM
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QC Batch Report - Sample Duplicates

WorkGroup: WG53667
Duplicate: D09052003-06:53667

Matrix : GW/ChemW
Prep Method :
Analytical Method: SM 2320B

Parameter	Sample Conc	DUP Conc	RDL	Units	%RPD	RPD
ALKALINITY, TOTAL	4968	4916	50.0	mg/l	1	10

NOTE: Calculation of %RPD is not required for concentrations less than 10X the RDL.

LABORATORY ANALYSIS REPORT

SC Certification Number: 24110001

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QC Batch Report - Batch Sample List

WorkGroup : WG53698
Description: PO4-Ortho

Matrix : GW/ChemW
Prep Method :
Analytical Method: SM 4500PE

Sample ID	Client ID	Run#	PREP Date Time	ANALYTICAL Date Time	Analyst	Dilution
L09052003-04	B-17C	1		05/20/2009 1622	CDC	1
L09052003-05	B-24A	1		05/20/2009 1622	CDC	1
L09052003-06	B-09C	1		05/20/2009 1623	CDC	1
L09052003-07	B-12	1		05/20/2009 1623	CDC	1
L09052003-08	B-23B	1		05/20/2009 1624	CDC	1
L09052003-09	B-23A	1		05/20/2009 1625	CDC	1
L09052003-10	B-22B	1		05/20/2009 1626	CDC	1
L09052003-11	B-10	1		05/20/2009 1626	CDC	1
L09052003-12	B-10 DUP.	1		05/20/2009 1627	CDC	1
L09052003-13	B-01	1		05/20/2009 1627	CDC	5
MB53698:1	Method Blank	1		05/20/2009 1632	CDC	1
LCS53698:1	Laboratory Control Spike	1		05/20/2009 1621	CDC	1
MS09052003-05:53698	Matrix Spike	1		05/20/2009 1628	CDC	1
MSD09052003-05:53698	Matrix Spike Duplicate	1		05/20/2009 1629	CDC	1

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QC Batch Report - Method Blanks

WorkGroup: WG53698
Blank : MB53698:1

Parameter	Result	Qual	RDL	Units	Analyst	Date	Time
Matrix : GW/ChemW							
Wet Chemistry							
SM 4500PE							
ORTHO PHOSPHATE (AS P)	<	0.030 U	0.030	mg/l	CDC	05/20/2009	1632

SC Certification Number: 24110001

Client : AECOM
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Contact : BRYON DAHLGREN

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QC Batch Report - Matrix Spikes and Duplicates

WorkGroup: WG53698
MS/MSD : MS09052003-05:53698
MSD09052003-05:53698

Matrix : GW/ChemW
Prep Method :
Analytical Method: SM 4500PE

Parameter	Spike Added	Sample Conc	MS Conc	Units	MS %REC	Limits %REC
ORTHO PHOSPHATE (AS P)	0.500	0.0811	0.580	mg/l	100	90-110

Parameter	Spike Added	MSD Conc	MSD Units	MSD %REC	%RPD	Limits %RPD	%REC
ORTHO PHOSPHATE (AS P)	0.500	0.581	mg/l	100	0	10	90-110

NOTE: MS/MSD % recoveries are not evaluated if the sample concentration is greater than four times the spike added.



LABORATORY ANALYSIS REPORT

SC Certification Number: 24110001

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Contact : BRYON DAHLGREN

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QC Batch Report - Laboratory Control Standards and Duplicates

WorkGroup: WG53698
LCS : LCS53698:1

Matrix : GW/ChemW
Prep Method :
Analytical Method: SM 4500PE

Parameter	Spike Added	LCS Conc	Units	LCS %REC	Limits %REC
ORTHO PHOSPHATE (AS P)	0.500	0.501	mg/l	100	90-110

LABORATORY ANALYSIS REPORT

SC Certification Number: 24110001

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ROSWELL, GA 30076
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QC Batch Report - Batch Sample List

WorkGroup : WG53641
Description: IC RUN GW

Matrix : GW/ChemW
Prep Method :
Analytical Method: SW846 9056

Sample ID	Client ID	Run#	PREP Date Time	ANALYTICAL Date Time	Analyst	Dilution
L09052003-04	B-17C	1		05/20/2009 1141	EIC	1
L09052003-05	B-24A	1		05/20/2009 1223	EIC	1
L09052003-06	B-09C	1		05/20/2009 1251	EIC	1
L09052003-07	B-12	1		05/20/2009 1346	EIC	1
L09052003-08	B-23B	1		05/20/2009 1414	EIC	1
L09052003-09	B-23A	1		05/20/2009 1509	EIC	1
L09052003-10	B-22B	1		05/20/2009 1659	EIC	1
L09052003-11	B-10	1		05/20/2009 1727	EIC	1
L09052003-12	B-10 DUP.	1		05/20/2009 1822	EIC	1
L09052003-13	B-01	1		05/20/2009 1917	EIC	1
MB53641:1	Method Blank	1		05/20/2009 0855	EIC	1
LCS53641:1	Laboratory Control Spike	1		05/20/2009 0923	EIC	1
MS09052003-07:53641	Matrix Spike	1		05/20/2009 2012	EIC	1.05
MSD09052003-07:53641	Matrix Spike Duplicate	1		05/20/2009 2040	EIC	1.05



LABORATORY ANALYSIS REPORT

SC Certification Number: 24110001

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QC Batch Report - Method Blanks

WorkGroup: WG53641
Blank : MB53641:1

Parameter	Result	Qual	RDL	Units	Analyst	Date	Time
Matrix : GW/ChemW							
Wet Chemistry							
SW846 9056							
NITRATE NITROGEN (AS N)	<	0.10	U	0.10	mg/l	EIC	05/20/2009 0855
NITRITE NITROGEN (AS N)	<	0.10	U	0.10	mg/l	EIC	05/20/2009 0855
SULFATE	<	0.50	U	0.50	mg/l	EIC	05/20/2009 0855

LABORATORY ANALYSIS REPORT

SC Certification Number: 24110001

Client : AECOM
1455 OLD ALABAMA ROAD
SUITE 170
ROSWELL, GA 30076
Contact : BRYON DAHLGREN

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QC Batch Report - Matrix Spikes and Duplicates

WorkGroup: WG53641
MS/MSD : MS09052003-07:53641
MSD09052003-07:53641

Matrix : GW/ChemW
Prep Method :
Analytical Method: SW846 9056

Parameter	Spike Added	Sample Conc	MS Conc	Units	MS %REC	Limits %REC
NITRATE NITROGEN (AS N)	5.25	< 0.100	5.52	mg/l	105	85-114
NITRITE NITROGEN (AS N)	5.25	< 0.100	5.57	mg/l	106	84-115
SULFATE	5.25	< 0.500	5.63	mg/l	107	80-120

Parameter	Spike Added	MSD Conc	Units	MSD %REC	%RPD	Limits %RPD	%REC
NITRATE NITROGEN (AS N)	5.25	5.53	mg/l	105	0	10	85-114
NITRITE NITROGEN (AS N)	5.25	5.56	mg/l	106	0	10	84-115
SULFATE	5.25	5.62	mg/l	107	0	10	80-120

NOTE: MS/MSD % recoveries are not evaluated if the sample concentration is greater than four times the spike added.



LABORATORY ANALYSIS REPORT

SC Certification Number: 24110001

Client : AECOM
1455 OLD ALABAMA ROAD
SUITE 170
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QC Batch Report - Laboratory Control Standards and Duplicates

WorkGroup: WG53641
LCS : LCS53641:1

Matrix : GW/ChemW
Prep Method :
Analytical Method: SW846 9056

Parameter	Spike Added	LCS Conc	Units	LCS %REC	Limits %REC
NITRATE NITROGEN (AS N)	5.00	4.79	mg/l	96	88-110
NITRITE NITROGEN (AS N)	5.00	4.78	mg/l	96	84-110
SULFATE	5.00	4.74	mg/l	95	84-110

Chain of Custody Record

Client C.N.A. Holdings, Inc. Salisbury, NC		Project / Site Location 61242.12 NRLF		Laboratory Certification Numbers: SC - 24710, NC - 25, NE/LAP - E87633, TN - 2923, VA - 77 816 E. Durst Avenue, Greenwood, SC 29649 (864) 229-4413 Fax: (864) 229-7119 Email: Laboratory@davisfloyd.com Internet: www.davisfloyd.com		Office Use Only Laboratory Work Request	
Contact Bryon Dahlgren		Report To Bryon Dahlgren		Copy To		PO / Quote Number	
Collected By Bryon Dahlgren		Atmospheric Conditions		Reporting Requirements: [] Standard [] Rush (Specify _____) Required Parameters: Containers and Preservatives (P-)		Special Instructions	
NOTICE: John McLaughlin		(Optional)		CONTAINERS		State	
Sample Description		Sample Collection Date		Time sampling initiated (composite only)		Composite	
Grab		Matrix Type		Number of Containers		PARAMETERS	
pH, Sp. Cond, Temp, DO, ORP, Fe+2		Field		4x40 G TFE		2.5 L G	
1,4-Dioxane		A		Ethylene Glycol		1x40 G TFE	
Dow-A		A		NO3		500 P	
ALK, SO4, NO2, PO4-O		A		500 P		Indicate any known or expected hazards with a "X".	
HOT		Comments		Fraction		01	
C5H12-1		5/10/07 1445		X 2 5		02	
C5H12-2		1505		X 2 5		03	
5W-5		1530		X 2 7		04	
B-17c		1712		X 5 7		05	
B-24A		1808		X 5 7		06	
B-09c		1827		X 5 8		07	
B-12		1900		X 5 8		08	
B-23B		5/14/07 0957		X 5 8		09	
B-23A		1205		X 5 8		10	
B-22B		1315		X 5 7		11	
B-10		1355		X 5 9		12	
B-10 D4p		1355		X 5 9		13	
B-01		1505		X 5 8			
Relinquished By		Date		Time		Relinquished By	
Received By		Date		Time		Received In Laboratory By	
Comments		Date		Time		Date	
Samples degassed - no preservative		5/20/07 0730		1545		5/20/07 0730	
Matrix Type Definitions		1-Drinking Water 2-Clean Water 5-Groundwater 7-Soil/Sediment 8-Liquid Sludge 9-Oil 12-Air		(Note 1) For Discharge Measurements		Receipt Information	
(2) Preservative Definitions A-None B-H2SO4 C-HCl D-HNO3 E-NaOH F-Filtered G-Other		Beginning		Ending		Cooler ID (if available)	
Start Date:		Start Time:		End Date:		End Time:	
Multiplier		Note: Indicate immediate delivery for those shipments in which the temperature does not have adequate time to reach 4°C.		On Ice (Yes/No)		Temp (C)	
Custody Seal:		Intact / Broken		Immediate Delivery: Yes/No		Temp (C)	
Davis & Floyd, Inc.		FLO2_02 (04/05)		Shipping Via		UPS FEDEX CLIENT COURIER OTHER	
Tracking Number		D&F		Shipped Via		UPS FEDEX CLIENT COURIER OTHER	



Field Analysis Sheet

Client	C.N.A. Holdings, Inc.
Address	
City	Salisbury
State	NC ZIP

Location	NRLF
Project	61242.1012
Contact	Bryon Dahlgren
Report To	

[illegible]

Field Analyst: J. M.

Date: 5-18-09

Note any free-product or samples suspected of high levels of contamination in comment field.

Notes

[illegible]

Sample Description and Header information are populated from the Project Description and Sheet Set-up pages.

Davis & Floyd, Inc.
FL04_01 (04/05)

Field Data for Groundwater Sample Collection
 Groundwater Measurements

Well ID: B-17C

Client: C.N.A. Holdings, Inc. / NRLF
 Site Name: Salisbury, NC Job No.: 61242.12
 Date: 5/18/09 LWR submitted by: _____
 Sampling Personnel: JLM
 Regulatory Personnel: N/A
 Weather Conditions: Clear Breeze Temp. (°C): 25
 Well Diameter: 2.0 in.
 (A) Top of Well Elevation: 677.06 ft. msl (yes / no)
 (B) Depth to Immiscible Layer: N/A ft.
 (C) Immiscible Layer Elevation: (A) - (B) = N/A ft. msl (yes / no)
 (D) Depth to Groundwater: 17.60 ft.
 (E) Groundwater Elevation: (A) - (D) = 659.46 ft. msl (yes / no) ✓
 (F) Total Well Depth: 102.50 ft.
 (G) Length of Water Column: (F) - (D) = 84.9 ft.
 Casing Volume = (G) Volume in gal./ft. = 13.8 gals.
 Method of Well Evacuation PUMP Start Time: 1540
 Method of Sample Collection PUMP Time: 1712
 Chain of Custody Started: (yes) (no)

Source(s) of Well ID MAP ID Label (yes) / (no)
 Well Completion: Protective Casing (yes) / (no) Flush (yes / no)
 Flush-Mount Cover Seal Intact (yes) / (no) Locking Cap (yes) / (no)
 Locked at Arrival (yes) / (no) Departure (yes) / (no)
 Well Casing (height above / depth below) ground: 2.5 ft.
 Casing Type (PVC) (steel) (Other) _____
 Dedicated Pump or Bailor (yes) / (no) Type _____
 Protective Post / Abutment (yes / no) Concrete Pad (yes) / (no)
 Well Integrity: Satisfactory (yes) / (no) If no, explain below.
 Well Yield (low / moderate / high)

WELL VOLUME DATA

Diameter of Tubing (in.)	Volume (gal. / ft.)	Diameter of Pipe (in.)	Volume (gal. / ft.)
1/8	0.0006	1.0	0.041
3/16	0.0014	2.0	0.163
1/4	0.0025	3.0	0.367
5/16	0.0039	4.0	0.653
3/8	0.0050	5.0	1.020
1/2	0.0100	6.0	1.470
3/4	0.0230	1 gallon/ft. = 3.8 liters/ft.	

Cylinder Volume (gal./ft.) = $\pi r^2 h \times 0.0043$

Radius (r) and height (h) measured in inches.

FIELD ANALYSES

Measurements	First	Second	Third	Fourth	Fifth	()
Volume Purged (gallons)	<u>14</u>	<u>28</u>	<u>42</u>			
Time (military)	<u>1610</u>	<u>1640</u>	<u>1710</u>			
pH (S.U.)	<u>6.6</u>	<u>6.6</u>	<u>6.6</u>			
Specific Conductance (µmhos/cm)	<u>763</u>	<u>741</u>	<u>738</u>			
Water Temp. (°C)	<u>17</u>	<u>17</u>	<u>17</u>			
Odor (subjective) *	<u>1</u>	<u>1</u>	<u>1</u>			
Turbidity (NTU)	<u>1.0</u>	<u>1.0</u>	<u>1.0</u>			
DO	<u>6.4</u>	<u>0.3</u>	<u>0.3</u>			
ORP	<u>114</u>	<u>119</u>	<u>124</u>			

* (1) None (2) Slight (3) Moderate (4) Strong

** (1) Clear (2) Slightly Turbid (3) Moderately Turbid (4) Very Turbid (5) Extremely Turbid

Comments/Observations/Recommendations: Ferrous Iron: <0.2 mg/L

Completed by: John L. Floyd

Signature

Date

Field Data for Groundwater Sample Collection
Groundwater Measurements

Well ID: B-24A

Client: C.N.A. Holdings, Inc. / NRLF

Site Name: Salisbury, NC Job No.: 61242.12

Date: 5/18/09 LWR submitted by: _____

Sampling Personnel: JLM

Regulatory Personnel: N/A

Weather Conditions: Clear Temp. (°C): 23

Well Diameter: 2.0 in.

(A) Top of Well Elevation: 659.10 ft. msl (yes / no)

(B) Depth to Immiscible Layer: N/A ft.

(C) Immiscible Layer Elevation: (A) - (B) = N/A ft. msl (yes / no)

(D) Depth to Groundwater: 4.49 ft.

(E) Groundwater Elevation: (A) - (D) = 654.61 ft. msl (yes / no)

(F) Total Well Depth: 31.5 ft.

(G) Length of Water Column: (F) - (D) = 27.01 ft.

Casing Volume = (G) Volume in gal./ft. = 4.4 gals.

Method of Well Evacuation PUMP Start Time: 1740

Method of Sample Collection PUMP Time: 1808

Chain of Custody Started: (yes / no)

Source(s) of Well ID MAP ID Label (yes / no)

Well Completion: Protective Casing (yes / no) Flush (yes / no)

Flush-Mount Cover Seal Intact (yes / no) Locking Cap (yes / no)

Locked at Arrival (yes / no) Departure (yes / no)

Well Casing (height above / depth below) ground: 2.5 ft.

Casing Type (PVC) (Steel) (Other) _____

Dedicated Pump or Bailer (yes / no) Type _____

Protective Post / Abutment (yes / no) Concrete Pad (yes / no)

Well Integrity: Satisfactory (yes / no) If no, explain below.

Well Yield (low / moderate / high) (high)

WELL VOLUME DATA			
Diameter of Tubing (in.)	Volume (gal. / ft.)	Diameter of Pipe (in.)	Volume (gal. / ft.)
1/8	0.0006	1.0	0.041
3/16	0.0014	2.0	0.163
1/4	0.0025	3.0	0.367
5/16	0.0039	4.0	0.653
3/8	0.0050	5.0	1.020
1/2	0.0100	6.0	1.470
3/4	0.0230	1 gallon/ft. = 3.8 liters/ft.	

Cylinder Volume (gal./ft.) = $\pi r^2 h \times 0.0043$

Radius (r) and height (h) measured in inches.

Measurements	FIELD ANALYSES					
	First	Second	Third	Fourth	Fifth	()
Volume Purged (gallons)	<u>4.4</u>	<u>8.8</u>	<u>13.2</u>			
Time (military)	<u>1750</u>	<u>1755</u>	<u>1805</u>			
pH (S.U.)	<u>6.6</u>	<u>6.6</u>	<u>6.6</u>			
Specific Conductance (µmhos/cm)	<u>734</u>	<u>751</u>	<u>764</u>			
Water Temp. (°C)	<u>14</u>	<u>14</u>	<u>14</u>			
Odor (subjective) *	<u>2</u>	<u>2</u>	<u>2</u>			
Turbidity (NTU)	<u>7.0</u>	<u>1.0</u>	<u>1.0</u>			
DO	<u>0.3</u>	<u>0.3</u>	<u>0.3</u>			
ORP	<u>57</u>	<u>44</u>	<u>43</u>			

* (1)None (2)Slight (3)Moderate (4)Strong

** (1)Clear (2)Slightly Turbid (3)Moderately Turbid (4)Very Turbid (5)Extremely Turbid

Comments/Observations/Recommendations: Ferrous Iron: 1.3 mg/L

Completed by: [Signature] Date: 5-18-09

Davis & Floyd, Inc.
FL07_00 (01/01)

Field Data for Groundwater Sample Collection
 Groundwater Measurements

Well ID: B-09C

Client: C.N.A. Holdings, Inc. / NRLF
 Site Name: Salisbury, NC Job No.: 61242.12
 Date: 5/18/09 LWR submitted by: _____
 Sampling Personnel: JLM
 Regulatory Personnel: N/A
 Weather Conditions: clear Temp. (°C): 22
 Well Diameter: 2.0 in.
 (A) Top of Well Elevation: 713.44 ft. msl (yes / no)
 (B) Depth to Immiscible Layer: N/A ft.
 (C) Immiscible Layer Elevation: (A) - (B) = N/A ft. msl (yes / no)
 (D) Depth to Groundwater: 39.33 ft.
 (E) Groundwater Elevation: (A) - (D) = 674.11 ft. msl (yes / no) ✓
 (F) Total Well Depth: 154.00 ft.
 (G) Length of Water Column: (F) - (D) = 114.67 ft.
 Casing Volume = (G) Volume in gal./ft. = 19.0 gals.
 Method of Well Evacuation PUMP Start Time: 1247
 Method of Sample Collection PUMP Time: 1827
 Chain of Custody Started: (yes / no)

Source(s) of Well ID MAP ID Label (yes / no)
 Well Completion: Protective Casing (yes / no) Flush (yes / no)
 Flush-Mount Cover Seal Intact (yes / no) Locking Cap (yes / no)
 Locked at Arrival (yes / no) Departure (yes / no)
 Well Casing (height above / depth below) ground: 2.5 ft.
 Casing Type (PVC) (Steel) (Other) _____
 Dedicated Pump or Bailor (yes / no) Type _____
 Protective Post / Abutment (yes / no) Concrete Pad (yes / no)
 Well Integrity: Satisfactory (yes / no) If no, explain below.
 Well Yield (low / moderate / high)

WELL VOLUME DATA			
Diameter of Tubing (in.)	Volume (gal. / ft.)	Diameter of Pipe (in.)	Volume (gal. / ft.)
1/8	0.0006	1.0	0.041
3/16	0.0014	2.0	0.163
1/4	0.0025	3.0	0.367
5/16	0.0039	4.0	0.653
3/8	0.0050	5.0	1.020
1/2	0.0100	6.0	1.470
3/4	0.0230	1 gallon/ft. = 3.8 liters/ft.	

Cylinder Volume (gal./ft.) = $\pi r^2 h \times 0.0043$
 Radius (r) and height (h) measured in inches.

FIELD ANALYSES						
Measurements	First	Second	Third	Fourth	Fifth	()
Volume Purged (gallons)	<u>19</u>	<u>38</u>	<u>57</u>			
Time (military)	<u>1337</u>	<u>1427</u>	<u>1517</u>			
pH (S.U.)	<u>5.9</u>	<u>5.9</u>	<u>5.8</u>			
Specific Conductance (µmhos/cm)	<u>11350</u>	<u>10140</u>	<u>10040</u>			
Water Temp. (°C)	<u>14</u>	<u>15</u>	<u>15</u>			
Odor (subjective) *	<u>4</u>	<u>4</u>	<u>4</u>			
Turbidity (NTU)	<u>21</u>	<u>1.0</u>	<u>1.0</u>			
DO	<u>0.1</u>	<u>0.1</u>	<u>0.1</u>			
ORP	<u>-81</u>	<u>-80</u>	<u>-83</u>			

* (1)None (2)Slight (3)Moderate (4)Strong ** (1)Clear (2)Slightly Turbid (3)Moderately Turbid (4)Very Turbid (5)Extremely Turbid

Comments/Observations/Recommendations: Ferrous Iron: 3.0 mg/L 75 psi R-D/D-B 1/2

Completed by: [Signature] 5/18/09
 Signature Date
 Davis & Floyd, Inc.
 FL07_00 (01/01)

Field Data for Groundwater Sample Collection
 Groundwater Measurements

Well ID: B-12

Client: C.N.A. Holdings, Inc. / NRLF

Site Name: Salisbury, NC Job No.: 61242.12

Date: 5/18/09 LWR submitted by: _____

Sampling Personnel: JLM

Regulatory Personnel: N/A

Weather Conditions: Clear Temp. (°C): 23

Well Diameter: 2.0 in.

(A) Top of Well Elevation: 677.11 ft. msl (yes / no)

(B) Depth to Immiscible Layer: N/A ft.

(C) Immiscible Layer Elevation: (A) - (B) = N/A ft. msl (yes / no)

(D) Depth to Groundwater: 18.03 ft.

(E) Groundwater Elevation: (A) - (D) = 659.08 ft. msl (yes / no) ✓

(F) Total Well Depth: 35.64 ft.

(G) Length of Water Column: (F) - (D) = 17.61 ft.

Casing Volume = (G) Volume in gal./ft. = 2.9 gals.

Method of Well Evacuation PUMP Start Time: 1318

Method of Sample Collection PUMP Time: 1900

Chain of Custody Started: (yes / no)

Source(s) of Well ID MAP ID Label (yes / no)

Well Completion: Protective Casing (yes / no) Flush (yes / no)

Flush-Mount Cover Seal Intact (yes / no) Locking Cap (yes / no)

Locked at Arrival (yes / no) Departure (yes / no)

Well Casing (height above / depth below) ground: 5.0 ft.

Casing Type (PVC) (steel) (Other) _____

Dedicated Pump or Bailer (yes / no) Type _____

Protective Post / Abutment (yes / no) Concrete Pad (yes / no)

Well Integrity: Satisfactory (yes / no) If no, explain below.

Well Yield (low) / moderate / high)

WELL VOLUME DATA			
Diameter of Tubing (in.)	Volume (gal. / ft.)	Diameter of Pipe (in.)	Volume (gal. / ft.)
1/8	0.0006	1.0	0.041
3/16	0.0014	2.0	0.163
1/4	0.0025	3.0	0.367
5/16	0.0039	4.0	0.653
3/8	0.0050	5.0	1.020
1/2	0.0100	6.0	1.470
3/4	0.0230	1 gallon/ft. = 3.8 liters/ft.	

Cylinder Volume (gal./ft.) = $\pi r^2 h \times 0.0043$
 Radius (r) and height (h) measured in inches.

Measurements	FIELD ANALYSES				
	First	Second	Third	Fourth	Fifth ()
Volume Purged (gallons)	<u>3.0</u>	<u>6.0</u>	<u>DRY @</u>	<u>7.5 gal</u>	
Time (military)	<u>1337</u>	<u>1355</u>	<u>1411</u>		
pH (S.U.)	<u>6.5</u>	<u>6.9</u>	<u>6.9</u>		
Specific Conductance (µmhos/cm)	<u>533</u>	<u>521</u>	<u>509</u>		
Water Temp. (°C)	<u>16</u>	<u>16</u>	<u>16</u>		
Odor (subjective) *	<u>1</u>	<u>1</u>	<u>1</u>		
Turbidity (NTU)	<u>19</u>	<u>18</u>	<u>10</u>		
DO	<u>2.7</u>	<u>2.6</u>	<u>2.4</u>		
ORP	<u>-5</u>	<u>-9</u>	<u>-12</u>		

* (1)None (2)Slight (3)Moderate (4)Strong

** (1)Clear (2)Slightly Turbid (3)Moderately Turbid (4)Very Turbid (5)Extremely Turbid

Comments/Observations/Recommendations: Ferrous Iron: <0.2 mg/l

Completed by: _____

Signature

Date

Field Data for Groundwater Sample Collection
Groundwater Measurements

Well ID: B-23B

Client: C.N.A. Holdings, Inc. / NRLF

Site Name: Salisbury, NC Job No.: 61242.12

Date: 5/19/09 LWR submitted by: _____

Sampling Personnel: JLM

Regulatory Personnel: N/A

Weather Conditions: Clear Temp. (°C): 12

Well Diameter: 2.0 in.

(A) Top of Well Elevation: 665.74 ft. msl (yes / no)

(B) Depth to Immiscible Layer: N/A ft.

(C) Immiscible Layer Elevation: (A) - (B) = N/A ft. msl (yes / no)

(D) Depth to Groundwater: 8.86 ft.

(E) Groundwater Elevation: (A) - (D) = 656.88 ft. msl (yes / no) ✓

(F) Total Well Depth: 97.5 ft.

(G) Length of Water Column: (F) - (D) = 88.64 ft.

Casing Volume = (G) Volume in gal./ft. = 14.5 gals.

Method of Well Evacuation PUMP Start Time: 0635

Method of Sample Collection PUMP Time: 0957

Chain of Custody Started: (yes / no) (yes)

Source(s) of Well ID MAP ID Label (yes / no) (yes)

Well Completion: Protective Casing (yes / no) (yes) Flush (yes / no) (no)

Flush-Mount Cover Seal Intact (yes / no) (yes) Locking Cap (yes / no) (no)

Locked at Arrival (yes / no) (yes) Departure (yes / no) (yes)

Well Casing (height above / depth below) ground: 2.0 ft.

Casing Type (PVC) (Steel) (Other) _____

Dedicated Pump or Bailer (yes / no) Type _____

Protective Post / Abutment (yes / no) (no) Concrete Pad (yes / no) (yes)

Well Integrity: Satisfactory (yes / no) (yes) If no, explain below.

Well Yield (low / moderate / high) (high)

WELL VOLUME DATA			
Diameter of Tubing (in.)	Volume (gal. / ft.)	Diameter of Pipe (in.)	Volume (gal. / ft.)
1/8	0.0006	1.0	0.041
3/16	0.0014	2.0	0.163
1/4	0.0025	3.0	0.367
5/16	0.0039	4.0	0.653
3/8	0.0050	5.0	1.020
1/2	0.0100	6.0	1.470
3/4	0.0230	1 gallon/ft. = 3.8 liters/ft.	

Cylinder Volume (gal./ft.) = $\pi r^2 h \times 0.0043$

Radius (r) and height (h) measured in inches.

Measurements	FIELD ANALYSES					
	First	Second	Third	Fourth	Fifth	()
Volume Purged (gallons)	<u>14.5</u>	<u>29</u>	<u>43.5</u>			
Time (military)	<u>0740</u>	<u>0843</u>	<u>0945</u>			
pH (S.U.)	<u>6.6</u>	<u>6.6</u>	<u>6.5</u>			
Specific Conductance (µmhos/cm)	<u>5830</u>	<u>5845</u>	<u>5830</u>			
Water Temp. (°C)	<u>15</u>	<u>15</u>	<u>15</u>			
Odor (subjective) *	<u>3</u>	<u>3</u>	<u>3</u>			
Turbidity (NTU)	<u>21</u>	<u>17</u>	<u>14</u>			
DO	<u>0.2</u>	<u>0.2</u>	<u>0.2</u>			
ORP	<u>-20</u>	<u>-27</u>	<u>-30</u>			

* (1)None (2)Slight (3)Moderate (4)Strong ** (1)Clear (2)Slightly Turbid (3)Moderately Turbid (4)Very Turbid (5)Extremely Turbid

Comments/Observations/Recommendations: Ferrous Iron: 1.4 mg/L

Completed by: John M. Mahan 5-29-09
Signature Date

Davis & Floyd, Inc.
FL07_00 (01/01)

Field Data for Groundwater Sample Collection
 Groundwater Measurements

Well ID: B-23A

Client: C.N.A. Holdings, Inc. / NRLF
 Site Name: Salisbury, NC Job No.: 61242.12
 Date: 5/19/09 LWR submitted by: _____
 Sampling Personnel: JLM
 Regulatory Personnel: N/A
 Weather Conditions: Clear Temp. (°C): 12
 Well Diameter: 2.0 in.
 (A) Top of Well Elevation: 665.75 ft. msl (yes/no)
 (B) Depth to Immiscible Layer: N/A ft.
 (C) Immiscible Layer Elevation: (A) - (B) = N/A ft. msl (yes/no)
 (D) Depth to Groundwater: 9.38 ft.
 (E) Groundwater Elevation: (A) - (D) = 656.37 ft. msl (yes/no) ✓
 (F) Total Well Depth: 77.00 ft.
 (G) Length of Water Column: (F) - (D) = 67.62 ft.
 Casing Volume = (G) Volume in gal./ft. = 11.02 gals.
 Method of Well Evacuation PUMP Start Time: 1000
 Method of Sample Collection PUMP Time: 1205
 Chain of Custody Started: (yes/no)

Source(s) of Well ID MAP ID Label (yes/no)
 Well Completion: Protective Casing (yes/no) Flush (yes/no)
 Flush-Mount Cover Seal Intact (yes/no) Locking Cap (yes/no)
 Locked at Arrival (yes/no) Departure (yes/no)
 Well Casing (height above / depth below) ground: 2.0 ft.
 Casing Type (PVC) (Steel) (Other) _____
 Dedicated Pump or Bailer (yes/no) Type _____
 Protective Post / Abutment (yes/no) Concrete Pad (yes/no)
 Well Integrity: Satisfactory (yes/no) If no, explain below.
 Well Yield (low / moderate / high)

WELL VOLUME DATA			
Diameter of Tubing (in.)	Volume (gal. / ft.)	Diameter of Pipe (in.)	Volume (gal. / ft.)
1/8	0.0006	1.0	0.041
3/16	0.0014	2.0	0.163
1/4	0.0025	3.0	0.367
5/16	0.0039	4.0	0.653
3/8	0.0050	5.0	1.020
1/2	0.0100	6.0	1.470
3/4	0.0230		
1 gallon/ft. = 3.8 liters/ft.			

Cylinder Volume (gal./ft.) = $\pi r^2 h \times 0.0043$
 Radius (r) and height (h) measured in inches.

Measurements	FIELD ANALYSES					
	First	Second	Third	Fourth	Fifth	()
Volume Purged (gallons)	<u>11</u>	<u>22</u>	<u>33</u>			
Time (military)	<u>1036</u>	<u>1117</u>	<u>1157</u>			
pH (S.U.)	<u>6.6</u>	<u>6.5</u>	<u>6.6</u>			
Specific Conductance (µmhos/cm)	<u>5580</u>	<u>5820</u>	<u>5600</u>			
Water Temp. (°C)	<u>15</u>	<u>16</u>	<u>16</u>			
Odor (subjective) *	<u>3</u>	<u>3</u>	<u>3</u>			
Turbidity (NTU)	<u>27</u>	<u>20</u>	<u>17</u>			
DO	<u>0.3</u>	<u>0.3</u>	<u>0.3</u>			
ORP	<u>-7.1</u>	<u>6.0</u>	<u>-1.0</u>			

* (1)None (2)Slight (3)Moderate (4)Strong ** (1)Clear (2)Slightly Turbid (3)Moderately Turbid (4)Very Turbid (5)Extremely Turbid

Comments/Observations/Recommendations: Ferrous Iron: 1.4 mg/l

Completed by: Jahid M. Khan 5-19-09
 Signature Date
 Davis & Floyd, Inc.
 FL07_00 (01/01)

Field Data for Groundwater Sample Collection
 Groundwater Measurements

Well ID: B-22B

Client: C.N.A. Holdings, Inc. / NRLF

Site Name: Salisbury, NC Job No.: 61242.12

Date: 5/19/09 LWR submitted by: _____

Sampling Personnel: JLM

Regulatory Personnel: N/A

Weather Conditions: Clear Temp. (°C): 16

Well Diameter: 2.0 in.

(A) Top of Well Elevation: 660.15 ft. msl (yes / no)

(B) Depth to Immiscible Layer: N/A ft.

(C) Immiscible Layer Elevation: (A) - (B) = N/A ft. msl (yes / no)

(D) Depth to Groundwater: 1.57 ft.

(E) Groundwater Elevation: (A) - (D) = 658.58 ft. msl (yes / no) ✓

(F) Total Well Depth: 6.500 ft.

(G) Length of Water Column: (F) - (D) = 63.43 ft.

Casing Volume = (G) Volume in gal./ft. = 10.34 gals.

Method of Well Evacuation PUMP Start Time: 1220

Method of Sample Collection PUMP Time: 1315

Chain of Custody Started: (yes / no) (yes)

Source(s) of Well ID MAP ID Label (yes / no) (yes)

Well Completion: Protective Casing (yes / no) (yes) Flush (yes / no) (no)

Flush-Mount Cover Seal Intact (yes / no) (yes) Locking Cap (yes / no) (yes)

Locked at Arrival (yes / no) (yes) Departure (yes / no) (yes)

Well Casing (height above / depth below) ground: 3.0 ft.

Casing Type (PVC) (yes / no) (yes) (Other) _____

Dedicated Pump or Bailer (yes / no) (yes) Type _____

Protective Post / Abutment (yes / no) (yes) Concrete Pad (yes / no) (yes)

Well Integrity: Satisfactory (yes / no) (yes) If no, explain below.

Well Yield (low / moderate / high) (high)

WELL VOLUME DATA			
Diameter of Tubing (in.)	Volume (gal. / ft.)	Diameter of Pipe (in.)	Volume (gal. / ft.)
1/8	0.0006	1.0	0.041
3/16	0.0014	2.0	0.163
1/4	0.0025	3.0	0.367
5/16	0.0039	4.0	0.653
3/8	0.0050	5.0	1.020
1/2	0.0100	6.0	1.470
3/4	0.0230	1 gallon/ft. = 3.8 liters/ft.	

Cylinder Volume (gal./ft.) = $\pi r^2 h \times 0.0043$

Radius (r) and height (h) measured in inches.

Measurements	FIELD ANALYSES					
	First	Second	Third	Fourth	Fifth	()
Volume Purged (gallons)	<u>100.3</u>	<u>20.6</u>	<u>30.9</u>			
Time (military)	<u>1235</u>	<u>1250</u>	<u>1310</u>			
pH (S.U.)	<u>6.7</u>	<u>6.7</u>	<u>6.7</u>			
Specific Conductance (µmhos/cm)	<u>1220</u>	<u>1244</u>	<u>1242</u>			
Water Temp. (°C)	<u>18</u>	<u>16</u>	<u>16</u>			
Odor (subjective) *	<u>2</u>	<u>2</u>	<u>2</u>			
Turbidity (NTU)	<u>7.0</u>	<u>3.0</u>	<u>3.0</u>			
DO	<u>0.2</u>	<u>0.2</u>	<u>0.2</u>			
ORP	<u>-47</u>	<u>-57</u>	<u>-61</u>			

* (1)None (2)Slight (3)Moderate (4)Strong

** (1)Clear (2)Slightly Turbid (3)Moderately Turbid (4)Very Turbid (5)Extremely Turbid

Comments/Observations/Recommendations: Ferrous Iron: 2.2 mg/L

Completed by: J. L. M. L. L.

Signature

Date

Field Data for Groundwater Sample Collection
Groundwater Measurements

Well ID: B-10

Client: C.N.A. Holdings, Inc. / NRLF

Site Name: Salisbury, NC Job No.: 61242.12

Date: 5/19/09 LWR submitted by: _____

Sampling Personnel: JLM

Regulatory Personnel: N/A

Weather Conditions: Clear, Windy Temp. (°C): 20

Well Diameter: 2.0 in.

(A) Top of Well Elevation: 751.80 ft. msl (yes / no)

(B) Depth to Immiscible Layer: N/A ft.

(C) Immiscible Layer Elevation: (A) - (B) = N/A ft. msl (yes / no)

(D) Depth to Groundwater: 48.71 ft.

(E) Groundwater Elevation: (A) - (D) = 703.09 ft. msl (yes / no) ✓

(F) Total Well Depth: 60.00 ft.

(G) Length of Water Column: (F) - (D) = 11.29 ft.

Casing Volume = (G) Volume in gal./ft. = 1.84 gals.

Method of Well Evacuation PUMP Start Time: 1333

Method of Sample Collection PUMP Time: 1355

Chain of Custody Started: (yes/no)

Source(s) of Well ID MAP ID Label (yes/no)

Well Completion: Protective Casing (yes/no) Flush (yes/no)

Flush-Mount Cover Seal Intact (yes/no) Locking Cap (yes/no)

Locked at Arrival (yes/no) Departure (yes/no)

Well Casing (height above / depth below) ground: 1.0 ft.

Casing Type (PVC) (steel) (Other) _____

Dedicated Pump or Bailer (yes/no) Type _____

Protective Post / Abutment (yes/no) Concrete Pad (yes/no)

Well Integrity: Satisfactory (yes/no) If no, explain below.

Well Yield (low / moderate / high)

WELL VOLUME DATA

Diameter of Tubing (in.)	Volume (gal. / ft.)	Diameter of Pipe (in.)	Volume (gal. / ft.)
1/8	0.0006	1.0	0.041
3/16	0.0014	2.0	0.163
1/4	0.0025	3.0	0.367
5/16	0.0039	4.0	0.653
3/8	0.0050	5.0	1.020
1/2	0.0100	6.0	1.470
3/4	0.0230	1 gallon/ft. = 3.8 liters/ft.	

Cylinder Volume (gal./ft.) = $\pi r^2 h \times 0.0043$

Radius (r) and height (h) measured in inches.

Measurements	FIELD ANALYSES					
	First	Second	Third	Fourth	Fifth	()
Volume Purged (gallons)	<u>1.9</u>	<u>3.8</u>	<u>6.0</u>			
Time (military)	<u>1338</u>	<u>1345</u>	<u>1351</u>			
pH (S.U.)	<u>6.5</u>	<u>6.5</u>	<u>6.5</u>			
Specific Conductance (µmhos/cm)	<u>2670</u>	<u>2140</u>	<u>2180</u>			
Water Temp. (°C)	<u>18</u>	<u>17</u>	<u>17</u>			
Odor (subjective) *	<u>3</u>	<u>3</u>	<u>2</u>			
Turbidity (NTU)	<u>52</u>	<u>37</u>	<u>27</u>			
DO	<u>0.3</u>	<u>0.3</u>	<u>0.3</u>			
ORP	<u>-37</u>	<u>-47</u>	<u>-51</u>			

* (1)None (2)Slight (3)Moderate (4)Strong

** (1)Clear (2)Slightly Turbid (3)Moderately Turbid (4)Very Turbid (5)Extremely Turbid

Comments/Observations/Recommendations: Ferrous Iron : 2.4 mg/L

Completed by: JLM

Signature

5-19-09
Date

Field Data for Groundwater Sample Collection
 Groundwater Measurements

Well ID: B-01

Client: C.N.A. Holdings, Inc. / NRLF
 Site Name: Salisbury, NC Job No.: 61242.12
 Date: 5/17/09 LWR submitted by: _____
 Sampling Personnel: JLM
 Regulatory Personnel: N/A
 Weather Conditions: Clear Windy Temp. (°C): 22
 Well Diameter: 2.0 in.
 (A) Top of Well Elevation: 756.55 ft. msl (yes / no)
 (B) Depth to Immiscible Layer: N/A ft.
 (C) Immiscible Layer Elevation: (A) - (B) = N/A ft. msl (yes / no)
 (D) Depth to Groundwater: 60.76 ft.
 (E) Groundwater Elevation: (A) - (D) = 695.79 ft. msl (yes / no) ✓
 (F) Total Well Depth: 69.0 ft.
 (G) Length of Water Column: (F) - (D) = 8.24 ft.
 Casing Volume = (G) Volume in gal./ft. = 1.34 gals.
 Method of Well Evacuation PUMP Start Time: 1426
 Method of Sample Collection PUMP Time: 1505
 Chain of Custody Started: (yes / no)

Source(s) of Well ID MAP ID Label (yes / no)
 Well Completion: Protective Casing (yes / no) Flush (yes / no)
 Flush-Mount Cover Seal Intact (yes / no) Locking Cap (yes / no)
 Locked at Arrival (yes / no) Departure (yes / no)
 Well Casing (height above / depth below) ground: _____ ft.
 Casing Type (PVC) (Steel) (Other) _____
 Dedicated Pump or Bailer (yes / no) Type _____
 Protective Post / Abutment (yes / no) Concrete Pad (yes / no)
 Well Integrity: Satisfactory (yes / no) If no, explain below.
 Well Yield (low / moderate / high)

WELL VOLUME DATA			
Diameter of Tubing (in.)	Volume (gal. / ft.)	Diameter of Pipe (in.)	Volume (gal. / ft.)
1/8	0.0006	1.0	0.041
3/16	0.0014	2.0	0.163
1/4	0.0025	3.0	0.367
5/16	0.0039	4.0	0.653
3/8	0.0050	5.0	1.020
1/2	0.0100	6.0	1.470
3/4	0.0230	1 gallon/ft. = 3.8 liters/ft.	

Cylinder Volume (gal./ft.) = $\pi r^2 h \times 0.0043$
 Radius (r) and height (h) measured in inches.

Measurements	FIELD ANALYSES					
	First	Second	Third	Fourth	Fifth	()
Volume Purged (gallons)	<u>1.4</u>	<u>2.8</u>	<u>4.2</u>			
Time (minutes)	<u>1430</u>	<u>1445</u>	<u>1501</u>			
pH (S.U.)	<u>5.2</u>	<u>5.3</u>	<u>5.4</u>			
Specific Conductance (µmhos/cm)	<u>7310</u>	<u>7540</u>	<u>7710</u>			
Water Temp. (°C)	<u>18</u>	<u>18</u>	<u>18</u>			
Odor (subjective) *	<u>3</u>	<u>3</u>	<u>3</u>			
Turbidity (NTU)	<u>3.7</u>	<u>2.3</u>	<u>2.0</u>			
DO	<u>0.3</u>	<u>0.3</u>	<u>0.3</u>			
ORP	<u>109</u>	<u>98</u>	<u>93</u>			

* (1)None (2)Slight (3)Moderate (4)Strong ** (1)Clear (2)Slightly Turbid (3)Moderately Turbid (4)Very Turbid (5)Extremely Turbid

Comments/Observations/Recommendations: Ferrous Iron : 4.1 mg / L

Completed by: [Signature] Date: 05-19-09

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

RDL	Report Detection Limit	MDL	Method Detection Limit
TIC	Tentatively Identified Compounds	MSL	Mean Sea Level
TNTC	Too Numerous To Count	MPN	Most Probable Number
BTU	British Thermal Units	NTU	Nephelometric Turbidity Units
C	Degrees Centigrade	F	Degrees Fahrenheit
umhos/cm	micromhos/cm	meq	milliequivalents
kg	kilogram(s)	g	gram(s)
mg	milligram(s)	ug	microgram(s)
l	liter(s)	ml	milliliters(s)
ul	microliter(s)	m3	cubic meter(s)
lb	pound(s)	ft3	cubic foot(feet)
ft	foot(feet)	su	Standard Units

mg/l, mg/kg Units of concentration in milligrams per liter for liquids and milligrams per kilogram for solids. Also referred to as Parts Per Million or "ppm" when the assumption is made that the specific gravity or density is one (1 g/ml).

ug/l, ug/kg Units of concentration in micrograms per liter for liquids and micrograms per kilograms for solids. Also referred to as Parts Per Billion or "ppb" when the assumption is made that the specific gravity or density is one (1 g/ml).

wt% Units of concentration expressed on a weight/weight basis (e.g. grams per 100 grams).

< Less Than – The number following the sign is the limit of quantitation, the smallest amount of analyte that can be reliably determined using this test.

> Greater Than

Data Qualifiers:

- A** TIC is a possible aldol-condensation product resulting from sample extraction, (Organics)
- B** Analyte also detected in the method blank.
- C** Amendable Cyanide is a negative value due to an unknown interference.
- E** Estimated concentration due to interference.
- J** Estimated value below RDL or estimated value for TIC. (Organics)
- P** Concentration difference between primary and confirmation columns >25%. (Organics) The lower result is reported.
- U** Final concentration is below the detection limit.
- X** Matrix interference which requires dilution or prevents the reporting of a result. Detection limits have been adjusted where applicable.
- *** Defined in report comments.

Solid samples (i.e. soil, sludge, and solid waste) are reported on a dry weight basis unless otherwise noted.

Test results relate only to the sample tested. Clients should be aware that a critical step in a chemical or biological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of the material involved, the test results will be meaningless. If you have any questions regarding the proper techniques of collecting samples, please contact us. However, we cannot be held responsible for sample integrity unless sampling has been performed by a member of our staff.

REPRESENTATION AND LIMITATION OF LIABILITY – The accuracy of all analytical results for samples begins as it is received by the laboratory. Integrity of the sample begins at the time it is placed in the possession of authorized Davis & Floyd, Inc. Laboratories personnel. All other warranties, expressed or implied, are disclaimed. Liability is limited to the cost of the analysis.

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AD07_03 (12/06)*