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SCS ENGINEERS, PC

May 11, 2015
File No. 02209366.04

Mr. Ervin Lane, Hydrogeologist
North Carolina Department of Environment and Natural Resources
Division of Waste Management
Solid Waste Section
217 West Jones Street
Raleigh, North Carolina 27603

Subject: **Closed Anson County Landfill - Facility Permit Number 04-01**
2014 Annual Water Quality Monitoring Report

Dear Mr. Lane:

On behalf of Anson County, SCS Engineers, PC is submitting the attached 2014 annual Water Quality Monitoring Report for the closed Anson County Landfill, Facility Permit Number 04-01. The 2014 monitoring event is the 3rd of the requested annual groundwater monitoring events for five (5) years. This request is based on a letter dated May 16, 2011 from Mr. Ervin Lane with NCDENR, Division of Waste Management, Solid Waste Section. In addition to the Report an Environmental Monitoring Reporting Form and the electronic data deliverable is being submitted. For the 2014 annual monitoring event, groundwater sampling was conducted on November 20, 2014 and laboratory analyzed for 40 CFR Part 258 Appendix I constituents.

In summary, during this monitoring event no Appendix I organic constituents were detected within the Landfill's four monitoring wells. Two (2) inorganic constituents were detected within the monitoring wells, below their respective 15A NCAC 02L .0202 Groundwater Quality Standard compliance limit. These inorganics include Barium in all four monitoring wells and Zinc in monitoring well MW-D. The historical groundwater monitoring laboratory analytical results for all four monitoring wells is included in the Water Quality Monitoring Report.

As stated in the Report, the detection of inorganic metals during laboratory analysis is not always caused by a release from the landfill rather contributed to the natural occurring of the inorganics or metals in the in-situ soils. If you have any questions or need additional information please do not hesitate to contact either myself at 704-504-3107 (aglenn@scsengineers.com) or Mr. Mike Sessions, Anson County's Utilities Director at 704-694-5208.

Sincerely,

Albert D. Glenn, P.E.
Project Manager
SCS ENGINEERS, PC

cc: Mike Sessions – Anson County

Attachments: 2014 Annual Water Quality Monitoring Report, Environmental Monitoring Reporting Form, and Electronic Data Deliverable.

SCS ENGINEERS

WATER QUALITY MONITORING REPORT
2014 ANNUAL SAMPLING EVENT
ANSON COUNTY LANDFILL
FACILITY PERMIT NO. 04-01

Prepared for:

ANSON COUNTY

Anson County Utilities Department
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Wadesboro, North Carolina 28170
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Date: April 28, 2015
File No.: 02209366.04

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WATER QUALITY MONITORING REPORT
2014 ANNUAL SAMPLING EVENT
ANSON COUNTY LANDFILL
FACILITY PERMIT NO. 04-01

Presented To:

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Wadesboro, North Carolina 28170
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NORTH CAROLINA PROFESSIONAL SEAL 031802 ENGINEER ALBERT GLENN

4/28/2015

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NORTH CAROLINA LICENSED SEAL 2219 GEOLOGIST KRISTIN LEA JETTYS

Date: April 28, 2015
File No.: 02209366.04

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SCS Engineers, PC (SCS) is submitting this Water Quality Monitoring Report for the closed Anson County Landfill, a.k.a. Lilesville Landfill, on behalf of the Anson County Utilities Department. The Landfill's North Carolina Department of Natural Resources (NCDENR) facility permit number is 04-01. This report provides background information, description of field activities, data, and summary and analysis of the laboratory analytical results from the groundwater monitoring sampling event conducted in November 2014.

This monitoring event is the third (3rd) annual monitoring event during a five (5) year period as requested in a letter dated May 16, 2011 from Mr. Ervin Lane, Compliance Hydrogeologist with NCDENR; Division of Waste Management; Solid Waste Section.

1 BACKGROUND

There are two (2) solid waste landfills, approximately 49.7 and 11.6-acres in size that previously operated along Haileys Ferry Road (SR 1801) in Lilesville, North Carolina. See attached **Figure No. 1** for the landfill locations and approximate landfilled waste extents. The 49.7-acre landfill began operations before 1972 and was closed prior to 1978. The 11.6-acre landfill which is permitted and subjected to groundwater monitoring was closed with a final cover system in the fall of 1994 with landfill operations dating back to 1978. The 11.6-acre landfill facility permit number is 04-01. Both landfills are unlined.

Based on a letter dated January 18, 1996 from Mr. James Coffey with the Department of Environment, Health and Natural Resources - DEHNR (currently NCDENR) to Anson County, the permitted 11.6-acre landfill was considered officially closed subject to post-closure conditions including groundwater monitoring. This letter is included in **Attachment 4** for reference. Since 1996, the landfill has been in a post-closure care period. Based on review of previously prepared documentation, groundwater monitoring has been conducted at the permitted landfill since 1992. Currently, the groundwater monitoring program at the landfill consists of four monitoring wells: one (1) background well and three (3) compliance wells. The background well is designated as MW-A with the compliance wells being designated as MW- B, MW-C, and MW-D.

A Groundwater Monitoring Evaluation Report dated March 18, 2011 was prepared and submitted to NCDENR by Engineering & Environmental Science Company (E^2S) of Raleigh, North Carolina on behalf of Anson County. This report outlined the historical groundwater monitoring results at the landfill from 1992 to 2006, evaluated the need to continue with groundwater monitoring and a request to stop further groundwater monitoring at the landfill. The County received a letter dated May 16, 2011 from Mr. Ervin Lane with NCDENR, Division of Waste Management stating that the Division had reviewed the Groundwater Monitoring Evaluation Report including the request to stop the groundwater monitoring and determined that the County needs to continue groundwater monitoring on an annual basis for the next five (5) years. The letter also stated after five (5) years of additional monitoring, the monitoring results will be re-evaluated by the NCDENR to determine the need for continued groundwater monitoring at the landfill. The letter from NCDENR is included in **Attachment 4** for reference.

2 FIELD ACTIVITIES

On November 20, 2014, SCS personnel collected groundwater samples from the four (4) existing monitoring wells at the Anson County Landfill for laboratory analysis of constituents listed in Appendix I of the 40 Code of Federal Regulations (CFR) Part 258. The list of Appendix I constituents is included for reference in **Attachment 2**. The wells are designated as MW-A, MW-B, MW-C, and MW-D. Groundwater was purged and samples were collected from the monitoring wells using low flow sampling procedures.

SCS's field sampling logs containing field measurements for pH, conductivity, temperature, water levels, and dissolved oxygen are included in **Attachment 1**.

3 GROUNDWATER LEVELS AND FLOW

Water level data for the November 2014 sampling event is summarized in **Table 1**. Based on the water level data, a Groundwater Surface Contour Map is presented as **Figure 1**. The groundwater flow direction is primarily towards the eastern property boundary. The calculated groundwater flow velocity and estimated values for hydraulic conductivity and porosity are included below in **Table 1**. Please note that for all the monitoring wells, the estimated values for hydraulic conductivity and effective porosity in Table 1 are from the Groundwater Monitoring Evaluation Report prepared by Engineering & Environmental Science Company (E^2S) dated March 18, 2011.

TABLE 1

Groundwater Level and Flow Data

Closed Anson County Landfill (Lilesville Landfill) - Facility Permit No. 04-01

Well ID	Date	GS Elevation	Well Depth	TOC Elevation	K (ft/yr)	n	DTW (feet)	WL-Elev. (feet)	I (ft/ft)	V (ft/yr)
MW-A	11-20-2014	NM	27.82	462.63	517.21	0.25	12.65	449.98	0.022	44.54
MW-B	11-20-2014	NM	28.1	451.20	517.21	0.25	16.29	434.91	0.022	44.54
MW-C	11-20-2014	NM	22.55	438.19	517.21	0.25	5.01	433.18	0.004	8.52
MW-D	11-20-2014	NM	35.45	436.16	517.21	0.25	5.00	431.16	0.003	5.50

Legend:

GS = ground surface

TOC = top of casing

NM = Not Measured

WL-Elev = water level elevation

DTW = depth to water from TOC (measured)

V = groundwater flow rate (calculated)**; V** = (K*I)/n

n = effective porosity (estimated based on previous GW monitoring reports and site conditions)

K = hydraulic conductivity (estimated based on previous GW monitoring reports and site conditions)

I = hydraulic gradient (calculated); **I** = WL-elev. difference / horizontal distance

4 WATER QUALITY

40 CFR Part 258 Appendix I detected constituents with their analytical concentration were compared against the North Carolina Department of Environment and Natural Resources (NCDENR) rule 15A NCAC 02L .0202 Groundwater Quality Standards (2L). When a 15A NCAC 02L .0202 Groundwater Quality Standard is not available for a detected constituent, the result is compared against the North Carolina Groundwater Protection Standard (GWP). The following **Table 2** lists the Appendix I detected constituents analytical results from the November 2014 annual water quality monitoring event. In **Table 2**, constituent analytical results that exceed their associated 2L or GWP compliance limit are shaded. A hard copy of the laboratory report from Pace Analytical Services, Inc. with a copy of the chain-of-custody form is included in **Attachment 3**.

TABLE 2

Summary of Groundwater Quality Data - Appendix I Constituents

Closed Anson County Landfill (Lilesville Landfill) - Facility Permit No. 04-01

Compound	Sampling Date	Compliance Limit (µg/L)		Analytical Results for Sample Locations (in µg/L)			
		SWSL	15A NCAC 02L	MW-A	MW-B	MW-C	MW-D
Barium	11-20-2014	100	700	**62.8**	**18.4**	**18.6**	**40.3**
Zinc	11-20-2014	10	1000	ND<10	ND<10	ND<10	**13.5**

Legend:

µg/L = Micrograms per Liter

Shaded field denotes result that exceeds Compliance Limit.

GWP = Groundwater Protection Standard (2L Standard not established)

J = Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit

Bold font indicates analyte detection.

SWSL = Solid Waste Section Limit

NE = Not established

4.1 GROUNDWATER ANALYTICAL RESULTS

The description of the Appendix I constituents detected during the November 2015 annual groundwater monitoring event above their respective 2L or Groundwater Protection Standard compliance limit is as follows:

4.1.1 ORGANIC CONSTITUENTS

No Appendix I organic constituents were detected during the monitoring event.

4.1.2 INORGANIC CONSTITUENTS

Barium and Zinc were the only Appendix I inorganic constituents detected in one or more of the monitoring wells during the monitoring event although were detected below their respective compliance limit. These detections are summarized as follows:

- **Barium** was detected in all four (4) monitoring wells below its 2L compliance limit of 700 µg/L. In background monitoring well MW-A the concentration was 62.8 µg/L. In compliance well MW-B the concentration was 18.4 µg/L, MW-C was 18.6 µg/L and MW-D was 40.3 µg/L.

- **Zinc** was only detected in monitoring well MW-D at a concentration of 13.5 µg/L which is less than its 2L compliance limit of 1000 µg/L.

5 SUMMARY AND ANALYSIS

A summary of the November 2014 annual water quality monitoring event results as well as historical monitoring results is a follows:

5.1 ORGANICS DETECTION SUMMARY

During the November 2014 annual monitoring event, no Appendix I organic constituents were detected above their respective detection limits in the monitoring wells. During the previous annual monitoring event in April 2013, Chlorobenzene was detected within monitoring well MW-C but the concentration was below the compliance limit.

The monitoring wells historical analytical results for previously detected Appendix I organics are presented in **Table 3.**

5.2 INORGANICS DETECTION SUMMARY

During the November 2014 annual monitoring event no Appendix I inorganic constituents were detected above their respective compliance limits in the monitoring wells. During this monitoring event Barium was detected below its respective compliance limit of 700 µg/L in all four (4) monitoring wells. Barium has historically been detected in all the monitoring wells but below the 2L compliance limit.

Zinc was also detected during this monitoring event in monitoring well MW-D below its respective compliance limit of 1000 µg/L. Since 2012 Zinc has only been detected in monitoring well MW-D, always below the compliance limit.

The monitoring wells historical analytical results for previously detected Appendix I inorganics are presented in **Table 3.**

TABLE 3

Historical Groundwater Monitoring Results

Closed Anson County Landfill (Lilesville Landfill) - Facility Permit No. 04-01

Sample Date	Detection Limit	Compliance Limit 15A NCAC 02L or Groundwater Protection Standard	Analytical Results (µg/L)			
			MW-A	MW-B	MW-C	MW-D
Parameter :	**Benzene**					
Apr-99	2		ND	ND	ND	ND
Oct-00	1		ND	ND	**2.1**	ND
Oct-01	2		ND	ND	**2.7**	ND
Apr-02	1		ND	ND	**1.5**	ND
Oct-03	1		ND	ND	**1.3**	ND
May-04	1		ND	ND	ND	ND
Oct-04	5		ND	ND	ND	ND
May-05	5		ND	ND	ND	ND
Oct-06	5		ND	ND	ND	ND
Oct-12	1	1	ND	ND	**1.3**	ND
Apr-13	1	1	ND	ND	ND	ND
Nov-14	1	1	ND	ND	ND	ND
Parameter :	**Chlorobenzene**					
Apr-99	2		ND	ND	ND	ND
Oct-00	1		ND	ND	**14**	ND
Oct-01	2		ND	ND	**17**	ND
Apr-02	1		ND	ND	**11**	ND
Oct-03	1		ND	ND	**6**	ND
May-04	1		ND	ND	ND	ND
Oct-04	5		ND	ND	ND	ND
May-05	5		ND	ND	ND	ND
Oct-06	5		ND	ND	**9**	ND
Oct-12	1	50	ND	ND	**5.2**	ND
Apr-13	1	50	ND	ND	**1.4**	ND
Nov-14	1	50	ND	ND	ND	ND

ND = Not Detected (below detection limit)

TABLE 3 (continued)
Historical Groundwater Monitoring Results
Closed Anson County Landfill (Lilesville Landfill) - Facility Permit No. 04-01

Sample Date	Detection Limit	Compliance Limit 15A NCAC 02L or Groundwater Protection Standard	Analytical Results (µg/L)			
			MW-A	MW-B	MW-C	MW-D
Parameter :	**Arsenic**					
Apr-99	5		ND	ND	ND	ND
Oct-00	5		ND	ND	**6**	ND
Oct-01	5		ND	**27**	ND	ND
Apr-02	5		ND	ND	**8**	ND
Oct-03	5		ND	ND	**7**	ND
May-04	5		**8**	**5**	**5**	ND
Oct-04	20		ND	ND	ND	ND
May-05	20		**16**	**31**	**81**	**72**
Oct-06	20		ND	ND	ND	ND
Oct-12	5	10	ND	ND	**5.4**	ND
Apr-13	10	10	ND	ND	ND	ND
Nov-14	10	10	ND	ND	ND	ND
Parameter :	**Barium**					
Apr-99	20		**20**	**14**	**76**	**66**
Oct-00	20		**21**	**150**	**211**	**53**
Oct-01	20		**21**	**26**	**238**	**66**
Apr-02	20		**23**	**18**	**18**	**52**
Oct-03	20		**17**	**17**	**205**	**49**
May-04	20		**23**	**24**	**91**	**51**
Oct-04	40		ND	**45**	**150**	**70**
May-05	40		**28**	**31**	**81**	**72**
Oct-06	40		ND	**52**	**260**	**65**
Oct-12	5	700	**18.1**	**19.6**	**176**	**69.4**
Apr-13	5	700	**21.4**	**15.5**	**83.8**	**74.1**
Nov-14	5	700	**62.8**	**18.4**	**18.6**	**40.3**

ND = Not Detected (below detection limit)

TABLE 3 (continued)
Historical Groundwater Monitoring Results
Closed Anson County Landfill (Lilesville Landfill) - Facility Permit No. 04-01

Sample Date	Detection Limit	Compliance Limit 15A NCAC 02L or Groundwater Protection Standard	Analytical Results (µg/L)			
			MW-A	MW-B	MW-C	MW-D
Parameter :	**Chromium**					
Apr-99	5		ND	ND	ND	ND
Oct-00	5		ND	ND	ND	ND
Oct-01	5		ND	ND	ND	**10**
Apr-02	5		ND	ND	ND	ND
Oct-03	5		ND	ND	ND	**6**
May-04	5		ND	ND	ND	ND
Oct-04	20		ND	ND	ND	ND
May-05	20		ND	ND	ND	ND
Oct-06	20		ND	ND	ND	ND
Oct-12	5	10	ND	ND	ND	**176**
Apr-13	5	10	ND	ND	ND	**350**
Nov-14	5	10	ND	ND	ND	ND
Parameter :	**Lead**					
Apr-99	3		ND	ND	ND	**8**
Oct-00	3		ND	ND	**3**	**34**
Oct-01	3		ND	**5**	ND<3	**24**
Apr-02	2		ND	ND	**4**	**4**
Oct-03	2		ND	ND	ND	**3**
May-04	2		**6**	**4**	ND	ND
Oct-04	15		ND	ND	ND	ND
May-05	10		ND	ND	ND	ND
Oct-06	40		ND	ND	ND	ND
Oct-12	5	15	ND	ND	ND	**24.8**
Apr-13	5	15	ND	ND	ND	**28.2**
Nov-14	5	15	ND	ND	ND	ND

ND = Not Detected (below detection limit)

TABLE 3 (continued)
Historical Groundwater Monitoring Results
Closed Anson County Landfill (Lilesville Landfill) - Facility Permit No. 04-01

Sample Date	Detection Limit	Compliance Limit 15A NCAC 02L or Groundwater Protection Standard	Analytical Results (µg/L)			
			MW-A	MW-B	MW-C	MW-D
Parameter :	**Beryllium**					
Oct-12	1	4	ND	ND	ND	ND
Apr-13	1	4	ND	ND	ND	**1.4**
Nov-14	1	4	ND	ND	ND	ND
Parameter :	**Cobalt**					
Oct-12	5	1	ND	ND	ND	**6**
Apr-13	5	1	ND	**19.3**	**48.4**	**13.3**
Nov-14	5	1	ND	ND	ND	ND
Parameter :	**Copper**					
Oct-12	5	1000	ND	ND	ND	**26.6**
Apr-13	5	1000	ND	ND	ND	**25**
Nov-14	5	1000	ND	ND	ND	ND
Parameter :	**Nickel**					
Oct-12	5	100	ND	ND	ND	**86.6**
Apr-13	5	100	ND	ND	ND	**160**
Nov-14	5	100	ND	ND	ND	ND
Parameter :	**Vanadium**					
Oct-12	5	0.3	ND	ND	ND	**18**
Apr-13	5	0.3	ND	ND	ND	**22.3**
Nov-14	5	0.3	ND	ND	ND	ND
Parameter :	**Zinc**					
Oct-12	10	1000	ND	ND	ND	**31**
Apr-13	10	1000	ND	ND	ND	**27.5**
Nov-14	10	1000	ND	ND	ND	**13.5**

ND = Not Detected (below detection limit)

5.3 ANALYSIS

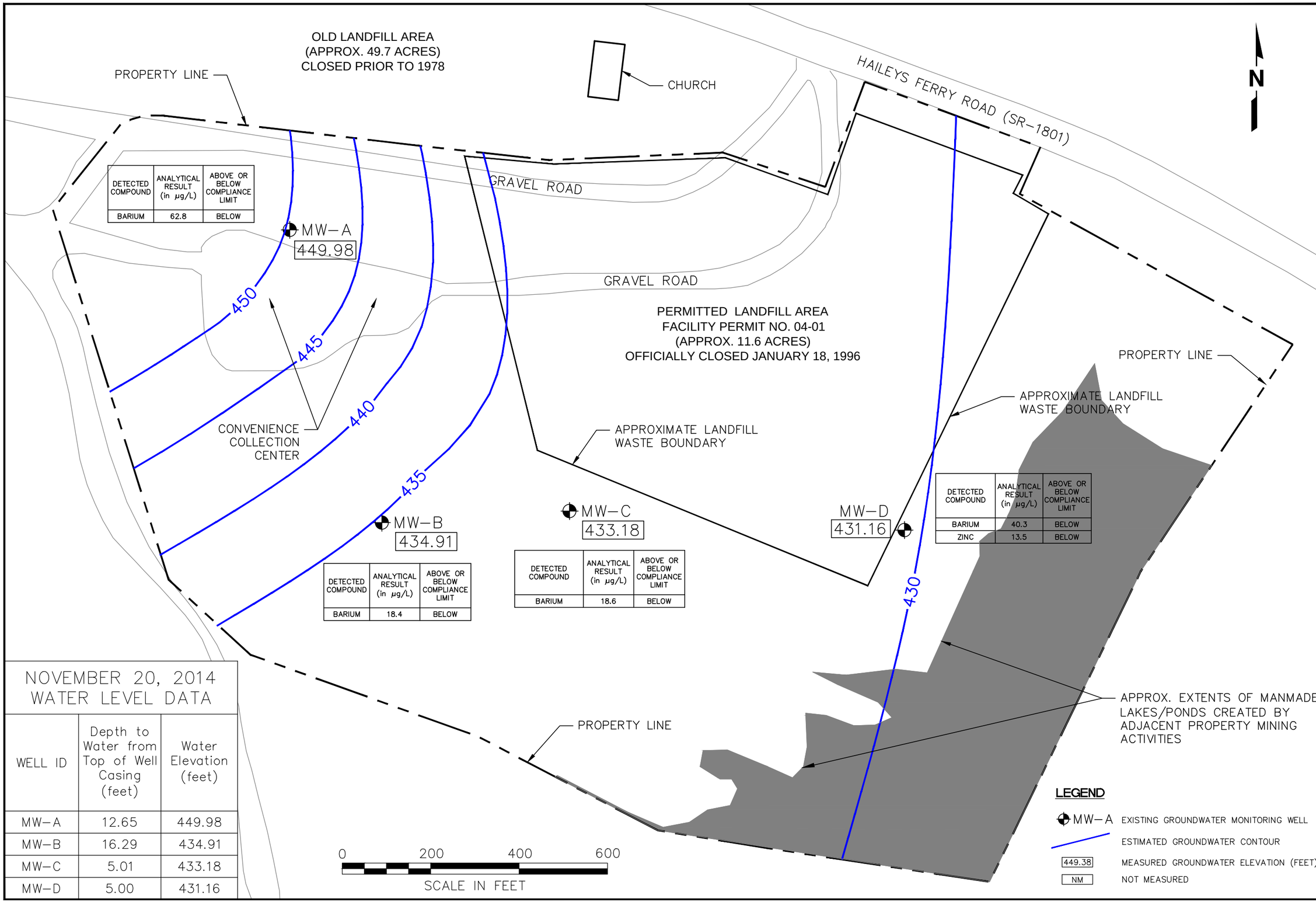
During the November 2014 annual monitoring event, no 40 CFR Part 258 Appendix I organic constituents or metals were detected above their respective compliance limits in the monitoring wells. Certain Appendix I inorganics or metals are considered natural occurring within the in-situ soils and not caused by a release from a landfill. An example of this is a closed MSW landfill located in Union County, North Carolina where groundwater alternate source demonstrations(1) for metals were completed and the metals Barium, Beryllium, Chromium, Cobalt, Copper, Lead, Nickel, Vanadium and Zinc were determined to be natural occurring at considerable levels in the in-situ soils. The landfill located in Union County is within the vicinity of and has similar geologic conditions to the closed Anson County - Lilesville Landfill. So the existence of these metals in the in-situ soils at the Anson County - Lilesville Landfill is probable. Further investigation of the existence of these metals and levels within the Lilesville Landfill's in-situ soils may be undertaken by Anson County if deemed beneficial to the groundwater monitoring or so directed by NCDENR. Further investigation of the in-situ soils does not seem warranted at this time since only Barium and Zinc were detected during the monitoring event at levels below their respective compliance limit.

No Appendix I organics or volatile organic compounds (VOCs) were detected during the monitoring event. Chlorobenzene has periodically been detected in monitoring well MW-C during previously monitoring events, at levels below the compliance limit. There are two (2) remaining regulatory requested annual monitoring events to occur. These remaining monitoring events will establish whether the non-detection of Chlorobenzene during this monitoring event is corroborated.

(1) Reference: Alternate Source Demonstration Report, Union County Landfill, Wingate North Carolina dated July 2008 and Revised Alternate Source Demonstration for the Union County Landfill dated November 2012.

FIGURE NO. 1

Groundwater Surface Contour Map



DETECTED COMPOUND	ANALYTICAL RESULT (in µg/L)	ABOVE OR BELOW COMPLIANCE LIMIT
BARIUM	62.8	BELOW

DETECTED COMPOUND	ANALYTICAL RESULT (in µg/L)	ABOVE OR BELOW COMPLIANCE LIMIT
BARIUM	18.4	BELOW

DETECTED COMPOUND	ANALYTICAL RESULT (in µg/L)	ABOVE OR BELOW COMPLIANCE LIMIT
BARIUM	18.6	BELOW

DETECTED COMPOUND	ANALYTICAL RESULT (in µg/L)	ABOVE OR BELOW COMPLIANCE LIMIT
BARIUM	40.3	BELOW
ZINC	13.5	BELOW

NOVEMBER 20, 2014
WATER LEVEL DATA

WELL ID	Depth to Water from Top of Well Casing (feet)	Water Elevation (feet)
MW-A	12.65	449.98
MW-B	16.29	434.91
MW-C	5.01	433.18
MW-D	5.00	431.16

DATE 11/20/2014
FIGURE 1

CLOSED ANSON COUNTY LANDFILL 04-01
GROUNDWATER SURFACE CONTOUR MAP
LILESVILLE, NC

PROJECT NO. 02209366.04
DES BY DMC
SCALE AS SHOWN
CHK BY ADG
CAD FILE POT. MAP
APP BY ADG

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ATTACHMENT 1

Monitoring Well Sampling Logs

ANSON COUNTY LANDFILL - CLOSED LILESVILLE LANDFILL
ANSON COUNTY, NORTH CAROLINA
MONITORING WELL SAMPLE LOG

WELL ID: MW-A
WEATHER: Clear, Mid 50s
DATE: 11/20/2014
PERSONNEL: Michael Cobb; SCS Engineers, PC
Adam Smith; SCS Engineers, PC

REASON FOR SAMPLING: Compliance.

Total Well Depth: 27.82 ft.
Depth to Water: 12.65 ft.
Water Column: 15.17 ft.
Well Volume: 2.45 gal.

Field Readings	1	2	3	4	
Time	1612	1615	1618	1621	
Turbidity	12.11	3.75	1.16	0.62	
pH	5.05	4.9	4.87	4.83	
DO Mg/L	0.6	0.57	0.55	0.57	
Temperature	17.8	17.9	18	17.9	
Sp. Conductivity	38.7	36.2	36	35.8	Total purged from well: 27 gal

	5	6	7	8	9	10	11	12
Time	1624	1627						
Turbidity	0.34	0						
pH	4.83	4.76						
DO Mg/L	0.46	0.5						
Temperature	18	17.9						
Sp. Conductivity	36	35.9						

Notes:
Purged 3 well volumes before taking measurements.

Sample ID: GW-3

Sample Time: 1635
Laboratory: Pace Analytical
Shipping Date: 11/21/2014

ANSON COUNTY LANDFILL - CLOSED LILESVILLE LANDFILL
ANSON COUNTY, NORTH CAROLINA
MONITORING WELL SAMPLE LOG

WELL ID: MW-B
WEATHER: Clear, Mid 50s
DATE: 11/20/2014
PERSONNEL: Michael Cobb; SCS Engineers, PC
Adam Smith; SCS Engineers, PC

REASON FOR SAMPLING: Compliance.

Total Well Depth: 28.1 ft.
Depth to Water: 16.29 ft.
Water Column: 11.81 ft.
Well Volume: 1.91 gal.

Field Readings	1	2	3	4	
Time	1455	1459	1503	1506	
Turbidity	5.58	3.61	2.25	1.76	
pH	5.97	5.78	5.72	5.73	
DO Mg/L	0.69	0.57	0.5	0.52	
Temperature	17.6	17.7	17.7	17.7	
Sp. Conductivity	82.9	75.3	75.7	75.9	Total purged from well: 20 gal

	5	6	7					
Time	1509	1512	1515					
Turbidity	1.02	0.86	0.78					
pH	5.71	5.69	5.69					
DO Mg/L	0.44	0.5	0.49					
Temperature	17.7	17.7	17.7					
Sp. Conductivity	75.5	75.6	75.6					

Notes:
Purged 3 well volumes before taking measurements

Sample ID: GW-2

Sample Time: 1520
Laboratory: Pace Analytical
Shipping Date: 11/21/2014

ANSON COUNTY LANDFILL - CLOSED LILESVILLE LANDFILL
ANSON COUNTY, NORTH CAROLINA
MONITORING WELL SAMPLE LOG

WELL ID: MW-C
WEATHER: Clear, Mid 50s
DATE: 11/20/2014
PERSONNEL: Michael Cobb; SCS Engineers, PC
Adam Smith; SCS Engineers, PC

REASON FOR SAMPLING: Compliance.

Total Well Depth: 22.55 ft.
Depth to Water: 5.01 ft.
Water Column: 17.54 ft.
Well Volume: 2.84 gal.

Field Readings	1	2	3	4	
Time	1225	1229	1233	1237	
Turbidity	24.23	21.27	20.81	17.74	
pH	5.87	6.13	6.09	6.12	
DO Mg/L	1.87	0.9	0.55	0.57	
Temperature	18	17.9	17.9	17.9	
Sp. Conductivity	220.2	213.2	218	219.8	Total purged from well: 30 gal

	5	6	7	8	9	10	11	12
Time	1241	1245	1249					
Turbidity	15.12	13.96	13.69					
pH	6.15	6.14	6.1					
DO Mg/L	0.61	0.58	0.62					
Temperature	17.8	17.8	17.8					
Sp. Conductivity	214.8	217.7	221.3					

Notes:
Purged 3 well volumes before taking measurements.

Sample ID: GW-1

Sample Time: 1255
Laboratory: Pace Analytical
Shipping Date: 11/21/2014

ANSON COUNTY LANDFILL - CLOSED LILESVILLE LANDFILL
ANSON COUNTY, NORTH CAROLINA
MONITORING WELL SAMPLE LOG

WELL ID: MW-D
WEATHER: Clear, Mid 50s
DATE: 11/20/2014
PERSONNEL: Michael Cobb; SCS Engineers, PC
Adam Smith; SCS Engineers, PC

REASON FOR SAMPLING: Compliance.

Total Well Depth:	35.45	ft.
Depth to Water:	5	ft.
Water Column:	30.45	ft.
Well Volume:	5.17	gal.

Field Readings	1	2	3	4	
Time					
Turbidity					
pH					
Sp. Conductivity					
DO Mg/L					
Temp.					Total purged from well: 15 gal

Notes:
Well dry before initial purge completed.
Waited for well to recharge and then sampled.

Sample ID: GW-4

Sample Time: 1725
Laboratory: Pace Analytical
Shipping Date: 11/21/2014

ATTACHMENT 2

Constituents for Detection Monitoring 40 CFR 258, Appendix I

Constituents for Detection Monitoring
(40 CFR 258, Appendix I)

Common name	CAS RN
Antimony	(Total)
Arsenic	(Total)
Barium	(Total)
Beryllium	(Total)
Cadmium	(Total)
Chromium	(Total)
Cobalt	(Total)
Copper	(Total)
Lead	(Total)
Nickel	(Total)
Selenium	(Total)
Silver	(Total)
Thallium	(Total)
Vanadium	(Total)
Zinc	(Total)
Acetone	67-64-1
Acrylonitrile	107-13-1
Benzene	71-43-2
Bromochloromethane	74-97-5
Bromodichloromethane	75-27-4
Bromoform; Tribromomethane	75-25-2
Carbon disulfide	75-15-0
Carbon tetrachloride	56-23-5
Chlorobenzene	108-90-7
Chloroethane; Ethyl chloride	75-00-3
Chloroform; Trichloromethane	67-66-3
Dibromochloromethane; Chlorodibromomethane	124-48-1
1,2-Dibromo-3-chlorpropane; DBCP	96-12-8
1,2-Dibromoethane; Ethylene dibromide; EDB	106-93-4
o-Dichlorobenzene; 1,2-Dichlorobenzene	95-50-1
p-Dichlorobenzene; 1,4-Dichlorobenzene	106-46-7
trans-1,4-Dichloro-2-butene	110-57-6
1,1-Dichloroethane; Ethylidene chloride	75-34-3
1,2-Dichloroethane; Ethlyene dichloride	107-06-2
1,1-Dichloroethylene; 1-1-Dichloroethene; Vinylidene chloride	75-35-4
cis-1,2-Dichloroethylene; cis-1,2-Dichloroethene	156-59-2
trans-1,2-Dichloroethylene; trans-1,2-Dichloroethene	156-60-5
1,2-Dichlorpropane; Propylene dichloride	78-87-5
cis-1,3-Dichlorpropene	10061-01-5
trans-1,3-Dichlorpropene	10061-02-6
Ethylbenzene	100-41-4
2-hexanone; Methyl butyl ketone	591-78-6
Methyl bromide; Bromomethane	74-83-9
Methyl chloride; Chloromethane	74-87-3
Methylene bromide Dibromomethane	74-95-3
Methylene chloride; Dichloromethane	75-09-2
Methyl ethyl ketone; MEK; 2-Butanone	78-93-3
Methyl iodide; Iodomethane	74-88-4
4-Methyl-2-pentanone; Methyl isobutyl isobutyl ketone	108-10-1
Styrene	100-42-5
1,1,1,2-Tetrachloroethane	630-20-6
1,1,2,2-Tetrachloroethane	79-34-5
Tetrachloroethylene; Tetracholorethene; Perchloroethylene	127-18-4
Toluene	108-88-3
1,1,1-Trochlorethane; Methylchloroform	71-55-6
1,1,2-Trichloroethane	79-00-5
Trichloroethylene; Trichlorethene	79-01-6
Trichlorofluoromethane; CFC-11	75-69-4
1,2,3-Trichloropropane	96-18-4
Vinyl acetate	108-05-4
Vinyl chloride	75-01-4
Xylenes	1330-20-7

NC Department of Environment and Natural Resources

Waste Management - Constituent List

Solid Waste Environmental Monitoring Reporting Limits and Standards

All units are in (ug/L) unless noted.
NE = Not Established
CAS numbers that begin with "SW" are not real CAS numbers, instead this represents the Solid Waste Section's ID number.

CAS Number	Name	Other Names	2L Std.	GWP* Std.	SWSL**	SW ID	App I
630-20-6	1,1,1,2-Tetrachloroethane	Ethane, 1,1,1,2-tetrachloro-	NE	1	5	190	I
71-55-6	1,1,1-Trichloroethane;	Ethane, 1,1,1-trichloro-	200	--	1	200	I
79-34-5	1,1,2,2-Tetrachloroethane	Ethane, 1,1,2,2-tetrachloro-	0.2	0.18	3	191	I
79-00-5	1,1,2-Trichloroethane	Ethane, 1,1,2-trichloro-	NE	0.6	1	202	I
76-13-1	1,1,2-Trichlorotrifluoroethane	CFC-113	200000	NE	NE	398	
92-52-4	1,1-biphenyl	1,1-biphenyl	400	--	10	421	
75-34-3	1,1-Dichloroethane; Ethyldidene	Ethane, 1,1-dichloro-	6	--	5	75	I
75-35-4	1,1-Dichloroethylene; 1,1-	Ethene, 1,1-dichloro-	7	--	5	77	I
563-58-6	1,1-Dichloropropene	1-Propene, 1,1-dichloro-	NE	NE	5	85	
96-18-4	1,2,3-Trichloropropane	Propane, 1,2,3-trichloro-	0.005	--	1	206	I
95-94-3	1,2,4,5-Tetrachlorobenzene	Benzene, 1,2,4,5-tetrachloro-	NE	2	10	189	
120-82-1	1,2,4-Trichlorobenzene	Benzene, 1,2,4-trichloro-	70	70	10	199	
95-63-6	1,2,4-Trimethylbenzene	Pseudocumene	400	NE	NE	372	
226-36-8	1,2,5,6-Dibenzacridine		NE	NE	NE	385	
96-12-8	1,2-Dibromo-3-chloropropane; DBCP	Propane, 1,2-dibromo-3-chloro-	0.04	--	13	67	I
106-93-4	1,2-Dibromoethane; Ethylene dibromide;	Ethane, 1,2-dibromo-	0.02	--	1	68	I
107-06-2	1,2-Dichloroethane; Ethylene	Ethane, 1,2-dichloro-	0.4	--	1	76	I
540-59-0	1,2-Dichloroethylene mixed isomers	Mixed Isomers	NE	60	NE	481	
78-87-5	1,2-Dichloropropane	Propane, 1,2-dichloro-	0.6	--	1	82	I
122-66-7	1,2-Diphenylhydrazine		NE	NE	NE	394	
108-67-8	1,3,5-Trimethylbenzene)	Mesitylene	400	NE	NE	373	
142-28-9	1,3-Dichloropropane; Trimethylene	Propane, 1,3-dichloro-	NE	NE	1	83	
106-37-6	1,4-Dibromobenzene	p-Dibromobenzene, p-Bromobenzene		70		471	
123-91-1	1,4-dioxane	1,4-dioxane	3	--	10	422	
130-15-4	1,4-Naphthoquinone	1,4-Naphthalenedione	NE	NE	10	149	

* GWP = Groundwater Protection
** SWSL = Solid Waste

Last updated: 6/13/2011 8:19:15 AM

CAS Number	Name	Other Names	2L Std.	GWP* Std.	SWSL**	SW ID	App I
87-61-6	1-2-3-Trichlorobenzene		NE	NE	NE	371	
90-12-0	1-Methylnaphthalene	α-methylnaphthalene	NE	1	NE	503	
134-32-7	1-Naphthylamine	1-Naphthalenamine	NE	NE	10	150	
120-36-5	2-(2-4-dichlorophenoxy)propionic		NE	NE	NE	352	
594-20-7	2,2-Dichloropropane; Isopropylidene	Propane, 2,2-dichloro-	NE	NE	15	84	
58-90-2	2,3,4,6-Tetrachlorophenol	Phenol, 2,3,4,6-tetrachloro-	200	--	10	193	
93-76-5	2,4,5-T; 2,4,5-Trichlorophenoxyacetic	Acetic acid, (2,4,5-trichlorophenoxy)-	NE	NE	2	188	
93-72-1	2,4,5-TP Acid	Silvex	50	NE	NE	452	
95-95-4	2,4,5-Trichlorophenol	Phenol, 2,4,5-trichloro-	NE	63	10	204	
88-06-2	2,4,6-Trichlorophenol	Phenol, 2,4,6-trichloro-	NE	4	10	205	
94-75-7	2,4-D; 2,4-Dichlorophenoxyacetic	Acetic acid, (2,4-dichlorophenoxy)-	70	--	2	59	
120-83-2	2,4-Dichlorophenol	Phenol, 2,4-dichloro-	NE	0.98	10	80	
105-67-9	2,4-Dimethylphenol; m-Xylenol	Phenol, 2,4-dimethyl-	100	--	10	95	
51-28-5	2,4-Dinitrophenol	Phenol, 2,4-dinitro-	NE	NE	50	99	
121-14-2	2,4-Dinitrotoluene	Benzene, 1-methyl-2,4-dinitro-	NE	0.1	10	100	
87-65-0	2,6-Dichlorophenol	Phenol, 2,6-dichloro-	NE	NE	10	81	
606-20-2	2,6-Dinitrotoluene	Benzene, 2-methyl-1,3-dinitro-	NE	NE	10	101	
94-82-6	2-4 DB		NE	NE	NE	350	
53-96-3	2-Acetylaminofluorene; 2-AAF	Acetamide, N-9H-fluoren-2-yl-	NE	NE	20	6	
110-75-8	2-Chloroethylvinyl ether		NE	NE	NE	358	
91-58-7	2-Chloronaphthalene	Naphthalene, 2-chloro-	NE	NE	10	47	
95-57-8	2-Chlorophenol	Phenol, 2-chloro-	0.4	--	10	48	
591-78-6	2-Hexanone; Methyl butyl ketone	2-Hexanone	NE	40	50	124	I
91-57-6	2-Methylnaphthalene	Naphthalene, 2-methyl-	30	--	10	145	
91-59-8	2-Naphthylamine	2-Naphthalenamine	NE	NE	10	151	
109-06-8	2-Picoline		NE	NE	NE	390	
91-94-1	3,3'-Dichlorobenzidine	[1,1'-Biphenyl]-4,4'-diamine,3,3'-	NE	NE	20	72	
119-93-7	3,3'-Dimethylbenzidine	[1,1'-Biphenyl]-4,4'-diamine,3,3'-	NE	NE	10	94	
56-49-5	3-Methylcholanthrene	Benz[j]aceanthrylene,1,2-dihydro-3-	NE	NE	10	138	
72-54-8	4,4'-DDD	Benzene 1,1'-(2,2-	0.1	--	0.1	60	
72-55-9	4,4'-DDE	Benzene, 1,1'-	NE	NE	0.1	61	
50-29-3	4,4'-DDT	Benzene, 1,1'-(2,2,2-	0.1	--	0.1	62	
534-52-1	4,6-Dinitro-o-cresol; 4,6-Dinitro-2-	Phenol, 2-methyl-4,6-dinitro-	NE	NE	50	98	
92-67-1	4-Aminobiphenyl	[1,1'-Biphenyl]-4-amine	NE	NE	20	11	
460-00-4	4-Bromofluorobenzene		NE	NE	NE	463	
101-55-3	4-Bromophenyl phenyl ether	Benzene, 1-bromo-4-phenoxy-	NE	NE	10	31	

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** SWSL = Solid Waste

CAS Number	Name	Other Names	2L Std.	GWP* Std.	SWSL**	SW ID	App I
7005-72-3	4-Chlorophenyl phenyl ether	Benzene, 1-chloro-4-phenoxy-	NE	NE	10	49	
108-10-1	4-Methyl-2-pentanone; Methyl isobutyl	2-Pentanone, 4-methyl-	NE	560	100	147	I
56-57-5	4-nitroquinoline-1-oxide		NE	NE	NE	388	
99-55-8	5-Nitro-o-toluidine	Benzenamine, 2-methyl-5-nitro-	NE	NE	10	157	
57-97-6	7,12-Dimethylbenz[a]anthracene	Benz[a]anthracene, 7,12-dimethyl-	NE	NE	10	93	
83-32-9	Acenaphthene	Acenaphthylene, 1,2-dihydro-	80	--	10	1	
208-96-8	Acenaphthylene	Acenaphthylene	200	--	10	2	
SW416	Acetic Acid	Acetic Acid	NE	NE	NE	416	
34256-82-1	Acetochlor			100		490	
187022-11-3	Acetochlor ESA			1000		491	
184992-44-4	Acetochlor OXA			1000		492	
67-64-1	Acetone	2-Propanone	6000	--	100	3	I
75-05-8	Acetonitrile; Methyl cyanide	Acetonitrile	NE	42	55	4	
98-86-2	Acetophenone	Ethanone, 1-phenyl-	NE	700	10	5	
50594-66-6	Acifluorofen	Acifluorofen				453	
107-02-8	Acrolein	2-Propenal	NE	4	53	7	
79-06-1	Acrylamide	Acrylamide	0.008	--	NE	429	
107-13-1	Acrylonitrile	2-Propenenitrile	NE	NE	200	8	I
15972-60-8	Alachlor			0.4		469	
309-00-2	Aldrin	1,4:5,8-	NE	0.002	0.05	9	
SW337	Alkalinity		NE	NE	NE	337	
107-05-1	Allyl chloride	1-Propene, 3-chloro-	NE	NE	10	10	
319-84-6	alpha-BHC	Cyclohexane,1,2,3,4,5,6-hexachloro-	NE	0.006	0.05	24	
319-84-6	alpha-Hexachlorocyclohexane	α-Benzenehexachloride	NE	0.006	NE	501	
--	Aluminum	Aluminum	NE	3500	NE	454	
7429-90-5	Aluminum		NE	3500	NE	438	
7664-41-7	Ammonia	Ammonia	NE	1500	NE	435	
62-53-3	Aniline		NE	NE	NE	381	
120-12-7	Anthracene	Anthracene	2000	--	10	12	
7440-36-0	Antimony	Antimony	NE	1	6	13	I
140-57-8	Aramite		NE	NE	NE	382	
12674-11-2	Aroclor 1016	congener of PCB; see (1336-36-3)	NE	NE	NE	401	
11104-28-2	Aroclor 1221	congener of PCB; see (1336-36-3)	NE	NE	NE	402	
11141-16-5	Aroclor 1232	congener of PCB; see (1336-36-3)	NE	NE	NE	403	
53469-21-9	Aroclor 1242	congener of PCB; see (1336-36-3)	NE	NE	NE	404	
12672-29-6	Aroclor 1248	congener of PCB; see (1336-36-3)	NE	NE	NE	405	

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CAS Number	Name	Other Names	2L Std.	GWP* Std.	SWSL**	SW ID	App I
11097-69-1	Aroclor 1254	congener of PCB; see (1336-36-3)	NE	NE	NE	406	
11096-82-5	Aroclor 1260	congener of PCB; see (1336-36-3)	NE	NE	NE	407	
7440-38-2	Arsenic	Arsenic	10	--	10	14	I
7440-39-3	Barium	Barium	700	--	100	15	I
25057-89-0	Bentazon		NE	NE	NE	462	
100-52-7	Benzaldehyde	Phenylmethanal,	NE	700	NE	496	
71-43-2	Benzene	Benzene	1	--	1	16	I
122-09-8	Benzeneethanamine, alpha,alpha-		NE	NE	NE	386	
92-87-5	Benzidine		NE	NE	NE	383	
56-55-3	Benzo[a]anthracene;	Benz[a]anthracene	0.05	--	10	17	
50-32-8	Benzo[a]pyrene	Benzo[a]pyrene	0.005	--	10	21	
205-99-2	Benzo[b]fluoranthene	Benz[e]acephenanthrylene	0.05	--	10	18	
191-24-2	Benzo[ghi]perylene	Benzo[ghi]perylene	200	--	10	20	
207-08-9	Benzo[k]fluoranthene	Benzo[k]fluoranthene	0.5	--	10	19	
65-85-0	Benzoic Acid		30000	28000	NE	395	
100-51-6	Benzyl alcohol	Benzenemethanol	NE	700	20	22	
7440-41-7	Beryllium	Beryllium	NE	4	1	23	I
319-85-7	beta-BHC	Cyclohexane,1,2,3,4,5,6-hexachloro-	NE	0.019	0.05	25	
319-85-7	beta-Hexachlorocyclohexane	ß-Benzenehexachloride	NE	0.02	NE	502	
SW347	Bicarbonate (as CaCO3)		NE	NE	NE	347	
SW316	Biological Oxygen Demand	BOD	NE	NE	NE	316	
101-84-8	biphenyl ether	biphenyl ether	NE	NE	10	423	
108-60-1	Bis(2-chloro-1-methylethyl) ether; 2,2'-	Propane, 2,2'-oxybis[1-chloro-	NE	NE	10	46	
111-91-1	Bis(2-chloroethoxy)methane	Ethane, 1,1'-[methylenebis(oxy)]bis [2-	NE	NE	10	42	
111-44-4	Bis(2-chloroethyl)ether; Dichloroethyl	Ethane, 1,1'-oxybis[2-chloro-	NE	0.031	10	43	
39638-32-9	Bis(2-chloroisopropyl) ether		0.03	NE	NE	384	
117-81-7	Bis(2-ethylhexyl) phthalate	1,2-Benzenedicarboxylic acid, bis(2-	3	NE	15	111	
7440-42-8	Boron	Boron	700	--	NE	428	
108-86-1	Bromobenzene		NE	NE	NE	360	
74-97-5	Bromochloromethane;	Methane, bromochloro-	NE	0.6	3	28	I
75-27-4	Bromodichloromethane;	Methane, bromodichloro-	0.6	--	1	29	I
75-25-2	Bromoform; Tribromomethane	Methane, tribromo-	4	--	3	30	I
71-36-3	Butanol n	n-Butyl Alcohol	NE	700		470	
78-92-2	Butanol sec	sec-Butyl Alcohol	NE	10000		483	
85-68-7	Butyl benzyl phthalate; Benzyl butyl	1,2-Benzenedicarboxylicacid, butyl	1000	--	10	32	
SW418	Butyric Acid	Butyric Acid	NE	NE	NE	418	

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CAS Number	Name	Other Names	2L Std.	GWP* Std.	SWSL**	SW ID	App I
7440-43-9	Cadmium	Cadmium	2	--	1	34	I
7440-70-2	Calcium		NE	NE	NE	375	
471-34-1	Calcium carbonate		NE	NE	NE	464	
105-60-2	Caprolactam		4000	NE	NE	440	
86-74-8	Carbazole	dibenzopyrrole, diphenylenimine,	NE	2	NE	497	
1563-66-2	Carbofuran	Carbofuran	40	NE	NE	430	
124-38-9	Carbon Dioxide		NE	NE	NE	459	
SW413	Carbon Dioxide (CO2)	CO2 Gas	NE	NE	NE	413	
75-15-0	Carbon disulfide	Carbon disulfide	700	--	100	35	I
56-23-5	Carbon tetrachloride	Methane, tetrachloro-	0.3	--	1	36	I
SW348	Carbonate (as CaCO3)		NE	NE	NE	348	
7440-44-0	Charcoal		NE	NE	NE	466	
SW317	Chemical Oxygen Demand	COD	NE	NE	NE	317	
57-74-9	Chlordane	4,7-Methano-1H-indene,1,2,4,5,6,7,8,8-	0.1	--	0.5	339	
12789-03-6	Chlordane (constituents)		NE	NE	NE	400	
5103-71-9	Chlordane, alpha	cis-Chlordane	NE	NE	NE	379	
5103-74-2	Chlordane, beta	trans-Chlordane	NE	NE	NE	378	
5566-34-7	Chlordane, gamma		NE	NE	NE	399	
16887-00-6	Chloride	Chloride				455	
SW301	Chloride		250000	--	NE	301	
108-90-7	Chlorobenzene	Benzene, chloro-	50	--	3	39	I
510-15-6	Chlorobenzilate	Benzeneacetic acid, 4-chloro-(4-	NE	NE	10	40	
75-00-3	Chloroethane; Ethyl chloride	Ethane, chloro-	3000	--	10	41	I
67-66-3	Chloroform; Trichloromethane	Methane, trichloro-	70	--	5	44	I
126-99-8	Chloroprene	1,3-Butadiene, 2-chloro-	NE	NE	20	50	
7440-47-3	Chromium	Chromium	10	--	10	51	I
218-01-9	Chrysene	Chrysene	5	--	10	52	
156-59-2	cis-1,2-Dichloroethylene; cis-1,2-	Ethene, 1,2-dichloro-,(Z)-	70	--	5	78	I
10061-01-5	cis-1,3-Dichloropropene	1-Propene, 1,3-dichloro-, (Z)-	0.4	--	1	86	I
7440-48-4	Cobalt	Cobalt	NE	1	10	53	I
SW309	Coliform (total)		1	NE	NE	309	
SW310	Color (color units)		15	NE	NE	310	
7440-50-8	Copper	Copper	1000	--	10	54	I
57-12-5	Cyanide	Cyanide	70	--	10	58	
75-99-0	Dalapon		NE	200	NE	355	
3424-82-6	DDE	o,p-DDE		0.1		472	

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CAS Number	Name	Other Names	2L Std.	GWP* Std.	SWSL**	SW ID	App I
319-86-8	delta-BHC	Cyclohexane,1,2,3,4,5,6-hexachloro-	NE	0.019	0.05	26	
SW318	Depth To Water (ft)	DTW	NE	NE	NE	318	
117-81-7	Di(2-ethylhexyl)phthalate	Di(2-ethylhexyl)phthalate, DEHP	2.5	--	NE	431	
2303-16-4	Diallate	Carbamothioic acid,bis(1-methylethyl)-,	NE	NE	10	63	
53-70-3	Dibenz[a,h]anthracene	Dibenz[a,h]anthracene	0.005	--	10	64	
132-64-9	Dibenzofuran	Dibenzofuran	NE	28	10	65	
124-48-1	Dibromochloromethane;	Methane, dibromochloro-	0.4	0.41	3	66	I
1918-00-9	Dicamba		NE	NE	NE	353	
79-43-6	Dichloroacetic Acid		NE	0.7	NE	480	
75-71-8	Dichlorodifluoromethane; CFC 12	Methane,dichlorodifluoro-	1000	--	5	74	
60-57-1	Dieldrin	2,7:3,6-Dimethanonaphth[2,3-	0.002	--	0.075	88	
84-66-2	Diethyl phthalate	1,2-Benzenedicarboxylicacid, diethyl	6000	--	10	90	
60-51-5	Dimethoate	Phosphorodithioic acid,O,O-dimethyl S-	NE	NE	20	91	
131-11-3	Dimethyl phthalate	1,2-Benzenedicarboxylicacid, dimethyl	NE	NE	10	96	
84-74-2	Di-n-butyl phthalate	1,2-Benzenedicarboxylic acid, dibutyl	700	--	10	33	
117-84-0	Di-n-octyl phthalate	1,2-Benzenedicarboxylicacid, dioctyl	100	--	10	168	
88-85-7	Dinoseb; DNBP; 2-sec-Butyl-4,6-	Phenol, 2-(1-methylpropyl)-4,6-dinitro-	NE	7	1	102	
1746-01-6	Dioxin	2,3,7,8-TCDD	0.2	NE	NE	441	
101-84-8	Diphenyl ether	Diphenyl oxide; 1,1'-Oxybisbenzene;	NE	100	NE	498	
122-39-4	Diphenylamine	Benzenamine, N-phenyl-	NE	NE	10	103	
85-00-7	Diquat			20		473	
74-82-8	Dissolved Methane	Dissolved Methane				456	
7782-44-7	Dissolved Oxygen		NE	NE	NE	356	
298-04-4	Disulfoton	Phosphorodithioic acid,O,O-diethyl S-[2-	0.3	--	10	104	
3648-20-2	Diundecyl phthalate	Santicizer 711	100	NE	NE	442	
959-98-8	Endosulfan I	6,9-Methano-2,4,3-benzodiox-	40	NE	0.1	105	
33213-65-9	Endosulfan II	6,9-Methano-2,4,3-	--	42	0.1	106	
1031-07-8	Endosulfan sulfate	6,9-Methano-2,4,3-	NE	40	0.1	107	
145-73-3	Endothall			100		474	
72-20-8	Endrin	2,7:3,6-Dimethanonaphth[2,3-b]oxirene,	2	--	0.1	108	
7421-93-4	Endrin aldehyde	1,2,4-Methenocyclo-penta[cd]pentalene-	2	--	0.1	109	
106-89-8	Epichlorohydrin		4	NE	NE	443	
74-84-0	Ethane- Dissolved		NE	NE	NE	331	
64-17-5	Ethanol	Ethyl alcohol, Ethyl hydrate,	NE	4000	NE	499	
74-85-1	Ethene- Dissolved		NE	NE	NE	332	
141-78-6	Ethyl acetate		3000	NE	NE	444	

* GWP = Groundwater Protection Last updated: 6/13/2011 8:19:15 AM

** SWSL = Solid Waste

CAS Number	Name	Other Names	2L Std.	GWP* Std.	SWSL**	SW ID	App I
97-63-2	Ethyl methacrylate	2-Propenoic acid, 2-methyl-, ethyl	NE	NE	10	112	
62-50-0	Ethyl methanesulfonate	Methanesulfonic acid,ethyl ester	NE	NE	20	113	
637-92-3	Ethyl tert-butyl ether	ETBE, Ethyl tertiary butyl ether	NE	47	NE	500	
100-41-4	Ethylbenzene	Benzene, ethyl-	600	--	1	110	I
107-21-1	ethylene glycol	ethylene glycol	10000	--	10,000	424	
52-85-7	Famphur	Phosphorothioic acid, O-[4-	NE	NE	20	114	
SW334	Ferrous Iron- Dissolved		NE	NE	NE	334	
206-44-0	Fluoranthene	Fluoranthene	300	--	10	115	
86-73-7	Fluorene	9H-Fluorene	300	--	10	116	
16984-48-8	Fluoride		2000	--	2000	312	
SW313	Foaming Agents		500	--	NE	313	
50-00-0	Formaldehyde		600	NE	NE	445	
59-89-9	gamma-BHC (Lindane)	gamma-BHC (Lindane)				457	
58-89-9	gamma-BHC; Lindane	Cyclohexane,1,2,3,4,5,6-hexachloro-	0.03	--	0.05	27	
SW314	Gross Alpha		15	NE	NE	314	
SW427	Groundwater Elevation (feet)	GW Elevation (feet)	NE	NE	NE	427	
SW319	Head (ft mean sea level)		NE	NE	NE	319	
76-44-8	Heptachlor	4,7-Methano-1H-indene,1,4,5,6,7,8,8-	0.008	--	0.05	117	
1024-57-3	Heptachlor epoxide	2,5-Methano-2H-indeno[1,2-	0.004	--	0.075	118	
142-82-5	Heptane	Heptane	400	--	NE	432	
118-74-1	Hexachlorobenzene	Benzene, hexachloro-	0.02	--	10	119	
87-68-3	Hexachlorobutadiene	1,3-Butadiene,1,1,2,3,4,4-hexachloro-	0.4	0.44	10	120	
608-73-1	Hexachlorocyclohexane isomers		0.02	NE	NE	446	
77-47-4	Hexachlorocyclopentadiene	1,3-Cyclopentadiene,1,2,3,4,5,5-	NE	50	10	121	
67-72-1	Hexachloroethane	Ethane, hexachloro-	NE	2.5	10	122	
70-30-4	Hexachlorophene		NE	NE	NE	387	
1888-71-7	Hexachloropropene	1-Propene, 1,1,2,3,3,3-hexachloro-	NE	NE	10	123	
142-62-1	Hexanoic Acid		NE	NE	NE	485	
133-74-0	Hydrogen Gas	Dissolved Hydrogen Gas	NE	NE	NE	420	
SW338	Hydrogen Sulfide		NE	NE	NE	338	
646-07-1	i-Hexonic Acid		NE	NE	NE	486	
193-39-5	Indeno(1,2,3-cd)pyrene	Indeno[1,2,3-cd]pyrene	0.05	--	10	125	
503-74-2	i-Pentanoic Acid		NE	NE	NE	488	
7439-89-6	Iron		300	--	300	340	
78-83-1	Isobutyl alcohol	1-Propanol, 2-methyl-	NE	NE	100	126	
465-73-6	Isodrin	1,4,5,8-Dimethanonaphthalene,1,2,3,4,1	NE	NE	20	127	

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78-59-1	Isophorone	2-Cyclohexen-1-one,3,5,5-trimethyl-	40	--	10	128	
108-20-3	Isopropyl ether		70	--	NE	366	
98-82-8	Isopropylbenzene		70	--	NE	367	
120-58-1	Isosafrole	1,3-Benzodioxole, 5-(1-propenyl)-	NE	NE	10	129	
143-50-0	Kepone	1,3,4-Metheno-2H-cyclobuta-	NE	NE	20	130	
SW415	Lactic Acid	Lactic Acid	NE	NE	NE	415	
SW329	Landfill Gas	LFG	NE	NE	NE	329	
7439-92-1	Lead	Lead	15	--	10	131	I
SW374	m-&p-Cresol (combined)		NE	NE	NE	374	
SW359	m-&p-Xylene (combined)		NE	NE	NE	359	
7439-95-4	Magnesium		NE	NE	NE	376	
7439-96-5	Manganese		50	--	50	342	
SW335	Manganese- Dissolved		50	--	50	335	
94-74-6	MCPA		NE	NE	NE	351	
108-39-4	m-Cresol; 3-Methylphenol	Phenol, 3-methyl-	400	--	10	345	
541-73-1	m-Dichlorobenzene; 1,3-	Benzene, 1,3-dichloro-	200	--	5	70	
99-65-0	m-Dinitrobenzene	Benzene, 1,3-dinitro-	NE	NE	20	97	
93-65-2	Mecopop, MCPP		NE	NE	NE	354	
7439-97-6	Mercury	Mercury	1	--	0.2	132	
126-98-7	Methacrylonitrile	2-Propenenitrile, 2-methyl-	NE	NE	100	133	
SW333	Methane- Dissolved		NE	NE	NE	333	
67-56-1	Methanol		4000	NE	NE	448	
91-80-5	Methapyrilene	1,2,Ethanediamine, N,N-dimethyl-N'-2-	NE	NE	100	134	
72-43-5	Methoxychlor	Benzene, 1,1'-	40	--	1	135	
72-43-5	Methoxychlor		40	NE	NE	449	
74-83-9	Methyl bromide; Bromomethane	Methane, bromo-	NE	10	10	136	I
74-87-3	Methyl chloride; Chloromethane	Methane, chloro-	3	--	1	137	I
78-93-3	Methyl ethyl ketone; MEK; 2-	2-Butanone	4000	--	100	141	I
74-88-4	Methyl iodide; Iodomethane	Methane, iodo-	NE	NE	10	142	I
108-10-1	Methyl Isobutyl Ketone			100		493	
80-62-6	Methyl methacrylate	2-Propenoic acid, 2-methyl-, methyl	NE	25	30	143	
66-27-3	Methyl methanesulfonate	Methanesulfonic acid,methyl ester	NE	NE	10	144	
298-00-0	Methyl parathion; Parathion methyl	Phosphorothioic acid,O,O-dimethyl	NE	NE	10	146	
2037-26-5	Methylbenzene		NE	NE	NE	461	
74-95-3	Methylene bromide;	Methane, dibromo-	NE	70	10	139	I
75-09-2	Methylene chloride;	Methane, dichloro-	5	--	1	140	I

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CAS Number	Name	Other Names	2L Std.	GWP* Std.	SWSL**	SW ID	App I
1634-04-4	Methyl-tert-butyl ether (MTBE)		20	--	NE	369	
99-09-2	m-Nitroaniline; 3-Nitroaniline	Benzenamine, 3-nitro-	NE	NE	50	153	
7439-98-7	Molybdenum		NE	NE	NE	397	
108-38-3	m-Xylene		NE	NE	NE	409	
91-20-3	Naphthalene	Naphthalene	6	--	10	148	
104-51-8	n-Butylbenzene		70	--	NE	361	
110-54-3	n-Hexane		400	NE	NE	447	
7440-02-0	Nickel	Nickel	100	--	50	152	I
14797-55-8	Nitrate (as N)		10000	--	10000	303	
14797-65-0	Nitrite (as N)		1000	--	1000	304	
98-95-3	Nitrobenzene	Benzene, nitro-	NE	NE	10	156	
7727-37-9	Nitrogen		NE	NE	NE	467	
55-18-5	N-Nitrosodiethylamine	Ethanamine, N-ethyl-N-nitroso-	NE	NE	20	160	
62-75-9	N-Nitrosodimethylamine	Methanamine, N-methyl-N-nitroso-	0.0007	--	10	161	
924-16-3	N-Nitrosodi-n-butylamine	1-Butanamine, N-butyl-N-nitroso-	NE	NE	10	162	
86-30-6	N-Nitrosodiphenylamine	Benzenamine, N-nitroso-N-phenyl-	NE	NE	10	163	
SW426	N-	N-	NE	NE	10	426	
SW439	N-		NE	NE	NE	439	
621-64-7	N-Nitrosodipropylamine; N-Nitroso-N-	1-Propanamine, N-nitroso-N-propyl-	NE	NE	10	164	
10595-95-6	N-Nitrosomethylethalamine	Ethanamine, N-methyl-N-nitroso-	NE	NE	10	165	
59-89-2	N-Nitrosomorpholine		NE	NE	NE	389	
100-75-4	N-Nitrosopiperidine	Piperidine, 1-nitroso-	NE	NE	20	166	
930-55-2	N-Nitrosopyrrolidine	Pyrrolidine, 1-nitroso-	NE	NE	10	167	
SW419	No2/No3 (nitrate & nitrite reported	NOX	NE	NE	NE	419	
103-65-1	n-Propylbenzene		70	NE	NE	370	
126-68-1	O,O,O-Triethyl phosphorothioate	Phosphorothioic acid,O,O,O-triethyl	NE	NE	10	207	
297-97-2	O,O-Diethyl O-2-pyrazinyl	Phosphorothioic acid,O,O-diethyl O-	NE	NE	20	89	
136777-61-2	o,p-Xylene		NE	NE	NE	460	
95-49-8	o-Chlorotoluene	2-chlorotoluene	100	NE	NE	364	
95-48-7	o-Cresol; 2-Methylphenol	Phenol, 2-methyl-	NE	400	10	56	
95-50-1	o-Dichlorobenzene; 1,2-	Benzene, 1,2-dichloro-	20	--	5	69	I
88-74-4	o-Nitroaniline; 2-Nitroaniline	Benzenamine, 2-nitro-	NE	NE	50	154	
88-75-5	o-Nitrophenol; 2-Nitrophenol	Phenol, 2-nitro-	NE	NE	10	158	
SW437	Orthophosphate Phosphorus		NE	NE	NE	437	
95-53-4	o-Toluidine	Benzenamine, 2-methyl-	NE	NE	10	197	
23135-22-0	Oxamyl		200	NE	NE	450	

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CAS Number	Name	Other Names	2L Std.	GWP* Std.	SWSL**	SW ID	App I
SW336	Oxygen Reduction Potential (mV)	ORP	NE	NE	NE	336	
96-47-6	o-Xylene		NE	NE	NE	408	
60-11-7	p-(Dimethylamino)azobenzene	Benzenamine, N,N-dimethyl-4-	NE	NE	10	92	
56-38-2	Parathion	Phosphorothioic acid,O,O-diethyl-O-(4-	NE	NE	10	169	
106-47-8	p-Chloroaniline	Benzenamine, 4-chloro-	NE	NE	20	38	
59-50-7	p-Chloro-m-cresol; 4-Chloro-3-	Phenol, 4-chloro-3-methyl-	NE	NE	20	45	
106-43-4	p-Chlorotoluene		NE	24	NE	365	
106-44-5	p-Cresol; 4-Methylphenol	Phenol, 4-methyl-	40	NE--	10	344	
99-87-6	p-Cymene		NE	25	NE	368	
106-46-7	p-Dichlorobenzene; 1,4-	Benzene, 1,4-dichloro-	6	--	1	71	I
608-93-5	Pentachlorobenzene	Benzene, pentachloro-	NE	NE	10	171	
76-01-7	Pentachloroethane		NE	NE	NE	380	
82-68-8	Pentachloronitrobenzene	Benzene,pentachloronitro-	NE	NE	20	172	
87-86-5	Pentachlorophenol	Phenol, pentachloro-	0.3	--	25	173	
109-52-4	Pentanoic Acid		NE	NE	NE	487	
7790-98-9	Perchlorate and Perchlorate Salts			2		494	
335-67-1	Perfluorooctanoic acid	PFOA, C8		2		484	
SW307	petroleum aliphatic carbon fraction class		10000	--	NE	307	
SW305	petroleum aliphatic carbon fraction class		400	--	NE	305	
SW306	petroleum aliphatic carbon fraction class		700	--	NE	306	
SW308	petroleum aromatics carbon fraction		200	--	NE	308	
SW320	pH (field)		NE	NE	NE	320	
SW321	pH (lab)		NE	NE	NE	321	
62-44-2	Phenacetin	Acetamide, N-(4-ethoxyphenyl)	NE	NE	20	174	
85-01-8	Phenanthrene	Phenanthrene	200	--	10	175	
108-95-2	Phenol	Phenol	30	--	10	177	
298-02-2	Phorate	Phosphorodithioic acid,O,O-diethyl S-	1	--	10	178	
96-91-3	Picramic Acid	2-amino-4,6-dinitiphenol	NE	0.7	NE	482	
100-01-6	p-Nitroaniline; 4-Nitroaniline	Benzenamine, 4-nitro-	NE	NE	20	155	
100-02-7	p-Nitrophenol; 4-Nitrophenol	Phenol, 4-nitro-	NE	NE	50	159	
1336-36-3	Polychlorinated biphenyls; PCBs	1,1'-Biphenyl,chloro derivatives Method	NE	0.09	2	434	
7440-09-7	Potassium		NE	NE	NE	377	
106-50-3	p-Phenylenediamine	1,4-Benzenediamine	NE	NE	10	176	
23950-58-5	Pronamide	Benzamide, 3,5-dichloro-N-(1,1-	NE	NE	10	179	
SW417	Propionic Acid	Propionic Acid	NE	NE	NE	417	
107-12-0	Propionitrile; Ethyl cyanide	Propanenitrile	NE	NE	150	180	

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CAS Number	Name	Other Names	2L Std.	GWP* Std.	SWSL**	SW ID	App I
57-55-6	Propylene Glycol		NE	140,000	NE	507	
106-42-3	p-Xylene		NE	NE	NE	410	
129-00-0	Pyrene	Pyrene	200	--	10	181	
110-86-1	Pyridine		NE	7	NE	391	
SW414	Pyruvic Acid	Pyruvic Acid	NE	NE	NE	414	
94-59-7	Safrole	1,3-Benzodioxole, 5-(2-propenyl)-	NE	NE	10	182	
135-98-8	sec-Butylbenzene		70	--	NE	362	
7782-49-2	Selenium	Selenium	20	--	10	183	I
7440-22-4	Silver	Silver	20	--	10	184	I
93-72-1	Silvex; 2,4,5-TP	Propanoic acid, 2-(2,4,5-	50	--	2	185	
122-34-9	Simazine		4	NE	NE	451	
7440-23-5	Sodium		NE	20000	NE	322	
SW323	SpecCond (field)		NE	NE	NE	323	
SW324	SpecCond (lab)		NE	NE	NE	324	
7440-24-6	Strontium		NE	NE	NE	465	
100-42-5	Styrene	Benzene, ethenyl-	70	--	1	186	I
14808-79-8	Sulfate		250000	--	250000	315	
18496-25-8	Sulfide	Sulfide	NE	NE	1000	187	
3689-24-5	Sulfotep		NE	NE	NE	392	
99-35-4	sym-Trinitrobenzene	Benzene, 1,3,5-trinitro-	NE	NE	10	208	
SW325	Temp (oC)		NE	NE	NE	325	
994-05-8	tert-Amyl methyl ether	TAME, 2-methoxy-2-methylbutane	NE	128	NE	504	
98-06-6	tert-Butylbenzene		70	--	NE	363	
75-65-0	Tertiary Butyl Alcohol	tert-butanol	NE	10	NE	505	
127-18-4	Tetrachloroethylene; Tetrachloroethene;	Ethene, tetrachloro-	0.7	--	1	192	I
109-99-9	Tetrahydrofuran		NE	NE	NE	458	
7440-28-0	Thallium	Thallium	NE	0.28	5.5	194	I
7440-31-5	Tin	Tin	NE	2000	100	195	
108-88-3	Toluene	Benzene, methyl-	600	--	1	196	I
SW328	Top Of Casing (ft mean sea level)	TOC	NE	NE	NE	328	
SW425	Total BHC		NE	0.019	NE	425	
SW311	Total Dissolved Solids	TDS	500000	--	NE	311	
SW436	Total Fatty Acids	Total Fatty Acids	NE	NE	NE	436	
E-10195	Total Organic Carbon		NE	NE	NE	357	
SW396	Total Organic Halides		NE	NE	NE	396	
7723-14-0	Total Phosphorus	Total Phosphorus	NE	NE	NE	412	

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CAS Number	Name	Other Names	2L Std.	GWP* Std.	SWSL**	SW ID	App I
SW343	Total Suspended Solids		NE	NE	NE	343	
SW411	Total Well Depth (ft)	TD	NE	NE	NE	411	
8001-35-2	Toxaphene	Toxaphene	0.03	--	1.5	198	
156-60-5	trans-1,2-Dichloroethylene; trans-1,2-	Ethene, 1,2-dichloro-,(E)-	100	--	5	79	I
10061-02-6	trans-1,3-Dichloropropene	1-Propene, 1,3-dichloro-, (E)-	0.4	--	1	87	I
110-57-6	trans-1,4-Dichloro-2-butene	2-Butene, 1,4-dichloro-, (E)-	NE	NE	100	73	I
79-01-6	Trichloroethylene; Trichloroethene	Ethene, trichloro-	3	--	1	201	I
75-69-4	Trichlorofluoromethane; CFC-11	Methane,trichlorofluoro-	2000	--	1	203	I
SW330	Turbidity		NE	NE	NE	330	
7440-62-2	Vanadium	Vanadium	NE	0.3	25	209	I
108-05-4	Vinyl acetate	Acetic acid, ethenylester	NE	88	50	210	I
75-01-4	Vinyl chloride; Chloroethene	Ethene, chloro-	0.03	--	1	211	I
1330-20-7	Xylene (total)	(o-,m-,and p-, Benzene, dimethyl	500	--	5	346	I
7440-66-6	Zinc	Zinc	1000	--	10	213	I

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N.C. Department of Environment and Natural Resources
1601 Mail Service Center, Raleigh, NC 27699-1601
Headquarters (Environment and Natural Resources Building): 217 W. Jones St.
Archdale Building: 512 N. Salisbury St.
Toll Free: (877) 623-6748

ATTACHMENT 3

Laboratory Analytical Results

Pace Analytical Services, Inc.

Pace Analytical Services, Inc.
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

December 14, 2014

Mr. Michael Cobb
SCS Engineers
2520 Whitehall Park Drive
Suite 450
Charlotte, NC 28273

RE: Project: Anson Co LF GW 02209366.04
Pace Project No.: 92226779

Dear Mr. Cobb:
Enclosed are the analytical results for sample(s) received by the laboratory on November 21, 2014. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

Analyses were performed at the Pace Analytical Services location indicated on the sample analyte page for analysis unless otherwise footnoted.

Some analyses have been subcontracted outside of the Pace Network. The subcontracted laboratory report has been attached.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Kevin Godwin
kevin.godwin@pacelabs.com
Project Manager

Enclosures

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Pace Analytical Services, Inc.
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

CERTIFICATIONS

Project: Anson Co LF GW 02209366.04
Pace Project No.: 92226779

Charlotte Certification IDs

9800 Kincey Ave. Ste 100, Huntersville, NC 28078
North Carolina Drinking Water Certification #: 37706
North Carolina Field Services Certification #: 5342
North Carolina Wastewater Certification #: 12
South Carolina Certification #: 99006001
Florida/NELAP Certification #: E87627
Kentucky UST Certification #: 84
West Virginia Certification #: 357
Virginia/VELAP Certification #: 460221

Asheville Certification IDs

2225 Riverside Drive, Asheville, NC 28804
Florida/NELAP Certification #: E87648
Massachusetts Certification #: M-NC030
North Carolina Drinking Water Certification #: 37712
North Carolina Wastewater Certification #: 40
South Carolina Certification #: 99030001
West Virginia Certification #: 356
Virginia/VELAP Certification #: 460222

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9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

SAMPLE ANALYTE COUNT

Project: Anson Co LF GW 02209366.04
Pace Project No.: 92226779

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92226779001	**GW-1**	EPA 6010	JMW	15	PASI-A
		EPA 7470	HVK	1	PASI-A
		EPA 8260	GAW	50	PASI-C
		SM 4500-S2D	JTJ	1	PASI-A
		SM 5210B	SER	1	PASI-A
		EPA 300.0	AES2	2	PASI-A
		EPA 353.2	DMN	1	PASI-A
		SM 4500-Cl-E	SER	1	PASI-A
		SM 5220D	JTJ	1	PASI-A
		SM 5310B	AES2	1	PASI-A
92226779002	**GW-2**	EPA 6010	JMW	15	PASI-A
		EPA 7470	HVK	1	PASI-A
		EPA 8260	GAW	50	PASI-C
		SM 4500-S2D	JTJ	1	PASI-A
		SM 5210B	SER	1	PASI-A
		EPA 300.0	AES2	2	PASI-A
		EPA 353.2	DMN	1	PASI-A
		SM 4500-Cl-E	SER	1	PASI-A
		SM 5220D	JTJ	1	PASI-A
		SM 5310B	AES2	1	PASI-A
92226779003	**GW-3**	EPA 6010	JMW	15	PASI-A
		EPA 7470	HVK	1	PASI-A
		EPA 8260	GAW	50	PASI-C
		SM 4500-S2D	JTJ	1	PASI-A
		SM 5210B	SER	1	PASI-A
		EPA 300.0	AES2	2	PASI-A
		EPA 353.2	DMN	1	PASI-A
		SM 4500-Cl-E	SER	1	PASI-A
		SM 5220D	JTJ	1	PASI-A
		SM 5310B	AES2	1	PASI-A
92226779004	**GW-4**	EPA 6010	JMW	15	PASI-A
		EPA 7470	HVK	1	PASI-A
		EPA 8260	GAW	50	PASI-C
		SM 4500-S2D	JTJ	1	PASI-A
		SM 5210B	SER	1	PASI-A
		EPA 300.0	AES2	2	PASI-A
		EPA 353.2	DMN	1	PASI-A

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SAMPLE ANALYTE COUNT

Project: Anson Co LF GW 02209366.04
Pace Project No.: 92226779

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		SM 4500-Cl-E	SER	1	PASI-A
		SM 5220D	JTJ	1	PASI-A
		SM 5310B	AES2	1	PASI-A

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ANALYTICAL RESULTS

Project: Anson Co LF GW 02209366.04
Pace Project No.: 92226779

Sample: GW-1 **Lab ID: 92226779001** Collected: 11/20/14 12:55 Received: 11/21/14 15:25 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 ICP Groundwater	Analytical Method: EPA 6010 Preparation Method: EPA 3010							
Antimony	ND	ug/L	5.0	1	11/24/14 16:20	11/25/14 19:03	7440-36-0	
Arsenic	ND	ug/L	10.0	1	11/24/14 16:20	11/25/14 19:03	7440-38-2	
Barium	**62.8**	ug/L	5.0	1	11/24/14 16:20	11/25/14 19:03	7440-39-3	
Beryllium	ND	ug/L	1.0	1	11/24/14 16:20	11/25/14 19:03	7440-41-7	
Cadmium	ND	ug/L	1.0	1	11/24/14 16:20	11/25/14 19:03	7440-43-9	
Chromium	ND	ug/L	5.0	1	11/24/14 16:20	11/25/14 19:03	7440-47-3	
Cobalt	ND	ug/L	5.0	1	11/24/14 16:20	11/25/14 19:03	7440-48-4	
Copper	ND	ug/L	5.0	1	11/24/14 16:20	11/25/14 19:03	7440-50-8	
Lead	ND	ug/L	5.0	1	11/24/14 16:20	11/25/14 19:03	7439-92-1	
Nickel	ND	ug/L	5.0	1	11/24/14 16:20	11/25/14 19:03	7440-02-0	
Selenium	ND	ug/L	10.0	1	11/24/14 16:20	11/25/14 19:03	7782-49-2	
Silver	ND	ug/L	5.0	1	11/24/14 16:20	11/25/14 19:03	7440-22-4	
Thallium	ND	ug/L	5.4	1	11/24/14 16:20	11/25/14 19:03	7440-28-0	
Vanadium	ND	ug/L	5.0	1	11/24/14 16:20	11/25/14 19:03	7440-62-2	
Zinc	ND	ug/L	10.0	1	11/24/14 16:20	11/25/14 19:03	7440-66-6	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470							
Mercury	ND	ug/L	0.20	1	11/22/14 14:00	11/24/14 14:37	7439-97-6	
8260 MSV Low Level Landfill	Analytical Method: EPA 8260							
Acetone	ND	ug/L	25.0	1		11/25/14 17:53	67-64-1	
Acrylonitrile	ND	ug/L	10.0	1		11/25/14 17:53	107-13-1	
Benzene	ND	ug/L	1.0	1		11/25/14 17:53	71-43-2	
Bromochloromethane	ND	ug/L	1.0	1		11/25/14 17:53	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		11/25/14 17:53	75-27-4	
Bromoform	ND	ug/L	1.0	1		11/25/14 17:53	75-25-2	
Bromomethane	ND	ug/L	2.0	1		11/25/14 17:53	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	1		11/25/14 17:53	78-93-3	
Carbon disulfide	ND	ug/L	2.0	1		11/25/14 17:53	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	1		11/25/14 17:53	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		11/25/14 17:53	108-90-7	
Chloroethane	ND	ug/L	1.0	1		11/25/14 17:53	75-00-3	
Chloroform	ND	ug/L	1.0	1		11/25/14 17:53	67-66-3	
Chloromethane	ND	ug/L	1.0	1		11/25/14 17:53	74-87-3	
1,2-Dibromo-3-chloropropane	ND	ug/L	2.0	1		11/25/14 17:53	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	1		11/25/14 17:53	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		11/25/14 17:53	106-93-4	
Dibromomethane	ND	ug/L	1.0	1		11/25/14 17:53	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		11/25/14 17:53	95-50-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		11/25/14 17:53	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	1.0	1		11/25/14 17:53	110-57-6	
1,1-Dichloroethane	ND	ug/L	1.0	1		11/25/14 17:53	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		11/25/14 17:53	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		11/25/14 17:53	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		11/25/14 17:53	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		11/25/14 17:53	156-60-5	

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ANALYTICAL RESULTS

Project: Anson Co LF GW 02209366.04
Pace Project No.: 92226779

Sample: GW-1 **Lab ID: 92226779001** Collected: 11/20/14 12:55 Received: 11/21/14 15:25 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level Landfill	Analytical Method: EPA 8260							
1,2-Dichloropropane	ND	ug/L	1.0	1		11/25/14 17:53	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		11/25/14 17:53	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		11/25/14 17:53	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	1		11/25/14 17:53	100-41-4	
2-Hexanone	ND	ug/L	5.0	1		11/25/14 17:53	591-78-6	
Iodomethane	ND	ug/L	5.0	1		11/25/14 17:53	74-88-4	
Methylene Chloride	ND	ug/L	1.0	1		11/25/14 17:53	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	1		11/25/14 17:53	108-10-1	
Styrene	ND	ug/L	1.0	1		11/25/14 17:53	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		11/25/14 17:53	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		11/25/14 17:53	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		11/25/14 17:53	127-18-4	
Toluene	ND	ug/L	1.0	1		11/25/14 17:53	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		11/25/14 17:53	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		11/25/14 17:53	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		11/25/14 17:53	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		11/25/14 17:53	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	1		11/25/14 17:53	96-18-4	
Vinyl acetate	ND	ug/L	2.0	1		11/25/14 17:53	108-05-4	
Vinyl chloride	ND	ug/L	1.0	1		11/25/14 17:53	75-01-4	
Xylene (Total)	ND	ug/L	2.0	1		11/25/14 17:53	1330-20-7	
Surrogates								
4-Bromofluorobenzene (S)	98	%	70-130	1		11/25/14 17:53	460-00-4	
1,2-Dichloroethane-d4 (S)	104	%	70-130	1		11/25/14 17:53	17060-07-0	
Toluene-d8 (S)	102	%	70-130	1		11/25/14 17:53	2037-26-5	
4500S2D Sulfide Water	Analytical Method: SM 4500-S2D							
Sulfide	ND	mg/L	0.10	1		11/24/14 16:30	18496-25-8	
5210B BOD, 5 day	Analytical Method: SM 5210B							
BOD, 5 day	**3.6**	mg/L	2.0	1	11/22/14 03:40	11/27/14 05:00		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0							
Fluoride	ND	mg/L	0.50	1		12/10/14 20:58	16984-48-8	
Sulfate	ND	mg/L	2.0	1		12/10/14 20:58	14808-79-8	
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2							
Nitrogen, Nitrate	ND	mg/L	0.020	1		11/22/14 00:46		
4500 Chloride	Analytical Method: SM 4500-Cl-E							
Chloride	**9.6**	mg/L	1.0	1		12/03/14 04:10	16887-00-6	
5220D COD	Analytical Method: SM 5220D							
Chemical Oxygen Demand	**32.0**	mg/L	25.0	1		12/02/14 16:00		M1

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ANALYTICAL RESULTS

Project: Anson Co LF GW 02209366.04
Pace Project No.: 92226779

Sample: GW-1 **Lab ID: 92226779001** Collected: 11/20/14 12:55 Received: 11/21/14 15:25 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
5310B TOC	Analytical Method: SM 5310B							
Total Organic Carbon	**4.8**	mg/L	1.0	1		12/04/14 03:16	7440-44-0	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Anson Co LF GW 02209366.04
Pace Project No.: 92226779

Sample: GW-2 **Lab ID: 92226779002** Collected: 11/20/14 15:20 Received: 11/21/14 15:25 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 ICP Groundwater	Analytical Method: EPA 6010 Preparation Method: EPA 3010							
Antimony	ND	ug/L	5.0	1	11/24/14 16:20	11/25/14 19:06	7440-36-0	
Arsenic	ND	ug/L	10.0	1	11/24/14 16:20	11/25/14 19:06	7440-38-2	
Barium	**18.4**	ug/L	5.0	1	11/24/14 16:20	11/25/14 19:06	7440-39-3	
Beryllium	ND	ug/L	1.0	1	11/24/14 16:20	11/25/14 19:06	7440-41-7	
Cadmium	ND	ug/L	1.0	1	11/24/14 16:20	11/25/14 19:06	7440-43-9	
Chromium	ND	ug/L	5.0	1	11/24/14 16:20	11/25/14 19:06	7440-47-3	
Cobalt	ND	ug/L	5.0	1	11/24/14 16:20	11/25/14 19:06	7440-48-4	
Copper	ND	ug/L	5.0	1	11/24/14 16:20	11/25/14 19:06	7440-50-8	
Lead	ND	ug/L	5.0	1	11/24/14 16:20	11/25/14 19:06	7439-92-1	
Nickel	ND	ug/L	5.0	1	11/24/14 16:20	11/25/14 19:06	7440-02-0	
Selenium	ND	ug/L	10.0	1	11/24/14 16:20	11/25/14 19:06	7782-49-2	
Silver	ND	ug/L	5.0	1	11/24/14 16:20	11/25/14 19:06	7440-22-4	
Thallium	ND	ug/L	5.4	1	11/24/14 16:20	11/25/14 19:06	7440-28-0	
Vanadium	ND	ug/L	5.0	1	11/24/14 16:20	11/25/14 19:06	7440-62-2	
Zinc	ND	ug/L	10.0	1	11/24/14 16:20	11/25/14 19:06	7440-66-6	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470							
Mercury	ND	ug/L	0.20	1	11/22/14 14:00	11/24/14 14:40	7439-97-6	
8260 MSV Low Level Landfill	Analytical Method: EPA 8260							
Acetone	ND	ug/L	25.0	1		11/25/14 18:10	67-64-1	
Acrylonitrile	ND	ug/L	10.0	1		11/25/14 18:10	107-13-1	
Benzene	ND	ug/L	1.0	1		11/25/14 18:10	71-43-2	
Bromochloromethane	ND	ug/L	1.0	1		11/25/14 18:10	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		11/25/14 18:10	75-27-4	
Bromoform	ND	ug/L	1.0	1		11/25/14 18:10	75-25-2	
Bromomethane	ND	ug/L	2.0	1		11/25/14 18:10	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	1		11/25/14 18:10	78-93-3	
Carbon disulfide	ND	ug/L	2.0	1		11/25/14 18:10	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	1		11/25/14 18:10	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		11/25/14 18:10	108-90-7	
Chloroethane	ND	ug/L	1.0	1		11/25/14 18:10	75-00-3	
Chloroform	ND	ug/L	1.0	1		11/25/14 18:10	67-66-3	
Chloromethane	ND	ug/L	1.0	1		11/25/14 18:10	74-87-3	
1,2-Dibromo-3-chloropropane	ND	ug/L	2.0	1		11/25/14 18:10	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	1		11/25/14 18:10	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		11/25/14 18:10	106-93-4	
Dibromomethane	ND	ug/L	1.0	1		11/25/14 18:10	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		11/25/14 18:10	95-50-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		11/25/14 18:10	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	1.0	1		11/25/14 18:10	110-57-6	
1,1-Dichloroethane	ND	ug/L	1.0	1		11/25/14 18:10	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		11/25/14 18:10	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		11/25/14 18:10	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		11/25/14 18:10	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		11/25/14 18:10	156-60-5	

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ANALYTICAL RESULTS

Project: Anson Co LF GW 02209366.04
Pace Project No.: 92226779

Sample: GW-2 **Lab ID: 92226779002** Collected: 11/20/14 15:20 Received: 11/21/14 15:25 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level Landfill	Analytical Method: EPA 8260							
1,2-Dichloropropane	ND	ug/L	1.0	1		11/25/14 18:10	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		11/25/14 18:10	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		11/25/14 18:10	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	1		11/25/14 18:10	100-41-4	
2-Hexanone	ND	ug/L	5.0	1		11/25/14 18:10	591-78-6	
Iodomethane	ND	ug/L	5.0	1		11/25/14 18:10	74-88-4	
Methylene Chloride	ND	ug/L	1.0	1		11/25/14 18:10	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	1		11/25/14 18:10	108-10-1	
Styrene	ND	ug/L	1.0	1		11/25/14 18:10	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		11/25/14 18:10	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		11/25/14 18:10	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		11/25/14 18:10	127-18-4	
Toluene	ND	ug/L	1.0	1		11/25/14 18:10	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		11/25/14 18:10	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		11/25/14 18:10	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		11/25/14 18:10	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		11/25/14 18:10	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	1		11/25/14 18:10	96-18-4	
Vinyl acetate	ND	ug/L	2.0	1		11/25/14 18:10	108-05-4	
Vinyl chloride	ND	ug/L	1.0	1		11/25/14 18:10	75-01-4	
Xylene (Total)	ND	ug/L	2.0	1		11/25/14 18:10	1330-20-7	
Surrogates								
4-Bromofluorobenzene (S)	101	%	70-130	1		11/25/14 18:10	460-00-4	
1,2-Dichloroethane-d4 (S)	104	%	70-130	1		11/25/14 18:10	17060-07-0	
Toluene-d8 (S)	102	%	70-130	1		11/25/14 18:10	2037-26-5	
4500S2D Sulfide Water	Analytical Method: SM 4500-S2D							
Sulfide	ND	mg/L	0.10	1		11/24/14 16:30	18496-25-8	
5210B BOD, 5 day	Analytical Method: SM 5210B							
BOD, 5 day	ND	mg/L	2.0	1	11/22/14 03:40	11/27/14 05:00		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0							
Fluoride	ND	mg/L	0.50	1		12/10/14 21:31	16984-48-8	
Sulfate	**2.4**	mg/L	2.0	1		12/10/14 21:31	14808-79-8	
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2							
Nitrogen, Nitrate	ND	mg/L	0.020	1		11/22/14 00:53		
4500 Chloride	Analytical Method: SM 4500-Cl-E							
Chloride	**4.3**	mg/L	1.0	1		12/03/14 04:11	16887-00-6	
5220D COD	Analytical Method: SM 5220D							
Chemical Oxygen Demand	ND	mg/L	25.0	1		12/02/14 16:00		

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ANALYTICAL RESULTS

Project: Anson Co LF GW 02209366.04
Pace Project No.: 92226779

Sample: GW-2 **Lab ID: 92226779002** Collected: 11/20/14 15:20 Received: 11/21/14 15:25 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
5310B TOC	Analytical Method: SM 5310B							
Total Organic Carbon	**1.6**	mg/L	1.0	1		12/04/14 03:27	7440-44-0	

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ANALYTICAL RESULTS

Project: Anson Co LF GW 02209366.04
Pace Project No.: 92226779

Sample: GW-3 **Lab ID: 92226779003** Collected: 11/20/14 16:35 Received: 11/21/14 15:25 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 ICP Groundwater	Analytical Method: EPA 6010 Preparation Method: EPA 3010							
Antimony	ND	ug/L	5.0	1	11/26/14 10:30	11/26/14 19:25	7440-36-0	
Arsenic	ND	ug/L	10.0	1	11/26/14 10:30	11/26/14 19:25	7440-38-2	
Barium	**18.6**	ug/L	5.0	1	11/26/14 10:30	11/26/14 19:25	7440-39-3	
Beryllium	ND	ug/L	1.0	1	11/26/14 10:30	11/26/14 19:25	7440-41-7	
Cadmium	ND	ug/L	1.0	1	11/26/14 10:30	11/26/14 19:25	7440-43-9	
Chromium	ND	ug/L	5.0	1	11/26/14 10:30	11/26/14 19:25	7440-47-3	
Cobalt	ND	ug/L	5.0	1	11/26/14 10:30	11/26/14 19:25	7440-48-4	
Copper	ND	ug/L	5.0	1	11/26/14 10:30	11/26/14 19:25	7440-50-8	
Lead	ND	ug/L	5.0	1	11/26/14 10:30	11/26/14 19:25	7439-92-1	
Nickel	ND	ug/L	5.0	1	11/26/14 10:30	11/26/14 19:25	7440-02-0	
Selenium	ND	ug/L	10.0	1	11/26/14 10:30	11/26/14 19:25	7782-49-2	
Silver	ND	ug/L	5.0	1	11/26/14 10:30	11/26/14 19:25	7440-22-4	
Thallium	ND	ug/L	5.4	1	11/26/14 10:30	11/26/14 19:25	7440-28-0	
Vanadium	ND	ug/L	5.0	1	11/26/14 10:30	11/26/14 19:25	7440-62-2	
Zinc	ND	ug/L	10.0	1	11/26/14 10:30	11/26/14 19:25	7440-66-6	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470							
Mercury	ND	ug/L	0.20	1	11/22/14 14:00	11/24/14 14:43	7439-97-6	
8260 MSV Low Level Landfill	Analytical Method: EPA 8260							
Acetone	ND	ug/L	25.0	1		11/25/14 18:26	67-64-1	
Acrylonitrile	ND	ug/L	10.0	1		11/25/14 18:26	107-13-1	
Benzene	ND	ug/L	1.0	1		11/25/14 18:26	71-43-2	
Bromochloromethane	ND	ug/L	1.0	1		11/25/14 18:26	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		11/25/14 18:26	75-27-4	
Bromoform	ND	ug/L	1.0	1		11/25/14 18:26	75-25-2	
Bromomethane	ND	ug/L	2.0	1		11/25/14 18:26	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	1		11/25/14 18:26	78-93-3	
Carbon disulfide	ND	ug/L	2.0	1		11/25/14 18:26	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	1		11/25/14 18:26	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		11/25/14 18:26	108-90-7	
Chloroethane	ND	ug/L	1.0	1		11/25/14 18:26	75-00-3	
Chloroform	ND	ug/L	1.0	1		11/25/14 18:26	67-66-3	
Chloromethane	ND	ug/L	1.0	1		11/25/14 18:26	74-87-3	
1,2-Dibromo-3-chloropropane	ND	ug/L	2.0	1		11/25/14 18:26	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	1		11/25/14 18:26	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		11/25/14 18:26	106-93-4	
Dibromomethane	ND	ug/L	1.0	1		11/25/14 18:26	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		11/25/14 18:26	95-50-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		11/25/14 18:26	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	1.0	1		11/25/14 18:26	110-57-6	
1,1-Dichloroethane	ND	ug/L	1.0	1		11/25/14 18:26	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		11/25/14 18:26	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		11/25/14 18:26	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		11/25/14 18:26	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		11/25/14 18:26	156-60-5	

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ANALYTICAL RESULTS

Project: Anson Co LF GW 02209366.04
Pace Project No.: 92226779

Sample: GW-3 **Lab ID: 92226779003** Collected: 11/20/14 16:35 Received: 11/21/14 15:25 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level Landfill	Analytical Method: EPA 8260							
1,2-Dichloropropane	ND	ug/L	1.0	1		11/25/14 18:26	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		11/25/14 18:26	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		11/25/14 18:26	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	1		11/25/14 18:26	100-41-4	
2-Hexanone	ND	ug/L	5.0	1		11/25/14 18:26	591-78-6	
Iodomethane	ND	ug/L	5.0	1		11/25/14 18:26	74-88-4	
Methylene Chloride	ND	ug/L	1.0	1		11/25/14 18:26	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	1		11/25/14 18:26	108-10-1	
Styrene	ND	ug/L	1.0	1		11/25/14 18:26	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		11/25/14 18:26	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		11/25/14 18:26	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		11/25/14 18:26	127-18-4	
Toluene	ND	ug/L	1.0	1		11/25/14 18:26	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		11/25/14 18:26	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		11/25/14 18:26	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		11/25/14 18:26	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		11/25/14 18:26	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	1		11/25/14 18:26	96-18-4	
Vinyl acetate	ND	ug/L	2.0	1		11/25/14 18:26	108-05-4	
Vinyl chloride	ND	ug/L	1.0	1		11/25/14 18:26	75-01-4	
Xylene (Total)	ND	ug/L	2.0	1		11/25/14 18:26	1330-20-7	
Surrogates								
4-Bromofluorobenzene (S)	97	%	70-130	1		11/25/14 18:26	460-00-4	
1,2-Dichloroethane-d4 (S)	102	%	70-130	1		11/25/14 18:26	17060-07-0	
Toluene-d8 (S)	102	%	70-130	1		11/25/14 18:26	2037-26-5	
4500S2D Sulfide Water	Analytical Method: SM 4500-S2D							
Sulfide	ND	mg/L	0.10	1		11/24/14 16:30	18496-25-8	
5210B BOD, 5 day	Analytical Method: SM 5210B							
BOD, 5 day	ND	mg/L	2.0	1	11/22/14 03:40	11/27/14 05:00		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0							
Fluoride	ND	mg/L	0.50	1		12/10/14 23:08	16984-48-8	
Sulfate	**3.5**	mg/L	2.0	1		12/10/14 23:08	14808-79-8	
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2							
Nitrogen, Nitrate	ND	mg/L	0.020	1		11/22/14 00:58		
4500 Chloride	Analytical Method: SM 4500-Cl-E							
Chloride	**3.9**	mg/L	1.0	1		12/03/14 04:12	16887-00-6	
5220D COD	Analytical Method: SM 5220D							
Chemical Oxygen Demand	**88.0**	mg/L	25.0	1		12/02/14 16:00		

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ANALYTICAL RESULTS

Project: Anson Co LF GW 02209366.04
Pace Project No.: 92226779

Sample: GW-3 **Lab ID: 92226779003** Collected: 11/20/14 16:35 Received: 11/21/14 15:25 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
5310B TOC	Analytical Method: SM 5310B							
Total Organic Carbon	ND	mg/L	1.0	1		12/04/14 03:37	7440-44-0	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Anson Co LF GW 02209366.04
Pace Project No.: 92226779

Sample: GW-4 **Lab ID: 92226779004** Collected: 11/20/14 17:25 Received: 11/21/14 15:25 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 ICP Groundwater	Analytical Method: EPA 6010 Preparation Method: EPA 3010							
Antimony	ND	ug/L	5.0	1	11/26/14 10:30	11/26/14 19:43	7440-36-0	
Arsenic	ND	ug/L	10.0	1	11/26/14 10:30	11/26/14 19:43	7440-38-2	
Barium	**40.3**	ug/L	5.0	1	11/26/14 10:30	11/26/14 19:43	7440-39-3	
Beryllium	ND	ug/L	1.0	1	11/26/14 10:30	11/26/14 19:43	7440-41-7	
Cadmium	ND	ug/L	1.0	1	11/26/14 10:30	11/26/14 19:43	7440-43-9	
Chromium	ND	ug/L	5.0	1	11/26/14 10:30	11/26/14 19:43	7440-47-3	
Cobalt	ND	ug/L	5.0	1	11/26/14 10:30	11/26/14 19:43	7440-48-4	
Copper	ND	ug/L	5.0	1	11/26/14 10:30	11/26/14 19:43	7440-50-8	
Lead	ND	ug/L	5.0	1	11/26/14 10:30	11/26/14 19:43	7439-92-1	
Nickel	ND	ug/L	5.0	1	11/26/14 10:30	11/26/14 19:43	7440-02-0	
Selenium	ND	ug/L	10.0	1	11/26/14 10:30	11/26/14 19:43	7782-49-2	
Silver	ND	ug/L	5.0	1	11/26/14 10:30	11/26/14 19:43	7440-22-4	
Thallium	ND	ug/L	5.4	1	11/26/14 10:30	11/26/14 19:43	7440-28-0	
Vanadium	ND	ug/L	5.0	1	11/26/14 10:30	11/26/14 19:43	7440-62-2	
Zinc	**13.5**	ug/L	10.0	1	11/26/14 10:30	11/26/14 19:43	7440-66-6	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470							
Mercury	ND	ug/L	0.20	1	11/22/14 14:00	11/24/14 14:46	7439-97-6	
8260 MSV Low Level Landfill	Analytical Method: EPA 8260							
Acetone	ND	ug/L	25.0	1		11/25/14 18:42	67-64-1	
Acrylonitrile	ND	ug/L	10.0	1		11/25/14 18:42	107-13-1	
Benzene	ND	ug/L	1.0	1		11/25/14 18:42	71-43-2	
Bromochloromethane	ND	ug/L	1.0	1		11/25/14 18:42	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		11/25/14 18:42	75-27-4	
Bromoform	ND	ug/L	1.0	1		11/25/14 18:42	75-25-2	
Bromomethane	ND	ug/L	2.0	1		11/25/14 18:42	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	1		11/25/14 18:42	78-93-3	
Carbon disulfide	ND	ug/L	2.0	1		11/25/14 18:42	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	1		11/25/14 18:42	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		11/25/14 18:42	108-90-7	
Chloroethane	ND	ug/L	1.0	1		11/25/14 18:42	75-00-3	
Chloroform	ND	ug/L	1.0	1		11/25/14 18:42	67-66-3	
Chloromethane	ND	ug/L	1.0	1		11/25/14 18:42	74-87-3	
1,2-Dibromo-3-chloropropane	ND	ug/L	2.0	1		11/25/14 18:42	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	1		11/25/14 18:42	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		11/25/14 18:42	106-93-4	
Dibromomethane	ND	ug/L	1.0	1		11/25/14 18:42	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		11/25/14 18:42	95-50-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		11/25/14 18:42	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	1.0	1		11/25/14 18:42	110-57-6	
1,1-Dichloroethane	ND	ug/L	1.0	1		11/25/14 18:42	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		11/25/14 18:42	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		11/25/14 18:42	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		11/25/14 18:42	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		11/25/14 18:42	156-60-5	

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ANALYTICAL RESULTS

Project: Anson Co LF GW 02209366.04
Pace Project No.: 92226779

Sample: GW-4 **Lab ID: 92226779004** Collected: 11/20/14 17:25 Received: 11/21/14 15:25 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level Landfill	Analytical Method: EPA 8260							
1,2-Dichloropropane	ND	ug/L	1.0	1		11/25/14 18:42	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		11/25/14 18:42	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		11/25/14 18:42	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	1		11/25/14 18:42	100-41-4	
2-Hexanone	ND	ug/L	5.0	1		11/25/14 18:42	591-78-6	
Iodomethane	ND	ug/L	5.0	1		11/25/14 18:42	74-88-4	
Methylene Chloride	ND	ug/L	1.0	1		11/25/14 18:42	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	1		11/25/14 18:42	108-10-1	
Styrene	ND	ug/L	1.0	1		11/25/14 18:42	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		11/25/14 18:42	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		11/25/14 18:42	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		11/25/14 18:42	127-18-4	
Toluene	ND	ug/L	1.0	1		11/25/14 18:42	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		11/25/14 18:42	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		11/25/14 18:42	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		11/25/14 18:42	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		11/25/14 18:42	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	1		11/25/14 18:42	96-18-4	
Vinyl acetate	ND	ug/L	2.0	1		11/25/14 18:42	108-05-4	
Vinyl chloride	ND	ug/L	1.0	1		11/25/14 18:42	75-01-4	
Xylene (Total)	ND	ug/L	2.0	1		11/25/14 18:42	1330-20-7	
Surrogates								
4-Bromofluorobenzene (S)	97	%	70-130	1		11/25/14 18:42	460-00-4	
1,2-Dichloroethane-d4 (S)	101	%	70-130	1		11/25/14 18:42	17060-07-0	
Toluene-d8 (S)	103	%	70-130	1		11/25/14 18:42	2037-26-5	
4500S2D Sulfide Water	Analytical Method: SM 4500-S2D							
Sulfide	ND	mg/L	0.10	1		11/24/14 16:30	18496-25-8	
5210B BOD, 5 day	Analytical Method: SM 5210B							
BOD, 5 day	ND	mg/L	2.0	1	11/22/14 03:40	11/27/14 05:00		B2
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0							
Fluoride	ND	mg/L	0.50	1		12/10/14 23:40	16984-48-8	
Sulfate	**2.7**	mg/L	2.0	1		12/10/14 23:40	14808-79-8	
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2							
Nitrogen, Nitrate	ND	mg/L	0.020	1		11/22/14 01:08		
4500 Chloride	Analytical Method: SM 4500-Cl-E							
Chloride	**2.0**	mg/L	1.0	1		12/03/14 04:12	16887-00-6	
5220D COD	Analytical Method: SM 5220D							
Chemical Oxygen Demand	ND	mg/L	25.0	1		12/02/14 16:00		

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ANALYTICAL RESULTS

Project: Anson Co LF GW 02209366.04
Pace Project No.: 92226779

Sample: GW-4 **Lab ID: 92226779004** Collected: 11/20/14 17:25 Received: 11/21/14 15:25 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
5310B TOC	Analytical Method: SM 5310B							
Total Organic Carbon	ND	mg/L	1.0	1		12/04/14 03:57	7440-44-0	

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QUALITY CONTROL DATA

Project: Anson Co LF GW 02209366.04
Pace Project No.: 92226779

QC Batch: MERP/7338 Analysis Method: EPA 7470
QC Batch Method: EPA 7470 Analysis Description: 7470 Mercury
Associated Lab Samples: 92226779001, 92226779002, 92226779003, 92226779004

METHOD BLANK: 1336690 Matrix: Water
Associated Lab Samples: 92226779001, 92226779002, 92226779003, 92226779004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	ug/L	ND	0.20	11/24/14 13:58	

LABORATORY CONTROL SAMPLE: 1336691

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	2.5	2.0	82	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1336692 1336693

Parameter	Units	92226660007 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
Mercury	ug/L	ND	2.5	2.5	1.8	1.8	70	70	75-125	0	M1

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

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QUALITY CONTROL DATA

Project: Anson Co LF GW 02209366.04
Pace Project No.: 92226779

QC Batch: MPRP/17416 | Analysis Method: EPA 6010
QC Batch Method: EPA 3010 | Analysis Description: 6010 MET NC Groundwater
Associated Lab Samples: 92226779001, 92226779002

METHOD BLANK: 1337205 | Matrix: Water
Associated Lab Samples: 92226779001, 92226779002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Antimony	ug/L	ND	5.0	11/25/14 17:35	
Arsenic	ug/L	ND	10.0	11/25/14 17:35	
Barium	ug/L	ND	5.0	11/25/14 17:35	
Beryllium	ug/L	ND	1.0	11/25/14 17:35	
Cadmium	ug/L	ND	1.0	11/25/14 17:35	
Chromium	ug/L	ND	5.0	11/25/14 17:35	
Cobalt	ug/L	ND	5.0	11/25/14 17:35	
Copper	ug/L	ND	5.0	11/25/14 17:35	
Lead	ug/L	ND	5.0	11/25/14 17:35	
Nickel	ug/L	ND	5.0	11/25/14 17:35	
Selenium	ug/L	ND	10.0	11/25/14 17:35	
Silver	ug/L	ND	5.0	11/25/14 17:35	
Thallium	ug/L	ND	5.4	11/25/14 17:35	
Vanadium	ug/L	ND	5.0	11/25/14 17:35	
Zinc	ug/L	ND	10.0	11/25/14 17:35	

LABORATORY CONTROL SAMPLE: 1337206

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	ug/L	500	490	98	80-120	
Arsenic	ug/L	500	483	97	80-120	
Barium	ug/L	500	484	97	80-120	
Beryllium	ug/L	500	486	97	80-120	
Cadmium	ug/L	500	489	98	80-120	
Chromium	ug/L	500	481	96	80-120	
Cobalt	ug/L	500	484	97	80-120	
Copper	ug/L	500	492	98	80-120	
Lead	ug/L	500	490	98	80-120	
Nickel	ug/L	500	489	98	80-120	
Selenium	ug/L	500	497	99	80-120	
Silver	ug/L	250	238	95	80-120	
Thallium	ug/L	500	479	96	80-120	
Vanadium	ug/L	500	481	96	80-120	
Zinc	ug/L	500	474	95	80-120	

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QUALITY CONTROL DATA

Project: Anson Co LF GW 02209366.04
Pace Project No.: 92226779

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1337207 1337208

Parameter	Units	92226660007 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
Antimony	ug/L	ND	500	500	472	474	94	95	75-125	1	
Arsenic	ug/L	ND	500	500	470	471	94	94	75-125	0	
Barium	ug/L	116	500	500	586	597	94	96	75-125	2	
Beryllium	ug/L	ND	500	500	481	485	96	97	75-125	1	
Cadmium	ug/L	ND	500	500	475	477	95	95	75-125	0	
Chromium	ug/L	ND	500	500	472	476	94	95	75-125	1	
Cobalt	ug/L	13.5	500	500	479	480	93	93	75-125	0	
Copper	ug/L	ND	500	500	475	480	95	96	75-125	1	
Lead	ug/L	ND	500	500	468	469	93	94	75-125	0	
Nickel	ug/L	9.0	500	500	478	480	94	94	75-125	1	
Selenium	ug/L	ND	500	500	479	481	96	96	75-125	1	
Silver	ug/L	ND	250	250	232	232	92	93	75-125	0	
Thallium	ug/L	ND	500	500	458	460	91	92	75-125	0	
Vanadium	ug/L	ND	500	500	480	482	96	96	75-125	0	
Zinc	ug/L	ND	500	500	466	468	93	93	75-125	0	

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QUALITY CONTROL DATA

Project: Anson Co LF GW 02209366.04
Pace Project No.: 92226779

QC Batch: MPRP/17433 | Analysis Method: EPA 6010
QC Batch Method: EPA 3010 | Analysis Description: 6010 MET NC Groundwater
Associated Lab Samples: 92226779003, 92226779004

METHOD BLANK: 1339003 | Matrix: Water
Associated Lab Samples: 92226779003, 92226779004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Antimony	ug/L	ND	5.0	11/26/14 19:18	
Arsenic	ug/L	ND	10.0	11/26/14 19:18	
Barium	ug/L	ND	5.0	11/26/14 19:18	
Beryllium	ug/L	ND	1.0	11/26/14 19:18	
Cadmium	ug/L	ND	1.0	11/26/14 19:18	
Chromium	ug/L	ND	5.0	11/26/14 19:18	
Cobalt	ug/L	ND	5.0	11/26/14 19:18	
Copper	ug/L	ND	5.0	11/26/14 19:18	
Lead	ug/L	ND	5.0	11/26/14 19:18	
Nickel	ug/L	ND	5.0	11/26/14 19:18	
Selenium	ug/L	ND	10.0	11/26/14 19:18	
Silver	ug/L	ND	5.0	11/26/14 19:18	
Thallium	ug/L	ND	5.4	11/26/14 19:18	
Vanadium	ug/L	ND	5.0	11/26/14 19:18	
Zinc	ug/L	ND	10.0	11/26/14 19:18	

LABORATORY CONTROL SAMPLE: 1339004

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	ug/L	500	486	97	80-120	
Arsenic	ug/L	500	488	98	80-120	
Barium	ug/L	500	482	96	80-120	
Beryllium	ug/L	500	489	98	80-120	
Cadmium	ug/L	500	491	98	80-120	
Chromium	ug/L	500	483	97	80-120	
Cobalt	ug/L	500	485	97	80-120	
Copper	ug/L	500	498	100	80-120	
Lead	ug/L	500	487	97	80-120	
Nickel	ug/L	500	490	98	80-120	
Selenium	ug/L	500	486	97	80-120	
Silver	ug/L	250	240	96	80-120	
Thallium	ug/L	500	478	96	80-120	
Vanadium	ug/L	500	488	98	80-120	
Zinc	ug/L	500	478	96	80-120	

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QUALITY CONTROL DATA

Project: Anson Co LF GW 02209366.04
Pace Project No.: 92226779

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1339005 1339006

Parameter	Units	92226779003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
Antimony	ug/L	ND	500	500	489	492	98	98	75-125	1	
Arsenic	ug/L	ND	500	500	487	491	97	98	75-125	1	
Barium	ug/L	18.6	500	500	505	512	97	99	75-125	1	
Beryllium	ug/L	ND	500	500	489	496	98	99	75-125	1	
Cadmium	ug/L	ND	500	500	492	494	98	99	75-125	0	
Chromium	ug/L	ND	500	500	483	490	97	98	75-125	1	
Cobalt	ug/L	ND	500	500	490	490	98	98	75-125	0	
Copper	ug/L	ND	500	500	496	502	99	100	75-125	1	
Lead	ug/L	ND	500	500	489	490	98	98	75-125	0	
Nickel	ug/L	ND	500	500	493	493	99	99	75-125	0	
Selenium	ug/L	ND	500	500	489	490	98	98	75-125	0	
Silver	ug/L	ND	250	250	240	241	96	96	75-125	0	
Thallium	ug/L	ND	500	500	480	484	96	97	75-125	1	
Vanadium	ug/L	ND	500	500	487	493	97	98	75-125	1	
Zinc	ug/L	ND	500	500	483	484	96	96	75-125	0	

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QUALITY CONTROL DATA

Project: Anson Co LF GW 02209366.04
Pace Project No.: 92226779

QC Batch: MSV/29383 Analysis Method: EPA 8260
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV Low Level Landfill
Associated Lab Samples: 92226779001, 92226779002, 92226779003, 92226779004

METHOD BLANK: 1337960 Matrix: Water
Associated Lab Samples: 92226779001, 92226779002, 92226779003, 92226779004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	ND	1.0	11/25/14 12:10	
1,1,1-Trichloroethane	ug/L	ND	1.0	11/25/14 12:10	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	11/25/14 12:10	
1,1,2-Trichloroethane	ug/L	ND	1.0	11/25/14 12:10	
1,1-Dichloroethane	ug/L	ND	1.0	11/25/14 12:10	
1,1-Dichloroethene	ug/L	ND	1.0	11/25/14 12:10	
1,2,3-Trichloropropane	ug/L	ND	1.0	11/25/14 12:10	
1,2-Dibromo-3-chloropropane	ug/L	ND	2.0	11/25/14 12:10	
1,2-Dibromoethane (EDB)	ug/L	ND	1.0	11/25/14 12:10	
1,2-Dichlorobenzene	ug/L	ND	1.0	11/25/14 12:10	
1,2-Dichloroethane	ug/L	ND	1.0	11/25/14 12:10	
1,2-Dichloropropane	ug/L	ND	1.0	11/25/14 12:10	
1,4-Dichlorobenzene	ug/L	ND	1.0	11/25/14 12:10	
2-Butanone (MEK)	ug/L	ND	5.0	11/25/14 12:10	
2-Hexanone	ug/L	ND	5.0	11/25/14 12:10	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	5.0	11/25/14 12:10	
Acetone	ug/L	ND	25.0	11/25/14 12:10	
Acrylonitrile	ug/L	ND	10.0	11/25/14 12:10	
Benzene	ug/L	ND	1.0	11/25/14 12:10	
Bromochloromethane	ug/L	ND	1.0	11/25/14 12:10	
Bromodichloromethane	ug/L	ND	1.0	11/25/14 12:10	
Bromoform	ug/L	ND	1.0	11/25/14 12:10	
Bromomethane	ug/L	ND	2.0	11/25/14 12:10	
Carbon disulfide	ug/L	ND	2.0	11/25/14 12:10	
Carbon tetrachloride	ug/L	ND	1.0	11/25/14 12:10	
Chlorobenzene	ug/L	ND	1.0	11/25/14 12:10	
Chloroethane	ug/L	ND	1.0	11/25/14 12:10	
Chloroform	ug/L	ND	1.0	11/25/14 12:10	
Chloromethane	ug/L	ND	1.0	11/25/14 12:10	
cis-1,2-Dichloroethene	ug/L	ND	1.0	11/25/14 12:10	
cis-1,3-Dichloropropene	ug/L	ND	1.0	11/25/14 12:10	
Dibromochloromethane	ug/L	ND	1.0	11/25/14 12:10	
Dibromomethane	ug/L	ND	1.0	11/25/14 12:10	
Ethylbenzene	ug/L	ND	1.0	11/25/14 12:10	
Iodomethane	ug/L	ND	5.0	11/25/14 12:10	
Methylene Chloride	ug/L	ND	1.0	11/25/14 12:10	
Styrene	ug/L	ND	1.0	11/25/14 12:10	
Tetrachloroethene	ug/L	ND	1.0	11/25/14 12:10	
Toluene	ug/L	ND	1.0	11/25/14 12:10	
trans-1,2-Dichloroethene	ug/L	ND	1.0	11/25/14 12:10	
trans-1,3-Dichloropropene	ug/L	ND	1.0	11/25/14 12:10	

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QUALITY CONTROL DATA

Project: Anson Co LF GW 02209366.04
Pace Project No.: 92226779

METHOD BLANK: 1337960 Matrix: Water
Associated Lab Samples: 92226779001, 92226779002, 92226779003, 92226779004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
trans-1,4-Dichloro-2-butene	ug/L	ND	1.0	11/25/14 12:10	
Trichloroethene	ug/L	ND	1.0	11/25/14 12:10	
Trichlorofluoromethane	ug/L	ND	1.0	11/25/14 12:10	
Vinyl acetate	ug/L	ND	2.0	11/25/14 12:10	
Vinyl chloride	ug/L	ND	1.0	11/25/14 12:10	
Xylene (Total)	ug/L	ND	2.0	11/25/14 12:10	
1,2-Dichloroethane-d4 (S)	%	102	70-130	11/25/14 12:10	
4-Bromofluorobenzene (S)	%	97	70-130	11/25/14 12:10	
Toluene-d8 (S)	%	103	70-130	11/25/14 12:10	

LABORATORY CONTROL SAMPLE: 1337961

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	50	51.5	103	80-125	
1,1,1-Trichloroethane	ug/L	50	51.2	102	71-129	
1,1,2,2-Tetrachloroethane	ug/L	50	50.2	100	79-124	
1,1,2-Trichloroethane	ug/L	50	50.4	101	85-125	
1,1-Dichloroethane	ug/L	50	54.4	109	73-126	
1,1-Dichloroethene	ug/L	50	53.5	107	66-135	
1,2,3-Trichloropropane	ug/L	50	48.9	98	75-130	
1,2-Dibromo-3-chloropropane	ug/L	50	52.5	105	71-133	
1,2-Dibromoethane (EDB)	ug/L	50	54.8	110	83-124	
1,2-Dichlorobenzene	ug/L	50	49.0	98	80-133	
1,2-Dichloroethane	ug/L	50	46.9	94	67-128	
1,2-Dichloropropane	ug/L	50	55.0	110	75-132	
1,4-Dichlorobenzene	ug/L	50	49.7	99	78-130	
2-Butanone (MEK)	ug/L	100	109	109	61-144	
2-Hexanone	ug/L	100	106	106	68-143	
4-Methyl-2-pentanone (MIBK)	ug/L	100	106	106	72-135	
Acetone	ug/L	100	97.4	97	48-146	
Acrylonitrile	ug/L	250	276	111	40-160	
Benzene	ug/L	50	52.4	105	80-125	
Bromochloromethane	ug/L	50	63.4	127	71-125	L0
Bromodichloromethane	ug/L	50	48.0	96	78-124	
Bromoform	ug/L	50	42.9	86	71-128	
Bromomethane	ug/L	50	46.7	93	40-160	
Carbon disulfide	ug/L	50	58.5	117	50-160	
Carbon tetrachloride	ug/L	50	52.3	105	69-131	
Chlorobenzene	ug/L	50	50.7	101	81-122	
Chloroethane	ug/L	50	40.1	80	39-148	
Chloroform	ug/L	50	48.0	96	73-127	
Chloromethane	ug/L	50	51.6	103	44-146	
cis-1,2-Dichloroethene	ug/L	50	55.1	110	74-124	
cis-1,3-Dichloropropene	ug/L	50	54.2	108	72-132	

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QUALITY CONTROL DATA

Project: Anson Co LF GW 02209366.04
Pace Project No.: 92226779

LABORATORY CONTROL SAMPLE: 1337961

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Dibromochloromethane	ug/L	50	45.8	92	78-125	
Dibromomethane	ug/L	50	51.3	103	82-120	
Ethylbenzene	ug/L	50	50.5	101	79-121	
Iodomethane	ug/L	100	118	118	39-154	
Methylene Chloride	ug/L	50	60.3	121	64-133	
Styrene	ug/L	50	52.3	105	84-126	
Tetrachloroethene	ug/L	50	47.7	95	78-122	
Toluene	ug/L	50	49.8	100	80-121	
trans-1,2-Dichloroethene	ug/L	50	53.4	107	71-127	
trans-1,3-Dichloropropene	ug/L	50	53.5	107	69-141	
trans-1,4-Dichloro-2-butene	ug/L	50	48.0	96	40-160	
Trichloroethene	ug/L	50	45.5	91	78-122	
Trichlorofluoromethane	ug/L	50	43.7	87	53-137	
Vinyl acetate	ug/L	100	108	108	40-160	
Vinyl chloride	ug/L	50	50.8	102	58-137	
Xylene (Total)	ug/L	150	148	99	81-126	
1,2-Dichloroethane-d4 (S)	%			103	70-130	
4-Bromofluorobenzene (S)	%			96	70-130	
Toluene-d8 (S)	%			102	70-130	

MATRIX SPIKE SAMPLE: 1337962

Parameter	Units	92226774001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	ND	20	20.2	101	70-130	
1,1,1-Trichloroethane	ug/L	ND	20	23.2	116	70-130	
1,1,2,2-Tetrachloroethane	ug/L	ND	20	18.5	92	70-130	
1,1,2-Trichloroethane	ug/L	ND	20	20.3	102	70-130	
1,1-Dichloroethane	ug/L	21.5	20	44.8	116	70-130	
1,1-Dichloroethene	ug/L	ND	20	23.3	115	70-166	
1,2,3-Trichloropropane	ug/L	ND	20	19.4	97	70-130	
1,2-Dibromo-3-chloropropane	ug/L	ND	20	17.8	89	70-130	
1,2-Dibromoethane (EDB)	ug/L	ND	20	20.7	103	70-130	
1,2-Dichlorobenzene	ug/L	ND	20	19.3	96	70-130	
1,2-Dichloroethane	ug/L	0.68J	20	20.3	98	70-130	
1,2-Dichloropropane	ug/L	4.1	20	27.3	116	70-130	
1,4-Dichlorobenzene	ug/L	4.7	20	24.7	100	70-130	
2-Butanone (MEK)	ug/L	ND	40	38.8	97	70-130	
2-Hexanone	ug/L	ND	40	40.1	100	70-130	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	40	39.4	99	70-130	
Acetone	ug/L	ND	40	39.0	92	70-130	
Acrylonitrile	ug/L	ND	100	104	104	70-130	
Benzene	ug/L	6.2	20	29.2	115	70-148	
Bromochloromethane	ug/L	ND	20	23.2	116	70-130	
Bromodichloromethane	ug/L	ND	20	19.2	96	70-130	
Bromoform	ug/L	ND	20	17.1	86	70-130	

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QUALITY CONTROL DATA

Project: Anson Co LF GW 02209366.04
Pace Project No.: 92226779

MATRIX SPIKE SAMPLE: 1337962

Parameter	Units	92226774001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Bromomethane	ug/L	ND	20	11.8	59	70-130	M0
Carbon disulfide	ug/L	ND	20	21.9	110	70-130	
Carbon tetrachloride	ug/L	ND	20	24.6	123	70-130	
Chlorobenzene	ug/L	0.37J	20	21.6	106	70-146	
Chloroethane	ug/L	ND	20	15.2	75	70-130	
Chloroform	ug/L	ND	20	20.7	104	70-130	
Chloromethane	ug/L	ND	20	19.6	98	70-130	
cis-1,2-Dichloroethene	ug/L	44.9	20	69.4	122	70-130	
cis-1,3-Dichloropropene	ug/L	ND	20	20.3	102	70-130	
Dibromochloromethane	ug/L	ND	20	16.4	82	70-130	
Dibromomethane	ug/L	ND	20	20.7	104	70-130	
Ethylbenzene	ug/L	ND	20	21.4	107	70-130	
Iodomethane	ug/L	ND	40	41.0	103	70-130	
Methylene Chloride	ug/L	ND	20	25.0	125	70-130	
Styrene	ug/L	ND	20	20.9	105	70-130	
Tetrachloroethene	ug/L	1.1	20	21.6	102	70-130	
Toluene	ug/L	ND	20	21.9	110	70-155	
trans-1,2-Dichloroethene	ug/L	1.4J	20	24.5	116	70-130	
trans-1,3-Dichloropropene	ug/L	ND	20	18.4	92	70-130	
trans-1,4-Dichloro-2-butene	ug/L	ND	20	16.6	83	70-130	
Trichloroethene	ug/L	5.1	20	25.6	103	69-151	
Trichlorofluoromethane	ug/L	ND	20	23.0	115	70-130	
Vinyl acetate	ug/L	ND	40	35.0	87	70-130	
Vinyl chloride	ug/L	5.2	20	24.9	99	70-130	
1,2-Dichloroethane-d4 (S)	%				100	70-130	
4-Bromofluorobenzene (S)	%				98	70-130	
Toluene-d8 (S)	%				105	70-130	

SAMPLE DUPLICATE: 1337963

Parameter	Units	92226774002 Result	Dup Result	RPD	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	ND	ND		
1,1,1-Trichloroethane	ug/L	ND	ND		
1,1,2,2-Tetrachloroethane	ug/L	ND	ND		
1,1,2-Trichloroethane	ug/L	ND	ND		
1,1-Dichloroethane	ug/L	1.3J	1.3	1	
1,1-Dichloroethene	ug/L	ND	ND		
1,2,3-Trichloropropane	ug/L	ND	ND		
1,2-Dibromo-3-chloropropane	ug/L	ND	ND		
1,2-Dibromoethane (EDB)	ug/L	ND	ND		
1,2-Dichlorobenzene	ug/L	ND	ND		
1,2-Dichloroethane	ug/L	0.47J	.45J		
1,2-Dichloropropane	ug/L	0.56J	ND		
1,4-Dichlorobenzene	ug/L	1.9	1.8	6	
2-Butanone (MEK)	ug/L	ND	ND		

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QUALITY CONTROL DATA

Project: Anson Co LF GW 02209366.04
Pace Project No.: 92226779

SAMPLE DUPLICATE: 1337963

Parameter	Units	92226774002 Result	Dup Result	RPD	Qualifiers
2-Hexanone	ug/L	ND	ND		
4-Methyl-2-pentanone (MIBK)	ug/L	ND	ND		
Acetone	ug/L	ND	ND		
Acrylonitrile	ug/L	ND	ND		
Benzene	ug/L	0.30J	.33J		
Bromochloromethane	ug/L	ND	ND		
Bromodichloromethane	ug/L	ND	ND		
Bromoform	ug/L	ND	ND		
Bromomethane	ug/L	ND	ND		
Carbon disulfide	ug/L	ND	ND		
Carbon tetrachloride	ug/L	ND	ND		
Chlorobenzene	ug/L	0.95J	.93J		
Chloroethane	ug/L	ND	ND		
Chloroform	ug/L	ND	ND		
Chloromethane	ug/L	ND	ND		
cis-1,2-Dichloroethene	ug/L	9.6	9.4	2	
cis-1,3-Dichloropropene	ug/L	ND	ND		
Dibromochloromethane	ug/L	ND	ND		
Dibromomethane	ug/L	ND	ND		
Ethylbenzene	ug/L	ND	ND		
Iodomethane	ug/L	ND	ND		
Methylene Chloride	ug/L	ND	ND		
Styrene	ug/L	ND	ND		
Tetrachloroethene	ug/L	ND	ND		
Toluene	ug/L	ND	ND		
trans-1,2-Dichloroethene	ug/L	ND	ND		
trans-1,3-Dichloropropene	ug/L	ND	ND		
trans-1,4-Dichloro-2-butene	ug/L	ND	ND		
Trichloroethene	ug/L	ND	ND		
Trichlorofluoromethane	ug/L	ND	ND		
Vinyl acetate	ug/L	ND	ND		
Vinyl chloride	ug/L	2.1	2.1	1	
Xylene (Total)	ug/L	ND	ND		
1,2-Dichloroethane-d4 (S)	%	106	102	4	
4-Bromofluorobenzene (S)	%	99	99	0	
Toluene-d8 (S)	%	102	103	1	

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Huntersville, NC 28078
(704)875-9092

QUALITY CONTROL DATA

Project: Anson Co LF GW 02209366.04
Pace Project No.: 92226779

QC Batch: WET/34429 Analysis Method: SM 4500-S2D
QC Batch Method: SM 4500-S2D Analysis Description: 4500S2D Sulfide Water
Associated Lab Samples: 92226779001, 92226779002, 92226779003, 92226779004

METHOD BLANK: 1337167 Matrix: Water
Associated Lab Samples: 92226779001, 92226779002, 92226779003, 92226779004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Sulfide	mg/L	ND	0.10	11/24/14 16:30	

LABORATORY CONTROL SAMPLE: 1337168

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Sulfide	mg/L	.5	0.51	103	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1337169 1337170

Parameter	Units	92226725004 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
Sulfide	mg/L	ND	.5	.5	0.51	0.51	95	95	90-110	0	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1337171 1337172

Parameter	Units	92226449005 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
Sulfide	mg/L	ND	.5	.5	0.48	0.48	95	95	90-110	0	

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QUALITY CONTROL DATA

Project: Anson Co LF GW 02209366.04
Pace Project No.: 92226779

QC Batch: WET/34404 Analysis Method: SM 5210B
QC Batch Method: SM 5210B Analysis Description: 5210B BOD, 5 day
Associated Lab Samples: 92226779001, 92226779002, 92226779003, 92226779004

METHOD BLANK: 1336553 Matrix: Water
Associated Lab Samples: 92226779001, 92226779002, 92226779003, 92226779004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
BOD, 5 day	mg/L	ND	2.0	11/27/14 05:00	

LABORATORY CONTROL SAMPLE: 1336554

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
BOD, 5 day	mg/L	198	199	101	84.5-115.4	

SAMPLE DUPLICATE: 1336555

Parameter	Units	92226732002 Result	Dup Result	RPD	Qualifiers
BOD, 5 day	mg/L	128	123	4	

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QUALITY CONTROL DATA

Project: Anson Co LF GW 02209366.04
Pace Project No.: 92226779

QC Batch: WETA/21203 | Analysis Method: EPA 300.0
QC Batch Method: EPA 300.0 | Analysis Description: 300.0 IC Anions
Associated Lab Samples: 92226779001, 92226779002, 92226779003, 92226779004

METHOD BLANK: 1347063 | Matrix: Water
Associated Lab Samples: 92226779001, 92226779002, 92226779003, 92226779004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Fluoride	mg/L	ND	0.50	12/10/14 16:39	
Sulfate	mg/L	ND	2.0	12/10/14 16:39	

LABORATORY CONTROL SAMPLE: 1347064

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Fluoride	mg/L	2.5	2.4	96	90-110	
Sulfate	mg/L	20	19.2	96	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1347065 1347066

Parameter	Units	92226616004 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
Fluoride	mg/L	0.52	2.5	2.5	2.9	2.9	95	96	90-110	1	
Sulfate	mg/L	6.8	20	20	26.6	26.9	99	101	90-110	1	

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QUALITY CONTROL DATA

Project: Anson Co LF GW 02209366.04
Pace Project No.: 92226779

QC Batch: WETA/21020 — Analysis Method: EPA 353.2
QC Batch Method: EPA 353.2 — Analysis Description: 353.2 Nitrate + Nitrite, Unpres.
Associated Lab Samples: 92226779001, 92226779002, 92226779003

METHOD BLANK: 1336541 — Matrix: Water
Associated Lab Samples: 92226779001, 92226779002, 92226779003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrogen, Nitrate	mg/L	ND	0.020	11/22/14 00:16	

LABORATORY CONTROL SAMPLE: 1336542

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Nitrate	mg/L	2.5	2.4	96	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1336543 — 1336544

Parameter	Units	92226831001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
Nitrogen, Nitrate	mg/L	0.32	2.5	2.5	2.7	2.7	95	95	90-110	0	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1336545 — 1336546

Parameter	Units	92226830009 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
Nitrogen, Nitrate	mg/L	1.9	2.5	2.5	4.2	4.1	89	89	90-110	0	M1

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QUALITY CONTROL DATA

Project: Anson Co LF GW 02209366.04
Pace Project No.: 92226779

QC Batch: WETA/21021 | Analysis Method: EPA 353.2
QC Batch Method: EPA 353.2 | Analysis Description: 353.2 Nitrate + Nitrite, Unpres.
Associated Lab Samples: 92226779004

METHOD BLANK: 1336547 | Matrix: Water
Associated Lab Samples: 92226779004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrogen, Nitrate	mg/L	ND	0.020	11/22/14 01:00	

LABORATORY CONTROL SAMPLE: 1336548

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Nitrate	mg/L	2.5	2.4	95	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1336549 1336550

Parameter	Units	92226831006 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
Nitrogen, Nitrate	mg/L	ND	2.5	2.5	1.3	1.3	53	53	90-110	0	M1

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1336551 1336552

Parameter	Units	92226779004 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
Nitrogen, Nitrate	mg/L	ND	2.5	2.5	2.3	2.3	91	91	90-110	0	

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QUALITY CONTROL DATA

Project: Anson Co LF GW 02209366.04
Pace Project No.: 92226779

QC Batch: WETA/21098 Analysis Method: SM 4500-Cl-E
QC Batch Method: SM 4500-Cl-E Analysis Description: 4500 Chloride
Associated Lab Samples: 92226779001, 92226779002, 92226779003, 92226779004

METHOD BLANK: 1340786 Matrix: Water
Associated Lab Samples: 92226779001, 92226779002, 92226779003, 92226779004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	12/03/14 04:02	

LABORATORY CONTROL SAMPLE: 1340787

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	20	20.9	104	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1340788 1340789

Parameter	Units	92226122015 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
Chloride	mg/L	146000 ug/L	20	20	162	164	79	86	90-110	1	M6

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1340790 1340791

Parameter	Units	92226864002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
Chloride	mg/L	3000	20	20	2860	2850	-706	-753	90-110	0	M6

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QUALITY CONTROL DATA

Project: Anson Co LF GW 02209366.04
Pace Project No.: 92226779

QC Batch: WETA/21107 Analysis Method: SM 5220D
QC Batch Method: SM 5220D Analysis Description: 5220D COD
Associated Lab Samples: 92226779001, 92226779002, 92226779003, 92226779004

METHOD BLANK: 1341466 Matrix: Water
Associated Lab Samples: 92226779001, 92226779002, 92226779003, 92226779004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chemical Oxygen Demand	mg/L	ND	25.0	12/02/14 16:00	

LABORATORY CONTROL SAMPLE: 1341467

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chemical Oxygen Demand	mg/L	750	788	105	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1341468 1341469

Parameter	Units	92226779001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
Chemical Oxygen Demand	mg/L	32.0	750	750	883	883	113	113	90-110	0	M1

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Anson Co LF GW 02209366.04
Pace Project No.: 92226779

QC Batch: WETA/21113 Analysis Method: SM 5310B
QC Batch Method: SM 5310B Analysis Description: 5310B TOC
Associated Lab Samples: 92226779001, 92226779002, 92226779003, 92226779004

METHOD BLANK: 1341819 Matrix: Water
Associated Lab Samples: 92226779001, 92226779002, 92226779003, 92226779004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Organic Carbon	mg/L	ND	1.0	12/03/14 22:31	

LABORATORY CONTROL SAMPLE: 1341820

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Organic Carbon	mg/L	25	23.8	95	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1341821 1341822

Parameter	Units	92226611002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
Total Organic Carbon	mg/L	2.4	25	25	42.0	41.2	159	155	90-110	2	M1

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1341823 1341824

Parameter	Units	92226731002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
Total Organic Carbon	mg/L	1.4	25	25	31.7	31.0	121	118	90-110	2	M1

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QUALIFIERS

Project: Anson Co LF GW 02209366.04
Pace Project No.: 92226779

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Acid preservation may not be appropriate for 2-Chloroethylvinyl ether, Styrene, and Vinyl chloride.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

LABORATORIES

PASI-A	Pace Analytical Services - Asheville
PASI-C	Pace Analytical Services - Charlotte

ANALYTE QUALIFIERS

B2	Oxygen usage is less than 2.0 for all dilutions set. The reported value is an estimated less than value and is calculated for the dilution using the most amount of sample.
L0	Analyte recovery in the laboratory control sample (LCS) was outside QC limits.
M0	Matrix spike recovery and/or matrix spike duplicate recovery was outside laboratory control limits.
M1	Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.
M6	Matrix spike and Matrix spike duplicate recovery not evaluated against control limits due to sample dilution.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Anson Co LF GW 02209366.04
Pace Project No.: 92226779

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92226779001	**GW-1**	EPA 3010	MPRP/17416	EPA 6010	ICP/15696
92226779002	**GW-2**	EPA 3010	MPRP/17416	EPA 6010	ICP/15696
92226779003	**GW-3**	EPA 3010	MPRP/17433	EPA 6010	ICP/15711
92226779004	**GW-4**	EPA 3010	MPRP/17433	EPA 6010	ICP/15711
92226779001	**GW-1**	EPA 7470	MERP/7338	EPA 7470	MERC/7049
92226779002	**GW-2**	EPA 7470	MERP/7338	EPA 7470	MERC/7049
92226779003	**GW-3**	EPA 7470	MERP/7338	EPA 7470	MERC/7049
92226779004	**GW-4**	EPA 7470	MERP/7338	EPA 7470	MERC/7049
92226779001	**GW-1**	EPA 8260	MSV/29383		
92226779002	**GW-2**	EPA 8260	MSV/29383		
92226779003	**GW-3**	EPA 8260	MSV/29383		
92226779004	**GW-4**	EPA 8260	MSV/29383		
92226779001	**GW-1**	SM 4500-S2D	WET/34429		
92226779002	**GW-2**	SM 4500-S2D	WET/34429		
92226779003	**GW-3**	SM 4500-S2D	WET/34429		
92226779004	**GW-4**	SM 4500-S2D	WET/34429		
92226779001	**GW-1**	SM 5210B	WET/34404	SM 5210B	WET/34407
92226779002	**GW-2**	SM 5210B	WET/34404	SM 5210B	WET/34407
92226779003	**GW-3**	SM 5210B	WET/34404	SM 5210B	WET/34407
92226779004	**GW-4**	SM 5210B	WET/34404	SM 5210B	WET/34407
92226779001	**GW-1**	EPA 300.0	WETA/21203		
92226779002	**GW-2**	EPA 300.0	WETA/21203		
92226779003	**GW-3**	EPA 300.0	WETA/21203		
92226779004	**GW-4**	EPA 300.0	WETA/21203		
92226779001	**GW-1**	EPA 353.2	WETA/21020		
92226779002	**GW-2**	EPA 353.2	WETA/21020		
92226779003	**GW-3**	EPA 353.2	WETA/21020		
92226779004	**GW-4**	EPA 353.2	WETA/21021		
92226779001	**GW-1**	SM 4500-Cl-E	WETA/21098		
92226779002	**GW-2**	SM 4500-Cl-E	WETA/21098		
92226779003	**GW-3**	SM 4500-Cl-E	WETA/21098		
92226779004	**GW-4**	SM 4500-Cl-E	WETA/21098		
92226779001	**GW-1**	SM 5220D	WETA/21107		
92226779002	**GW-2**	SM 5220D	WETA/21107		
92226779003	**GW-3**	SM 5220D	WETA/21107		
92226779004	**GW-4**	SM 5220D	WETA/21107		
92226779001	**GW-1**	SM 5310B	WETA/21113		
92226779002	**GW-2**	SM 5310B	WETA/21113		
92226779003	**GW-3**	SM 5310B	WETA/21113		
92226779004	**GW-4**	SM 5310B	WETA/21113		

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Pace Analytical	Document Name: Sample Condition Upon Receipt (SCUR)	Document Revised: September 22, 2014 Page 1 of 2
	Document Number: F-CHR-CS-003-rev.15	Issuing Authority: Pace Huntersville Quality Office

Client Name: S C S

Courier: ☐ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Commercial ☐ Pace Other_____

Custody Seal on Cooler/Box Present: ☐ yes ☐ no Seals intact: ☐ yes ☐ no

Optional
Proj. Due Date:
Proj. Name:

Packing Material: ☐ Bubble Wrap ☐ Bubble Bags ☐ None ☐ Other_____

Thermometer Used: IR Gun T1401 Type of Ice: Wet Blue None ☐ Samples on ice, cooling process has begun

Temp Correction Factor T1401 No Correction

Corrected Cooler Temp.: 6.0 °C Biological Tissue is Frozen: Yes No N/A

Date and Initials of person examining contents: CMF 11/21/14

Temp should be above freezing to 6°C

		Comments:
Chain of Custody Present:	☑Yes ☐No ☐N/A	1.
Chain of Custody Filled Out:	☑Yes ☐No ☐N/A	2.
Chain of Custody Relinquished:	☑Yes ☐No ☐N/A	3.
Sampler Name & Signature on COC:	☑Yes ☐No ☐N/A	4.
Samples Arrived within Hold Time:	☑Yes ☐No ☐N/A	5.
Short Hold Time Analysis (<72hr):	☑Yes ☐No ☐N/A	6.
Rush Turn Around Time Requested:	☐Yes ☑No ☐N/A	7.
Sufficient Volume:	☑Yes ☐No ☐N/A	8.
Correct Containers Used:	☑Yes ☐No ☐N/A	9.
-Pace Containers Used:	☑Yes ☐No ☐N/A	
Containers Intact:	☑Yes ☐No ☐N/A	10.
Filtered volume received for Dissolved tests	☐Yes ☐No ☑N/A	11.
Sample Labels match COC: -Includes date/time/ID/Analysis Matrix:_____	☐Yes ☑No ☐N/A	12. #3 Samp 16:30 #4 Samp 17:10
All containers needing preservation have been checked.	☑Yes ☐No ☐N/A	13.
All containers needing preservation are found to be in compliance with EPA recommendation.	☑Yes ☐No ☐N/A	
exceptions: VOA, coliform, TOC, O&G, WI-DRO (water)	☑Yes ☐No	
Samples checked for dechlorination:	☑Yes ☐No ☐N/A	14.
Headspace in VOA Vials (>6mm):	☐Yes ☑No ☐N/A	15.
Trip Blank Present:	☐Yes ☐No ☑N/A	16.
Trip Blank Custody Seals Present	☐Yes ☐No ☑N/A	
Pace Trip Blank Lot # (if purchased):_____		

Client Notification/ Resolution: Field Data Required? Y / N

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

SCURF Review: JZ Date: 11/21/14

SRF Review: NMG Date: 11/24/14

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e out of hold, incorrect preservative, out of temp, incorrect containers)

WO# : 92226779

92226779

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CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Page: 1 of 1

1887019

Section A Required Client Information:

Company: SCS Engineers
Address: 2520 Whitehall Park Dr. Charlotte, NC 28273
Email To: mcobb@scsengineers.com
Phone: 704-504-3107 Fax: 704-504-3174
Requested Due Date/TAT: normal

Section B Required Project Information:

Report To: Mike Cobb
Copy To:
Purchase Order No.:
Project Name: Anson Co. LF GW
Project Number: 02209366.04

Section C Invoice Information:

Attention: Albert Glenn
Company Name: SCS
Address: ←
Pace Quote Reference:
Pace Project Manager:
Pace Profile #:

REGULATORY AGENCY: ☐ NPDES ☑ GROUND WATER ☐ DRINKING WATER ☐ UST ☐ RCRA ☐ OTHER

Site Location STATE: NC

Section D Required Client Information

SAMPLE ID (A-Z, 0-9 / ,-) Sample IDs MUST BE UNIQUE

Matrix Codes (MATRIX / CODE): Drinking Water DW; Water WT; Waste Water WW; Product P; Soil/Solid SL; Oil OL; Wipe WP; Air AR; Tissue TS; Other OT

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED COMPOSITE START DATE	COLLECTED COMPOSITE START TIME	COLLECTED COMPOSITE END/GRAB DATE	COLLECTED COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other Preserve Air	App 1 GOIO Metals	App 1 8260	App BOD	COD	Chloride	Sulfate + Fluoride	Nitrate	TOX	Sulfide	TOC	Mercury	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	GW-1	WT	G	11/20	1255				15	4	2	2	3	1			3	X	X	X	X	X	X	X	X	X	X	X		001
2	GW-2	WT	G	11/20	1520				15	4	2	2	3	1			3	X	X	X	X	X	X	X	X	X	X	X		002
3	GW-3	WT	G	11/20	1635				15	4	2	2	3	1			3	X	X	X	X	X	X	X	X	X	X	X		003
4	GW-4	WT	G	11/20	1725				15	4	2	2	3	1			3	X	X	X	X	X	X	X	X	X	X	X		004
5																														
6																														
7																														
8																														
9																														
10																														
11																														
12																														

Requested Analysis Filtered (Y/N)

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
GW-1 has two jars with	[signature]	11/21	1135	[signature] Pace	11/21	1135	
mercury + GW-2 has two	[signature] Pace	11/21	1525	[signature]	11/21/14	15:25	
App 1 Metals; jar mix-up							
call 864-506-4962 w/questions							

ORIGINAL

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Donald Michael Cobb

SIGNATURE of SAMPLER: [signature] DATE Signed (MM/DD/YY): 11/21/14

Temp in °C | Received on Ice (Y/N) | Custody Sealed Cooler (Y/N) | Samples Intact (Y/N)

*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.

Summit Environmental Technologies, Inc.
3310 Win St.
Cuyahoga Falls, Ohio 44223
TEL: (330) 253-8211 FAX: (330) 253-4489
Website: http://www.settek.com

December 08, 2014

Kevin Godwin
Pace Analytical Services Inc
9800 Kincey Avenue Suite 100
Huntersville, NC 28078
TEL: (704) 875-9092
FAX: (704) 875-9091

RE: 92226779

Order No.: 14112182

Dear Kevin Godwin:

Summit Environmental Technologies, Inc. received 4 sample(s) on 11/25/2014 for the analyses presented in the following report.

There were no problems with the analytical events associated with this report unless noted in the Case Narrative.

Quality control data is within laboratory defined or method specified acceptance limits except where noted.

If you have any questions regarding these tests results, please feel free to call the laboratory.

Sincerely,

Dr. Mo Osman
Project Manager
3310 Win St.
Cuyahoga Falls, Ohio 44223

A2LA 0724.01, Alabama 41600, Arizona AZ0788, Arkansas 88-0735, California 07256CA, Colorado, Connecticut PH-0105, Delaware, Florida NELAC E87688, Georgia E87688 and 943, Idaho OH00923, Illinois 200061 and Reg.5, Indiana C-OH-13, Kansas E-10347, Kentucky (Underground Storage Tank) 3, Kentucky 90146, Louisiana 04061 and LA12004, Maine 2012015, Maryland 339, Massachusetts M-OPH923, Minnesota 409711, Montana CERT0099, New Hampshire 2996, New Jersey OH006, New York 11777, North Carolina 39705 and 631, Ohio Drinking Water 4170, Ohio VAP CL0052, Oklahoma 9940, Oregon OH200001, Pennsylvania 68-01335, Rhode Island LA000317, South Carolina 92016001, Tennessee TN04018, Texas T104704466-11-5, Region 8 8TMS-L, USDA/APHIS P330-11-00244, Utah OH009232011-1, Vermont VT-87688, Virginia 00440 and 1581, Washington C891, West Virginia 248 and 9957C and E87688, Wisconsin 399013010

Summit Environmental Technologies, Inc.
3310 Win St.
Cuyahoga Falls, Ohio 44223
TEL: (330) 253-8211 FAX: (330) 253-4489
Website: http://www.settek.com

Workorder Sample Summary

WO#: **14112182**

08-Dec-14

CLIENT: Pace Analytical Services Inc
Project: 92226779

Lab SampleID	Client Sample ID	Tag No	Date Collected	Date Received	Matrix
14112182-001	92226779001		11/20/2014 12:55:00 PM	11/25/2014 9:40:00 AM	Non-Potable Water
14112182-002	92226779002		11/20/2014 3:20:00 PM	11/25/2014 9:40:00 AM	Non-Potable Water
14112182-003	92226779003		11/20/2014 4:35:00 PM	11/25/2014 9:40:00 AM	Non-Potable Water
14112182-004	92226779004		11/20/2014 5:25:00 PM	11/25/2014 9:40:00 AM	Non-Potable Water

Summit Environmental Technologies, Inc.
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Cuyahoga Falls, Ohio 44223
TEL: (330) 253-8211 FAX: (330) 253-4489
Website: http://www.settek.com

Case Narrative

WO#: **14112182**
Date: **12/8/2014**

CLIENT: Pace Analytical Services Inc
Project: 92226779

This report in its entirety consists of the documents listed below. All documents contain the Summit Environmental Technologies, Inc. Work Order Number assigned to this report.

Paginated Report including: Cover Letter, Case Narrative, Analytical Results, Applicable Quality Control Summary Reports and copies of the Chain of Custody Documents supplied with this sample set.

Concentrations reported with a J-Flag in the Qualifier Field are values below the Limit of Quantitation (LOQ) but greater than the established Method Detection Limit (MDL).

Method numbers, unless specified as SM (Standard Methods) or ASTM, are EPA methods.

Estimated uncertainty values are available upon request.

Any comments or problems with the analytical events associated with this report are noted below.

Summit Environmental Technologies, Inc.
3310 Win St.
Cuyahoga Falls, Ohio 44223
TEL: (330) 253-8211 FAX: (330) 253-4489
Website: http://www.settek.com

WO#: **14112182**
Date Reported: **12/8/2014**
Company: Pace Analytical Services Inc
Address: 9800 Kincey Avenue Suite 100
Huntersville NC 28078
Received: 11/25/2014
Project#: 92226779

Client ID#	Lab ID#	Collected	Analyte	Result	Units	Matrix	Method	DF	RL	Run	Analyst
92226779001	001	11/20/2014	Total Organic Halides	ND	mg/L	Non-Potable Water	EPA 9020	1	0.10	12/5/2014	CXS

Client ID#	Lab ID#	Collected	Analyte	Result	Units	Matrix	Method	DF	RL	Run	Analyst
92226779002	002	11/20/2014	Total Organic Halides	ND	mg/L	Non-Potable Water	EPA 9020	1	0.10	12/5/2014	CXS

Client ID#	Lab ID#	Collected	Analyte	Result	Units	Matrix	Method	DF	RL	Run	Analyst
92226779003	003	11/20/2014	Total Organic Halides	ND	mg/L	Non-Potable Water	EPA 9020	1	0.10	12/5/2014	CXS

Client ID#	Lab ID#	Collected	Analyte	Result	Units	Matrix	Method	DF	RL	Run	Analyst
92226779004	004	11/20/2014	Total Organic Halides	ND	mg/L	Non-Potable Water	EPA 9020	1	0.10	12/5/2014	CXS

Summit Environmental Technologies, Inc.
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TEL: (330) 253-8211 FAX: (330) 253-4489
Website: http://www.settek.com

QC SUMMARY REPORT

WO#: **14112182**

08-Dec-14

Client: Pace Analytical Services Inc
Project: 92226779

TestCode: **TOX_NPW(9020)**

Sample ID **MB-R28756** SampType: **MBLK** TestCode: **TOX_NPW(90** Units: **mg/L** Prep Date: RunNo: **28756**
Client ID: **PBW** Batch ID: **R28756t** TestNo: **SW9020** Analysis Date: **12/5/2014** SeqNo: **399583**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Organic Halides	ND	0.10									

Sample ID **LCS-R28756** SampType: **LCS** TestCode: **TOX_NPW(90** Units: **mg/L** Prep Date: RunNo: **28756**
Client ID: **LCSW** Batch ID: **R28756t** TestNo: **SW9020** Analysis Date: **12/5/2014** SeqNo: **399584**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Organic Halides	0.22	0.10	0.2000	0	110	70	130				

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank	C	Value is below Minimum Compound Limit.
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
M	Manual Integration used to determine area response	ND	Not Detected at the Reporting Limit	O	RSD is greater than RSDlimit
P	Second column confirmation exceeds	PL	Permit Limit	R	RPD outside accepted recovery limits
RL	Reporting Detection Limit	S	Spike Recovery outside accepted recovery limits	U	Samples with CalcVal < MDL

Original

Chain of Custody

Pace Analytical
www.pacelabs.com

Workorder: 92226779 **Workorder Name:** Anson Co LF GW 02209366.04 **Results Requested** 12/9/2014

Report / Invoice To

Kevin Godwin
Pace Analytical Charlotte
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
Phone (704)875-9092
Email: kevin.godwin@pacelabs.com

Subcontract To

Summit

P.O. KRG14105

14112182-001004
CSL

Requested Analy

Item	Sample ID	Collect Date/Time	Lab ID	Matrix	Preserved Containers: HCSH						TOX												LAB USE ONLY
1	GW-1	11/20/2014 12:55	92226779001	Water	1						X												
2	GW-2	11/20/2014 15:20	92226779002	Water	1						X												
3	GW-3	11/20/2014 16:35	92226779003	Water	1						X												
4	GW-4	11/20/2014 17:25	92226779004	Water	1						X												
5																							

Transfers	Released By	Date/Time	Received By	Date/Time
1	[illegible]	11/24/14 17:20		
2				
3			[illegible]	11/25/14 0540

Comments

Cooler Temperature on Receipt °C **Custody Seal** Y or N **Received on Ice** Y or N **Samples Intact** Y or N

***In order to maintain client confidentiality, location/name of the sampling site, sampler's name and signature may not be provided on this COC document. This chain of custody is considered complete as is since this information is available in the owner laboratory.*

Rev. 12
Date: 07/27/13

Summit Environmental Technologies, Inc.
Cooler Receipt Form

Client: Pace (Charlotte)

Initials of person inspecting cooler and samples: SC

Order Number:

Date Received: 11-25-14 Time Received: 0940 Date cooler(s) opened and samples inspected: 11-25-14

Number of Coolers/Boxes: 1

N/A

Shipper: ~~FEDEX~~ UPS DHL Airborne US Postal Walk-in Pickup Other:

Packaging: Peanuts Bubble Wrap Paper Foam None Other:

Tape on cooler/box: Y N N/A

Custody Seals intact Y N N/A

C-O-C in plastic Y N N/A

Ice ✓ Blue ice _____ present / absent / melted N/A

Sample Temperature IR Gun #16020459 CF 0.0 °C 0.3 °C N/A

Radiological Testing Instrument serial #35127 Y N N/A
(see page 2 for scan results)
****Use 1 sheet per sample for Radiological Testing. If sample is HOT, the Radiological Safety Officer must be notified immediately.**

C-O-C filled out properly Y N N/A

Samples in separate bags Y N N/A

Sample containers intact* Y N N/A

*If no, list broken sample(s):

Sample label(s) complete (ID, date, etc.) Y N N/A

Label(s) agree with C-O-C Y N N/A

Correct containers used Y N N/A

Sufficient sample received Y N N/A

Bubbles absent from 40 mL vials** Y N N/A

** Samples with bubbles <6mm are acceptable. Indicate bubble size if >6mm.

Was client contacted about samples Y N

Will client send new samples Y N

Client contact:

Date/Time:

Logged in by:

Comments:

Rev. 12
Date: 07/27/13

Summit Environmental Technologies, Inc.
Sample Receipt

pH test on samples

Client ID	Test	pH
GW1	TOX	2
2		
3		
4		

Radiological scan on sample

Client ID	scan	CPM

ATTACHMENT 4

Relevant Documentation and Correspondence

NCDENR
North Carolina Department of Environment an
Division of Waste Manageme
Dexter R. Matthews
Director

Beverly Eaves Perdue
Governor

May 16, 2011

Mr. Sam Dawson
Anson County Utilities
907 North Washington Street
Wadesboro, NC 28170

Re: Groundwater Monitoring Evaluation
Anson County Landfill, Permit #04-01

Dear Mr. Dawson:

The Solid Waste Section (Section) has reviewed the *Groundwater Monitoring Evaluation* for the Anson County Landfill prepared by Engineering & Environmental Science Company. The evaluation concludes that groundwater monitoring at the facility is no longer necessary due to the absence of residences and presence of only two commercial properties within 3000 feet of the waste boundary, absence of receptors with the exception of lakes and ponds created by nearby mining activities, the results of a Solute Fate Transport Model, and historical contaminant concentrations in groundwater. The facility was granted official closure in a letter dated January 18, 1996 from the Section. Post closure condition # 8a states:

> Groundwater quality at this facility is subject to the "Classification and Water Quality Standards Applicable to the Groundwaters of North Carolina, "15A NCAC 2L. This includes, but is not limited to, the provisions for detection monitoring, assessment, and corrective action.

A review of groundwater analytical data indicated the consistent detection of benzene at concentrations exceeding the 2L Standard in groundwater samples collected from MW-C except when laboratory reporting limits were greater than both the 2L Standard and Solid Waste Section Limit (SWSL). Anson County should continue groundwater monitoring on an annual basis for the next five years using laboratory reporting limits at or below the SWSLs in order to determine if the landfill is impacting groundwater. The Section will re-evaluate the need for continued groundwater monitoring at the end of the five year period.

Please contact me at (919) 508-8516 or by e-mail at ervin.lane@ncdenr.gov if you have any questions or concerns regarding this letter. Thank you in advance for your cooperation in this matter.

Sincerely,

Ervin Lane
Compliance Hydrogeologist
Solid Waste Section

State of North Carolina
Department of Environment,
Health and Natural Resources
Division of Solid Waste Management

James B. Hunt, Jr., Governor
Jonathan B. Howes, Secretary
William L. Meyer, Director

DEHNR

January 18, 1996

Mr. Steve Carpenter, County Manager
County of Anson
Courthouse, Room 30
Wadesboro, North Carolina 28170

RECEIVED JAN 22 1996

SUBJECT: Closure of the Anson County Landfill MSW Units
FACILITY PERMIT #: 04-01

Dear Mr. Carpenter:

The Solid Waste Section (the Section) has received and reviewed documentation submitted by Engineering & Environmental Science Company, thru your consultant, Hobbs, Upchurch & Associates, P.A. on your behalf regarding the subject facility. Based on this documentation, dated 23 September 1994 ,the Section has determined that the MSW unit at the subject facility has been closed in accordance with the applicable requirements. This determination may be rescinded should any of the documentation prove to be inaccurate.

The MSW unit at the subject facility is considered closed subject to the following post closure conditions. The owner and/or operator of the facility, Anson County, is responsible for compliance with these conditions. Condition #8 addresses continued water quality monitoring for the existing ground water monitoring system.

Please note, that this closure shall become effective upon written notification by the owner/operator that the facility shall be maintained in compliance with the post closure conditions specified in this letter. Rule .0510 also states that when a disposal unit is closed, the permit to operate that unit is terminated and any future disposal operations will require approval by the Section.

POST CLOSURE CONDITIONS

1. **MANAGEMENT OF LANDFILL GAS:** The owner and/or operator shall take the measures necessary to ensure that the closed site shall continue to meet the design standards for landfill gas found in Rule .0503(2)(a).

2. **MANAGEMENT OF SURFACE WATER:** The owner and/or operator shall take the measures necessary to ensure that the closed site shall meet the requirements of Rule .0503(2)(c). In addition, the landfill unit shall be maintained such that surface water runoff occurs in a controlled manner, and surface water shall not be impounded over waste.

3. **AIR QUALITY:** The owner/operator shall ensure that landfill units do not violate any applicable requirements developed under a State Implementation Plan approved or promulgated by the U.S. EPA Administrator pursuant to Section 110 of the Clean Air Act, as amended.

4. **FINAL COVER SYSTEM:** The integrity and effectiveness of the final cover system and any permanent erosion control devices must be maintained. This could include making repairs to the cover as necessary to correct the effects of settlement, subsidence, erosion, or other events.

5. **PROPOSED USES:** The owner/operator shall submit a proposal for the Section's review and approval addressing post closures uses of the facility. Proposed post closure uses shall not violate any post closure conditions found in this letter. In particular, plans for post closure uses shall avoid possibilities for the entrapment of methane gas. Routine landfill gas monitoring within structures and at the facility boundary may not be sufficient to detect potentially dangerous situations.

6. **ONGOING SOLID WASTE MANAGEMENT ACTIVITIES:** Continuing solid waste management activities (e.g. yardwaste composting, scrap tire collection, solid waste transfer) shall not violate any post closure conditions found in this letter, and must meet any other applicable requirements.

7. **RECORDATION:** The owner/operator shall ensure that the recordation requirements for land disposal sites found in Rule .0204 are met.

8. **WATER QUALITY MONITORING AND REPORTING REQUIREMENTS:**

a. Groundwater quality at this facility is subject to the "Classification and Water Quality Standards Applicable to the Groundwaters of North Carolina," 15A NCAC 2L. This includes, but is not limited to, the provisions for detection monitoring, assessment, and corrective action.

b. The permittee shall sample the detection monitoring wells and surface water sampling location(s) at a minimum on a semi-annual basis.

c. Water quality detection monitoring shall continue for a minimum of five years from the date of the Sections's receipt of the owner/operator's notification that the facility will be maintained in compliance with the post-closure conditions specified in this letter. After five years the Sections will determine if further monitoring is to be required.

d. Sampling equipment and methods shall conform to specifications in Attachment 1, "North Carolina Water Quality Monitoring Guidance Document for Solid Waste Facilities." The sampling parameters and methods shall be those found in Attachment 2, "Sampling and Analysis Requirements for Construction and Demolition Landfills and Closed Sanitary Landfills", or an alternate list of sampling parameters as approved by the Solid Waste Section.

e. The permittee shall maintain a record of all monitoring events and analytical data. Reports of the sampling events and analytical data shall be submitted to the Section in a timely manner.

f. Past ground water quality data for this facility indicates that Groundwater Quality Standards have been exceeded for some chemical constituents. Additional water quality assessment will be necessary in the future. Until such time Anson County will continue to monitor and sample ground water consistent with Conditions b, c. and d of this section.

If there are questions regarding this closure letter please contact Jim Barber at (910) 486-1191 or the undersigned at (919) 733-0692.

Sincerely,

James C. Coffey

James C. Coffey
Permitting Branch Supervisor
Solid Waste Section

cc: Phil Preie
Terry Dover
Mark Fry
Dan Sundberg; Hobbs, Upchurch & Associates
Central Files