DENR USE ONLY: ☐ Paper Report ☐ Electronic Data - Email CD (data loaded: Yes / No) Doc/Event #:

NC DENR
Division of Waste Management - Solid Waste

Environmental Monitoring Reporting Form

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

Instructions:

- **Prepare one form for each individually monitored unit.**
- **Please type or print legibly.**
- Attach a notification table with values that attain or exceed NC 2L groundwater standards or NC 2B surface water standards. The notification must include a preliminary analysis of the cause and significance of each value. (e.g. naturally occurring, off-site source, pre-existing condition, etc.).
- Attach a notification table of any groundwater or surface water values that equal or exceed the reporting limits.
- Attach a notification table of any methane gas values that attain or exceed explosive gas levels. This includes any structures on or nearby the facility (NCAC 13B .1629 (4)(a)(i).
- In accordance with NC General Statutes Chapter 89C and 89E and NC Solid Waste Management Rules 15A NCAC 13B, be sure to affix a seal to the bottom of this page, when applicable.
- Send the original signed and sealed form, any tables, and Electronic Data Deliverable to: Compliance Unit, NCDENR-DWM, Solid Waste Section, 1646 Mail Service Center, Raleigh, NC 27699-1646.

Solid Waste Monitoring Data Submittal Information

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

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

Name: Trevor J. Benton, P.G. Phone: 864-288-1265

E-mail: trevor@blecorp.com

Facility name:	Facility Address:	Facility Permit #	NC Landfill Rule: (.0500 or .1600)	Actual sampling dates (e.g., October 20-24, 2006)
Closed Francis Farms Landfill	Francis Farm Road Haywood County, North Carolina	44-03	.1600	February 18-21, 2013

Environmental Status: (Check all that apply)

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

Type of data submitted: (Check all that apply)

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

Notification attached?

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

Certification

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

Trevor J. Benton, P.G.	Hydrogeologist	864-288-1265
Facility Representative Name (Print)	Title	(Area Code) Telephone Number

Signature — Date: 6/25/13

Affix NC Licensed/ Professional Geologist/Engineer Seal here:

NORTH CAROLINA LICENSED SEAL 2025 GEOLOGIST TREVOR J. BENTON

Revised 01/2007

BUNNELL-LAMMONS ENGINEERING, INC.

GEOTECHNICAL, ENVIRONMENTAL AND CONSTRUCTION MATERIALS CONSULTANTS

REPORT OF GROUNDWATER QUALITY RESULTS & STATISTICAL ANALYSIS

FIRST SEMI-ANNUAL SAMPLING EVENT OF 2013

CLOSED FRANCIS FARM LANDFILL
PERMIT NUMBER: 44-03
HAYWOOD COUNTY, NORTH CAROLINA

Prepared For:

HAYWOOD COUNTY SOLID WASTE MANAGEMENT
278 Recycle Road
Clyde, North Carolina 28721

Prepared By:

BUNNELL-LAMMONS ENGINEERING, INC.
6004 Ponder Court
Greenville, South Carolina 29615

June 25, 2013

BLE Project Number J12-1957-33

BUNNELL-LAMMONS ENGINEERING, INC.
GEOTECHNICAL, ENVIRONMENTAL AND CONSTRUCTION MATERIALS CONSULTANTS

June 25, 2013

Haywood County Solid Waste Management
278 Recycle Road
Clyde, North Carolina 28721

Attention: Mr. Stephen King
Solid Waste Director

Subject: **Report of Groundwater Quality Results & Statistical Analysis**
First Semi-Annual Sampling Event of 2013
Closed Francis Farm Landfill
Permit Number: 44-03
Haywood County, North Carolina
BLE Project Number J12-1957-33

Dear Mr. King:

As authorized, Bunnell-Lammons Engineering, Inc. (BLE) has performed the statistical analysis of groundwater quality data obtained from the subject site. The enclosed report describes the work performed and presents the results obtained with our conclusions. The purpose of this work was to statistically compare the laboratory analytical results of groundwater samples from the background monitoring wells to the downgradient monitoring wells at the subject closed municipal solid waste (MSW) landfill in accordance with Title 15A NCAC 13B .1632 (g), (h), and (i). This report of the sampling and statistical analysis has been prepared for submittal to the North Carolina Division of Waste Management (NCDWM) in accordance with Rule 15A NCAC 13B .1632 (j).

We appreciate the opportunity to serve as your geological consultant on this project and look forward to working with you on future projects. If you have any questions, please contact us at (864) 288-1265.

Sincerely,
BUNNELL-LAMMONS ENGINEERING, INC.

Trevor J. Benton, L.G.
Project Geologist
Licensed, North Carolina No. 2025

Mark S. Preddy, L.G.
Senior Geologist
Licensed, North Carolina No. 1043

cc: Ms. Elizabeth Werner – NC DENR Solid Waste Section, 217 West Jones Street, Raleigh, North Carolina 27603

6004 PONDERS COURT
GREENVILLE, SOUTH CAROLINA 29615
PHONE (864) 288-1265
FAX (864) 288-4430

PROJECT INFORMATION

The subject closed municipal solid waste landfill site is located in Haywood County, North Carolina, approximately two miles northeast of Waynesville on Francis Farm Road (**Figure 1**). The landfill has five groundwater monitoring wells consisting of two upgradient (MW-4 and MW-5) and three downgradient wells (MW-1A, MW-2A, and MW-3A). Additionally, there are three surface water sampling locations consisting of one upgradient (SW-1) and two downgradient (SW-2 and Blanton Branch) sampling points. Between summer of 2010 and winter of 2012, 24 new monitoring wells [MW-6 through MW-15 (summer 2010); MW-16 through MW-21 (fall 2011); and MW-14D through MW-25 (winter 2012)] were installed at the facility as part of the assessment monitoring plan. The facility currently has a total of 29 groundwater monitoring wells.

BLE was retained by Haywood County to prepare the semi-annual sampling reports for 2013. Historical data from multiple sources and in multiple formats had to be gathered and synthesized into this report.

This report presents data from the first semi-annual sampling event in 2013 for the site. The water samples were collected and analyzed as required by North Carolina's regulations for operation of municipal solid waste landfills. This report incorporates the last twenty-seven sampling events for wells MW-1A, MW-2A, MW-3A, MW-4 and MW-5 between February 1999 and February 2013. Additionally, this is the fifth (N5) sampling event for newly installed (2010) wells MW-6 through MW-15, the third baseline sampling event (N3) for newly installed (2011) wells MW-16 through MW-21, and the first baseline sampling event (N1) for newly installed (2012) wells MW-14D through MW-25.

FIELD ACTIVITIES, SAMPLING, AND ANALYSIS

Groundwater and surface water samples were collected for the first semi-annual sampling event of 2013 by personnel from Pace Analytical Services, Inc. (Pace) of Asheville, North Carolina on February 18-21, 2013. Groundwater samples were collected from each of the 29 groundwater monitoring well locations associated with the facility. Additionally, three on-site surface water locations were sampled during the event. The groundwater samples were analyzed in the laboratory for North Carolina's *Appendix II* list of volatile organic compounds (VOCs) and metals, pesticides, and cyanide and in the field for pH, specific conductance, turbidity, and temperature. The surface water samples were analyzed in the laboratory for North Carolina's *Appendix II* list of VOCs and metals, and in the field for pH, specific conductance, and temperature. Summary tables of analytical results are attached in **Appendix A** (groundwater) and **Appendix B** (surface water). A copy of the Pace laboratory and field data is included in **Appendix C**.

GROUNDWATER FLOW

The water level data collected during the groundwater sampling is presented in **Table 1**. A water table surface elevation contour map featuring the new survey elevation data is presented as **Figure 2** along with generalized groundwater flow directions.

SUMMARY OF LABORATORY RESULTS

Groundwater

Total metal detections in groundwater during the current sampling event included:

- total barium (29 wells);
- total beryllium (1 well);
- total cadmium (1 well);
- total chromium (7 wells);
- total cobalt (9 wells);
- total copper (6 wells);
- total lead (1 well);
- total nickel (8 wells);
- total vanadium (7 wells); and
- total zinc (14 wells).

VOC detections in groundwater included:

- benzene (4 wells);
- chlorobenzene (4 wells);
- chloroethane (6 wells);
- carbon disulfide (2 wells);
- 1,2-dichlorobenzene (7 wells);
- 1,4-dichlorobenzene (11 wells);
- 1,1-dichloroethane (12 wells);
- 1,2-dichloroethane (4 wells);
- cis-1,2-dichloroethene (12 wells);
- dichloromethane (2 wells);
- tetrachloroethene (2 wells);
- toluene (1 well);
- trichloroethene (2 wells);
- total xylenes (2 wells); and
- naphthalene (1 well).

The concentrations of the following constituents were detected above North Carolina's maximum contaminant levels[1] (MCLs):

- total barium (MW-13 and MW-23);
- total cadmium (MW-23);
- total chromium (MW-12, MW-23, and MW-25);
- total nickel (MW-23);
- benzene (MW-4, MW-5, MW-13, and MW-14);

[1] North Carolina Department of Environment and Natural Resources (NCDENR), Classifications of Water Quality Standards, Section 15A NCAC 2L.202, December 1, 2005.

- 1,2-dichlorobenzene (MW-14);
- 1,4-dichlorobenzene (MW-14);
- 1,1-dichloroethane (MW-3A, MW-4, and MW-5);
- 1,2-dichloroethane (MW-4, MW-7, MW-19, and MW-19D);
- dichloromethane (MW-4);
- tetrachloroethene (MW-4 and MW-5); and
- trichloroethene (MW-4 and MW-5).

Summary tables of the current and historical detected concentrations in groundwater are included in **Appendix A** (estimated "J-flag" values [i.e., estimated values between the method detection limit and the reporting limit] are also included with the laboratory data in **Appendix C**, but not on the summary tables).

Surface Water

Concentrations of total barium (3 locations) were detected in the surface water samples during the current sampling event. None of the concentrations were above established North Carolina surface water[2] MCL. Additionally, no VOCs were detected in the surface water samples. Summary tables of the current and historical detected concentrations in surface water are included in **Appendix B** (estimated "J-flag" values are also included with the laboratory data in **Appendix C**, but not on the summary tables).

STATISTICAL METHODS PERFORMED

The purpose of performing statistical analysis of groundwater quality data is to determine if a release of leachate has occurred from the landfill cells to the groundwater at the site. The US EPA has prepared a guidance document for evaluating groundwater quality data titled *Statistical Analysis of Groundwater Monitoring Data at RCRA Facilities – Unified Guidance* (March 2009). The procedures and methodology used for data analysis of this project are consistent with this US EPA guidance document, and meet or exceed the performance criteria specified in the North Carolina solid waste management rules Title 15A NCAC 13B .1632(g-i). Four methods of statistical analysis were performed depending on the number of detected concentrations and the distribution of the data for a specific compound, as follows:

1. If 15% to 90% of the data were not detected, the one-way non-parametric analysis of variance (ANOVA) Kruskal-Wallis rank-sum test was performed;

2. If less than 15% of the data were not detected, and if the data was normally distributed and homogeneous, then one-way parametric ANOVA was performed. If the data were not normally distributed and homogeneous, then a non-parametric type test was used (Kruskal-Wallis);

3. Alternatively, if greater than 50% of the data were not detected, Poisson Prediction Limits may be performed, or if less than 50% of the data were not detected, Normal Prediction Limits may be performed; and

[2] North Carolina Department of Environment and Natural Resources, "Redbook", Surface Waters and Wetlands Standards, Section 15A NCAC 02B.0100, .0200, and .0300, May 1, 2007.

4. Intrawell comparisons were performed, if necessary, using Shewhart-CUSUM control charts.

It is important to note that the nature of the statistical procedures applied to the data frequently leads to false positives, which result in statistically significant increases (SSI). These false positives are inherent to the statistical procedures themselves and are a result of the insufficiency of the mathematical equations to represent the multiple factors affecting the groundwater quality variability at a given site. Furthermore, a clear distinction should be made between the terms "calculated SSI" and "validated SSI." A calculated SSI is the result of the application of mathematical equations to evaluate variability of water quality data over time by mathematical means. A validated SSI is determined when, based on a review of the data set as a whole, it can be concluded that the calculated statistical significance might be a function of a release of leachate to groundwater, and not a function of natural variability and/or other conditions.

SUMMARY OF STATISTICAL RESULTS

The statistical analysis was performed on constituents that have been historically detected above the laboratory reporting limit, and have been detected during the current sampling event. Estimated "J-flag" values are not statistically analyzed. The statistical results summarized on **Table 2** and included in **Appendix D** indicate that:

1. The Poisson Prediction Limit test performed for total antimony, total arsenic, total beryllium, total mercury, total silver, total vanadium, acetone, carbon disulfide, chlorobenzene, chloroethane, 1,4-dichlorobenzene, 1,2-dichloroethane, 1,1-dichloroethene, cis-1,3-dichloropropene, ethylbenzene, toluene, vinyl chloride, and total xylenes did not calculate SSIs. However, the Poisson Prediction Limit and Wilcoxon tests performed on 1,2-dichlorobenzene calculated SSIs for wells MW-7, MW-11, MW-14 and MW-15.

2. The Kruskal-Wallis, Shewart-CUSUM, and Trend tests used for total barium, total cadmium, total chromium, total cobalt, total copper, total lead, total nickel, total selenium, total zinc, benzene, 1,1-dichloroethane, cis-1,2-dichloroethene, dichloromethane, tetrachloroethene, and trichloroethene did not calculate SSIs. However, an SSI was calculated for total cobalt in well MW-3A; and

3. There is currently an insufficient database to perform statistical analysis for total cobalt in well MW-3A and for naphthalene. These constituents/wells will be statistically analyzed in the future after the minimum required number of sampling events has been performed.

Multiple VOC detections have been observed in the background wells during the current and historical sampling events for benzene, chloroethane, 1,4-dichlorobenzene, 1,1-dichloroethane, 1,2-dichloroethane, cis-1,2-dichloroethene, dichloromethane, tetrachloroethene, trichloroethene, and total xylenes.

CONCLUSION

The current sampling event represents the fifth (N5) sampling event for wells MW-6 through MW-15, the third (N3) baseline sampling event for new wells MW-16 through MW-21, and first (N1) baseline sampling event for new wells MW-14D through MW-25 installed in association with the assessment monitoring phase of the landfill. The data from the new wells has been added to the statistical database, but a minimum of four to nine sampling events are necessary for the appropriate statistical processes to be run on the data from the new wells. As additional laboratory data becomes available for these wells during the following sampling events, statistical methods will be used to evaluate statistical significance.

Concentrations of total metals (groundwater and surface water) and VOCs (groundwater) were detected at the site. Groundwater concentrations of total barium, total cadmium, total chromium, total nickel, benzene, 1,2-dichlorobenzene, 1,4-dichlorobenzene, 1,1-dichloroethane, 1,2-dichloroethane, dichloromethane, tetrachloroethene, and trichloroethene were detected above North Carolina's MCL in several monitoring wells. No concentrations of total metals or VOCs were detected above North Carolina's surface water MCLs.

The detected concentrations of total metals are most likely naturally occurring and related to sample turbidity. Metal cations typically adsorb to the surface of platy particles (clay and silt). Therefore, turbidity of the groundwater and surface water samples will relate to detected concentrations of the metal cations. Consequently, the metal concentrations detected should be considered natural background concentrations.

A NCDWM-approved groundwater assessment is currently in progress at the facility. Two phases of well installation and sampling are complete and have been reported to the NCDWM. Phase I included monitoring wells MW-6 through MW-15. Phase II included the monitoring wells MW-16 through MW-21. The Phase III well installations were conducted in December 2012 and included monitoring wells MW-14D through MW-25. A report of the Phase III assessment is in progress. The laboratory analyses results contained herein includes the assessment wells from all three phases, plus the previously existing compliance wells.

The approved groundwater sampling matrix at the site includes the *Appendix II* list of VOCs and metals, pesticides, and cyanide. The next regularly scheduled groundwater sampling event will be conducted in August 2013.

TABLES

TABLE 1

GROUNDWATER MONITORING WELL CONSTRUCTION AND GROUNDWATER ELEVATION DATA
Haywood County Closed Landfill, Francis Farm
Haywood County, North Carolina
BLE Project Number J12-1957-33

2/18-21/2013															
Well	**Well Location**	**Northing (feet)**	**Easting (feet)**	**Meas. Pt. Elevation**	**Gnd. Surface Elevation**	***Depth to Water (bgs)**	**Depth to Water (bmp)**	**Water Elevation**	**Total Borehole Depth (bgs)**	**Screen Depth (bgs)**	**Screen Elevation**	**Well Type**	**Well Monitors**	**Top of Rock Depth (bgs)**	**Top of Rock Elev.**
MW-1	On-Site	662,529.13	822,317.14	2,666.59	2,663.72	>33.13	>36	<2630.59	UK	UK - UK	UK - UK	UK	UK	UK	UK
MW-1A	On-Site	662,590.73	822,083.15	2,690.88	2,687.97	40.79	43.70	2,647.18	UK	UK - UK	UK - UK	UK	UK	UK	UK
MW-2A	On-Site	662,347.08	822,814.69	2,643.78	2,640.98	20.33	23.13	2,620.65	27.0	12.0 - 27.0	2,629.0 - 2,614.0	II	PWR/BR	18.0	2,623.0
MW-3A	On-Site	661,921.62	823,026.22	2,674.29	2,671.59	32.22	34.92	2,639.37	UK	UK - UK	UK - UK	UK	UK	UK	UK
MW-4	On-Site	661,420.29	822,245.39	2,789.47	2,786.88	68.88	71.47	2,718.00	UK	UK - UK	UK - UK	UK	UK	UK	UK
MW-5	On-Site	661,286.31	822,167.91	2,797.08	2,797.37	76.17	75.88	2,721.20	94.0	73.1 - 88.1	2,724.3 - 2,709.3	II	PWR	89.0	2,708.4
Groundwater Monitoring Wells MW-6 through MW-25 Installed by BLE															
MW-6	Off-Site	662,941.12	822,167.78	2,612.63	2,613.03	6.08	5.68	2,606.95	12.5	2.3 - 12.3	2,610.7 - 2,600.7	II	Res/Collv	12.5	2,600.5
MW-7	Off-Site	662,800.72	822,584.39	2,621.33	2,621.48	6.23	6.08	2,615.25	24.0	4.0 - 19.0	2,617.5 - 2,602.5	II	Collv/Allv	NE	NE
MW-8	Off-Site	662,619.60	822,989.68	2,620.05	2,620.25	5.05	4.85	2,615.20	19.0	3.0 - 13.0	2,617.3 - 2,607.3	II	Alluvial	NE	NE
MW-9	Off-Site	662,309.84	823,295.25	2,618.67	2,619.19	2.40	1.88	2,616.79	19.0	2.0 - 12.0	2,617.2 - 2,607.2	II	Alluvial	NE	NE
MW-10	Off-Site	661,947.33	823,365.59	2,623.60	2,623.96	1.77	1.41	2,622.19	15.0	2.0 - 12.0	2,622.0 - 2,612.0	II	Alluvial	NE	NE
MW-11	On-Site	661,509.39	822,572.73	2,756.22	2,756.46	79.11	78.87	2,677.35	100.0	70.8 - 85.8	2,685.7 - 2,670.7	II	BR	71.0	2,685.5
MW-12	Off-Site	661,078.94	822,142.39	2,803.11	2,800.28	72.74	75.57	2,727.54	90.0	64.8 - 79.8	2,735.5 - 2,720.5	II	BR	64.0	2,736.3
MW-13	On-Site	661,377.43	821,791.88	2,799.14	2,799.51	84.41	84.04	2,715.10	127.0	74.0 - 89.0	2,725.5 - 2,710.5	II	PWR/BR	81.0	2,718.5
MW-14	On-Site	661,894.81	821,755.37	2,770.34	2,770.64	86.62	86.32	2,684.02	120.0	93.8 - 108.8	2,676.8 - 2,661.8	II	BR	33.0	2,737.6
MW-14D	On-Site	661,878.59	821,754.85	2,771.63	2,772.05	145.51	145.09	2,626.54	250.5	202.0 - 212.0	2,570.0 - 2,560.0	II	BR	41.0	2,731.0
MW-15	On-Site	662,338.59	821,896.86	2,719.57	2,716.89	79.83	82.51	2,637.06	163.0	75.8 - 90.8	2,641.1 - 2,626.1	II	BR	19.0	2,697.9
MW-16	Off-Site	661,203.62	821,457.75	2,716.16	2,716.29	59.64	59.51	2,656.65	70.0	54.8 - 69.8	2,661.5 - 2,646.5	II	PWR/BR	63.0	2,653.3
MW-16D	Off-Site	661,192.49	821,467.73	2,716.28	2,716.57	74.46	74.17	2,642.11	150.0	116.0 - 126.0	2,600.6 - 2,590.6	II	BR	81.0	2,635.6
MW-17	Off-Site	661,739.15	821,178.09	2,664.77	2,665.07	53.69	53.39	2,611.38	73.0	49.8 - 64.8	2,615.3 - 2,600.3	II	PWR/BR	63.0	2,602.1
MW-18	Off-Site	662,150.91	821,256.31	2,620.91	2,620.93	24.65	24.63	2,596.28	41.0	25.8 - 40.8	2,595.1 - 2,580.1	II	BR	22.0	2,598.9
MW-19	Off-Site	662,965.29	822,624.55	2,615.08	2,615.29	6.52	6.31	2,608.77	21.0	5.5 - 20.5	2,609.8 - 2,594.8	II	Allv/Res	NE	NE
MW-19D	Off-Site	662,952.84	822,617.92	2,615.33	2,615.62	6.04	5.75	2,609.58	59.0	53.9 - 58.9	2,561.7 - 2,556.7	II	PWR	NE	NE
MW-20	Off-Site	661,973.29	823,503.41	2,621.94	2,622.13	2.03	1.84	2,620.10	15.5	5.3 - 15.3	2,616.8 - 2,606.8	II	Alluvial	NE	NE
MW-20D	Off-Site	661,973.43	823,494.68	2,621.94	2,622.12	0.45	0.27	2,621.67	69.0	60.0 - 65.0	2,562.1 - 2,557.1	II	PWR	NE	NE
MW-21	Off-Site	661,424.40	823,203.28	2,658.37	2,658.72	20.18	19.83	2,638.54	36.0	18.8 - 33.8	2,639.9 - 2,624.9	II	Residuum	NE	NE
MW-22	Off-Site	661,046.30	820,724.07	2,599.86	2,600.00	1.76	1.63	2,598.23	25.0	4.0 - 24.0	2,596.0 - 2,576.0	II	Alluvial	NE	NE
MW-23	Off-Site	663,169.77	822,719.36	2,611.43	2,611.63	1.56	1.37	2,610.06	24.0	3.8 - 23.8	2,607.8 - 2,587.8	II	Alluvial	NE	NE
MW-24	Off-Site	662,019.81	823,641.42	2,625.80	2,626.04	4.01	3.77	2,622.03	35.0	7.5 - 27.5	2,618.5 - 2,598.5	II	Collv/PWR/BR	15.0	2,611.0
MW-25	Off-Site	661,488.76	822,382.32	2,756.31	2,756.67	229.72	229.36	2,526.95	259.5	249.3 - 259.3	2,507.4 - 2,497.4	II	BR	62.0	2,694.7

Notes:
All survey data provided by McGill Associates, all units in feet.
*DTW from bgs values have been calculated from survey data provided by McGill Associates.
All values shown to the nearest 0.1-ft have been rounded.
Water levels measured on 2/18-21/13 by Pace
MW-1, -1A, -2A, -3A, -4, -5 installed by others. MW-6 through MW-25 installed by BLE.

Measuring Point Elevation is top of casing
II = Type II well
NE = Not encountered
UK = Unknown, information is not available

BR & PWR = Bedrock & Partially Weathered Rock
Res = Residuum
Collv = Colluvium
Allv = Alluvium

Prepared by: IAI
Checked by: PJVH

TABLE 2

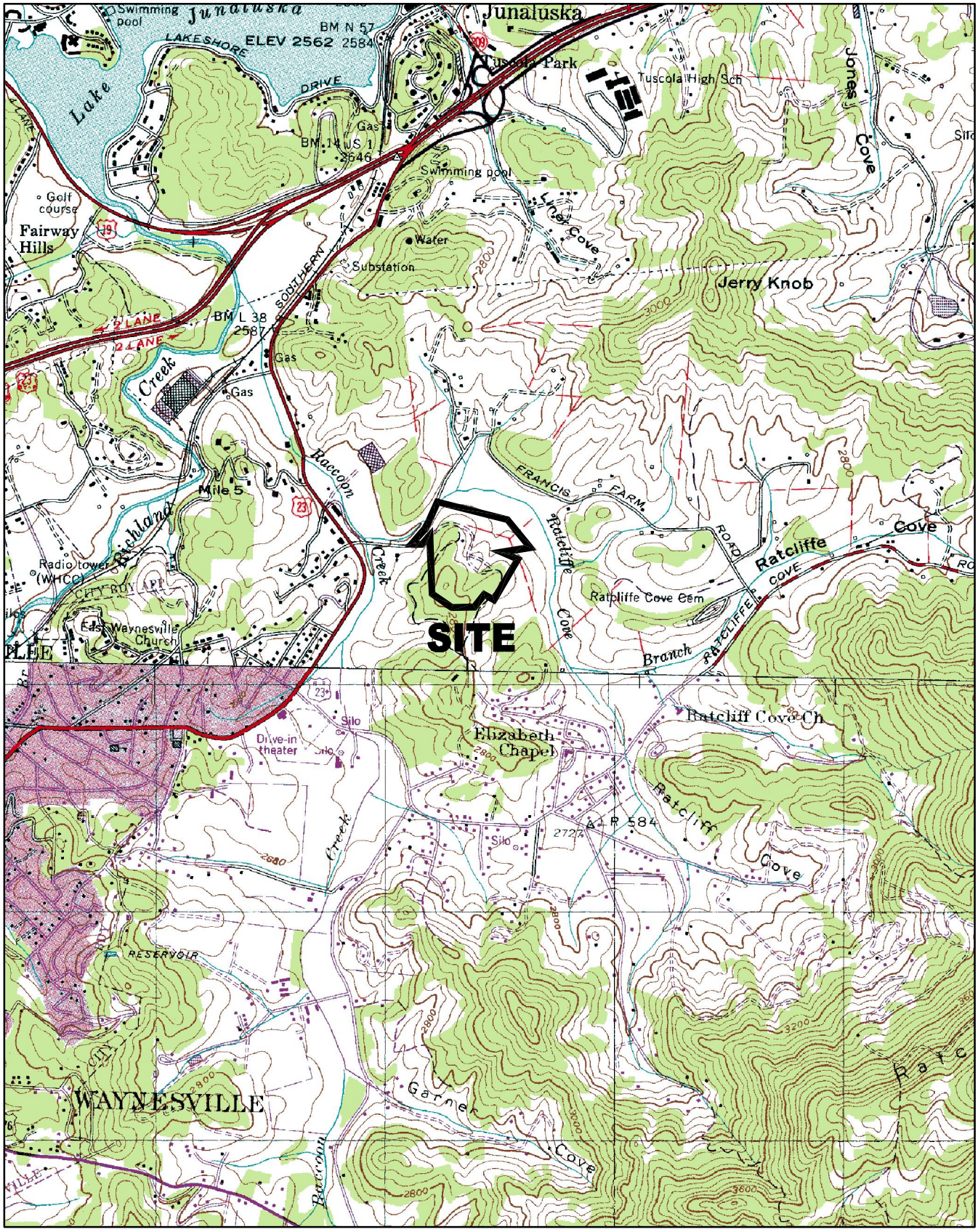
SUMMARY OF STATISTICAL ANALYSIS RESULTS
Haywood County Closed Landfill, Francis Farm
Haywood County, North Carolina
BLE Project Number J12-1957-33

Chemical/ Compound	Percent ND	Primary Statistical Test	Primary Pass/Fail	Secondary Statistical Test	Secondary Pass/Fail	SSI Calculated
Total Antimony	99%	Poisson Prediction Limits	Pass	-	-	No
Total Arsenic	90%	Poisson Prediction Limits	Pass	-	-	No
Total Barium *	3%	Kruskal-Wallis	Fail	Shewart-CUSUM or Trend Test	Pass	No
Total Beryllium	97%	Poisson Prediction Limits	Pass	-	-	No
Total Cadmium	86%	Kruskal-Wallis	Pass	-	-	No
Total Chromium	63%	Kruskal-Wallis	Pass	-	-	No
Total Cobalt	49%	Kruskal-Wallis	Fail	Shewart-CUSUM or Trend Test	Pass (4)	No
Total Copper	72%	Kruskal-Wallis	Pass	-	-	No
Total Lead	83%	Kruskal-Wallis	Pass	-	-	No
Total Mercury	95%	Poisson Prediction Limits	Pass	-	-	No
Total Nickel	58%	Kruskal-Wallis	Pass	-	-	No
Total Selenium	90%	Kruskal-Wallis	Pass	-	-	No
Total Silver	93%	Poisson Prediction Limits	Pass	-	-	No
Total Vanadium	71%	Poisson Prediction Limits	Pass	-	-	No
Total Zinc	41%	Kruskal-Wallis	Pass	-	-	No
Acetone	99%	Poisson Prediction Limits	Pass	-	-	No
Benzene	68%	Kruskal-Wallis	Pass	-	-	No (multiple historic detections in background wells)
Carbon Disulfide	99%	Poisson Prediction Limits	Pass	-	-	No
Chlorobenzene	86%	Poisson Prediction Limits	Pass	-	-	No
Chloroethane	58%	Poisson Prediction Limits	Pass	-	-	No (multiple historic detections in background wells)
1,2-Dichlorobenzene	81%	Poisson Prediction Limits	Fail	Wilcoxon	Fail	Yes (7, 11, 14, 15)
1,4-Dichlorobenzene	61%	Poisson Prediction Limits	Pass	-	-	No (multiple historic detections in background wells)
1,1-Dichloroethane	28%	Kruskal-Wallis	Pass	-	-	No (multiple historic detections in background wells)
1,2-Dichloroethane	80%	Poisson Prediction Limits	Pass	-	-	No (multiple historic detections in background wells)
1,1-Dichloroethene	99%	Poisson Prediction Limits	Pass	-	-	No
cis-1,2-Dichloroethene	24%	Kruskal-Wallis	Pass	-	-	No (multiple historic detections in background wells)
cis-1,3-Dichloropropene	99%	Poisson Prediction Limits	Pass	-	-	No
Ethylbenzene	96%	Poisson Prediction Limits	Pass	-	-	No
Dichloromethane	84%	Kruskal-Wallis	Pass	-	-	No (multiple historic detections in background wells)
Tetrachloroethene	72%	Kruskal-Wallis	Pass	-	-	No (multiple historic detections in background wells)
Toluene	91%	Poisson Prediction Limits	Pass	-	-	No
Trichloroethene	73%	Kruskal-Wallis	Pass	-	-	No (multiple historic detections in background wells)
Vinyl Chloride	97%	Poisson Prediction Limits	Pass	-	-	No
Total Xylenes	86%	Poisson Prediction Limits	Pass	-	-	No (multiple historic detections in background wells)
Naphthalene	93%	Insufficient Data. Not Tested.	-	-	-	-

Notes:

1. MCL = *Maximum Contaminant Level*
2. SSI = *Statistically Significant Increase*
3. * = The dataset for total barium was not homogeneous and normally distributed. Therefore, a non-parametric ANOVA testing procedure was used (Kruskal-Wallis) rather than parametric ANOVA.
4. Well MW-3A does not have enough data for intrawell comparisons at this time (a minimum of 9 sampling events is required).

FIGURES

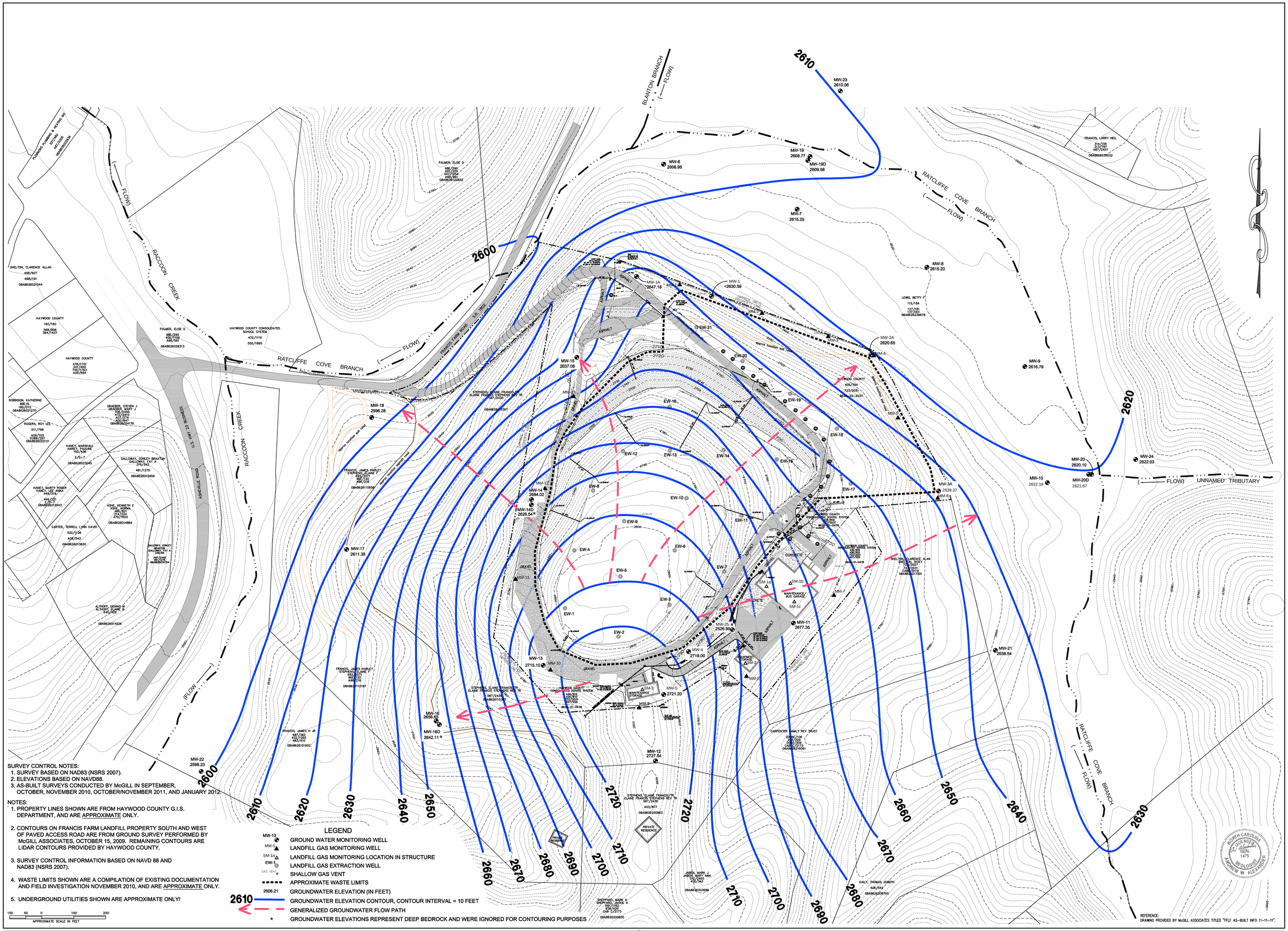


2000 1000 0 2000 4000

APPROXIMATE SCALE IN FEET

REFERENCE:
USGS TOPOGRAPHIC MAP, 7.5 MINUTE SERIES, CLYDE AND WAYNESVILLE, N.C. QUADRANGLES, 1978 AND PHOTOREVISED 1979.

DRAWN: ACE	DATE: 06-10-13	BLE INC. BUNNELL-LAMMONS ENGINEERING, INC. 6004 PONDERS COURT GREENVILLE, SOUTH CAROLINA 29615 PHONE: (864)288-1265 FAX: (864)288-4430	SITE LOCATION MAP HAYWOOD COUNTY LANDFILL CLOSED FRANCIS FARM LANDFILL HAYWOOD COUNTY, NORTH CAROLINA	FIGURE 1
CHECKED: AWA	CAD: HCFFLF-33 SLM			
APPROVED:	JOB NO: J12-1957-33			



SURVEY CONTROL NOTES:

1. SURVEY BASED ON NAD83 (NSRS 2007).
2. ELEVATIONS BASED ON NAVD88.
3. AS-BUILT SURVEYS CONDUCTED BY McGILL IN SEPTEMBER, OCTOBER, NOVEMBER 2010, OCTOBER/NOVEMBER 2011, AND JANUARY 2012.

NOTES:

1. PROPERTY LINES SHOWN ARE FROM HAYWOOD COUNTY G.I.S. DEPARTMENT, AND ARE APPROXIMATE ONLY.
2. CONTOURS ON FRANCIS FARM LANDFILL PROPERTY SOUTH AND WEST OF PAVED ACCESS ROAD ARE FROM GROUND SURVEY PERFORMED BY McGILL ASSOCIATES, OCTOBER 15, 2009. REMAINING CONTOURS ARE LIDAR CONTOURS PROVIDED BY HAYWOOD COUNTY.
3. SURVEY CONTROL INFORMATION BASED ON NAVD 88 AND NAD83 (NSRS 2007).
4. WASTE LIMITS SHOWN ARE A COMPILATION OF EXISTING DOCUMENTATION AND FIELD INVESTIGATION NOVEMBER 2010, AND ARE APPROXIMATE ONLY.
5. UNDERGROUND UTILITIES SHOWN ARE APPROXIMATE ONLY!

REVISIONS		
No.	DESCRIPTION	BY

DRAWN:	ACE
CHECKED:	AWA
APPROVED:	

DATE:	05-01-13
CAD FILE:	FIG 2 FFLF-33 FEB 2013 WTM MAP
JOB NO:	J12-1957-33

BLE INC.

BUNNELL-LAMMONS ENGINEERING, INC.
6004 POINDEXTER COURT
GREENVILLE, SOUTH CAROLINA 29615
PHONE: (864)288-2285 FAX: (864)288-4480

GROUNDWATER ELEVATION CONTOUR MAP – FEBRUARY 18-21, 2013
CLOSED FRANCIS FARM LANDFILL
HAYWOOD COUNTY, NORTH CAROLINA

FIGURE NO. 2

APPENDICES

APPENDIX A

SUMMARY TABLES OF GROUNDWATER ANALYTICAL RESULTS

Closed Francis Farm Landfill - Haywood Co., NC
Groundwater Sampling Event (2-18-1999)

TEST	UNITS	MRL	MCL	MW-4	MW-5A	MW-1A	MW-2	MW-3A	MW-6	MW-7	MW-8	MW-9	MW-10	MW-11	MW-12	MW-13	MW-14	MW-14D	MW-15	MW-16	MW-16D	MW-17	MW-18	MW-19	MW-19D	MW-20	MW-20D	MW-21	MW-22	MW-23	MW-24	MW-25	EQUIP. BLANK
pH	pH units	-	NE	6.5	NS	5.4	NS	6	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Specific Conductance	umhos/cm	1	NE	72	NS	310	NS	420	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Temperature	°C	-	NE	12	NS	13	NS	12	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Turbidity	NTU	0.1	NE	NT	NS	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Total Antimony (Sb)	ug/l	NT	NE	NT	NS	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Total Arsenic (As)	ug/l	5	50	ND	NS	ND	NS	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Total Barium (Ba)	ug/l	100	2000	100	NS	300	NS	400	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Total Beryllium (Be)	ug/l	NT	NE	NT	NS	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Total Cadmium (Cd)	ug/l	10	1.75	ND	NS	ND	NS	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Total Chromium (Cr)	ug/l	20	50	ND	NS	ND	NS	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Total Cobalt (Co)	ug/l	NT	NE	NT	NS	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Total Copper (Cu)	ug/l	NT	1000	NT	NS	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Total Lead (Pb)	ug/l	100	15	ND	NS	ND	NS	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Total Mercury (Hg)	ug/l	0.2	1.05	ND	NS	ND	NS	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Total Nickel (Ni)	ug/l	50	100	NT	NS	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Total Selenium (Se)	ug/l	5	50	ND	NS	ND	NS	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Total Silver (Ag)	ug/l	50	17.5	ND	NS	ND	NS	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Total Thallium (Tl)	ug/l	NT	NE	NT	NS	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Total Vanadium (V)	ug/l	NT	NE	NT	NS	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Total Zinc (Zn)	ug/l	NT	1050	NT	NS	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Acetone	ug/l	NT	700	NT	NS	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Acrylonitrile	ug/l	NT	NE	NT	NS	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Benzene	ug/l	NT	1	NT	NS	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Bromochloromethane	ug/l	NT	NE	NT	NS	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Bromodichloromethane	ug/l	NT	0.56	NT	NS	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Bromoform	ug/l	NT	0.19	NT	NS	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Carbon Disulfide	ug/l	NT	700	NT	NS	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Bromomethane (Methylbromide)	ug/l	NT	NE	NT	NS	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Carbon tetrachloride	ug/l	NT	0.269	NT	NS	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Chlorobenzene (mono)	ug/l	NT	50	NT	NS	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Chloroethane	ug/l	NT	2800	NT	NS	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Chloroform	ug/l	NT	70	NT	NS	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Chloromethane (Methylchloride)	ug/l	NT	2.6	NT	NS	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Dibromochloromethane	ug/l	NT	NE	NT	NS	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
1,2-Dibromo-3-chloropropane; DBCP	ug/l	NT	0.025	NT	NS	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
1,2-Dibromoethane; Ethylene dibromide	ug/l	NT	0.00047	NT	NS	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Dibromomethane	ug/l	NT	NE	NT	NS	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
1,2-Dichlorobenzene	ug/l	NT	24	NT	NS	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
1,4-Dichlorobenzene	ug/l	NT	1.4	NT	NS	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
trans-1,4-Dichloro-2-butene	ug/l	NT	NE	NT	NS	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
1,1-Dichloroethane	ug/l	NT	70	NT	NS	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
1,2-Dichloroethane	ug/l	NT	0.38	NT	NS	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
1,1-Dichloroethene (-ethylene)	ug/l	NT	7	NT	NS	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
cis-1,2-Dichloroethene (-ethylene)	ug/l	NT	70	NT	NS	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
trans-1,2-Dichloroethene (-ylene)	ug/l	NT	100	NT	NS	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
1,2-Dichloropropane	ug/l	NT	0.51	NT	NS	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
cis-1,3-Dichloropropene (-propylene)	ug/l	NT	0.19	NT	NS	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
trans-1,3-Dichloropropene (-propylene)	ug/l	NT	0.19	NT	NS	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Ethylbenzene	ug/l	NT	550	NT	NS	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
2-Hexanone	ug/l	NT	NE	NT	NS	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Iodomethane	ug/l	NT	NE	NT	NS	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Dichloromethane (Methylene chloride)	ug/l	NT	4.6	NT	NS	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
2-Butanone (Methyl ethyl ketone)	ug/l	NT	4200	NT	NS	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
4-Methyl-2-Pentanone	ug/l	NT	NE	NT	NS	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Styrene	ug/l	NT	100	NT	NS	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
1,1,1,2-Tetrachloroethane	ug/l	NT	NE	NT	NS	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
1,1,2,2-Tetrachloroethane	ug/l	NT	NE	NT	NS	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Tetrachloroethene (-ethylene)	ug/l	NT	0.7	NT	NS	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Toluene	ug/l	NT	1000	NT	NS	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
1,1,1-Trichloroethane	ug/l	NT	200	NT	NS	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
1,1,2-Trichloroethane	ug/l	NT	NE	NT	NS	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Trichloroethene (-ethylene)	ug/l	NT	2.8	NT	NS	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Trichlorofluoromethane	ug/l	NT	2100	NT	NS	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
1,2,3-Trichloropropane	ug/l	NT	0.005	NT	NS	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Vinyl acetate	ug/l	NT	NE	NT	NS	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Vinyl chloride	ug/l	NT	0.015	NT	NS	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Total Xylenes	ug/l	NT	530	NT	NS	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Naphthalene	ug/l	NT	6	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
1,3-dichlorobenzene	ug/l	NT	200	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
dichlorodifluoromethane	ug/l	NT	1000	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT

Notes:

1. MCL = Maximum Contaminant Level, as established in the NCDENR, Classifications of Water Quality Standards Applicable to Groundwaters of North Carolina, Section 15A NCAC 2L.202. Shaded cells indicated exceedances of MCLs.
2. NE = Not Established; North Carolina has not established a MCL
3. MRL = Laboratory Method Reporting Limit
4. ND = Not Detected at the MRL; "J"-flagged data (i.e., values estimated between the laboratory method detection limit [MDL] and the MRL) are not presented on this spreadsheet.
5. NS = Not Sampled
6. NT = Not Tested
7. NP = Not Present during sampling event

Closed Francis Farm Landfill - Haywood Co., NC
Groundwater Sampling Event (8-16-1999)

TEST	UNITS	MRL	MCL	MW-4	MW-5A	MW-1A	MW-2	MW-3A	MW-6	MW-7	MW-8	MW-9	MW-10	MW-11	MW-12	MW-13	MW-14	MW-14D	MW-15	MW-16	MW-16D	MW-17	MW-18	MW-19	MW-19D	MW-20	MW-20D	MW-21	MW-22	MW-23	MW-24	MW-25	EQUIP. BLANK
pH	pH units	-	NE	5.5	NS	5.3	NS	5.7	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Specific Conductance	umhos/cm	1	NE	100	NS	430	NS	670	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Temperature	°C	-	NE	15	NS	15	NS	14	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Turbidity	NTU	0.1	NE	NT	NS	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Total Antimony (Sb)	µg/l	NT	NE	NT	NS	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Total Arsenic (As)	µg/l	5	50	ND	NS	ND	NS	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Total Barium (Ba)	µg/l	100	2000	120	NS	230	NS	260	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Total Beryllium (Be)	µg/l	NT	NE	NT	NS	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Total Cadmium (Cd)	µg/l	10	1.75	ND	NS	2.5	NS	7.4	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Total Chromium (Cr)	µg/l	20	50	35	NS	61	NS	14	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Total Cobalt (Co)	µg/l	NT	NE	NT	NS	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Total Copper (Cu)	µg/l	NT	1000	NT	NS	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Total Lead (Pb)	µg/l	100	15	ND	NS	ND	NS	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Total Mercury (Hg)	µg/l	0.2	1.05	ND	NS	ND	NS	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Total Nickel (Ni)	µg/l	50	100	NT	NS	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Total Selenium (Se)	µg/l	5	50	ND	NS	ND	NS	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Total Silver (Ag)	µg/l	50	17.5	ND	NS	ND	NS	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Total Thallium (Tl)	µg/l	NT	NE	NT	NS	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Total Vanadium (V)	µg/l	NT	NE	NT	NS	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Total Zinc (Zn)	µg/l	NT	1050	NT	NS	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Acetone	µg/l	NT	700	NT	NS	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Acrylonitrile	µg/l	NT	NE	NT	NS	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Benzene	µg/l	NT	1	NT	NS	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Bromochloromethane	µg/l	NT	NE	NT	NS	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Bromodichloromethane	µg/l	NT	0.56	NT	NS	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Bromoform	µg/l	NT	0.19	NT	NS	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Carbon Disulfide	µg/l	NT	700	NT	NS	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Bromomethane (Methylbromide)	µg/l	NT	NE	NT	NS	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Carbon tetrachloride	µg/l	NT	0.269	NT	NS	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Chlorobenzene (mono)	µg/l	NT	50	NT	NS	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Chloroethane	µg/l	NT	2800	NT	NS	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Chloroform	µg/l	NT	70	NT	NS	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Chloromethane (Methylchloride)	µg/l	NT	2.6	NT	NS	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Dibromochloromethane	µg/l	NT	NE	NT	NS	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
1,2-Dibromo-3-chloropropane; DBCP	µg/l	NT	0.025	NT	NS	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
1,2-Dibromoethane; Ethylene dibromide	µg/l	NT	0.00047	NT	NS	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Dibromomethane	µg/l	NT	NE	NT	NS	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
1,2-Dichlorobenzene	µg/l	NT	24	NT	NS	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
1,4-Dichlorobenzene	µg/l	NT	1.4	NT	NS	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
trans-1,4-Dichloro-2-butene	µg/l	NT	NE	NT	NS	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
1,1-Dichloroethane	µg/l	NT	70	NT	NS	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
1,2-Dichloroethane	µg/l	NT	0.38	NT	NS	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
1,1-Dichloroethene (-ethylene)	µg/l	NT	7	NT	NS	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
cis-1,2-Dichloroethene (-ethylene)	µg/l	NT	70	NT	NS	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
trans-1,2-Dichloroethene (-ylene)	µg/l	NT	100	NT	NS	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
1,2-Dichloropropane	µg/l	NT	0.51	NT	NS	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
cis-1,3-Dichloropropene (-propylene)	µg/l	NT	0.19	NT	NS	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
trans-1,3-Dichloropropene (-propylene)	µg/l	NT	0.19	NT	NS	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Ethylbenzene	µg/l	NT	550	NT	NS	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
2-Hexanone	µg/l	NT	NE	NT	NS	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Iodomethane	µg/l	NT	NE	NT	NS	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Dichloromethane (Methylene chloride)	µg/l	NT	4.6	NT	NS	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
2-Butanone (Methyl ethyl ketone)	µg/l	NT	4200	NT	NS	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
4-Methyl-2-Pentanone	µg/l	NT	NE	NT	NS	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Styrene	µg/l	NT	100	NT	NS	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
1,1,1,2-Tetrachloroethane	µg/l	NT	NE	NT	NS	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
1,1,2,2-Tetrachloroethane	µg/l	NT	NE	NT	NS	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Tetrachloroethene (-ethylene)	µg/l	NT	0.7	NT	NS	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Toluene	µg/l	NT	1000	NT	NS	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
1,1,1-Trichloroethane	µg/l	NT	200	NT	NS	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
1,1,2-Trichloroethane	µg/l	NT	NE	NT	NS	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Trichloroethene (-ethylene)	µg/l	NT	2.8	NT	NS	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Trichlorofluoromethane	µg/l	NT	2100	NT	NS	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
1,2,3-Trichloropropane	µg/l	NT	0.005	NT	NS	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Vinyl acetate	µg/l	NT	NE	NT	NS	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Vinyl chloride	µg/l	NT	0.015	NT	NS	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Total Xylenes	µg/l	NT	530	NT	NS	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Naphthalene	µg/l	NT	6	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
1,3-dichlorobenzene	µg/l	NT	200	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
dichlorodifluoromethane	µg/l	NT	1000	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT

Notes:

1. MCL = Maximum Contaminant Level, as established in the NCDENR, Classifications of Water Quality Standards Applicable to Groundwaters of North Carolina, Section 15A NCAC 2L.202. Shaded cells indicated exceedances of MCLs.
2. NE = Not Established; North Carolina has not established a MCL
3. MRL = Laboratory Method Reporting Limit
4. ND = Not Detected at the MRL; "J"-flagged data (i.e., values estimated between the laboratory method detection limit [MDL] and the MRL) are not presented on this spreadsheet.
5. NS = Not Sampled
6. NT = Not Tested
7. NP = Not Present during sampling event

Closed Francis Farm Landfill - Haywood Co., NC
Groundwater Sampling Event (2-14-2000)

TEST	UNITS	MRL	MCL	MW-4	MW-5A	MW-1A	MW-2A	MW-3A	MW-6	MW-7	MW-8	MW-9	MW-10	MW-11	MW-12	MW-13	MW-14	MW-14D	MW-15	MW-16	MW-16D	MW-17	MW-18	MW-19	MW-19D	MW-20	MW-20D	MW-21	MW-22	MW-23	MW-24	MW-25	EQUIP. BLANK
pH	pH units	-	NE	5	NS	5.1	NS	6.7	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Specific Conductance	umhos/cm	1	NE	180	NS	300	NS	500	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Temperature	°C	-	NE	13	NS	13	NS	13	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Turbidity	NTU	0.1	NE	NT	NS	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Total Antimony (Sb)	µg/l	NT	NE	NT	NS	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Total Arsenic (As)	µg/l	5	50	ND	NS	ND	NS	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Total Barium (Ba)	µg/l	100	2000	150	NS	270	NS	240	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Total Beryllium (Be)	µg/l	NT	NE	NT	NS	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Total Cadmium (Cd)	µg/l	10	1.75	1.4	NS	2	NS	9.1	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Total Chromium (Cr)	µg/l	20	50	11	NS	7.2	NS	5.6	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Total Cobalt (Co)	µg/l	NT	NE	NT	NS	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Total Copper (Cu)	µg/l	NT	1000	NT	NS	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Total Lead (Pb)	µg/l	100	15	ND	NS	ND	NS	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Total Mercury (Hg)	µg/l	0.2	1.05	ND	NS	ND	NS	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Total Nickel (Ni)	µg/l	50	100	NT	NS	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Total Selenium (Se)	µg/l	5	50	ND	NS	ND	NS	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Total Silver (Ag)	µg/l	50	17.5	ND	NS	4.3	NS	4.9	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Total Thallium (Tl)	µg/l	NT	NE	NT	NS	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Total Vanadium (V)	µg/l	NT	NE	NT	NS	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Total Zinc (Zn)	µg/l	NT	1050	NT	NS	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Acetone	µg/l	NT	700	NT	NS	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Acrylonitrile	µg/l	NT	NE	NT	NS	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Benzene	µg/l	NT	1	NT	NS	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Bromochloromethane	µg/l	NT	NE	NT	NS	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Bromodichloromethane	µg/l	NT	0.56	NT	NS	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Bromoform	µg/l	NT	0.19	NT	NS	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Carbon Disulfide	µg/l	NT	700	NT	NS	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Bromomethane (Methylbromide)	µg/l	NT	NE	NT	NS	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Carbon tetrachloride	µg/l	NT	0.269	NT	NS	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Chlorobenzene (mono)	µg/l	NT	50	NT	NS	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Chloroethane	µg/l	NT	2800	NT	NS	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Chloroform	µg/l	NT	70	NT	NS	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Chloromethane (Methylchloride)	µg/l	NT	2.6	NT	NS	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Dibromochloromethane	µg/l	NT	NE	NT	NS	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
1,2-Dibromo-3-chloropropane; DBCP	µg/l	NT	0.025	NT	NS	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
1,2-Dibromoethane; Ethylene dibromide	µg/l	NT	0.00047	NT	NS	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Dibromomethane	µg/l	NT	NE	NT	NS	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
1,2-Dichlorobenzene	µg/l	NT	24	NT	NS	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
1,4-Dichlorobenzene	µg/l	NT	1.4	NT	NS	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
trans-1,4-Dichloro-2-butene	µg/l	NT	NE	NT	NS	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
1,1-Dichloroethane	µg/l	NT	70	NT	NS	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
1,2-Dichloroethane	µg/l	NT	0.38	NT	NS	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
1,1-Dichloroethene (-ethylene)	µg/l	NT	7	NT	NS	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
cis-1,2-Dichloroethene (-ethylene)	µg/l	NT	70	NT	NS	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
trans-1,2-Dichloroethene (-ylene)	µg/l	NT	100	NT	NS	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
1,2-Dichloropropane	µg/l	NT	0.51	NT	NS	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
cis-1,3-Dichloropropene (-propylene)	µg/l	NT	0.19	NT	NS	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
trans-1,3-Dichloropropene (-propylene)	µg/l	NT	0.19	NT	NS	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Ethylbenzene	µg/l	NT	550	NT	NS	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
2-Hexanone	µg/l	NT	NE	NT	NS	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Iodomethane	µg/l	NT	NE	NT	NS	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Dichloromethane (Methylene chloride)	µg/l	NT	4.6	NT	NS	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
2-Butanone (Methyl ethyl ketone)	µg/l	NT	4200	NT	NS	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
4-Methyl-2-Pentanone	µg/l	NT	NE	NT	NS	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Styrene	µg/l	NT	100	NT	NS	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
1,1,1,2-Tetrachloroethane	µg/l	NT	NE	NT	NS	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
1,1,2,2-Tetrachloroethane	µg/l	NT	NE	NT	NS	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Tetrachloroethene (-ethylene)	µg/l	NT	0.7	NT	NS	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Toluene	µg/l	NT	1000	NT	NS	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
1,1,1-Trichloroethane	µg/l	NT	200	NT	NS	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
1,1,2-Trichloroethane	µg/l	NT	NE	NT	NS	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Trichloroethene (-ethylene)	µg/l	NT	2.8	NT	NS	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Trichlorofluoromethane	µg/l	NT	2100	NT	NS	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
1,2,3-Trichloropropane	µg/l	NT	0.005	NT	NS	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Vinyl acetate	µg/l	NT	NE	NT	NS	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Vinyl chloride	µg/l	NT	0.015	NT	NS	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Total Xylenes	µg/l	NT	530	NT	NS	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Naphthalene	µg/l	NT	6	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
1,3-dichlorobenzene	µg/l	NT	200	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
dichlorodifluoromethane	µg/l	NT	1000	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT

Notes:

1. MCL = Maximum Contaminant Level, as established in the NCDENR, Classifications of Water Quality Standards Applicable to Groundwaters of North Carolina, Section 15A NCAC 2L.202. Shaded cells indicated exceedances of MCLs.
2. NE = Not Established; North Carolina has not established a MCL
3. MRL = Laboratory Method Reporting Limit
4. ND = Not Detected at the MRL; "J"-flagged data (i.e., values estimated between the laboratory method detection limit [MDL] and the MRL) are not presented on this spreadsheet.
5. NS = Not Sampled
6. NT = Not Tested
7. NP = Not Present during sampling event

Closed Francis Farm Landfill - Haywood Co., NC
Groundwater Sampling Event (8-14-2000)

TEST	UNITS	MRL	MCL	MW-4A	MW-5	MW-1A	MW-2	MW-3A	MW-6	MW-7	MW-8	MW-9	MW-10	MW-11	MW-12	MW-13	MW-14	MW-14D	MW-15	MW-16	MW-16D	MW-17	MW-18	MW-19	MW-19D	MW-20	MW-20D	MW-21	MW-22	MW-23	MW-24	MW-25	EQUIP. BLANK
pH	pH units	-	NE	4.9	NT	5.2	NS	5.8	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Specific Conductance	µmhos/cm	1	NE	100	NT	440	NS	600	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Temperature	°C	-	NE	16	NT	15	NS	14	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Turbidity	NTU	0.1	NE	NT	NT	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Total Antimony (Sb)	µg/l	NT	NE	NT	NT	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Total Arsenic (As)	µg/l	5	50	ND	NT	ND	NS	10	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Total Barium (Ba)	µg/l	100	2000	180	NT	410	NS	310	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Total Beryllium (Be)	µg/l	NT	NE	NT	NT	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Total Cadmium (Cd)	µg/l	10	1.75	1.3	NT	4.9	NS	13	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Total Chromium (Cr)	µg/l	20	50	5.4	NT	7.4	NS	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Total Cobalt (Co)	µg/l	NT	NE	NT	NT	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Total Copper (Cu)	µg/l	NT	1000	NT	NT	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Total Lead (Pb)	µg/l	100	15	ND	NT	ND	NS	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Total Mercury (Hg)	µg/l	0.2	1.05	ND	NT	0.4	NS	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Total Nickel (Ni)	µg/l	50	100	NT	NT	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Total Selenium (Se)	µg/l	5	50	ND	NT	ND	NS	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Total Silver (Ag)	µg/l	50	17.5	4	NT	8.9	NS	7.8	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	3
Total Thallium (Tl)	µg/l	NT	NE	NT	NT	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Total Vanadium (V)	µg/l	NT	NE	NT	NT	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Total Zinc (Zn)	µg/l	NT	1050	NT	NT	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Acetone	µg/l	NT	700	NT	NT	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Acrylonitrile	µg/l	NT	NE	NT	NT	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Benzene	µg/l	NT	1	NT	NT	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Bromochloromethane	µg/l	NT	NE	NT	NT	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Bromodichloromethane	µg/l	NT	0.56	NT	NT	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Bromoform	µg/l	NT	0.19	NT	NT	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Carbon Disulfide	µg/l	NT	700	NT	NT	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Bromomethane (Methylbromide)	µg/l	NT	NE	NT	NT	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Carbon tetrachloride	µg/l	NT	0.269	NT	NT	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Chlorobenzene (mono)	µg/l	NT	50	NT	NT	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Chloroethane	µg/l	NT	2800	NT	NT	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Chloroform	µg/l	NT	70	NT	NT	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Chloromethane (Methylchloride)	µg/l	NT	2.6	NT	NT	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Dibromochloromethane	µg/l	NT	NE	NT	NT	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
1,2-Dibromo-3-chloropropane; DBCP	µg/l	NT	0.025	NT	NT	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
1,2-Dibromoethane; Ethylene dibromide	µg/l	NT	0.00047	NT	NT	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Dibromomethane	µg/l	NT	NE	NT	NT	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
1,2-Dichlorobenzene	µg/l	NT	24	NT	NT	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
1,4-Dichlorobenzene	µg/l	NT	1.4	NT	NT	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
trans-1,4-Dichloro-2-butene	µg/l	NT	NE	NT	NT	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
1,1-Dichloroethane	µg/l	NT	70	NT	NT	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
1,2-Dichloroethane	µg/l	NT	0.38	NT	NT	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
1,1-Dichloroethene (-ethylene)	µg/l	NT	7	NT	NT	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
cis-1,2-Dichloroethene (-ethylene)	µg/l	NT	70	NT	NT	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
trans-1,2-Dichloroethene (-vlene)	µg/l	NT	100	NT	NT	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
1,2-Dichloropropane	µg/l	NT	0.51	NT	NT	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
cis-1,3-Dichloropropene (-propylene)	µg/l	NT	0.19	NT	NT	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
trans-1,3-Dichloropropene (-propylene)	µg/l	NT	0.19	NT	NT	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Ethylbenzene	µg/l	NT	550	NT	NT	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
2-Hexanone	µg/l	NT	NE	NT	NT	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Iodomethane	µg/l	NT	NE	NT	NT	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Dichloromethane (Methylene chloride)	µg/l	NT	4.6	NT	NT	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
2-Butanone (Methyl ethyl ketone)	µg/l	NT	4200	NT	NT	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
4-Methyl-2-Pentanone	µg/l	NT	NE	NT	NT	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Styrene	µg/l	NT	100	NT	NT	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
1,1,1,2-Tetrachloroethane	µg/l	NT	NE	NT	NT	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
1,1,2,2-Tetrachloroethane	µg/l	NT	NE	NT	NT	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Tetrachloroethene (-ethylene)	µg/l	NT	0.7	NT	NT	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Toluene	µg/l	NT	1000	NT	NT	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
1,1,1-Trichloroethane	µg/l	NT	200	NT	NT	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
1,1,2-Trichloroethane	µg/l	NT	NE	NT	NT	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Trichloroethene (-ethylene)	µg/l	NT	2.8	NT	NT	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Trichlorofluoromethane	µg/l	NT	2100	NT	NT	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
1,2,3-Trichloropropane	µg/l	NT	0.005	NT	NT	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Vinyl acetate	µg/l	NT	NE	NT	NT	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Vinyl chloride	µg/l	NT	0.015	NT	NT	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Total Xylenes	µg/l	NT	530	NT	NT	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Naphthalene	µg/l	NT	6	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
1,3-dichlorobenzene	µg/l	NT	200	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
dichlorodifluoromethane	µg/l	NT	1000	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT

Notes:

1. MCL = Maximum Contaminant Level, as established in the NCDENR, Classifications of Water Quality Standards Applicable to Groundwaters of North Carolina, Section 15A NCAC 2L.202. Shaded cells indicated exceedances of MCLs.
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3. MRL = Laboratory Method Reporting Limit
4. ND = Not Detected at the MRL; "J"-flagged data (i.e., values estimated between the laboratory method detection limit [MDL] and the MRL) are not presented on this spreadsheet.
5. NS = Not Sampled
6. NT = Not Tested
7. NP = Not Present during sampling event

Closed Francis Farm Landfill - Haywood Co., NC
Groundwater Sampling Event (3-19-2001)

TEST	UNITS	MRL	MCL	MW-4A	MW-5	MW-1A	MW-2A	MW-3A	MW-6	MW-7	MW-8	MW-9	MW-10	MW-11	MW-12	MW-13	MW-14	MW-14D	MW-15	MW-16	MW-16D	MW-17	MW-18	MW-19	MW-19D	MW-20	MW-20D	MW-21	MW-22	MW-23	MW-24	MW-25	EQUIP. BLANK
pH	pH units	-	NE	5.4	5.8	6.0	6.2	6.1	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Specific Conductance	µmhos/cm	1	NE	98	130	350	550	470	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Temperature	°C	-	NE	14	12.1	13	13	13	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Turbidity	NTU	0.1	NE	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Total Antimony (Sb)	µg/l	NT	NE	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Total Arsenic (As)	µg/l	5	50	ND	11	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Total Barium (Ba)	µg/l	100	2000	120	2000	340	830	310	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Total Beryllium (Be)	µg/l	NT	NE	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Total Cadmium (Cd)	µg/l	10	1.75	ND	18	2.6	12	6.9	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Total Chromium (Cr)	µg/l	20	50	5.2	140	12	32	7.7	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Total Cobalt (Co)	µg/l	NT	NE	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Total Copper (Cu)	µg/l	NT	1000	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Total Lead (Pb)	µg/l	100	15	ND	38	ND	16	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Total Mercury (Hg)	µg/l	0.2	1.05	ND	ND	ND	0.2	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Total Nickel (Ni)	µg/l	50	100	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Total Selenium (Se)	µg/l	5	50	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Total Silver (Ag)	µg/l	50	17.5	ND	ND	ND	6.6	4.7	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Total Thallium (Tl)	µg/l	NT	NE	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Total Vanadium (V)	µg/l	NT	NE	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Total Zinc (Zn)	µg/l	NT	1050	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Acetone	µg/l	NT	700	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Acrylonitrile	µg/l	NT	NE	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Benzene	µg/l	NT	1	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Bromochloromethane	µg/l	NT	NE	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Bromodichloromethane	µg/l	NT	0.56	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Bromoform	µg/l	NT	0.19	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Carbon Disulfide	µg/l	NT	700	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Bromomethane (Methylbromide)	µg/l	NT	NE	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Carbon tetrachloride	µg/l	NT	0.269	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Chlorobenzene (mono)	µg/l	NT	50	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Chloroethane	µg/l	NT	2800	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Chloroform	µg/l	NT	70	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Chloromethane (Methylchloride)	µg/l	NT	2.6	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Dibromochloromethane	µg/l	NT	NE	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
1,2-Dibromo-3-chloropropane; DBCP	µg/l	NT	0.025	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
1,2-Dibromoethane; Ethylene dibromide	µg/l	NT	0.00047	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Dibromomethane	µg/l	NT	NE	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
1,2-Dichlorobenzene	µg/l	NT	24	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
1,4-Dichlorobenzene	µg/l	NT	1.4	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
trans-1,4-Dichloro-2-butene	µg/l	NT	NE	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
1,1-Dichloroethane	µg/l	NT	70	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
1,2-Dichloroethane	µg/l	NT	0.38	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
1,1-Dichloroethene (-ethylene)	µg/l	NT	7	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
cis-1,2-Dichloroethene (-ethylene)	µg/l	NT	70	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
trans-1,2-Dichloroethene (-vlene)	µg/l	NT	100	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
1,2-Dichloropropane	µg/l	NT	0.51	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
cis-1,3-Dichloropropene (-propylene)	µg/l	NT	0.19	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
trans-1,3-Dichloropropene (-propylene)	µg/l	NT	0.19	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Ethylbenzene	µg/l	NT	550	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
2-Hexanone	µg/l	NT	NE	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Iodomethane	µg/l	NT	NE	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Dichloromethane (Methylene chloride)	µg/l	NT	4.6	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
2-Butanone (Methyl ethyl ketone)	µg/l	NT	4200	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
4-Methyl-2-Pentanone	µg/l	NT	NE	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Styrene	µg/l	NT	100	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
1,1,1,2-Tetrachloroethane	µg/l	NT	NE	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
1,1,2,2-Tetrachloroethane	µg/l	NT	NE	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Tetrachloroethene (-ethylene)	µg/l	NT	0.7	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Toluene	µg/l	NT	1000	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
1,1,1-Trichloroethane	µg/l	NT	200	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
1,1,2-Trichloroethane	µg/l	NT	NE	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Trichloroethene (-ethylene)	µg/l	NT	2.8	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Trichlorofluoromethane	µg/l	NT	2100	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
1,2,3-Trichloropropane	µg/l	NT	0.005	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Vinyl acetate	µg/l	NT	NE	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Vinyl chloride	µg/l	NT	0.015	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Total Xylenes	µg/l	NT	530	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Naphthalene	µg/l	NT	6	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
1,3-dichlorobenzene	µg/l	NT	200	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
dichlorodifluoromethane	µg/l	NT	1000	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT

Notes:

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5. NS = Not Sampled
6. NT = Not Tested
7. NP = Not Present during sampling event

Closed Francis Farm Landfill - Haywood Co., NC
Groundwater Sampling Event (8-27-2002)

TEST	UNITS	MRL	MCL	MW-4	MW-5	MW-1A	MW-2A	MW-3A	MW-6	MW-7	MW-8	MW-9	MW-10	MW-11	MW-12	MW-13	MW-14	MW-14D	MW-15	MW-16	MW-16D	MW-17	MW-18	MW-19	MW-19D	MW-20	MW-20D	MW-21	MW-22	MW-23	MW-24	MW-25	EQUIP. BLANK
pH	pH units	-	NE	5.5	5.83	5.9	5.92	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Specific Conductance	µmhos/cm	1	NE	110	170	331	460	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Temperature	°C	-	NE	16.2	14.4	16.5	17.8	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Turbidity	NTU	0.1	NE	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Total Antimony (Sb)	µg/l	NT	NE	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Total Arsenic (As)	µg/l	5	50	5.8	25	ND	23	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Total Barium (Ba)	µg/l	100	2000	150	2800	250	2700	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Total Beryllium (Be)	µg/l	NT	NE	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Total Cadmium (Cd)	µg/l	10	1.75	ND	21	ND	25	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Total Chromium (Cr)	µg/l	20	50	5.4	210	ND	130	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Total Cobalt (Co)	µg/l	NT	NE	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Total Copper (Cu)	µg/l	NT	1000	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Total Lead (Pb)	µg/l	100	15	ND	47	ND	31	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Total Mercury (Hg)	µg/l	0.2	1.05	ND	ND	ND	ND	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Total Nickel (Ni)	µg/l	50	100	ND	ND	ND	ND	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Total Selenium (Se)	µg/l	5	50	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Total Silver (Ag)	µg/l	50	17.5	ND	ND	ND	ND	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Total Thallium (Tl)	µg/l	NT	NE	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Total Vanadium (V)	µg/l	NT	NE	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Total Zinc (Zn)	µg/l	NT	1050	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Acetone	µg/l	NT	700	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Acrylonitrile	µg/l	NT	NE	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Benzene	µg/l	NT	1	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Bromochloromethane	µg/l	NT	NE	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Bromodichloromethane	µg/l	NT	0.56	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Bromoform	µg/l	NT	0.19	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Carbon Disulfide	µg/l	NT	700	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Bromomethane (Methylbromide)	µg/l	NT	NE	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Carbon tetrachloride	µg/l	NT	0.269	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Chlorobenzene (mono)	µg/l	NT	50	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Chloroethane	µg/l	NT	2800	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Chloroform	µg/l	NT	70	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Chloromethane (Methylchloride)	µg/l	NT	2.6	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Dibromochloromethane	µg/l	NT	NE	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
1,2-Dibromo-3-chloropropane; DBCP	µg/l	NT	0.025	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
1,2-Dibromoethane; Ethylene dibromide	µg/l	NT	0.00047	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Dibromomethane	µg/l	NT	NE	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
1,2-Dichlorobenzene	µg/l	NT	24	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
1,4-Dichlorobenzene	µg/l	NT	1.4	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
trans-1,4-Dichloro-2-butene	µg/l	NT	NE	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
1,1-Dichloroethane	µg/l	NT	70	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
1,2-Dichloroethane	µg/l	NT	0.38	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
1,1-Dichloroethene (-ethylene)	µg/l	NT	7	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
cis-1,2-Dichloroethene (-ethylene)	µg/l	NT	70	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
trans-1,2-Dichloroethene (-vlene)	µg/l	NT	100	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
1,2-Dichloropropane	µg/l	NT	0.51	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
cis-1,3-Dichloropropene (-propylene)	µg/l	NT	0.19	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
trans-1,3-Dichloropropene (-propylene)	µg/l	NT	0.19	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Ethylbenzene	µg/l	NT	550	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
2-Hexanone	µg/l	NT	NE	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Iodomethane	µg/l	NT	NE	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Dichloromethane (Methylene chloride)	µg/l	NT	4.6	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
2-Butanone (Methyl ethyl ketone)	µg/l	NT	4200	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
4-Methyl-2-Pentanone	µg/l	NT	NE	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Styrene	µg/l	NT	100	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
1,1,1,2-Tetrachloroethane	µg/l	NT	NE	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
1,1,2,2-Tetrachloroethane	µg/l	NT	NE	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Tetrachloroethene (-ethylene)	µg/l	NT	0.7	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Toluene	µg/l	NT	1000	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
1,1,1-Trichloroethane	µg/l	NT	200	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
1,1,2-Trichloroethane	µg/l	NT	NE	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Trichloroethene (-ethylene)	µg/l	NT	2.8	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Trichlorofluoromethane	µg/l	NT	2100	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
1,2,3-Trichloropropane	µg/l	NT	0.005	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Vinyl acetate	µg/l	NT	NE	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Vinyl chloride	µg/l	NT	0.015	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Total Xylenes	µg/l	NT	530	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Naphthalene	µg/l	NT	6	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
1,3-dichlorobenzene	µg/l	NT	200	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
dichlorodifluoromethane	µg/l	NT	1000	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT

Notes:

1. MCL = Maximum Contaminant Level, as established in the NCDENR, Classifications of Water Quality Standards Applicable to Groundwaters of North Carolina, Section 15A NCAC 2L.202. Shaded cells indicated exceedances of MCLs.
2. NE = Not Established; North Carolina has not established a MCL
3. MRL = Laboratory Method Reporting Limit
4. ND = Not Detected at the MRL; "J"-flagged data (i.e., values estimated between the laboratory method detection limit [MDL] and the MRL) are not presented on this spreadsheet.
5. NS = Not Sampled
6. NT = Not Tested
7. NP = Not Present during sampling event

Closed Francis Farm Landfill - Haywood Co., NC
Groundwater Sampling Event (2-24-2003)

TEST	UNITS	MRL	MCL	MW-4	MW-5	MW-1A	MW-2A	MW-3A	MW-6	MW-7	MW-8	MW-9	MW-10	MW-11	MW-12	MW-13	MW-14	MW-14D	MW-15	MW-16	MW-16D	MW-17	MW-18	MW-19	MW-19D	MW-20	MW-20D	MW-21	MW-22	MW-23	MW-24	MW-25	EQUIP. BLANK
pH	pH units	-	NE	5.21	5.59	5.85	6.1	6.15	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Specific Conductance	umhos/cm	1	NE	99	165	351	417	380	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Temperature	°C	-	NE	13.1	12.2	13.7	13	13.7	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Turbidity	NTU	0.1	NE	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Total Antimony (Sb)	µg/l	NT	NE	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Total Arsenic (As)	µg/l	5	50	ND	23	ND	16	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Total Barium (Ba)	µg/l	100	2000	150	2500	310	1800	330	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Total Beryllium (Be)	µg/l	NT	NE	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Total Cadmium (Cd)	µg/l	10	1.75	ND	19	2.1	22	6.2	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Total Chromium (Cr)	µg/l	20	50	ND	200	5.1	79	14	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Total Cobalt (Co)	µg/l	NT	NE	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Total Copper (Cu)	µg/l	NT	1000	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Total Lead (Pb)	µg/l	100	15	ND	41	ND	27	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Total Mercury (Hg)	µg/l	0.2	1.05	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Total Nickel (Ni)	µg/l	50	100	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Total Selenium (Se)	µg/l	5	50	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Total Silver (Ag)	µg/l	50	17.5	4.1	ND	7.3	3.5	8.5	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	3.3
Total Thallium (Tl)	µg/l	NT	NE	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Total Vanadium (V)	µg/l	NT	NE	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Total Zinc (Zn)	µg/l	NT	1050	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Acetone	µg/l	NT	700	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Acrylonitrile	µg/l	NT	NE	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Benzene	µg/l	NT	1	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Bromochloromethane	µg/l	NT	NE	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Bromodichloromethane	µg/l	NT	0.56	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Bromoform	µg/l	NT	0.19	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Carbon Disulfide	µg/l	NT	700	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Bromomethane (Methylbromide)	µg/l	NT	NE	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Carbon tetrachloride	µg/l	NT	0.269	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Chlorobenzene (mono)	µg/l	NT	50	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Chloroethane	µg/l	NT	2800	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Chloroform	µg/l	NT	70	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Chloromethane (Methylchloride)	µg/l	NT	2.6	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Dibromochloromethane	µg/l	NT	NE	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
1,2-Dibromo-3-chloropropane; DBCP	µg/l	NT	0.025	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
1,2-Dibromoethane; Ethylene dibromide	µg/l	NT	0.00047	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Dibromomethane	µg/l	NT	NE	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
1,2-Dichlorobenzene	µg/l	NT	24	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
1,4-Dichlorobenzene	µg/l	NT	1.4	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
trans-1,4-Dichloro-2-butene	µg/l	NT	NE	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
1,1-Dichloroethane	µg/l	NT	70	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
1,2-Dichloroethane	µg/l	NT	0.38	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
1,1-Dichloroethene (-ethylene)	µg/l	NT	7	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
cis-1,2-Dichloroethene (-ethylene)	µg/l	NT	70	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
trans-1,2-Dichloroethene (-vlene)	µg/l	NT	100	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
1,2-Dichloropropane	µg/l	NT	0.51	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
cis-1,3-Dichloropropene (-propylene)	µg/l	NT	0.19	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
trans-1,3-Dichloropropene (-propylene)	µg/l	NT	0.19	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Ethylbenzene	µg/l	NT	550	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
2-Hexanone	µg/l	NT	NE	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Iodomethane	µg/l	NT	NE	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Dichloromethane (Methylene chloride)	µg/l	NT	4.6	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
2-Butanone (Methyl ethyl ketone)	µg/l	NT	4200	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
4-Methyl-2-Pentanone	µg/l	NT	NE	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Styrene	µg/l	NT	100	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
1,1,1,2-Tetrachloroethane	µg/l	NT	NE	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
1,1,2,2-Tetrachloroethane	µg/l	NT	NE	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Tetrachloroethene (-ethylene)	µg/l	NT	0.7	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Toluene	µg/l	NT	1000	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
1,1,1-Trichloroethane	µg/l	NT	200	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
1,1,2-Trichloroethane	µg/l	NT	NE	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Trichloroethene (-ethylene)	µg/l	NT	2.8	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Trichlorofluoromethane	µg/l	NT	2100	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
1,2,3-Trichloropropane	µg/l	NT	0.005	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Vinyl acetate	µg/l	NT	NE	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Vinyl chloride	µg/l	NT	0.015	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Total Xylenes	µg/l	NT	530	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Naphthalene	µg/l	NT	6	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
1,3-dichlorobenzene	µg/l	NT	200	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
dichlorodifluoromethane	µg/l	NT	1000	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT

Notes:

1. MCL = Maximum Contaminant Level, as established in the NCDENR, Classifications of Water Quality Standards Applicable to Groundwaters of North Carolina, Section 15A NCAC 2L.202. Shaded cells indicated exceedances of MCLs.
2. NE = Not Established; North Carolina has not established a MCL
3. MRL = Laboratory Method Reporting Limit
4. ND = Not Detected at the MRL; "J"-flagged data (i.e., values estimated between the laboratory method detection limit [MDL] and the MRL) are not presented on this spreadsheet.
5. NS = Not Sampled
6. NT = Not Tested
7. NP = Not Present during sampling event

Closed Francis Farm Landfill - Haywood Co., NC
Groundwater Sampling Event (8-11-2003)

TEST	UNITS	MRL	MCL	MW-4	MW-5	MW-1A	MW-2A	MW-3A	MW-6	MW-7	MW-8	MW-9	MW-10	MW-11	MW-12	MW-13	MW-14	MW-14D	MW-15	MW-16	MW-16D	MW-17	MW-18	MW-19	MW-19D	MW-20	MW-20D	MW-21	MW-22	MW-23	MW-24	MW-25	EQUIP. BLANK
pH	pH units	-	NE	5.69	5.89	6.27	6.34	6.28	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Specific Conductance	µmhos/cm	1	NE	100	189	5.25	580	510	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Temperature	°C	-	NE	16.4	15.2	16.9	14	14	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Turbidity	NTU	0.1	NE	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Total Antimony (Sb)	µg/l	NT	NE	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Total Arsenic (As)	µg/l	5	50	ND	9.9	ND	6.5	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Total Barium (Ba)	µg/l	5	2000	150	1200	530	950	350	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Total Beryllium (Be)	µg/l	NT	NE	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Total Cadmium (Cd)	µg/l	1	1.75	ND	ND	2	3.1	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Total Chromium (Cr)	µg/l	2	50	81	81	19	38	6.7	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Total Cobalt (Co)	µg/l	NT	NE	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Total Copper (Cu)	µg/l	NT	1000	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Total Lead (Pb)	µg/l	5	15	30	30	10	28	17	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Total Mercury (Hg)	µg/l	0.2	1.05	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Total Nickel (Ni)	µg/l	50	100	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Total Selenium (Se)	µg/l	5	50	ND	ND	ND	7.3	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Total Silver (Ag)	µg/l	2	17.5	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Total Thallium (Tl)	µg/l	NT	NE	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Total Vanadium (V)	µg/l	NT	NE	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Total Zinc (Zn)	µg/l	NT	1050	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Acetone	µg/l	10	700	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Acrylonitrile	µg/l	25	NE	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Benzene	µg/l	5	1	7.2	9	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Bromochloromethane	µg/l	5	NE	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Bromodichloromethane	µg/l	5	0.56	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Bromoform	µg/l	5	0.19	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Carbon Disulfide	µg/l	10	700	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Bromomethane (Methylbromide)	µg/l	5	NE	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Carbon tetrachloride	µg/l	5	0.269	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Chlorobenzene (mono)	µg/l	5	50	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Chloroethane	µg/l	10	2800	52	33	20	11	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Chloroform	µg/l	5	70	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Chloromethane (Methylchloride)	µg/l	5	2.6	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Dibromochloromethane	µg/l	5	NE	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
1,2-Dibromo-3-chloropropane; DBCP	µg/l	5	0.025	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
1,2-Dibromoethane; Ethylene dibromide	µg/l	5	0.00047	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Dibromomethane	µg/l	5	NE	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
1,2-Dichlorobenzene	µg/l	5	24	ND	ND	ND	22	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
1,4-Dichlorobenzene	µg/l	5	1.4	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
trans-1,4-Dichloro-2-butene	µg/l	5	NE	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
1,1-Dichloroethane	µg/l	5	70	22	23	8.8	5.2	10	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
1,2-Dichloroethane	µg/l	5	0.38	ND	ND	ND	ND	5	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
1,1-Dichloroethene (-ethylene)	µg/l	5	7	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
cis-1,2-Dichloroethene (-ethylene)	µg/l	5	70	16	21	13	50	5.6	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
trans-1,2-Dichloroethene (-vlene)	µg/l	5	100	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
1,2-Dichloropropane	µg/l	5	0.51	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
cis-1,3-Dichloropropene (-propylene)	µg/l	5	0.19	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
trans-1,3-Dichloropropene (-propylene)	µg/l	5	0.19	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Ethylbenzene	µg/l	5	550	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
2-Hexanone	µg/l	10	NE	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Iodomethane	µg/l	10	NE	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Dichloromethane (Methylene chloride)	µg/l	5	4.6	ND	21	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
2-Butanone (Methyl ethyl ketone)	µg/l	10	4200	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
4-Methyl-2-Pentanone	µg/l	10	NE	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Styrene	µg/l	5	100	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
1,1,1,2-Tetrachloroethane	µg/l	5	NE	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
1,1,2,2-Tetrachloroethane	µg/l	5	NE	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Tetrachloroethene (-ethylene)	µg/l	5	0.7	ND	8.9	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Toluene	µg/l	5	1000	ND	ND	ND	ND	4500	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
1,1,1-Trichloroethane	µg/l	5	200	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
1,1,2-Trichloroethane	µg/l	5	NE	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Trichloroethene (-ethylene)	µg/l	5	2.8	5.6	11	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Trichlorofluoromethane	µg/l	10	2100	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
1,2,3-Trichloropropane	µg/l	5	0.005	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Vinyl acetate	µg/l	10	NE	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Vinyl chloride	µg/l	5	0.015	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Total Xylenes	µg/l	10	530	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Naphthalene	µg/l	NT	6	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
1,3-dichlorobenzene	µg/l	NT	200	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
dichlorodifluoromethane	µg/l	NT	1000	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT

Notes:

1. MCL = Maximum Contaminant Level, as established in the NCDENR, Classifications of Water Quality Standards Applicable to Groundwaters of North Carolina, Section 15A NCAC 2L.202. Shaded cells indicated exceedances of MCLs.
2. NE = Not Established; North Carolina has not established a MCL
3. MRL = Laboratory Method Reporting Limit
4. ND = Not Detected at the MRL; "J"-flagged data (i.e., values estimated between the laboratory method detection limit [MDL] and the MRL) are not presented on this spreadsheet.
5. NS = Not Sampled
6. NT = Not Tested
7. NP = Not Present during sampling event

Closed Francis Farm Landfill - Haywood Co., NC
Groundwater Sampling Event (2-9-2004)

TEST	UNITS	MRL	MCL	MW-4	MW-5	MW-1A	MW-2A	MW-3A	MW-6	MW-7	MW-8	MW-9	MW-10	MW-11	MW-12	MW-13	MW-14	MW-14D	MW-15	MW-16	MW-16D	MW-17	MW-18	MW-19	MW-19D	MW-20	MW-20D	MW-21	MW-22	MW-23	MW-24	MW-25	EQUIP. BLANK
pH	pH units	-	NE	5.54	5.4	5.91	6.06	5.95	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Specific Conductance	µmhos/cm	1	NE	99	165	322	349	259	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Temperature	°C	-	NE	12.1	11.8	13.5	12.4	12	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Turbidity	NTU	0.1	NE	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Total Antimony (Sb)	µg/l	NT	NE	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Total Arsenic (As)	µg/l	5	50	ND	8.3	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Total Barium (Ba)	µg/l	5	2000	120	890	260	370	310	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Total Beryllium (Be)	µg/l	NT	NE	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Total Cadmium (Cd)	µg/l	1	1.75	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Total Chromium (Cr)	µg/l	2	50	ND	57	ND	2.1	4.9	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Total Cobalt (Co)	µg/l	NT	NE	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Total Copper (Cu)	µg/l	NT	1000	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Total Lead (Pb)	µg/l	5	15	ND	18	ND	9.4	7.4	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Total Mercury (Hg)	µg/l	0.2	1.05	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Total Nickel (Ni)	µg/l	50	100	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Total Selenium (Se)	µg/l	5	50	ND	ND	6.9	13	16	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Total Silver (Ag)	µg/l	2	17.5	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Total Thallium (Tl)	µg/l	NT	NE	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Total Vanadium (V)	µg/l	NT	NE	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Total Zinc (Zn)	µg/l	NT	1050	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Acetone	µg/l	10	700	ND	ND	ND	25	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Acrylonitrile	µg/l	25	NE	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Benzene	µg/l	5	1	14	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Bromochloromethane	µg/l	5	NE	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Bromodichloromethane	µg/l	5	0.56	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Bromoform	µg/l	5	0.19	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Carbon Disulfide	µg/l	10	700	ND	ND	12	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Bromomethane (Methylbromide)	µg/l	5	NE	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Carbon tetrachloride	µg/l	5	0.269	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Chlorobenzene (mono)	µg/l	5	50	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Chloroethane	µg/l	10	2800	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Chloroform	µg/l	5	70	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Chloromethane (Methylchloride)	µg/l	5	2.6	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Dibromochloromethane	µg/l	5	NE	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
1,2-Dibromo-3-chloropropane; DBCP	µg/l	5	0.025	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
1,2-Dibromoethane; Ethylene dibromide	µg/l	5	0.00047	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Dibromomethane	µg/l	5	NE	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
1,2-Dichlorobenzene	µg/l	5	24	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
1,4-Dichlorobenzene	µg/l	5	1.4	ND	ND	ND	5.9	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
trans-1,4-Dichloro-2-butene	µg/l	5	NE	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
1,1-Dichloroethane	µg/l	5	70	40	ND	6.2	ND	8.2	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
1,2-Dichloroethane	µg/l	5	0.38	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
1,1-Dichloroethene (-ethylene)	µg/l	5	7	ND	11	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
cis-1,2-Dichloroethene (-ethylene)	µg/l	5	70	24	ND	11	7.6	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
trans-1,2-Dichloroethene (-vlene)	µg/l	5	100	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
1,2-Dichloropropane	µg/l	5	0.51	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
cis-1,3-Dichloropropene (-propylene)	µg/l	5	0.19	ND	8.1	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
trans-1,3-Dichloropropene (-propylene)	µg/l	5	0.19	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Ethylbenzene	µg/l	5	550	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
2-Hexanone	µg/l	10	NE	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Iodomethane	µg/l	10	NE	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Dichloromethane (Methylene chloride)	µg/l	5	4.6	ND	8.7	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
2-Butanone (Methyl ethyl ketone)	µg/l	10	4200	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
4-Methyl-2-Pentanone	µg/l	10	NE	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Styrene	µg/l	5	100	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
1,1,1,2-Tetrachloroethane	µg/l	5	NE	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
1,1,2,2-Tetrachloroethane	µg/l	5	NE	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Tetrachloroethene (-ethylene)	µg/l	5	0.7	9.6	6.2	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Toluene	µg/l	5	1000	ND	ND	ND	ND	34	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
1,1,1-Trichloroethane	µg/l	5	200	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
1,1,2-Trichloroethane	µg/l	5	NE	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Trichloroethene (-ethylene)	µg/l	5	2.8	13	6.2	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Trichlorofluoromethane	µg/l	10	2100	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
1,2,3-Trichloropropane	µg/l	5	0.005	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Vinyl acetate	µg/l	10	NE	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Vinyl chloride	µg/l	5	0.015	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Total Xylenes	µg/l	10	530	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Naphthalene	µg/l	NT	6	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
1,3-dichlorobenzene	µg/l	NT	200	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
dichlorodifluoromethane	µg/l	NT	1000	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT

Notes:

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5. NS = Not Sampled
6. NT = Not Tested
7. NP = Not Present during sampling event

Closed Francis Farm Landfill - Haywood Co., NC
Groundwater Sampling Event (8-16-2004)

TEST	UNITS	MRL	MCL	MW-4	MW-5	MW-1A	MW-2A	MW-3A	MW-6	MW-7	MW-8	MW-9	MW-10	MW-11	MW-12	MW-13	MW-14	MW-14D	MW-15	MW-16	MW-16D	MW-17	MW-18	MW-19	MW-19D	MW-20	MW-20D	MW-21	MW-22	MW-23	MW-24	MW-25	EQUIP. BLANK
pH	pH units	-	NE	5.64	5.84	6.14	6.14	6.15	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Specific Conductance	µmhos/cm	1	NE	115	170	345	465	410	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Temperature	°C	-	NE	17.3	15.3	16.9	13.5	14.1	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Turbidity	NTU	0.1	NE	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Total Antimony (Sb)	µg/l	NT	NE	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Total Arsenic (As)	µg/l	5	50	ND	6.1	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Total Barium (Ba)	µg/l	5	2000	140	1100	280	300	310	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Total Beryllium (Be)	µg/l	NT	NE	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Total Cadmium (Cd)	µg/l	1	1.75	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Total Chromium (Cr)	µg/l	2	50	3.3	52	4	2.8	2	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Total Cobalt (Co)	µg/l	NT	NE	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Total Copper (Cu)	µg/l	NT	1000	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Total Lead (Pb)	µg/l	5	15	ND	23	ND	11	9.4	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Total Mercury (Hg)	µg/l	0.2	1.05	0.3	ND	1.4	3.5	0.6	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	0.7
Total Nickel (Ni)	µg/l	50	100	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Total Selenium (Se)	µg/l	5	50	ND	ND	5.5	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Total Silver (Ag)	µg/l	2	17.5	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Total Thallium (Tl)	µg/l	NT	NE	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Total Vanadium (V)	µg/l	NT	NE	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Total Zinc (Zn)	µg/l	NT	1050	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Acetone	µg/l	100	700	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Acrylonitrile	µg/l	200	NE	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Benzene	µg/l	5	1	13	6.1	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Bromochloromethane	µg/l	5	NE	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Bromodichloromethane	µg/l	5	0.56	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Bromoform	µg/l	5	0.19	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Carbon Disulfide	µg/l	100	700	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Bromomethane (Methylbromide)	µg/l	10	NE	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Carbon tetrachloride	µg/l	10	0.269	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Chlorobenzene (mono)	µg/l	5	50	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Chloroethane	µg/l	10	2800	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Chloroform	µg/l	5	70	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Chloromethane (Methylchloride)	µg/l	10	2.6	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Dibromochloromethane	µg/l	5	NE	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
1,2-Dibromo-3-chloropropane; DBCP	µg/l	25	0.025	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
1,2-Dibromoethane; Ethylene dibromide	µg/l	5	0.00047	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Dibromomethane	µg/l	10	NE	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
1,2-Dichlorobenzene	µg/l	5	24	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
1,4-Dichlorobenzene	µg/l	5	1.4	ND	ND	ND	11	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
trans-1,4-Dichloro-2-butene	µg/l	100	NE	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
1,1-Dichloroethane	µg/l	5	70	38	12	ND	ND	12	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
1,2-Dichloroethane	µg/l	5	0.38	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
1,1-Dichloroethene (-ethylene)	µg/l	5	7	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
cis-1,2-Dichloroethene (-ethylene)	µg/l	5	70	29	15	9.7	12	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
trans-1,2-Dichloroethene (-vlene)	µg/l	5	100	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
1,2-Dichloropropane	µg/l	5	0.51	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
cis-1,3-Dichloropropene (-propylene)	µg/l	10	0.19	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
trans-1,3-Dichloropropene (-propylene)	µg/l	10	0.19	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Ethylbenzene	µg/l	5	550	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
2-Hexanone	µg/l	50	NE	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Iodomethane	µg/l	10	NE	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Dichloromethane (Methylene chloride)	µg/l	10	4.6	6.1	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
2-Butanone (Methyl ethyl ketone)	µg/l	100	4200	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
4-Methyl-2-Pentanone	µg/l	100	NE	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Styrene	µg/l	10	100	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
1,1,1,2-Tetrachloroethane	µg/l	5	NE	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
1,1,2,2-Tetrachloroethane	µg/l	5	NE	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Tetrachloroethene (-ethylene)	µg/l	5	0.7	7.9	5.8	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Toluene	µg/l	5	1000	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
1,1,1-Trichloroethane	µg/l	5	200	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
1,1,2-Trichloroethane	µg/l	5	NE	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Trichloroethene (-ethylene)	µg/l	5	2.8	10	5.5	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Trichlorofluoromethane	µg/l	5	2100	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
1,2,3-Trichloropropane	µg/l	15	0.005	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Vinyl acetate	µg/l	50	NE	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Vinyl chloride	µg/l	10	0.015	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Total Xylenes	µg/l	5	530	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Naphthalene	µg/l	NT	6	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
1,3-dichlorobenzene	µg/l	NT	200	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
dichlorodifluoromethane	µg/l	NT	1000	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT

Notes:

1. MCL = Maximum Contaminant Level, as established in the NCDENR, Classifications of Water Quality Standards Applicable to Groundwaters of North Carolina, Section 15A NCAC 2L.202. Shaded cells indicated exceedances of MCLs.
2. NE = Not Established; North Carolina has not established a MCL
3. MRL = Laboratory Method Reporting Limit
4. ND = Not Detected at the MRL; "J"-flagged data (i.e., values estimated between the laboratory method detection limit [MDL] and the MRL) are not presented on this spreadsheet.
5. NS = Not Sampled
6. NT = Not Tested
7. NP = Not Present during sampling event

Closed Francis Farm Landfill - Haywood Co., NC
Groundwater Sampling Event (2-14-2005)

TEST	UNITS	MRL	MCL	MW-4	MW-5	MW-1A	MW-2A	MW-3A	MW-6	MW-7	MW-8	MW-9	MW-10	MW-11	MW-12	MW-13	MW-14	MW-14D	MW-15	MW-16	MW-16D	MW-17	MW-18	MW-19	MW-19D	MW-20	MW-20D	MW-21	MW-22	MW-23	MW-24	MW-25	EQUIP. BLANK
pH	pH units	-	NE	5.38	5.6	6.09	6.06	6.07	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Specific Conductance	umhos/cm	1	NE	95	131	270	360	278	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Temperature	°C	-	NE	11.3	11.3	12.3	13.3	12.8	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Turbidity	NTU	0.1	NE	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Total Antimony (Sb)	µg/l	NT	NE	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Total Arsenic (As)	µg/l	5	50	ND	6.2	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Total Barium (Ba)	µg/l	5	2000	160	520	310	300	300	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Total Beryllium (Be)	µg/l	NT	NE	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Total Cadmium (Cd)	µg/l	1	1.75	ND	ND	2.4	7	4	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Total Chromium (Cr)	µg/l	2	50	4.1	11	7.6	18	12	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Total Cobalt (Co)	µg/l	NT	NE	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Total Copper (Cu)	µg/l	NT	1000	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Total Lead (Pb)	µg/l	5	15	ND	7.9	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Total Mercury (Hg)	µg/l	0.2	1.05	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Total Nickel (Ni)	µg/l	50	100	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Total Selenium (Se)	µg/l	5	50	5.3	ND	16	39	24	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	5.8
Total Silver (Ag)	µg/l	2	17.5	ND	ND	ND	5.8	3.6	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Total Thallium (Tl)	µg/l	NT	NE	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Total Vanadium (V)	µg/l	NT	NE	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Total Zinc (Zn)	µg/l	NT	1050	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Acetone	µg/l	100	700	53	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Acrylonitrile	µg/l	200	NE	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Benzene	µg/l	5	1	20	7.1	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Bromochloromethane	µg/l	5	NE	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Bromodichloromethane	µg/l	5	0.56	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Bromoform	µg/l	5	0.19	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Carbon Disulfide	µg/l	100	700	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Bromomethane (Methylbromide)	µg/l	10	NE	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Carbon tetrachloride	µg/l	10	0.269	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Chlorobenzene (mono)	µg/l	5	50	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Chloroethane	µg/l	10	2800	16	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Chloroform	µg/l	5	70	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Chloromethane (Methylchloride)	µg/l	10	2.6	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Dibromochloromethane	µg/l	5	NE	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
1,2-Dibromo-3-chloropropane; DBCP	µg/l	25	0.025	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
1,2-Dibromoethane; Ethylene dibromide	µg/l	5	0.00047	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Dibromomethane	µg/l	10	NE	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
1,2-Dichlorobenzene	µg/l	5	24	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
1,4-Dichlorobenzene	µg/l	5	1.4	ND	ND	ND	14	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
trans-1,4-Dichloro-2-butene	µg/l	100	NE	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
1,1-Dichloroethane	µg/l	5	70	70	15	5.5	ND	11	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
1,2-Dichloroethane	µg/l	5	0.38	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
1,1-Dichloroethene (-ethylene)	µg/l	5	7	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
cis-1,2-Dichloroethene (-ethylene)	µg/l	5	70	48	20	10	26	6	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
trans-1,2-Dichloroethene (-ylene)	µg/l	5	100	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
1,2-Dichloropropane	µg/l	5	0.51	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
cis-1,3-Dichloropropene (-propylene)	µg/l	10	0.19	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
trans-1,3-Dichloropropene (-propylene)	µg/l	10	0.19	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Ethylbenzene	µg/l	5	550	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
2-Hexanone	µg/l	50	NE	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Iodomethane	µg/l	10	NE	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Dichloromethane (Methylene chloride)	µg/l	10	4.6	12	12	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
2-Butanone (Methyl ethyl ketone)	µg/l	100	4200	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
4-Methyl-2-Pentanone	µg/l	100	NE	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Styrene	µg/l	10	100	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
1,1,1,2-Tetrachloroethane	µg/l	5	NE	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
1,1,2,2-Tetrachloroethane	µg/l	5	NE	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Tetrachloroethene (-ethylene)	µg/l	5	0.7	15	6.4	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Toluene	µg/l	5	1000	ND	ND	ND	ND	6.5	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
1,1,1-Trichloroethane	µg/l	5	200	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
1,1,2-Trichloroethane	µg/l	5	NE	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Trichloroethene (-ethylene)	µg/l	5	2.8	17	7	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Trichlorofluoromethane	µg/l	5	2100	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
1,2,3-Trichloropropane	µg/l	15	0.005	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Vinyl acetate	µg/l	50	NE	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Vinyl chloride	µg/l	10	0.015	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Total Xylenes	µg/l	5	530	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Naphthalene	µg/l	NT	6	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
1,3-dichlorobenzene	µg/l	NT	200	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
dichlorodifluoromethane	µg/l	NT	1000	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT

Notes:

1. MCL = Maximum Contaminant Level, as established in the NCDENR, Classifications of Water Quality Standards Applicable to Groundwaters of North Carolina, Section 15A NCAC 2L.202. Shaded cells indicated exceedances of MCLs.
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4. ND = Not Detected at the MRL; "J"-flagged data (i.e., values estimated between the laboratory method detection limit [MDL] and the MRL) are not presented on this spreadsheet.
5. NS = Not Sampled
6. NT = Not Tested
7. NP = Not Present during sampling event

Closed Francis Farm Landfill - Haywood Co., NC
Groundwater Sampling Event (9-1-2005)

TEST	UNITS	MRL	MCL	MW-4	MW-5	MW-1A	MW-2A	MW-3A	MW-6	MW-7	MW-8	MW-9	MW-10	MW-11	MW-12	MW-13	MW-14	MW-14D	MW-15	MW-16	MW-16D	MW-17	MW-18	MW-19	MW-19D	MW-20	MW-20D	MW-21	MW-22	MW-23	MW-24	MW-25	EQUIP. BLANK
pH	pH units	-	NE	5.58	5.63	6.21	6.42	6.45	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Specific Conductance	µmhos/cm	1	NE	122	150	355	485	300	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Temperature	°C	-	NE	15.2	13.7	16	13.7	14	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Turbidity	NTU	0.1	NE	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Total Antimony (Sb)	µg/l	NT	NE	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Total Arsenic (As)	µg/l	5	50	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Total Barium (Ba)	µg/l	5	2000	140	330	280	280	210	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Total Beryllium (Be)	µg/l	NT	NE	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Total Cadmium (Cd)	µg/l	1	1.75	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Total Chromium (Cr)	µg/l	2	50	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Total Cobalt (Co)	µg/l	NT	NE	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Total Copper (Cu)	µg/l	NT	1000	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Total Lead (Pb)	µg/l	5	15	ND	ND	ND	14	7.4	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Total Mercury (Hg)	µg/l	0.2	1.05	0.2	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Total Nickel (Ni)	µg/l	50	100	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Total Selenium (Se)	µg/l	5	50	6.9	ND	10	8.9	9.5	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Total Silver (Ag)	µg/l	2	17.5	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Total Thallium (Tl)	µg/l	NT	NE	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Total Vanadium (V)	µg/l	NT	NE	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Total Zinc (Zn)	µg/l	NT	1050	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Acetone	µg/l	10	700	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Acrylonitrile	µg/l	25	NE	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Benzene	µg/l	5	1	13	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Bromochloromethane	µg/l	5	NE	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Bromodichloromethane	µg/l	5	0.56	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Bromoform	µg/l	5	0.19	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Carbon Disulfide	µg/l	10	700	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Bromomethane (Methylbromide)	µg/l	5	NE	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Carbon tetrachloride	µg/l	5	0.269	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Chlorobenzene (mono)	µg/l	5	50	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Chloroethane	µg/l	10	2800	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Chloroform	µg/l	5	70	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Chloromethane (Methylchloride)	µg/l	5	2.6	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Dibromochloromethane	µg/l	5	NE	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
1,2-Dibromo-3-chloropropane; DBCP	µg/l	5	0.025	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
1,2-Dibromoethane; Ethylene dibromide	µg/l	5	0.00047	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Dibromomethane	µg/l	5	NE	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
1,2-Dichlorobenzene	µg/l	5	24	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
1,4-Dichlorobenzene	µg/l	5	1.4	ND	ND	ND	13	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
trans-1,4-Dichloro-2-butene	µg/l	5	NE	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
1,1-Dichloroethane	µg/l	5	70	42	10	6.3	ND	8.6	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
1,2-Dichloroethane	µg/l	5	0.38	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
1,1-Dichloroethene (-ethylene)	µg/l	5	7	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
cis-1,2-Dichloroethene (-ethylene)	µg/l	5	70	31	13	11	27	9.4	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
trans-1,2-Dichloroethene (-ylene)	µg/l	5	100	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
1,2-Dichloropropane	µg/l	5	0.51	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
cis-1,3-Dichloropropene (-propylene)	µg/l	5	0.19	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
trans-1,3-Dichloropropene (-propylene)	µg/l	5	0.19	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Ethylbenzene	µg/l	5	550	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
2-Hexanone	µg/l	10	NE	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Iodomethane	µg/l	10	NE	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Dichloromethane (Methylene chloride)	µg/l	5	4.6	7.3	7.4	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
2-Butanone (Methyl ethyl ketone)	µg/l	10	4200	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
4-Methyl-2-Pentanone	µg/l	10	NE	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Styrene	µg/l	5	100	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
1,1,1,2-Tetrachloroethane	µg/l	5	NE	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
1,1,2,2-Tetrachloroethane	µg/l	5	NE	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Tetrachloroethene (-ethylene)	µg/l	5	0.7	9	5.4	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Toluene	µg/l	5	1000	ND	ND	ND	ND	120	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
1,1,1-Trichloroethane	µg/l	5	200	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
1,1,2-Trichloroethane	µg/l	5	NE	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Trichloroethene (-ethylene)	µg/l	5	2.8	11	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Trichlorofluoromethane	µg/l	10	2100	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
1,2,3-Trichloropropane	µg/l	5	0.005	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Vinyl acetate	µg/l	10	NE	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Vinyl chloride	µg/l	5	0.015	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Total Xylenes	µg/l	10	530	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Naphthalene	µg/l	NT	6	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
1,3-dichlorobenzene	µg/l	NT	200	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
dichlorodifluoromethane	µg/l	NT	1000	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT

Notes:

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5. NS = Not Sampled
6. NT = Not Tested
7. NP = Not Present during sampling event

Closed Francis Farm Landfill - Haywood Co., NC
Groundwater Sampling Event (2-16-2006)

TEST	UNITS	MRL	MCL	MW-4	MW-5	MW-1A	MW-2A	MW-3A	MW-6	MW-7	MW-8	MW-9	MW-10	MW-11	MW-12	MW-13	MW-14	MW-14D	MW-15	MW-16	MW-16D	MW-17	MW-18	MW-19	MW-19D	MW-20	MW-20D	MW-21	MW-22	MW-23	MW-24	MW-25	EQUIP. BLANK
pH	pH units	-	NE	5.71	5.65	6.03	6.16	6.35	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Specific Conductance	µmhos/cm	1	NE	181	168	460	590	380	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Temperature	°C	-	NE	15.1	12.4	13.8	13.3	13.3	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Turbidity	NTU	0.1	NE	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Total Antimony (Sb)	µg/l	NT	NE	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Total Arsenic (As)	µg/l	5	50	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Total Barium (Ba)	µg/l	5	2000	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Total Beryllium (Be)	µg/l	NT	NE	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Total Cadmium (Cd)	µg/l	1	1.75	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Total Chromium (Cr)	µg/l	2	50	ND	16	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Total Cobalt (Co)	µg/l	NT	NE	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Total Copper (Cu)	µg/l	NT	1000	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Total Lead (Pb)	µg/l	5	15	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Total Mercury (Hg)	µg/l	0.2	1.05	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Total Nickel (Ni)	µg/l	50	100	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Total Selenium (Se)	µg/l	5	50	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Total Silver (Ag)	µg/l	2	17.5	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Total Thallium (Tl)	µg/l	NT	NE	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Total Vanadium (V)	µg/l	NT	NE	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Total Zinc (Zn)	µg/l	NT	1050	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Acetone	µg/l	10	700	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Acrylonitrile	µg/l	25	NE	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Benzene	µg/l	5	1	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Bromochloromethane	µg/l	5	NE	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Bromodichloromethane	µg/l	5	0.56	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Bromoform	µg/l	5	0.19	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Carbon Disulfide	µg/l	10	700	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Bromomethane (Methylbromide)	µg/l	5	NE	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Carbon tetrachloride	µg/l	5	0.269	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Chlorobenzene (mono)	µg/l	5	50	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Chloroethane	µg/l	10	2800	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Chloroform	µg/l	5	70	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Chloromethane (Methylchloride)	µg/l	5	2.6	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Dibromochloromethane	µg/l	5	NE	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
1,2-Dibromo-3-chloropropane; DBCP	µg/l	5	0.025	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
1,2-Dibromoethane; Ethylene dibromide	µg/l	5	0.00047	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Dibromomethane	µg/l	5	NE	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
1,2-Dichlorobenzene	µg/l	5	24	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
1,4-Dichlorobenzene	µg/l	5	1.4	ND	ND	ND	10	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
trans-1,4-Dichloro-2-butene	µg/l	5	NE	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
1,1-Dichloroethane	µg/l	5	70	ND	7.1	ND	ND	13	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
1,2-Dichloroethane	µg/l	5	0.38	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
1,1-Dichloroethene (-ethylene)	µg/l	5	7	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
cis-1,2-Dichloroethene (-ethylene)	µg/l	5	70	ND	7.4	ND	17	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
trans-1,2-Dichloroethene (-ylene)	µg/l	5	100	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
1,2-Dichloropropane	µg/l	5	0.51	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
cis-1,3-Dichloropropene (-propylene)	µg/l	5	0.19	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
trans-1,3-Dichloropropene (-propylene)	µg/l	5	0.19	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Ethylbenzene	µg/l	5	550	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
2-Hexanone	µg/l	10	NE	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Iodomethane	µg/l	10	NE	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Dichloromethane (Methylene chloride)	µg/l	5	4.6	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
2-Butanone (Methyl ethyl ketone)	µg/l	10	4200	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
4-Methyl-2-Pentanone	µg/l	10	NE	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Styrene	µg/l	5	100	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
1,1,1,2-Tetrachloroethane	µg/l	5	NE	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
1,1,2,2-Tetrachloroethane	µg/l	5	NE	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Tetrachloroethene (-ethylene)	µg/l	5	0.7	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Toluene	µg/l	5	1000	ND	ND	ND	ND	6.5	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
1,1,1-Trichloroethane	µg/l	5	200	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
1,1,2-Trichloroethane	µg/l	5	NE	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Trichloroethene (-ethylene)	µg/l	5	2.8	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Trichlorofluoromethane	µg/l	10	2100	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
1,2,3-Trichloropropane	µg/l	5	0.005	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Vinyl acetate	µg/l	10	NE	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Vinyl chloride	µg/l	5	0.015	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Total Xylenes	µg/l	10	530	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Naphthalene	µg/l	NT	6	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
1,3-dichlorobenzene	µg/l	NT	200	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
dichlorodifluoromethane	µg/l	NT	1000	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT

Notes:

1. MCL = Maximum Contaminant Level, as established in the NCDENR, Classifications of Water Quality Standards Applicable to Groundwaters of North Carolina, Section 15A NCAC 2L.202. Shaded cells indicated exceedances of MCLs.
2. NE = Not Established; North Carolina has not established a MCL
3. MRL = Laboratory Method Reporting Limit
4. ND = Not Detected at the MRL; "J"-flagged data (i.e., values estimated between the laboratory method detection limit [MDL] and the MRL) are not presented on this spreadsheet.
5. NS = Not Sampled
6. NT = Not Tested
7. NP = Not Present during sampling event

Closed Francis Farm Landfill - Haywood Co., NC
Groundwater Sampling Event (8-30-2006)

TEST	UNITS	MRL	MCL	MW-4	MW-5	MW-1A	MW-2A	MW-3A	MW-6	MW-7	MW-8	MW-9	MW-10	MW-11	MW-12	MW-13	MW-14	MW-14D	MW-15	MW-16	MW-16D	MW-17	MW-18	MW-19	MW-19D	MW-20	MW-20D	MW-21	MW-22	MW-23	MW-24	MW-25	EQUIP. BLANK
pH	pH units	-	NE	5.62	5.95	5.9	6.44	6.29	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Specific Conductance	µmhos/cm	1	NE	177	213	409	642	545	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Temperature	°C	-	NE	16.5	15.4	18.3	14.7	15.4	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Turbidity	NTU	0.1	NE	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Total Antimony (Sb)	µg/l	NT	NE	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Total Arsenic (As)	µg/l	5	50	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Total Barium (Ba)	µg/l	5	2000	160	250	290	220	240	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Total Beryllium (Be)	µg/l	NT	NE	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Total Cadmium (Cd)	µg/l	1	1.75	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Total Chromium (Cr)	µg/l	2	50	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Total Cobalt (Co)	µg/l	NT	NE	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Total Copper (Cu)	µg/l	NT	1000	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Total Lead (Pb)	µg/l	5	15	7.6	6.5	5.2	5.7	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Total Mercury (Hg)	µg/l	0.2	1.05	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Total Nickel (Ni)	µg/l	50	100	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Total Selenium (Se)	µg/l	5	50	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Total Silver (Ag)	µg/l	2	17.5	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Total Thallium (Tl)	µg/l	NT	NE	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Total Vanadium (V)	µg/l	NT	NE	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Total Zinc (Zn)	µg/l	NT	1050	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Acetone	µg/l	25	700	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Acrylonitrile	µg/l	25	NE	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Benzene	µg/l	5	1	16	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Bromochloromethane	µg/l	5	NE	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Bromodichloromethane	µg/l	5	0.56	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Bromoform	µg/l	5	0.19	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Carbon Disulfide	µg/l	10	700	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Bromomethane (Methylbromide)	µg/l	5	NE	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Carbon tetrachloride	µg/l	5	0.269	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Chlorobenzene (mono)	µg/l	5	50	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Chloroethane	µg/l	10	2800	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Chloroform	µg/l	5	70	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Chloromethane (Methylchloride)	µg/l	5	2.6	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Dibromochloromethane	µg/l	5	NE	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
1,2-Dibromo-3-chloropropane; DBCP	µg/l	5	0.025	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
1,2-Dibromoethane; Ethylene dibromide	µg/l	5	0.00047	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Dibromomethane	µg/l	5	NE	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
1,2-Dichlorobenzene	µg/l	5	24	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
1,4-Dichlorobenzene	µg/l	5	1.4	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
trans-1,4-Dichloro-2-butene	µg/l	5	NE	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
1,1-Dichloroethane	µg/l	5	70	42	5.7	ND	7.6	23	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
1,2-Dichloroethane	µg/l	5	0.38	ND	ND	ND	ND	5	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
1,1-Dichloroethene (-ethylene)	µg/l	5	7	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
cis-1,2-Dichloroethene (-ethylene)	µg/l	5	70	34	ND	6.8	16	5.8	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
trans-1,2-Dichloroethene (-vlene)	µg/l	5	100	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
1,2-Dichloropropane	µg/l	5	0.51	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
cis-1,3-Dichloropropene (-propylene)	µg/l	5	0.19	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
trans-1,3-Dichloropropene (-propylene)	µg/l	5	0.19	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Ethylbenzene	µg/l	5	550	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
2-Hexanone	µg/l	10	NE	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Iodomethane	µg/l	10	NE	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Dichloromethane (Methylene chloride)	µg/l	5	4.6	17	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
2-Butanone (Methyl ethyl ketone)	µg/l	10	4200	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
4-Methyl-2-Pentanone	µg/l	10	NE	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Styrene	µg/l	5	100	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
1,1,1,2-Tetrachloroethane	µg/l	5	NE	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
1,1,2,2-Tetrachloroethane	µg/l	5	NE	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Tetrachloroethene (-ethylene)	µg/l	5	0.7	8.3	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Toluene	µg/l	5	1000	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
1,1,1-Trichloroethane	µg/l	5	200	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
1,1,2-Trichloroethane	µg/l	5	NE	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Trichloroethene (-ethylene)	µg/l	5	2.8	11	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Trichlorofluoromethane	µg/l	10	2100	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
1,2,3-Trichloropropane	µg/l	5	0.005	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Vinyl acetate	µg/l	10	NE	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Vinyl chloride	µg/l	5	0.015	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Total Xylenes	µg/l	10	530	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Naphthalene	µg/l	NT	6	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
1,3-dichlorobenzene	µg/l	NT	200	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
dichlorodifluoromethane	µg/l	NT	1000	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT

Notes:

1. MCL = Maximum Contaminant Level, as established in the NCDENR, Classifications of Water Quality Standards Applicable to Groundwaters of North Carolina, Section 15A NCAC 2L.202. Shaded cells indicated exceedances of MCLs.
2. NE = Not Established; North Carolina has not established a MCL
3. MRL = Laboratory Method Reporting Limit
4. ND = Not Detected at the MRL; "J"-flagged data (i.e., values estimated between the laboratory method detection limit [MDL] and the MRL) are not presented on this spreadsheet.
5. NS = Not Sampled
6. NT = Not Tested
7. NP = Not Present during sampling event

Closed Francis Farm Landfill - Haywood Co., NC
Groundwater Sampling Event (2-26-2007)

TEST	UNITS	MRL	MCL	MW-4	MW-5	MW-1A	MW-2A	MW-3A	MW-6	MW-7	MW-8	MW-9	MW-10	MW-11	MW-12	MW-13	MW-14	MW-14D	MW-15	MW-16	MW-16D	MW-17	MW-18	MW-19	MW-19D	MW-20	MW-20D	MW-21	MW-22	MW-23	MW-24	MW-25	EQUIP. BLANK
pH	pH units	-	NE	6.14	5.36	6.07	6.6	6.29	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Specific Conductance	µmhos/cm	1	NE	175	180	388	756	548	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Temperature	°C	-	NE	13.8	12.2	14.1	12.1	13.1	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Turbidity	NTU	0.1	NE	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Total Antimony (Sb)	µg/l	NT	NE	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Total Arsenic (As)	µg/l	5	50	ND	ND	ND	5.9	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Total Barium (Ba)	µg/l	5	2000	140	280	210	240	300	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Total Beryllium (Be)	µg/l	NT	NE	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Total Cadmium (Cd)	µg/l	1	1.75	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Total Chromium (Cr)	µg/l	5	50	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Total Cobalt (Co)	µg/l	NT	NE	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Total Copper (Cu)	µg/l	NT	1000	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Total Lead (Pb)	µg/l	5	15	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Total Mercury (Hg)	µg/l	0.2	1.05	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Total Nickel (Ni)	µg/l	50	100	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Total Selenium (Se)	µg/l	10	50	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Total Silver (Ag)	µg/l	5	17.5	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Total Thallium (Tl)	µg/l	NT	NE	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Total Vanadium (V)	µg/l	NT	NE	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Total Zinc (Zn)	µg/l	NT	1050	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Acetone	µg/l	25	700	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Acrylonitrile	µg/l	25	NE	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Benzene	µg/l	5	1	15	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Bromochloromethane	µg/l	5	NE	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Bromodichloromethane	µg/l	5	0.56	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Bromoform	µg/l	5	0.19	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Carbon Disulfide	µg/l	10	700	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Bromomethane (Methylbromide)	µg/l	5	NE	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Carbon tetrachloride	µg/l	5	0.269	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Chlorobenzene (mono)	µg/l	5	50	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Chloroethane	µg/l	10	2800	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Chloroform	µg/l	5	70	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Chloromethane (Methylchloride)	µg/l	5	2.6	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Dibromochloromethane	µg/l	5	NE	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
1,2-Dibromo-3-chloropropane; DBCP	µg/l	5	0.025	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
1,2-Dibromoethane; Ethylene dibromide	µg/l	5	0.00047	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Dibromomethane	µg/l	5	NE	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
1,2-Dichlorobenzene	µg/l	5	24	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
1,4-Dichlorobenzene	µg/l	5	1.4	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
trans-1,4-Dichloro-2-butene	µg/l	5	NE	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
1,1-Dichloroethane	µg/l	5	70	36	ND	ND	ND	17	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
1,2-Dichloroethane	µg/l	5	0.38	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
1,1-Dichloroethene (-ethylene)	µg/l	5	7	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
cis-1,2-Dichloroethene (-ethylene)	µg/l	5	70	30	ND	ND	12	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
trans-1,2-Dichloroethene (-vlene)	µg/l	5	100	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
1,2-Dichloropropane	µg/l	5	0.51	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
cis-1,3-Dichloropropene (-propylene)	µg/l	5	0.19	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
trans-1,3-Dichloropropene (-propylene)	µg/l	5	0.19	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Ethylbenzene	µg/l	5	550	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
2-Hexanone	µg/l	10	NE	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Iodomethane	µg/l	10	NE	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Dichloromethane (Methylene chloride)	µg/l	5	4.6	15	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
2-Butanone (Methyl ethyl ketone)	µg/l	10	4200	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
4-Methyl-2-Pentanone	µg/l	10	NE	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Styrene	µg/l	5	100	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
1,1,1,2-Tetrachloroethane	µg/l	5	NE	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
1,1,2,2-Tetrachloroethane	µg/l	5	NE	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Tetrachloroethene (-ethylene)	µg/l	5	0.7	8.5	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Toluene	µg/l	5	1000	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
1,1,1-Trichloroethane	µg/l	5	200	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
1,1,2-Trichloroethane	µg/l	5	NE	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Trichloroethene (-ethylene)	µg/l	5	2.8	11	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Trichlorofluoromethane	µg/l	10	2100	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
1,2,3-Trichloropropane	µg/l	5	0.005	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Vinyl acetate	µg/l	10	NE	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Vinyl chloride	µg/l	5	0.015	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Total Xylenes	µg/l	10	530	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Naphthalene	µg/l	NT	6	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
1,3-dichlorobenzene	µg/l	NT	200	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
dichlorodifluoromethane	µg/l	NT	1000	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT

Notes:

1. MCL = Maximum Contaminant Level, as established in the NCDENR, Classifications of Water Quality Standards Applicable to Groundwaters of North Carolina, Section 15A NCAC 2L.202. Shaded cells indicated exceedances of MCLs.
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3. MRL = Laboratory Method Reporting Limit
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5. NS = Not Sampled
6. NT = Not Tested
7. NP = Not Present during sampling event

Closed Francis Farm Landfill - Haywood Co., NC
Groundwater Sampling Event (8-13-2007)

TEST	UNITS	MRL	MCL	MW-4	MW-5	MW-1A	MW-2A	MW-3A	MW-6	MW-7	MW-8	MW-9	MW-10	MW-11	MW-12	MW-13	MW-14	MW-14D	MW-15	MW-16	MW-16D	MW-17	MW-18	MW-19	MW-19D	MW-20	MW-20D	MW-21	MW-22	MW-23	MW-24	MW-25	EQUIP. BLANK
pH	pH units	-	NE	5.46	5.76	6.14	6.2	Dry	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Specific Conductance	µmhos/cm	10	NE	159	148	284	512	Dry	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Temperature	°C	-	NE	16.5	15	17.8	13.3	Dry	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Turbidity	NTU	0.1	NE	NT	NT	NT	NT	Dry	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Total Antimony (Sb)	µg/l	NT	NE	NT	NT	NT	NT	Dry	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Total Arsenic (As)	µg/l	5	50	ND	ND	ND	ND	Dry	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Total Barium (Ba)	µg/l	5	2000	137	208	176	256	Dry	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Total Beryllium (Be)	µg/l	NT	NE	NT	NT	NT	NT	Dry	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Total Cadmium (Cd)	µg/l	1	1.75	ND	ND	1.5	ND	Dry	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Total Chromium (Cr)	µg/l	5	50	ND	ND	ND	ND	Dry	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Total Cobalt (Co)	µg/l	NT	NE	NT	NT	NT	NT	Dry	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Total Copper (Cu)	µg/l	NT	1000	NT	NT	NT	NT	Dry	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Total Lead (Pb)	µg/l	5	15	ND	ND	ND	ND	Dry	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Total Mercury (Hg)	µg/l	0.2	1.05	ND	ND	ND	ND	Dry	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Total Nickel (Ni)	µg/l	NT	100	NT	NT	NT	NT	Dry	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Total Selenium (Se)	µg/l	10	50	ND	ND	ND	29.2	Dry	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Total Silver (Ag)	µg/l	5	17.5	ND	ND	ND	ND	Dry	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Total Thallium (Tl)	µg/l	NT	NE	NT	NT	NT	NT	Dry	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Total Vanadium (V)	µg/l	NT	NE	NT	NT	NT	NT	Dry	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Total Zinc (Zn)	µg/l	NT	1050	NT	NT	NT	NT	Dry	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Acetone	µg/l	25	700	ND	ND	ND	ND	Dry	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Acrylonitrile	µg/l	10	NE	ND	ND	ND	ND	Dry	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Benzene	µg/l	1	1	17	1.7	ND	ND	Dry	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Bromochloromethane	µg/l	1	NE	ND	ND	ND	ND	Dry	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Bromodichloromethane	µg/l	1	0.56	ND	ND	ND	ND	Dry	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Bromoform	µg/l	1	0.19	ND	ND	ND	ND	Dry	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Carbon Disulfide	µg/l	2	700	ND	ND	ND	ND	Dry	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Bromomethane (Methylbromide)	µg/l	5	NE	ND	ND	ND	ND	Dry	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Carbon tetrachloride	µg/l	1	0.269	ND	ND	ND	ND	Dry	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Chlorobenzene (mono)	µg/l	1	50	ND	ND	2.5	ND	Dry	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Chloroethane	µg/l	1	2800	5.5	2.7	2.3	4.8	Dry	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Chloroform	µg/l	1	70	ND	ND	ND	ND	Dry	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Chloromethane (Methylchloride)	µg/l	1	2.6	ND	ND	ND	ND	Dry	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Dibromochloromethane	µg/l	1	NE	ND	ND	ND	ND	Dry	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
1,2-Dibromo-3-chloropropane; DBCP	µg/l	3	0.025	ND	ND	ND	ND	Dry	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
1,2-Dibromoethane; Ethylene dibromide	µg/l	1	0.00047	ND	ND	ND	ND	Dry	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Dibromomethane	µg/l	1	NE	ND	ND	ND	ND	Dry	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
1,2-Dichlorobenzene	µg/l	1	24	ND	ND	ND	ND	Dry	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
1,4-Dichlorobenzene	µg/l	1	1.4	3.7	ND	ND	12.1	Dry	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
trans-1,4-Dichloro-2-butene	µg/l	1	NE	ND	ND	ND	ND	Dry	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
1,1-Dichloroethane	µg/l	1	70	40.3	4.3	1.8	4.4	Dry	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
1,2-Dichloroethane	µg/l	1	0.38	1.3	ND	1.1	ND	Dry	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
1,1-Dichloroethene (-ethylene)	µg/l	1	7	ND	ND	ND	ND	Dry	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
cis-1,2-Dichloroethene (-ethylene)	µg/l	1	70	31.6	4.3	5.1	9.7	Dry	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
trans-1,2-Dichloroethene (-vlene)	µg/l	1	100	ND	ND	ND	ND	Dry	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
1,2-Dichloropropane	µg/l	1	0.51	ND	ND	ND	ND	Dry	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
cis-1,3-Dichloropropene (-propylene)	µg/l	1	0.19	ND	ND	ND	ND	Dry	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
trans-1,3-Dichloropropene (-propylene)	µg/l	1	0.19	ND	ND	ND	ND	Dry	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Ethylbenzene	µg/l	1	550	1.1	ND	ND	ND	Dry	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
2-Hexanone	µg/l	5	NE	ND	ND	ND	ND	Dry	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Iodomethane	µg/l	5	NE	ND	ND	ND	ND	Dry	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Dichloromethane (Methylene chloride)	µg/l	2	4.6	38.8	2.9	ND	ND	Dry	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
2-Butanone (Methyl ethyl ketone)	µg/l	5	4200	ND	ND	ND	ND	Dry	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
4-Methyl-2-Pentanone	µg/l	5	NE	ND	ND	ND	ND	Dry	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Styrene	µg/l	1	100	ND	ND	ND	ND	Dry	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
1,1,1,2-Tetrachloroethane	µg/l	1	NE	ND	ND	ND	ND	Dry	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
1,1,2,2-Tetrachloroethane	µg/l	1	NE	ND	ND	ND	ND	Dry	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Tetrachloroethene (-ethylene)	µg/l	1	0.7	8.1	3.6	ND	ND	Dry	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Toluene	µg/l	1	1000	7.4	ND	ND	ND	Dry	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
1,1,1-Trichloroethane	µg/l	1	200	ND	ND	ND	ND	Dry	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
1,1,2-Trichloroethane	µg/l	1	NE	ND	ND	ND	ND	Dry	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Trichloroethene (-ethylene)	µg/l	1	2.8	9.9	2.7	ND	ND	Dry	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Trichlorofluoromethane	µg/l	1	2100	ND	ND	ND	ND	Dry	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
1,2,3-Trichloropropane	µg/l	1	0.005	ND	ND	ND	ND	Dry	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Vinyl acetate	µg/l	2	NE	ND	ND	ND	ND	Dry	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Vinyl chloride	µg/l	1	0.015	ND	ND	ND	1.5	Dry	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Total Xylenes	µg/l	2	530	6.1	ND	ND	ND	Dry	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Naphthalene	µg/l	NT	6	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
1,3-dichlorobenzene	µg/l	NT	200	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
dichlorodifluoromethane	µg/l	NT	1000	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT

Notes:

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5. NS = Not Sampled
6. NT = Not Tested
7. NP = Not Present during sampling event

Closed Francis Farm Landfill - Haywood Co., NC
Groundwater Sampling Event (2-11-2008)

TEST	UNITS	MRL	MCL	MW-4	MW-5	MW-1A	MW-2A	MW-3A	MW-6	MW-7	MW-8	MW-9	MW-10	MW-11	MW-12	MW-13	MW-14	MW-14D	MW-15	MW-16	MW-16D	MW-17	MW-18	MW-19	MW-19D	MW-20	MW-20D	MW-21	MW-22	MW-23	MW-24	MW-25	EQUIP. BLANK
pH	pH units	-	NE	5.27	5.47	5.64	5.81	5.4	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Specific Conductance	µmhos/cm	10	NE	172	158	289	473	611	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Temperature	°C	-	NE	13	12.2	12.8	12.9	12.6	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Turbidity	NTU	NT	NE	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Total Antimony (Sb)	µg/l	NT	NE	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Total Arsenic (As)	µg/l	5	50	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Total Barium (Ba)	µg/l	5	2000	155	238	165	229	41.7	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Total Beryllium (Be)	µg/l	NT	NE	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Total Cadmium (Cd)	µg/l	1	1.75	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Total Chromium (Cr)	µg/l	5	50	ND	6.3	ND	ND	10.3	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Total Cobalt (Co)	µg/l	NT	NE	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Total Copper (Cu)	µg/l	NT	1000	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Total Lead (Pb)	µg/l	5	15	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Total Mercury (Hg)	µg/l	0.2	1.05	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Total Nickel (Ni)	µg/l	NT	100	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Total Selenium (Se)	µg/l	10	50	ND	ND	ND	13.5	81.7	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Total Silver (Ag)	µg/l	5	17.5	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Total Thallium (Tl)	µg/l	NT	NE	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Total Vanadium (V)	µg/l	NT	NE	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Total Zinc (Zn)	µg/l	NT	1050	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Acetone	µg/l	25	700	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Acrylonitrile	µg/l	10	NE	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Benzene	µg/l	1	1	18.5	2	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Bromochloromethane	µg/l	1	NE	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Bromodichloromethane	µg/l	1	0.56	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Bromoform	µg/l	1	0.19	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Carbon Disulfide	µg/l	2	700	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Bromomethane (Methylbromide)	µg/l	5	NE	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Carbon tetrachloride	µg/l	1	0.269	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Chlorobenzene (mono)	µg/l	1	50	ND	ND	2.5	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Chloroethane	µg/l	1	2800	4.2	2.5	2.5	2.1	7.6	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Chloroform	µg/l	1	70	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Chloromethane (Methylchloride)	µg/l	1	2.6	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Dibromochloromethane	µg/l	1	NE	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
1,2-Dibromo-3-chloropropane; DBCP	µg/l	3	0.025	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
1,2-Dibromoethane; Ethylene dibromide	µg/l	1	0.00047	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Dibromomethane	µg/l	1	NE	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
1,2-Dichlorobenzene	µg/l	1	24	ND	ND	ND	1.2	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
1,4-Dichlorobenzene	µg/l	1	1.4	4.5	ND	ND	10.8	1.1	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
trans-1,4-Dichloro-2-butene	µg/l	1	NE	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
1,1-Dichloroethane	µg/l	1	70	39.0	4.7	1.5	1.5	15.4	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
1,2-Dichloroethane	µg/l	1	0.38	1.5	ND	ND	ND	3.2	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
1,1-Dichloroethene (-ethylene)	µg/l	1	7	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
cis-1,2-Dichloroethene (-ethylene)	µg/l	1	70	33.4	4.5	3.8	ND	1.6	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
trans-1,2-Dichloroethene (-vlene)	µg/l	1	100	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
1,2-Dichloropropane	µg/l	1	0.51	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
cis-1,3-Dichloropropene (-propylene)	µg/l	1	0.19	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
trans-1,3-Dichloropropene (-propylene)	µg/l	1	0.19	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Ethylbenzene	µg/l	1	550	2.8	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
2-Hexanone	µg/l	5	NE	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Iodomethane	µg/l	5	NE	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Dichloromethane (Methylene chloride)	µg/l	2	4.6	31.8	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
2-Butanone (Methyl ethyl ketone)	µg/l	5	4200	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
4-Methyl-2-Pentanone	µg/l	5	NE	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Styrene	µg/l	1	100	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
1,1,1,2-Tetrachloroethane	µg/l	1	NE	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
1,1,2,2-Tetrachloroethane	µg/l	1	NE	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Tetrachloroethene (-ethylene)	µg/l	1	0.7	8.2	3.5	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Toluene	µg/l	1	1000	20.5	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
1,1,1-Trichloroethane	µg/l	1	200	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
1,1,2-Trichloroethane	µg/l	1	NE	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Trichloroethene (-ethylene)	µg/l	1	2.8	9.9	2.7	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Trichlorofluoromethane	µg/l	1	2100	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
1,2,3-Trichloropropane	µg/l	1	0.005	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Vinyl acetate	µg/l	2	NE	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Vinyl chloride	µg/l	1	0.015	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Total Xylenes	µg/l	2	530	11.3	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Naphthalene	µg/l	NT	6	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
1,3-dichlorobenzene	µg/l	NT	200	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
dichlorodifluoromethane	µg/l	NT	1000	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT

Notes:

1. MCL = Maximum Contaminant Level, as established in the NCDENR, Classifications of Water Quality Standards Applicable to Groundwaters of North Carolina, Section 15A NCAC 2L.202. Shaded cells indicated exceedances of MCLs.
2. NE = Not Established; North Carolina has not established a MCL
3. MRL = Laboratory Method Reporting Limit
4. ND = Not Detected at the MRL; "J"-flagged data (i.e., values estimated between the laboratory method detection limit [MDL] and the MRL) are not presented on this spreadsheet.
5. NS = Not Sampled
6. NT = Not Tested
7. NP = Not Present during sampling event

Closed Francis Farm Landfill - Haywood Co., NC
Groundwater Sampling Event (8-25-2008)

TEST	UNITS	MRL	MCL	MW-4	MW-5	MW-1A	MW-2A	MW-3A	MW-6	MW-7	MW-8	MW-9	MW-10	MW-11	MW-12	MW-13	MW-14	MW-14D	MW-15	MW-16	MW-16D	MW-17	MW-18	MW-19	MW-19D	MW-20	MW-20D	MW-21	MW-22	MW-23	MW-24	MW-25	EQUIP. BLANK
pH	pH units	-	NE	5.30	5.71	6.02	6.38	Dry	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Specific Conductance	umhos/cm	10	NE	180	180	324	590	Dry	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Temperature	°C	-	NE	16.2	14.4	16.1	20.7	Dry	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Turbidity	NTU	NT	NE	NT	NT	NT	NT	Dry	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Total Antimony (Sb)	µg/l	NT	NE	NT	NT	NT	NT	Dry	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Total Arsenic (As)	µg/l	5	50	ND	ND	ND	ND	Dry	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Total Barium (Ba)	µg/l	5	2000	142	195	150	265	Dry	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Total Beryllium (Be)	µg/l	NT	NE	NT	NT	NT	NT	Dry	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Total Cadmium (Cd)	µg/l	1	1.75	ND	ND	ND	ND	Dry	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Total Chromium (Cr)	µg/l	5	50	ND	ND	ND	ND	Dry	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Total Cobalt (Co)	µg/l	NT	NE	NT	NT	NT	NT	Dry	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Total Copper (Cu)	µg/l	NT	1000	NT	NT	NT	NT	Dry	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Total Lead (Pb)	µg/l	5	15	ND	ND	ND	ND	Dry	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Total Mercury (Hg)	µg/l	0.2	1.05	ND	ND	ND	ND	Dry	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Total Nickel (Ni)	µg/l	NT	100	NT	NT	NT	NT	Dry	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Total Selenium (Se)	µg/l	10	50	ND	ND	ND	13.9	Dry	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Total Silver (Ag)	µg/l	5	17.5	ND	ND	ND	ND	Dry	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Total Thallium (Tl)	µg/l	NT	NE	NT	NT	NT	NT	Dry	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Total Vanadium (V)	µg/l	NT	NE	NT	NT	NT	NT	Dry	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Total Zinc (Zn)	µg/l	NT	1050	NT	NT	NT	NT	Dry	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Acetone	µg/l	25	700	ND	ND	ND	ND	Dry	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Acrylonitrile	µg/l	10	NE	ND	ND	ND	ND	Dry	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Benzene	µg/l	1	1	18.9	2.3	ND	ND	Dry	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Bromochloromethane	µg/l	1	NE	ND	ND	ND	ND	Dry	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Bromodichloromethane	µg/l	1	0.56	ND	ND	ND	ND	Dry	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Bromoform	µg/l	1	0.19	ND	ND	ND	ND	Dry	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Carbon Disulfide	µg/l	2	700	ND	ND	ND	ND	Dry	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Bromomethane (Methylbromide)	µg/l	5	NE	ND	ND	ND	ND	Dry	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Carbon tetrachloride	µg/l	1	0.269	ND	ND	ND	ND	Dry	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Chlorobenzene (mono)	µg/l	1	50	ND	ND	3.1	ND	Dry	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Chloroethane	µg/l	1	2800	6.2	2.4	2.6	4.2	Dry	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Chloroform	µg/l	1	70	ND	ND	ND	ND	Dry	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Chloromethane (Methylchloride)	µg/l	1	2.6	ND	ND	ND	ND	Dry	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Dibromochloromethane	µg/l	1	NE	ND	ND	ND	ND	Dry	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
1,2-Dibromo-3-chloropropane; DBCP	µg/l	3	0.025	ND	ND	ND	ND	Dry	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
1,2-Dibromoethane; Ethylene dibromide	µg/l	1	0.00047	ND	ND	ND	ND	Dry	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Dibromomethane	µg/l	1	NE	ND	ND	ND	ND	Dry	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
1,2-Dichlorobenzene	µg/l	1	24	ND	ND	ND	1.9	Dry	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
1,4-Dichlorobenzene	µg/l	1	1.4	5.1	ND	ND	8.6	Dry	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
trans-1,4-Dichloro-2-butene	µg/l	1	NE	ND	ND	ND	ND	Dry	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
1,1-Dichloroethane	µg/l	1	70	39.3	5.4	1.4	2.6	Dry	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
1,2-Dichloroethane	µg/l	1	0.38	1.5	ND	ND	ND	Dry	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
1,1-Dichloroethene (-ethylene)	µg/l	1	7	ND	ND	ND	ND	Dry	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
cis-1,2-Dichloroethene (-ethylene)	µg/l	1	70	34.5	5.8	2.8	7.6	Dry	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
trans-1,2-Dichloroethene (-vlene)	µg/l	1	100	ND	ND	ND	ND	Dry	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
1,2-Dichloropropane	µg/l	1	0.51	ND	ND	ND	ND	Dry	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
cis-1,3-Dichloropropene (-propylene)	µg/l	1	0.19	ND	ND	ND	ND	Dry	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
trans-1,3-Dichloropropene (-propylene)	µg/l	1	0.19	ND	ND	ND	ND	Dry	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Ethylbenzene	µg/l	1	550	2.1	ND	ND	ND	Dry	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
2-Hexanone	µg/l	5	NE	ND	ND	ND	ND	Dry	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Iodomethane	µg/l	5	NE	ND	ND	ND	ND	Dry	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Dichloromethane (Methylene chloride)	µg/l	2	4.6	43.7	ND	ND	ND	Dry	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
2-Butanone (Methyl ethyl ketone)	µg/l	5	4200	ND	ND	ND	ND	Dry	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
4-Methyl-2-Pentanone	µg/l	5	NE	ND	ND	ND	ND	Dry	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Styrene	µg/l	1	100	ND	ND	ND	ND	Dry	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
1,1,1,2-Tetrachloroethane	µg/l	1	NE	ND	ND	ND	ND	Dry	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
1,1,2,2-Tetrachloroethane	µg/l	1	NE	ND	ND	ND	ND	Dry	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Tetrachloroethene (-ethylene)	µg/l	1	0.7	7.9	3.9	ND	ND	Dry	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Toluene	µg/l	1	1000	11.9	ND	ND	ND	Dry	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
1,1,1-Trichloroethane	µg/l	1	200	ND	ND	ND	ND	Dry	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
1,1,2-Trichloroethane	µg/l	1	NE	ND	ND	ND	ND	Dry	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Trichloroethene (-ethylene)	µg/l	1	2.8	10	3	ND	ND	Dry	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Trichlorofluoromethane	µg/l	1	2100	ND	ND	ND	ND	Dry	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
1,2,3-Trichloropropane	µg/l	1	0.005	ND	ND	ND	ND	Dry	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Vinyl acetate	µg/l	2	NE	ND	ND	ND	ND	Dry	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Vinyl chloride	µg/l	1	0.015	ND	ND	ND	ND	Dry	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Total Xylenes	µg/l	3	530	7.7	ND	ND	ND	Dry	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Naphthalene	µg/l	NT	6	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
1,3-dichlorobenzene	µg/l	NT	200	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
dichlorodifluoromethane	µg/l	NT	1000	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT

Notes:

1. MCL = Maximum Contaminant Level, as established in the NCDENR, Classifications of Water Quality Standards Applicable to Groundwaters of North Carolina, Section 15A NCAC 2L.202. Shaded cells indicated exceedances of MCLs.
2. NE = Not Established; North Carolina has not established a MCL
3. MRL = Laboratory Method Reporting Limit
4. ND = Not Detected at the MRL; "J"-flagged data (i.e., values estimated between the laboratory method detection limit [MDL] and the MRL) are not presented on this spreadsheet.
5. NS = Not Sampled
6. NT = Not Tested
7. NP = Not Present during sampling event

Closed Francis Farm Landfill - Haywood Co., NC
Groundwater Sampling Event (2-23-2009)

TEST	UNITS	MRL	MCL	MW-4	MW-5	MW-1A	MW-2A	MW-3A	MW-6	MW-7	MW-8	MW-9	MW-10	MW-11	MW-12	MW-13	MW-14	MW-14D	MW-15	MW-16	MW-16D	MW-17	MW-18	MW-19	MW-19D	MW-20	MW-20D	MW-21	MW-22	MW-23	MW-24	MW-25	EQUIP. BLANK
pH	pH units	-	NE	5.48	5.56	6.00	5.89	5.94	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Specific Conductance	µmhos/cm	-	NE	136	238	237	335	305	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Temperature	°C	-	NE	NT	8.6	10.4	10.8	10.5	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Turbidity	NTU	NT	NE	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Total Antimony (Sb)	µg/l	NT	NE	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Total Arsenic (As)	µg/l	5.0	50	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Total Barium (Ba)	µg/l	5.0	2000	146	270	220	215	206	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Total Beryllium (Be)	µg/l	NT	NE	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Total Cadmium (Cd)	µg/l	1.0	1.75	ND	ND	2.2	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Total Chromium (Cr)	µg/l	5.0	50	ND	7.2	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Total Cobalt (Co)	µg/l	NT	NE	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Total Copper (Cu)	µg/l	NT	1000	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Total Lead (Pb)	µg/l	5.0	15	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Total Mercury (Hg)	µg/l	0.20	1.05	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Total Nickel (Ni)	µg/l	NT	100	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Total Selenium (Se)	µg/l	10.0	50	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Total Silver (Ag)	µg/l	5.0	17.5	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Total Thallium (Tl)	µg/l	NT	NE	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Total Vanadium (V)	µg/l	NT	NE	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Total Zinc (Zn)	µg/l	NT	1050	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Acetone	µg/l	25.0	700	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Acrylonitrile	µg/l	10.0	NE	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Benzene	µg/l	1.0	1	14.3	2.1	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Bromochloromethane	µg/l	1.0	NE	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Bromodichloromethane	µg/l	1.0	0.56	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Bromoform	µg/l	1.0	0.19	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Carbon Disulfide	µg/l	2.0	700	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Bromomethane (Methylbromide)	µg/l	5.0	NE	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Carbon tetrachloride	µg/l	1.0	0.269	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Chlorobenzene (mono)	µg/l	1.0	50	ND	ND	2.7	ND	1.0	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Chloroethane	µg/l	1.0	2800	2.3	2.1	1.8	ND	7.6	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Chloroform	µg/l	1.0	70	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Chloromethane (Methylchloride)	µg/l	1.0	2.6	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Dibromochloromethane	µg/l	1.0	NE	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
1,2-Dibromo-3-chloropropane; DBCP	µg/l	3.0	0.025	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
1,2-Dibromoethane; Ethylene dibromide	µg/l	1.0	0.00047	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Dibromomethane	µg/l	1.0	NE	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
1,2-Dichlorobenzene	µg/l	1.0	24	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
1,4-Dichlorobenzene	µg/l	1.0	1.4	5.2	ND	ND	6.0	1.3	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
trans-1,4-Dichloro-2-butene	µg/l	1.0	NE	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
1,1-Dichloroethane	µg/l	1.0	70	29.9	5.2	1.1	1.0	14.4	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
1,2-Dichloroethane	µg/l	1.0	0.38	1.6	ND	ND	ND	4.1	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
1,1-Dichloroethene (-ethylene)	µg/l	1.0	7	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
cis-1,2-Dichloroethene (-ethylene)	µg/l	1.0	70	27.7	5.4	2.2	9.2	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
trans-1,2-Dichloroethene (-vlene)	µg/l	1.0	100	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
1,2-Dichloropropane	µg/l	1.0	0.51	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
cis-1,3-Dichloropropene (-propylene)	µg/l	1.0	0.19	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
trans-1,3-Dichloropropene (-propylene)	µg/l	1.0	0.19	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Ethylbenzene	µg/l	1.0	550	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
2-Hexanone	µg/l	5.0	NE	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Iodomethane	µg/l	5.0	NE	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Dichloromethane (Methylene chloride)	µg/l	2.0	4.6	29.2	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
2-Butanone (Methyl ethyl ketone)	µg/l	5.0	4200	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
4-Methyl-2-Pentanone	µg/l	5.0	NE	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Styrene	µg/l	1.0	100	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
1,1,1,2-Tetrachloroethane	µg/l	1.0	NE	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
1,1,2,2-Tetrachloroethane	µg/l	1.0	NE	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Tetrachloroethene (-ethylene)	µg/l	1.0	0.7	6.6	3.9	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Toluene	µg/l	1.0	1000	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
1,1,1-Trichloroethane	µg/l	1.0	200	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
1,1,2-Trichloroethane	µg/l	1.0	NE	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Trichloroethene (-ethylene)	µg/l	1.0	2.8	8.1	3.0	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Trichlorofluoromethane	µg/l	1.0	2100	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
1,2,3-Trichloropropane	µg/l	1.0	0.005	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Vinyl acetate	µg/l	2.0	NE	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Vinyl chloride	µg/l	1.0	0.015	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Total Xylenes	µg/l	2.0	530	3.7	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Naphthalene	µg/l	NT	6	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
1,3-dichlorobenzene	µg/l	NT	200	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
dichlorodifluoromethane	µg/l	NT	1000	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT

Notes:

1. MCL = Maximum Contaminant Level, as established in the NCDENR, Classifications of Water Quality Standards Applicable to Groundwaters of North Carolina, Section 15A NCAC 2L.202. Shaded cells indicated exceedances of MCLs.
2. NE = Not Established; North Carolina has not established a MCL
3. MRL = Laboratory Method Reporting Limit
4. ND = Not Detected at the MRL; "J"-flagged data (i.e., values estimated between the laboratory method detection limit [MDL] and the MRL) are not presented on this spreadsheet.
5. NS = Not Sampled
6. NT = Not Tested
7. NP = Not Present during sampling event

Closed Francis Farm Landfill - Haywood Co., NC
Groundwater Sampling Event (8-24-2009)

TEST	UNITS	MRL	MCL	MW-4	MW-5	MW-1A	MW-2A	MW-3A	MW-6	MW-7	MW-8	MW-9	MW-10	MW-11	MW-12	MW-13	MW-14	MW-14D	MW-15	MW-16	MW-16D	MW-17	MW-18	MW-19	MW-19D	MW-20	MW-20D	MW-21	MW-22	MW-23	MW-24	MW-25	EQUIP. BLANK
pH	pH units	-	NE	5.28	5.59	6.02	6.12	6.00	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Specific Conductance	µmhos/cm	-	NE	185	217	413	534	515	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Temperature	°C	-	NE	15.7	13.7	15.7	16.7	14.8	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Turbidity	NTU	NT	NE	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Total Antimony (Sb)	µg/l	NT	NE	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Total Arsenic (As)	µg/l	5.0	50	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Total Barium (Ba)	µg/l	5.0	2000	136	264	203	173	210	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Total Beryllium (Be)	µg/l	NT	NE	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Total Cadmium (Cd)	µg/l	1.0	1.75	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Total Chromium (Cr)	µg/l	5.0	50	ND	6.5	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Total Cobalt (Co)	µg/l	NT	NE	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Total Copper (Cu)	µg/l	NT	1000	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Total Lead (Pb)	µg/l	5.0	15	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Total Mercury (Hg)	µg/l	0.20	1.05	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Total Nickel (Ni)	µg/l	NT	100	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Total Selenium (Se)	µg/l	10.0	50	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Total Silver (Ag)	µg/l	5.0	17.5	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Total Thallium (Tl)	µg/l	NT	NE	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Total Vanadium (V)	µg/l	NT	NE	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Total Zinc (Zn)	µg/l	NT	1050	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Acetone	µg/l	25.0	700	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Acrylonitrile	µg/l	10.0	NE	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Benzene	µg/l	1.0	1	16.3	3	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Bromochloromethane	µg/l	1.0	NE	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Bromodichloromethane	µg/l	1.0	0.56	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Bromoform	µg/l	1.0	0.19	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Carbon Disulfide	µg/l	2.0	700	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Bromomethane (Methylbromide)	µg/l	5.0	NE	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Carbon tetrachloride	µg/l	1.0	0.269	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Chlorobenzene (mono)	µg/l	1.0	50	ND	ND	3.4	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Chloroethane	µg/l	1.0	2800	2.8	ND	2.3	4.7	6.1	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Chloroform	µg/l	1.0	70	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Chloromethane (Methylchloride)	µg/l	1.0	2.6	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Dibromochloromethane	µg/l	1.0	NE	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
1,2-Dibromo-3-chloropropane; DBCP	µg/l	3.0	0.025	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
1,2-Dibromoethane; Ethylene dibromide	µg/l	1.0	0.00047	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Dibromomethane	µg/l	1.0	NE	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
1,2-Dichlorobenzene	µg/l	1.0	24	ND	ND	ND	1.6	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
1,4-Dichlorobenzene	µg/l	1.0	1.4	4.8	ND	ND	10.3	1.1	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
trans-1,4-Dichloro-2-butene	µg/l	1.0	NE	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
1,1-Dichloroethane	µg/l	1.0	70	30.5	7	1.5	2.4	19.3	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
1,2-Dichloroethane	µg/l	1.0	0.38	1.6	ND	ND	ND	5.1	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
1,1-Dichloroethene (-ethylene)	µg/l	1.0	7	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
cis-1,2-Dichloroethene (-ethylene)	µg/l	1.0	70	31.8	7.1	2.1	11.2	2.2	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
trans-1,2-Dichloroethene (-ylene)	µg/l	1.0	100	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
1,2-Dichloropropane	µg/l	1.0	0.51	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
cis-1,3-Dichloropropene (-propylene)	µg/l	1.0	0.19	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
trans-1,3-Dichloropropene (-propylene)	µg/l	1.0	0.19	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Ethylbenzene	µg/l	1.0	550	1.7	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
2-Hexanone	µg/l	5.0	NE	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Iodomethane	µg/l	5.0	NE	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Dichloromethane (Methylene chloride)	µg/l	2.0	4.6	40.8	2.4	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
2-Butanone (Methyl ethyl ketone)	µg/l	5.0	4200	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
4-Methyl-2-Pentanone	µg/l	5.0	NE	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Styrene	µg/l	1.0	100	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
1,1,1,2-Tetrachloroethane	µg/l	1.0	NE	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
1,1,2,2-Tetrachloroethane	µg/l	1.0	NE	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Tetrachloroethene (-ethylene)	µg/l	1.0	0.7	6.6	4.2	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Toluene	µg/l	1.0	1000	4.1	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
1,1,1-Trichloroethane	µg/l	1.0	200	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
1,1,2-Trichloroethane	µg/l	1.0	NE	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Trichloroethene (-ethylene)	µg/l	1.0	2.8	7.8	3.5	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Trichlorofluoromethane	µg/l	1.0	2100	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
1,2,3-Trichloropropane	µg/l	1.0	0.005	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Vinyl acetate	µg/l	2.0	NE	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Vinyl chloride	µg/l	1.0	0.015	ND	ND	ND	1.1	1.1	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Total Xylenes	µg/l	2.0	530	7.2	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Naphthalene	µg/l	NT	6	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
1,3-dichlorobenzene	µg/l	NT	200	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
dichlorodifluoromethane	µg/l	NT	1000	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT

Notes:

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4. ND = Not Detected at the MRL; "J"-flagged data (i.e., values estimated between the laboratory method detection limit [MDL] and the MRL) are not presented on this spreadsheet.
5. NS = Not Sampled
6. NT = Not Tested
7. NP = Not Present during sampling event

Closed Francis Farm Landfill - Haywood Co., NC
Groundwater Sampling Event (2-22-2010)

TEST	UNITS	MRL	MCL	MW-4	MW-5	MW-1A	MW-2A	MW-3A	MW-6	MW-7	MW-8	MW-9	MW-10	MW-11	MW-12	MW-13	MW-14	MW-14D	MW-15	MW-16	MW-16D	MW-17	MW-18	MW-19	MW-19D	MW-20	MW-20D	MW-21	MW-22	MW-23	MW-24	MW-25	EQUIP. BLANK
pH	pH units	-	NE	5.47	5.84	6.16	6.01	6.13	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Specific Conductance	µmhos/cm	-	NE	182	236	462	527	498	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Temperature	°C	-	NE	14.3	12.8	14.8	12	12.5	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Turbidity	NTU	NT	NE	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Total Antimony (Sb)	µg/l	NT	NE	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Total Arsenic (As)	µg/l	5.0	50	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Total Barium (Ba)	µg/l	5.0	2000	139	260	269	250	224	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Total Beryllium (Be)	µg/l	NT	NE	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Total Cadmium (Cd)	µg/l	1.0	1.75	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Total Chromium (Cr)	µg/l	5.0	50	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Total Cobalt (Co)	µg/l	NT	NE	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Total Copper (Cu)	µg/l	NT	1000	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Total Lead (Pb)	µg/l	5.0	15	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Total Mercury (Hg)	µg/l	0.20	1.05	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Total Nickel (Ni)	µg/l	NT	100	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Total Selenium (Se)	µg/l	10.0	50	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Total Silver (Ag)	µg/l	5.0	17.5	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Total Thallium (Tl)	µg/l	NT	NE	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Total Vanadium (V)	µg/l	NT	NE	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Total Zinc (Zn)	µg/l	NT	1050	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Acetone	µg/l	25.0	700	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Acrylonitrile	µg/l	10.0	NE	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Benzene	µg/l	1.0	1	17.6	3.4	ND	ND	1.5	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Bromochloromethane	µg/l	1.0	NE	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Bromodichloromethane	µg/l	1.0	0.56	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Bromoform	µg/l	1.0	0.19	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Carbon Disulfide	µg/l	2.0	700	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Bromomethane (Methylbromide)	µg/l	5.0	NE	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Carbon tetrachloride	µg/l	1.0	0.269	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Chlorobenzene (mono)	µg/l	1.0	50	ND	ND	4.5	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Chloroethane	µg/l	1.0	2800	4.8	3.7	3.5	1.3	4.8	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Chloroform	µg/l	1.0	70	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Chloromethane (Methylchloride)	µg/l	1.0	2.6	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Dibromochloromethane	µg/l	1.0	NE	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
1,2-Dibromo-3-chloropropane; DBCP	µg/l	3.0	0.025	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
1,2-Dibromoethane; Ethylene dibromide	µg/l	1.0	0.00047	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Dibromomethane	µg/l	1.0	NE	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
1,2-Dichlorobenzene	µg/l	1.0	24	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
1,4-Dichlorobenzene	µg/l	1.0	1.4	5.3	ND	ND	2.4	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
trans-1,4-Dichloro-2-butene	µg/l	1.0	NE	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
1,1-Dichloroethane	µg/l	1.0	70	34.5	10.1	1.6	ND	15.5	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
1,2-Dichloroethane	µg/l	1.0	0.38	1.7	ND	1.2	ND	2.5	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
1,1-Dichloroethene (-ethylene)	µg/l	1.0	7	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
cis-1,2-Dichloroethene (-ethylene)	µg/l	1.0	70	36.5	7.8	1.2	5.8	2	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
trans-1,2-Dichloroethene (-ylene)	µg/l	1.0	100	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
1,2-Dichloropropane	µg/l	1.0	0.51	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
cis-1,3-Dichloropropene (-propylene)	µg/l	1.0	0.19	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
trans-1,3-Dichloropropene (-propylene)	µg/l	1.0	0.19	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Ethylbenzene	µg/l	1.0	550	1.8	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
2-Hexanone	µg/l	5.0	NE	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Iodomethane	µg/l	5.0	NE	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Dichloromethane (Methylene chloride)	µg/l	2.0	4.6	42.8	2.9	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
2-Butanone (Methyl ethyl ketone)	µg/l	5.0	4200	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
4-Methyl-2-Pentanone	µg/l	5.0	NE	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Styrene	µg/l	1.0	100	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
1,1,1,2-Tetrachloroethane	µg/l	1.0	NE	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
1,1,2,2-Tetrachloroethane	µg/l	1.0	NE	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Tetrachloroethene (-ethylene)	µg/l	1.0	0.7	7.8	5.1	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Toluene	µg/l	1.0	1000	11.8	ND	ND	ND	48.4	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
1,1,1-Trichloroethane	µg/l	1.0	200	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
1,1,2-Trichloroethane	µg/l	1.0	NE	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Trichloroethene (-ethylene)	µg/l	1.0	2.8	9.1	4.7	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Trichlorofluoromethane	µg/l	1.0	2100	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
1,2,3-Trichloropropane	µg/l	1.0	0.005	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Vinyl acetate	µg/l	2.0	NE	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Vinyl chloride	µg/l	1.0	0.015	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Total Xylenes	µg/l	2.0	530	13.6	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Naphthalene	µg/l	NT	6	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
1,3-dichlorobenzene	µg/l	NT	200	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
dichlorodifluoromethane	µg/l	NT	1000	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT

Notes:

1. MCL = Maximum Contaminant Level, as established in the NCDENR, Classifications of Water Quality Standards Applicable to Groundwaters of North Carolina, Section 15A NCAC 2L.202. Shaded cells indicated exceedances of MCLs.
2. NE = Not Established; North Carolina has not established a MCL
3. MRL = Laboratory Method Reporting Limit
4. ND = Not Detected at the MRL; "J"-flagged data (i.e., values estimated between the laboratory method detection limit [MDL] and the MRL) are not presented on this spreadsheet.
5. NS = Not Sampled
6. NT = Not Tested
7. NP = Not Present during sampling event

Closed Francis Farm Landfill - Haywood Co., NC
Groundwater Sampling Event (8-30-2010)

TEST	UNITS	MRL	MCL	MW-4	MW-5	MW-1A	MW-2A	MW-3A	MW-6	MW-7	MW-8	MW-9	MW-10	MW-11	MW-12	MW-13	MW-14	MW-14D	MW-15	MW-16	MW-16D	MW-17	MW-18	MW-19	MW-19D	MW-20	MW-20D	MW-21	MW-22	MW-23	MW-24	MW-25	EQUIP. BLANK
pH	pH units	-	NE	5.41	5.64	6.12	6.01	6.21	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Specific Conductance	µmhos/cm	-	NE	197	266	385	544	529	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Temperature	°C	-	NE	16.1	14.1	16.6	14.9	15.5	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Turbidity	NTU	NT	NE	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Total Antimony (Sb)	µg/l	NT	NE	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Total Arsenic (As)	µg/l	5.0	50	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Total Barium (Ba)	µg/l	5.0	2000	125	246	192	203	206	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Total Beryllium (Be)	µg/l	NT	NE	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Total Cadmium (Cd)	µg/l	1.0	1.75	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Total Chromium (Cr)	µg/l	5.0	50	ND	8.8	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Total Cobalt (Co)	µg/l	NT	NE	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Total Copper (Cu)	µg/l	NT	1000	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Total Lead (Pb)	µg/l	5.0	15	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Total Mercury (Hg)	µg/l	0.20	1.05	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Total Nickel (Ni)	µg/l	NT	100	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Total Selenium (Se)	µg/l	10.0	50	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Total Silver (Ag)	µg/l	5.0	17.5	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Total Thallium (Tl)	µg/l	NT	NE	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Total Vanadium (V)	µg/l	NT	NE	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Total Zinc (Zn)	µg/l	NT	1050	NT	NT	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Acetone	µg/l	25.0	700	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Acrylonitrile	µg/l	10.0	NE	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Benzene	µg/l	1.0	1	19.9	4.8	ND	1.3	1.3	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Bromochloromethane	µg/l	1.0	NE	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Bromodichloromethane	µg/l	1.0	0.56	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Bromoform	µg/l	1.0	0.19	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Carbon Disulfide	µg/l	2.0	700	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Bromomethane (Methylbromide)	µg/l	2.0	NE	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Carbon tetrachloride	µg/l	1.0	0.269	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Chlorobenzene (mono)	µg/l	1.0	50	ND	ND	2.5	ND	1.2	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Chloroethane	µg/l	1.0	2800	2.9	4.4	1.9	4.7	5.6	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Chloroform	µg/l	1.0	70	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Chloromethane (Methylchloride)	µg/l	1.0	2.6	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Dibromochloromethane	µg/l	1.0	NE	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
1,2-Dibromo-3-chloropropane; DBCP	µg/l	5.0	0.025	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
1,2-Dibromoethane; Ethylene dibromide	µg/l	1.0	0.00047	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Dibromomethane	µg/l	1.0	NE	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
1,2-Dichlorobenzene	µg/l	1.0	24	ND	ND	ND	2.1	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
1,4-Dichlorobenzene	µg/l	1.0	1.4	4.7	ND	ND	12.3	1.3	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
trans-1,4-Dichloro-2-butene	µg/l	1.0	NE	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
1,1-Dichloroethane	µg/l	1.0	70	32.1	11.7	1.6	2.5	27.8	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
1,2-Dichloroethane	µg/l	1.0	0.38	1.7	ND	1	ND	6.2	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
1,1-Dichloroethene (-ethylene)	µg/l	1.0	7	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
cis-1,2-Dichloroethene (-ethylene)	µg/l	1.0	70	33.6	6.1	1.5	6.2	3.4	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
trans-1,2-Dichloroethene (-vlene)	µg/l	1.0	100	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
1,2-Dichloropropane	µg/l	1.0	0.51	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
cis-1,3-Dichloropropene (-propylene)	µg/l	1.0	0.19	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
trans-1,3-Dichloropropene (-propylene)	µg/l	1.0	0.19	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Ethylbenzene	µg/l	1.0	550	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
2-Hexanone	µg/l	5.0	NE	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Iodomethane	µg/l	5.0	NE	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Dichloromethane (Methylene chloride)	µg/l	2.0	4.6	41	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
2-Butanone (Methyl ethyl ketone)	µg/l	5.0	4200	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
4-Methyl-2-Pentanone	µg/l	5.0	NE	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Styrene	µg/l	1.0	100	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
1,1,1,2-Tetrachloroethane	µg/l	1.0	NE	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
1,1,2,2-Tetrachloroethane	µg/l	1.0	NE	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Tetrachloroethene (-ethylene)	µg/l	1.0	0.7	8	6.3	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Toluene	µg/l	1.0	1000	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
1,1,1-Trichloroethane	µg/l	1.0	200	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
1,1,2-Trichloroethane	µg/l	1.0	NE	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Trichloroethene (-ethylene)	µg/l	1.0	2.8	9.1	5.8	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Trichlorofluoromethane	µg/l	1.0	2100	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
1,2,3-Trichloropropane	µg/l	1.0	0.005	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Vinyl acetate	µg/l	2.0	NE	ND	ND	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Vinyl chloride	µg/l	1.0	0.015	ND	ND	ND	ND	1.5	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Total Xylenes	µg/l	2.0	530	6.4	2	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Naphthalene	µg/l	NT	6	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
1,3-dichlorobenzene	µg/l	NT	200	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
dichlorodifluoromethane	µg/l	NT	1000	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT

Notes:

1. MCL = Maximum Contaminant Level, as established in the NCDENR, Classifications of Water Quality Standards Applicable to Groundwaters of North Carolina, Section 15A NCAC 2L.202. Shaded cells indicated exceedances of MCLs.
2. NE = Not Established; North Carolina has not established a MCL
3. MRL = Laboratory Method Reporting Limit
4. ND = Not Detected at the MRL; "J"-flagged data (i.e., values estimated between the laboratory method detection limit [MDL] and the MRL) are not presented on this spreadsheet.
5. NS = Not Sampled
6. NT = Not Tested
7. NP = Not Present during sampling event

Closed Francis Farm Landfill - Haywood Co., NC
Groundwater Sampling Event (2-22-2011)

TEST	UNITS	MRL	MCL	MW-4	MW-5	MW-1A	MW-2A	MW-3A	MW-6	MW-7	MW-8	MW-9	MW-10	MW-11	MW-12	MW-13	MW-14	MW-14D	MW-15	MW-16	MW-16D	MW-17	MW-18	MW-19	MW-19D	MW-20	MW-20D	MW-21	MW-22	MW-23	MW-24	MW-25	EQUIP. BLANK
pH	pH units	-	NE	5.40	5.51	5.86	5.78	5.65	5.49	5.45	5.82	5.60	5.10	6.50	5.89	5.94	6.30	NP	7.12	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Specific Conductance	umhos/cm	-	NE	223	264	375	498	370	77	273	216	142	62	676	94	526	827	NP	732	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Temperature	°C	-	NE	13.5	12.3	13.6	12.6	12.2	12.8	10.9	10.9	9.3	8.1	14.4	13.1		14.8	NP	13.5	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Turbidity	NTU	-	NE	8.42	3.68	0.31	4.8	7.56	4	7.19	6.53	275	97	4.16	23	4.88	3.69	NP	5.78	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Total Antimony (Sb)	µg/l	5.0	NE	ND	ND	ND	ND	ND	ND	ND	ND	5.1	ND	ND	ND	ND	ND	NP	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Total Arsenic (As)	µg/l	5.0	10	ND	ND	ND	ND	ND	ND	ND	ND	5.8	ND	5.3	ND	ND	ND	NP	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Total Barium (Ba)	µg/l	5.0	700	163	237	171	191	241	54	213	72.8	1190	193	138	197	977	309	NP	68.7	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Total Beryllium (Be)	µg/l	1.0	NE	ND	ND	ND	ND	ND	ND	ND	ND	3.6	ND	ND	ND	ND	ND	NP	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Total Cadmium (Cd)	µg/l	1.0	2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Total Chromium (Cr)	µg/l	5.0	10	ND	ND	ND	ND	ND	ND	ND	6.3	161	17.6	ND	8.1	ND	ND	NP	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Total Cobalt (Co)	µg/l	5.0	NE	13.5	16.8	10.5	55.5	110	ND	5.4	ND	40.5	5.2	9.4	9.8	ND	6.1	NP	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Total Copper (Cu)	µg/l	5.0	1000	ND	155	ND	ND	5.1	ND	ND	ND	64.3	10.7	ND	ND	ND	ND	NP	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Total Lead (Pb)	µg/l	5.0	15	ND	7.2	ND	ND	ND	ND	ND	ND	16.2	6.3	ND	ND	ND	ND	NP	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Total Mercury (Hg)	µg/l	0.20	1	NT	NT	NT	NT	NT	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Total Nickel (Ni)	µg/l	5.0	100	5	5.4	ND	ND	39	8	ND	ND	97.3	8.4	ND	7.6	15.9	7.5	NP	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Total Selenium (Se)	µg/l	10.0	20	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Total Silver (Ag)	µg/l	5.0	20	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Total Thallium (Tl)	µg/l	5.4	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Total Vanadium (V)	µg/l	5.0	NE	6.1	ND	ND	ND	ND	ND	ND	5.6	205	22.8	ND	7.8	ND	ND	NP	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Total Zinc (Zn)	µg/l	10	1000	30.7	90.4	ND	ND	ND	ND	19.8	ND	162	36.7	10.3	26.5	ND	16	NP	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Acetone	µg/l	25.0	6000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Acrylonitrile	µg/l	10.0	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Benzene	µg/l	1.0	1	15.5	5.1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5.3	1.3	NP	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Bromochloromethane	µg/l	1.0	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Bromodichloromethane	µg/l	1.0	0.6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Bromoform	µg/l	1.0	4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Carbon Disulfide	µg/l	2.0	700	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Bromomethane (Methylbromide)	µg/l	2.0	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Carbon tetrachloride	µg/l	1.0	0.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Chlorobenzene (mono)	µg/l	1.0	50	ND	ND	1.8	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.6	NP	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Chloroethane	µg/l	1.0	3,000	3.1	4	1.5	ND	7.3	ND	1.3	ND	ND	ND	ND	ND	1.3	1.3	NP	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Chloroform	µg/l	1.0	70	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Chloromethane (Methylchloride)	µg/l	1.0	3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Dibromochloromethane	µg/l	1.0	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
1,2-Dibromo-3-chloropropane; DBCP	µg/l	5.0	0.04	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
1,2-Dibromoethane; Ethylene dibromide	µg/l	1.0	0.02000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Dibromomethane	µg/l	1.0	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
1,2-Dichlorobenzene	µg/l	1.0	20	ND	ND	ND	ND	1.1	ND	1.4	ND	ND	ND	4.2	ND	ND	104	NP	3.3	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
1,4-Dichlorobenzene	µg/l	1.0	6	4.7	1.3	ND	7.0	1.2	ND	1.7	ND	ND	ND	1.4	ND	5.9	21.4	NP	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
trans-1,4-Dichloro-2-butene	µg/l	1.0	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
1,1-Dichloroethane	µg/l	1.0	6	31.9	12.9	1.2	1.4	17.5	ND	4.4	ND	ND	3.1	7.5	ND	4.8	1.5	NP	1	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
1,2-Dichloroethane	µg/l	1.0	0.4	2	ND	ND	ND	2.8	ND	3	ND	ND	ND	ND	ND	ND	ND	NP	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
1,1-Dichloroethene (-ethylene)	µg/l	1.0	7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
cis-1,2-Dichloroethene (-ethylene)	µg/l	1.0	70	34.6	14.4	1	5.6	1.6	ND	2.7	ND	ND	2.3	10.9	ND	17.3	32.5	NP	8.9	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
trans-1,2-Dichloroethene (-vlene)	µg/l	1.0	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
1,2-Dichloropropane	µg/l	1.0	0.6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
cis-1,3-Dichloropropene (-propylene)	µg/l	1.0	0.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
trans-1,3-Dichloropropene (-propylene)	µg/l	1.0	0.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Ethylbenzene	µg/l	1.0	600	1.7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
2-Hexanone	µg/l	5.0	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Iodomethane	µg/l	5.0	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Dichloromethane (Methylene chloride)	µg/l	2.0	5	46.6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
2-Butanone (Methyl ethyl ketone)	µg/l	5.0	4000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
4-Methyl-2-Pentanone	µg/l	5.0	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Styrene	µg/l	1.0	70	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
1,1,1,2-Tetrachloroethane	µg/l	1.0	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
1,1,2,2-Tetrachloroethane	µg/l	1.0	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Tetrachloroethene (-ethylene)	µg/l	1.0	0.7	6.7	5.6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.2	ND	NP	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Toluene	µg/l	1.0	600	11.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
1,1,1-Trichloroethane	µg/l	1.0	200	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
1,1,2-Trichloroethane	µg/l	1.0	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Trichloroethene (-ethylene)	µg/l	1.0	3	7	4.8	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.7	ND	NP	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Trichlorofluoromethane	µg/l	1.0	2000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
1,2,3-Trichloropropane	µg/l	1.0	0.005	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Vinyl acetate	µg/l	2.0	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Vinyl chloride	µg/l	1.0	0.03	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Total Xylenes	µg/l	2.0	500	12.6	2.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	8.8	ND	NP	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Naphthalene	µg/l	NT	6	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
1,3-dichlorobenzene	µg/l	NT	200	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
dichlorodifluoromethane	µg/l	NT	1000	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT

Notes:

1. MCL = Maximum Contaminant Level, as established in the NCDENR, Classifications of Water Quality Standards Applicable to Groundwaters of North Carolina, Section 15A NCAC 2L.202. Shaded cells indicated exceedances of MCLs.
2. NE = Not Established; North Carolina has not established a MCL
3. MRL = Laboratory Method Reporting Limit
4. ND = Not Detected at the MRL; "J"-flagged data (i.e., values estimated between the laboratory method detection limit [MDL] and the MRL) are not presented on this spreadsheet.
5. NS = Not Sampled
6. NT = Not Tested
7. NP = Not Present during sampling event

Closed Francis Farm Landfill - Haywood Co., NC
Groundwater Sampling Event (8-22-2011)

TEST	UNITS	MRL	MCL	MW-4	MW-5	MW-1A	MW-2A	MW-3A	MW-6	MW-7	MW-8	MW-9	MW-10	MW-11	MW-12	MW-13	MW-14	MW-14D	MW-15	MW-16	MW-16D	MW-17	MW-18	MW-19	MW-19D	MW-20	MW-20D	MW-21	MW-22	MW-23	MW-24	MW-25	EQUIP. BLANK
pH	pH units	-	NE	5.60	5.70	5.80	6.10	5.90	5.70	5.80	6.00	5.80	5.40	6.60	6.00	6.00	6.40	NP	7.30	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Specific Conductance	umhos/cm	-	NE	197	245	363	499	380	75	256	230	114	56	627	93	476	740	NP	660	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Temperature	°C	-	NE	15.7	13.4	13.8	14.4	13.2	17.8	15.6	15.3	16.8	17.4	15	13.5	14.8	15.2	NP	14.3	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Turbidity	NTU	-	NE	3.9	41	13	39	69	18	999	4.4	108	190	9.5	153	5.2	14	NP	12	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Total Antimony (Sb)	µg/l	5.0	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Total Arsenic (As)	µg/l	5.0	10	ND	ND	ND	ND	ND	ND	8.7	ND	ND	ND	ND	ND	ND	ND	NP	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Total Barium (Ba)	µg/l	5.0	700	133	280	189	189	214	66.8	1640	76.4	202	71.9	104	191	972	284	NP	57.7	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Total Beryllium (Be)	µg/l	1.0	NE	ND	ND	ND	ND	ND	ND	2.4	ND	ND	ND	ND	ND	ND	ND	NP	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Total Cadmium (Cd)	µg/l	1.0	2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Total Chromium (Cr)	µg/l	5.0	10	ND	ND	ND	ND	ND	ND	105	ND	19.3	ND	ND	8.3	ND	ND	NP	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Total Cobalt (Co)	µg/l	5.0	NE	6.8	9.7	8.9	45.4	51.9	ND	43.1	ND	ND	ND	ND	ND	ND	ND	NP	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Total Copper (Cu)	µg/l	5.0	1000	ND	7.3	ND	ND	7.9	ND	125	ND	7.9	ND	7.5	ND	ND	ND	NP	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Total Lead (Pb)	µg/l	5.0	15	ND	ND	ND	ND	ND	ND	37.2	ND	ND	ND	ND	ND	ND	ND	NP	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Total Mercury (Hg)	µg/l	NT	1	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
Total Nickel (Ni)	µg/l	5.0	100	8.2	7.4	ND	5.7	11.6	5.5	62.1	ND	10.9	ND	5.2	7.7	20.1	ND	NP	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Total Selenium (Se)	µg/l	10.0	20	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Total Silver (Ag)	µg/l	5.0	20	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Total Thallium (Tl)	µg/l	5.4	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Total Vanadium (V)	µg/l	5.0	NE	ND	ND	ND	ND	ND	ND	185	ND	23.1	ND	ND	8.1	ND	ND	NP	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Total Zinc (Zn)	µg/l	10	1000	ND	16.9	ND	ND	59.2	ND	283	ND	15.9	ND	50.6	ND	ND	21	NP	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Acetone	µg/l	25.0	6000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Acrylonitrile	µg/l	10.0	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Benzene	µg/l	1.0	1	16.9	4.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	4.4	1.2	NP	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Bromochloromethane	µg/l	1.0	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Bromodichloromethane	µg/l	1.0	0.6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Bromoform	µg/l	1.0	4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Carbon Disulfide	µg/l	2.0	700	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Bromomethane (Methylbromide)	µg/l	2.0	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Carbon tetrachloride	µg/l	1.0	0.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Chlorobenzene (mono)	µg/l	1.0	50	ND	ND	2.6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.7	NP	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Chloroethane	µg/l	1.0	3000	2.7	2.9	2.2	2.5	ND	ND	1.2	ND	ND	ND	ND	ND	1.2	1.6	NP	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Chloroform	µg/l	1.0	70	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Chloromethane (Methylchloride)	µg/l	1.0	3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Dibromochloromethane	µg/l	1.0	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
1,2-Dibromo-3-chloropropane; DBCP	µg/l	5.0	0.04	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
1,2-Dibromoethane; Ethylene dibromide	µg/l	1.0	0.02000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Dibromomethane	µg/l	1.0	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
1,2-Dichlorobenzene	µg/l	1.0	20	ND	ND	ND	1.3	ND	ND	1.5	ND	ND	ND	4	ND	ND	97.1	NP	2.8	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
1,4-Dichlorobenzene	µg/l	1.0	6	5.1	1.1	ND	7.3	ND	ND	1.6	ND	ND	ND	1.5	ND	5.6	21.7	NP	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
trans-1,4-Dichloro-2-butene	µg/l	1.0	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
1,1-Dichloroethane	µg/l	1.0	6	33.2	9.6	1.4	1.7	14.7	ND	4.6	ND	1.5	2.8	9.6	ND	4.3	1.3	NP	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
1,2-Dichloroethane	µg/l	1.0	0.4	2	ND	ND	ND	2.1	ND	3.2	ND	ND	ND	ND	ND	ND	ND	NP	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
1,1-Dichloroethene (-ethylene)	µg/l	1.0	7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
cis-1,2-Dichloroethene (-ethylene)	µg/l	1.0	70	36.7	11.5	ND	4	2.4	ND	3.6	ND	2.3	2.1	10.1	ND	15.8	31.1	NP	7.7	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
trans-1,2-Dichloroethene (-vlene)	µg/l	1.0	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
1,2-Dichloropropane	µg/l	1.0	0.6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
cis-1,3-Dichloropropene (-propylene)	µg/l	1.0	0.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
trans-1,3-Dichloropropene (-propylene)	µg/l	1.0	0.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Ethylbenzene	µg/l	1.0	600	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
2-Hexanone	µg/l	5.0	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Iodomethane	µg/l	5.0	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Dichloromethane (Methylene chloride)	µg/l	2.0	5	48.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
2-Butanone (Methyl ethyl ketone)	µg/l	5.0	4000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
4-Methyl-2-Pentanone	µg/l	5.0	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Styrene	µg/l	1.0	70	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
1,1,1,2-Tetrachloroethane	µg/l	1.0	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
1,1,2,2-Tetrachloroethane	µg/l	1.0	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Tetrachloroethene (-ethylene)	µg/l	1.0	0.7	7.5	4.6	ND	ND	ND	ND	ND	ND	1.2	ND	1	ND	1.7	ND	NP	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Toluene	µg/l	1.0	600	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
1,1,1-Trichloroethane	µg/l	1.0	200	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
1,1,2-Trichloroethane	µg/l	1.0	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Trichloroethene (-ethylene)	µg/l	1.0	3	7.9	3.7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.5	ND	NP	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Trichlorofluoromethane	µg/l	1.0	2000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
1,2,3-Trichloropropane	µg/l	1.0	0.005	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Vinyl acetate	µg/l	2.0	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Vinyl chloride	µg/l	1.0	0.03	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Total Xylenes	µg/l	2.0	500	7.7	2.1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	7.7	ND	NP	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	ND
Naphthalene	µg/l	NT	6	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
1,3-dichlorobenzene	µg/l	NT	200	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
dichlorodifluoromethane	µg/l	NT	1000	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NP	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT

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6. NT = Not Tested
7. NP = Not Present during sampling event

Closed Francis Farm Landfill - Haywood Co., NC
Groundwater Sampling Event (2-22-2012)

TEST	UNITS	MRL	MCL	MW-4	MW-5	MW-1A	MW-2A	MW-3A	MW-6	MW-7	MW-8	MW-9	MW-10	MW-11	MW-12	MW-13	MW-14	MW-14D	MW-15	MW-16	MW-16D	MW-17	MW-18	MW-19	MW-19D	MW-20	MW-20D	MW-21	MW-22	MW-23	MW-24	MW-25	EQUIP. BLANK
pH	pH units	-	NE	5.70	5.80	6.30	6.10	6.10	6.20	5.80	6.30	6.20	5.60	6.60	6.50	6.00	6.50	NP	7.50	6.20	NP	6.40	5.90	5.70	NP	6.50	NP	5.80	NP	NP	NP	NP	NT
Specific Conductance	umhos/cm	-	NE	228	246	522	568	356	63	299	207	138	61	678	81	514	774	NP	683	147	NP	82	71	201	NP	63	NP	25	NP	NP	NP	NP	NT
Temperature	°C	-	NE	13.2	12.2	12.7	12	11.3	12.3	11.4	10.5	10.5	12.2	13.4	11.4	13.1	13	NP	12.7	14.3	NP	13.8	13	11.8	NP	13.6	NP	13.4	NP	NP	NP	NP	NT
Turbidity	NTU	-	NE	3.36	3.5	3.23	3.35	2.09	9.7	11.2	16.1	17.4	30.9	3.57	50.7	1.51	3.15	NP	4.77	10	NP	4.18	58.1	10.56	NP	44.2	NP	12.3	NP	NP	NP	NP	NT
Total Antimony (Sb)	µg/l	5.0	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	ND	ND	NP	ND	ND	ND	NP	ND	NP	ND	NP	NP	NP	NP	ND
Total Arsenic (As)	µg/l	5.0	10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	ND	ND	NP	ND	ND	ND	NP	ND	NP	ND	NP	NP	NP	NP	ND
Total Barium (Ba)	µg/l	5.0	700	134	214	222	266	175	48.7	207	62.7	126	102	90.2	196	970	237	NP	49.9	249	NP	93.5	135	141	NP	80.3	NP	56.3	NP	NP	NP	NP	ND
Total Beryllium (Be)	µg/l	1.0	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	ND	ND	NP	ND	ND	ND	NP	ND	NP	ND	NP	NP	NP	NP	ND
Total Cadmium (Cd)	µg/l	1.0	2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	ND	ND	NP	ND	ND	ND	NP	ND	NP	ND	NP	NP	NP	NP	ND
Total Chromium (Cr)	µg/l	5.0	10	ND	ND	ND	ND	ND	ND	5.2	6.9	10.6	6.2	ND	11.1	ND	ND	NP	ND	5.7	NP	ND	7.3	ND	NP	6.4	NP	ND	NP	NP	NP	NP	ND
Total Cobalt (Co)	µg/l	5.0	NE	5.7	5.8	10.1	30.9	54	ND	ND	ND	ND	ND	ND	ND	5.5	ND	NP	ND	ND	NP	ND	ND	ND	NP	ND	NP	ND	NP	NP	NP	NP	ND
Total Copper (Cu)	µg/l	5.0	1000	ND	ND	ND	ND	ND	ND	ND	5.7	6.9	ND	ND	8.3	ND	ND	NP	ND	6.8	NP	ND	5.4	ND	NP	7.4	NP	ND	NP	NP	NP	NP	ND
Total Lead (Pb)	µg/l	5.0	15	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	ND	ND	NP	ND	ND	ND	NP	ND	NP	ND	NP	NP	NP	NP	ND
Total Mercury (Hg)	µg/l	0.20	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	ND	ND	NP	ND	ND	ND	NP	ND	NP	ND	NP	NP	NP	NP	ND
Total Nickel (Ni)	µg/l	5.0	100	9.2	ND	ND	ND	11	ND	ND	ND	5	ND	ND	9.6	24.6	5.2	NP	ND	ND	NP	ND	6.2	ND	NP	5.9	NP	ND	NP	NP	NP	NP	ND
Total Selenium (Se)	µg/l	10.0	20	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	ND	ND	NP	ND	ND	ND	NP	ND	NP	ND	NP	NP	NP	NP	ND
Total Silver (Ag)	µg/l	5.0	20	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	ND	ND	NP	ND	ND	ND	NP	ND	NP	ND	NP	NP	NP	NP	ND
Total Thallium (Tl)	µg/l	5.4	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	ND	ND	NP	ND	ND	ND	NP	ND	NP	ND	NP	NP	NP	NP	ND
Total Vanadium (V)	µg/l	5.0	NE	ND	ND	ND	ND	ND	ND	ND	8.8	12.5	8.6	ND	14.1	5	ND	NP	ND	11	NP	ND	9.8	6.1	NP	7.6	NP	ND	NP	NP	NP	NP	ND
Total Zinc (Zn)	µg/l	10	1000	ND	ND	16.7	ND	10.5	10.4	16.7	16.8	23.1	31.8	ND	10.9	11	143	NP	ND	21.4	NP	12.4	17.2	24.3	NP	26.9	NP	15.3	NP	NP	NP	NP	ND
Acetone	µg/l	25.0	6000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	ND	ND	NP	ND	ND	ND	NP	ND	NP	ND	NP	NP	NP	NP	ND
Acrylonitrile	µg/l	10.0	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	ND	ND	NP	ND	ND	ND	NP	ND	NP	ND	NP	NP	NP	NP	ND
Benzene	µg/l	1.0	1	16.9	3.9	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5	1.3	NP	ND	ND	NP	ND	ND	ND	NP	ND	NP	ND	NP	NP	NP	NP	ND
Bromochloromethane	µg/l	1.0	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	ND	ND	NP	ND	ND	ND	NP	ND	NP	ND	NP	NP	NP	NP	ND
Bromodichloromethane	µg/l	1.0	0.6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	ND	ND	NP	ND	ND	ND	NP	ND	NP	ND	NP	NP	NP	NP	ND
Bromoform	µg/l	1.0	4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	ND	ND	NP	ND	ND	ND	NP	ND	NP	ND	NP	NP	NP	NP	ND
Carbon Disulfide	µg/l	2.0	700	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	ND	ND	NP	ND	ND	ND	NP	ND	NP	ND	NP	NP	NP	NP	ND
Bromomethane (Methylbromide)	µg/l	2.0	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	ND	ND	NP	ND	ND	ND	NP	ND	NP	ND	NP	NP	NP	NP	ND
Carbon tetrachloride	µg/l	1.0	0.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	ND	ND	NP	ND	ND	ND	NP	ND	NP	ND	NP	NP	NP	NP	ND
Chlorobenzene (mono)	µg/l	1.0	50	ND	ND	2.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.5	NP	ND	ND	NP	ND	ND	ND	NP	ND	NP	ND	NP	NP	NP	NP	ND
Chloroethane	µg/l	1.0	3000	1.7	2.3	1.7	ND	3.7	ND	ND	ND	ND	ND	ND	ND	1.2	1.2	NP	ND	ND	NP	ND	ND	ND	NP	ND	NP	ND	NP	NP	NP	NP	ND
Chloroform	µg/l	1.0	70	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	ND	ND	NP	ND	ND	ND	NP	ND	NP	ND	NP	NP	NP	NP	ND
Chloromethane (Methylchloride)	µg/l	1.0	3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	ND	ND	NP	ND	ND	ND	NP	ND	NP	ND	NP	NP	NP	NP	ND
Dibromochloromethane	µg/l	1.0	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	ND	ND	NP	ND	ND	ND	NP	ND	NP	ND	NP	NP	NP	NP	ND
1,2-Dibromo-3-chloropropane; DBCP	µg/l	5.0	0.04	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	ND	ND	NP	ND	ND	ND	NP	ND	NP	ND	NP	NP	NP	NP	ND
1,2-Dibromoethane; Ethylene dibromide	µg/l	1.0	0.02000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	ND	ND	NP	ND	ND	ND	NP	ND	NP	ND	NP	NP	NP	NP	ND
Dibromomethane	µg/l	1.0	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	ND	ND	NP	ND	ND	ND	NP	ND	NP	ND	NP	NP	NP	NP	ND
1,2-Dichlorobenzene	µg/l	1.0	20	ND	ND	ND	ND	ND	ND	1.6	ND	ND	ND	5	ND	ND	75.9	NP	4	ND	NP	ND	ND	ND	NP	ND	NP	ND	NP	NP	NP	NP	ND
1,4-Dichlorobenzene	µg/l	1.0	6	4.9	ND	ND	3.1	ND	ND	1.6	ND	ND	ND	1.6	ND	6	18.7	NP	ND	ND	NP	ND	ND	ND	NP	ND	NP	ND	NP	NP	NP	NP	ND
trans-1,4-Dichloro-2-butene	µg/l	1.0	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	ND	ND	NP	ND	ND	ND	NP	ND	NP	ND	NP	NP	NP	NP	ND
1,1-Dichloroethane	µg/l	1.0	6	30.1	8.1	1.2	ND	8.4	ND	3	ND	ND	2.1	8.5	ND	4.7	ND	NP	ND	1.8	NP	ND	ND	3.4	NP	ND	NP	ND	NP	NP	NP	NP	ND
1,2-Dichloroethane	µg/l	1.0	0.4	1.7	ND	ND	ND	ND	ND	2.2	ND	ND	ND	ND	ND	ND	ND	NP	ND	ND	NP	ND	ND	3.2	NP	ND	NP	ND	NP	NP	NP	NP	ND
1,1-Dichloroethene (-ethylene)	µg/l	1.0	7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	ND	ND	NP	ND	ND	ND	NP	ND	NP	ND	NP	NP	NP	NP	ND
cis-1,2-Dichloroethene (-ethylene)	µg/l	1.0	70	33.1	10.2	ND	4.6	ND	ND	2.4	ND	ND	1.7	10.6	ND	18.4	20.7	NP	9	1.5	NP	ND	ND	1.3	NP	ND	NP	ND	NP	NP	NP	NP	ND
trans-1,2-Dichloroethene (-ylene)	µg/l	1.0	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	ND	ND	NP	ND	ND	ND	NP	ND	NP	ND	NP	NP	NP	NP	ND
1,2-Dichloropropane	µg/l	1.0	0.6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	ND	ND	NP	ND	ND	ND	NP	ND	NP	ND	NP	NP	NP	NP	ND
cis-1,3-Dichloropropene (-propylene)	µg/l	1.0	0.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	ND	ND	NP	ND	ND	ND	NP	ND	NP	ND	NP	NP	NP	NP	ND
trans-1,3-Dichloropropene (-propylene)	µg/l	1.0	0.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	ND	ND	NP	ND	ND	ND	NP	ND	NP	ND	NP	NP	NP	NP	ND
Ethylbenzene	µg/l	1.0	600	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	ND	ND	NP	ND	ND	ND	NP	ND	NP	ND	NP	NP	NP	NP	ND
2-Hexanone	µg/l	5.0	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	ND	ND	NP	ND	ND	ND	NP	ND	NP	ND	NP	NP	NP	NP	ND
Iodomethane	µg/l	5.0	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	ND	ND	NP	ND	ND	ND	NP	ND	NP	ND	NP	NP	NP	NP	ND
Dichloromethane (Methylene chloride)	µg/l	2.0	5	32.6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	ND	ND	NP	ND	ND	ND	NP	ND	NP	ND	NP	NP	NP	NP	ND
2-Butanone (Methyl ethyl ketone)	µg/l	5.0	4000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	ND	ND	NP	ND	ND	ND	NP	ND	NP	ND	NP	NP	NP	NP	ND
4-Methyl-2-Pentanone	µg/l	5.0	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	ND	ND	NP	ND	ND	ND	NP	ND	NP	ND	NP	NP	NP	NP	ND
Styrene	µg/l	1.0	70	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	ND	ND	NP	ND	ND	ND	NP	ND	NP	ND	NP	NP	NP	NP	ND
1,1,1,2-Tetrachloroethane	µg/l	1.0	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	ND	ND	NP	ND	ND	ND	NP	ND	NP	ND	NP	NP	NP	NP	ND
1,1,2,2-Tetrachloroethane	µg/l	1.0	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	ND	ND	NP	ND	ND	ND	NP	ND	NP	ND	NP	NP	NP	NP	ND
Tetrachloroethene (-ethylene)	µg/l	1.0	0.7	5.9	3.7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.6	ND	NP	ND	ND	NP	ND	ND	ND	NP	ND	NP	ND	NP	NP	NP	NP	ND
Toluene	µg/l	1.0	600	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	ND	ND	NP	ND	ND	ND	NP	ND	NP	ND	NP	NP	NP	NP	ND
1,1,1-Trichloroethane	µg/l	1.0	200	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	ND	ND	NP	ND	ND	ND	NP	ND	NP	ND	NP	NP	NP	NP	ND
1,1,2-Trichloroethane	µg/l	1.0	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	ND	ND	NP	ND	ND	ND	NP	ND	NP	ND	NP	NP	NP	NP	ND
Trichloroethene (-ethylene)	µg/l	1.0	3	7.3	3.6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.6	ND	NP	ND	ND	NP	ND	ND	ND	NP	ND	NP	ND	NP	NP	NP	NP	ND
Trichlorofluoromethane	µg/l	1.0	2000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	ND	ND	NP	ND	ND	ND	NP	3.8	NP	3.8	NP	NP	NP	NP	ND
1,2,3-Trichloropropane	µg/l	1.0	0.005	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	ND	ND	NP	ND	ND	ND	NP	ND	NP	ND	NP	NP	NP	NP	ND
Vinyl acetate	µg/l	2.0	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	ND	ND	NP	ND	ND	ND	NP	ND	NP	ND	NP	NP	NP	NP	ND
Vinyl chloride	µg/l	1.0	0.03	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	ND	ND	NP	ND	ND	ND	NP	ND	NP	ND	NP	NP	NP	NP	ND
Total Xylenes	µg/l	2.0	500	6.6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	7.8	ND	NP	ND	ND	NP	ND	ND	ND	NP	ND	NP	ND	NP	NP	NP	NP	ND
Naphthalene	µg/l	1.0	6	5.6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	ND	ND	NP	ND	ND	ND	NP	ND	NP	ND	NP	NP	NP	NP	ND
1,3-dichlorobenzene	µg/l	1.0	200	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	ND	ND	NP	ND	ND	ND	NP	ND	NP	ND	NP	NP	NP	NP	ND
Dichlorodifluoromethane	µg/l	1.0	1000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	ND	ND	NP	ND	ND	ND	NP	ND	NP	ND	NP	NP	NP	NP	ND

Notes:

1. MCL = Maximum Contaminant Level, as established in the NCDENR, Classifications of Water Quality Standards Applicable to Groundwaters of North Carolina, Section 15A NCAC 2L.202. Shaded cells indicated exceedances of MCLs.
2. NE = Not Established; North Carolina has not established a MCL
3. MRL = Laboratory Method Reporting Limit
4. ND = Not Detected at the MRL; "J"-flagged data (i.e., values estimated between the laboratory method detection limit [MDL] and the MRL) are not presented on this spreadsheet.
5. NS = Not Sampled
6. NT = Not Tested
7. NP = Not Present during sampling event

Closed Francis Farm Landfill - Haywood Co., NC
Groundwater Sampling Event (8-29-2012)

TEST	UNITS	MRL	MCL	MW-4	MW-5	MW-1A	MW-2A	MW-3A	MW-6	MW-7	MW-8	MW-9	MW-10	MW-11	MW-12	MW-13	MW-14	MW-14D	MW-15	MW-16	MW-16D	MW-17	MW-18	MW-19	MW-19D	MW-20	MW-20D	MW-21	MW-22	MW-23	MW-24	MW-25	EQUIP. BLANK
pH	pH units	-	NE	5.70	5.90	6.00	6.10	6.10	5.90	5.90	6.20	5.90	5.50	6.20	6.20	6.10	6.40	NP	7.20	6.10	NP	6.30	6.10	5.70	NP	6.10	NP	5.80	NP	NP	NP	NP	NT
Specific Conductance	µmhos/cm	-	NE	213	234	360	570	446	67	278	274	114	56	611	87	465	756	NP	681	138	NP	75	65	230	NP	59	NP	27	NP	NP	NP	NP	NT
Temperature	°C	-	NE	16.7	15.1	15.4	16.8	15.4	16.6	16.2	20	18.6	19.4	15.8	14.1	17	14.6	NP	14.2	15.2	NP	15.4	14.8	18.6	NP	16.6	NP	18.4	NP	NP	NP	NP	NT
Turbidity	NTU	-	NE	5.84	33.9	2.15	12.9	13	7.29	15	15.4	28.7	20.7	8.69	630	4.05	5.89	NP	4.67	14.7	NP	14.8	8.53	3.84	NP	622	NP	22.8	NP	NP	NP	NP	NT
Total Antimony (Sb)	µg/l	5.0	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	ND	ND	NP	ND	ND	ND	NP	ND	NP	ND	NP	NP	NP	NP	ND
Total Arsenic (As)	µg/l	5.0	10	ND	ND	ND	ND	5.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	ND	ND	NP	ND	ND	ND	NP	11.2	NP	ND	NP	NP	NP	NP	ND
Total Barium (Ba)	µg/l	5.0	700	151	289	174	283	232	42.8	224	67.4	106	110	106	335	931	237	NP	64	184	NP	96.2	83.7	137	NP	615	NP	51	NP	NP	NP	NP	ND
Total Beryllium (Be)	µg/l	1.0	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	ND	ND	NP	ND	ND	ND	NP	1.1	NP	ND	NP	NP	NP	NP	ND
Total Cadmium (Cd)	µg/l	1.0	2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	ND	ND	NP	ND	ND	ND	NP	ND	NP	ND	NP	NP	NP	NP	ND
Total Chromium (Cr)	µg/l	5.0	10	ND	7.1	ND	6.2	5.5	6.1	9.7	ND	7.9	6.5	ND	40.2	ND	ND	NP	ND	ND	NP	ND	ND	ND	NP	56.3	NP	ND	NP	NP	NP	NP	ND
Total Cobalt (Co)	µg/l	5.0	NE	9.6	17.3	8.5	40	104	ND	5.1	ND	ND	ND	ND	11.7	15.8	ND	NP	ND	ND	NP	ND	ND	ND	NP	21.4	NP	ND	NP	NP	NP	NP	ND
Total Copper (Cu)	µg/l	5.0	1000	ND	16.2	ND	5.6	9.2	ND	5.6	ND	ND	5	ND	17.3	ND	ND	NP	ND	ND	NP	ND	ND	ND	NP	78.5	NP	ND	NP	NP	NP	NP	ND
Total Lead (Pb)	µg/l	5.0	15	ND	ND	ND	ND	5.4	ND	ND	ND	ND	ND	ND	9.2	ND	ND	NP	ND	ND	NP	ND	ND	ND	NP	13.3	NP	ND	NP	NP	NP	NP	ND
Total Mercury (Hg)	µg/l	0.20	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	ND	ND	NP	ND	ND	ND	NP	ND	NP	ND	NP	NP	NP	NP	ND
Total Nickel (Ni)	µg/l	5.0	100	10.3	9.2	ND	13.3	23	ND	5.5	ND	ND	ND	ND	22.3	34.9	ND	NP	ND	ND	NP	ND	ND	ND	NP	60.8	NP	ND	NP	NP	NP	NP	ND
Total Selenium (Se)	µg/l	10.0	20	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	ND	ND	NP	ND	ND	ND	NP	ND	NP	ND	NP	NP	NP	NP	ND
Total Silver (Ag)	µg/l	5.0	20	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	ND	ND	NP	ND	ND	ND	NP	ND	NP	ND	NP	NP	NP	NP	ND
Total Thallium (Tl)	µg/l	5.4	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	ND	ND	NP	ND	ND	ND	NP	ND	NP	ND	NP	NP	NP	NP	ND
Total Vanadium (V)	µg/l	5.0	NE	ND	14.7	ND	8.1	5.9	ND	9.9	ND	10.6	10	ND	49	ND	ND	NP	ND	5.5	NP	ND	ND	ND	NP	86.2	NP	ND	NP	NP	NP	NP	ND
Total Zinc (Zn)	µg/l	10	1000	ND	12.7	ND	28	194	37.8	20.3	14.5	10.4	19.5	ND	21	10.8	12.4	NP	ND	ND	NP	ND	ND	13.6	NP	198	NP	11.7	NP	NP	NP	NP	ND
Acetone	µg/l	25.0	6000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	ND	ND	NP	ND	ND	ND	NP	ND	NP	ND	NP	NP	NP	NP	ND
Acrylonitrile	µg/l	50.0	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	ND	ND	NP	ND	ND	ND	NP	ND	NP	ND	NP	NP	NP	NP	ND
Benzene	µg/l	1.0	1	15.6	3.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	4.4	1.1	NP	ND	ND	NP	ND	ND	ND	NP	ND	NP	ND	NP	NP	NP	NP	ND
Bromochloromethane	µg/l	1.0	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	ND	ND	NP	ND	ND	ND	NP	ND	NP	ND	NP	NP	NP	NP	ND
Bromodichloromethane	µg/l	1.0	0.6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	ND	ND	NP	ND	ND	ND	NP	ND	NP	ND	NP	NP	NP	NP	ND
Bromoform	µg/l	1.0	4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	ND	ND	NP	ND	ND	ND	NP	ND	NP	ND	NP	NP	NP	NP	ND
Carbon Disulfide	µg/l	2.0	700	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	ND	ND	NP	ND	ND	ND	NP	ND	NP	ND	NP	NP	NP	NP	ND
Bromomethane (Methylbromide)	µg/l	2.0	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	ND	ND	NP	ND	ND	ND	NP	ND	NP	ND	NP	NP	NP	NP	ND
Carbon tetrachloride	µg/l	1.0	0.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	ND	ND	NP	ND	ND	ND	NP	ND	NP	ND	NP	NP	NP	NP	ND
Chlorobenzene (mono)	µg/l	1.0	50	ND	ND	2.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.4	NP	ND	ND	NP	ND	ND	ND	NP	ND	NP	ND	NP	NP	NP	NP	ND
Chloroethane	µg/l	1.0	3000	ND	ND	ND	ND	1.8	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	ND	ND	NP	ND	ND	ND	NP	ND	NP	ND	NP	NP	NP	NP	ND
Chloroform	µg/l	1.0	70	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	ND	ND	NP	ND	ND	ND	NP	ND	NP	ND	NP	NP	NP	NP	ND
Chloromethane (Methylchloride)	µg/l	1.0	3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	ND	ND	NP	ND	ND	ND	NP	ND	NP	ND	NP	NP	NP	NP	ND
Dibromochloromethane	µg/l	1.0	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	ND	ND	NP	ND	ND	ND	NP	ND	NP	ND	NP	NP	NP	NP	ND
1,2-Dibromo-3-chloropropane; DBCP	µg/l	5.0	0.04	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	ND	ND	NP	ND	ND	ND	NP	ND	NP	ND	NP	NP	NP	NP	ND
1,2-Dibromoethane; Ethylene dibromide	µg/l	1.0	0.02000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	ND	ND	NP	ND	ND	ND	NP	ND	NP	ND	NP	NP	NP	NP	ND
Dibromomethane	µg/l	1.0	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	ND	ND	NP	ND	ND	ND	NP	ND	NP	ND	NP	NP	NP	NP	ND
1,2-Dichlorobenzene	µg/l	1.0	20	ND	ND	ND	1.8	ND	ND	1.6	ND	ND	ND	5.9	ND	ND	70.7	NP	4.4	ND	NP	ND	ND	1.2	NP	ND	NP	ND	NP	NP	NP	NP	ND
1,4-Dichlorobenzene	µg/l	1.0	6	5	ND	ND	8.6	ND	ND	1.4	ND	ND	ND	1.8	ND	5.6	17.5	NP	ND	ND	NP	ND	ND	1.3	NP	ND	NP	ND	NP	NP	NP	NP	ND
trans-1,4-Dichloro-2-butene	µg/l	1.0	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	ND	ND	NP	ND	ND	ND	NP	ND	NP	ND	NP	NP	NP	NP	ND
1,1-Dichloroethane	µg/l	1.0	6	26.5	7.4	1.3	1.50	15.2	ND	2.6	ND	ND	1.8	6.8	ND	3.3	ND	NP	ND	1.6	NP	ND	ND	4.5	NP	ND	NP	ND	NP	NP	NP	NP	ND
1,2-Dichloroethane	µg/l	1.0	0.4	1.4	ND	ND	ND	2.1	ND	1.7	ND	ND	ND	ND	ND	ND	ND	NP	ND	ND	NP	ND	ND	3.9	NP	ND	NP	ND	NP	NP	NP	NP	ND
1,1-Dichloroethene (-ethylene)	µg/l	1.0	7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	ND	ND	NP	ND	ND	ND	NP	ND	NP	ND	NP	NP	NP	NP	ND
cis-1,2-Dichloroethene (-ethylene)	µg/l	1.0	70	30.5	8	ND	2.8	2.6	ND	2.2	ND	1.6	1.3	15.1	ND	13.9	22.8	NP	5.3	1.2	NP	ND	ND	1.3	NP	ND	NP	ND	NP	NP	NP	NP	ND
trans-1,2-Dichloroethene (-vlene)	µg/l	1.0	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	ND	ND	NP	ND	ND	ND	NP	ND	NP	ND	NP	NP	NP	NP	ND
1,2-Dichloropropane	µg/l	1.0	0.6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	ND	ND	NP	ND	ND	ND	NP	ND	NP	ND	NP	NP	NP	NP	ND
cis-1,3-Dichloropropene (-propylene)	µg/l	1.0	0.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	ND	ND	NP	ND	ND	ND	NP	ND	NP	ND	NP	NP	NP	NP	ND
trans-1,3-Dichloropropene (-propylene)	µg/l	1.0	0.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	ND	ND	NP	ND	ND	ND	NP	ND	NP	ND	NP	NP	NP	NP	ND
Ethylbenzene	µg/l	1.0	600	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	ND	ND	NP	ND	ND	ND	NP	ND	NP	ND	NP	NP	NP	NP	ND
2-Hexanone	µg/l	5.0	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	ND	ND	NP	ND	ND	ND	NP	ND	NP	ND	NP	NP	NP	NP	ND
Iodomethane	µg/l	5.0	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	ND	ND	NP	ND	ND	ND	NP	ND	NP	ND	NP	NP	NP	NP	ND
Dichloromethane (Methylene chloride)	µg/l	1.0	5	16.8	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	ND	ND	NP	ND	ND	ND	NP	ND	NP	ND	NP	NP	NP	NP	ND
2-Butanone (Methyl ethyl ketone)	µg/l	5.0	4000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	ND	ND	NP	ND	ND	ND	NP	ND	NP	ND	NP	NP	NP	NP	ND
4-Methyl-2-Pentanone	µg/l	5.0	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	ND	ND	NP	ND	ND	ND	NP	ND	NP	ND	NP	NP	NP	NP	ND
Styrene	µg/l	1.0	70	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	ND	ND	NP	ND	ND	ND	NP	ND	NP	ND	NP	NP	NP	NP	ND
1,1,1,2-Tetrachloroethane	µg/l	1.0	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	ND	ND	NP	ND	ND	ND	NP	ND	NP	ND	NP	NP	NP	NP	ND
1,1,2,2-Tetrachloroethane	µg/l	1.0	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	ND	ND	NP	ND	ND	ND	NP	ND	NP	ND	NP	NP	NP	NP	ND
Tetrachloroethene (-ethylene)	µg/l	1.0	0.7	5.8	3.7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.5	ND	NP	ND	ND	NP	ND	ND	ND	NP	ND	NP	ND	NP	NP	NP	NP	ND
Toluene	µg/l	1.0	600	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	ND	ND	NP	ND	ND	ND	NP	ND	NP	ND	NP	NP	NP	NP	ND
1,1,1-Trichloroethane	µg/l	1.0	200	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	ND	ND	NP	ND	ND	ND	NP	ND	NP	ND	NP	NP	NP	NP	ND
1,1,2-Trichloroethane	µg/l	1.0	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	ND	ND	NP	ND	ND	ND	NP	ND	NP	ND	NP	NP	NP	NP	ND
Trichloroethene (-ethylene)	µg/l	1.0	3	7	3.4	ND	ND	ND	ND	ND	ND	ND	ND	1.1	ND	1.3	ND	NP	ND	ND	NP	ND	ND	ND	NP	ND	NP	ND	NP	NP	NP	NP	ND
Trichlorofluoromethane	µg/l	1.0	2000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	ND	ND	NP	ND	ND	ND	NP	ND	NP	ND	NP	NP	NP	NP	ND
1,2,3-Trichloropropane	µg/l	1.0	0.005	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	ND	ND	NP	ND	ND	ND	NP	ND	NP	ND	NP	NP	NP	NP	ND
Vinyl acetate	µg/l	2.0	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	ND	ND	NP	ND	ND	ND	NP	ND	NP	ND	NP	NP	NP	NP	ND
Vinyl chloride	µg/l	1.0	0.03	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	ND	ND	NP	ND	ND	ND	NP	ND	NP	ND	NP	NP	NP	NP	ND
Total Xylenes	µg/l	2.0	500	5.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	6.7	ND	NP	ND	ND	NP	ND	ND	ND	NP	ND	NP	ND	NP	NP	NP	NP	ND
Naphthalene	µg/l	1.0	6	4.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	ND	ND	NP	ND	ND	ND	NP	ND	NP	ND	NP	NP	NP	NP	ND
1,3-dichlorobenzene	µg/l	1.0	200	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	ND	ND	NP	ND	ND	ND	NP	ND	NP	ND	NP	NP	NP	NP	ND
Dichlorodifluoromethane	µg/l	1.0	1000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	ND	ND	NP	ND	ND	ND	NP	ND	NP	ND	NP	NP	NP	NP	ND

Notes:

1. MCL = Maximum Contaminant Level, as established in the NCDENR, Classifications of Water Quality Standards Applicable to Groundwaters of North Carolina, Section 15A NCAC 2L.202. Shaded cells indicated exceedances of MCLs.
2. NE = Not Established; North Carolina has not established a MCL
3. MRL = Laboratory Method Reporting Limit
4. ND = Not Detected at the MRL; "J"-flagged data (i.e., values estimated between the laboratory method detection limit [MDL] and the MRL) are not presented on this spreadsheet.
5. NS = Not Sampled
6. NT = Not Tested
7. NP = Not Present during sampling event

Closed Francis Farm Landfill - Haywood Co., NC
Groundwater Sampling Event (2-18-2013)

TEST	UNITS	MRL	MCL	MW-4	MW-5	MW-1A	MW-2A	MW-3A	MW-6	MW-7	MW-8	MW-9	MW-10	MW-11	MW-12	MW-13	MW-14	MW-14D	MW-15	MW-16	MW-16D	MW-17	MW-18	MW-19	MW-19D	MW-20	MW-20D	MW-21	MW-22	MW-23	MW-24	MW-25	EQUIP. BLANK
pH	pH units	-	NE	5.70	5.90	6.30	6.00	6.10	6.00	6.00	6.30	6.10	5.70	6.60	6.50	6.20	6.50	9.75	7.50	6.20	8.59	6.30	6.10	5.80	6.20	6.50	6.70	5.70	5.80	6.10	6.20	11.34	NT
Specific Conductance	µmhos/cm	-	NE	193	242	445	33.2	347	57	333	198	66	57	667	80	5	716	284	678	107	184.7	75	65	201	611	59	85	24	75.8	87.5	56.4	891	NT
Temperature	°C	-	NE	12.8	12.2	13.8	13.4	12.9	12.6	13.4	10.4	9.9	10.9	15.2	11	12.2	14.2	14.5	14	12	14	11.5	11.7	11.1	11.8	10.9	11.4	12	9.8	9.5	11.2	14.9	NT
Turbidity	NTU	-	NE	1.89	10.08	5.06	4.28	6.73	1.3	5.4	12.9	6.24	31.7	2.53	40	2.56	9.66	7.65	3.39	2.14	9.97	1.32	7.73	9.7	9.23	80	27.8	6.09	9.26	900	4.53	15.3	NT
Total Antimony (Sb)	µg/l	5.0	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Arsenic (As)	µg/l	10.0	10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Barium (Ba)	µg/l	5.0	700	128	229	267	221	172	16.2	200	41.3	75.7	86	95.5	216	815	238	34.6	42.6	118	56.1	65.6	91.5	131	265	100	54.5	45.6	103	1470	31.6	64.6	ND
Total Beryllium (Be)	µg/l	1.0	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.5	ND	ND	ND
Total Cadmium (Cd)	µg/l	1.0	2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.4	ND	ND	ND
Total Chromium (Cr)	µg/l	5.0	10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	16	ND	ND	ND	ND	ND	6	1.7	2.6	ND	ND	7	ND	ND	ND	292	ND	51.4	ND
Total Cobalt (Co)	µg/l	5.0	NE	6	14.8	26.1	49.7	84.3	ND	ND	ND	ND	ND	ND	7	20.7	6.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	72.7	ND	ND	ND
Total Copper (Cu)	µg/l	5.0	1000	ND	7.3	ND	ND	12.8	ND	ND	ND	ND	ND	ND	9	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	8.8	ND	ND	ND	207	ND	12.3	ND
Total Lead (Pb)	µg/l	5.0	15	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5.4	ND	ND	ND
Total Mercury (Hg)	µg/l	0.20	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Nickel (Ni)	µg/l	5.0	100	ND	6	ND	ND	11.9	ND	ND	ND	ND	ND	ND	11.3	36.5	ND	ND	ND	ND	ND	ND	ND	ND	6.6	8.4	ND	ND	ND	104	ND	18.5	ND
Total Selenium (Se)	µg/l	10.0	20	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Silver (Ag)	µg/l	5.0	20	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Thallium (Tl)	µg/l	5.4	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Vanadium (V)	µg/l	5.0	NE	ND	ND	ND	ND	ND	ND	ND	5.3	ND	ND	ND	20.8	ND	ND	6.2	ND	ND	ND	ND	ND	ND	ND	10.6	5.1	ND	ND	393	ND	24.5	ND
Total Zinc (Zn)	µg/l	10	1000	24	11.5	123	25.7	14.2	19.5	ND	20.2	ND	ND	ND	13.6	ND	13.7	ND	ND	ND	ND	ND	12.4	ND	ND	24.8	21.4	ND	ND	195	ND	39.2	ND
Acetone	µg/l	25.0	6000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acrylonitrile	µg/l	10.0	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	µg/l	1.0	1	17.1	4.1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	3.5	1.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromochloromethane	µg/l	1.0	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromodichloromethane	µg/l	1.0	0.6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromoform	µg/l	1.0	4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbon Disulfide	µg/l	2.0	700	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	9.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	3.9	ND
Bromomethane (Methylbromide)	µg/l	2.0	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbon tetrachloride	µg/l	1.0	0.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene (mono)	µg/l	1.0	50	ND	ND	3.1	ND	ND	ND	1.1	ND	ND	ND	ND	ND	ND	1.5	ND	ND	ND	ND	ND	ND	ND	2.3	ND	ND	ND	ND	ND	ND	ND	ND
Chloroethane	µg/l	1.0	3000	1.3	2.4	2.1	ND	2.7	ND	1.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.1	ND	ND	ND	ND	ND	ND	ND	ND
Chloroform	µg/l	1.0	70	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloromethane (Methylchloride)	µg/l	1.0	3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibromochloromethane	µg/l	1.0	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromo-3-chloropropane; DBCP	µg/l	5.0	0.04	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromoethane; Ethylene dibromide	µg/l	1.0	0.02000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibromomethane	µg/l	1.0	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	µg/l	1.0	20	ND	ND	ND	ND	ND	ND	2.2	ND	ND	ND	5.9	ND	ND	76.7	5.9	9.2	ND	ND	ND	ND	1.1	3.2	ND	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	µg/l	1.0	6	5.6	1.1	ND	2.2	ND	ND	1.9	ND	ND	ND	1.6	ND	5.2	18.1	1.1	1.6	ND	ND	ND	ND	1.1	2.7	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,4-Dichloro-2-butene	µg/l	1.0	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	µg/l	1.0	6	27.5	7.9	1.4	ND	7.0	ND	2.9	ND	ND	1.8	5.7	ND	2.7	ND	ND	ND	ND	1.1	ND	ND	3.6	3.4	ND	ND	ND	ND	ND	ND	3.1	ND
1,2-Dichloroethane	µg/l	1.0	0.4	1.6	ND	ND	ND	ND	ND	2.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	3	3.7	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene (-ethylene)	µg/l	1.0	7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene (-ethylene)	µg/l	1.0	70	31.4	10.4	ND	1.6	ND	ND	2.6	ND	ND	1.6	17.3	ND	14.2	20.6	1.5	10.6	ND	ND	ND	ND	1.1	ND	ND	ND	ND	ND	ND	ND	2	ND
trans-1,2-Dichloroethene (-ylene)	µg/l	1.0	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloropropane	µg/l	1.0	0.6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,3-Dichloropropene (-propylene)	µg/l	1.0	0.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,3-Dichloropropene (-propylene)	µg/l	1.0	0.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	µg/l	1.0	600	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Hexanone	µg/l	5.0	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Iodomethane	µg/l	5.0	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dichloromethane (Methylene chloride)	µg/l	1.0	5	21.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.4	ND
2-Butanone (Methyl ethyl ketone)	µg/l	5.0	4000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-Methyl-2-Pentanone	µg/l	5.0	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Styrene	µg/l	1.0	70	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1,2-Tetrachloroethane	µg/l	1.0	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	µg/l	1.0	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene (-ethylene)	µg/l	1.0	0.7	5.8	4.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	µg/l	1.0	600	1.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	µg/l	1.0	200	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	µg/l	1.0	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene (-ethylene)	µg/l	1.0	3	6.1	3.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichlorofluoromethane	µg/l	1.0	2000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,3-Trichloropropane	µg/l	1.0	0.005	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl acetate	µg/l	2.0	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl chloride	µg/l	1.0	0.03	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Xylenes	µg/l	2.0	500	7.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.8	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Naphthalene	µg/l	1.0	6	5.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,3-dichlorobenzene	µg/l	1.0	200	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dichlorodifluoromethane	µg/l	1.0	1000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Notes:

1. MCL = Maximum Contaminant Level, as established in the NCDENR, Classifications of Water Quality Standards Applicable to Groundwaters of North Carolina, Section 15A NCAC 2L.202. Shaded cells indicated exceedances of MCLs.
2. NE = Not Established; North Carolina has not established a MCL
3. MRL = Laboratory Method Reporting Limit
4. ND = Not Detected at the MRL; "J"-flagged data (i.e., values estimated between the laboratory method detection limit [MDL] and the MRL) are not presented on this spreadsheet.
5. NS = Not Sampled
6. NT = Not Tested
7. NP = Not Present during sampling event

APPENDIX B

SUMMARY TABLES OF SURFACE WATER ANALYTICAL RESULTS

Closed Francis Farm Landfill - Haywood Co., NC
Surface Water Sampling Event (2-18-1999)

TEST	UNITS	MDL	MRL	SW-1	SW-2	Blanton Branch
pH	pH units (on-site)	-	<6.0; >9.0	7	7	6.7
Specific Conductance	µmhos/cm (on-site)	1	NE	32	41	75
Temperature	°C (on-site)	-	29	9.4	10	12
Turbidity	NTU (on-site)	0.1	50	NT	NT	NT
Total Antimony (Sb)	µg/l	30	NE	NT	NT	NT
Total Arsenic (As)	µg/l	10	10	ND	ND	ND
Total Barium (Ba)	µg/l	500	NE	ND	ND	ND
Total Beryllium (Be)	µg/l	2	6.5	NT	NT	NT
Total Cadmium (Cd)	µg/l	1	0.4	ND	ND	ND
Total Chromium (Cr)	µg/l	10	50	ND	ND	ND
Total Cobalt (Co)	µg/l	10	NE	NT	NT	NT
Total Copper (Cu)	µg/l	200	7	NT	NT	NT
Total Lead (Pb)	µg/l	10	25	ND	ND	ND
Total Nickel (Ni)	µg/l	50	88	NT	ND	NT
Total Selenium (Se)	µg/l	20	5	ND	ND	ND
Total Silver (Ag)	µg/l	10	0.06	ND	ND	ND
Total Thallium (Tl)	µg/l	10	NE	NT	NT	NT
Total Zinc (Zn)	µg/l	50	50	NT	NT	NT
Total Mercury (Hg)	µg/l	0.2	0.012	ND	ND	ND
Acetone	µg/l	100	NE	NT	NT	NT
Acrylonitrile	µg/l	200	NE	NT	NT	NT
Benzene	µg/l	5	51	NT	NT	NT
Bromochloromethane	µg/l	5	NE	NT	NT	NT
Bromodichloromethane	µg/l	5	NE	NT	NT	NT
Bromoform	µg/l	5	NE	NT	NT	NT
Carbon Disulfide	µg/l	100	NE	NT	NT	NT
Bromomethane (Methylbromide)	µg/l	10	NE	NT	NT	NT
Carbon tetrachloride	µg/l	10	1.6	NT	NT	NT
Chlorobenzene (mono)	µg/l	5	NE	NT	NT	NT
Chloroethane	µg/l	10	NE	NT	NT	NT
Chloroform	µg/l	5	NE	NT	NT	NT
Chloromethane (Methylchloride)	µg/l	10	NE	NT	NT	NT
Dibromochloromethane	µg/l	5	NE	NT	NT	NT
1,2-Dibromo-3-chloropropane; DBCP	µg/l	25	NE	NT	NT	NT
1,2-Dibromoethane; Ethylene dibromide	µg/l	5	NE	NT	NT	NT
Dibromomethane	µg/l	10	NE	NT	NT	NT
1,2-Dichlorobenzene	µg/l	5	NE	NT	NT	NT
1,4-Dichlorobenzene	µg/l	5	NE	NT	NT	NT
trans-1,4-Dichloro-2butene	µg/l	100	NE	NT	NT	NT
1,1-Dichloroethane	µg/l	5	NE	NT	NT	NT
1,2-Dichloroethane	µg/l	5	NE	NT	NT	NT
1,1-Dichloroethene (-ethylene)	µg/l	5	NE	NT	NT	NT
cis-1,2-Dichloroethene (-ethylene)	µg/l	5	NE	NT	NT	NT
trans-1,2-Dichloroethene (-ylene)	µg/l	5	NE	NT	NT	NT
1,2-Dichloropropane	µg/l	5	NE	NT	NT	NT
cis-1,3-Dichloropropene (-propylene)	µg/l	10	NE	NT	NT	NT
trans-1,3-Dichloropropene (-propylene)	µg/l	10	NE	NT	NT	NT
Ethylbenzene	µg/l	5	NE	NT	NT	NT
2-Hexanone	µg/l	50	NE	NT	NT	NT
Iodomethane	µg/l	10	NE	NT	NT	NT
Dichloromethane (Methylene chloride)	µg/l	10	NE	NT	NT	NT
2-Butanone (Methyl ethyl ketone)	µg/l	100	NE	NT	NT	NT
4-Methyl-2-Pentanone	µg/l	100	NE	NT	NT	NT
Styrene	µg/l	10	NE	NT	NT	NT
1,1,1,2-Tetrachloroethane	µg/l	5	NE	NT	NT	NT
1,1,2,2-Tetrachloroethane	µg/l	5	4	NT	NT	NT
Tetrachloroethene (-ethylene)	µg/l	5	3.3	NT	NT	NT
Toluene	µg/l	5	0.36	NT	NT	NT
1,1,1-Trichloroethane	µg/l	5	NE	NT	NT	NT
1,1,2-Trichloroethane	µg/l	5	NE	NT	NT	NT
Trichloroethene (-ethylene)	µg/l	5	30	NT	NT	NT
Trichlorofluoromethane	µg/l	5	NE	NT	NT	NT
1,2,3-Trichloropropane	µg/l	15	NE	NT	NT	NT
Vinyl acetate	µg/l	50	NE	NT	NT	NT
Vinyl chloride	µg/l	10	2.4	NT	NT	NT
Total Xylenes	µg/l	5	NE	NT	NT	NT

Notes:

MCL = *Maximum Contaminant Level*, as established in the NCDENR "Redbook" Surface Waters and Wetlands Standards Section 15A NCAC 02B.0100, .0200, and .0300. Shaded cells indicated exceedances of MCLs.

NE = *Not Established*; North Carolina has not established a MCL

MRL = Laboratory *Method Reporting Limit*

ND = *Not Detected* at the MRL; "J"-flagged data (i.e., values estimated between the laboratory method detection limit [MDL] and the MRL) are not presented on this spreadsheet.

NS = *Not Sampled*

NT = *Not Tested*

NP = *Not Present* during sampling event

Closed Francis Farm Landfill - Haywood Co., NC
Surface Water Sampling Event (8-16-1999)

TEST	UNITS	MDL	MRL	SW-1	SW-2	Blanton Branch
pH	pH units (on-site)	-	<6.0; >9.0	**6.2**	**6.3**	**6.3**
Specific Conductance	µmhos/cm (on-site)	1	NE	**60**	**80**	**100**
Temperature	°C (on-site)	-	29	**19**	**21**	**22**
Turbidity	NTU (on-site)	0.1	50	NT	NT	NT
Total Antimony (Sb)	µg/l	30	NE	NT	NT	NT
Total Arsenic (As)	µg/l	10	10	ND	ND	ND
Total Barium (Ba)	µg/l	500	NE	**29**	**29**	**29**
Total Beryllium (Be)	µg/l	2	6.5	NT	NT	NT
Total Cadmium (Cd)	µg/l	1	0.4	ND	ND	ND
Total Chromium (Cr)	µg/l	10	50	ND	ND	ND
Total Cobalt (Co)	µg/l	10	NE	NT	NT	NT
Total Copper (Cu)	µg/l	200	7	NT	NT	NT
Total Lead (Pb)	µg/l	10	25	ND	ND	ND
Total Nickel (Ni)	µg/l	50	88	NT	NT	NT
Total Selenium (Se)	µg/l	20	5	ND	ND	ND
Total Silver (Ag)	µg/l	10	0.06	ND	ND	ND
Total Thallium (Tl)	µg/l	10	NE	NT	NT	NT
Total Zinc (Zn)	µg/l	50	50	NT	NT	NT
Total Mercury (Hg)	µg/l	0.2	0.012	ND	ND	ND
Acetone	µg/l	100	NE	NT	NT	NT
Acrylonitrile	µg/l	200	NE	NT	NT	NT
Benzene	µg/l	5	51	NT	NT	NT
Bromochloromethane	µg/l	5	NE	NT	NT	NT
Bromoform	µg/l	5	NE	NT	NT	NT
Bromofrom	µg/l	5	NE	NT	NT	NT
Carbon Disulfide	µg/l	100	NE	NT	NT	NT
Bromomethane (Methylbromide)	µg/l	10	NE	NT	NT	NT
Carbon tetrachloride	µg/l	10	1.6	NT	NT	NT
Chlorobenzene (mono)	µg/l	5	NE	NT	NT	NT
Chloroethane	µg/l	10	NE	NT	NT	NT
Chloroform	µg/l	5	NE	NT	NT	NT
Chloromethane (Methylchloride)	µg/l	10	NE	NT	NT	NT
Dibromochloromethane	µg/l	5	NE	NT	NT	NT
1,2-Dibromo-3-chloropropane; DBCP	µg/l	25	NE	NT	NT	NT
1,2-Dibromoethane; Ethylene dibromide	µg/l	5	NE	NT	NT	NT
Dibromomethane	µg/l	10	NE	NT	NT	NT
1,2-Dichlorobenzene	µg/l	5	NE	NT	NT	NT
1,4-Dichlorobenzene	µg/l	5	NE	NT	NT	NT
trans-1,4-Dichloro-2butene	µg/l	100	NE	NT	NT	NT
1,1-Dichloroethane	µg/l	5	NE	NT	NT	NT
1,2-Dichloroethane	µg/l	5	NE	NT	NT	NT
1,1-Dichloroethene (-ethylene)	µg/l	5	NE	NT	NT	NT
cis-1,2-Dichloroethene (-ethylene)	µg/l	5	NE	NT	NT	NT
trans-1,2-Dichloroethene (-ylene)	µg/l	5	NE	NT	NT	NT
1,2-Dichloropropane	µg/l	5	NE	NT	NT	NT
cis-1,3-Dichloropropene (-propylene)	µg/l	10	NE	NT	NT	NT
trans-1,3-Dichloropropene (-propylene)	µg/l	10	NE	NT	NT	NT
Ethylbenzene	µg/l	5	NE	NT	NT	NT
2-Hexanone	µg/l	50	NE	NT	NT	NT
Iodomethane	µg/l	10	NE	NT	NT	NT
Dichloromethane (Methylene chloride)	µg/l	10	NE	NT	NT	NT
2-Butanone (Methyl ethyl ketone)	µg/l	100	NE	NT	NT	NT
4-Methyl-2-Pentanone	µg/l	100	NE	NT	NT	NT
Styrene	µg/l	10	NE	NT	NT	NT
1,1,1,2-Tetrachloroethane	µg/l	5	NE	NT	NT	NT
1,1,2,2-Tetrachloroethane	µg/l	5	4	NT	NT	NT
Tetrachloroethene (-ethylene)	µg/l	5	3.3	NT	NT	NT
Toluene	µg/l	5	0.36	NT	NT	NT
1,1,1-Trichloroethane	µg/l	5	NE	NT	NT	NT
1,1,2-Trichloroethane	µg/l	5	NE	NT	NT	NT
Trichloroethene (-ethylene)	µg/l	5	30	NT	NT	NT
Trichlorofluoromethane	µg/l	5	NE	NT	NT	NT
1,2,3-Trichloropropane	µg/l	15	NE	NT	NT	NT
Vinyl acetate	µg/l	50	NE	NT	NT	NT
Vinyl chloride	µg/l	10	2.4	NT	NT	NT
Total Xylenes	µg/l	5	NE	NT	NT	NT

Notes:

MCL = *Maximum Contaminant Level*, as established in the NCDENR "Redbook" Surface Waters and Wetlands Standards Section 15A NCAC 02B.0100, .0200, and .0300. Shaded cells indicated exceedances of MCLs.

NE = *Not Established*; North Carolina has not established a MCL

MRL = Laboratory *Method Reporting Limit*

ND = *Not Detected* at the MRL; "J"-flagged data (i.e., values estimated between the laboratory method detection limit [MDL] and the MRL) are not presented on this spreadsheet.

NS = *Not Sampled*

NT = *Not Tested*

NP = *Not Present* during sampling event

Closed Francis Farm Landfill - Haywood Co., NC
Surface Water Sampling Event (2-14-2000)

TEST	UNITS	MDL	MRL	SW-1	SW-2	Blanton Branch
pH	pH units (on-site)	-	<6.0; >9.0	6.2	6.2	6.4
Specific Conductance	µmhos/cm (on-site)	1	NE	55	70	110
Temperature	°C (on-site)	-	29	10	10	9
Turbidity	NTU (on-site)	0.1	50	NT	NT	NT
Total Antimony (Sb)	µg/l	30	NE	NT	NT	NT
Total Arsenic (As)	µg/l	10	10	ND	ND	ND
Total Barium (Ba)	µg/l	500	NE	43	69	56
Total Beryllium (Be)	µg/l	2	6.5	NT	NT	NT
Total Cadmium (Cd)	µg/l	1	0.4	ND	ND	ND
Total Chromium (Cr)	µg/l	10	50	ND	7.5	ND
Total Cobalt (Co)	µg/l	10	NE	NT	NT	NT
Total Copper (Cu)	µg/l	200	7	NT	NT	NT
Total Lead (Pb)	µg/l	10	25	ND	ND	ND
Total Nickel (Ni)	µg/l	50	88	NT	ND	NT
Total Selenium (Se)	µg/l	20	5	ND	ND	ND
Total Silver (Ag)	µg/l	10	0.06	ND	ND	ND
Total Thallium (Tl)	µg/l	10	NE	NT	NT	NT
Total Zinc (Zn)	µg/l	50	50	NT	NT	NT
Total Mercury (Hg)	µg/l	0.2	0.012	ND	ND	ND
Acetone	µg/l	100	NE	NT	NT	NT
Acrylonitrile	µg/l	200	NE	NT	NT	NT
Benzene	µg/l	5	51	NT	NT	NT
Bromochloromethane	µg/l	5	NE	NT	NT	NT
Bromodichloromethane	µg/l	5	NE	NT	NT	NT
Bromoform	µg/l	5	NE	NT	NT	NT
Carbon Disulfide	µg/l	100	NE	NT	NT	NT
Bromomethane (Methylbromide)	µg/l	10	NE	NT	NT	NT
Carbon tetrachloride	µg/l	10	1.6	NT	NT	NT
Chlorobenzene (mono)	µg/l	5	NE	NT	NT	NT
Chloroethane	µg/l	10	NE	NT	NT	NT
Chloroform	µg/l	5	NE	NT	NT	NT
Chloromethane (Methylchloride)	µg/l	10	NE	NT	NT	NT
Dibromochloromethane	µg/l	5	NE	NT	NT	NT
1,2-Dibromo-3-chloropropane; DBCP	µg/l	25	NE	NT	NT	NT
1,2-Dibromoethane; Ethylene dibromide	µg/l	5	NE	NT	NT	NT
Dibromomethane	µg/l	10	NE	NT	NT	NT
1,2-Dichlorobenzene	µg/l	5	NE	NT	NT	NT
1,4-Dichlorobenzene	µg/l	5	NE	NT	NT	NT
trans-1,4-Dichloro-2butene	µg/l	100	NE	NT	NT	NT
1,1-Dichloroethane	µg/l	5	NE	NT	NT	NT
1,2-Dichloroethane	µg/l	5	NE	NT	NT	NT
1,1-Dichloroethene (-ethylene)	µg/l	5	NE	NT	NT	NT
cis-1,2-Dichloroethene (-ethylene)	µg/l	5	NE	NT	NT	NT
trans-1,2-Dichloroethene (-ylene)	µg/l	5	NE	NT	NT	NT
1,2-Dichloropropane	µg/l	5	NE	NT	NT	NT
cis-1,3-Dichloropropene (-propylene)	µg/l	10	NE	NT	NT	NT
trans-1,3-Dichloropropene (-propylene)	µg/l	10	NE	NT	NT	NT
Ethylbenzene	µg/l	5	NE	NT	NT	NT
2-Hexanone	µg/l	50	NE	NT	NT	NT
Iodomethane	µg/l	10	NE	NT	NT	NT
Dichloromethane (Methylene chloride)	µg/l	10	NE	NT	NT	NT
2-Butanone (Methyl ethyl ketone)	µg/l	100	NE	NT	NT	NT
4-Methyl-2-Pentanone	µg/l	100	NE	NT	NT	NT
Styrene	µg/l	10	NE	NT	NT	NT
1,1,1,2-Tetrachloroethane	µg/l	5	NE	NT	NT	NT
1,1,2,2-Tetrachloroethane	µg/l	5	4	NT	NT	NT
Tetrachloroethene (-ethylene)	µg/l	5	3.3	NT	NT	NT
Toluene	µg/l	5	0.36	NT	NT	NT
1,1,1-Trichloroethane	µg/l	5	NE	NT	NT	NT
1,1,2-Trichloroethane	µg/l	5	NE	NT	NT	NT
Trichloroethene (-ethylene)	µg/l	5	30	NT	NT	NT
Trichlorofluoromethane	µg/l	5	NE	NT	NT	NT
1,2,3-Trichloropropane	µg/l	15	NE	NT	NT	NT
Vinyl acetate	µg/l	50	NE	NT	NT	NT
Vinyl chloride	µg/l	10	2.4	NT	NT	NT
Total Xylenes	µg/l	5	NE	NT	NT	NT

Notes:

MCL = *Maximum Contaminant Level*, as established in the NCDENR "Redbook" Surface Waters and Wetlands Standards Section 15A NCAC 02B.0100, .0200, and .0300. Shaded cells indicated exceedances of MCLs.

NE = *Not Established*; North Carolina has not established a MCL

MRL = Laboratory *Method Reporting Limit*

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NS = *Not Sampled*

NT = *Not Tested*

NP = *Not Present* during sampling event

Closed Francis Farm Landfill - Haywood Co., NC
Surface Water Sampling Event (8-14-2000)

TEST	UNITS	MDL	MRL	SW-1	SW-2	Blanton Branch
pH	pH units (on-site)	-	<6.0; >9.0	6.4	6.8	6.6
Specific Conductance	µmhos/cm (on-site)	1	NE	52	78	110
Temperature	°C (on-site)	-	29	17	19	20
Turbidity	NTU (on-site)	0.1	50	NT	NT	NT
Total Antimony (Sb)	µg/l	30	NE	NT	NT	NT
Total Arsenic (As)	µg/l	10	10	ND	ND	ND
Total Barium (Ba)	µg/l	500	NE	28	35	36
Total Beryllium (Be)	µg/l	2	6.5	NT	NT	NT
Total Cadmium (Cd)	µg/l	1	0.4	ND	ND	ND
Total Chromium (Cr)	µg/l	10	50	ND	ND	ND
Total Cobalt (Co)	µg/l	10	NE	NT	NT	NT
Total Copper (Cu)	µg/l	200	7	NT	NT	NT
Total Lead (Pb)	µg/l	10	25	ND	ND	ND
Total Nickel (Ni)	µg/l	50	88	NT	NT	NT
Total Selenium (Se)	µg/l	20	5	ND	ND	ND
Total Silver (Ag)	µg/l	10	0.06	18	12	9.6
Total Thallium (Tl)	µg/l	10	NE	NT	NT	NT
Total Zinc (Zn)	µg/l	50	50	NT	NT	NT
Total Mercury (Hg)	µg/l	0.2	0.012	ND	ND	ND
Acetone	µg/l	100	NE	NT	NT	NT
Acrylonitrile	µg/l	200	NE	NT	NT	NT
Benzene	µg/l	5	51	NT	NT	NT
Bromochloromethane	µg/l	5	NE	NT	NT	NT
Bromodichloromethane	µg/l	5	NE	NT	NT	NT
Bromoform	µg/l	5	NE	NT	NT	NT
Carbon Disulfide	µg/l	100	NE	NT	NT	NT
Bromomethane (Methylbromide)	µg/l	10	NE	NT	NT	NT
Carbon tetrachloride	µg/l	10	1.6	NT	NT	NT
Chlorobenzene (mono)	µg/l	5	NE	NT	NT	NT
Chloroethane	µg/l	10	NE	NT	NT	NT
Chloroform	µg/l	5	NE	NT	NT	NT
Chloromethane (Methylchloride)	µg/l	10	NE	NT	NT	NT
Dibromochloromethane	µg/l	5	NE	NT	NT	NT
1,2-Dibromo-3-chloropropane; DBCP	µg/l	25	NE	NT	NT	NT
1,2-Dibromoethane; Ethylene dibromide	µg/l	5	NE	NT	NT	NT
Dibromomethane	µg/l	10	NE	NT	NT	NT
1,2-Dichlorobenzene	µg/l	5	NE	NT	NT	NT
1,4-Dichlorobenzene	µg/l	5	NE	NT	NT	NT
trans-1,4-Dichloro-2butene	µg/l	100	NE	NT	NT	NT
1,1-Dichloroethane	µg/l	5	NE	NT	NT	NT
1,2-Dichloroethane	µg/l	5	NE	NT	NT	NT
1,1-Dichloroethene (-ethylene)	µg/l	5	NE	NT	NT	NT
cis-1,2-Dichloroethene (-ethylene)	µg/l	5	NE	NT	NT	NT
trans-1,2-Dichloroethene (-ylene)	µg/l	5	NE	NT	NT	NT
1,2-Dichloropropane	µg/l	5	NE	NT	NT	NT
cis-1,3-Dichloropropene (-propylene)	µg/l	10	NE	NT	NT	NT
trans-1,3-Dichloropropene (-propylene)	µg/l	10	NE	NT	NT	NT
Ethylbenzene	µg/l	5	NE	NT	NT	NT
2-Hexanone	µg/l	50	NE	NT	NT	NT
Iodomethane	µg/l	10	NE	NT	NT	NT
Dichloromethane (Methylene chloride)	µg/l	10	NE	NT	NT	NT
2-Butanone (Methyl ethyl ketone)	µg/l	100	NE	NT	NT	NT
4-Methyl-2-Pentanone	µg/l	100	NE	NT	NT	NT
Styrene	µg/l	10	NE	NT	NT	NT
1,1,1,2-Tetrachloroethane	µg/l	5	NE	NT	NT	NT
1,1,2,2-Tetrachloroethane	µg/l	5	4	NT	NT	NT
Tetrachloroethene (-ethylene)	µg/l	5	3.3	NT	NT	NT
Toluene	µg/l	5	0.36	NT	NT	NT
1,1,1-Trichloroethane	µg/l	5	NE	NT	NT	NT
1,1,2-Trichloroethane	µg/l	5	NE	NT	NT	NT
Trichloroethene (-ethylene)	µg/l	5	30	NT	NT	NT
Trichlorofluoromethane	µg/l	5	NE	NT	NT	NT
1,2,3-Trichloropropane	µg/l	15	NE	NT	NT	NT
Vinyl acetate	µg/l	50	NE	NT	NT	NT
Vinyl chloride	µg/l	10	2.4	NT	NT	NT
Total Xylenes	µg/l	5	NE	NT	NT	NT

Notes:

MCL = *Maximum Contaminant Level*, as established in the NCDENR "Redbook" Surface Waters and Wetlands Standards Section 15A NCAC 02B.0100, .0200, and .0300. Shaded cells indicated exceedances of MCLs.

NE = *Not Established*; North Carolina has not established a MCL

MRL = Laboratory *Method Reporting Limit*

ND = *Not Detected* at the MRL; "J"-flagged data (i.e., values estimated between the laboratory method detection limit [MDL] and the MRL) are not presented on this spreadsheet.

NS = *Not Sampled*

NT = *Not Tested*

NP = *Not Present* during sampling event

Closed Francis Farm Landfill - Haywood Co., NC
Surface Water Sampling Event (3-19-2001)

TEST	UNITS	MDL	MRL	SW-1	SW-2	Blanton Branch
pH	pH units (on-site)	-	<6.0; >9.0	**6.3**	**6.9**	**7**
Specific Conductance	µmhos/cm (on-site)	1	NE	**40**	**52**	**110**
Temperature	°C (on-site)	-	29	**10.8**	**9.7**	**9.6**
Turbidity	NTU (on-site)	0.1	50	NT	NT	NT
Total Antimony (Sb)	µg/l	30	NE	NT	NT	NT
Total Arsenic (As)	µg/l	10	10	ND	ND	ND
Total Barium (Ba)	µg/l	500	NE	**32**	**32**	**30**
Total Beryllium (Be)	µg/l	2	6.5	NT	NT	ND
Total Cadmium (Cd)	µg/l	1	0.4	ND	ND	ND
Total Chromium (Cr)	µg/l	10	50	ND	ND	ND
Total Cobalt (Co)	µg/l	10	NE	NT	NT	ND
Total Copper (Cu)	µg/l	200	7	NT	NT	NT
Total Lead (Pb)	µg/l	10	25	ND	ND	ND
Total Nickel (Ni)	µg/l	50	88	NT	ND	ND
Total Selenium (Se)	µg/l	20	5	ND	ND	ND
Total Silver (Ag)	µg/l	10	0.06	ND	ND	ND
Total Thallium (Tl)	µg/l	10	NE	NT	NT	NT
Total Zinc (Zn)	µg/l	50	50	NT	NT	NT
Total Mercury (Hg)	µg/l	0.2	0.012	ND	ND	ND
Acetone	µg/l	100	NE	NT	NT	NT
Acrylonitrile	µg/l	200	NE	NT	NT	NT
Benzene	µg/l	5	51	NT	NT	NT
Bromochloromethane	µg/l	5	NE	NT	NT	NT
Bromodichloromethane	µg/l	5	NE	NT	NT	NT
Bromoform	µg/l	5	NE	NT	NT	NT
Carbon Disulfide	µg/l	100	NE	NT	NT	NT
Bromomethane (Methylbromide)	µg/l	10	NE	NT	NT	NT
Carbon tetrachloride	µg/l	10	1.6	NT	NT	NT
Chlorobenzene (mono)	µg/l	5	NE	NT	NT	NT
Chloroethane	µg/l	10	NE	NT	NT	NT
Chloroform	µg/l	5	NE	NT	NT	NT
Chloromethane (Methylchloride)	µg/l	10	NE	NT	NT	NT
Dibromochloromethane	µg/l	5	NE	NT	NT	NT
1,2-Dibromo-3-chloropropane; DBCP	µg/l	25	NE	NT	NT	NT
1,2-Dibromoethane; Ethylene dibromide	µg/l	5	NE	NT	NT	NT
Dibromomethane	µg/l	10	NE	NT	NT	NT
1,2-Dichlorobenzene	µg/l	5	NE	NT	NT	NT
1,4-Dichlorobenzene	µg/l	5	NE	NT	NT	NT
trans-1,4-Dichloro-2butene	µg/l	100	NE	NT	NT	NT
1,1-Dichloroethane	µg/l	5	NE	NT	NT	NT
1,2-Dichloroethane	µg/l	5	NE	NT	NT	NT
1,1-Dichloroethene (-ethylene)	µg/l	5	NE	NT	NT	NT
cis-1,2-Dichloroethene (-ethylene)	µg/l	5	NE	NT	NT	NT
trans-1,2-Dichloroethene (-ylene)	µg/l	5	NE	NT	NT	NT
1,2-Dichloropropane	µg/l	5	NE	NT	NT	NT
cis-1,3-Dichloropropene (-propylene)	µg/l	10	NE	NT	NT	NT
trans-1,3-Dichloropropene (-propylene)	µg/l	10	NE	NT	NT	NT
Ethylbenzene	µg/l	5	NE	NT	NT	NT
2-Hexanone	µg/l	50	NE	NT	NT	NT
Iodomethane	µg/l	10	NE	NT	NT	NT
Dichloromethane (Methylene chloride)	µg/l	10	NE	NT	NT	NT
2-Butanone (Methyl ethyl ketone)	µg/l	100	NE	NT	NT	NT
4-Methyl-2-Pentanone	µg/l	100	NE	NT	NT	NT
Styrene	µg/l	10	NE	NT	NT	NT
1,1,1,2-Tetrachloroethane	µg/l	5	NE	NT	NT	NT
1,1,2,2-Tetrachloroethane	µg/l	5	4	NT	NT	NT
Tetrachloroethene (-ethylene)	µg/l	5	3.3	NT	NT	NT
Toluene	µg/l	5	0.36	NT	NT	NT
1,1,1-Trichloroethane	µg/l	5	NE	NT	NT	NT
1,1,2-Trichloroethane	µg/l	5	NE	NT	NT	NT
Trichloroethene (-ethylene)	µg/l	5	30	NT	NT	NT
Trichlorofluoromethane	µg/l	5	NE	NT	NT	NT
1,2,3-Trichloropropane	µg/l	15	NE	NT	NT	NT
Vinyl acetate	µg/l	50	NE	NT	NT	NT
Vinyl chloride	µg/l	10	2.4	NT	NT	NT
Total Xylenes	µg/l	5	NE	NT	NT	NT

Notes:

MCL = *Maximum Contaminant Level*, as established in the NCDENR "Redbook" Surface Waters and Wetlands Standards Section 15A NCAC 02B.0100, .0200, and .0300. Shaded cells indicated exceedances of MCLs.

NE = *Not Established*; North Carolina has not established a MCL

MRL = Laboratory *Method Reporting Limit*

ND = *Not Detected* at the MRL; "J"-flagged data (i.e., values estimated between the laboratory method detection limit [MDL] and the MRL) are not presented on this spreadsheet.

NS = *Not Sampled*

NT = *Not Tested*

NP = *Not Present* during sampling event

Closed Francis Farm Landfill - Haywood Co., NC
Surface Water Sampling Event (8-27-2002)

TEST	UNITS	MDL	MRL	SW-1	SW-2	Blanton Branch
pH	pH units (on-site)	-	<6.0; >9.0	6.37	6.84	6.8
Specific Conductance	µmhos/cm (on-site)	1	NE	55	80	149
Temperature	°C (on-site)	-	29	18.5	20	22.6
Turbidity	NTU (on-site)	0.1	50	NT	NT	NT
Total Antimony (Sb)	µg/l	30	NE	NT	NT	NT
Total Arsenic (As)	µg/l	10	10	ND	ND	ND
Total Barium (Ba)	µg/l	500	NE	ND	49	71
Total Beryllium (Be)	µg/l	2	6.5	NT	NT	NT
Total Cadmium (Cd)	µg/l	1	0.4	ND	ND	ND
Total Chromium (Cr)	µg/l	10	50	ND	ND	ND
Total Cobalt (Co)	µg/l	10	NE	NT	NT	NT
Total Copper (Cu)	µg/l	200	7	NT	NT	NT
Total Lead (Pb)	µg/l	10	25	ND	ND	ND
Total Nickel (Ni)	µg/l	50	88	NT	NT	NT
Total Selenium (Se)	µg/l	20	5	ND	ND	ND
Total Silver (Ag)	µg/l	10	0.06	ND	ND	ND
Total Thallium (Tl)	µg/l	10	NE	NT	NT	NT
Total Zinc (Zn)	µg/l	50	50	NT	NT	NT
Total Mercury (Hg)	µg/l	0.2	0.012	ND	ND	ND
Acetone	µg/l	100	NE	NT	NT	NT
Acrylonitrile	µg/l	200	NE	NT	NT	NT
Benzene	µg/l	5	51	NT	NT	NT
Bromochloromethane	µg/l	5	NE	NT	NT	NT
Bromodichloromethane	µg/l	5	NE	NT	NT	NT
Bromoform	µg/l	5	NE	NT	NT	NT
Carbon Disulfide	µg/l	100	NE	NT	NT	NT
Bromomethane (Methylbromide)	µg/l	10	NE	NT	NT	NT
Carbon tetrachloride	µg/l	10	1.6	NT	NT	NT
Chlorobenzene (mono)	µg/l	5	NE	NT	NT	NT
Chloroethane	µg/l	10	NE	NT	NT	NT
Chloroform	µg/l	5	NE	NT	NT	NT
Chloromethane (Methylchloride)	µg/l	10	NE	NT	NT	NT
Dibromochloromethane	µg/l	5	NE	NT	NT	NT
1,2-Dibromo-3-chloropropane; DBCP	µg/l	25	NE	NT	NT	NT
1,2-Dibromoethane; Ethylene dibromide	µg/l	5	NE	NT	NT	NT
Dibromomethane	µg/l	10	NE	NT	NT	NT
1,2-Dichlorobenzene	µg/l	5	NE	NT	NT	NT
1,4-Dichlorobenzene	µg/l	5	NE	NT	NT	NT
trans-1,4-Dichloro-2butene	µg/l	100	NE	NT	NT	NT
1,1-Dichloroethane	µg/l	5	NE	NT	NT	NT
1,2-Dichloroethane	µg/l	5	NE	NT	NT	NT
1,1-Dichloroethene (-ethylene)	µg/l	5	NE	NT	NT	NT
cis-1,2-Dichloroethene (-ethylene)	µg/l	5	NE	NT	NT	NT
trans-1,2-Dichloroethene (-ylene)	µg/l	5	NE	NT	NT	NT
1,2-Dichloropropane	µg/l	5	NE	NT	NT	NT
cis-1,3-Dichloropropene (-propylene)	µg/l	10	NE	NT	NT	NT
trans-1,3-Dichloropropene (-propylene)	µg/l	10	NE	NT	NT	NT
Ethylbenzene	µg/l	5	NE	NT	NT	NT
2-Hexanone	µg/l	50	NE	NT	NT	NT
Iodomethane	µg/l	10	NE	NT	NT	NT
Dichloromethane (Methylene chloride)	µg/l	10	NE	NT	NT	NT
2-Butanone (Methyl ethyl ketone)	µg/l	100	NE	NT	NT	NT
4-Methyl-2-Pentanone	µg/l	100	NE	NT	NT	NT
Styrene	µg/l	10	NE	NT	NT	NT
1,1,1,2-Tetrachloroethane	µg/l	5	NE	NT	NT	NT
1,1,2,2-Tetrachloroethane	µg/l	5	4	NT	NT	NT
Tetrachloroethene (-ethylene)	µg/l	5	3.3	NT	NT	NT
Toluene	µg/l	5	0.36	NT	NT	NT
1,1,1-Trichloroethane	µg/l	5	NE	NT	NT	NT
1,1,2-Trichloroethane	µg/l	5	NE	NT	NT	NT
Trichloroethene (-ethylene)	µg/l	5	30	NT	NT	NT
Trichlorofluoromethane	µg/l	5	NE	NT	NT	NT
1,2,3-Trichloropropane	µg/l	15	NE	NT	NT	NT
Vinyl acetate	µg/l	50	NE	NT	NT	NT
Vinyl chloride	µg/l	10	2.4	NT	NT	NT
Total Xylenes	µg/l	5	NE	NT	NT	NT

Notes:

MCL = *Maximum Contaminant Level*, as established in the NCDENR "Redbook" Surface Waters and Wetlands Standards Section 15A NCAC 02B.0100, .0200, and .0300. Shaded cells indicated exceedances of MCLs.

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NS = *Not Sampled*

NT = *Not Tested*

NP = *Not Present* during sampling event

Closed Francis Farm Landfill - Haywood Co., NC
Surface Water Sampling Event (2-24-2003)

TEST	UNITS	MDL	MRL	SW-1	SW-2	Blanton Branch
pH	pH units (on-site)	-	<6.0; >9.0	7.05	6.84	6.8
Specific Conductance	µmhos/cm (on-site)	1	NE	41	50	110
Temperature	°C (on-site)	-	29	11.6	12.2	13
Turbidity	NTU (on-site)	0.1	50	NT	NT	NT
Total Antimony (Sb)	µg/l	30	NE	NT	NT	NT
Total Arsenic (As)	µg/l	10	10	ND	ND	ND
Total Barium (Ba)	µg/l	500	NE	35	42	45
Total Beryllium (Be)	µg/l	2	6.5	NT	NT	NT
Total Cadmium (Cd)	µg/l	1	0.4	ND	ND	ND
Total Chromium (Cr)	µg/l	10	50	ND	ND	ND
Total Cobalt (Co)	µg/l	10	NE	NT	NT	NT
Total Copper (Cu)	µg/l	200	7	NT	NT	NT
Total Lead (Pb)	µg/l	10	25	ND	ND	ND
Total Nickel (Ni)	µg/l	50	88	NT	NT	NT
Total Selenium (Se)	µg/l	20	5	ND	ND	ND
Total Silver (Ag)	µg/l	10	0.06	2.9	4.4	4.1
Total Thallium (Tl)	µg/l	10	NE	NT	NT	NT
Total Zinc (Zn)	µg/l	50	50	NT	NT	NT
Total Mercury (Hg)	µg/l	0.2	0.012	ND	ND	ND
Acetone	µg/l	100	NE	NT	NT	NT
Acrylonitrile	µg/l	200	NE	NT	NT	NT
Benzene	µg/l	5	51	NT	NT	NT
Bromochloromethane	µg/l	5	NE	NT	NT	NT
Bromodichloromethane	µg/l	5	NE	NT	NT	NT
Bromoform	µg/l	5	NE	NT	NT	NT
Carbon Disulfide	µg/l	100	NE	NT	NT	NT
Bromomethane (Methylbromide)	µg/l	10	NE	NT	NT	NT
Carbon tetrachloride	µg/l	10	1.6	NT	NT	NT
Chlorobenzene (mono)	µg/l	5	NE	NT	NT	NT
Chloroethane	µg/l	10	NE	NT	NT	NT
Chloroform	µg/l	5	NE	NT	NT	NT
Chloromethane (Methylchloride)	µg/l	10	NE	NT	NT	NT
Dibromochloromethane	µg/l	5	NE	NT	NT	NT
1,2-Dibromo-3-chloropropane; DBCP	µg/l	25	NE	NT	NT	NT
1,2-Dibromoethane; Ethylene dibromide	µg/l	5	NE	NT	NT	NT
Dibromomethane	µg/l	10	NE	NT	NT	NT
1,2-Dichlorobenzene	µg/l	5	NE	NT	NT	NT
1,4-Dichlorobenzene	µg/l	5	NE	NT	NT	NT
trans-1,4-Dichloro-2butene	µg/l	100	NE	NT	NT	NT
1,1-Dichloroethane	µg/l	5	NE	NT	NT	NT
1,2-Dichloroethane	µg/l	5	NE	NT	NT	NT
1,1-Dichloroethene (-ethylene)	µg/l	5	NE	NT	NT	NT
cis-1,2-Dichloroethene (-ethylene)	µg/l	5	NE	NT	NT	NT
trans-1,2-Dichloroethene (-ylene)	µg/l	5	NE	NT	NT	NT
1,2-Dichloropropane	µg/l	5	NE	NT	NT	NT
cis-1,3-Dichloropropene (-propylene)	µg/l	10	NE	NT	NT	NT
trans-1,3-Dichloropropene (-propylene)	µg/l	10	NE	NT	NT	NT
Ethylbenzene	µg/l	5	NE	NT	NT	NT
2-Hexanone	µg/l	50	NE	NT	NT	NT
Iodomethane	µg/l	10	NE	NT	NT	NT
Dichloromethane (Methylene chloride)	µg/l	10	NE	NT	NT	NT
2-Butanone (Methyl ethyl ketone)	µg/l	100	NE	NT	NT	NT
4-Methyl-2-Pentanone	µg/l	100	NE	NT	NT	NT
Styrene	µg/l	10	NE	NT	NT	NT
1,1,1,2-Tetrachloroethane	µg/l	5	NE	NT	NT	NT
1,1,2,2-Tetrachloroethane	µg/l	5	4	NT	NT	NT
Tetrachloroethene (-ethylene)	µg/l	5	3.3	NT	NT	NT
Toluene	µg/l	5	0.36	NT	NT	NT
1,1,1-Trichloroethane	µg/l	5	NE	NT	NT	NT
1,1,2-Trichloroethane	µg/l	5	NE	NT	NT	NT
Trichloroethene (-ethylene)	µg/l	5	30	NT	NT	NT
Trichlorofluoromethane	µg/l	5	NE	NT	NT	NT
1,2,3-Trichloropropane	µg/l	15	NE	NT	NT	NT
Vinyl acetate	µg/l	50	NE	NT	NT	NT
Vinyl chloride	µg/l	10	2.4	NT	NT	NT
Total Xylenes	µg/l	5	NE	NT	NT	NT

Notes:

MCL = *Maximum Contaminant Level*, as established in the NCDENR "Redbook" Surface Waters and Wetlands Standards Section 15A NCAC 02B.0100, .0200, and .0300. Shaded cells indicated exceedances of MCLs.

NE = *Not Established*; North Carolina has not established a MCL

MRL = Laboratory *Method Reporting Limit*

ND = *Not Detected* at the MRL; "J"-flagged data (i.e., values estimated between the laboratory method detection limit [MDL] and the MRL) are not presented on this spreadsheet.

NS = *Not Sampled*

NT = *Not Tested*

NP = *Not Present* during sampling event

Closed Francis Farm Landfill - Haywood Co., NC
Surface Water Sampling Event (8-11-2003)

TEST	UNITS	MDL	MRL	SW-1	SW-2	Blanton Branch
pH	pH units (on-site)	-	<6.0; >9.0	7.24	7.15	7.1
Specific Conductance	µmhos/cm (on-site)	1	NE	51	75	111
Temperature	°C (on-site)	-	29	19	21.6	23
Turbidity	NTU (on-site)	0.1	50	NT	NT	NT
Total Antimony (Sb)	µg/l	30	NE	NT	NT	NT
Total Arsenic (As)	µg/l	10	10	ND	ND	ND
Total Barium (Ba)	µg/l	500	NE	29	45	28
Total Beryllium (Be)	µg/l	2	6.5	NT	NT	NT
Total Cadmium (Cd)	µg/l	1	0.4	ND	ND	ND
Total Chromium (Cr)	µg/l	10	50	ND	2.6	ND
Total Cobalt (Co)	µg/l	10	NE	NT	NT	NT
Total Copper (Cu)	µg/l	200	7	NT	NT	NT
Total Lead (Pb)	µg/l	10	25	ND	ND	ND
Total Nickel (Ni)	µg/l	50	88	NT	NT	NT
Total Selenium (Se)	µg/l	20	5	ND	ND	ND
Total Silver (Ag)	µg/l	10	0.06	ND	ND	ND
Total Thallium (Tl)	µg/l	10	NE	NT	NT	NT
Total Zinc (Zn)	µg/l	50	50	NT	NT	NT
Total Mercury (Hg)	µg/l	0.2	0.012	ND	ND	ND
Acetone	µg/l	100	NE	ND	ND	ND
Acrylonitrile	µg/l	200	NE	ND	ND	ND
Benzene	µg/l	5	51	ND	ND	ND
Bromochloromethane	µg/l	5	NE	ND	ND	ND
Bromodichloromethane	µg/l	5	NE	ND	ND	ND
Bromoform	µg/l	5	NE	ND	ND	ND
Carbon Disulfide	µg/l	100	NE	ND	ND	ND
Bromomethane (Methylbromide)	µg/l	10	NE	ND	ND	ND
Carbon tetrachloride	µg/l	10	1.6	ND	ND	ND
Chlorobenzene (mono)	µg/l	5	NE	ND	ND	ND
Chloroethane	µg/l	10	NE	ND	ND	ND
Chloroform	µg/l	5	NE	ND	ND	ND
Chloromethane (Methylchloride)	µg/l	10	NE	ND	ND	ND
Dibromochloromethane	µg/l	5	NE	ND	ND	ND
1,2-Dibromo-3-chloropropane; DBCP	µg/l	25	NE	ND	ND	ND
1,2-Dibromoethane; Ethylene dibromide	µg/l	5	NE	ND	ND	ND
Dibromomethane	µg/l	10	NE	ND	ND	ND
1,2-Dichlorobenzene	µg/l	5	NE	ND	ND	ND
1,4-Dichlorobenzene	µg/l	5	NE	ND	ND	ND
trans-1,4-Dichloro-2butene	µg/l	100	NE	ND	ND	ND
1,1-Dichloroethane	µg/l	5	NE	ND	ND	ND
1,2-Dichloroethane	µg/l	5	NE	ND	ND	ND
1,1-Dichloroethene (-ethylene)	µg/l	5	NE	ND	ND	ND
cis-1,2-Dichloroethene (-ethylene)	µg/l	5	NE	ND	ND	ND
trans-1,2-Dichloroethene (-ylene)	µg/l	5	NE	ND	ND	ND
1,2-Dichloropropane	µg/l	5	NE	ND	ND	ND
cis-1,3-Dichloropropene (-propylene)	µg/l	10	NE	ND	ND	ND
trans-1,3-Dichloropropene (-propylene)	µg/l	10	NE	ND	ND	ND
Ethylbenzene	µg/l	5	NE	ND	ND	ND
2-Hexanone	µg/l	50	NE	ND	ND	ND
Iodomethane	µg/l	10	NE	ND	ND	ND
Dichloromethane (Methylene chloride)	µg/l	10	NE	ND	ND	ND
2-Butanone (Methyl ethyl ketone)	µg/l	100	NE	ND	ND	ND
4-Methyl-2-Pentanone	µg/l	100	NE	ND	ND	ND
Styrene	µg/l	10	NE	ND	ND	ND
1,1,1,2-Tetrachloroethane	µg/l	5	NE	ND	ND	ND
1,1,2,2-Tetrachloroethane	µg/l	5	4	ND	ND	ND
Tetrachloroethene (-ethylene)	µg/l	5	3.3	ND	ND	ND
Toluene	µg/l	5	0.36	ND	ND	ND
1,1,1-Trichloroethane	µg/l	5	NE	ND	ND	ND
1,1,2-Trichloroethane	µg/l	5	NE	ND	ND	ND
Trichloroethene (-ethylene)	µg/l	5	30	ND	ND	ND
Trichlorofluoromethane	µg/l	5	NE	ND	ND	ND
1,2,3-Trichloropropane	µg/l	15	NE	ND	ND	ND
Vinyl acetate	µg/l	50	NE	ND	ND	ND
Vinyl chloride	µg/l	10	2.4	ND	ND	ND
Total Xylenes	µg/l	5	NE	ND	ND	ND

Notes:

MCL = *Maximum Contaminant Level*, as established in the NCDENR "Redbook" Surface Waters and Wetlands Standards Section 15A NCAC 02B.0100, .0200, and .0300. Shaded cells indicated exceedances of MCLs.

NE = *Not Established*; North Carolina has not established a MCL

MRL = Laboratory *Method Reporting Limit*

ND = *Not Detected* at the MRL; "J"-flagged data (i.e., values estimated between the laboratory method detection limit [MDL] and the MRL) are not presented on this spreadsheet.

NS = *Not Sampled*

NT = *Not Tested*

NP = *Not Present* during sampling event

Closed Francis Farm Landfill - Haywood Co., NC
Surface Water Sampling Event (2-9-2004)

TEST	UNITS	MDL	MRL	SW-1	SW-2	Blanton Branch
pH	pH units (on-site)	-	<6.0; >9.0	**6.22**	**6.71**	**6.38**
Specific Conductance	µmhos/cm (on-site)	1	NE	**39**	**42**	**80**
Temperature	°C (on-site)	-	29	**7.8**	**7.8**	**8.1**
Turbidity	NTU (on-site)	0.1	50	NT	NT	NT
Total Antimony (Sb)	µg/l	30	NE	NT	NT	NT
Total Arsenic (As)	µg/l	10	10	ND	ND	ND
Total Barium (Ba)	µg/l	500	NE	**30**	**37**	**34**
Total Beryllium (Be)	µg/l	2	6.5	NT	NT	NT
Total Cadmium (Cd)	µg/l	1	0.4	ND	ND	ND
Total Chromium (Cr)	µg/l	10	50	ND	ND	ND
Total Cobalt (Co)	µg/l	10	NE	NT	NT	NT
Total Copper (Cu)	µg/l	200	7	NT	NT	NT
Total Lead (Pb)	µg/l	10	25	ND	ND	ND
Total Nickel (Ni)	µg/l	50	88	NT	NT	NT
Total Selenium (Se)	µg/l	20	5	ND	ND	ND
Total Silver (Ag)	µg/l	10	0.06	ND	ND	ND
Total Thallium (Tl)	µg/l	10	NE	NT	NT	NT
Total Zinc (Zn)	µg/l	50	50	NT	NT	NT
Total Mercury (Hg)	µg/l	0.2	0.012	ND	ND	ND
Acetone	µg/l	100	NE	ND	ND	**14**
Acrylonitrile	µg/l	200	NE	ND	ND	ND
Benzene	µg/l	5	51	ND	ND	ND
Bromochloromethane	µg/l	5	NE	ND	ND	ND
Bromodichloromethane	µg/l	5	NE	ND	ND	ND
Bromoform	µg/l	5	NE	ND	ND	ND
Carbon Disulfide	µg/l	100	NE	ND	ND	ND
Bromomethane (Methylbromide)	µg/l	10	NE	ND	ND	ND
Carbon tetrachloride	µg/l	10	1.6	ND	ND	ND
Chlorobenzene (mono)	µg/l	5	NE	ND	ND	ND
Chloroethane	µg/l	10	NE	ND	ND	ND
Chloroform	µg/l	5	NE	ND	ND	ND
Chloromethane (Methylchloride)	µg/l	10	NE	ND	ND	ND
Dibromochloromethane	µg/l	5	NE	ND	ND	ND
1,2-Dibromo-3-chloropropane; DBCP	µg/l	25	NE	ND	ND	ND
1,2-Dibromoethane; Ethylene dibromide	µg/l	5	NE	ND	ND	ND
Dibromomethane	µg/l	10	NE	ND	ND	ND
1,2-Dichlorobenzene	µg/l	5	NE	ND	ND	ND
1,4-Dichlorobenzene	µg/l	5	NE	ND	ND	ND
trans-1,4-Dichloro-2butene	µg/l	100	NE	ND	ND	ND
1,1-Dichloroethane	µg/l	5	NE	ND	ND	ND
1,2-Dichloroethane	µg/l	5	NE	ND	ND	ND
1,1-Dichloroethene (-ethylene)	µg/l	5	NE	ND	ND	ND
cis-1,2-Dichloroethene (-ethylene)	µg/l	5	NE	ND	ND	ND
trans-1,2-Dichloroethene (-ylene)	µg/l	5	NE	ND	ND	ND
1,2-Dichloropropane	µg/l	5	NE	ND	ND	ND
cis-1,3-Dichloropropene (-propylene)	µg/l	10	NE	ND	ND	ND
trans-1,3-Dichloropropene (-propylene)	µg/l	10	NE	ND	ND	ND
Ethylbenzene	µg/l	5	NE	ND	ND	ND
2-Hexanone	µg/l	50	NE	ND	ND	ND
Iodomethane	µg/l	10	NE	ND	ND	ND
Dichloromethane (Methylene chloride)	µg/l	10	NE	ND	ND	ND
2-Butanone (Methyl ethyl ketone)	µg/l	100	NE	ND	ND	ND
4-Methyl-2-Pentanone	µg/l	100	NE	ND	ND	ND
Styrene	µg/l	10	NE	ND	ND	ND
1,1,1,2-Tetrachloroethane	µg/l	5	NE	ND	ND	ND
1,1,2,2-Tetrachloroethane	µg/l	5	4	ND	ND	ND
Tetrachloroethene (-ethylene)	µg/l	5	3.3	ND	ND	ND
Toluene	µg/l	5	0.36	ND	ND	ND
1,1,1-Trichloroethane	µg/l	5	NE	ND	ND	ND
1,1,2-Trichloroethane	µg/l	5	NE	ND	ND	ND
Trichloroethene (-ethylene)	µg/l	5	30	ND	ND	ND
Trichlorofluoromethane	µg/l	5	NE	ND	ND	ND
1,2,3-Trichloropropane	µg/l	15	NE	ND	ND	ND
Vinyl acetate	µg/l	50	NE	ND	ND	ND
Vinyl chloride	µg/l	10	2.4	ND	ND	ND
Total Xylenes	µg/l	5	NE	ND	ND	ND

Notes:

MCL = *Maximum Contaminant Level*, as established in the NCDENR "Redbook" Surface Waters and Wetlands Standards Section 15A NCAC 02B.0100, .0200, and .0300. Shaded cells indicated exceedances of MCLs.

NE = *Not Established*; North Carolina has not established a MCL

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NS = *Not Sampled*

NT = *Not Tested*

NP = *Not Present* during sampling event

Closed Francis Farm Landfill - Haywood Co., NC
Surface Water Sampling Event (8-16-2004)

TEST	UNITS	MDL	MRL	SW-1	SW-2	Blanton Branch
pH	pH units (on-site)	-	<6.0; >9.0	6.98	7.11	6.8
Specific Conductance	µmhos/cm (on-site)	1	NE	59	80	125
Temperature	°C (on-site)	-	29	19.4	22.3	24.8
Turbidity	NTU (on-site)	0.1	50	NT	NT	NT
Total Antimony (Sb)	µg/l	30	NE	NT	NT	NT
Total Arsenic (As)	µg/l	10	10	ND	ND	ND
Total Barium (Ba)	µg/l	500	NE	34	40	43
Total Beryllium (Be)	µg/l	2	6.5	NT	NT	NT
Total Cadmium (Cd)	µg/l	1	0.4	ND	ND	ND
Total Chromium (Cr)	µg/l	10	50	ND	ND	ND
Total Cobalt (Co)	µg/l	10	NE	NT	NT	NT
Total Copper (Cu)	µg/l	200	7	NT	NT	NT
Total Lead (Pb)	µg/l	10	25	ND	ND	ND
Total Nickel (Ni)	µg/l	50	88	NT	NT	NT
Total Selenium (Se)	µg/l	20	5	ND	ND	ND
Total Silver (Ag)	µg/l	10	0.06	ND	ND	ND
Total Thallium (Tl)	µg/l	10	NE	NT	NT	NT
Total Zinc (Zn)	µg/l	50	50	NT	NT	NT
Total Mercury (Hg)	µg/l	0.2	0.012	0.25	0.67	0.29
Acetone	µg/l	100	NE	ND	ND	ND
Acrylonitrile	µg/l	200	NE	ND	ND	ND
Benzene	µg/l	5	51	ND	ND	ND
Bromochloromethane	µg/l	5	NE	ND	ND	ND
Bromodichloromethane	µg/l	5	NE	ND	ND	ND
Bromoform	µg/l	5	NE	ND	ND	ND
Carbon Disulfide	µg/l	100	NE	ND	ND	ND
Bromomethane (Methylbromide)	µg/l	10	NE	ND	ND	ND
Carbon tetrachloride	µg/l	10	1.6	ND	ND	ND
Chlorobenzene (mono)	µg/l	5	NE	ND	ND	ND
Chloroethane	µg/l	10	NE	ND	ND	ND
Chloroform	µg/l	5	NE	ND	ND	ND
Chloromethane (Methylchloride)	µg/l	10	NE	ND	ND	ND
Dibromochloromethane	µg/l	5	NE	ND	ND	ND
1,2-Dibromo-3-chloropropane; DBCP	µg/l	25	NE	ND	ND	ND
1,2-Dibromoethane; Ethylene dibromide	µg/l	5	NE	ND	ND	ND
Dibromomethane	µg/l	10	NE	ND	ND	ND
1,2-Dichlorobenzene	µg/l	5	NE	ND	ND	ND
1,4-Dichlorobenzene	µg/l	5	NE	ND	ND	ND
trans-1,4-Dichloro-2butene	µg/l	100	NE	ND	ND	ND
1,1-Dichloroethane	µg/l	5	NE	ND	ND	ND
1,2-Dichloroethane	µg/l	5	NE	ND	ND	ND
1,1-Dichloroethene (-ethylene)	µg/l	5	NE	ND	ND	ND
cis-1,2-Dichloroethene (-ethylene)	µg/l	5	NE	ND	ND	ND
trans-1,2-Dichloroethene (-ylene)	µg/l	5	NE	ND	ND	ND
1,2-Dichloropropane	µg/l	5	NE	ND	ND	ND
cis-1,3-Dichloropropene (-propylene)	µg/l	10	NE	ND	ND	ND
trans-1,3-Dichloropropene (-propylene)	µg/l	10	NE	ND	ND	ND
Ethylbenzene	µg/l	5	NE	ND	ND	ND
2-Hexanone	µg/l	50	NE	ND	ND	ND
Iodomethane	µg/l	10	NE	ND	ND	ND
Dichloromethane (Methylene chloride)	µg/l	10	NE	ND	ND	ND
2-Butanone (Methyl ethyl ketone)	µg/l	100	NE	ND	ND	ND
4-Methyl-2-Pentanone	µg/l	100	NE	ND	ND	ND
Styrene	µg/l	10	NE	ND	ND	ND
1,1,1,2-Tetrachloroethane	µg/l	5	NE	ND	ND	ND
1,1,2,2-Tetrachloroethane	µg/l	5	4	ND	ND	ND
Tetrachloroethene (-ethylene)	µg/l	5	3.3	ND	ND	ND
Toluene	µg/l	5	0.36	ND	ND	ND
1,1,1-Trichloroethane	µg/l	5	NE	ND	ND	ND
1,1,2-Trichloroethane	µg/l	5	NE	ND	ND	ND
Trichloroethene (-ethylene)	µg/l	5	30	ND	ND	ND
Trichlorofluoromethane	µg/l	5	NE	ND	ND	ND
1,2,3-Trichloropropane	µg/l	15	NE	ND	ND	ND
Vinyl acetate	µg/l	50	NE	ND	ND	ND
Vinyl chloride	µg/l	10	2.4	ND	ND	ND
Total Xylenes	µg/l	5	NE	ND	ND	ND

Notes:

MCL = *Maximum Contaminant Level*, as established in the NCDENR "Redbook" Surface Waters and Wetlands Standards Section 15A NCAC 02B.0100, .0200, and .0300. Shaded cells indicated exceedances of MCLs.

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NT = *Not Tested*

NP = *Not Present* during sampling event

Closed Francis Farm Landfill - Haywood Co., NC
Surface Water Sampling Event (2-14-2005)

TEST	UNITS	MDL	MRL	SW-1	SW-2	Blanton Branch
pH	pH units (on-site)	-	<6.0; >9.0	8.06	7.32	7.97
Specific Conductance	µmhos/cm (on-site)	1	NE	38	120	45
Temperature	°C (on-site)	-	29	8.2	10.7	9.3
Turbidity	NTU (on-site)	0.1	50	NT	NT	NT
Total Antimony (Sb)	µg/l	30	NE	NT	NT	NT
Total Arsenic (As)	µg/l	10	10	ND	ND	ND
Total Barium (Ba)	µg/l	500	NE	35	52	52
Total Beryllium (Be)	µg/l	2	6.5	NT	NT	NT
Total Cadmium (Cd)	µg/l	1	0.4	ND	ND	ND
Total Chromium (Cr)	µg/l	10	50	ND	5.6	3.7
Total Cobalt (Co)	µg/l	10	NE	NT	NT	NT
Total Copper (Cu)	µg/l	200	7	NT	NT	NT
Total Lead (Pb)	µg/l	10	25	ND	ND	ND
Total Nickel (Ni)	µg/l	50	88	NT	NT	NT
Total Selenium (Se)	µg/l	20	5	8.6	ND	5.5
Total Silver (Ag)	µg/l	10	0.06	ND	ND	ND
Total Thallium (Tl)	µg/l	10	NE	NT	NT	NT
Total Zinc (Zn)	µg/l	50	50	NT	NT	NT
Total Mercury (Hg)	µg/l	0.2	0.012	ND	ND	ND
Acetone	µg/l	100	NE	ND	ND	ND
Acrylonitrile	µg/l	200	NE	ND	ND	ND
Benzene	µg/l	5	51	ND	ND	ND
Bromochloromethane	µg/l	5	NE	ND	ND	ND
Bromodichloromethane	µg/l	5	NE	ND	ND	ND
Bromoform	µg/l	5	NE	ND	ND	ND
Carbon Disulfide	µg/l	100	NE	ND	ND	ND
Bromomethane (Methylbromide)	µg/l	10	NE	ND	ND	ND
Carbon tetrachloride	µg/l	10	1.6	ND	ND	ND
Chlorobenzene (mono)	µg/l	5	NE	ND	ND	ND
Chloroethane	µg/l	10	NE	ND	ND	ND
Chloroform	µg/l	5	NE	ND	ND	ND
Chloromethane (Methylchloride)	µg/l	10	NE	ND	ND	ND
Dibromochloromethane	µg/l	5	NE	ND	ND	ND
1,2-Dibromo-3-chloropropane; DBCP	µg/l	25	NE	ND	ND	ND
1,2-Dibromoethane; Ethylene dibromide	µg/l	5	NE	ND	ND	ND
Dibromomethane	µg/l	10	NE	ND	ND	ND
1,2-Dichlorobenzene	µg/l	5	NE	ND	ND	ND
1,4-Dichlorobenzene	µg/l	5	NE	ND	ND	ND
trans-1,4-Dichloro-2butene	µg/l	100	NE	ND	ND	ND
1,1-Dichloroethane	µg/l	5	NE	ND	ND	ND
1,2-Dichloroethane	µg/l	5	NE	ND	ND	ND
1,1-Dichloroethene (-ethylene)	µg/l	5	NE	ND	ND	ND
cis-1,2-Dichloroethene (-ethylene)	µg/l	5	NE	ND	ND	ND
trans-1,2-Dichloroethene (-ylene)	µg/l	5	NE	ND	ND	ND
1,2-Dichloropropane	µg/l	5	NE	ND	ND	ND
cis-1,3-Dichloropropene (-propylene)	µg/l	10	NE	ND	ND	ND
trans-1,3-Dichloropropene (-propylene)	µg/l	10	NE	ND	ND	ND
Ethylbenzene	µg/l	5	NE	ND	ND	ND
2-Hexanone	µg/l	50	NE	ND	ND	ND
Iodomethane	µg/l	10	NE	ND	ND	ND
Dichloromethane (Methylene chloride)	µg/l	10	NE	ND	ND	ND
2-Butanone (Methyl ethyl ketone)	µg/l	100	NE	ND	ND	ND
4-Methyl-2-Pentanone	µg/l	100	NE	ND	ND	ND
Styrene	µg/l	10	NE	ND	ND	ND
1,1,1,2-Tetrachloroethane	µg/l	5	NE	ND	ND	ND
1,1,2,2-Tetrachloroethane	µg/l	5	4	ND	ND	ND
Tetrachloroethene (-ethylene)	µg/l	5	3.3	ND	ND	ND
Toluene	µg/l	5	0.36	ND	ND	ND
1,1,1-Trichloroethane	µg/l	5	NE	ND	ND	ND
1,1,2-Trichloroethane	µg/l	5	NE	ND	ND	ND
Trichloroethene (-ethylene)	µg/l	5	30	ND	ND	ND
Trichlorofluoromethane	µg/l	5	NE	ND	ND	ND
1,2,3-Trichloropropane	µg/l	15	NE	ND	ND	ND
Vinyl acetate	µg/l	50	NE	ND	ND	ND
Vinyl chloride	µg/l	10	2.4	ND	ND	ND
Total Xylenes	µg/l	5	NE	ND	ND	ND

Notes:

MCL = *Maximum Contaminant Level*, as established in the NCDENR "Redbook" Surface Waters and Wetlands Standards Section 15A NCAC 02B.0100, .0200, and .0300. Shaded cells indicated exceedances of MCLs.

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NT = *Not Tested*

NP = *Not Present* during sampling event

Closed Francis Farm Landfill - Haywood Co., NC
Surface Water Sampling Event (9-1-2005)

TEST	UNITS	MDL	MRL	SW-1	SW-2	Blanton Branch
pH	pH units (on-site)	-	<6.0; >9.0	**7.21**	**7.13**	**7.5**
Specific Conductance	µmhos/cm (on-site)	1	NE	**61**	**78**	**120**
Temperature	°C (on-site)	-	29	**19.8**	**22.6**	**24.1**
Turbidity	NTU (on-site)	0.1	50	NT	NT	NT
Total Antimony (Sb)	µg/l	30	NE	NT	NT	NT
Total Arsenic (As)	µg/l	10	10	ND	ND	ND
Total Barium (Ba)	µg/l	500	NE	**41**	**48**	**41**
Total Beryllium (Be)	µg/l	2	6.5	NT	NT	NT
Total Cadmium (Cd)	µg/l	1	0.4	ND	ND	ND
Total Chromium (Cr)	µg/l	10	50	ND	ND	ND
Total Cobalt (Co)	µg/l	10	NE	NT	NT	NT
Total Copper (Cu)	µg/l	200	7	NT	NT	NT
Total Lead (Pb)	µg/l	10	25	ND	ND	ND
Total Nickel (Ni)	µg/l	50	88	NT	NT	NT
Total Selenium (Se)	µg/l	20	5	ND	ND	ND
Total Silver (Ag)	µg/l	10	0.06	ND	ND	ND
Total Thallium (Tl)	µg/l	10	NE	NT	NT	NT
Total Zinc (Zn)	µg/l	50	50	NT	NT	NT
Total Mercury (Hg)	µg/l	0.2	0.012	ND	ND	ND
Acetone	µg/l	100	NE	ND	ND	ND
Acrylonitrile	µg/l	200	NE	ND	ND	ND
Benzene	µg/l	5	51	ND	ND	ND
Bromochloromethane	µg/l	5	NE	ND	ND	ND
Bromodichloromethane	µg/l	5	NE	ND	ND	ND
Bromoform	µg/l	5	NE	ND	ND	ND
Carbon Disulfide	µg/l	100	NE	ND	ND	ND
Bromomethane (Methylbromide)	µg/l	10	NE	ND	ND	ND
Carbon tetrachloride	µg/l	10	1.6	ND	ND	ND
Chlorobenzene (mono)	µg/l	5	NE	ND	ND	ND
Chloroethane	µg/l	10	NE	ND	ND	ND
Chloroform	µg/l	5	NE	ND	ND	ND
Chloromethane (Methylchloride)	µg/l	10	NE	ND	ND	ND
Dibromochloromethane	µg/l	5	NE	ND	ND	ND
1,2-Dibromo-3-chloropropane; DBCP	µg/l	25	NE	ND	ND	ND
1,2-Dibromoethane; Ethylene dibromide	µg/l	5	NE	ND	ND	ND
Dibromomethane	µg/l	10	NE	ND	ND	ND
1,2-Dichlorobenzene	µg/l	5	NE	ND	ND	ND
1,4-Dichlorobenzene	µg/l	5	NE	ND	ND	ND
trans-1,4-Dichloro-2butene	µg/l	100	NE	ND	ND	ND
1,1-Dichloroethane	µg/l	5	NE	ND	ND	ND
1,2-Dichloroethane	µg/l	5	NE	ND	ND	ND
1,1-Dichloroethene (-ethylene)	µg/l	5	NE	ND	ND	ND
cis-1,2-Dichloroethene (-ethylene)	µg/l	5	NE	ND	ND	ND
trans-1,2-Dichloroethene (-ylene)	µg/l	5	NE	ND	ND	ND
1,2-Dichloropropane	µg/l	5	NE	ND	ND	ND
cis-1,3-Dichloropropene (-propylene)	µg/l	10	NE	ND	ND	ND
trans-1,3-Dichloropropene (-propylene)	µg/l	10	NE	ND	ND	ND
Ethylbenzene	µg/l	5	NE	ND	ND	ND
2-Hexanone	µg/l	50	NE	ND	ND	ND
Iodomethane	µg/l	10	NE	ND	ND	ND
Dichloromethane (Methylene chloride)	µg/l	10	NE	ND	ND	ND
2-Butanone (Methyl ethyl ketone)	µg/l	100	NE	ND	ND	ND
4-Methyl-2-Pentanone	µg/l	100	NE	ND	ND	ND
Styrene	µg/l	10	NE	ND	ND	ND
1,1,1,2-Tetrachloroethane	µg/l	5	NE	ND	ND	ND
1,1,2,2-Tetrachloroethane	µg/l	5	4	ND	ND	ND
Tetrachloroethene (-ethylene)	µg/l	5	3.3	ND	ND	ND
Toluene	µg/l	5	0.36	ND	ND	ND
1,1,1-Trichloroethane	µg/l	5	NE	ND	ND	ND
1,1,2-Trichloroethane	µg/l	5	NE	ND	ND	ND
Trichloroethene (-ethylene)	µg/l	5	30	ND	ND	ND
Trichlorofluoromethane	µg/l	5	NE	ND	ND	ND
1,2,3-Trichloropropane	µg/l	15	NE	ND	ND	ND
Vinyl acetate	µg/l	50	NE	ND	ND	ND
Vinyl chloride	µg/l	10	2.4	ND	ND	ND
Total Xylenes	µg/l	5	NE	ND	ND	ND

Notes:

MCL = *Maximum Contaminant Level*, as established in the NCDENR "Redbook" Surface Waters and Wetlands Standards Section 15A NCAC 02B.0100, .0200, and .0300. Shaded cells indicated exceedances of MCLs.

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NS = *Not Sampled*

NT = *Not Tested*

NP = *Not Present* during sampling event

Closed Francis Farm Landfill - Haywood Co., NC
Surface Water Sampling Event (2-16-2006)

TEST	UNITS	MDL	MRL	SW-1	SW-2	Blanton Branch
pH	pH units (on-site)	-	<6.0; >9.0	NT	NT	NT
Specific Conductance	µmhos/cm (on-site)	1	NE	NT	NT	NT
Temperature	°C (on-site)	-	29	NT	NT	NT
Turbidity	NTU (on-site)	0.1	50	NT	NT	NT
Total Antimony (Sb)	µg/l	30	NE	NT	NT	NT
Total Arsenic (As)	µg/l	10	10	ND	ND	ND
Total Barium (Ba)	µg/l	500	NE	ND	ND	ND
Total Beryllium (Be)	µg/l	2	6.5	NT	NT	NT
Total Cadmium (Cd)	µg/l	1	0.4	ND	ND	ND
Total Chromium (Cr)	µg/l	10	50	ND	ND	ND
Total Cobalt (Co)	µg/l	10	NE	NT	NT	NT
Total Copper (Cu)	µg/l	200	7	NT	NT	NT
Total Lead (Pb)	µg/l	10	25	ND	ND	ND
Total Nickel (Ni)	µg/l	50	88	NT	NT	NT
Total Selenium (Se)	µg/l	20	5	ND	ND	ND
Total Silver (Ag)	µg/l	10	0.06	ND	ND	ND
Total Thallium (Tl)	µg/l	10	NE	NT	NT	NT
Total Zinc (Zn)	µg/l	50	50	NT	NT	NT
Total Mercury (Hg)	µg/l	0.2	0.012	ND	ND	ND
Acetone	µg/l	100	NE	ND	ND	ND
Acrylonitrile	µg/l	200	NE	ND	ND	ND
Benzene	µg/l	5	51	ND	ND	ND
Bromochloromethane	µg/l	5	NE	ND	ND	ND
Bromodichloromethane	µg/l	5	NE	ND	ND	ND
Bromoform	µg/l	5	NE	ND	ND	ND
Carbon Disulfide	µg/l	100	NE	ND	ND	ND
Bromomethane (Methylbromide)	µg/l	10	NE	ND	ND	ND
Carbon tetrachloride	µg/l	10	1.6	ND	ND	ND
Chlorobenzene (mono)	µg/l	5	NE	ND	ND	ND
Chloroethane	µg/l	10	NE	ND	ND	ND
Chloroform	µg/l	5	NE	ND	ND	ND
Chloromethane (Methylchloride)	µg/l	10	NE	ND	ND	ND
Dibromochloromethane	µg/l	5	NE	ND	ND	ND
1,2-Dibromo-3-chloropropane; DBCP	µg/l	25	NE	ND	ND	ND
1,2-Dibromoethane; Ethylene dibromide	µg/l	5	NE	ND	ND	ND
Dibromomethane	µg/l	10	NE	ND	ND	ND
1,2-Dichlorobenzene	µg/l	5	NE	ND	ND	ND
1,4-Dichlorobenzene	µg/l	5	NE	ND	ND	ND
trans-1,4-Dichloro-2butene	µg/l	100	NE	ND	ND	ND
1,1-Dichloroethane	µg/l	5	NE	ND	ND	ND
1,2-Dichloroethane	µg/l	5	NE	ND	ND	ND
1,1-Dichloroethene (-ethylene)	µg/l	5	NE	ND	ND	ND
cis-1,2-Dichloroethene (-ethylene)	µg/l	5	NE	ND	ND	ND
trans-1,2-Dichloroethene (-ylene)	µg/l	5	NE	ND	ND	ND
1,2-Dichloropropane	µg/l	5	NE	ND	ND	ND
cis-1,3-Dichloropropene (-propylene)	µg/l	10	NE	ND	ND	ND
trans-1,3-Dichloropropene (-propylene)	µg/l	10	NE	ND	ND	ND
Ethylbenzene	µg/l	5	NE	ND	ND	ND
2-Hexanone	µg/l	50	NE	ND	ND	ND
Iodomethane	µg/l	10	NE	ND	ND	ND
Dichloromethane (Methylene chloride)	µg/l	10	NE	ND	ND	ND
2-Butanone (Methyl ethyl ketone)	µg/l	100	NE	ND	ND	ND
4-Methyl-2-Pentanone	µg/l	100	NE	ND	ND	ND
Styrene	µg/l	10	NE	ND	ND	ND
1,1,1,2-Tetrachloroethane	µg/l	5	NE	ND	ND	ND
1,1,2,2-Tetrachloroethane	µg/l	5	4	ND	ND	ND
Tetrachloroethene (-ethylene)	µg/l	5	3.3	ND	ND	ND
Toluene	µg/l	5	0.36	ND	ND	ND
1,1,1-Trichloroethane	µg/l	5	NE	ND	ND	ND
1,1,2-Trichloroethane	µg/l	5	NE	ND	ND	ND
Trichloroethene (-ethylene)	µg/l	5	30	ND	ND	ND
Trichlorofluoromethane	µg/l	5	NE	ND	ND	ND
1,2,3-Trichloropropane	µg/l	15	NE	ND	ND	ND
Vinyl acetate	µg/l	50	NE	ND	ND	ND
Vinyl chloride	µg/l	10	2.4	ND	ND	ND
Total Xylenes	µg/l	5	NE	ND	ND	ND

Notes:

MCL = *Maximum Contaminant Level*, as established in the NCDENR "Redbook" Surface Waters and Wetlands Standards Section 15A NCAC 02B.0100, .0200, and .0300. Shaded cells indicated exceedances of MCLs.

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NS = *Not Sampled*

NT = *Not Tested*

NP = *Not Present* during sampling event

Closed Francis Farm Landfill - Haywood Co., NC
Surface Water Sampling Event (8-30-2006)

TEST	UNITS	MDL	MRL	SW-1	SW-2	Blanton Branch
pH	pH units (on-site)	-	<6.0; >9.0	**7.12**	**7.33**	**7.05**
Specific Conductance	µmhos/cm (on-site)	1	NE	**75**	**96**	**134**
Temperature	°C (on-site)	-	29	**21.3**	**26.2**	**27.6**
Turbidity	NTU (on-site)	0.1	50	NT	NT	NT
Total Antimony (Sb)	µg/l	30	NE	NT	NT	NT
Total Arsenic (As)	µg/l	10	10	ND	ND	ND
Total Barium (Ba)	µg/l	500	NE	**33**	**37**	**48**
Total Beryllium (Be)	µg/l	2	6.5	NT	NT	NT
Total Cadmium (Cd)	µg/l	1	0.4	ND	ND	ND
Total Chromium (Cr)	µg/l	10	50	ND	ND	ND
Total Cobalt (Co)	µg/l	10	NE	NT	NT	NT
Total Copper (Cu)	µg/l	200	7	NT	NT	NT
Total Lead (Pb)	µg/l	10	25	ND	ND	ND
Total Nickel (Ni)	µg/l	50	88	NT	NT	NT
Total Selenium (Se)	µg/l	20	5	ND	ND	ND
Total Silver (Ag)	µg/l	10	0.06	ND	ND	ND
Total Thallium (Tl)	µg/l	10	NE	NT	NT	NT
Total Zinc (Zn)	µg/l	50	50	NT	NT	NT
Total Mercury (Hg)	µg/l	0.2	0.012	ND	ND	ND
Acetone	µg/l	100	NE	ND	ND	ND
Acrylonitrile	µg/l	200	NE	ND	ND	ND
Benzene	µg/l	5	51	ND	ND	ND
Bromochloromethane	µg/l	5	NE	ND	ND	ND
Bromodichloromethane	µg/l	5	NE	ND	ND	ND
Bromoform	µg/l	5	NE	ND	ND	ND
Carbon Disulfide	µg/l	100	NE	ND	ND	ND
Bromomethane (Methylbromide)	µg/l	10	NE	ND	ND	ND
Carbon tetrachloride	µg/l	10	1.6	ND	ND	ND
Chlorobenzene (mono)	µg/l	5	NE	ND	ND	ND
Chloroethane	µg/l	10	NE	ND	ND	ND
Chloroform	µg/l	5	NE	ND	ND	ND
Chloromethane (Methylchloride)	µg/l	10	NE	ND	ND	ND
Dibromochloromethane	µg/l	5	NE	ND	ND	ND
1,2-Dibromo-3-chloropropane; DBCP	µg/l	25	NE	ND	ND	ND
1,2-Dibromoethane; Ethylene dibromide	µg/l	5	NE	ND	ND	ND
Dibromomethane	µg/l	10	NE	ND	ND	ND
1,2-Dichlorobenzene	µg/l	5	NE	ND	ND	ND
1,4-Dichlorobenzene	µg/l	5	NE	ND	ND	ND
trans-1,4-Dichloro-2butene	µg/l	100	NE	ND	ND	ND
1,1-Dichloroethane	µg/l	5	NE	ND	ND	ND
1,2-Dichloroethane	µg/l	5	NE	ND	ND	ND
1,1-Dichloroethene (-ethylene)	µg/l	5	NE	ND	ND	ND
cis-1,2-Dichloroethene (-ethylene)	µg/l	5	NE	ND	ND	ND
trans-1,2-Dichloroethene (-ylene)	µg/l	5	NE	ND	ND	ND
1,2-Dichloropropane	µg/l	5	NE	ND	ND	ND
cis-1,3-Dichloropropene (-propylene)	µg/l	10	NE	ND	ND	ND
trans-1,3-Dichloropropene (-propylene)	µg/l	10	NE	ND	ND	ND
Ethylbenzene	µg/l	5	NE	ND	ND	ND
2-Hexanone	µg/l	50	NE	ND	ND	ND
Iodomethane	µg/l	10	NE	ND	ND	ND
Dichloromethane (Methylene chloride)	µg/l	10	NE	ND	ND	ND
2-Butanone (Methyl ethyl ketone)	µg/l	100	NE	ND	ND	ND
4-Methyl-2-Pentanone	µg/l	100	NE	ND	ND	ND
Styrene	µg/l	10	NE	ND	ND	ND
1,1,1,2-Tetrachloroethane	µg/l	5	NE	ND	ND	ND
1,1,2,2-Tetrachloroethane	µg/l	5	4	ND	ND	ND
Tetrachloroethene (-ethylene)	µg/l	5	3.3	ND	ND	ND
Toluene	µg/l	5	0.36	ND	ND	ND
1,1,1-Trichloroethane	µg/l	5	NE	ND	ND	ND
1,1,2-Trichloroethane	µg/l	5	NE	ND	ND	ND
Trichloroethene (-ethylene)	µg/l	5	30	ND	ND	ND
Trichlorofluoromethane	µg/l	5	NE	ND	ND	ND
1,2,3-Trichloropropane	µg/l	15	NE	ND	ND	ND
Vinyl acetate	µg/l	50	NE	ND	ND	ND
Vinyl chloride	µg/l	10	2.4	ND	ND	ND
Total Xylenes	µg/l	5	NE	ND	ND	ND

Notes:

MCL = *Maximum Contaminant Level*, as established in the NCDENR "Redbook" Surface Waters and Wetlands Standards Section 15A NCAC 02B.0100, .0200, and .0300. Shaded cells indicated exceedances of MCLs.

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NP = *Not Present* during sampling event

Closed Francis Farm Landfill - Haywood Co., NC
Surface Water Sampling Event (2-26-2007)

TEST	UNITS	MDL	MRL	SW-1	SW-2	Blanton Branch
pH	pH units (on-site)	-	<6.0; >9.0	**7.18**	**7.36**	**7.36**
Specific Conductance	µmhos/cm (on-site)	1	NE	**62**	**206**	**91**
Temperature	°C (on-site)	-	29	**12.3**	**12.3**	**12.6**
Turbidity	NTU (on-site)	0.1	50	NT	NT	NT
Total Antimony (Sb)	µg/l	30	NE	NT	NT	NT
Total Arsenic (As)	µg/l	5	10	ND	ND	ND
Total Barium (Ba)	µg/l	5	NE	**34**	**36**	**36**
Total Beryllium (Be)	µg/l	2	6.5	NT	NT	NT
Total Cadmium (Cd)	µg/l	1	0.4	ND	ND	ND
Total Chromium (Cr)	µg/l	5	50	ND	ND	ND
Total Cobalt (Co)	µg/l	10	NE	NT	NT	NT
Total Copper (Cu)	µg/l	200	7	NT	NT	NT
Total Lead (Pb)	µg/l	5	25	ND	ND	ND
Total Nickel (Ni)	µg/l	50	88	NT	NT	NT
Total Selenium (Se)	µg/l	10	5	ND	ND	ND
Total Silver (Ag)	µg/l	5	0.06	ND	ND	ND
Total Thallium (Tl)	µg/l	10	NE	NT	NT	NT
Total Zinc (Zn)	µg/l	50	50	NT	NT	NT
Total Mercury (Hg)	µg/l	0.2	0.012	ND	ND	ND
Acetone	µg/l	25	NE	ND	ND	ND
Acrylonitrile	µg/l	25	NE	ND	ND	ND
Benzene	µg/l	5	51	ND	ND	ND
Bromochloromethane	µg/l	5	NE	ND	ND	ND
Bromodichloromethane	µg/l	5	NE	ND	ND	ND
Bromoform	µg/l	5	NE	ND	ND	ND
Carbon Disulfide	µg/l	10	NE	ND	ND	ND
Bromomethane (Methylbromide)	µg/l	5	NE	ND	ND	ND
Carbon tetrachloride	µg/l	5	1.6	ND	ND	ND
Chlorobenzene (mono)	µg/l	5	NE	ND	ND	ND
Chloroethane	µg/l	10	NE	ND	ND	ND
Chloroform	µg/l	5	NE	ND	ND	ND
Chloromethane (Methylchloride)	µg/l	5	NE	ND	ND	ND
Dibromochloromethane	µg/l	5	NE	ND	ND	ND
1,2-Dibromo-3-chloropropane; DBCP	µg/l	5	NE	ND	ND	ND
1,2-Dibromoethane; Ethylene dibromide	µg/l	5	NE	ND	ND	ND
Dibromomethane	µg/l	5	NE	ND	ND	ND
1,2-Dichlorobenzene	µg/l	5	NE	ND	ND	ND
1,4-Dichlorobenzene	µg/l	5	NE	ND	ND	ND
trans-1,4-Dichloro-2butene	µg/l	5	NE	ND	ND	ND
1,1-Dichloroethane	µg/l	5	NE	ND	ND	ND
1,2-Dichloroethane	µg/l	5	NE	ND	ND	ND
1,1-Dichloroethene (-ethylene)	µg/l	5	NE	ND	ND	ND
cis-1,2-Dichloroethene (-ethylene)	µg/l	5	NE	ND	ND	ND
trans-1,2-Dichloroethene (-ylene)	µg/l	5	NE	ND	ND	ND
1,2-Dichloropropane	µg/l	5	NE	ND	ND	ND
cis-1,3-Dichloropropene (-propylene)	µg/l	5	NE	ND	ND	ND
trans-1,3-Dichloropropene (-propylene)	µg/l	5	NE	ND	ND	ND
Ethylbenzene	µg/l	5	NE	ND	ND	ND
2-Hexanone	µg/l	10	NE	ND	ND	ND
Iodomethane	µg/l	10	NE	ND	ND	ND
Dichloromethane (Methylene chloride)	µg/l	5	NE	ND	ND	ND
2-Butanone (Methyl ethyl ketone)	µg/l	10	NE	ND	ND	ND
4-Methyl-2-Pentanone	µg/l	10	NE	ND	ND	ND
Styrene	µg/l	5	NE	ND	ND	ND
1,1,1,2-Tetrachloroethane	µg/l	5	NE	ND	ND	ND
1,1,2,2-Tetrachloroethane	µg/l	5	4	ND	ND	ND
Tetrachloroethene (-ethylene)	µg/l	5	3.3	ND	ND	ND
Toluene	µg/l	5	0.36	ND	ND	ND
1,1,1-Trichloroethane	µg/l	5	NE	ND	ND	ND
1,1,2-Trichloroethane	µg/l	5	NE	ND	ND	ND
Trichloroethene (-ethylene)	µg/l	5	30	ND	ND	ND
Trichlorofluoromethane	µg/l	10	NE	ND	ND	ND
1,2,3-Trichloropropane	µg/l	5	NE	ND	ND	ND
Vinyl acetate	µg/l	10	NE	ND	ND	ND
Vinyl chloride	µg/l	5	2.4	ND	ND	ND
Total Xylenes	µg/l	10	NE	ND	ND	ND

Notes:

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NP = *Not Present* during sampling event

Closed Francis Farm Landfill - Haywood Co., NC
Surface Water Sampling Event (8-13-2007)

TEST	UNITS	MDL	MRL	SW-1	SW-2	Blanton Branch
pH	pH units (on-site)	-	<6.0; >9.0	**7.38**	**7.2**	**7.2**
Specific Conductance	µmhos/cm (on-site)	10	NE	**63.6**	**84.2**	**83**
Temperature	°C (on-site)	-	29	**21**	**25.4**	**26.1**
Turbidity	NTU (on-site)	0.1	50	NT	NT	NT
Total Antimony (Sb)	µg/l	NT	NE	NT	NT	NT
Total Arsenic (As)	µg/l	5	10	ND	ND	ND
Total Barium (Ba)	µg/l	5	NE	**31.6**	**34.7**	**34.3**
Total Beryllium (Be)	µg/l	NT	6.5	NT	NT	NT
Total Cadmium (Cd)	µg/l	1	0.4	ND	ND	ND
Total Chromium (Cr)	µg/l	5	50	ND	ND	ND
Total Cobalt (Co)	µg/l	NT	NE	NT	NT	NT
Total Copper (Cu)	µg/l	NT	7	NT	NT	NT
Total Lead (Pb)	µg/l	5	25	ND	ND	ND
Total Nickel (Ni)	µg/l	NT	88	NT	NT	NT
Total Selenium (Se)	µg/l	10	5	ND	ND	ND
Total Silver (Ag)	µg/l	5	0.06	ND	ND	ND
Total Thallium (Tl)	µg/l	NT	NE	NT	NT	NT
Total Zinc (Zn)	µg/l	NT	50	NT	NT	NT
Total Mercury (Hg)	µg/l	0.2	0.012	ND	ND	ND
Acetone	µg/l	25	NE	ND	ND	ND
Acrylonitrile	µg/l	10	NE	ND	ND	ND
Benzene	µg/l	1	51	ND	ND	ND
Bromochloromethane	µg/l	1	NE	ND	ND	ND
Bromodichloromethane	µg/l	1	NE	ND	ND	ND
Bromoform	µg/l	1	NE	ND	ND	ND
Carbon Disulfide	µg/l	2	NE	ND	ND	ND
Bromomethane (Methylbromide)	µg/l	5	NE	ND	ND	ND
Carbon tetrachloride	µg/l	1	1.6	ND	ND	ND
Chlorobenzene (mono)	µg/l	1	NE	ND	ND	ND
Chloroethane	µg/l	1	NE	ND	ND	ND
Chloroform	µg/l	1	NE	ND	ND	ND
Chloromethane (Methylchloride)	µg/l	1	NE	ND	ND	ND
Dibromochloromethane	µg/l	1	NE	ND	ND	ND
1,2-Dibromo-3-chloropropane; DBCP	µg/l	3	NE	ND	ND	ND
1,2-Dibromoethane; Ethylene dibromide	µg/l	1	NE	ND	ND	ND
Dibromomethane	µg/l	1	NE	ND	ND	ND
1,2-Dichlorobenzene	µg/l	1	NE	ND	ND	ND
1,4-Dichlorobenzene	µg/l	1	NE	ND	ND	ND
trans-1,4-Dichloro-2butene	µg/l	1	NE	ND	ND	ND
1,1-Dichloroethane	µg/l	1	NE	ND	ND	ND
1,2-Dichloroethane	µg/l	1	NE	ND	ND	ND
1,1-Dichloroethene (-ethylene)	µg/l	1	NE	ND	ND	ND
cis-1,2-Dichloroethene (-ethylene)	µg/l	1	NE	ND	ND	ND
trans-1,2-Dichloroethene (-ylene)	µg/l	1	NE	ND	ND	ND
1,2-Dichloropropane	µg/l	1	NE	ND	ND	ND
cis-1,3-Dichloropropene (-propylene)	µg/l	1	NE	ND	ND	ND
trans-1,3-Dichloropropene (-propylene)	µg/l	1	NE	ND	ND	ND
Ethylbenzene	µg/l	1	NE	ND	ND	ND
2-Hexanone	µg/l	5	NE	ND	ND	ND
Iodomethane	µg/l	5	NE	ND	ND	ND
Dichloromethane (Methylene chloride)	µg/l	2	NE	ND	ND	ND
2-Butanone (Methyl ethyl ketone)	µg/l	5	NE	ND	ND	ND
4-Methyl-2-Pentanone	µg/l	5	NE	ND	ND	ND
Styrene	µg/l	1	NE	ND	ND	ND
1,1,1,2-Tetrachloroethane	µg/l	1	NE	ND	ND	ND
1,1,2,2-Tetrachloroethane	µg/l	1	4	ND	ND	ND
Tetrachloroethene (-ethylene)	µg/l	1	3.3	ND	ND	ND
Toluene	µg/l	1	0.36	ND	ND	ND
1,1,1-Trichloroethane	µg/l	1	NE	ND	ND	ND
1,1,2-Trichloroethane	µg/l	1	NE	ND	ND	ND
Trichloroethene (-ethylene)	µg/l	1	30	ND	ND	ND
Trichlorofluoromethane	µg/l	1	NE	ND	ND	ND
1,2,3-Trichloropropane	µg/l	1	NE	ND	ND	ND
Vinyl acetate	µg/l	2	NE	ND	ND	ND
Vinyl chloride	µg/l	1	2.4	ND	ND	ND
Total Xylenes	µg/l	2	NE	ND	ND	ND

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Closed Francis Farm Landfill - Haywood Co., NC
Surface Water Sampling Event 2-11-2008

TEST	UNITS	MDL	MRL	SW-1	SW-2	Blanton Branch
pH	pH units (on-site)	-	<6.0; >9.0	**7.08**	**6.95**	**6.86**
Specific Conductance	µmhos/cm (on-site)	10	NE	**66**	**92**	**81**
Temperature	°C (on-site)	-	29	**9.1**	**11.1**	**10.2**
Turbidity	NTU (on-site)	0.1	50	NT	NT	NT
Total Antimony (Sb)	µg/l	NT	NE	NT	NT	NT
Total Arsenic (As)	µg/l	5	10	ND	ND	ND
Total Barium (Ba)	µg/l	5	NE	**33.9**	**45.4**	**40.5**
Total Beryllium (Be)	µg/l	NT	6.5	ND	ND	ND
Total Cadmium (Cd)	µg/l	1	0.4	ND	ND	ND
Total Chromium (Cr)	µg/l	5	50	ND	ND	ND
Total Cobalt (Co)	µg/l	NT	NE	NT	NT	NT
Total Copper (Cu)	µg/l	NT	7	NT	NT	NT
Total Lead (Pb)	µg/l	5	25	ND	ND	ND
Total Nickel (Ni)	µg/l	NT	88	NT	NT	NT
Total Selenium (Se)	µg/l	10	5	ND	ND	ND
Total Silver (Ag)	µg/l	5	0.06	ND	ND	ND
Total Thallium (Tl)	µg/l	NT	NE	NT	NT	NT
Total Zinc (Zn)	µg/l	NT	50	NT	NT	NT
Total Mercury (Hg)	µg/l	0.2	0.012	ND	ND	ND
Acetone	µg/l	25	NE	ND	ND	ND
Acrylonitrile	µg/l	10	NE	ND	ND	ND
Benzene	µg/l	1	51	ND	ND	ND
Bromochloromethane	µg/l	1	NE	ND	ND	ND
Bromodichloromethane	µg/l	1	NE	ND	ND	ND
Bromoform	µg/l	1	NE	ND	ND	ND
Carbon Disulfide	µg/l	2	NE	ND	ND	ND
Bromomethane (Methylbromide)	µg/l	5	NE	ND	ND	ND
Carbon tetrachloride	µg/l	1	1.6	ND	ND	ND
Chlorobenzene (mono)	µg/l	1	NE	ND	ND	ND
Chloroethane	µg/l	1	NE	ND	ND	ND
Chloroform	µg/l	1	NE	ND	ND	ND
Chloromethane (Methylchloride)	µg/l	1	NE	ND	ND	ND
Dibromochloromethane	µg/l	1	NE	ND	ND	ND
1,2-Dibromo-3-chloropropane; DBCP	µg/l	3	NE	ND	ND	ND
1,2-Dibromoethane; Ethylene dibromide	µg/l	1	NE	ND	ND	ND
Dibromomethane	µg/l	1	NE	ND	ND	ND
1,2-Dichlorobenzene	µg/l	1	NE	ND	ND	ND
1,4-Dichlorobenzene	µg/l	1	NE	ND	ND	ND
trans-1,4-Dichloro-2butene	µg/l	1	NE	ND	ND	ND
1,1-Dichloroethane	µg/l	1	NE	ND	ND	ND
1,2-Dichloroethane	µg/l	1	NE	ND	ND	ND
1,1-Dichloroethene (-ethylene)	µg/l	1	NE	ND	ND	ND
cis-1,2-Dichloroethene (-ethylene)	µg/l	1	NE	ND	ND	ND
trans-1,2-Dichloroethene (-ylene)	µg/l	1	NE	ND	ND	ND
1,2-Dichloropropane	µg/l	1	NE	ND	ND	ND
cis-1,3-Dichloropropene (-propylene)	µg/l	1	NE	ND	ND	ND
trans-1,3-Dichloropropene (-propylene)	µg/l	1	NE	ND	ND	ND
Ethylbenzene	µg/l	1	NE	ND	ND	ND
2-Hexanone	µg/l	5	NE	ND	ND	ND
Iodomethane	µg/l	5	NE	ND	ND	ND
Dichloromethane (Methylene chloride)	µg/l	2	NE	ND	ND	ND
2-Butanone (Methyl ethyl ketone)	µg/l	5	NE	ND	ND	ND
4-Methyl-2-Pentanone	µg/l	5	NE	ND	ND	ND
Styrene	µg/l	1	NE	ND	ND	ND
1,1,1,2-Tetrachloroethane	µg/l	1	NE	ND	ND	ND
1,1,2,2-Tetrachloroethane	µg/l	1	4	ND	ND	ND
Tetrachloroethene (-ethylene)	µg/l	1	3.3	ND	ND	ND
Toluene	µg/l	1	0.36	ND	ND	ND
1,1,1-Trichloroethane	µg/l	1	NE	ND	ND	ND
1,1,2-Trichloroethane	µg/l	1	NE	ND	ND	ND
Trichloroethene (-ethylene)	µg/l	1	30	ND	ND	ND
Trichlorofluoromethane	µg/l	1	NE	ND	ND	ND
1,2,3-Trichloropropane	µg/l	1	NE	ND	ND	ND
Vinyl acetate	µg/l	2	NE	ND	ND	ND
Vinyl chloride	µg/l	1	2.4	ND	ND	ND
Total Xylenes	µg/l	2	NE	ND	ND	ND

Notes:

MCL = *Maximum Contaminant Level*, as established in the NCDENR "Redbook" Surface Waters and Wetlands Standards Section 15A NCAC 02B.0100, .0200, and .0300. Shaded cells indicated exceedances of MCLs.

NE = *Not Established*; North Carolina has not established a MCL

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ND = *Not Detected* at the MRL; "J"-flagged data (i.e., values estimated between the laboratory method detection limit [MDL] and the MRL) are not presented on this spreadsheet.

NS = *Not Sampled*

NT = *Not Tested*

NP = *Not Present* during sampling event

Closed Francis Farm Landfill - Haywood Co., NC
Surface Water Sampling Event 8-25-2008

TEST	UNITS	MDL	MRL	SW-1	SW-2	Blanton Branch
pH	pH units (on-site)	-	<6.0; >9.0	**7.24**	**6.88**	**6.7**
Specific Conductance	µmhos/cm (on-site)	10	NE	**74**	**135**	**97**
Temperature	°C (on-site)	-	29	**20.3**	**22.7**	**20.7**
Turbidity	NTU (on-site)	NT	50	NT	NT	NT
Total Antimony (Sb)	µg/l	NT	NE	NT	NT	NT
Total Arsenic (As)	µg/l	5	10	ND	ND	ND
Total Barium (Ba)	µg/l	5	NE	**38.8**	**59.0**	**36.0**
Total Beryllium (Be)	µg/l	NT	6.5	NT	NT	NT
Total Cadmium (Cd)	µg/l	1	0.4	ND	ND	ND
Total Chromium (Cr)	µg/l	5	50	ND	ND	ND
Total Cobalt (Co)	µg/l	NT	NE	NT	NT	NT
Total Copper (Cu)	µg/l	NT	7	NT	NT	NT
Total Lead (Pb)	µg/l	5	25	ND	ND	ND
Total Nickel (Ni)	µg/l	NT	88	NT	NT	NT
Total Selenium (Se)	µg/l	10	5	ND	ND	ND
Total Silver (Ag)	µg/l	5	0.06	ND	ND	ND
Total Thallium (Tl)	µg/l	NT	NE	NT	NT	NT
Total Zinc (Zn)	µg/l	NT	50	NT	NT	NT
Total Mercury (Hg)	µg/l	0.2	0.012	ND	ND	ND
Acetone	µg/l	25	NE	ND	ND	ND
Acrylonitrile	µg/l	10	NE	ND	ND	ND
Benzene	µg/l	1	51	ND	ND	ND
Bromochloromethane	µg/l	1	NE	ND	ND	ND
Bromodichloromethane	µg/l	1	NE	ND	ND	ND
Bromoform	µg/l	1	NE	ND	ND	ND
Carbon Disulfide	µg/l	2	NE	ND	ND	ND
Bromomethane (Methylbromide)	µg/l	5	NE	ND	ND	ND
Carbon tetrachloride	µg/l	1	1.6	ND	ND	ND
Chlorobenzene (mono)	µg/l	1	NE	ND	ND	ND
Chloroethane	µg/l	1	NE	ND	ND	ND
Chloroform	µg/l	1	NE	ND	ND	ND
Chloromethane (Methylchloride)	µg/l	1	NE	ND	ND	ND
Dibromochloromethane	µg/l	1	NE	ND	ND	ND
1,2-Dibromo-3-chloropropane; DBCP	µg/l	3	NE	ND	ND	ND
1,2-Dibromoethane; Ethylene dibromide	µg/l	1	NE	ND	ND	ND
Dibromomethane	µg/l	1	NE	ND	ND	ND
1,2-Dichlorobenzene	µg/l	1	NE	ND	ND	ND
1,4-Dichlorobenzene	µg/l	1	NE	ND	ND	ND
trans-1,4-Dichloro-2butene	µg/l	1	NE	ND	ND	ND
1,1-Dichloroethane	µg/l	1	NE	ND	ND	ND
1,2-Dichloroethane	µg/l	1	NE	ND	ND	ND
1,1-Dichloroethene (-ethylene)	µg/l	1	NE	ND	ND	ND
cis-1,2-Dichloroethene (-ethylene)	µg/l	1	NE	ND	ND	ND
trans-1,2-Dichloroethene (-ylene)	µg/l	1	NE	ND	ND	ND
1,2-Dichloropropane	µg/l	1	NE	ND	ND	ND
cis-1,3-Dichloropropene (-propylene)	µg/l	1	NE	ND	ND	ND
trans-1,3-Dichloropropene (-propylene)	µg/l	1	NE	ND	ND	ND
Ethylbenzene	µg/l	1	NE	ND	ND	ND
2-Hexanone	µg/l	5	NE	ND	ND	ND
Iodomethane	µg/l	5	NE	ND	ND	ND
Dichloromethane (Methylene chloride)	µg/l	2	NE	ND	ND	ND
2-Butanone (Methyl ethyl ketone)	µg/l	5	NE	ND	ND	ND
4-Methyl-2-Pentanone	µg/l	5	NE	ND	ND	ND
Styrene	µg/l	1	NE	ND	ND	ND
1,1,1,2-Tetrachloroethane	µg/l	1	NE	ND	ND	ND
1,1,2,2-Tetrachloroethane	µg/l	1	4	ND	ND	ND
Tetrachloroethene (-ethylene)	µg/l	1	3.3	ND	ND	ND
Toluene	µg/l	1	0.36	ND	ND	ND
1,1,1-Trichloroethane	µg/l	1	NE	ND	ND	ND
1,1,2-Trichloroethane	µg/l	1	NE	ND	ND	ND
Trichloroethene (-ethylene)	µg/l	1	30	ND	ND	ND
Trichlorofluoromethane	µg/l	1	NE	ND	ND	ND
1,2,3-Trichloropropane	µg/l	1	NE	ND	ND	ND
Vinyl acetate	µg/l	2	NE	ND	ND	ND
Vinyl chloride	µg/l	1	2.4	ND	ND	ND
Total Xylenes	µg/l	3	NE	ND	ND	ND

Notes:

MCL = *Maximum Contaminant Level*, as established in the NCDENR "Redbook" Surface Waters and Wetlands Standards Section 15A NCAC 02B.0100, .0200, and .0300. Shaded cells indicated exceedances of MCLs.

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Closed Francis Farm Landfill - Haywood Co., NC
Surface Water Sampling Event (2-23-2009)

TEST	UNITS	MDL	MRL	SW-1	SW-2	Blanton Branch
pH	pH units (on-site)	-	<6.0; >9.0	**6.56**	**6.62**	**6.54**
Specific Conductance	µmhos/cm (on-site)	-	NE	**66**	**96**	**87**
Temperature	°C (on-site)	-	29	**6.0**	**9.1**	**7.1**
Turbidity	NTU (on-site)	NT	50	NT	NT	NT
Total Antimony (Sb)	µg/l	NT	NE	NT	NT	NT
Total Arsenic (As)	µg/l	5.0	10	ND	ND	ND
Total Barium (Ba)	µg/l	5.0	NE	**35.5**	**47.6**	**40.3**
Total Beryllium (Be)	µg/l	NT	6.5	NT	NT	NT
Total Cadmium (Cd)	µg/l	1.0	0.4	ND	ND	ND
Total Chromium (Cr)	µg/l	5.0	50	ND	ND	ND
Total Cobalt (Co)	µg/l	NT	NE	NT	NT	NT
Total Copper (Cu)	µg/l	NT	7	NT	NT	NT
Total Lead (Pb)	µg/l	5.0	25	ND	ND	ND
Total Nickel (Ni)	µg/l	NT	88	NT	NT	NT
Total Selenium (Se)	µg/l	10	5	ND	ND	ND
Total Silver (Ag)	µg/l	5.0	0.06	ND	ND	ND
Total Thallium (Tl)	µg/l	NT	NE	NT	NT	NT
Total Zinc (Zn)	µg/l	NT	50	NT	NT	NT
Total Mercury (Hg)	µg/l	0.20	0.012	ND	ND	ND
Acetone	µg/l	25	NE	ND	ND	ND
Acrylonitrile	µg/l	10.0	NE	ND	ND	ND
Benzene	µg/l	1.0	51	ND	ND	ND
Bromochloromethane	µg/l	1.0	NE	ND	ND	ND
Bromodichloromethane	µg/l	1.0	NE	ND	ND	ND
Bromoform	µg/l	1.0	NE	ND	ND	ND
Carbon Disulfide	µg/l	2.0	NE	ND	ND	ND
Bromomethane (Methylbromide)	µg/l	5.0	NE	ND	ND	ND
Carbon tetrachloride	µg/l	1.0	1.6	ND	ND	ND
Chlorobenzene (mono)	µg/l	1.0	NE	ND	ND	ND
Chloroethane	µg/l	1.0	NE	ND	ND	ND
Chloroform	µg/l	1.0	NE	ND	ND	ND
Chloromethane (Methylchloride)	µg/l	1.0	NE	ND	ND	ND
Dibromochloromethane	µg/l	1.0	NE	ND	ND	ND
1,2-Dibromo-3-chloropropane; DBCP	µg/l	3.0	NE	ND	ND	ND
1,2-Dibromoethane; Ethylene dibromide	µg/l	1.0	NE	ND	ND	ND
Dibromomethane	µg/l	1.0	NE	ND	ND	ND
1,2-Dichlorobenzene	µg/l	1.0	NE	ND	ND	ND
1,4-Dichlorobenzene	µg/l	1.0	NE	ND	ND	ND
trans-1,4-Dichloro-2butene	µg/l	1.0	NE	ND	ND	ND
1,1-Dichloroethane	µg/l	1.0	NE	ND	ND	ND
1,2-Dichloroethane	µg/l	1.0	NE	ND	ND	ND
1,1-Dichloroethene (-ethylene)	µg/l	1.0	NE	ND	ND	ND
cis-1,2-Dichloroethene (-ethylene)	µg/l	1.0	NE	ND	ND	ND
trans-1,2-Dichloroethene (-ylene)	µg/l	1.0	NE	ND	ND	ND
1,2-Dichloropropane	µg/l	1.0	NE	ND	ND	ND
cis-1,3-Dichloropropene (-propylene)	µg/l	1.0	NE	ND	ND	ND
trans-1,3-Dichloropropene (-propylene)	µg/l	1.0	NE	ND	ND	ND
Ethylbenzene	µg/l	1.0	NE	ND	ND	ND
2-Hexanone	µg/l	5.0	NE	ND	ND	ND
Iodomethane	µg/l	5.0	NE	ND	ND	ND
Dichloromethane (Methylene chloride)	µg/l	2.0	NE	ND	ND	ND
2-Butanone (Methyl ethyl ketone)	µg/l	5.0	NE	ND	ND	ND
4-Methyl-2-Pentanone	µg/l	5.0	NE	ND	ND	ND
Styrene	µg/l	1.0	NE	ND	ND	ND
1,1,1,2-Tetrachloroethane	µg/l	1.0	NE	ND	ND	ND
1,1,2,2-Tetrachloroethane	µg/l	1.0	4	ND	ND	ND
Tetrachloroethene (-ethylene)	µg/l	1.0	3.3	ND	ND	ND
Toluene	µg/l	1.0	0.36	ND	ND	ND
1,1,1-Trichloroethane	µg/l	1.0	NE	ND	ND	ND
1,1,2-Trichloroethane	µg/l	1.0	NE	ND	ND	ND
Trichloroethene (-ethylene)	µg/l	1.0	30	ND	ND	ND
Trichlorofluoromethane	µg/l	1.0	NE	ND	ND	ND
1,2,3-Trichloropropane	µg/l	1.0	NE	ND	ND	ND
Vinyl acetate	µg/l	2.0	NE	ND	ND	ND
Vinyl chloride	µg/l	1.0	2.4	ND	ND	ND
Total Xylenes	µg/l	2.0	NE	ND	ND	ND

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NP = *Not Present* during sampling event

Closed Francis Farm Landfill - Haywood Co., NC
Surface Water Sampling Event (8-24-2009)

TEST	UNITS	MDL	MRL	SW-1	SW-2	Blanton Branch
pH	pH units (on-site)	-	<6.0; >9.0	**6.6**	**6.35**	**6.52**
Specific Conductance	µmhos/cm (on-site)	-	NE	**72**	**108**	**96**
Temperature	°C (on-site)	-	29	**19.2**	**22.1**	**6.52**
Turbidity	NTU (on-site)	NT	50	NT	NT	NT
Total Antimony (Sb)	µg/l	NT	NE	NT	NT	NT
Total Arsenic (As)	µg/l	5.0	10	ND	ND	ND
Total Barium (Ba)	µg/l	5.0	NE	**41.7**	**41.5**	**36.8**
Total Beryllium (Be)	µg/l	NT	6.5	NT	NT	NT
Total Cadmium (Cd)	µg/l	1.0	0.4	ND	ND	ND
Total Chromium (Cr)	µg/l	5.0	50	ND	ND	ND
Total Cobalt (Co)	µg/l	NT	NE	NT	NT	NT
Total Copper (Cu)	µg/l	NT	7	NT	NT	NT
Total Lead (Pb)	µg/l	5.0	25	ND	ND	ND
Total Nickel (Ni)	µg/l	NT	88	NT	NT	NT
Total Selenium (Se)	µg/l	10	5	ND	ND	ND
Total Silver (Ag)	µg/l	5.0	0.06	ND	ND	ND
Total Thallium (Tl)	µg/l	NT	NE	NT	NT	NT
Total Zinc (Zn)	µg/l	NT	50	NT	NT	NT
Total Mercury (Hg)	µg/l	0.20	0.012	ND	ND	ND
Acetone	µg/l	25	NE	ND	ND	ND
Acrylonitrile	µg/l	10.0	NE	ND	ND	ND
Benzene	µg/l	1.0	51	ND	ND	ND
Bromochloromethane	µg/l	1.0	NE	ND	ND	ND
Bromodichloromethane	µg/l	1.0	NE	ND	ND	ND
Bromoform	µg/l	1.0	NE	ND	ND	ND
Carbon Disulfide	µg/l	2.0	NE	ND	ND	ND
Bromomethane (Methylbromide)	µg/l	5.0	NE	ND	ND	ND
Carbon tetrachloride	µg/l	1.0	1.6	ND	ND	ND
Chlorobenzene (mono)	µg/l	1.0	NE	ND	ND	ND
Chloroethane	µg/l	1.0	NE	ND	ND	ND
Chloroform	µg/l	1.0	NE	ND	ND	ND
Chloromethane (Methylchloride)	µg/l	1.0	NE	ND	ND	ND
Dibromochloromethane	µg/l	1.0	NE	ND	ND	ND
1,2-Dibromo-3-chloropropane; DBCP	µg/l	3.0	NE	ND	ND	ND
1,2-Dibromoethane; Ethylene dibromide	µg/l	1.0	NE	ND	ND	ND
Dibromomethane	µg/l	1.0	NE	ND	ND	ND
1,2-Dichlorobenzene	µg/l	1.0	NE	ND	ND	ND
1,4-Dichlorobenzene	µg/l	1.0	NE	ND	ND	ND
trans-1,4-Dichloro-2butene	µg/l	1.0	NE	ND	ND	ND
1,1-Dichloroethane	µg/l	1.0	NE	ND	ND	ND
1,2-Dichloroethane	µg/l	1.0	NE	ND	ND	ND
1,1-Dichloroethene (-ethylene)	µg/l	1.0	NE	ND	ND	ND
cis-1,2-Dichloroethene (-ethylene)	µg/l	1.0	NE	ND	ND	ND
trans-1,2-Dichloroethene (-ylene)	µg/l	1.0	NE	ND	ND	ND
1,2-Dichloropropane	µg/l	1.0	NE	ND	ND	ND
cis-1,3-Dichloropropene (-propylene)	µg/l	1.0	NE	ND	ND	ND
trans-1,3-Dichloropropene (-propylene)	µg/l	1.0	NE	ND	ND	ND
Ethylbenzene	µg/l	1.0	NE	ND	ND	ND
2-Hexanone	µg/l	5.0	NE	ND	ND	ND
Iodomethane	µg/l	5.0	NE	ND	ND	ND
Dichloromethane (Methylene chloride)	µg/l	2.0	NE	ND	ND	ND
2-Butanone (Methyl ethyl ketone)	µg/l	5.0	NE	ND	ND	ND
4-Methyl-2-Pentanone	µg/l	5.0	NE	ND	ND	ND
Styrene	µg/l	1.0	NE	ND	ND	ND
1,1,1,2-Tetrachloroethane	µg/l	1.0	NE	ND	ND	ND
1,1,2,2-Tetrachloroethane	µg/l	1.0	4	ND	ND	ND
Tetrachloroethene (-ethylene)	µg/l	1.0	3.3	ND	ND	ND
Toluene	µg/l	1.0	0.36	ND	ND	ND
1,1,1-Trichloroethane	µg/l	1.0	NE	ND	ND	ND
1,1,2-Trichloroethane	µg/l	1.0	NE	ND	ND	ND
Trichloroethene (-ethylene)	µg/l	1.0	30	ND	ND	ND
Trichlorofluoromethane	µg/l	1.0	NE	ND	ND	ND
1,2,3-Trichloropropane	µg/l	1.0	NE	ND	ND	ND
Vinyl acetate	µg/l	2.0	NE	ND	ND	ND
Vinyl chloride	µg/l	1.0	2.4	ND	ND	ND
Total Xylenes	µg/l	2.0	NE	ND	ND	ND

Notes:

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NP = *Not Present* during sampling event

Closed Francis Farm Landfill - Haywood Co., NC
Surface Water Sampling Event (2-22-2010)

TEST	UNITS	MDL	MRL	SW-1	SW-2	Blanton Branch
pH	pH units (on-site)	-	<6.0; >9.0	**6.54**	**6.54**	**6.65**
Specific Conductance	µmhos/cm (on-site)	-	NE	**66**	**108**	**72**
Temperature	°C (on-site)	-	29	**10.2**	**13.5**	**10.5**
Turbidity	NTU (on-site)	NT	50	NT	NT	NT
Total Antimony (Sb)	µg/l	NT	NE	NT	NT	NT
Total Arsenic (As)	µg/l	5.0	10	ND	ND	ND
Total Barium (Ba)	µg/l	5.0	NE	**35.4**	**51.7**	**43.9**
Total Beryllium (Be)	µg/l	NT	6.5	NT	NT	NT
Total Cadmium (Cd)	µg/l	1.0	0.4	ND	ND	ND
Total Chromium (Cr)	µg/l	5.0	50	ND	ND	ND
Total Cobalt (Co)	µg/l	NT	NE	NT	NT	NT
Total Copper (Cu)	µg/l	NT	7	NT	NT	NT
Total Lead (Pb)	µg/l	5.0	25	ND	ND	ND
Total Nickel (Ni)	µg/l	NT	88	NT	NT	NT
Total Selenium (Se)	µg/l	10	5	ND	ND	ND
Total Silver (Ag)	µg/l	5.0	0.06	ND	ND	ND
Total Thallium (Tl)	µg/l	NT	NE	NT	NT	NT
Total Zinc (Zn)	µg/l	NT	50	NT	NT	NT
Total Mercury (Hg)	µg/l	0.20	0.012	ND	ND	ND
Acetone	µg/l	25	NE	ND	ND	ND
Acrylonitrile	µg/l	10.0	NE	ND	ND	ND
Benzene	µg/l	1.0	51	ND	ND	ND
Bromochloromethane	µg/l	1.0	NE	ND	ND	ND
Bromodichloromethane	µg/l	1.0	NE	ND	ND	ND
Bromoform	µg/l	1.0	NE	ND	ND	ND
Carbon Disulfide	µg/l	2.0	NE	ND	ND	ND
Bromomethane (Methylbromide)	µg/l	5.0	NE	ND	ND	ND
Carbon tetrachloride	µg/l	1.0	1.6	ND	ND	ND
Chlorobenzene (mono)	µg/l	1.0	NE	ND	ND	ND
Chloroethane	µg/l	1.0	NE	ND	ND	ND
Chloroform	µg/l	1.0	NE	ND	ND	ND
Chloromethane (Methylchloride)	µg/l	1.0	NE	ND	ND	ND
Dibromochloromethane	µg/l	1.0	NE	ND	ND	ND
1,2-Dibromo-3-chloropropane; DBCP	µg/l	3.0	NE	ND	ND	ND
1,2-Dibromoethane; Ethylene dibromide	µg/l	1.0	NE	ND	ND	ND
Dibromomethane	µg/l	1.0	NE	ND	ND	ND
1,2-Dichlorobenzene	µg/l	1.0	NE	ND	ND	ND
1,4-Dichlorobenzene	µg/l	1.0	NE	ND	ND	ND
trans-1,4-Dichloro-2butene	µg/l	1.0	NE	ND	ND	ND
1,1-Dichloroethane	µg/l	1.0	NE	ND	ND	ND
1,2-Dichloroethane	µg/l	1.0	NE	ND	ND	ND
1,1-Dichloroethene (-ethylene)	µg/l	1.0	NE	ND	ND	ND
cis-1,2-Dichloroethene (-ethylene)	µg/l	1.0	NE	ND	ND	ND
trans-1,2-Dichloroethene (-ylene)	µg/l	1.0	NE	ND	ND	ND
1,2-Dichloropropane	µg/l	1.0	NE	ND	ND	ND
cis-1,3-Dichloropropene (-propylene)	µg/l	1.0	NE	ND	ND	ND
trans-1,3-Dichloropropene (-propylene)	µg/l	1.0	NE	ND	ND	ND
Ethylbenzene	µg/l	1.0	NE	ND	ND	ND
2-Hexanone	µg/l	5.0	NE	ND	ND	ND
Iodomethane	µg/l	5.0	NE	ND	ND	ND
Dichloromethane (Methylene chloride)	µg/l	2.0	NE	ND	ND	ND
2-Butanone (Methyl ethyl ketone)	µg/l	5.0	NE	ND	ND	ND
4-Methyl-2-Pentanone	µg/l	5.0	NE	ND	ND	ND
Styrene	µg/l	1.0	NE	ND	ND	ND
1,1,1,2-Tetrachloroethane	µg/l	1.0	NE	ND	ND	ND
1,1,2,2-Tetrachloroethane	µg/l	1.0	4	ND	ND	ND
Tetrachloroethene (-ethylene)	µg/l	1.0	3.3	ND	ND	ND
Toluene	µg/l	1.0	0.36	ND	ND	ND
1,1,1-Trichloroethane	µg/l	1.0	NE	ND	ND	ND
1,1,2-Trichloroethane	µg/l	1.0	NE	ND	ND	ND
Trichloroethene (-ethylene)	µg/l	1.0	30	ND	ND	ND
Trichlorofluoromethane	µg/l	1.0	NE	ND	ND	ND
1,2,3-Trichloropropane	µg/l	1.0	NE	ND	ND	ND
Vinyl acetate	µg/l	2.0	NE	ND	ND	ND
Vinyl chloride	µg/l	1.0	2.4	ND	ND	ND
Total Xylenes	µg/l	2.0	NE	ND	ND	ND

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NS = *Not Sampled*

NT = *Not Tested*

NP = *Not Present* during sampling event

Closed Francis Farm Landfill - Haywood Co., NC
Surface Water Sampling Event (8-30-2010)

TEST	UNITS	MDL	MRL	SW-1	SW-2	Blanton Branch
pH	pH units (on-site)	-	<6.0; >9.0	**6.53**	**6.38**	**6.5**
Specific Conductance	µmhos/cm (on-site)	-	NE	**72**	**104**	**96**
Temperature	°C (on-site)	-	29	**20.9**	**24.5**	**23.2**
Turbidity	NTU (on-site)	NT	50	NT	NT	NT
Total Antimony (Sb)	µg/l	NT	NE	NT	NT	NT
Total Arsenic (As)	µg/l	5.0	10	ND	ND	ND
Total Barium (Ba)	µg/l	5.0	NE	**65**	**44.4**	**37.7**
Total Beryllium (Be)	µg/l	NT	6.5	NT	ND	NT
Total Cadmium (Cd)	µg/l	1.0	0.4	ND	ND	ND
Total Chromium (Cr)	µg/l	5.0	50	**7.1**	ND	ND
Total Cobalt (Co)	µg/l	NT	NE	NT	NT	NT
Total Copper (Cu)	µg/l	NT	7	NT	NT	NT
Total Lead (Pb)	µg/l	5.0	25	ND	ND	ND
Total Nickel (Ni)	µg/l	NT	88	NT	NT	NT
Total Selenium (Se)	µg/l	10	5	ND	ND	ND
Total Silver (Ag)	µg/l	5.0	0.06	ND	ND	ND
Total Thallium (Tl)	µg/l	NT	NE	NT	NT	NT
Total Zinc (Zn)	µg/l	NT	50	NT	NT	NT
Total Mercury (Hg)	µg/l	0.20	0.012	ND	ND	ND
Acetone	µg/l	25	NE	ND	ND	ND
Acrylonitrile	µg/l	10.0	NE	ND	ND	ND
Benzene	µg/l	1.0	51	ND	ND	ND
Bromochloromethane	µg/l	1.0	NE	ND	ND	ND
Bromodichloromethane	µg/l	1.0	NE	ND	ND	ND
Bromoform	µg/l	1.0	NE	ND	ND	ND
Carbon Disulfide	µg/l	2.0	NE	ND	ND	ND
Bromomethane (Methylbromide)	µg/l	2.0	NE	ND	ND	ND
Carbon tetrachloride	µg/l	1.0	1.6	ND	ND	ND
Chlorobenzene (mono)	µg/l	1.0	NE	ND	ND	ND
Chloroethane	µg/l	1.0	NE	ND	ND	ND
Chloroform	µg/l	1.0	NE	ND	ND	ND
Chloromethane (Methylchloride)	µg/l	1.0	NE	ND	ND	ND
Dibromochloromethane	µg/l	1.0	NE	ND	ND	ND
1,2-Dibromo-3-chloropropane; DBCP	µg/l	5.0	NE	ND	ND	ND
1,2-Dibromoethane; Ethylene dibromide	µg/l	1.0	NE	ND	ND	ND
Dibromomethane	µg/l	1.0	NE	ND	ND	ND
1,2-Dichlorobenzene	µg/l	1.0	NE	ND	ND	ND
1,4-Dichlorobenzene	µg/l	1.0	NE	ND	ND	ND
trans-1,4-Dichloro-2butene	µg/l	1.0	NE	ND	ND	ND
1,1-Dichloroethane	µg/l	1.0	NE	ND	ND	ND
1,2-Dichloroethane	µg/l	1.0	NE	ND	ND	ND
1,1-Dichloroethene (-ethylene)	µg/l	1.0	NE	ND	ND	ND
cis-1,2-Dichloroethene (-ethylene)	µg/l	1.0	NE	ND	ND	ND
trans-1,2-Dichloroethene (-ylene)	µg/l	1.0	NE	ND	ND	ND
1,2-Dichloropropane	µg/l	1.0	NE	ND	ND	ND
cis-1,3-Dichloropropene (-propylene)	µg/l	1.0	NE	ND	ND	ND
trans-1,3-Dichloropropene (-propylene)	µg/l	1.0	NE	ND	ND	ND
Ethylbenzene	µg/l	1.0	NE	ND	ND	ND
2-Hexanone	µg/l	5.0	NE	ND	ND	ND
Iodomethane	µg/l	5.0	NE	ND	ND	ND
Dichloromethane (Methylene chloride)	µg/l	2.0	NE	ND	ND	ND
2-Butanone (Methyl ethyl ketone)	µg/l	5.0	NE	ND	ND	ND
4-Methyl-2-Pentanone	µg/l	5.0	NE	ND	ND	ND
Styrene	µg/l	1.0	NE	ND	ND	ND
1,1,1,2-Tetrachloroethane	µg/l	1.0	NE	ND	ND	ND
1,1,2,2-Tetrachloroethane	µg/l	1.0	4	ND	ND	ND
Tetrachloroethene (-ethylene)	µg/l	1.0	3.3	ND	ND	ND
Toluene	µg/l	1.0	0.36	ND	ND	ND
1,1,1-Trichloroethane	µg/l	1.0	NE	ND	ND	ND
1,1,2-Trichloroethane	µg/l	1.0	NE	ND	ND	ND
Trichloroethene (-ethylene)	µg/l	1.0	30	ND	ND	ND
Trichlorofluoromethane	µg/l	1.0	NE	ND	ND	ND
1,2,3-Trichloropropane	µg/l	1.0	NE	ND	ND	ND
Vinyl acetate	µg/l	2.0	NE	ND	ND	ND
Vinyl chloride	µg/l	1.0	2.4	ND	ND	ND
Total Xylenes	µg/l	2.0	NE	ND	ND	ND

Notes:

MCL = *Maximum Contaminant Level*, as established in the NCDENR "Redbook" Surface Waters and Wetlands Standards Section 15A NCAC 02B.0100, .0200, and .0300. Shaded cells indicated exceedances of MCLs.

NE = *Not Established*; North Carolina has not established a MCL

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NP = *Not Present* during sampling event

Closed Francis Farm Landfill - Haywood Co., NC
Surface Water Sampling Event (2-22-2011)

TEST	UNITS	MDL	MRL	SW-1	SW-2	Blanton Branch
pH	pH units (on-site)	-	<6.0; >9.0	**6.45**	**6.33**	**6.28**
Specific Conductance	µmhos/cm (on-site)	-	NE	**86**	**99**	**112**
Temperature	°C (on-site)	-	29	**10.8**	**8.4**	**13.9**
Turbidity	NTU (on-site)	-	50	**0.94**	**1.3**	**1.45**
Total Antimony (Sb)	µg/l	5.0	NE	ND	ND	ND
Total Arsenic (As)	µg/l	5.0	10	ND	ND	ND
Total Barium (Ba)	µg/l	5.0	NE	**37.5**	**39.8**	**46.9**
Total Beryllium (Be)	µg/l	1.0	6.5	ND	ND	ND
Total Cadmium (Cd)	µg/l	1.0	0.4	ND	ND	ND
Total Chromium (Cr)	µg/l	5.0	50	ND	ND	ND
Total Cobalt (Co)	µg/l	5.0	NE	**7.2**	**5.4**	ND
Total Copper (Cu)	µg/l	5.0	7	ND	ND	ND
Total Lead (Pb)	µg/l	5.0	25	ND	ND	ND
Total Nickel (Ni)	µg/l	5.0	88	ND	ND	ND
Total Selenium (Se)	µg/l	10.0	5	ND	ND	ND
Total Silver (Ag)	µg/l	5.0	0.06	ND	ND	ND
Total Thallium (Tl)	µg/l	5.4	NE	ND	ND	ND
Total Zinc (Zn)	µg/l	10.0	50	ND	**12.7**	ND
Total Mercury (Hg)	µg/l	NT	0.012	NT	NT	NT
Acetone	µg/l	25.0	NE	ND	ND	ND
Acrylonitrile	µg/l	10.0	NE	ND	ND	ND
Benzene	µg/l	1.0	51	ND	ND	ND
Bromochloromethane	µg/l	1.0	NE	ND	ND	ND
Bromodichloromethane	µg/l	1.0	NE	ND	ND	ND
Bromoform	µg/l	1.0	NE	ND	ND	ND
Carbon Disulfide	µg/l	2.0	NE	ND	ND	ND
Bromomethane (Methylbromide)	µg/l	2.0	NE	ND	ND	ND
Carbon tetrachloride	µg/l	1.0	1.6	ND	ND	ND
Chlorobenzene (mono)	µg/l	1.0	NE	ND	ND	ND
Chloroethane	µg/l	1.0	NE	ND	ND	ND
Chloroform	µg/l	1.0	NE	ND	ND	ND
Chloromethane (Methylchloride)	µg/l	1.0	NE	ND	ND	ND
Dibromochloromethane	µg/l	1.0	NE	ND	ND	ND
1,2-Dibromo-3-chloropropane; DBCP	µg/l	5.0	NE	ND	ND	ND
1,2-Dibromoethane; Ethylene dibromide	µg/l	1.0	NE	ND	ND	ND
Dibromomethane	µg/l	1.0	NE	ND	ND	ND
1,2-Dichlorobenzene	µg/l	1.0	NE	ND	ND	ND
1,4-Dichlorobenzene	µg/l	1.0	NE	ND	ND	ND
trans-1,4-Dichloro-2butene	µg/l	1.0	NE	ND	ND	ND
1,1-Dichloroethane	µg/l	1.0	NE	ND	ND	ND
1,2-Dichloroethane	µg/l	1.0	NE	ND	ND	ND
1,1-Dichloroethene (-ethylene)	µg/l	1.0	NE	ND	ND	ND
cis-1,2-Dichloroethene (-ethylene)	µg/l	1.0	NE	ND	ND	ND
trans-1,2-Dichloroethene (-ylene)	µg/l	1.0	NE	ND	ND	ND
1,2-Dichloropropane	µg/l	1.0	NE	ND	ND	ND
cis-1,3-Dichloropropene (-propylene)	µg/l	1.0	NE	ND	ND	ND
trans-1,3-Dichloropropene (-propylene)	µg/l	1.0	NE	ND	ND	ND
Ethylbenzene	µg/l	1.0	NE	ND	ND	ND
2-Hexanone	µg/l	5.0	NE	ND	ND	ND
Iodomethane	µg/l	5.0	NE	ND	ND	ND
Dichloromethane (Methylene chloride)	µg/l	2.0	NE	ND	ND	ND
2-Butanone (Methyl ethyl ketone)	µg/l	5.0	NE	ND	ND	ND
4-Methyl-2-Pentanone	µg/l	5.0	NE	ND	ND	ND
Styrene	µg/l	1.0	NE	ND	ND	ND
1,1,1,2-Tetrachloroethane	µg/l	1.0	NE	ND	ND	ND
1,1,2,2-Tetrachloroethane	µg/l	1.0	4	ND	ND	ND
Tetrachloroethene (-ethylene)	µg/l	1.0	3.3	ND	ND	ND
Toluene	µg/l	1.0	0.36	ND	ND	ND
1,1,1-Trichloroethane	µg/l	1.0	NE	ND	ND	ND
1,1,2-Trichloroethane	µg/l	1.0	NE	ND	ND	ND
Trichloroethene (-ethylene)	µg/l	1.0	30	ND	ND	ND
Trichlorofluoromethane	µg/l	1.0	NE	ND	ND	ND
1,2,3-Trichloropropane	µg/l	1.0	NE	ND	ND	ND
Vinyl acetate	µg/l	2.0	NE	ND	ND	ND
Vinyl chloride	µg/l	1.0	2.4	ND	ND	ND
Total Xylenes	µg/l	2.0	NE	ND	ND	ND

Notes:

MCL = *Maximum Contaminant Level*, as established in the NCDENR "Redbook" Surface Waters and Wetlands Standards Section 15A NCAC 02B.0100, .0200, and .0300. Shaded cells indicated exceedances of MCLs.

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NP = *Not Present* during sampling event

Closed Francis Farm Landfill - Haywood Co., NC
Surface Water Sampling Event (8-22-2011)

TEST	UNITS	MDL	MRL	SW-1	SW-2	Blanton Branch
pH	pH units (on-site)	-	<6.0; >9.0	**6.6**	**6.5**	**6.6**
Specific Conductance	µmhos/cm (on-site)	-	NE	**93**	**99**	**114**
Temperature	°C (on-site)	-	29	**23.5**	**24**	**22**
Turbidity	NTU (on-site)	-	50	**37**	**5.9**	**5.7**
Total Antimony (Sb)	µg/l	5.0	NE	ND	ND	ND
Total Arsenic (As)	µg/l	5.0	10	ND	ND	ND
Total Barium (Ba)	µg/l	5.0	NE	**45.5**	**41.8**	**41.6**
Total Beryllium (Be)	µg/l	1.0	6.5	ND	ND	ND
Total Cadmium (Cd)	µg/l	1.0	0.4	ND	ND	ND
Total Chromium (Cr)	µg/l	5.0	50	ND	ND	ND
Total Cobalt (Co)	µg/l	5.0	NE	ND	ND	ND
Total Copper (Cu)	µg/l	5.0	7	ND	ND	ND
Total Lead (Pb)	µg/l	5.0	25	ND	ND	ND
Total Nickel (Ni)	µg/l	5.0	88	ND	ND	ND
Total Selenium (Se)	µg/l	10.0	5	ND	ND	ND
Total Silver (Ag)	µg/l	5.0	0.06	ND	ND	ND
Total Thallium (Tl)	µg/l	5.4	NE	ND	ND	ND
Total Zinc (Zn)	µg/l	10.0	50	ND	ND	ND
Total Mercury (Hg)	µg/l	NT	0.012	NT	NT	NT
Acetone	µg/l	25.0	NE	ND	ND	ND
Acrylonitrile	µg/l	10.0	NE	ND	ND	ND
Benzene	µg/l	1.0	51	ND	ND	ND
Bromochloromethane	µg/l	1.0	NE	ND	ND	ND
Bromodichloromethane	µg/l	1.0	NE	ND	ND	ND
Bromoform	µg/l	1.0	NE	ND	ND	ND
Carbon Disulfide	µg/l	2.0	NE	ND	ND	ND
Bromomethane (Methylbromide)	µg/l	2.0	NE	ND	ND	ND
Carbon tetrachloride	µg/l	1.0	1.6	ND	ND	ND
Chlorobenzene (mono)	µg/l	1.0	NE	ND	ND	ND
Chloroethane	µg/l	1.0	NE	ND	ND	ND
Chloroform	µg/l	1.0	NE	ND	ND	ND
Chloromethane (Methylchloride)	µg/l	1.0	NE	ND	ND	ND
Dibromochloromethane	µg/l	1.0	NE	ND	ND	ND
1,2-Dibromo-3-chloropropane; DBCP	µg/l	5.0	NE	ND	ND	ND
1,2-Dibromoethane; Ethylene dibromide	µg/l	1.0	NE	ND	ND	ND
Dibromomethane	µg/l	1.0	NE	ND	ND	ND
1,2-Dichlorobenzene	µg/l	1.0	NE	ND	ND	ND
1,4-Dichlorobenzene	µg/l	1.0	NE	ND	ND	ND
trans-1,4-Dichloro-2butene	µg/l	1.0	NE	ND	ND	ND
1,1-Dichloroethane	µg/l	1.0	NE	ND	ND	ND
1,2-Dichloroethane	µg/l	1.0	NE	ND	ND	ND
1,1-Dichloroethene (-ethylene)	µg/l	1.0	NE	ND	ND	ND
cis-1,2-Dichloroethene (-ethylene)	µg/l	1.0	NE	ND	ND	ND
trans-1,2-Dichloroethene (-ylene)	µg/l	1.0	NE	ND	ND	ND
1,2-Dichloropropane	µg/l	1.0	NE	ND	ND	ND
cis-1,3-Dichloropropene (-propylene)	µg/l	1.0	NE	ND	ND	ND
trans-1,3-Dichloropropene (-propylene)	µg/l	1.0	NE	ND	ND	ND
Ethylbenzene	µg/l	1.0	NE	ND	ND	ND
2-Hexanone	µg/l	5.0	NE	ND	ND	ND
Iodomethane	µg/l	5.0	NE	ND	ND	ND
Dichloromethane (Methylene chloride)	µg/l	2.0	NE	ND	ND	ND
2-Butanone (Methyl ethyl ketone)	µg/l	5.0	NE	ND	ND	ND
4-Methyl-2-Pentanone	µg/l	5.0	NE	ND	ND	ND
Styrene	µg/l	1.0	NE	ND	ND	ND
1,1,1,2-Tetrachloroethane	µg/l	1.0	NE	ND	ND	ND
1,1,2,2-Tetrachloroethane	µg/l	1.0	4	ND	ND	ND
Tetrachloroethene (-ethylene)	µg/l	1.0	3.3	ND	ND	ND
Toluene	µg/l	1.0	0.36	ND	ND	ND
1,1,1-Trichloroethane	µg/l	1.0	NE	ND	ND	ND
1,1,2-Trichloroethane	µg/l	1.0	NE	ND	ND	ND
Trichloroethene (-ethylene)	µg/l	1.0	30	ND	ND	ND
Trichlorofluoromethane	µg/l	1.0	NE	ND	ND	ND
1,2,3-Trichloropropane	µg/l	1.0	NE	ND	ND	ND
Vinyl acetate	µg/l	2.0	NE	ND	ND	ND
Vinyl chloride	µg/l	1.0	2.4	ND	ND	ND
Total Xylenes	µg/l	2.0	NE	ND	ND	ND

Notes:

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NT = *Not Tested*

NP = *Not Present* during sampling event

Closed Francis Farm Landfill - Haywood Co., NC
Surface Water Sampling Event (2-22-2012)

TEST	UNITS	MDL	MRL	SW-1	SW-2	Blanton Branch
pH	pH units (on-site)	-	<6.0; >9.0	**7.4**	**7**	**7.1**
Specific Conductance	µmhos/cm (on-site)	-	NE	**75**	**85**	**101**
Temperature	°C (on-site)	-	29	**12.4**	**11**	**12.1**
Turbidity	NTU (on-site)	-	50	**2.95**	**4.53**	**3.9**
Total Antimony (Sb)	µg/l	5.0	NE	ND	ND	ND
Total Arsenic (As)	µg/l	5.0	10	ND	ND	ND
Total Barium (Ba)	µg/l	5.0	NE	**35.1**	**36.0**	**38.6**
Total Beryllium (Be)	µg/l	1.0	6.5	ND	ND	ND
Total Cadmium (Cd)	µg/l	1.0	0.4	ND	ND	ND
Total Chromium (Cr)	µg/l	5.0	50	ND	ND	ND
Total Cobalt (Co)	µg/l	5.0	NE	ND	ND	ND
Total Copper (Cu)	µg/l	5.0	7	ND	ND	ND
Total Lead (Pb)	µg/l	5.0	25	ND	ND	ND
Total Nickel (Ni)	µg/l	5.0	88	ND	ND	ND
Total Selenium (Se)	µg/l	10.0	5	ND	ND	ND
Total Silver (Ag)	µg/l	5.0	0.06	ND	ND	ND
Total Thallium (Tl)	µg/l	5.4	NE	ND	ND	ND
Total Zinc (Zn)	µg/l	10.0	50	ND	ND	ND
Total Mercury (Hg)	µg/l	0.20	0.012	ND	ND	ND
Acetone	µg/l	25	NE	ND	ND	ND
Acrylonitrile	µg/l	10.0	NE	ND	ND	ND
Benzene	µg/l	1.0	51	ND	ND	ND
Bromochloromethane	µg/l	1.0	NE	ND	ND	ND
Bromodichloromethane	µg/l	1.0	NE	ND	ND	ND
Bromoform	µg/l	1.0	NE	ND	ND	ND
Carbon Disulfide	µg/l	2.0	NE	ND	ND	ND
Bromomethane (Methylbromide)	µg/l	2.0	NE	ND	ND	ND
Carbon tetrachloride	µg/l	1.0	1.6	ND	ND	ND
Chlorobenzene (mono)	µg/l	1.0	NE	ND	ND	ND
Chloroethane	µg/l	1.0	NE	ND	ND	ND
Chloroform	µg/l	1.0	NE	ND	ND	ND
Chloromethane (Methylchloride)	µg/l	1.0	NE	ND	ND	ND
Dibromochloromethane	µg/l	1.0	NE	ND	ND	ND
1,2-Dibromo-3-chloropropane; DBCP	µg/l	5.0	NE	ND	ND	ND
1,2-Dibromoethane; Ethylene dibromide	µg/l	1.0	NE	ND	ND	ND
Dibromomethane	µg/l	1.0	NE	ND	ND	ND
1,2-Dichlorobenzene	µg/l	1.0	NE	ND	ND	ND
1,4-Dichlorobenzene	µg/l	1.0	NE	ND	ND	ND
trans-1,4-Dichloro-2butene	µg/l	1.0	NE	ND	ND	ND
1,1-Dichloroethane	µg/l	1.0	NE	ND	ND	ND
1,2-Dichloroethane	µg/l	1.0	NE	ND	ND	ND
1,1-Dichloroethene (-ethylene)	µg/l	1.0	NE	ND	ND	ND
cis-1,2-Dichloroethene (-ethylene)	µg/l	1.0	NE	ND	ND	ND
trans-1,2-Dichloroethene (-ylene)	µg/l	1.0	NE	ND	ND	ND
1,2-Dichloropropane	µg/l	1.0	NE	ND	ND	ND
cis-1,3-Dichloropropene (-propylene)	µg/l	1.0	NE	ND	ND	ND
trans-1,3-Dichloropropene (-propylene)	µg/l	1.0	NE	ND	ND	ND
Ethylbenzene	µg/l	1.0	NE	ND	ND	ND
2-Hexanone	µg/l	5.0	NE	ND	ND	ND
Iodomethane	µg/l	5.0	NE	ND	ND	ND
Dichloromethane (Methylene chloride)	µg/l	2.0	NE	ND	ND	ND
2-Butanone (Methyl ethyl ketone)	µg/l	5.0	NE	ND	ND	ND
4-Methyl-2-Pentanone	µg/l	5.0	NE	ND	ND	ND
Styrene	µg/l	1.0	NE	ND	ND	ND
1,1,1,2-Tetrachloroethane	µg/l	1.0	NE	ND	ND	ND
1,1,2,2-Tetrachloroethane	µg/l	1.0	4	ND	ND	ND
Tetrachloroethene (-ethylene)	µg/l	1.0	3.3	ND	ND	ND
Toluene	µg/l	1.0	0.36	ND	ND	ND
1,1,1-Trichloroethane	µg/l	1.0	NE	ND	ND	ND
1,1,2-Trichloroethane	µg/l	1.0	NE	ND	ND	ND
Trichloroethene (-ethylene)	µg/l	1.0	30	ND	ND	ND
Trichlorofluoromethane	µg/l	1.0	NE	ND	ND	ND
1,2,3-Trichloropropane	µg/l	1.0	NE	ND	ND	ND
Vinyl acetate	µg/l	2.0	NE	ND	ND	ND
Vinyl chloride	µg/l	1.0	2.4	ND	ND	ND
Total Xylenes	µg/l	2.0	NE	ND	ND	ND

Notes:

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NT = *Not Tested*

NP = *Not Present* during sampling event

Closed Francis Farm Landfill - Haywood Co., NC
Surface Water Sampling Event (8-29-2012)

TEST	UNITS	MDL	MRL	SW-1	SW-2	Blanton Branch
pH	pH units (on-site)	-	<6.0; >9.0	**6.4**	**7.3**	**6.9**
Specific Conductance	µmhos/cm (on-site)	-	NE	**89**	**106**	**113**
Temperature	°C (on-site)	-	29	**22.8**	**21.4**	**21**
Turbidity	NTU (on-site)	-	50	**5.99**	**7.39**	**7**
Total Antimony (Sb)	µg/l	5.0	NE	ND	ND	ND
Total Arsenic (As)	µg/l	5.0	10	ND	ND	ND
Total Barium (Ba)	µg/l	5.0	NE	**40.2**	**41.9**	**47.2**
Total Beryllium (Be)	µg/l	1.0	6.5	ND	ND	ND
Total Cadmium (Cd)	µg/l	1.0	0.4	ND	ND	ND
Total Chromium (Cr)	µg/l	5.0	50	ND	ND	ND
Total Cobalt (Co)	µg/l	5.0	NE	ND	ND	ND
Total Copper (Cu)	µg/l	5.0	7	ND	ND	ND
Total Lead (Pb)	µg/l	5.0	25	ND	ND	ND
Total Nickel (Ni)	µg/l	5.0	88	ND	ND	ND
Total Selenium (Se)	µg/l	10.0	5	ND	ND	ND
Total Silver (Ag)	µg/l	5.0	0.06	ND	ND	ND
Total Thallium (Tl)	µg/l	5.4	NE	ND	ND	ND
Total Zinc (Zn)	µg/l	10.0	50	ND	ND	ND
Total Mercury (Hg)	µg/l	0.20	0.012	ND	ND	ND
Acetone	µg/l	25	NE	ND	ND	ND
Acrylonitrile	µg/l	10.0	NE	ND	ND	ND
Benzene	µg/l	1.0	51	ND	ND	ND
Bromochloromethane	µg/l	1.0	NE	ND	ND	ND
Bromodichloromethane	µg/l	1.0	NE	ND	ND	ND
Bromoform	µg/l	1.0	NE	ND	ND	ND
Carbon Disulfide	µg/l	2.0	NE	ND	ND	ND
Bromomethane (Methylbromide)	µg/l	2.0	NE	ND	ND	ND
Carbon tetrachloride	µg/l	1.0	1.6	ND	ND	ND
Chlorobenzene (mono)	µg/l	1.0	NE	ND	ND	ND
Chloroethane	µg/l	1.0	NE	ND	ND	ND
Chloroform	µg/l	1.0	NE	ND	ND	ND
Chloromethane (Methylchloride)	µg/l	1.0	NE	ND	ND	ND
Dibromochloromethane	µg/l	1.0	NE	ND	ND	ND
1,2-Dibromo-3-chloropropane; DBCP	µg/l	5.0	NE	ND	ND	ND
1,2-Dibromoethane; Ethylene dibromide	µg/l	1.0	NE	ND	ND	ND
Dibromomethane	µg/l	1.0	NE	ND	ND	ND
1,2-Dichlorobenzene	µg/l	1.0	NE	ND	ND	ND
1,4-Dichlorobenzene	µg/l	1.0	NE	ND	ND	ND
trans-1,4-Dichloro-2butene	µg/l	1.0	NE	ND	ND	ND
1,1-Dichloroethane	µg/l	1.0	NE	ND	ND	ND
1,2-Dichloroethane	µg/l	1.0	NE	ND	ND	ND
1,1-Dichloroethene (-ethylene)	µg/l	1.0	NE	ND	ND	ND
cis-1,2-Dichloroethene (-ethylene)	µg/l	1.0	NE	ND	ND	ND
trans-1,2-Dichloroethene (-ylene)	µg/l	1.0	NE	ND	ND	ND
1,2-Dichloropropane	µg/l	1.0	NE	ND	ND	ND
cis-1,3-Dichloropropene (-propylene)	µg/l	1.0	NE	ND	ND	ND
trans-1,3-Dichloropropene (-propylene)	µg/l	1.0	NE	ND	ND	ND
Ethylbenzene	µg/l	1.0	NE	ND	ND	ND
2-Hexanone	µg/l	5.0	NE	ND	ND	ND
Iodomethane	µg/l	5.0	NE	ND	ND	ND
Dichloromethane (Methylene chloride)	µg/l	1.0	NE	ND	ND	ND
2-Butanone (Methyl ethyl ketone)	µg/l	5.0	NE	ND	ND	ND
4-Methyl-2-Pentanone	µg/l	5.0	NE	ND	ND	ND
Styrene	µg/l	1.0	NE	ND	ND	ND
1,1,1,2-Tetrachloroethane	µg/l	1.0	NE	ND	ND	ND
1,1,2,2-Tetrachloroethane	µg/l	1.0	4	ND	ND	ND
Tetrachloroethene (-ethylene)	µg/l	1.0	3.3	ND	ND	ND
Toluene	µg/l	1.0	0.36	ND	ND	ND
1,1,1-Trichloroethane	µg/l	1.0	NE	ND	ND	ND
1,1,2-Trichloroethane	µg/l	1.0	NE	ND	ND	ND
Trichloroethene (-ethylene)	µg/l	1.0	30	ND	ND	ND
Trichlorofluoromethane	µg/l	1.0	NE	ND	ND	ND
1,2,3-Trichloropropane	µg/l	1.0	NE	ND	ND	ND
Vinyl acetate	µg/l	2.0	NE	ND	ND	ND
Vinyl chloride	µg/l	1.0	2.4	ND	ND	ND
Total Xylenes	µg/l	2.0	NE	ND	ND	ND

Notes:

MCL = *Maximum Contaminant Level*, as established in the NCDENR "Redbook" Surface Waters and Wetlands Standards Section 15A NCAC 02B.0100, .0200, and .0300. Shaded cells indicated exceedances of MCLs.

NE = *Not Established*; North Carolina has not established a MCL

MRL = Laboratory *Method Reporting Limit*

ND = *Not Detected* at the MRL; "J"-flagged data (i.e., values estimated between the laboratory method detection limit [MDL] and the MRL) are not presented on this spreadsheet.

NS = *Not Sampled*

NT = *Not Tested*

NP = *Not Present* during sampling event

Closed Francis Farm Landfill - Haywood Co., NC
Surface Water Sampling Event (2-18-2013)

TEST	UNITS	MDL	MRL	SW-1	SW-2	Blanton Branch
pH	pH units (on-site)	-	<6.0; >9.0	**6.9**	**7.1**	**7.1**
Specific Conductance	µmhos/cm (on-site)	-	NE	**68**	**75**	**97**
Temperature	°C (on-site)	-	29	**9.0**	**9.4**	**11.3**
Turbidity	NTU (on-site)	-	50	**2.40**	**2.48**	**294**
Total Antimony (Sb)	µg/l	5.0	NE	ND	ND	ND
Total Arsenic (As)	µg/l	5.0	10	ND	ND	ND
Total Barium (Ba)	µg/l	5.0	NE	**35**	**38.0**	**41.4**
Total Beryllium (Be)	µg/l	1.0	6.5	ND	ND	ND
Total Cadmium (Cd)	µg/l	1.0	0.4	ND	ND	ND
Total Chromium (Cr)	µg/l	5.0	50	ND	ND	ND
Total Cobalt (Co)	µg/l	5.0	NE	ND	ND	ND
Total Copper (Cu)	µg/l	5.0	7	ND	ND	ND
Total Lead (Pb)	µg/l	5.0	25	ND	ND	ND
Total Nickel (Ni)	µg/l	5.0	88	ND	ND	ND
Total Selenium (Se)	µg/l	10.0	5	ND	ND	ND
Total Silver (Ag)	µg/l	5.0	0.06	ND	ND	ND
Total Thallium (Tl)	µg/l	5.4	NE	ND	ND	ND
Total Zinc (Zn)	µg/l	10.0	50	ND	ND	ND
Total Mercury (Hg)	µg/l	0.20	0.012	ND	ND	ND
Acetone	µg/l	25	NE	ND	ND	ND
Acrylonitrile	µg/l	10.0	NE	ND	ND	ND
Benzene	µg/l	1.0	51	ND	ND	ND
Bromochloromethane	µg/l	1.0	NE	ND	ND	ND
Bromodichloromethane	µg/l	1.0	NE	ND	ND	ND
Bromoform	µg/l	1.0	NE	ND	ND	ND
Carbon Disulfide	µg/l	2.0	NE	ND	ND	ND
Bromomethane (Methylbromide)	µg/l	2.0	NE	ND	ND	ND
Carbon tetrachloride	µg/l	1.0	1.6	ND	ND	ND
Chlorobenzene (mono)	µg/l	1.0	NE	ND	ND	ND
Chloroethane	µg/l	1.0	NE	ND	ND	ND
Chloroform	µg/l	1.0	NE	ND	ND	ND
Chloromethane (Methylchloride)	µg/l	1.0	NE	ND	ND	ND
Dibromochloromethane	µg/l	1.0	NE	ND	ND	ND
1,2-Dibromo-3-chloropropane; DBCP	µg/l	5.0	NE	ND	ND	ND
1,2-Dibromoethane; Ethylene dibromide	µg/l	1.0	NE	ND	ND	ND
Dibromomethane	µg/l	1.0	NE	ND	ND	ND
1,2-Dichlorobenzene	µg/l	1.0	NE	ND	ND	ND
1,4-Dichlorobenzene	µg/l	1.0	NE	ND	ND	ND
trans-1,4-Dichloro-2butene	µg/l	1.0	NE	ND	ND	ND
1,1-Dichloroethane	µg/l	1.0	NE	ND	ND	ND
1,2-Dichloroethane	µg/l	1.0	NE	ND	ND	ND
1,1-Dichloroethene (-ethylene)	µg/l	1.0	NE	ND	ND	ND
cis-1,2-Dichloroethene (-ethylene)	µg/l	1.0	NE	ND	ND	ND
trans-1,2-Dichloroethene (-ylene)	µg/l	1.0	NE	ND	ND	ND
1,2-Dichloropropane	µg/l	1.0	NE	ND	ND	ND
cis-1,3-Dichloropropene (-propylene)	µg/l	1.0	NE	ND	ND	ND
trans-1,3-Dichloropropene (-propylene)	µg/l	1.0	NE	ND	ND	ND
Ethylbenzene	µg/l	1.0	NE	ND	ND	ND
2-Hexanone	µg/l	5.0	NE	ND	ND	ND
Iodomethane	µg/l	5.0	NE	ND	ND	ND
Dichloromethane (Methylene chloride)	µg/l	1.0	NE	ND	ND	ND
2-Butanone (Methyl ethyl ketone)	µg/l	5.0	NE	ND	ND	ND
4-Methyl-2-Pentanone	µg/l	5.0	NE	ND	ND	ND
Styrene	µg/l	1.0	NE	ND	ND	ND
1,1,1,2-Tetrachloroethane	µg/l	1.0	NE	ND	ND	ND
1,1,2,2-Tetrachloroethane	µg/l	1.0	4	ND	ND	ND
Tetrachloroethene (-ethylene)	µg/l	1.0	3.3	ND	ND	ND
Toluene	µg/l	1.0	0.36	ND	ND	ND
1,1,1-Trichloroethane	µg/l	1.0	NE	ND	ND	ND
1,1,2-Trichloroethane	µg/l	1.0	NE	ND	ND	ND
Trichloroethene (-ethylene)	µg/l	1.0	30	ND	ND	ND
Trichlorofluoromethane	µg/l	1.0	NE	ND	ND	ND
1,2,3-Trichloropropane	µg/l	1.0	NE	ND	ND	ND
Vinyl acetate	µg/l	2.0	NE	ND	ND	ND
Vinyl chloride	µg/l	1.0	2.4	ND	ND	ND
Total Xylenes	µg/l	2.0	NE	ND	ND	ND

Notes:

MCL = *Maximum Contaminant Level*, as established in the NCDENR "Redbook" Surface Waters and Wetlands Standards Section 15A NCAC 02B.0100, .0200, and .0300. Shaded cells indicated exceedances of MCLs.

NE = *Not Established*; North Carolina has not established a MCL

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NT = *Not Tested*

NP = *Not Present* during sampling event

APPENDIX C

LABORATORY ANALYTICAL RESULTS

92148500

Pace Analytical	Document Name: Report Form for Field Monitoring	Document Revised: August 4, 2011 Page 1 of 1
	Document No.: F-AVL-F-004-rev.00	Issuing Authorities: Pace Asheville Quality Office

2-13

Pace Analytical Services, Inc

Report Form for Field Monitoring

Location HAYWOOD FF

Date	Time	Sample	Sample ID	Water Level (Ft)	pH (units)	Temp (°C)	Specific Conductivity (uhmos)	Turbidity (NTU)	~~ORP~~ GALL	Volume	Comments
2-19.13	1200	Begin MP MPS	MW-1A	43.20	5.6	13.1	343.9	4.15	0.25	0	CLEAR
2-19	1220	MID	MW-1A		6.1	14.1	431.4	675	2.75	1.5	MUDDY
2-19	1605	~~Begin~~ Final	MW-1A		6.3	13.8	444.6	5.06	5.5	3	CLEAR ORG ODOR
2-21	~~1445~~	1500 Begin	MW-2A	23.13	5.9	13.1	296.0	1.60	0.25	0	CLEAR
2-21	~~1500~~	1515 Mid	MW 2A		5.9	13.0	358.0	0.34	2	1.5	
2-21	~~1550~~	1600 Final	MW 2A		6.0	13.4	332.0	4.22	4	3	ORG ODOR
2-21	1445	Begin	MW-3A	34.92	6.1	14.4	302.4	2.05	0.25	0	CLEAR
2-21	1500	Mid	MW-3A		6.1	13.6	331.9	11.2	2.25	1.5	
2-21	1530	Final	MW-3A		6.11	12.9	347.8	6.73	4.25	3	ORG ODOR
2-19	1225		MW-4	71.47	5.7	13.6	238.2	2.43	0.25	0	CLEAR
2-19	1250		4		5.8	13.8	244.6	200	2.00	1.5	MUDDY
2-19	1630		4		5.7	12.8	193.1	1.89	2.75	2	ORG ODOR
2-19	1300		MW-5	75.88	5.8	12.8	250.0	3.41	0.25	0	CLEAR
2-19	1310		MW-5		5.8	13.8	248.2	26.9	2.50	1.5	
2-19	1645		MW-5		5.9	12.2	244.2	10.02	5.5	3	ORG ODOR

NO Begin + Mid Recordings for 6, 7, 8, 9, 10, 20, 21, 190, 208, 219

Pace Analytical	Document Name: Report Form for Field Monitoring	Document Revised: August 4, 2011 Page 1 of 1
	Document No.: F-AVL-F-004-rev.00	Issuing Authorities: Pace Asheville Quality Office

2-13

Pace Analytical Services, Inc
Report Form for Field Monitoring

Location HAYWOOD FF

Date	Time	Sample ~~Sc~~	Sample ID	Water Level (Ft)	pH (units)	Temp (°C)	Specific Conductivity (uhmos)	Turbidity (NTU)	~~ORP~~ Gall	Volumes	Comments
2-19	1340	Begin MO	MW-11	78.83	6.4	13.3	537	9.09	0.25	0	CLEAR
2-19	1350	MID	MW-11		6.4	13.3	560	630	2.00	1.5	MUDDY
2-20	1120	FINAL	MW-11		6.6	15.2	663	2.53	3.25	3.0	CLEAR SLIGHT ODOR
2-19	1320	Begin	MW-12	75.53	6.5	12.0	71.1	5.43	0.25	0	CLEAR
2-19	1325	MID	MW-12		6.4	11.9	75.9	40	1.25	1.5	CLOUDY
2-19	1710	FINAL	MW-12		6.5	11.0	79.6	40	2.5	3.0	CLOUDY NO ODOR
2-19	1430	Begin	MW-13	84.64	6.2	12.8	509	2.83	0.25	0	CLEAR
2-19	1440	MID	MW-13		6.2	13.8	519	7.84	1.25	1.5	
2-19	1730	FINAL	MW-13		6.2	12.2	510	2.56	2.5	3.0	OIL ODOR
			MW-14	86.32	6.2	13.6	702	5.83	0.25		CLEAR
			MW-14		6.3	13.5	711	1503			MUDDY
			MW-14		6.5	14.2	716	9.66			CLEAR SLIGHT ODOR
			MW-15	82.51	7.4	13.4	701	3.48	0.25	0	CLEAR
			MW-15		7.5	12.3	723	72	2.25	1.5	CLOUDY
			MW-15		7.5	14.0	678	3.39	4.25	3	CLEAR SLIGHT ODOR

Pace Analytical	Document Name: Report Form for Field Monitoring	Document Revised: August 4, 2011 Page 1 of 1
	Document No.: F-AVL-F-004-rev.00	Issuing Authorities: Pace Asheville Quality Office

2-13

Pace Analytical Services, Inc
Report Form for Field Monitoring

Location _____

Date	Time	Sampler		Sample ID	Water Level (Ft)	pH (units)	Temp (°C)	Specific Conductivity (uhmos)	Turbidity (NTU)	~~ORP~~ Gallons	Volumes	Comments
2-20-13	1310	Begin	MPS	MW 16	59.51	6.3	11.2	100.2	17.4	0.25	0	CLEAR
2-20	1320	Min		MW - 16		6.2	12.2	123.2	1300	2.75	1.5	MUDDY
2-21	1130	Final		MW - 16		6.2	12.0	107.1	2.14	5.50	3.0	CLEAR NO ODOR
2-20	1240	Begin		MW - 17	53.39	6.9	10.8	73.9	2.20	0.25	0	CLEAR
2-20	1250	Min		MW - 17		6.6	11.9	83.2	700	3.00	1.5	MUDDY
2-21	1110	Final		MW - 17		6.3	11.5	75.2	1.32	6.00	3	CLEAR NO ODOR
2-20	1415	Begin		MW - 18	24.83	6.0	11.7	65.6	18.1	0.25	0	CLEAR
2-20	1410	Min		MW - 18		6.1	12.2	57.7	900	4.25	1.5	MUDDY
2-12	1055	Final		MW 18		6.1	11.7	65.4	7.7	8.50	3	CLEAR NO ODOR

92148510

Pace Analytical	Document Name: Report Form for Field Monitoring	Document Revised: August 4, 2011 Page 1 of 1
	Document No.: F-AVL-F-004-rev.00	Issuing Authorities: Pace Asheville Quality Office

2-18 > 2-21-13

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Report Form for Field Monitoring

Location: HAYWOOD CO FF LF

Date	Time	Sampler	Sample ID	Water Level (Ft)	pH (units)	Temp (°C)	Specific Conductivity (uhmos)	Turbidity (NTU)	~~ORP~~ CLOUD	Volumes	Comments
2-19	1605	MB	MW-1A	43.70	6.3	13.8	445	5.06	5.5	3 VOLS	CLEAR
											OLD ODOR
2-21	1605		MW-2A	23.13	6.0	13.4	33.2	4.28	4.00	3 VOLS	CLEAR
											OLD ODOR
2-21	1530		MW-3A	34.92	6.1	12.9	343	6.73	~~DRY 2.5~~ 4.25	3 VOLS	CLEAR
											OLD ODOR
2-19	1630		MW-4	71.43	5.7	12.8	193	1.89	DRY 2.25	~~1.5~~ 2 VOLS	CLEAR
										2 VOLS	OLD ODOR
2-19	1645		MW-5	75.88	5.9	12.2	242	10.08	5.5	3 VOLS	CLEAR
											OLD ODOR
2-18	1535		MW-6	5.68	6.0	12.6	57	1.30	3.5	3.5 VOLS	CLEAR
											NO ODOR
2-18	1555		MW-7	6.08	6.0	13.4	333	5.40	6.5	3 VOLS	CLEAR to MUDDY
											NO ODOR
2-18	1615		MW-8	~~4.82~~ 4.85	6.3	10.4	198	12.9	6.00	3 VOLS	CLEAR to MUDDY
											NO ODOR
2-18	1630		MW-9	1.88	6.1	9.9	66	6.24	5.5	3 VOLS	CLEAR to CLOUDY
											NO ODOR
2-18	1645		MW-10	1.41	5.7	10.9	57	31.7	5.00	3 VOLS	CLOUDY
											NO ODOR

Pace Analytical	Document Name: Report Form for Field Monitoring	Document Revised: August 4, 2011 Page 1 of 1
	Document No.: F-AVL-F-004-rev.00	Issuing Authorities: Pace Asheville Quality Office

Pace Analytical Services, Inc
Report Form for Field Monitoring

Location HAYWOOD FRANCIS FARM CE

Date	Time	Sampler	Sample ID	Water Level (Ft)	pH (units)	Temp (°C)	Specific Conductivity (uhmos)	Turbidity (NTU)	~~ORP~~ D.O. (mg/L)	Volumes	Comments
2-20-13	1120	BPJ	MW-11	78.87	6.6	15.2	667	2.53	3.75	3	CLEAR
											SLIGHT ODOR
2-19-13	1710		MW-12	75.57	6.5	11.0	80	40	2.5	3	CLOUDY ~~ODOR~~
											NO ODOR
2-19-13	1735		MW-13	84.04	6.2	12.2	510	2.56	2.5	3	CLEAR
											ORG ODOR
2-20	1035		MW-14	86.32	6.5	14.2	716	9.66	11.5	3	CLEAR SLIGHT ODOR
2-20	1055		MW-15	82.51	7.5	14.0	678	3.39	4.25	3	CLEAR
											SLIGHT ODOR
2-21	1130		MW-16	59.51	6.2	12.0	107	2.14	5.50	3	CLEAR
											NO ODOR
2-21-13	1110		MW-17	53.39	6.3	11.5	75	1.32	6.00	3	CLEAR
											NO ODOR
2-21-13	1055		MW-18	24.63	6.1	11.7	65	7.73	8.5	3	CLEAR
											NO ODOR
2-18-13	1720		MW-19	6.31	5.8	11.1	201	9.70	7.00	3	CLEAR TO MUDDY
											NO ODOR
2-18-13	1750		MW-20	1.84	6.5	10.9	59	80	7.00	3	CLOUDY to MUDDY
											NO ODOR

Pace Analytical	Document Name: Report Form for Field Monitoring	Document Revised: August 4, 2011 Page 1 of 1
	Document No.: F-AVL-F-004-rev.00	Issuing Authorities: Pace Asheville Quality Office

Pace Analytical Services, Inc
Report Form for Field Monitoring

Location: HAS CWOOD FRANCIS FARM LF

Date	Time	Samples	Sample ID	Water Level (Ft)	pH (units)	Temp (°C)	Specific Conductivity (uhmos)	Turbidity (NTU)	~~ORP~~ Gallons	Volume	Comments
2-18-13	1305		MW-21	19.23	5.7	12.0	24	6.09	7.5	3	CLEAR to CLOUDY
											NO ODOR
2-18	1445		SW-1		6.9	9.0	68	2.4			
2-18	1505		SW-2		7.1	9.4	~~34~~ 75	2.42			
			~~SW-3~~								
2-18	1515		SW-3		7.1	11.3	97	2.94			

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Pace Analytical	Document Name: Report Form for Field Monitoring	Document Revised: August 4, 2011 Page 1 of 1
	Document No.: F-AVL-F-004-rev.00	Issuing Authorities: Pace Asheville Quality Office

2-13

Pace Analytical Services, Inc
Report Form for Field Monitoring

Location BLK Haywood FF

Date	Time	Sampler MAS	Sample ID	Water Level (Ft)	pH (units)	Temp (°C)	Specific Conductivity (uhmos)	Turbidity (NTU)	~~ORP~~ Gallons	Comments Volume	
2-20	1545	Begin	MW-14D	148.05	11.98	11.2	195	50	0.25	0	
2-20	1600	Min	MW-14D		10.57	13.7	460	70	16	1.5 Dry	
2-21	1415	Final	MW-14D		9.75	14.5	284	7.69			Clear No odor
2-20	1335		MW-16D	74.17	8.99	11.4	147.5	19.9	0.25	0	Clear
2-20	1345		MW-16D		8.86	12.1	177.7	200	16	Dry 1.75 vol	Muddy
2-21	1330		MW-16D		8.59	14.0	184.7	9.97			Clear No odor
2-20	1500		MW-22	1.63	6.0	7.3	68.1	41.1	0.25	0 vol	Clear
2-20	1515		MW-22		5.8	9.0	64.9	1040	6100	1.5 vol	Muddy
2-21	1030		MW-22		5.8	9.8	75.2	9.26	1200	3 vol	Clear to muddy No odor
2-21	1225		23	1.37	6.0	9.2	85.7	26.2	0.5	0	Clear
2-21	1235		23		6.0	10.9	84.4	900	6	1.5 vol	Muddy
2-21	1710		23		6.1	9.5	87.5	900	12	3 vol	Muddy No odor
											Did not settle over 45 hrs

Pace Analytical	Document Name: Report Form for Field Monitoring	Document Revised: August 4, 2011 Page 1 of 1
	Document No.: F-AVL-F-004-rev.00	Issuing Authorities: Pace Asheville Quality Office

2.13

Pace Analytical Services, Inc
Report Form for Field Monitoring

Location Haywood FF

Date	Time	Sample	Sample ID	Water Level (Ft)	pH (units)	Temp (°C)	Specific Conductivity (uhmos)	Turbidity (NTU)	~~ORP~~ (Volts)	Comments (Volumes)	
2-21	1145	Begin MOS	MW-24	3.77	6.0	10.5	547	2.06	0.25	0	CLEAR
2-21	1210	Min	24		6.2	11.7	42.2	1000	8	1.5	MUDDY
2-21	1640	Final	24		6.2	11.2	56.4	475	16	3.0	CLEAR NO ODOR
2-20	1140	Begin	25	229.36	11.68	10.7	1274	21.4	0.25	0	CLEAR
2-20	1155	Min	25		11.77	13.0	1077	683	5.00	0.25 1 vol	MUDDY
2-21	1255	Final	25		11.34	14.9	891	15.3			CLEAR OR ODOR

Pace Analytical	Document Name: Report Form for Field Monitoring	Document Revised: August 4, 2011 Page 1 of 1
	Document No.: F-AVL-F-004-rev.00	Issuing Authorities: Pace Asheville Quality Office

2-13

Pace Analytical Services, Inc

Report Form for Field Monitoring

Location Haywood FF

Date	Time	Sampler	Sample ID	Water Level (Ft)	pH (units)	Temp (°C)	Specific Conductivity (uhmos)	Turbidity (NTU)	~~ORP~~ (Gallons)	Comments: Volumes	Comments
2-21	1145	Begin MCS	MW-24	3.77	6.0	10.5	547	2.06	0.25	0	CLEAR
2-21	1210	Min	24		6.2	11.7	42.2	1000	8	1.5	MUDDY
2-21	1640	Final	24		6.2	11.2	56.4	455	16	3.0	CLEAR NO ODOR
2-20	1140	Begin	25	229.36	11.68	10.7	1274	21.4	0.25	0	CLEAR
2-20	1155	Min	25		11.77	13.0	1077	683	5.00	0.5 1/2L	MUDDY
2-21	1255	Final	25		11.54	14.9	891	15.3			CLEAR OR ODOR
2-18	1735	END	MW-19D	5.75'	6.2	11.8	611	9.23	27	3 volumes	CLEAR
											NO ODOR
2-18	1810	END	MW-20D	0.25'	6.7	11.4	~~84~~ 85	27.8	33	3 volumes	CLOUDY NO ODOR

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March 11, 2013

Mr. Stephen King
Haywood Co. Solid Waste
278 Recycle Rd.
Clyde, NC 28721

RE: Project: FRANCIS FARM LF GWM FEB.2013
Pace Project No.: 92148500

Dear Mr. King:
Enclosed are the analytical results for sample(s) received by the laboratory between February 19, 2013 and February 22, 2013. 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.

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

Sincerely,

Lorri Patton

Lorri Patton for
Tom Williams
tom.williams@pacelabs.com
Project Manager

Enclosures

cc: Andy Alexander, BLE
Mr. Stephen King, Haywood Co. Solid Waste

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CERTIFICATIONS

Project: FRANCIS FARM LF GWM FEB.2013
Pace Project No.: 92148500

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 Dr., 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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SAMPLE SUMMARY

Project: FRANCIS FARM LF GWM FEB.2013
Pace Project No.: 92148500

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92148500001	SW-1	Water	02/18/13 14:45	02/19/13 09:30
92148500002	SW-2	Water	02/18/13 15:05	02/19/13 09:30
92148500003	BLANTON BRANCH	Water	02/18/13 15:05	02/19/13 09:30
92148500004	MW-6	Water	02/18/13 15:35	02/19/13 09:30
92148500005	MW-7	Water	02/18/13 15:55	02/19/13 09:30
92148500006	MW-8	Water	02/18/13 16:15	02/19/13 09:30
92148500007	MW-9	Water	02/18/13 16:30	02/19/13 09:30
92148500008	MW-10	Water	02/18/13 16:45	02/19/13 09:30
92148500009	MW-19	Water	02/18/13 17:20	02/19/13 09:30
92148500010	MW-20	Water	02/18/13 17:50	02/19/13 09:30
92148500011	MW-21	Water	02/18/13 17:05	02/19/13 09:30
92148500012	MW-1A	Water	02/19/13 16:05	02/20/13 08:00
92148500013	MW-4	Water	02/19/13 16:30	02/20/13 08:00
92148500014	MW-5	Water	02/19/13 16:45	02/20/13 08:00
92148500015	MW-12	Water	02/19/13 17:10	02/20/13 08:00
92148500016	MW-13	Water	02/19/13 17:30	02/20/13 08:00
92148500017	MW-11	Water	02/20/13 11:20	02/20/13 17:15
92148500018	MW-14	Water	02/20/13 10:35	02/20/13 17:15
92148500019	MW-15	Water	02/20/13 10:55	02/20/13 17:15
92148500020	MW-2A	Water	02/21/13 16:05	02/22/13 08:30
92148500021	MW-3A	Water	02/21/13 15:30	02/22/13 08:30
92148500022	MW-16	Water	02/21/13 11:30	02/22/13 08:30
92148500023	MW-17	Water	02/21/13 11:10	02/22/13 08:30
92148500024	MW-18	Water	02/21/13 10:55	02/22/13 08:30
92148500025	TRAVEL BLANK	Water	02/21/13 00:00	02/22/13 08:30
92148500026	EQUIPMENT BLANK	Water	02/21/13 00:00	02/22/13 08:30

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SAMPLE ANALYTE COUNT

Project: FRANCIS FARM LF GWM FEB.2013
Pace Project No.: 92148500

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92148500001	**SW-1**	EPA 6010	JMW	15	PASI-A
		EPA 7470	DMB	1	PASI-A
		EPA 8260	MCK	67	PASI-C
92148500002	**SW-2**	EPA 6010	JMW	15	PASI-A
		EPA 7470	DMB	1	PASI-A
		EPA 8260	MCK	67	PASI-C
92148500003	**BLANTON BRANCH**	EPA 6010	JMW	15	PASI-A
		EPA 7470	DMB	1	PASI-A
		EPA 8260	MCK	67	PASI-C
92148500004	**MW-6**	EPA 8081	RES	24	PASI-C
		EPA 6010	JMW	15	PASI-A
		EPA 7470	DMB	1	PASI-A
		EPA 8260	MCK	67	PASI-C
		SM 4500-CN-E	JDA	1	PASI-A
92148500005	**MW-7**	EPA 8081	RES	24	PASI-C
		EPA 6010	JMW	15	PASI-A
		EPA 7470	DMB	1	PASI-A
		EPA 8260	MCK	67	PASI-C
		SM 4500-CN-E	JDA	1	PASI-A
92148500006	**MW-8**	EPA 8081	RES	24	PASI-C
		EPA 6010	JMW	15	PASI-A
		EPA 7470	DMB	1	PASI-A
		EPA 8260	MCK	67	PASI-C
		SM 4500-CN-E	JDA	1	PASI-A
92148500007	**MW-9**	EPA 8081	RES	24	PASI-C
		EPA 6010	JMW	15	PASI-A
		EPA 7470	DMB	1	PASI-A
		EPA 8260	MCK	67	PASI-C
		SM 4500-CN-E	JDA	1	PASI-A
92148500008	**MW-10**	EPA 8081	RES	24	PASI-C
		EPA 6010	JMW	15	PASI-A
		EPA 7470	DMB	1	PASI-A
		EPA 8260	MCK	67	PASI-C
		SM 4500-CN-E	JDA	1	PASI-A
92148500009	**MW-19**	EPA 8081	RES	24	PASI-C
		EPA 6010	JMW	15	PASI-A
		EPA 7470	DMB	1	PASI-A

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SAMPLE ANALYTE COUNT

Project: FRANCIS FARM LF GWM FEB.2013
Pace Project No.: 92148500

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		EPA 8260	MCK	67	PASI-C
		SM 4500-CN-E	JDA	1	PASI-A
92148500010	**MW-20**	EPA 8081	RES	24	PASI-C
		EPA 6010	JMW	15	PASI-A
		EPA 7470	DMB	1	PASI-A
		EPA 8260	MCK	67	PASI-C
		SM 4500-CN-E	JDA	1	PASI-A
92148500011	**MW-21**	EPA 8081	RES	24	PASI-C
		EPA 6010	JMW	15	PASI-A
		EPA 7470	DMB	1	PASI-A
		EPA 8260	MCK	67	PASI-C
		SM 4500-CN-E	JDA	1	PASI-A
92148500012	**MW-1A**	EPA 8081	RES	24	PASI-C
		EPA 6010	JMW	15	PASI-A
		EPA 7470	DMB	1	PASI-A
		EPA 8260	MCK	67	PASI-C
		SM 4500-CN-E	JDA	1	PASI-A
92148500013	**MW-4**	EPA 8081	RES	24	PASI-C
		EPA 6010	JMW	15	PASI-A
		EPA 7470	DMB	1	PASI-A
		EPA 8260	MCK	67	PASI-C
		SM 4500-CN-E	JDA	1	PASI-A
92148500014	**MW-5**	EPA 8081	RES	24	PASI-C
		EPA 6010	JMW	15	PASI-A
		EPA 7470	DMB	1	PASI-A
		EPA 8260	MCK	67	PASI-C
		SM 4500-CN-E	JDA	1	PASI-A
92148500015	**MW-12**	EPA 8081	RES	24	PASI-C
		EPA 6010	JMW	15	PASI-A
		EPA 7470	DMB	1	PASI-A
		EPA 8260	MCK	67	PASI-C
		SM 4500-CN-E	JDA	1	PASI-A
92148500016	**MW-13**	EPA 8081	RES	24	PASI-C
		EPA 6010	JMW	15	PASI-A
		EPA 7470	DMB	1	PASI-A
		EPA 8260	MCK	67	PASI-C
		SM 4500-CN-E	EWS	1	PASI-A

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SAMPLE ANALYTE COUNT

Project: FRANCIS FARM LF GWM FEB.2013
Pace Project No.: 92148500

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92148500017	**MW-11**	EPA 8081	RES	24	PASI-C
		EPA 6010	JMW	15	PASI-A
		EPA 7470	DMB	1	PASI-A
		EPA 8260	MCK	67	PASI-C
		SM 4500-CN-E	EWS	1	PASI-A
92148500018	**MW-14**	EPA 8081	RES	24	PASI-C
		EPA 6010	JMW	15	PASI-A
		EPA 7470	DMB	1	PASI-A
		EPA 8260	MCK	67	PASI-C
		SM 4500-CN-E	EWS	1	PASI-A
92148500019	**MW-15**	EPA 8081	RES	24	PASI-C
		EPA 6010	JMW	15	PASI-A
		EPA 7470	DMB	1	PASI-A
		EPA 8260	MCK	67	PASI-C
		SM 4500-CN-E	EWS	1	PASI-A
92148500020	**MW-2A**	EPA 8081	RES	24	PASI-C
		EPA 6010	JMW	15	PASI-A
		EPA 7470	DMB	1	PASI-A
		EPA 8260	MCK	67	PASI-C
		SM 4500-CN-E	EWS	1	PASI-A
92148500021	**MW-3A**	EPA 8081	RES	24	PASI-C
		EPA 6010	JMW	15	PASI-A
		EPA 7470	DMB	1	PASI-A
		EPA 8260	MCK	67	PASI-C
		SM 4500-CN-E	EWS	1	PASI-A
92148500022	**MW-16**	EPA 8081	RES	24	PASI-C
		EPA 6010	JMW	15	PASI-A
		EPA 7470	DMB	1	PASI-A
		EPA 8260	MCK	67	PASI-C
		SM 4500-CN-E	EWS	1	PASI-A
92148500023	**MW-17**	EPA 8081	RES	24	PASI-C
		EPA 6010	JMW	15	PASI-A
		EPA 7470	DMB	1	PASI-A
		EPA 8260	MCK	67	PASI-C
		SM 4500-CN-E	EWS	1	PASI-A
92148500024	**MW-18**	EPA 8081	RES	24	PASI-C
		EPA 6010	JMW	15	PASI-A

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SAMPLE ANALYTE COUNT

Project: FRANCIS FARM LF GWM FEB.2013
Pace Project No.: 92148500

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		EPA 7470	DMB	1	PASI-A
		EPA 8260	MCK	67	PASI-C
		SM 4500-CN-E	EWS	1	PASI-A
92148500025	**TRAVEL BLANK**	EPA 8260	MCK	67	PASI-C
92148500026	**EQUIPMENT BLANK**	EPA 6010	JMW	15	PASI-A
		EPA 7470	DMB	1	PASI-A
		EPA 8260	MCK	67	PASI-C

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ANALYTICAL RESULTS

Project: FRANCIS FARM LF GWM FEB.2013
Pace Project No.: 92148500

Sample: SW-1 **Lab ID: 92148500001** Collected: 02/18/13 14:45 Received: 02/19/13 09:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Monitoring Well Data	Analytical Method:								
Collected By	**MPS**				1		02/28/13 15:56		
Collected Date	**2/18/13**				1		02/28/13 15:56		
Collected Time	**14:45**				1		02/28/13 15:56		
Field pH	**6.9**	Std. Units	0.10	0.10	1		02/28/13 15:56		
Field Temperature	**9.0**	deg C	0.50	0.50	1		02/28/13 15:56		
Field Specific Conductance	**68**	umhos/cm	1.0	1.0	1		02/28/13 15:56		
Turbidity	**2.4**	NTU	1.0	1.0	1		02/28/13 15:56		
6010 ICP Groundwater	Analytical Method: EPA 6010	Preparation Method: EPA 3010							
Antimony	ND	ug/L	5.0	2.6	1	02/22/13 20:35	02/24/13 12:34	7440-36-0	
Arsenic	ND	ug/L	10.0	2.7	1	02/22/13 20:35	02/24/13 12:34	7440-38-2	
Barium	**35.0**	ug/L	5.0	0.20	1	02/22/13 20:35	02/24/13 12:34	7440-39-3	
Beryllium	ND	ug/L	1.0	0.10	1	02/22/13 20:35	02/24/13 12:34	7440-41-7	
Cadmium	ND	ug/L	1.0	0.50	1	02/22/13 20:35	02/24/13 12:34	7440-43-9	
Chromium	**0.54J**	ug/L	5.0	0.40	1	02/22/13 20:35	02/24/13 12:34	7440-47-3	
Cobalt	ND	ug/L	5.0	0.60	1	02/22/13 20:35	02/24/13 12:34	7440-48-4	
Copper	**0.38J**	ug/L	5.0	0.30	1	02/22/13 20:35	02/24/13 12:34	7440-50-8	
Lead	ND	ug/L	5.0	4.0	1	02/22/13 20:35	02/24/13 12:34	7439-92-1	
Nickel	ND	ug/L	5.0	1.7	1	02/22/13 20:35	02/24/13 12:34	7440-02-0	
Selenium	**0.28J**	ug/L	10.0	0.10	1	02/22/13 20:35	02/24/13 12:34	7782-49-2	
Silver	**0.31J**	ug/L	5.0	0.10	1	02/22/13 20:35	02/24/13 12:34	7440-22-4	
Thallium	ND	ug/L	5.4	3.0	1	02/22/13 20:35	02/24/13 12:34	7440-28-0	
Vanadium	**1.3J**	ug/L	5.0	0.20	1	02/22/13 20:35	02/24/13 12:34	7440-62-2	
Zinc	**6.0J**	ug/L	10.0	0.40	1	02/22/13 20:35	02/24/13 12:34	7440-66-6	
7470 Mercury	Analytical Method: EPA 7470	Preparation Method: EPA 7470							
Mercury	ND	ug/L	0.20	0.10	1	02/21/13 19:25	02/22/13 13:54	7439-97-6	
8260 MSV Low Level Landfill	Analytical Method: EPA 8260								
Acetone	ND	ug/L	25.0	10.0	1		02/20/13 15:55	67-64-1	
Acetonitrile	ND	ug/L	50.0	2.2	1		02/20/13 15:55	75-05-8	
Acrylonitrile	ND	ug/L	10.0	1.9	1		02/20/13 15:55	107-13-1	
Allyl chloride	ND	ug/L	2.0	1.5	1		02/20/13 15:55	107-05-1	
Benzene	ND	ug/L	1.0	0.25	1		02/20/13 15:55	71-43-2	
Bromochloromethane	ND	ug/L	1.0	0.17	1		02/20/13 15:55	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	0.18	1		02/20/13 15:55	75-27-4	
Bromoform	ND	ug/L	1.0	0.26	1		02/20/13 15:55	75-25-2	
Bromomethane	ND	ug/L	2.0	0.29	1		02/20/13 15:55	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	0.96	1		02/20/13 15:55	78-93-3	
Carbon disulfide	ND	ug/L	2.0	1.2	1		02/20/13 15:55	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.25	1		02/20/13 15:55	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.23	1		02/20/13 15:55	108-90-7	
Chloroethane	ND	ug/L	1.0	0.54	1		02/20/13 15:55	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		02/20/13 15:55	67-66-3	
Chloromethane	ND	ug/L	1.0	0.11	1		02/20/13 15:55	74-87-3	
Chloroprene	ND	ug/L	5.0	0.27	1		02/20/13 15:55	126-99-8	

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ANALYTICAL RESULTS

Project: FRANCIS FARM LF GWM FEB.2013
Pace Project No.: 92148500

Sample: SW-1 **Lab ID: 92148500001** Collected: 02/18/13 14:45 Received: 02/19/13 09:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level Landfill	Analytical Method: EPA 8260								
1,2-Dibromo-3-chloropropane	ND	ug/L	5.0	2.5	1		02/20/13 15:55	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		02/20/13 15:55	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.27	1		02/20/13 15:55	106-93-4	
Dibromomethane	ND	ug/L	1.0	0.21	1		02/20/13 15:55	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	0.30	1		02/20/13 15:55	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	0.24	1		02/20/13 15:55	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	0.33	1		02/20/13 15:55	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	1.0	1.0	1		02/20/13 15:55	110-57-6	
Dichlorodifluoromethane	ND	ug/L	1.0	0.21	1		02/20/13 15:55	75-71-8	
1,1-Dichloroethane	ND	ug/L	1.0	0.32	1		02/20/13 15:55	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		02/20/13 15:55	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.56	1		02/20/13 15:55	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.19	1		02/20/13 15:55	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.49	1		02/20/13 15:55	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.27	1		02/20/13 15:55	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	0.28	1		02/20/13 15:55	142-28-9	
2,2-Dichloropropane	ND	ug/L	1.0	0.13	1		02/20/13 15:55	594-20-7	
1,1-Dichloropropene	ND	ug/L	1.0	0.49	1		02/20/13 15:55	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.13	1		02/20/13 15:55	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.26	1		02/20/13 15:55	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.30	1		02/20/13 15:55	100-41-4	
Ethyl methacrylate	ND	ug/L	1.0	0.20	1		02/20/13 15:55	97-63-2	
2-Hexanone	ND	ug/L	5.0	0.46	1		02/20/13 15:55	591-78-6	
Iodomethane	ND	ug/L	5.0	0.32	1		02/20/13 15:55	74-88-4	
Isobutanol	ND	ug/L	100	35.0	1		02/20/13 15:55	78-83-1	
Methacrylonitrile	ND	ug/L	10.0	0.93	1		02/20/13 15:55	126-98-7	
Methylene Chloride	ND	ug/L	1.0	0.97	1		02/20/13 15:55	75-09-2	
Methyl methacrylate	ND	ug/L	2.0	2.0	1		02/20/13 15:55	80-62-6	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	0.33	1		02/20/13 15:55	108-10-1	
Naphthalene	ND	ug/L	1.0	0.24	1		02/20/13 15:55	91-20-3	
Propionitrile	ND	ug/L	20.0	3.6	1		02/20/13 15:55	107-12-0	
Styrene	ND	ug/L	1.0	0.26	1		02/20/13 15:55	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	0.33	1		02/20/13 15:55	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.40	1		02/20/13 15:55	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		02/20/13 15:55	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		02/20/13 15:55	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		02/20/13 15:55	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.29	1		02/20/13 15:55	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.47	1		02/20/13 15:55	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	0.20	1		02/20/13 15:55	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	0.41	1		02/20/13 15:55	96-18-4	
Vinyl acetate	ND	ug/L	2.0	0.35	1		02/20/13 15:55	108-05-4	
Vinyl chloride	ND	ug/L	1.0	0.62	1		02/20/13 15:55	75-01-4	
Xylene (Total)	ND	ug/L	2.0	0.66	1		02/20/13 15:55	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	0.66	1		02/20/13 15:55	179601-23-1	
o-Xylene	ND	ug/L	1.0	0.23	1		02/20/13 15:55	95-47-6	

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ANALYTICAL RESULTS

Project: FRANCIS FARM LF GWM FEB.2013
Pace Project No.: 92148500

Sample: SW-1 **Lab ID: 92148500001** Collected: 02/18/13 14:45 Received: 02/19/13 09:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level Landfill	Analytical Method: EPA 8260								
Surrogates									
4-Bromofluorobenzene (S)	96	%	70-130		1		02/20/13 15:55	460-00-4	
Dibromofluoromethane (S)	109	%	70-130		1		02/20/13 15:55	1868-53-7	
1,2-Dichloroethane-d4 (S)	106	%	70-130		1		02/20/13 15:55	17060-07-0	
Toluene-d8 (S)	101	%	70-130		1		02/20/13 15:55	2037-26-5	

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ANALYTICAL RESULTS

Project: FRANCIS FARM LF GWM FEB.2013
Pace Project No.: 92148500

Sample: SW-2 **Lab ID: 92148500002** Collected: 02/18/13 15:05 Received: 02/19/13 09:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Monitoring Well Data	Analytical Method:								
Collected By	**MPS**				1		02/28/13 15:57		
Collected Date	**2/18/13**				1		02/28/13 15:57		
Collected Time	**15:05**				1		02/28/13 15:57		
Field pH	**7.1**	Std. Units	0.10	0.10	1		02/28/13 15:57		
Field Temperature	**9.4**	deg C	0.50	0.50	1		02/28/13 15:57		
Field Specific Conductance	**75**	umhos/cm	1.0	1.0	1		02/28/13 15:57		
Turbidity	**2.48**	NTU	1.0	1.0	1		02/28/13 15:57		
6010 ICP Groundwater	Analytical Method: EPA 6010	Preparation Method: EPA 3010							
Antimony	ND	ug/L	5.0	2.6	1	02/22/13 20:35	02/24/13 12:38	7440-36-0	
Arsenic	ND	ug/L	10.0	2.7	1	02/22/13 20:35	02/24/13 12:38	7440-38-2	
Barium	**38.0**	ug/L	5.0	0.20	1	02/22/13 20:35	02/24/13 12:38	7440-39-3	
Beryllium	ND	ug/L	1.0	0.10	1	02/22/13 20:35	02/24/13 12:38	7440-41-7	
Cadmium	ND	ug/L	1.0	0.50	1	02/22/13 20:35	02/24/13 12:38	7440-43-9	
Chromium	**1.0J**	ug/L	5.0	0.40	1	02/22/13 20:35	02/24/13 12:38	7440-47-3	
Cobalt	ND	ug/L	5.0	0.60	1	02/22/13 20:35	02/24/13 12:38	7440-48-4	
Copper	ND	ug/L	5.0	0.30	1	02/22/13 20:35	02/24/13 12:38	7440-50-8	
Lead	ND	ug/L	5.0	4.0	1	02/22/13 20:35	02/24/13 12:38	7439-92-1	
Nickel	ND	ug/L	5.0	1.7	1	02/22/13 20:35	02/24/13 12:38	7440-02-0	
Selenium	**2.6J**	ug/L	10.0	0.10	1	02/22/13 20:35	02/24/13 12:38	7782-49-2	
Silver	**0.15J**	ug/L	5.0	0.10	1	02/22/13 20:35	02/24/13 12:38	7440-22-4	
Thallium	ND	ug/L	5.4	3.0	1	02/22/13 20:35	02/24/13 12:38	7440-28-0	
Vanadium	**1.6J**	ug/L	5.0	0.20	1	02/22/13 20:35	02/24/13 12:38	7440-62-2	
Zinc	**4.7J**	ug/L	10.0	0.40	1	02/22/13 20:35	02/24/13 12:38	7440-66-6	
7470 Mercury	Analytical Method: EPA 7470	Preparation Method: EPA 7470							
Mercury	ND	ug/L	0.20	0.10	1	02/21/13 19:25	02/22/13 13:56	7439-97-6	
8260 MSV Low Level Landfill	Analytical Method: EPA 8260								
Acetone	ND	ug/L	25.0	10.0	1		02/20/13 16:11	67-64-1	
Acetonitrile	ND	ug/L	50.0	2.2	1		02/20/13 16:11	75-05-8	
Acrylonitrile	ND	ug/L	10.0	1.9	1		02/20/13 16:11	107-13-1	
Allyl chloride	ND	ug/L	2.0	1.5	1		02/20/13 16:11	107-05-1	
Benzene	ND	ug/L	1.0	0.25	1		02/20/13 16:11	71-43-2	
Bromochloromethane	ND	ug/L	1.0	0.17	1		02/20/13 16:11	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	0.18	1		02/20/13 16:11	75-27-4	
Bromoform	ND	ug/L	1.0	0.26	1		02/20/13 16:11	75-25-2	
Bromomethane	ND	ug/L	2.0	0.29	1		02/20/13 16:11	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	0.96	1		02/20/13 16:11	78-93-3	
Carbon disulfide	ND	ug/L	2.0	1.2	1		02/20/13 16:11	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.25	1		02/20/13 16:11	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.23	1		02/20/13 16:11	108-90-7	
Chloroethane	ND	ug/L	1.0	0.54	1		02/20/13 16:11	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		02/20/13 16:11	67-66-3	
Chloromethane	ND	ug/L	1.0	0.11	1		02/20/13 16:11	74-87-3	
Chloroprene	ND	ug/L	5.0	0.27	1		02/20/13 16:11	126-99-8	

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ANALYTICAL RESULTS

Project: FRANCIS FARM LF GWM FEB.2013
Pace Project No.: 92148500

Sample: SW-2 **Lab ID: 92148500002** Collected: 02/18/13 15:05 Received: 02/19/13 09:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level Landfill	Analytical Method: EPA 8260								
1,2-Dibromo-3-chloropropane	ND	ug/L	5.0	2.5	1		02/20/13 16:11	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		02/20/13 16:11	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.27	1		02/20/13 16:11	106-93-4	
Dibromomethane	ND	ug/L	1.0	0.21	1		02/20/13 16:11	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	0.30	1		02/20/13 16:11	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	0.24	1		02/20/13 16:11	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	0.33	1		02/20/13 16:11	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	1.0	1.0	1		02/20/13 16:11	110-57-6	
Dichlorodifluoromethane	ND	ug/L	1.0	0.21	1		02/20/13 16:11	75-71-8	
1,1-Dichloroethane	ND	ug/L	1.0	0.32	1		02/20/13 16:11	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		02/20/13 16:11	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.56	1		02/20/13 16:11	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.19	1		02/20/13 16:11	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.49	1		02/20/13 16:11	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.27	1		02/20/13 16:11	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	0.28	1		02/20/13 16:11	142-28-9	
2,2-Dichloropropane	ND	ug/L	1.0	0.13	1		02/20/13 16:11	594-20-7	
1,1-Dichloropropene	ND	ug/L	1.0	0.49	1		02/20/13 16:11	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.13	1		02/20/13 16:11	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.26	1		02/20/13 16:11	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.30	1		02/20/13 16:11	100-41-4	
Ethyl methacrylate	ND	ug/L	1.0	0.20	1		02/20/13 16:11	97-63-2	
2-Hexanone	ND	ug/L	5.0	0.46	1		02/20/13 16:11	591-78-6	
Iodomethane	ND	ug/L	5.0	0.32	1		02/20/13 16:11	74-88-4	
Isobutanol	ND	ug/L	100	35.0	1		02/20/13 16:11	78-83-1	
Methacrylonitrile	ND	ug/L	10.0	0.93	1		02/20/13 16:11	126-98-7	
Methylene Chloride	ND	ug/L	1.0	0.97	1		02/20/13 16:11	75-09-2	
Methyl methacrylate	ND	ug/L	2.0	2.0	1		02/20/13 16:11	80-62-6	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	0.33	1		02/20/13 16:11	108-10-1	
Naphthalene	ND	ug/L	1.0	0.24	1		02/20/13 16:11	91-20-3	
Propionitrile	ND	ug/L	20.0	3.6	1		02/20/13 16:11	107-12-0	
Styrene	ND	ug/L	1.0	0.26	1		02/20/13 16:11	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	0.33	1		02/20/13 16:11	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.40	1		02/20/13 16:11	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		02/20/13 16:11	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		02/20/13 16:11	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		02/20/13 16:11	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.29	1		02/20/13 16:11	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.47	1		02/20/13 16:11	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	0.20	1		02/20/13 16:11	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	0.41	1		02/20/13 16:11	96-18-4	
Vinyl acetate	ND	ug/L	2.0	0.35	1		02/20/13 16:11	108-05-4	
Vinyl chloride	ND	ug/L	1.0	0.62	1		02/20/13 16:11	75-01-4	
Xylene (Total)	ND	ug/L	2.0	0.66	1		02/20/13 16:11	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	0.66	1		02/20/13 16:11	179601-23-1	
o-Xylene	ND	ug/L	1.0	0.23	1		02/20/13 16:11	95-47-6	

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ANALYTICAL RESULTS

Project: FRANCIS FARM LF GWM FEB.2013
Pace Project No.: 92148500

Sample: SW-2 **Lab ID: 92148500002** Collected: 02/18/13 15:05 Received: 02/19/13 09:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level Landfill	Analytical Method: EPA 8260								
Surrogates									
4-Bromofluorobenzene (S)	100	%	70-130		1		02/20/13 16:11	460-00-4	
Dibromofluoromethane (S)	106	%	70-130		1		02/20/13 16:11	1868-53-7	
1,2-Dichloroethane-d4 (S)	102	%	70-130		1		02/20/13 16:11	17060-07-0	
Toluene-d8 (S)	101	%	70-130		1		02/20/13 16:11	2037-26-5	

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ANALYTICAL RESULTS

Project: FRANCIS FARM LF GWM FEB.2013
Pace Project No.: 92148500

Sample: BLANTON BRANCH **Lab ID: 92148500003** Collected: 02/18/13 15:05 Received: 02/19/13 09:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Monitoring Well Data	Analytical Method:								
Collected By	**MPS**				1		02/28/13 15:58		
Collected Date	**2/18/13**				1		02/28/13 15:58		
Collected Time	**15:15**				1		02/28/13 15:58		
Field pH	**7.1**	Std. Units	0.10	0.10	1		02/28/13 15:58		
Field Temperature	**11.3**	deg C	0.50	0.50	1		02/28/13 15:58		
Field Specific Conductance	**97**	umhos/cm	1.0	1.0	1		02/28/13 15:58		
Turbidity	**294**	NTU	1.0	1.0	1		02/28/13 15:58		
6010 ICP Groundwater	Analytical Method: EPA 6010	Preparation Method: EPA 3010							
Antimony	ND	ug/L	5.0	2.6	1	02/22/13 20:35	02/24/13 12:41	7440-36-0	
Arsenic	ND	ug/L	10.0	2.7	1	02/22/13 20:35	02/24/13 12:41	7440-38-2	
Barium	**41.4**	ug/L	5.0	0.20	1	02/22/13 20:35	02/24/13 12:41	7440-39-3	
Beryllium	ND	ug/L	1.0	0.10	1	02/22/13 20:35	02/24/13 12:41	7440-41-7	
Cadmium	ND	ug/L	1.0	0.50	1	02/22/13 20:35	02/24/13 12:41	7440-43-9	
Chromium	**0.52J**	ug/L	5.0	0.40	1	02/22/13 20:35	02/24/13 12:41	7440-47-3	
Cobalt	ND	ug/L	5.0	0.60	1	02/22/13 20:35	02/24/13 12:41	7440-48-4	
Copper	ND	ug/L	5.0	0.30	1	02/22/13 20:35	02/24/13 12:41	7440-50-8	
Lead	ND	ug/L	5.0	4.0	1	02/22/13 20:35	02/24/13 12:41	7439-92-1	
Nickel	ND	ug/L	5.0	1.7	1	02/22/13 20:35	02/24/13 12:41	7440-02-0	
Selenium	**2.2J**	ug/L	10.0	0.10	1	02/22/13 20:35	02/24/13 12:41	7782-49-2	
Silver	ND	ug/L	5.0	0.10	1	02/22/13 20:35	02/24/13 12:41	7440-22-4	
Thallium	ND	ug/L	5.4	3.0	1	02/22/13 20:35	02/24/13 12:41	7440-28-0	
Vanadium	**1.6J**	ug/L	5.0	0.20	1	02/22/13 20:35	02/24/13 12:41	7440-62-2	
Zinc	**6.5J**	ug/L	10.0	0.40	1	02/22/13 20:35	02/24/13 12:41	7440-66-6	
7470 Mercury	Analytical Method: EPA 7470	Preparation Method: EPA 7470							
Mercury	ND	ug/L	0.20	0.10	1	02/21/13 19:25	02/22/13 13:59	7439-97-6	
8260 MSV Low Level Landfill	Analytical Method: EPA 8260								
Acetone	ND	ug/L	25.0	10.0	1		02/20/13 16:27	67-64-1	
Acetonitrile	ND	ug/L	50.0	2.2	1		02/20/13 16:27	75-05-8	
Acrylonitrile	ND	ug/L	10.0	1.9	1		02/20/13 16:27	107-13-1	
Allyl chloride	ND	ug/L	2.0	1.5	1		02/20/13 16:27	107-05-1	
Benzene	ND	ug/L	1.0	0.25	1		02/20/13 16:27	71-43-2	
Bromochloromethane	ND	ug/L	1.0	0.17	1		02/20/13 16:27	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	0.18	1		02/20/13 16:27	75-27-4	
Bromoform	ND	ug/L	1.0	0.26	1		02/20/13 16:27	75-25-2	
Bromomethane	ND	ug/L	2.0	0.29	1		02/20/13 16:27	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	0.96	1		02/20/13 16:27	78-93-3	
Carbon disulfide	ND	ug/L	2.0	1.2	1		02/20/13 16:27	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.25	1		02/20/13 16:27	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.23	1		02/20/13 16:27	108-90-7	
Chloroethane	ND	ug/L	1.0	0.54	1		02/20/13 16:27	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		02/20/13 16:27	67-66-3	
Chloromethane	ND	ug/L	1.0	0.11	1		02/20/13 16:27	74-87-3	
Chloroprene	ND	ug/L	5.0	0.27	1		02/20/13 16:27	126-99-8	

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ANALYTICAL RESULTS

Project: FRANCIS FARM LF GWM FEB.2013
Pace Project No.: 92148500

Sample: BLANTON BRANCH **Lab ID: 92148500003** Collected: 02/18/13 15:05 Received: 02/19/13 09:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level Landfill	Analytical Method: EPA 8260								
1,2-Dibromo-3-chloropropane	ND	ug/L	5.0	2.5	1		02/20/13 16:27	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		02/20/13 16:27	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.27	1		02/20/13 16:27	106-93-4	
Dibromomethane	ND	ug/L	1.0	0.21	1		02/20/13 16:27	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	0.30	1		02/20/13 16:27	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	0.24	1		02/20/13 16:27	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	0.33	1		02/20/13 16:27	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	1.0	1.0	1		02/20/13 16:27	110-57-6	
Dichlorodifluoromethane	ND	ug/L	1.0	0.21	1		02/20/13 16:27	75-71-8	
1,1-Dichloroethane	ND	ug/L	1.0	0.32	1		02/20/13 16:27	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		02/20/13 16:27	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.56	1		02/20/13 16:27	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.19	1		02/20/13 16:27	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.49	1		02/20/13 16:27	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.27	1		02/20/13 16:27	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	0.28	1		02/20/13 16:27	142-28-9	
2,2-Dichloropropane	ND	ug/L	1.0	0.13	1		02/20/13 16:27	594-20-7	
1,1-Dichloropropene	ND	ug/L	1.0	0.49	1		02/20/13 16:27	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.13	1		02/20/13 16:27	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.26	1		02/20/13 16:27	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.30	1		02/20/13 16:27	100-41-4	
Ethyl methacrylate	ND	ug/L	1.0	0.20	1		02/20/13 16:27	97-63-2	
2-Hexanone	ND	ug/L	5.0	0.46	1		02/20/13 16:27	591-78-6	
Iodomethane	ND	ug/L	5.0	0.32	1		02/20/13 16:27	74-88-4	
Isobutanol	ND	ug/L	100	35.0	1		02/20/13 16:27	78-83-1	
Methacrylonitrile	ND	ug/L	10.0	0.93	1		02/20/13 16:27	126-98-7	
Methylene Chloride	ND	ug/L	1.0	0.97	1		02/20/13 16:27	75-09-2	
Methyl methacrylate	ND	ug/L	2.0	2.0	1		02/20/13 16:27	80-62-6	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	0.33	1		02/20/13 16:27	108-10-1	
Naphthalene	ND	ug/L	1.0	0.24	1		02/20/13 16:27	91-20-3	
Propionitrile	ND	ug/L	20.0	3.6	1		02/20/13 16:27	107-12-0	
Styrene	ND	ug/L	1.0	0.26	1		02/20/13 16:27	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	0.33	1		02/20/13 16:27	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.40	1		02/20/13 16:27	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		02/20/13 16:27	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		02/20/13 16:27	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		02/20/13 16:27	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.29	1		02/20/13 16:27	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.47	1		02/20/13 16:27	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	0.20	1		02/20/13 16:27	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	0.41	1		02/20/13 16:27	96-18-4	
Vinyl acetate	ND	ug/L	2.0	0.35	1		02/20/13 16:27	108-05-4	
Vinyl chloride	ND	ug/L	1.0	0.62	1		02/20/13 16:27	75-01-4	
Xylene (Total)	ND	ug/L	2.0	0.66	1		02/20/13 16:27	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	0.66	1		02/20/13 16:27	179601-23-1	
o-Xylene	ND	ug/L	1.0	0.23	1		02/20/13 16:27	95-47-6	

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ANALYTICAL RESULTS

Project: FRANCIS FARM LF GWM FEB.2013
Pace Project No.: 92148500

Sample: BLANTON BRANCH **Lab ID: 92148500003** Collected: 02/18/13 15:05 Received: 02/19/13 09:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level Landfill	Analytical Method: EPA 8260								
Surrogates									
4-Bromofluorobenzene (S)	99	%	70-130		1		02/20/13 16:27	460-00-4	
Dibromofluoromethane (S)	111	%	70-130		1		02/20/13 16:27	1868-53-7	
1,2-Dichloroethane-d4 (S)	104	%	70-130		1		02/20/13 16:27	17060-07-0	
Toluene-d8 (S)	100	%	70-130		1		02/20/13 16:27	2037-26-5	

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ANALYTICAL RESULTS

Project: FRANCIS FARM LF GWM FEB.2013
Pace Project No.: 92148500

Sample: MW-6 **Lab ID: 92148500004** Collected: 02/18/13 15:35 Received: 02/19/13 09:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Monitoring Well Data	Analytical Method:								
Collected By	**MPS**				1		02/28/13 16:10		
Collected Date	**2/18/13**				1		02/28/13 16:10		
Collected Time	**15:35**				1		02/28/13 16:10		
Field pH	**6.0**	Std. Units	0.10	0.10	1		02/28/13 16:10		
Field Temperature	**12.6**	deg C	0.50	0.50	1		02/28/13 16:10		
Field Specific Conductance	**57**	umhos/cm	1.0	1.0	1		02/28/13 16:10		
Turbidity	**1.30**	NTU	1.0	1.0	1		02/28/13 16:10		
8081 Organochlorine Pesticides	Analytical Method: EPA 8081 Preparation Method: EPA 3510								
Aldrin	ND	ug/L	0.050	0.050	1	02/25/13 13:20	03/04/13 23:44	309-00-2	
alpha-BHC	ND	ug/L	0.050	0.050	1	02/25/13 13:20	03/04/13 23:44	319-84-6	
beta-BHC	ND	ug/L	0.050	0.050	1	02/25/13 13:20	03/04/13 23:44	319-85-7	
delta-BHC	ND	ug/L	0.050	0.050	1	02/25/13 13:20	03/04/13 23:44	319-86-8	
gamma-BHC (Lindane)	ND	ug/L	0.050	0.050	1	02/25/13 13:20	03/04/13 23:44	58-89-9	
Chlordane (Technical)	ND	ug/L	0.20	0.20	1	02/25/13 13:20	03/04/13 23:44	57-74-9	
4,4'-DDD	ND	ug/L	0.050	0.050	1	02/25/13 13:20	03/04/13 23:44	72-54-8	
4,4'-DDE	ND	ug/L	0.050	0.050	1	02/25/13 13:20	03/04/13 23:44	72-55-9	
4,4'-DDT	ND	ug/L	0.050	0.050	1	02/25/13 13:20	03/04/13 23:44	50-29-3	
Dieldrin	ND	ug/L	0.050	0.050	1	02/25/13 13:20	03/04/13 23:44	60-57-1	
Endosulfan I	ND	ug/L	0.050	0.050	1	02/25/13 13:20	03/04/13 23:44	959-98-8	
Endosulfan II	ND	ug/L	0.050	0.050	1	02/25/13 13:20	03/04/13 23:44	33213-65-9	
Endosulfan sulfate	ND	ug/L	0.050	0.050	1	02/25/13 13:20	03/04/13 23:44	1031-07-8	
Endrin	ND	ug/L	0.050	0.050	1	02/25/13 13:20	03/04/13 23:44	72-20-8	
Endrin aldehyde	ND	ug/L	0.050	0.050	1	02/25/13 13:20	03/04/13 23:44	7421-93-4	
Endrin ketone	ND	ug/L	0.050	0.050	1	02/25/13 13:20	03/04/13 23:44	53494-70-5	
Heptachlor	ND	ug/L	0.050	0.050	1	02/25/13 13:20	03/04/13 23:44	76-44-8	
Heptachlor epoxide	ND	ug/L	0.050	0.050	1	02/25/13 13:20	03/04/13 23:44	1024-57-3	
Hexachlorobenzene	ND	ug/L	0.050	0.050	1	02/25/13 13:20	03/04/13 23:44	118-74-1	
Methoxychlor	ND	ug/L	0.15	0.15	1	02/25/13 13:20	03/04/13 23:44	72-43-5	
Mirex	ND	ug/L	0.15	0.15	1	02/25/13 13:20	03/04/13 23:44	2385-85-5	
Toxaphene	ND	ug/L	0.20	0.20	1	02/25/13 13:20	03/04/13 23:44	8001-35-2	
Surrogates									
Tetrachloro-m-xylene (S)	78	%	20-130		1	02/25/13 13:20	03/04/13 23:44	877-09-8	
Decachlorobiphenyl (S)	55	%	20-130		1	02/25/13 13:20	03/04/13 23:44	2051-24-3	
6010 ICP Groundwater	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Antimony	ND	ug/L	5.0	2.6	1	02/22/13 20:35	02/24/13 12:44	7440-36-0	
Arsenic	ND	ug/L	10.0	2.7	1	02/22/13 20:35	02/24/13 12:44	7440-38-2	
Barium	**16.2**	ug/L	5.0	0.20	1	02/22/13 20:35	02/24/13 12:44	7440-39-3	
Beryllium	ND	ug/L	1.0	0.10	1	02/22/13 20:35	02/24/13 12:44	7440-41-7	
Cadmium	ND	ug/L	1.0	0.50	1	02/22/13 20:35	02/24/13 12:44	7440-43-9	
Chromium	**0.44J**	ug/L	5.0	0.40	1	02/22/13 20:35	02/24/13 12:44	7440-47-3	
Cobalt	ND	ug/L	5.0	0.60	1	02/22/13 20:35	02/24/13 12:44	7440-48-4	
Copper	ND	ug/L	5.0	0.30	1	02/22/13 20:35	02/24/13 12:44	7440-50-8	
Lead	ND	ug/L	5.0	4.0	1	02/22/13 20:35	02/24/13 12:44	7439-92-1	
Nickel	ND	ug/L	5.0	1.7	1	02/22/13 20:35	02/24/13 12:44	7440-02-0	

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ANALYTICAL RESULTS

Project: FRANCIS FARM LF GWM FEB.2013
Pace Project No.: 92148500

Sample: MW-6 **Lab ID: 92148500004** Collected: 02/18/13 15:35 Received: 02/19/13 09:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 ICP Groundwater	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Selenium	ND	ug/L	10.0	0.10	1	02/22/13 20:35	02/24/13 12:44	7782-49-2	
Silver	ND	ug/L	5.0	0.10	1	02/22/13 20:35	02/24/13 12:44	7440-22-4	
Thallium	ND	ug/L	5.4	3.0	1	02/22/13 20:35	02/24/13 12:44	7440-28-0	
Vanadium	**0.55J**	ug/L	5.0	0.20	1	02/22/13 20:35	02/24/13 12:44	7440-62-2	
Zinc	**19.5**	ug/L	10.0	0.40	1	02/22/13 20:35	02/24/13 12:44	7440-66-6	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470								
Mercury	ND	ug/L	0.20	0.10	1	02/21/13 19:25	02/22/13 14:02	7439-97-6	
8260 MSV Low Level Landfill	Analytical Method: EPA 8260								
Acetone	ND	ug/L	25.0	10.0	1		02/20/13 16:43	67-64-1	
Acetonitrile	ND	ug/L	50.0	2.2	1		02/20/13 16:43	75-05-8	
Acrylonitrile	ND	ug/L	10.0	1.9	1		02/20/13 16:43	107-13-1	
Allyl chloride	ND	ug/L	2.0	1.5	1		02/20/13 16:43	107-05-1	
Benzene	ND	ug/L	1.0	0.25	1		02/20/13 16:43	71-43-2	
Bromochloromethane	ND	ug/L	1.0	0.17	1		02/20/13 16:43	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	0.18	1		02/20/13 16:43	75-27-4	
Bromoform	ND	ug/L	1.0	0.26	1		02/20/13 16:43	75-25-2	
Bromomethane	ND	ug/L	2.0	0.29	1		02/20/13 16:43	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	0.96	1		02/20/13 16:43	78-93-3	
Carbon disulfide	ND	ug/L	2.0	1.2	1		02/20/13 16:43	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.25	1		02/20/13 16:43	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.23	1		02/20/13 16:43	108-90-7	
Chloroethane	ND	ug/L	1.0	0.54	1		02/20/13 16:43	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		02/20/13 16:43	67-66-3	
Chloromethane	ND	ug/L	1.0	0.11	1		02/20/13 16:43	74-87-3	
Chloroprene	ND	ug/L	5.0	0.27	1		02/20/13 16:43	126-99-8	
1,2-Dibromo-3-chloropropane	ND	ug/L	5.0	2.5	1		02/20/13 16:43	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		02/20/13 16:43	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.27	1		02/20/13 16:43	106-93-4	
Dibromomethane	ND	ug/L	1.0	0.21	1		02/20/13 16:43	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	0.30	1		02/20/13 16:43	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	0.24	1		02/20/13 16:43	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	0.33	1		02/20/13 16:43	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	1.0	1.0	1		02/20/13 16:43	110-57-6	
Dichlorodifluoromethane	ND	ug/L	1.0	0.21	1		02/20/13 16:43	75-71-8	
1,1-Dichloroethane	ND	ug/L	1.0	0.32	1		02/20/13 16:43	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		02/20/13 16:43	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.56	1		02/20/13 16:43	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.19	1		02/20/13 16:43	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.49	1		02/20/13 16:43	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.27	1		02/20/13 16:43	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	0.28	1		02/20/13 16:43	142-28-9	
2,2-Dichloropropane	ND	ug/L	1.0	0.13	1		02/20/13 16:43	594-20-7	
1,1-Dichloropropene	ND	ug/L	1.0	0.49	1		02/20/13 16:43	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.13	1		02/20/13 16:43	10061-01-5	

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ANALYTICAL RESULTS

Project: FRANCIS FARM LF GWM FEB.2013
Pace Project No.: 92148500

Sample: MW-6 **Lab ID: 92148500004** Collected: 02/18/13 15:35 Received: 02/19/13 09:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level Landfill	Analytical Method: EPA 8260								
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.26	1		02/20/13 16:43	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.30	1		02/20/13 16:43	100-41-4	
Ethyl methacrylate	ND	ug/L	1.0	0.20	1		02/20/13 16:43	97-63-2	
2-Hexanone	ND	ug/L	5.0	0.46	1		02/20/13 16:43	591-78-6	
Iodomethane	ND	ug/L	5.0	0.32	1		02/20/13 16:43	74-88-4	
Isobutanol	ND	ug/L	100	35.0	1		02/20/13 16:43	78-83-1	
Methacrylonitrile	ND	ug/L	10.0	0.93	1		02/20/13 16:43	126-98-7	
Methylene Chloride	ND	ug/L	1.0	0.97	1		02/20/13 16:43	75-09-2	
Methyl methacrylate	ND	ug/L	2.0	2.0	1		02/20/13 16:43	80-62-6	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	0.33	1		02/20/13 16:43	108-10-1	
Naphthalene	ND	ug/L	1.0	0.24	1		02/20/13 16:43	91-20-3	
Propionitrile	ND	ug/L	20.0	3.6	1		02/20/13 16:43	107-12-0	
Styrene	ND	ug/L	1.0	0.26	1		02/20/13 16:43	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	0.33	1		02/20/13 16:43	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.40	1		02/20/13 16:43	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		02/20/13 16:43	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		02/20/13 16:43	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		02/20/13 16:43	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.29	1		02/20/13 16:43	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.47	1		02/20/13 16:43	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	0.20	1		02/20/13 16:43	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	0.41	1		02/20/13 16:43	96-18-4	
Vinyl acetate	ND	ug/L	2.0	0.35	1		02/20/13 16:43	108-05-4	
Vinyl chloride	ND	ug/L	1.0	0.62	1		02/20/13 16:43	75-01-4	
Xylene (Total)	ND	ug/L	2.0	0.66	1		02/20/13 16:43	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	0.66	1		02/20/13 16:43	179601-23-1	
o-Xylene	ND	ug/L	1.0	0.23	1		02/20/13 16:43	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	99	%	70-130		1		02/20/13 16:43	460-00-4	
Dibromofluoromethane (S)	109	%	70-130		1		02/20/13 16:43	1868-53-7	
1,2-Dichloroethane-d4 (S)	105	%	70-130		1		02/20/13 16:43	17060-07-0	
Toluene-d8 (S)	99	%	70-130		1		02/20/13 16:43	2037-26-5	
4500CNE Cyanide, Total	Analytical Method: SM 4500-CN-E								
Cyanide	ND	mg/L	0.0050	0.0050	1		02/23/13 14:42	57-12-5	

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ANALYTICAL RESULTS

Project: FRANCIS FARM LF GWM FEB.2013
Pace Project No.: 92148500

Sample: MW-7 **Lab ID: 92148500005** Collected: 02/18/13 15:55 Received: 02/19/13 09:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Monitoring Well Data	Analytical Method:								
Collected By	**MPS**				1		02/28/13 16:12		
Collected Date	**2/18/13**				1		02/28/13 16:12		
Collected Time	**15:55**				1		02/28/13 16:12		
Field pH	**6.0**	Std. Units	0.10	0.10	1		02/28/13 16:12		
Field Temperature	**13.4**	deg C	0.50	0.50	1		02/28/13 16:12		
Static Water Level	**6.08**	feet			1		02/28/13 16:12		
Field Specific Conductance	**333**	umhos/cm	1.0	1.0	1		02/28/13 16:12		
Turbidity	**5.40**	NTU	1.0	1.0	1		02/28/13 16:12		
8081 Organochlorine Pesticides	Analytical Method: EPA 8081 Preparation Method: EPA 3510								
Aldrin	ND	ug/L	0.050	0.050	1	02/25/13 13:20	03/05/13 00:02	309-00-2	
alpha-BHC	ND	ug/L	0.050	0.050	1	02/25/13 13:20	03/05/13 00:02	319-84-6	
beta-BHC	ND	ug/L	0.050	0.050	1	02/25/13 13:20	03/05/13 00:02	319-85-7	
delta-BHC	ND	ug/L	0.050	0.050	1	02/25/13 13:20	03/05/13 00:02	319-86-8	
gamma-BHC (Lindane)	**0.051**	ug/L	0.050	0.050	1	02/25/13 13:20	03/05/13 00:02	58-89-9	
Chlordane (Technical)	ND	ug/L	0.20	0.20	1	02/25/13 13:20	03/05/13 00:02	57-74-9	
4,4'-DDD	ND	ug/L	0.050	0.050	1	02/25/13 13:20	03/05/13 00:02	72-54-8	
4,4'-DDE	ND	ug/L	0.050	0.050	1	02/25/13 13:20	03/05/13 00:02	72-55-9	
4,4'-DDT	ND	ug/L	0.050	0.050	1	02/25/13 13:20	03/05/13 00:02	50-29-3	
Dieldrin	ND	ug/L	0.050	0.050	1	02/25/13 13:20	03/05/13 00:02	60-57-1	
Endosulfan I	ND	ug/L	0.050	0.050	1	02/25/13 13:20	03/05/13 00:02	959-98-8	
Endosulfan II	ND	ug/L	0.050	0.050	1	02/25/13 13:20	03/05/13 00:02	33213-65-9	
Endosulfan sulfate	ND	ug/L	0.050	0.050	1	02/25/13 13:20	03/05/13 00:02	1031-07-8	
Endrin	ND	ug/L	0.050	0.050	1	02/25/13 13:20	03/05/13 00:02	72-20-8	
Endrin aldehyde	ND	ug/L	0.050	0.050	1	02/25/13 13:20	03/05/13 00:02	7421-93-4	
Endrin ketone	ND	ug/L	0.050	0.050	1	02/25/13 13:20	03/05/13 00:02	53494-70-5	
Heptachlor	ND	ug/L	0.050	0.050	1	02/25/13 13:20	03/05/13 00:02	76-44-8	
Heptachlor epoxide	ND	ug/L	0.050	0.050	1	02/25/13 13:20	03/05/13 00:02	1024-57-3	
Hexachlorobenzene	ND	ug/L	0.050	0.050	1	02/25/13 13:20	03/05/13 00:02	118-74-1	
Methoxychlor	ND	ug/L	0.15	0.15	1	02/25/13 13:20	03/05/13 00:02	72-43-5	
Mirex	ND	ug/L	0.15	0.15	1	02/25/13 13:20	03/05/13 00:02	2385-85-5	
Toxaphene	ND	ug/L	0.20	0.20	1	02/25/13 13:20	03/05/13 00:02	8001-35-2	
Surrogates									
Tetrachloro-m-xylene (S)	92	%	20-130		1	02/25/13 13:20	03/05/13 00:02	877-09-8	
Decachlorobiphenyl (S)	67	%	20-130		1	02/25/13 13:20	03/05/13 00:02	2051-24-3	
6010 ICP Groundwater	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Antimony	ND	ug/L	5.0	2.6	1	02/22/13 20:35	02/24/13 12:47	7440-36-0	
Arsenic	**3.2J**	ug/L	10.0	2.7	1	02/22/13 20:35	02/24/13 12:47	7440-38-2	
Barium	**200**	ug/L	5.0	0.20	1	02/22/13 20:35	02/24/13 12:47	7440-39-3	
Beryllium	**0.10J**	ug/L	1.0	0.10	1	02/22/13 20:35	02/24/13 12:47	7440-41-7	
Cadmium	ND	ug/L	1.0	0.50	1	02/22/13 20:35	02/24/13 12:47	7440-43-9	
Chromium	**3.9J**	ug/L	5.0	0.40	1	02/22/13 20:35	02/24/13 12:47	7440-47-3	
Cobalt	ND	ug/L	5.0	0.60	1	02/22/13 20:35	02/24/13 12:47	7440-48-4	
Copper	ND	ug/L	5.0	0.30	1	02/22/13 20:35	02/24/13 12:47	7440-50-8	
Lead	ND	ug/L	5.0	4.0	1	02/22/13 20:35	02/24/13 12:47	7439-92-1	

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ANALYTICAL RESULTS

Project: FRANCIS FARM LF GWM FEB.2013
Pace Project No.: 92148500

Sample: MW-7 **Lab ID: 92148500005** Collected: 02/18/13 15:55 Received: 02/19/13 09:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 ICP Groundwater	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Nickel	**2.0J**	ug/L	5.0	1.7	1	02/22/13 20:35	02/24/13 12:47	7440-02-0	
Selenium	**3.5J**	ug/L	10.0	0.10	1	02/22/13 20:35	02/24/13 12:47	7782-49-2	
Silver	**0.63J**	ug/L	5.0	0.10	1	02/22/13 20:35	02/24/13 12:47	7440-22-4	
Thallium	ND	ug/L	5.4	3.0	1	02/22/13 20:35	02/24/13 12:47	7440-28-0	
Vanadium	**2.7J**	ug/L	5.0	0.20	1	02/22/13 20:35	02/24/13 12:47	7440-62-2	
Zinc	**9.2J**	ug/L	10.0	0.40	1	02/22/13 20:35	02/24/13 12:47	7440-66-6	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470								
Mercury	ND	ug/L	0.20	0.10	1	02/21/13 19:45	02/22/13 14:11	7439-97-6	M1
8260 MSV Low Level Landfill	Analytical Method: EPA 8260								
Acetone	ND	ug/L	25.0	10.0	1		02/20/13 16:58	67-64-1	
Acetonitrile	ND	ug/L	50.0	2.2	1		02/20/13 16:58	75-05-8	
Acrylonitrile	ND	ug/L	10.0	1.9	1		02/20/13 16:58	107-13-1	
Allyl chloride	ND	ug/L	2.0	1.5	1		02/20/13 16:58	107-05-1	
Benzene	**0.65J**	ug/L	1.0	0.25	1		02/20/13 16:58	71-43-2	
Bromochloromethane	ND	ug/L	1.0	0.17	1		02/20/13 16:58	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	0.18	1		02/20/13 16:58	75-27-4	
Bromoform	ND	ug/L	1.0	0.26	1		02/20/13 16:58	75-25-2	
Bromomethane	ND	ug/L	2.0	0.29	1		02/20/13 16:58	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	0.96	1		02/20/13 16:58	78-93-3	
Carbon disulfide	ND	ug/L	2.0	1.2	1		02/20/13 16:58	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.25	1		02/20/13 16:58	56-23-5	
Chlorobenzene	**1.1**	ug/L	1.0	0.23	1		02/20/13 16:58	108-90-7	
Chloroethane	**1.3**	ug/L	1.0	0.54	1		02/20/13 16:58	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		02/20/13 16:58	67-66-3	
Chloromethane	ND	ug/L	1.0	0.11	1		02/20/13 16:58	74-87-3	
Chloroprene	ND	ug/L	5.0	0.27	1		02/20/13 16:58	126-99-8	
1,2-Dibromo-3-chloropropane	ND	ug/L	5.0	2.5	1		02/20/13 16:58	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		02/20/13 16:58	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.27	1		02/20/13 16:58	106-93-4	
Dibromomethane	ND	ug/L	1.0	0.21	1		02/20/13 16:58	74-95-3	
1,2-Dichlorobenzene	**2.2**	ug/L	1.0	0.30	1		02/20/13 16:58	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	0.24	1		02/20/13 16:58	541-73-1	
1,4-Dichlorobenzene	**1.9**	ug/L	1.0	0.33	1		02/20/13 16:58	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	1.0	1.0	1		02/20/13 16:58	110-57-6	
Dichlorodifluoromethane	ND	ug/L	1.0	0.21	1		02/20/13 16:58	75-71-8	
1,1-Dichloroethane	**2.9**	ug/L	1.0	0.32	1		02/20/13 16:58	75-34-3	
1,2-Dichloroethane	**2.2**	ug/L	1.0	0.12	1		02/20/13 16:58	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.56	1		02/20/13 16:58	75-35-4	
cis-1,2-Dichloroethene	**2.6**	ug/L	1.0	0.19	1		02/20/13 16:58	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.49	1		02/20/13 16:58	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.27	1		02/20/13 16:58	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	0.28	1		02/20/13 16:58	142-28-9	
2,2-Dichloropropane	ND	ug/L	1.0	0.13	1		02/20/13 16:58	594-20-7	
1,1-Dichloropropene	ND	ug/L	1.0	0.49	1		02/20/13 16:58	563-58-6	

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ANALYTICAL RESULTS

Project: FRANCIS FARM LF GWM FEB.2013
Pace Project No.: 92148500

Sample: MW-7 **Lab ID: 92148500005** Collected: 02/18/13 15:55 Received: 02/19/13 09:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level Landfill	Analytical Method: EPA 8260								
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.13	1		02/20/13 16:58	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.26	1		02/20/13 16:58	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.30	1		02/20/13 16:58	100-41-4	
Ethyl methacrylate	ND	ug/L	1.0	0.20	1		02/20/13 16:58	97-63-2	
2-Hexanone	ND	ug/L	5.0	0.46	1		02/20/13 16:58	591-78-6	
Iodomethane	ND	ug/L	5.0	0.32	1		02/20/13 16:58	74-88-4	
Isobutanol	ND	ug/L	100	35.0	1		02/20/13 16:58	78-83-1	
Methacrylonitrile	ND	ug/L	10.0	0.93	1		02/20/13 16:58	126-98-7	
Methylene Chloride	ND	ug/L	1.0	0.97	1		02/20/13 16:58	75-09-2	
Methyl methacrylate	ND	ug/L	2.0	2.0	1		02/20/13 16:58	80-62-6	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	0.33	1		02/20/13 16:58	108-10-1	
Naphthalene	ND	ug/L	1.0	0.24	1		02/20/13 16:58	91-20-3	
Propionitrile	ND	ug/L	20.0	3.6	1		02/20/13 16:58	107-12-0	
Styrene	ND	ug/L	1.0	0.26	1		02/20/13 16:58	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	0.33	1		02/20/13 16:58	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.40	1		02/20/13 16:58	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		02/20/13 16:58	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		02/20/13 16:58	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		02/20/13 16:58	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.29	1		02/20/13 16:58	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.47	1		02/20/13 16:58	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	0.20	1		02/20/13 16:58	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	0.41	1		02/20/13 16:58	96-18-4	
Vinyl acetate	ND	ug/L	2.0	0.35	1		02/20/13 16:58	108-05-4	
Vinyl chloride	ND	ug/L	1.0	0.62	1		02/20/13 16:58	75-01-4	
Xylene (Total)	ND	ug/L	2.0	0.66	1		02/20/13 16:58	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	0.66	1		02/20/13 16:58	179601-23-1	
o-Xylene	ND	ug/L	1.0	0.23	1		02/20/13 16:58	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	97	%	70-130		1		02/20/13 16:58	460-00-4	
Dibromofluoromethane (S)	109	%	70-130		1		02/20/13 16:58	1868-53-7	
1,2-Dichloroethane-d4 (S)	104	%	70-130		1		02/20/13 16:58	17060-07-0	
Toluene-d8 (S)	99	%	70-130		1		02/20/13 16:58	2037-26-5	
4500CNE Cyanide, Total	Analytical Method: SM 4500-CN-E								
Cyanide	ND	mg/L	0.0050	0.0050	1		02/23/13 14:43	57-12-5	

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ANALYTICAL RESULTS

Project: FRANCIS FARM LF GWM FEB.2013
Pace Project No.: 92148500

Sample: MW-8 **Lab ID: 92148500006** Collected: 02/18/13 16:15 Received: 02/19/13 09:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Monitoring Well Data	Analytical Method:								
Collected By	**MPS**				1		02/28/13 16:14		
Collected Date	**2/18/13**				1		02/28/13 16:14		
Collected Time	**16:15**				1		02/28/13 16:14		
Field pH	**6.3**	Std. Units	0.10	0.10	1		02/28/13 16:14		
Field Temperature	**10.4**	deg C	0.50	0.50	1		02/28/13 16:14		
Static Water Level	**4.85**	feet			1		02/28/13 16:14		
Field Specific Conductance	**198**	umhos/cm	1.0	1.0	1		02/28/13 16:14		
Turbidity	**12.9**	NTU	1.0	1.0	1		02/28/13 16:14		
8081 Organochlorine Pesticides	Analytical Method: EPA 8081 Preparation Method: EPA 3510								
Aldrin	ND	ug/L	0.050	0.050	1	02/25/13 13:20	03/05/13 00:19	309-00-2	
alpha-BHC	ND	ug/L	0.050	0.050	1	02/25/13 13:20	03/05/13 00:19	319-84-6	
beta-BHC	ND	ug/L	0.050	0.050	1	02/25/13 13:20	03/05/13 00:19	319-85-7	
delta-BHC	ND	ug/L	0.050	0.050	1	02/25/13 13:20	03/05/13 00:19	319-86-8	
gamma-BHC (Lindane)	ND	ug/L	0.050	0.050	1	02/25/13 13:20	03/05/13 00:19	58-89-9	
Chlordane (Technical)	ND	ug/L	0.20	0.20	1	02/25/13 13:20	03/05/13 00:19	57-74-9	
4,4'-DDD	ND	ug/L	0.050	0.050	1	02/25/13 13:20	03/05/13 00:19	72-54-8	
4,4'-DDE	ND	ug/L	0.050	0.050	1	02/25/13 13:20	03/05/13 00:19	72-55-9	
4,4'-DDT	ND	ug/L	0.050	0.050	1	02/25/13 13:20	03/05/13 00:19	50-29-3	
Dieldrin	ND	ug/L	0.050	0.050	1	02/25/13 13:20	03/05/13 00:19	60-57-1	
Endosulfan I	ND	ug/L	0.050	0.050	1	02/25/13 13:20	03/05/13 00:19	959-98-8	
Endosulfan II	ND	ug/L	0.050	0.050	1	02/25/13 13:20	03/05/13 00:19	33213-65-9	
Endosulfan sulfate	ND	ug/L	0.050	0.050	1	02/25/13 13:20	03/05/13 00:19	1031-07-8	
Endrin	ND	ug/L	0.050	0.050	1	02/25/13 13:20	03/05/13 00:19	72-20-8	
Endrin aldehyde	ND	ug/L	0.050	0.050	1	02/25/13 13:20	03/05/13 00:19	7421-93-4	
Endrin ketone	ND	ug/L	0.050	0.050	1	02/25/13 13:20	03/05/13 00:19	53494-70-5	
Heptachlor	ND	ug/L	0.050	0.050	1	02/25/13 13:20	03/05/13 00:19	76-44-8	
Heptachlor epoxide	ND	ug/L	0.050	0.050	1	02/25/13 13:20	03/05/13 00:19	1024-57-3	
Hexachlorobenzene	ND	ug/L	0.050	0.050	1	02/25/13 13:20	03/05/13 00:19	118-74-1	
Methoxychlor	ND	ug/L	0.15	0.15	1	02/25/13 13:20	03/05/13 00:19	72-43-5	
Mirex	ND	ug/L	0.15	0.15	1	02/25/13 13:20	03/05/13 00:19	2385-85-5	
Toxaphene	ND	ug/L	0.20	0.20	1	02/25/13 13:20	03/05/13 00:19	8001-35-2	
Surrogates									
Tetrachloro-m-xylene (S)	70	%	20-130		1	02/25/13 13:20	03/05/13 00:19	877-09-8	
Decachlorobiphenyl (S)	62	%	20-130		1	02/25/13 13:20	03/05/13 00:19	2051-24-3	
6010 ICP Groundwater	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Antimony	ND	ug/L	5.0	2.6	1	02/22/13 20:35	02/24/13 12:50	7440-36-0	
Arsenic	ND	ug/L	10.0	2.7	1	02/22/13 20:35	02/24/13 12:50	7440-38-2	
Barium	**41.3**	ug/L	5.0	0.20	1	02/22/13 20:35	02/24/13 12:50	7440-39-3	
Beryllium	ND	ug/L	1.0	0.10	1	02/22/13 20:35	02/24/13 12:50	7440-41-7	
Cadmium	ND	ug/L	1.0	0.50	1	02/22/13 20:35	02/24/13 12:50	7440-43-9	
Chromium	**4.9J**	ug/L	5.0	0.40	1	02/22/13 20:35	02/24/13 12:50	7440-47-3	
Cobalt	ND	ug/L	5.0	0.60	1	02/22/13 20:35	02/24/13 12:50	7440-48-4	
Copper	**0.89J**	ug/L	5.0	0.30	1	02/22/13 20:35	02/24/13 12:50	7440-50-8	
Lead	ND	ug/L	5.0	4.0	1	02/22/13 20:35	02/24/13 12:50	7439-92-1	

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ANALYTICAL RESULTS

Project: FRANCIS FARM LF GWM FEB.2013
Pace Project No.: 92148500

Sample: MW-8 **Lab ID: 92148500006** Collected: 02/18/13 16:15 Received: 02/19/13 09:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 ICP Groundwater	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Nickel	**2.2J**	ug/L	5.0	1.7	1	02/22/13 20:35	02/24/13 12:50	7440-02-0	
Selenium	**2.3J**	ug/L	10.0	0.10	1	02/22/13 20:35	02/24/13 12:50	7782-49-2	
Silver	**0.39J**	ug/L	5.0	0.10	1	02/22/13 20:35	02/24/13 12:50	7440-22-4	
Thallium	ND	ug/L	5.4	3.0	1	02/22/13 20:35	02/24/13 12:50	7440-28-0	
Vanadium	**5.3**	ug/L	5.0	0.20	1	02/22/13 20:35	02/24/13 12:50	7440-62-2	
Zinc	**20.2**	ug/L	10.0	0.40	1	02/22/13 20:35	02/24/13 12:50	7440-66-6	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470								
Mercury	ND	ug/L	0.20	0.10	1	02/21/13 19:45	02/22/13 15:56	7439-97-6	
8260 MSV Low Level Landfill	Analytical Method: EPA 8260								
Acetone	ND	ug/L	25.0	10.0	1		02/20/13 17:14	67-64-1	
Acetonitrile	ND	ug/L	50.0	2.2	1		02/20/13 17:14	75-05-8	
Acrylonitrile	ND	ug/L	10.0	1.9	1		02/20/13 17:14	107-13-1	
Allyl chloride	ND	ug/L	2.0	1.5	1		02/20/13 17:14	107-05-1	
Benzene	ND	ug/L	1.0	0.25	1		02/20/13 17:14	71-43-2	
Bromochloromethane	ND	ug/L	1.0	0.17	1		02/20/13 17:14	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	0.18	1		02/20/13 17:14	75-27-4	
Bromoform	ND	ug/L	1.0	0.26	1		02/20/13 17:14	75-25-2	
Bromomethane	ND	ug/L	2.0	0.29	1		02/20/13 17:14	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	0.96	1		02/20/13 17:14	78-93-3	
Carbon disulfide	ND	ug/L	2.0	1.2	1		02/20/13 17:14	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.25	1		02/20/13 17:14	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.23	1		02/20/13 17:14	108-90-7	
Chloroethane	ND	ug/L	1.0	0.54	1		02/20/13 17:14	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		02/20/13 17:14	67-66-3	
Chloromethane	ND	ug/L	1.0	0.11	1		02/20/13 17:14	74-87-3	
Chloroprene	ND	ug/L	5.0	0.27	1		02/20/13 17:14	126-99-8	
1,2-Dibromo-3-chloropropane	ND	ug/L	5.0	2.5	1		02/20/13 17:14	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		02/20/13 17:14	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.27	1		02/20/13 17:14	106-93-4	
Dibromomethane	ND	ug/L	1.0	0.21	1		02/20/13 17:14	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	0.30	1		02/20/13 17:14	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	0.24	1		02/20/13 17:14	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	0.33	1		02/20/13 17:14	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	1.0	1.0	1		02/20/13 17:14	110-57-6	
Dichlorodifluoromethane	ND	ug/L	1.0	0.21	1		02/20/13 17:14	75-71-8	
1,1-Dichloroethane	ND	ug/L	1.0	0.32	1		02/20/13 17:14	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		02/20/13 17:14	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.56	1		02/20/13 17:14	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.19	1		02/20/13 17:14	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.49	1		02/20/13 17:14	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.27	1		02/20/13 17:14	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	0.28	1		02/20/13 17:14	142-28-9	
2,2-Dichloropropane	ND	ug/L	1.0	0.13	1		02/20/13 17:14	594-20-7	
1,1-Dichloropropene	ND	ug/L	1.0	0.49	1		02/20/13 17:14	563-58-6	

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ANALYTICAL RESULTS

Project: FRANCIS FARM LF GWM FEB.2013
Pace Project No.: 92148500

Sample: MW-8 **Lab ID: 92148500006** Collected: 02/18/13 16:15 Received: 02/19/13 09:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level Landfill	Analytical Method: EPA 8260								
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.13	1		02/20/13 17:14	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.26	1		02/20/13 17:14	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.30	1		02/20/13 17:14	100-41-4	
Ethyl methacrylate	ND	ug/L	1.0	0.20	1		02/20/13 17:14	97-63-2	
2-Hexanone	ND	ug/L	5.0	0.46	1		02/20/13 17:14	591-78-6	
Iodomethane	ND	ug/L	5.0	0.32	1		02/20/13 17:14	74-88-4	
Isobutanol	ND	ug/L	100	35.0	1		02/20/13 17:14	78-83-1	
Methacrylonitrile	ND	ug/L	10.0	0.93	1		02/20/13 17:14	126-98-7	
Methylene Chloride	ND	ug/L	1.0	0.97	1		02/20/13 17:14	75-09-2	
Methyl methacrylate	ND	ug/L	2.0	2.0	1		02/20/13 17:14	80-62-6	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	0.33	1		02/20/13 17:14	108-10-1	
Naphthalene	ND	ug/L	1.0	0.24	1		02/20/13 17:14	91-20-3	
Propionitrile	ND	ug/L	20.0	3.6	1		02/20/13 17:14	107-12-0	
Styrene	ND	ug/L	1.0	0.26	1		02/20/13 17:14	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	0.33	1		02/20/13 17:14	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.40	1		02/20/13 17:14	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		02/20/13 17:14	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		02/20/13 17:14	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		02/20/13 17:14	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.29	1		02/20/13 17:14	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.47	1		02/20/13 17:14	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	0.20	1		02/20/13 17:14	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	0.41	1		02/20/13 17:14	96-18-4	
Vinyl acetate	ND	ug/L	2.0	0.35	1		02/20/13 17:14	108-05-4	
Vinyl chloride	ND	ug/L	1.0	0.62	1		02/20/13 17:14	75-01-4	
Xylene (Total)	ND	ug/L	2.0	0.66	1		02/20/13 17:14	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	0.66	1		02/20/13 17:14	179601-23-1	
o-Xylene	ND	ug/L	1.0	0.23	1		02/20/13 17:14	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	99	%	70-130		1		02/20/13 17:14	460-00-4	
Dibromofluoromethane (S)	109	%	70-130		1		02/20/13 17:14	1868-53-7	
1,2-Dichloroethane-d4 (S)	105	%	70-130		1		02/20/13 17:14	17060-07-0	
Toluene-d8 (S)	101	%	70-130		1		02/20/13 17:14	2037-26-5	
4500CNE Cyanide, Total	Analytical Method: SM 4500-CN-E								
Cyanide	ND	mg/L	0.0050	0.0050	1		02/23/13 14:44	57-12-5	

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ANALYTICAL RESULTS

Project: FRANCIS FARM LF GWM FEB.2013
Pace Project No.: 92148500

Sample: MW-9 **Lab ID: 92148500007** Collected: 02/18/13 16:30 Received: 02/19/13 09:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Monitoring Well Data	Analytical Method:								
Collected By	**MPS**				1		02/28/13 16:18		
Collected Date	**2/18/13**				1		02/28/13 16:18		
Collected Time	**16:30**				1		02/28/13 16:18		
Field pH	**6.1**	Std. Units	0.10	0.10	1		02/28/13 16:18		
Field Temperature	**9.9**	deg C	0.50	0.50	1		02/28/13 16:18		
Static Water Level	**1.88**	feet			1		02/28/13 16:18		
Field Specific Conductance	**66**	umhos/cm	1.0	1.0	1		02/28/13 16:18		
Turbidity	**6.24**	NTU	1.0	1.0	1		02/28/13 16:18		
8081 Organochlorine Pesticides	Analytical Method: EPA 8081 Preparation Method: EPA 3510								
Aldrin	ND	ug/L	0.050	0.050	1	02/25/13 13:20	03/05/13 00:37	309-00-2	
alpha-BHC	ND	ug/L	0.050	0.050	1	02/25/13 13:20	03/05/13 00:37	319-84-6	
beta-BHC	ND	ug/L	0.050	0.050	1	02/25/13 13:20	03/05/13 00:37	319-85-7	
delta-BHC	ND	ug/L	0.050	0.050	1	02/25/13 13:20	03/05/13 00:37	319-86-8	
gamma-BHC (Lindane)	ND	ug/L	0.050	0.050	1	02/25/13 13:20	03/05/13 00:37	58-89-9	
Chlordane (Technical)	ND	ug/L	0.20	0.20	1	02/25/13 13:20	03/05/13 00:37	57-74-9	
4,4'-DDD	ND	ug/L	0.050	0.050	1	02/25/13 13:20	03/05/13 00:37	72-54-8	
4,4'-DDE	ND	ug/L	0.050	0.050	1	02/25/13 13:20	03/05/13 00:37	72-55-9	
4,4'-DDT	ND	ug/L	0.050	0.050	1	02/25/13 13:20	03/05/13 00:37	50-29-3	
Dieldrin	ND	ug/L	0.050	0.050	1	02/25/13 13:20	03/05/13 00:37	60-57-1	
Endosulfan I	ND	ug/L	0.050	0.050	1	02/25/13 13:20	03/05/13 00:37	959-98-8	
Endosulfan II	ND	ug/L	0.050	0.050	1	02/25/13 13:20	03/05/13 00:37	33213-65-9	
Endosulfan sulfate	ND	ug/L	0.050	0.050	1	02/25/13 13:20	03/05/13 00:37	1031-07-8	
Endrin	ND	ug/L	0.050	0.050	1	02/25/13 13:20	03/05/13 00:37	72-20-8	
Endrin aldehyde	ND	ug/L	0.050	0.050	1	02/25/13 13:20	03/05/13 00:37	7421-93-4	
Endrin ketone	ND	ug/L	0.050	0.050	1	02/25/13 13:20	03/05/13 00:37	53494-70-5	
Heptachlor	ND	ug/L	0.050	0.050	1	02/25/13 13:20	03/05/13 00:37	76-44-8	
Heptachlor epoxide	ND	ug/L	0.050	0.050	1	02/25/13 13:20	03/05/13 00:37	1024-57-3	
Hexachlorobenzene	ND	ug/L	0.050	0.050	1	02/25/13 13:20	03/05/13 00:37	118-74-1	
Methoxychlor	ND	ug/L	0.15	0.15	1	02/25/13 13:20	03/05/13 00:37	72-43-5	
Mirex	ND	ug/L	0.15	0.15	1	02/25/13 13:20	03/05/13 00:37	2385-85-5	
Toxaphene	ND	ug/L	0.20	0.20	1	02/25/13 13:20	03/05/13 00:37	8001-35-2	
Surrogates									
Tetrachloro-m-xylene (S)	75	%	20-130		1	02/25/13 13:20	03/05/13 00:37	877-09-8	
Decachlorobiphenyl (S)	65	%	20-130		1	02/25/13 13:20	03/05/13 00:37	2051-24-3	
6010 ICP Groundwater	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Antimony	ND	ug/L	5.0	2.6	1	02/22/13 20:35	02/24/13 12:53	7440-36-0	
Arsenic	**3.0J**	ug/L	10.0	2.7	1	02/22/13 20:35	02/24/13 12:53	7440-38-2	
Barium	**75.7**	ug/L	5.0	0.20	1	02/22/13 20:35	02/24/13 12:53	7440-39-3	
Beryllium	ND	ug/L	1.0	0.10	1	02/22/13 20:35	02/24/13 12:53	7440-41-7	
Cadmium	ND	ug/L	1.0	0.50	1	02/22/13 20:35	02/24/13 12:53	7440-43-9	
Chromium	**2.9J**	ug/L	5.0	0.40	1	02/22/13 20:35	02/24/13 12:53	7440-47-3	
Cobalt	ND	ug/L	5.0	0.60	1	02/22/13 20:35	02/24/13 12:53	7440-48-4	
Copper	**0.64J**	ug/L	5.0	0.30	1	02/22/13 20:35	02/24/13 12:53	7440-50-8	
Lead	ND	ug/L	5.0	4.0	1	02/22/13 20:35	02/24/13 12:53	7439-92-1	

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ANALYTICAL RESULTS

Project: FRANCIS FARM LF GWM FEB.2013
Pace Project No.: 92148500

Sample: MW-9 **Lab ID: 92148500007** Collected: 02/18/13 16:30 Received: 02/19/13 09:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 ICP Groundwater	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Nickel	**1.9J**	ug/L	5.0	1.7	1	02/22/13 20:35	02/24/13 12:53	7440-02-0	
Selenium	**3.4J**	ug/L	10.0	0.10	1	02/22/13 20:35	02/24/13 12:53	7782-49-2	
Silver	ND	ug/L	5.0	0.10	1	02/22/13 20:35	02/24/13 12:53	7440-22-4	
Thallium	ND	ug/L	5.4	3.0	1	02/22/13 20:35	02/24/13 12:53	7440-28-0	
Vanadium	**3.0J**	ug/L	5.0	0.20	1	02/22/13 20:35	02/24/13 12:53	7440-62-2	
Zinc	**5.9J**	ug/L	10.0	0.40	1	02/22/13 20:35	02/24/13 12:53	7440-66-6	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470								
Mercury	ND	ug/L	0.20	0.10	1	02/21/13 19:45	02/22/13 15:59	7439-97-6	
8260 MSV Low Level Landfill	Analytical Method: EPA 8260								
Acetone	ND	ug/L	25.0	10.0	1		02/20/13 17:30	67-64-1	
Acetonitrile	ND	ug/L	50.0	2.2	1		02/20/13 17:30	75-05-8	
Acrylonitrile	ND	ug/L	10.0	1.9	1		02/20/13 17:30	107-13-1	
Allyl chloride	ND	ug/L	2.0	1.5	1		02/20/13 17:30	107-05-1	
Benzene	ND	ug/L	1.0	0.25	1		02/20/13 17:30	71-43-2	
Bromochloromethane	ND	ug/L	1.0	0.17	1		02/20/13 17:30	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	0.18	1		02/20/13 17:30	75-27-4	
Bromoform	ND	ug/L	1.0	0.26	1		02/20/13 17:30	75-25-2	
Bromomethane	ND	ug/L	2.0	0.29	1		02/20/13 17:30	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	0.96	1		02/20/13 17:30	78-93-3	
Carbon disulfide	ND	ug/L	2.0	1.2	1		02/20/13 17:30	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.25	1		02/20/13 17:30	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.23	1		02/20/13 17:30	108-90-7	
Chloroethane	ND	ug/L	1.0	0.54	1		02/20/13 17:30	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		02/20/13 17:30	67-66-3	
Chloromethane	ND	ug/L	1.0	0.11	1		02/20/13 17:30	74-87-3	
Chloroprene	ND	ug/L	5.0	0.27	1		02/20/13 17:30	126-99-8	
1,2-Dibromo-3-chloropropane	ND	ug/L	5.0	2.5	1		02/20/13 17:30	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		02/20/13 17:30	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.27	1		02/20/13 17:30	106-93-4	
Dibromomethane	ND	ug/L	1.0	0.21	1		02/20/13 17:30	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	0.30	1		02/20/13 17:30	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	0.24	1		02/20/13 17:30	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	0.33	1		02/20/13 17:30	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	1.0	1.0	1		02/20/13 17:30	110-57-6	
Dichlorodifluoromethane	ND	ug/L	1.0	0.21	1		02/20/13 17:30	75-71-8	
1,1-Dichloroethane	**0.52J**	ug/L	1.0	0.32	1		02/20/13 17:30	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		02/20/13 17:30	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.56	1		02/20/13 17:30	75-35-4	
cis-1,2-Dichloroethene	**0.81J**	ug/L	1.0	0.19	1		02/20/13 17:30	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.49	1		02/20/13 17:30	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.27	1		02/20/13 17:30	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	0.28	1		02/20/13 17:30	142-28-9	
2,2-Dichloropropane	ND	ug/L	1.0	0.13	1		02/20/13 17:30	594-20-7	
1,1-Dichloropropene	ND	ug/L	1.0	0.49	1		02/20/13 17:30	563-58-6	

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ANALYTICAL RESULTS

Project: FRANCIS FARM LF GWM FEB.2013
Pace Project No.: 92148500

Sample: MW-9 **Lab ID: 92148500007** Collected: 02/18/13 16:30 Received: 02/19/13 09:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level Landfill	Analytical Method: EPA 8260								
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.13	1		02/20/13 17:30	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.26	1		02/20/13 17:30	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.30	1		02/20/13 17:30	100-41-4	
Ethyl methacrylate	ND	ug/L	1.0	0.20	1		02/20/13 17:30	97-63-2	
2-Hexanone	ND	ug/L	5.0	0.46	1		02/20/13 17:30	591-78-6	
Iodomethane	ND	ug/L	5.0	0.32	1		02/20/13 17:30	74-88-4	
Isobutanol	ND	ug/L	100	35.0	1		02/20/13 17:30	78-83-1	
Methacrylonitrile	ND	ug/L	10.0	0.93	1		02/20/13 17:30	126-98-7	
Methylene Chloride	ND	ug/L	1.0	0.97	1		02/20/13 17:30	75-09-2	
Methyl methacrylate	ND	ug/L	2.0	2.0	1		02/20/13 17:30	80-62-6	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	0.33	1		02/20/13 17:30	108-10-1	
Naphthalene	ND	ug/L	1.0	0.24	1		02/20/13 17:30	91-20-3	
Propionitrile	ND	ug/L	20.0	3.6	1		02/20/13 17:30	107-12-0	
Styrene	ND	ug/L	1.0	0.26	1		02/20/13 17:30	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	0.33	1		02/20/13 17:30	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.40	1		02/20/13 17:30	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		02/20/13 17:30	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		02/20/13 17:30	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		02/20/13 17:30	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.29	1		02/20/13 17:30	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.47	1		02/20/13 17:30	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	0.20	1		02/20/13 17:30	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	0.41	1		02/20/13 17:30	96-18-4	
Vinyl acetate	ND	ug/L	2.0	0.35	1		02/20/13 17:30	108-05-4	
Vinyl chloride	ND	ug/L	1.0	0.62	1		02/20/13 17:30	75-01-4	
Xylene (Total)	ND	ug/L	2.0	0.66	1		02/20/13 17:30	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	0.66	1		02/20/13 17:30	179601-23-1	
o-Xylene	ND	ug/L	1.0	0.23	1		02/20/13 17:30	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	97	%	70-130		1		02/20/13 17:30	460-00-4	
Dibromofluoromethane (S)	109	%	70-130		1		02/20/13 17:30	1868-53-7	
1,2-Dichloroethane-d4 (S)	101	%	70-130		1		02/20/13 17:30	17060-07-0	
Toluene-d8 (S)	100	%	70-130		1		02/20/13 17:30	2037-26-5	
4500CNE Cyanide, Total	Analytical Method: SM 4500-CN-E								
Cyanide	ND	mg/L	0.0050	0.0050	1		02/23/13 14:44	57-12-5	

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ANALYTICAL RESULTS

Project: FRANCIS FARM LF GWM FEB.2013
Pace Project No.: 92148500

Sample: MW-10 **Lab ID: 92148500008** Collected: 02/18/13 16:45 Received: 02/19/13 09:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Monitoring Well Data	Analytical Method:								
Collected By	**MPS**				1		02/28/13 16:20		
Collected Date	**2/18/13**				1		02/28/13 16:20		
Collected Time	**16:45**				1		02/28/13 16:20		
Field pH	**5.7**	Std. Units	0.10	0.10	1		02/28/13 16:20		
Field Temperature	**10.9**	deg C	0.50	0.50	1		02/28/13 16:20		
Static Water Level	**1.41**	feet			1		02/28/13 16:20		
Field Specific Conductance	**57**	umhos/cm	1.0	1.0	1		02/28/13 16:20		
Turbidity	**31.7**	NTU	1.0	1.0	1		02/28/13 16:20		
8081 Organochlorine Pesticides	Analytical Method: EPA 8081 Preparation Method: EPA 3510								
Aldrin	ND	ug/L	0.050	0.050	1	02/25/13 13:20	03/05/13 00:54	309-00-2	
alpha-BHC	ND	ug/L	0.050	0.050	1	02/25/13 13:20	03/05/13 00:54	319-84-6	
beta-BHC	ND	ug/L	0.050	0.050	1	02/25/13 13:20	03/05/13 00:54	319-85-7	
delta-BHC	ND	ug/L	0.050	0.050	1	02/25/13 13:20	03/05/13 00:54	319-86-8	
gamma-BHC (Lindane)	ND	ug/L	0.050	0.050	1	02/25/13 13:20	03/05/13 00:54	58-89-9	
Chlordane (Technical)	ND	ug/L	0.20	0.20	1	02/25/13 13:20	03/05/13 00:54	57-74-9	
4,4'-DDD	ND	ug/L	0.050	0.050	1	02/25/13 13:20	03/05/13 00:54	72-54-8	
4,4'-DDE	ND	ug/L	0.050	0.050	1	02/25/13 13:20	03/05/13 00:54	72-55-9	
4,4'-DDT	ND	ug/L	0.050	0.050	1	02/25/13 13:20	03/05/13 00:54	50-29-3	
Dieldrin	ND	ug/L	0.050	0.050	1	02/25/13 13:20	03/05/13 00:54	60-57-1	
Endosulfan I	ND	ug/L	0.050	0.050	1	02/25/13 13:20	03/05/13 00:54	959-98-8	
Endosulfan II	ND	ug/L	0.050	0.050	1	02/25/13 13:20	03/05/13 00:54	33213-65-9	
Endosulfan sulfate	ND	ug/L	0.050	0.050	1	02/25/13 13:20	03/05/13 00:54	1031-07-8	
Endrin	ND	ug/L	0.050	0.050	1	02/25/13 13:20	03/05/13 00:54	72-20-8	
Endrin aldehyde	ND	ug/L	0.050	0.050	1	02/25/13 13:20	03/05/13 00:54	7421-93-4	
Endrin ketone	ND	ug/L	0.050	0.050	1	02/25/13 13:20	03/05/13 00:54	53494-70-5	
Heptachlor	ND	ug/L	0.050	0.050	1	02/25/13 13:20	03/05/13 00:54	76-44-8	
Heptachlor epoxide	ND	ug/L	0.050	0.050	1	02/25/13 13:20	03/05/13 00:54	1024-57-3	
Hexachlorobenzene	ND	ug/L	0.050	0.050	1	02/25/13 13:20	03/05/13 00:54	118-74-1	
Methoxychlor	ND	ug/L	0.15	0.15	1	02/25/13 13:20	03/05/13 00:54	72-43-5	
Mirex	ND	ug/L	0.15	0.15	1	02/25/13 13:20	03/05/13 00:54	2385-85-5	
Toxaphene	ND	ug/L	0.20	0.20	1	02/25/13 13:20	03/05/13 00:54	8001-35-2	
Surrogates									
Tetrachloro-m-xylene (S)	78	%	20-130		1	02/25/13 13:20	03/05/13 00:54	877-09-8	
Decachlorobiphenyl (S)	63	%	20-130		1	02/25/13 13:20	03/05/13 00:54	2051-24-3	
6010 ICP Groundwater	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Antimony	ND	ug/L	5.0	2.6	1	02/22/13 20:35	02/24/13 12:56	7440-36-0	
Arsenic	ND	ug/L	10.0	2.7	1	02/22/13 20:35	02/24/13 12:56	7440-38-2	
Barium	**86.0**	ug/L	5.0	0.20	1	02/22/13 20:35	02/24/13 12:56	7440-39-3	
Beryllium	**0.12J**	ug/L	1.0	0.10	1	02/22/13 20:35	02/24/13 12:56	7440-41-7	
Cadmium	ND	ug/L	1.0	0.50	1	02/22/13 20:35	02/24/13 12:56	7440-43-9	
Chromium	**3.6J**	ug/L	5.0	0.40	1	02/22/13 20:35	02/24/13 12:56	7440-47-3	
Cobalt	**0.61J**	ug/L	5.0	0.60	1	02/22/13 20:35	02/24/13 12:56	7440-48-4	
Copper	**1.9J**	ug/L	5.0	0.30	1	02/22/13 20:35	02/24/13 12:56	7440-50-8	
Lead	ND	ug/L	5.0	4.0	1	02/22/13 20:35	02/24/13 12:56	7439-92-1	

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ANALYTICAL RESULTS

Project: FRANCIS FARM LF GWM FEB.2013
Pace Project No.: 92148500

Sample: MW-10 **Lab ID: 92148500008** Collected: 02/18/13 16:45 Received: 02/19/13 09:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 ICP Groundwater	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Nickel	**2.1J**	ug/L	5.0	1.7	1	02/22/13 20:35	02/24/13 12:56	7440-02-0	
Selenium	ND	ug/L	10.0	0.10	1	02/22/13 20:35	02/24/13 12:56	7782-49-2	
Silver	**0.45J**	ug/L	5.0	0.10	1	02/22/13 20:35	02/24/13 12:56	7440-22-4	
Thallium	ND	ug/L	5.4	3.0	1	02/22/13 20:35	02/24/13 12:56	7440-28-0	
Vanadium	**4.9J**	ug/L	5.0	0.20	1	02/22/13 20:35	02/24/13 12:56	7440-62-2	
Zinc	**7.8J**	ug/L	10.0	0.40	1	02/22/13 20:35	02/24/13 12:56	7440-66-6	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470								
Mercury	ND	ug/L	0.20	0.10	1	02/21/13 19:45	02/22/13 16:02	7439-97-6	
8260 MSV Low Level Landfill	Analytical Method: EPA 8260								
Acetone	ND	ug/L	25.0	10.0	1		02/20/13 17:46	67-64-1	
Acetonitrile	ND	ug/L	50.0	2.2	1		02/20/13 17:46	75-05-8	
Acrylonitrile	ND	ug/L	10.0	1.9	1		02/20/13 17:46	107-13-1	
Allyl chloride	ND	ug/L	2.0	1.5	1		02/20/13 17:46	107-05-1	
Benzene	ND	ug/L	1.0	0.25	1		02/20/13 17:46	71-43-2	
Bromochloromethane	ND	ug/L	1.0	0.17	1		02/20/13 17:46	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	0.18	1		02/20/13 17:46	75-27-4	
Bromoform	ND	ug/L	1.0	0.26	1		02/20/13 17:46	75-25-2	
Bromomethane	ND	ug/L	2.0	0.29	1		02/20/13 17:46	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	0.96	1		02/20/13 17:46	78-93-3	
Carbon disulfide	ND	ug/L	2.0	1.2	1		02/20/13 17:46	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.25	1		02/20/13 17:46	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.23	1		02/20/13 17:46	108-90-7	
Chloroethane	ND	ug/L	1.0	0.54	1		02/20/13 17:46	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		02/20/13 17:46	67-66-3	
Chloromethane	ND	ug/L	1.0	0.11	1		02/20/13 17:46	74-87-3	
Chloroprene	ND	ug/L	5.0	0.27	1		02/20/13 17:46	126-99-8	
1,2-Dibromo-3-chloropropane	ND	ug/L	5.0	2.5	1		02/20/13 17:46	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		02/20/13 17:46	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.27	1		02/20/13 17:46	106-93-4	
Dibromomethane	ND	ug/L	1.0	0.21	1		02/20/13 17:46	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	0.30	1		02/20/13 17:46	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	0.24	1		02/20/13 17:46	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	0.33	1		02/20/13 17:46	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	1.0	1.0	1		02/20/13 17:46	110-57-6	
Dichlorodifluoromethane	ND	ug/L	1.0	0.21	1		02/20/13 17:46	75-71-8	
1,1-Dichloroethane	**1.8**	ug/L	1.0	0.32	1		02/20/13 17:46	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		02/20/13 17:46	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.56	1		02/20/13 17:46	75-35-4	
cis-1,2-Dichloroethene	**1.6**	ug/L	1.0	0.19	1		02/20/13 17:46	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.49	1		02/20/13 17:46	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.27	1		02/20/13 17:46	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	0.28	1		02/20/13 17:46	142-28-9	
2,2-Dichloropropane	ND	ug/L	1.0	0.13	1		02/20/13 17:46	594-20-7	
1,1-Dichloropropene	ND	ug/L	1.0	0.49	1		02/20/13 17:46	563-58-6	

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ANALYTICAL RESULTS

Project: FRANCIS FARM LF GWM FEB.2013
Pace Project No.: 92148500

Sample: MW-10 **Lab ID: 92148500008** Collected: 02/18/13 16:45 Received: 02/19/13 09:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level Landfill	Analytical Method: EPA 8260								
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.13	1		02/20/13 17:46	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.26	1		02/20/13 17:46	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.30	1		02/20/13 17:46	100-41-4	
Ethyl methacrylate	ND	ug/L	1.0	0.20	1		02/20/13 17:46	97-63-2	
2-Hexanone	ND	ug/L	5.0	0.46	1		02/20/13 17:46	591-78-6	
Iodomethane	ND	ug/L	5.0	0.32	1		02/20/13 17:46	74-88-4	
Isobutanol	ND	ug/L	100	35.0	1		02/20/13 17:46	78-83-1	
Methacrylonitrile	ND	ug/L	10.0	0.93	1		02/20/13 17:46	126-98-7	
Methylene Chloride	ND	ug/L	1.0	0.97	1		02/20/13 17:46	75-09-2	
Methyl methacrylate	ND	ug/L	2.0	2.0	1		02/20/13 17:46	80-62-6	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	0.33	1		02/20/13 17:46	108-10-1	
Naphthalene	ND	ug/L	1.0	0.24	1		02/20/13 17:46	91-20-3	
Propionitrile	ND	ug/L	20.0	3.6	1		02/20/13 17:46	107-12-0	
Styrene	ND	ug/L	1.0	0.26	1		02/20/13 17:46	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	0.33	1		02/20/13 17:46	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.40	1		02/20/13 17:46	79-34-5	
Tetrachloroethene	**0.60J**	ug/L	1.0	0.46	1		02/20/13 17:46	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		02/20/13 17:46	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		02/20/13 17:46	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.29	1		02/20/13 17:46	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.47	1		02/20/13 17:46	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	0.20	1		02/20/13 17:46	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	0.41	1		02/20/13 17:46	96-18-4	
Vinyl acetate	ND	ug/L	2.0	0.35	1		02/20/13 17:46	108-05-4	
Vinyl chloride	ND	ug/L	1.0	0.62	1		02/20/13 17:46	75-01-4	
Xylene (Total)	ND	ug/L	2.0	0.66	1		02/20/13 17:46	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	0.66	1		02/20/13 17:46	179601-23-1	
o-Xylene	ND	ug/L	1.0	0.23	1		02/20/13 17:46	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	98	%	70-130		1		02/20/13 17:46	460-00-4	
Dibromofluoromethane (S)	110	%	70-130		1		02/20/13 17:46	1868-53-7	
1,2-Dichloroethane-d4 (S)	104	%	70-130		1		02/20/13 17:46	17060-07-0	
Toluene-d8 (S)	101	%	70-130		1		02/20/13 17:46	2037-26-5	
4500CNE Cyanide, Total	Analytical Method: SM 4500-CN-E								
Cyanide	ND	mg/L	0.0050	0.0050	1		02/23/13 14:45	57-12-5	

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ANALYTICAL RESULTS

Project: FRANCIS FARM LF GWM FEB.2013
Pace Project No.: 92148500

Sample: MW-19 **Lab ID: 92148500009** Collected: 02/18/13 17:20 Received: 02/19/13 09:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Monitoring Well Data	Analytical Method:								
Collected By	**MPS**				1		02/28/13 16:28		
Collected Date	**2/18/13**				1		02/28/13 16:28		
Collected Time	**17:20**				1		02/28/13 16:28		
Field pH	**5.8**	Std. Units	0.10	0.10	1		02/28/13 16:28		
Field Temperature	**11.1**	deg C	0.50	0.50	1		02/28/13 16:28		
Static Water Level	**6.31**	feet			1		02/28/13 16:28		
Field Specific Conductance	**201**	umhos/cm	1.0	1.0	1		02/28/13 16:28		
Turbidity	**9.70**	NTU	1.0	1.0	1		02/28/13 16:28		
8081 Organochlorine Pesticides	Analytical Method: EPA 8081 Preparation Method: EPA 3510								
Aldrin	ND	ug/L	0.050	0.050	1	02/25/13 13:20	03/05/13 01:12	309-00-2	
alpha-BHC	ND	ug/L	0.050	0.050	1	02/25/13 13:20	03/05/13 01:12	319-84-6	
beta-BHC	ND	ug/L	0.050	0.050	1	02/25/13 13:20	03/05/13 01:12	319-85-7	
delta-BHC	ND	ug/L	0.050	0.050	1	02/25/13 13:20	03/05/13 01:12	319-86-8	
gamma-BHC (Lindane)	ND	ug/L	0.050	0.050	1	02/25/13 13:20	03/05/13 01:12	58-89-9	
Chlordane (Technical)	ND	ug/L	0.20	0.20	1	02/25/13 13:20	03/05/13 01:12	57-74-9	
4,4'-DDD	ND	ug/L	0.050	0.050	1	02/25/13 13:20	03/05/13 01:12	72-54-8	
4,4'-DDE	ND	ug/L	0.050	0.050	1	02/25/13 13:20	03/05/13 01:12	72-55-9	
4,4'-DDT	ND	ug/L	0.050	0.050	1	02/25/13 13:20	03/05/13 01:12	50-29-3	
Dieldrin	ND	ug/L	0.050	0.050	1	02/25/13 13:20	03/05/13 01:12	60-57-1	
Endosulfan I	ND	ug/L	0.050	0.050	1	02/25/13 13:20	03/05/13 01:12	959-98-8	
Endosulfan II	ND	ug/L	0.050	0.050	1	02/25/13 13:20	03/05/13 01:12	33213-65-9	
Endosulfan sulfate	ND	ug/L	0.050	0.050	1	02/25/13 13:20	03/05/13 01:12	1031-07-8	
Endrin	ND	ug/L	0.050	0.050	1	02/25/13 13:20	03/05/13 01:12	72-20-8	
Endrin aldehyde	ND	ug/L	0.050	0.050	1	02/25/13 13:20	03/05/13 01:12	7421-93-4	
Endrin ketone	ND	ug/L	0.050	0.050	1	02/25/13 13:20	03/05/13 01:12	53494-70-5	
Heptachlor	ND	ug/L	0.050	0.050	1	02/25/13 13:20	03/05/13 01:12	76-44-8	
Heptachlor epoxide	ND	ug/L	0.050	0.050	1	02/25/13 13:20	03/05/13 01:12	1024-57-3	
Hexachlorobenzene	ND	ug/L	0.050	0.050	1	02/25/13 13:20	03/05/13 01:12	118-74-1	
Methoxychlor	ND	ug/L	0.15	0.15	1	02/25/13 13:20	03/05/13 01:12	72-43-5	
Mirex	ND	ug/L	0.15	0.15	1	02/25/13 13:20	03/05/13 01:12	2385-85-5	
Toxaphene	ND	ug/L	0.20	0.20	1	02/25/13 13:20	03/05/13 01:12	8001-35-2	
Surrogates									
Tetrachloro-m-xylene (S)	79	%	20-130		1	02/25/13 13:20	03/05/13 01:12	877-09-8	
Decachlorobiphenyl (S)	100	%	20-130		1	02/25/13 13:20	03/05/13 01:12	2051-24-3	
6010 ICP Groundwater	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Antimony	ND	ug/L	5.0	2.6	1	02/22/13 20:35	02/24/13 13:09	7440-36-0	
Arsenic	ND	ug/L	10.0	2.7	1	02/22/13 20:35	02/24/13 13:09	7440-38-2	
Barium	**131**	ug/L	5.0	0.20	1	02/22/13 20:35	02/24/13 13:09	7440-39-3	
Beryllium	ND	ug/L	1.0	0.10	1	02/22/13 20:35	02/24/13 13:09	7440-41-7	
Cadmium	ND	ug/L	1.0	0.50	1	02/22/13 20:35	02/24/13 13:09	7440-43-9	
Chromium	**3.0J**	ug/L	5.0	0.40	1	02/22/13 20:35	02/24/13 13:09	7440-47-3	
Cobalt	**1.0J**	ug/L	5.0	0.60	1	02/22/13 20:35	02/24/13 13:09	7440-48-4	
Copper	ND	ug/L	5.0	0.30	1	02/22/13 20:35	02/24/13 13:09	7440-50-8	
Lead	ND	ug/L	5.0	4.0	1	02/22/13 20:35	02/24/13 13:09	7439-92-1	

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ANALYTICAL RESULTS

Project: FRANCIS FARM LF GWM FEB.2013
Pace Project No.: 92148500

Sample: MW-19 **Lab ID: 92148500009** Collected: 02/18/13 17:20 Received: 02/19/13 09:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 ICP Groundwater	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Nickel	**2.7J**	ug/L	5.0	1.7	1	02/22/13 20:35	02/24/13 13:09	7440-02-0	
Selenium	**1.1J**	ug/L	10.0	0.10	1	02/22/13 20:35	02/24/13 13:09	7782-49-2	
Silver	**0.59J**	ug/L	5.0	0.10	1	02/22/13 20:35	02/24/13 13:09	7440-22-4	
Thallium	ND	ug/L	5.4	3.0	1	02/22/13 20:35	02/24/13 13:09	7440-28-0	
Vanadium	**3.5J**	ug/L	5.0	0.20	1	02/22/13 20:35	02/24/13 13:09	7440-62-2	
Zinc	**5.6J**	ug/L	10.0	0.40	1	02/22/13 20:35	02/24/13 13:09	7440-66-6	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470								
Mercury	ND	ug/L	0.20	0.10	1	02/21/13 19:45	02/22/13 16:04	7439-97-6	
8260 MSV Low Level Landfill	Analytical Method: EPA 8260								
Acetone	ND	ug/L	25.0	10.0	1		02/20/13 18:02	67-64-1	
Acetonitrile	ND	ug/L	50.0	2.2	1		02/20/13 18:02	75-05-8	
Acrylonitrile	ND	ug/L	10.0	1.9	1		02/20/13 18:02	107-13-1	
Allyl chloride	ND	ug/L	2.0	1.5	1		02/20/13 18:02	107-05-1	
Benzene	ND	ug/L	1.0	0.25	1		02/20/13 18:02	71-43-2	
Bromochloromethane	ND	ug/L	1.0	0.17	1		02/20/13 18:02	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	0.18	1		02/20/13 18:02	75-27-4	
Bromoform	ND	ug/L	1.0	0.26	1		02/20/13 18:02	75-25-2	
Bromomethane	ND	ug/L	2.0	0.29	1		02/20/13 18:02	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	0.96	1		02/20/13 18:02	78-93-3	
Carbon disulfide	ND	ug/L	2.0	1.2	1		02/20/13 18:02	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.25	1		02/20/13 18:02	56-23-5	
Chlorobenzene	**0.53J**	ug/L	1.0	0.23	1		02/20/13 18:02	108-90-7	
Chloroethane	ND	ug/L	1.0	0.54	1		02/20/13 18:02	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		02/20/13 18:02	67-66-3	
Chloromethane	ND	ug/L	1.0	0.11	1		02/20/13 18:02	74-87-3	
Chloroprene	ND	ug/L	5.0	0.27	1		02/20/13 18:02	126-99-8	
1,2-Dibromo-3-chloropropane	ND	ug/L	5.0	2.5	1		02/20/13 18:02	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		02/20/13 18:02	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.27	1		02/20/13 18:02	106-93-4	
Dibromomethane	ND	ug/L	1.0	0.21	1		02/20/13 18:02	74-95-3	
1,2-Dichlorobenzene	**1.1**	ug/L	1.0	0.30	1		02/20/13 18:02	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	0.24	1		02/20/13 18:02	541-73-1	
1,4-Dichlorobenzene	**1.1**	ug/L	1.0	0.33	1		02/20/13 18:02	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	1.0	1.0	1		02/20/13 18:02	110-57-6	
Dichlorodifluoromethane	ND	ug/L	1.0	0.21	1		02/20/13 18:02	75-71-8	
1,1-Dichloroethane	**3.6**	ug/L	1.0	0.32	1		02/20/13 18:02	75-34-3	
1,2-Dichloroethane	**3.0**	ug/L	1.0	0.12	1		02/20/13 18:02	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.56	1		02/20/13 18:02	75-35-4	
cis-1,2-Dichloroethene	**1.1**	ug/L	1.0	0.19	1		02/20/13 18:02	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.49	1		02/20/13 18:02	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.27	1		02/20/13 18:02	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	0.28	1		02/20/13 18:02	142-28-9	
2,2-Dichloropropane	ND	ug/L	1.0	0.13	1		02/20/13 18:02	594-20-7	
1,1-Dichloropropene	ND	ug/L	1.0	0.49	1		02/20/13 18:02	563-58-6	

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ANALYTICAL RESULTS

Project: FRANCIS FARM LF GWM FEB.2013
Pace Project No.: 92148500

Sample: MW-19 **Lab ID: 92148500009** Collected: 02/18/13 17:20 Received: 02/19/13 09:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level Landfill	Analytical Method: EPA 8260								
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.13	1		02/20/13 18:02	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.26	1		02/20/13 18:02	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.30	1		02/20/13 18:02	100-41-4	
Ethyl methacrylate	ND	ug/L	1.0	0.20	1		02/20/13 18:02	97-63-2	
2-Hexanone	ND	ug/L	5.0	0.46	1		02/20/13 18:02	591-78-6	
Iodomethane	ND	ug/L	5.0	0.32	1		02/20/13 18:02	74-88-4	
Isobutanol	ND	ug/L	100	35.0	1		02/20/13 18:02	78-83-1	
Methacrylonitrile	ND	ug/L	10.0	0.93	1		02/20/13 18:02	126-98-7	
Methylene Chloride	ND	ug/L	1.0	0.97	1		02/20/13 18:02	75-09-2	
Methyl methacrylate	ND	ug/L	2.0	2.0	1		02/20/13 18:02	80-62-6	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	0.33	1		02/20/13 18:02	108-10-1	
Naphthalene	ND	ug/L	1.0	0.24	1		02/20/13 18:02	91-20-3	
Propionitrile	ND	ug/L	20.0	3.6	1		02/20/13 18:02	107-12-0	
Styrene	ND	ug/L	1.0	0.26	1		02/20/13 18:02	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	0.33	1		02/20/13 18:02	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.40	1		02/20/13 18:02	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		02/20/13 18:02	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		02/20/13 18:02	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		02/20/13 18:02	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.29	1		02/20/13 18:02	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.47	1		02/20/13 18:02	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	0.20	1		02/20/13 18:02	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	0.41	1		02/20/13 18:02	96-18-4	
Vinyl acetate	ND	ug/L	2.0	0.35	1		02/20/13 18:02	108-05-4	
Vinyl chloride	ND	ug/L	1.0	0.62	1		02/20/13 18:02	75-01-4	
Xylene (Total)	ND	ug/L	2.0	0.66	1		02/20/13 18:02	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	0.66	1		02/20/13 18:02	179601-23-1	
o-Xylene	ND	ug/L	1.0	0.23	1		02/20/13 18:02	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	97	%	70-130		1		02/20/13 18:02	460-00-4	
Dibromofluoromethane (S)	108	%	70-130		1		02/20/13 18:02	1868-53-7	
1,2-Dichloroethane-d4 (S)	105	%	70-130		1		02/20/13 18:02	17060-07-0	
Toluene-d8 (S)	100	%	70-130		1		02/20/13 18:02	2037-26-5	
4500CNE Cyanide, Total	Analytical Method: SM 4500-CN-E								
Cyanide	ND	mg/L	0.0050	0.0050	1		02/23/13 14:46	57-12-5	

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ANALYTICAL RESULTS

Project: FRANCIS FARM LF GWM FEB.2013
Pace Project No.: 92148500

Sample: MW-20 **Lab ID: 92148500010** Collected: 02/18/13 17:50 Received: 02/19/13 09:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Monitoring Well Data	Analytical Method:								
Collected By	**MPS**				1		02/28/13 16:29		
Collected Date	**2/18/13**				1		02/28/13 16:29		
Collected Time	**17:50**				1		02/28/13 16:29		
Field pH	**6.5**	Std. Units	0.10	0.10	1		02/28/13 16:29		
Field Temperature	**10.9**	deg C	0.50	0.50	1		02/28/13 16:29		
Static Water Level	**1.84**	feet			1		02/28/13 16:29		
Field Specific Conductance	**59**	umhos/cm	1.0	1.0	1		02/28/13 16:29		
Turbidity	**80**	NTU	1.0	1.0	1		02/28/13 16:29		
8081 Organochlorine Pesticides	Analytical Method: EPA 8081 Preparation Method: EPA 3510								
Aldrin	ND	ug/L	0.050	0.050	1	02/25/13 13:20	03/05/13 01:30	309-00-2	
alpha-BHC	ND	ug/L	0.050	0.050	1	02/25/13 13:20	03/05/13 01:30	319-84-6	
beta-BHC	ND	ug/L	0.050	0.050	1	02/25/13 13:20	03/05/13 01:30	319-85-7	
delta-BHC	ND	ug/L	0.050	0.050	1	02/25/13 13:20	03/05/13 01:30	319-86-8	
gamma-BHC (Lindane)	ND	ug/L	0.050	0.050	1	02/25/13 13:20	03/05/13 01:30	58-89-9	
Chlordane (Technical)	ND	ug/L	0.20	0.20	1	02/25/13 13:20	03/05/13 01:30	57-74-9	
4,4'-DDD	ND	ug/L	0.050	0.050	1	02/25/13 13:20	03/05/13 01:30	72-54-8	
4,4'-DDE	ND	ug/L	0.050	0.050	1	02/25/13 13:20	03/05/13 01:30	72-55-9	
4,4'-DDT	ND	ug/L	0.050	0.050	1	02/25/13 13:20	03/05/13 01:30	50-29-3	
Dieldrin	ND	ug/L	0.050	0.050	1	02/25/13 13:20	03/05/13 01:30	60-57-1	
Endosulfan I	ND	ug/L	0.050	0.050	1	02/25/13 13:20	03/05/13 01:30	959-98-8	
Endosulfan II	ND	ug/L	0.050	0.050	1	02/25/13 13:20	03/05/13 01:30	33213-65-9	
Endosulfan sulfate	ND	ug/L	0.050	0.050	1	02/25/13 13:20	03/05/13 01:30	1031-07-8	
Endrin	ND	ug/L	0.050	0.050	1	02/25/13 13:20	03/05/13 01:30	72-20-8	
Endrin aldehyde	ND	ug/L	0.050	0.050	1	02/25/13 13:20	03/05/13 01:30	7421-93-4	
Endrin ketone	ND	ug/L	0.050	0.050	1	02/25/13 13:20	03/05/13 01:30	53494-70-5	
Heptachlor	ND	ug/L	0.050	0.050	1	02/25/13 13:20	03/05/13 01:30	76-44-8	
Heptachlor epoxide	ND	ug/L	0.050	0.050	1	02/25/13 13:20	03/05/13 01:30	1024-57-3	
Hexachlorobenzene	ND	ug/L	0.050	0.050	1	02/25/13 13:20	03/05/13 01:30	118-74-1	
Methoxychlor	ND	ug/L	0.15	0.15	1	02/25/13 13:20	03/05/13 01:30	72-43-5	
Mirex	ND	ug/L	0.15	0.15	1	02/25/13 13:20	03/05/13 01:30	2385-85-5	
Toxaphene	ND	ug/L	0.20	0.20	1	02/25/13 13:20	03/05/13 01:30	8001-35-2	
Surrogates									
Tetrachloro-m-xylene (S)	79	%	20-130		1	02/25/13 13:20	03/05/13 01:30	877-09-8	
Decachlorobiphenyl (S)	68	%	20-130		1	02/25/13 13:20	03/05/13 01:30	2051-24-3	
6010 ICP Groundwater	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Antimony	ND	ug/L	5.0	2.6	1	02/22/13 20:35	02/24/13 13:12	7440-36-0	
Arsenic	ND	ug/L	10.0	2.7	1	02/22/13 20:35	02/24/13 13:12	7440-38-2	
Barium	**100**	ug/L	5.0	0.20	1	02/22/13 20:35	02/24/13 13:12	7440-39-3	
Beryllium	**0.14J**	ug/L	1.0	0.10	1	02/22/13 20:35	02/24/13 13:12	7440-41-7	
Cadmium	ND	ug/L	1.0	0.50	1	02/22/13 20:35	02/24/13 13:12	7440-43-9	
Chromium	**7.0**	ug/L	5.0	0.40	1	02/22/13 20:35	02/24/13 13:12	7440-47-3	
Cobalt	**3.2J**	ug/L	5.0	0.60	1	02/22/13 20:35	02/24/13 13:12	7440-48-4	
Copper	**8.8**	ug/L	5.0	0.30	1	02/22/13 20:35	02/24/13 13:12	7440-50-8	
Lead	ND	ug/L	5.0	4.0	1	02/22/13 20:35	02/24/13 13:12	7439-92-1	

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ANALYTICAL RESULTS

Project: FRANCIS FARM LF GWM FEB.2013
Pace Project No.: 92148500

Sample: MW-20 **Lab ID: 92148500010** Collected: 02/18/13 17:50 Received: 02/19/13 09:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 ICP Groundwater	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Nickel	**8.4**	ug/L	5.0	1.7	1	02/22/13 20:35	02/24/13 13:12	7440-02-0	
Selenium	**2.2J**	ug/L	10.0	0.10	1	02/22/13 20:35	02/24/13 13:12	7782-49-2	
Silver	ND	ug/L	5.0	0.10	1	02/22/13 20:35	02/24/13 13:12	7440-22-4	
Thallium	ND	ug/L	5.4	3.0	1	02/22/13 20:35	02/24/13 13:12	7440-28-0	
Vanadium	**10.6**	ug/L	5.0	0.20	1	02/22/13 20:35	02/24/13 13:12	7440-62-2	
Zinc	**24.8**	ug/L	10.0	0.40	1	02/22/13 20:35	02/24/13 13:12	7440-66-6	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470								
Mercury	ND	ug/L	0.20	0.10	1	02/21/13 19:45	02/22/13 16:08	7439-97-6	
8260 MSV Low Level Landfill	Analytical Method: EPA 8260								
Acetone	ND	ug/L	25.0	10.0	1		02/20/13 18:18	67-64-1	
Acetonitrile	ND	ug/L	50.0	2.2	1		02/20/13 18:18	75-05-8	
Acrylonitrile	ND	ug/L	10.0	1.9	1		02/20/13 18:18	107-13-1	
Allyl chloride	ND	ug/L	2.0	1.5	1		02/20/13 18:18	107-05-1	
Benzene	ND	ug/L	1.0	0.25	1		02/20/13 18:18	71-43-2	
Bromochloromethane	ND	ug/L	1.0	0.17	1		02/20/13 18:18	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	0.18	1		02/20/13 18:18	75-27-4	
Bromoform	ND	ug/L	1.0	0.26	1		02/20/13 18:18	75-25-2	
Bromomethane	ND	ug/L	2.0	0.29	1		02/20/13 18:18	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	0.96	1		02/20/13 18:18	78-93-3	
Carbon disulfide	ND	ug/L	2.0	1.2	1		02/20/13 18:18	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.25	1		02/20/13 18:18	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.23	1		02/20/13 18:18	108-90-7	
Chloroethane	ND	ug/L	1.0	0.54	1		02/20/13 18:18	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		02/20/13 18:18	67-66-3	
Chloromethane	ND	ug/L	1.0	0.11	1		02/20/13 18:18	74-87-3	
Chloroprene	ND	ug/L	5.0	0.27	1		02/20/13 18:18	126-99-8	
1,2-Dibromo-3-chloropropane	ND	ug/L	5.0	2.5	1		02/20/13 18:18	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		02/20/13 18:18	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.27	1		02/20/13 18:18	106-93-4	
Dibromomethane	ND	ug/L	1.0	0.21	1		02/20/13 18:18	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	0.30	1		02/20/13 18:18	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	0.24	1		02/20/13 18:18	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	0.33	1		02/20/13 18:18	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	1.0	1.0	1		02/20/13 18:18	110-57-6	
Dichlorodifluoromethane	ND	ug/L	1.0	0.21	1		02/20/13 18:18	75-71-8	
1,1-Dichloroethane	ND	ug/L	1.0	0.32	1		02/20/13 18:18	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		02/20/13 18:18	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.56	1		02/20/13 18:18	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.19	1		02/20/13 18:18	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.49	1		02/20/13 18:18	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.27	1		02/20/13 18:18	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	0.28	1		02/20/13 18:18	142-28-9	
2,2-Dichloropropane	ND	ug/L	1.0	0.13	1		02/20/13 18:18	594-20-7	
1,1-Dichloropropene	ND	ug/L	1.0	0.49	1		02/20/13 18:18	563-58-6	

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ANALYTICAL RESULTS

Project: FRANCIS FARM LF GWM FEB.2013
Pace Project No.: 92148500

Sample: MW-20 **Lab ID: 92148500010** Collected: 02/18/13 17:50 Received: 02/19/13 09:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level Landfill	Analytical Method: EPA 8260								
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.13	1		02/20/13 18:18	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.26	1		02/20/13 18:18	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.30	1		02/20/13 18:18	100-41-4	
Ethyl methacrylate	ND	ug/L	1.0	0.20	1		02/20/13 18:18	97-63-2	
2-Hexanone	ND	ug/L	5.0	0.46	1		02/20/13 18:18	591-78-6	
Iodomethane	ND	ug/L	5.0	0.32	1		02/20/13 18:18	74-88-4	
Isobutanol	ND	ug/L	100	35.0	1		02/20/13 18:18	78-83-1	
Methacrylonitrile	ND	ug/L	10.0	0.93	1		02/20/13 18:18	126-98-7	
Methylene Chloride	ND	ug/L	1.0	0.97	1		02/20/13 18:18	75-09-2	
Methyl methacrylate	ND	ug/L	2.0	2.0	1		02/20/13 18:18	80-62-6	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	0.33	1		02/20/13 18:18	108-10-1	
Naphthalene	ND	ug/L	1.0	0.24	1		02/20/13 18:18	91-20-3	
Propionitrile	ND	ug/L	20.0	3.6	1		02/20/13 18:18	107-12-0	
Styrene	ND	ug/L	1.0	0.26	1		02/20/13 18:18	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	0.33	1		02/20/13 18:18	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.40	1		02/20/13 18:18	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		02/20/13 18:18	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		02/20/13 18:18	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		02/20/13 18:18	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.29	1		02/20/13 18:18	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.47	1		02/20/13 18:18	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	0.20	1		02/20/13 18:18	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	0.41	1		02/20/13 18:18	96-18-4	
Vinyl acetate	ND	ug/L	2.0	0.35	1		02/20/13 18:18	108-05-4	
Vinyl chloride	ND	ug/L	1.0	0.62	1		02/20/13 18:18	75-01-4	
Xylene (Total)	ND	ug/L	2.0	0.66	1		02/20/13 18:18	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	0.66	1		02/20/13 18:18	179601-23-1	
o-Xylene	ND	ug/L	1.0	0.23	1		02/20/13 18:18	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	99	%	70-130		1		02/20/13 18:18	460-00-4	
Dibromofluoromethane (S)	111	%	70-130		1		02/20/13 18:18	1868-53-7	
1,2-Dichloroethane-d4 (S)	104	%	70-130		1		02/20/13 18:18	17060-07-0	
Toluene-d8 (S)	101	%	70-130		1		02/20/13 18:18	2037-26-5	
4500CNE Cyanide, Total	Analytical Method: SM 4500-CN-E								
Cyanide	ND	mg/L	0.0050	0.0050	1		02/23/13 14:47	57-12-5	

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ANALYTICAL RESULTS

Project: FRANCIS FARM LF GWM FEB.2013
Pace Project No.: 92148500

Sample: MW-21 **Lab ID: 92148500011** Collected: 02/18/13 17:05 Received: 02/19/13 09:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Monitoring Well Data	Analytical Method:								
Collected By	**MPS**				1		02/28/13 16:30		
Collected Date	**2/18/13**				1		02/28/13 16:30		
Collected Time	**17:05**				1		02/28/13 16:30		
Field pH	**5.7**	Std. Units	0.10	0.10	1		02/28/13 16:30		
Field Temperature	**12.0**	deg C	0.50	0.50	1		02/28/13 16:30		
Static Water Level	**19.83**	feet			1		02/28/13 16:30		
Field Specific Conductance	**24**	umhos/cm	1.0	1.0	1		02/28/13 16:30		
Turbidity	**6.09**	NTU	1.0	1.0	1		02/28/13 16:30		
8081 Organochlorine Pesticides	Analytical Method: EPA 8081 Preparation Method: EPA 3510								
Aldrin	ND	ug/L	0.050	0.050	1	02/25/13 13:20	03/05/13 01:47	309-00-2	
alpha-BHC	ND	ug/L	0.050	0.050	1	02/25/13 13:20	03/05/13 01:47	319-84-6	
beta-BHC	ND	ug/L	0.050	0.050	1	02/25/13 13:20	03/05/13 01:47	319-85-7	
delta-BHC	ND	ug/L	0.050	0.050	1	02/25/13 13:20	03/05/13 01:47	319-86-8	
gamma-BHC (Lindane)	ND	ug/L	0.050	0.050	1	02/25/13 13:20	03/05/13 01:47	58-89-9	
Chlordane (Technical)	ND	ug/L	0.20	0.20	1	02/25/13 13:20	03/05/13 01:47	57-74-9	
4,4'-DDD	ND	ug/L	0.050	0.050	1	02/25/13 13:20	03/05/13 01:47	72-54-8	
4,4'-DDE	ND	ug/L	0.050	0.050	1	02/25/13 13:20	03/05/13 01:47	72-55-9	
4,4'-DDT	ND	ug/L	0.050	0.050	1	02/25/13 13:20	03/05/13 01:47	50-29-3	
Dieldrin	ND	ug/L	0.050	0.050	1	02/25/13 13:20	03/05/13 01:47	60-57-1	
Endosulfan I	ND	ug/L	0.050	0.050	1	02/25/13 13:20	03/05/13 01:47	959-98-8	
Endosulfan II	ND	ug/L	0.050	0.050	1	02/25/13 13:20	03/05/13 01:47	33213-65-9	
Endosulfan sulfate	ND	ug/L	0.050	0.050	1	02/25/13 13:20	03/05/13 01:47	1031-07-8	
Endrin	ND	ug/L	0.050	0.050	1	02/25/13 13:20	03/05/13 01:47	72-20-8	
Endrin aldehyde	ND	ug/L	0.050	0.050	1	02/25/13 13:20	03/05/13 01:47	7421-93-4	
Endrin ketone	ND	ug/L	0.050	0.050	1	02/25/13 13:20	03/05/13 01:47	53494-70-5	
Heptachlor	ND	ug/L	0.050	0.050	1	02/25/13 13:20	03/05/13 01:47	76-44-8	
Heptachlor epoxide	ND	ug/L	0.050	0.050	1	02/25/13 13:20	03/05/13 01:47	1024-57-3	
Hexachlorobenzene	ND	ug/L	0.050	0.050	1	02/25/13 13:20	03/05/13 01:47	118-74-1	
Methoxychlor	ND	ug/L	0.15	0.15	1	02/25/13 13:20	03/05/13 01:47	72-43-5	
Mirex	ND	ug/L	0.15	0.15	1	02/25/13 13:20	03/05/13 01:47	2385-85-5	
Toxaphene	ND	ug/L	0.20	0.20	1	02/25/13 13:20	03/05/13 01:47	8001-35-2	
Surrogates									
Tetrachloro-m-xylene (S)	84	%	20-130		1	02/25/13 13:20	03/05/13 01:47	877-09-8	
Decachlorobiphenyl (S)	70	%	20-130		1	02/25/13 13:20	03/05/13 01:47	2051-24-3	
6010 ICP Groundwater	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Antimony	ND	ug/L	5.0	2.6	1	02/22/13 20:35	02/24/13 13:15	7440-36-0	
Arsenic	ND	ug/L	10.0	2.7	1	02/22/13 20:35	02/24/13 13:15	7440-38-2	
Barium	**45.6**	ug/L	5.0	0.20	1	02/22/13 20:35	02/24/13 13:15	7440-39-3	
Beryllium	**0.12J**	ug/L	1.0	0.10	1	02/22/13 20:35	02/24/13 13:15	7440-41-7	
Cadmium	ND	ug/L	1.0	0.50	1	02/22/13 20:35	02/24/13 13:15	7440-43-9	
Chromium	**1.9J**	ug/L	5.0	0.40	1	02/22/13 20:35	02/24/13 13:15	7440-47-3	
Cobalt	**1.6J**	ug/L	5.0	0.60	1	02/22/13 20:35	02/24/13 13:15	7440-48-4	
Copper	**0.50J**	ug/L	5.0	0.30	1	02/22/13 20:35	02/24/13 13:15	7440-50-8	
Lead	ND	ug/L	5.0	4.0	1	02/22/13 20:35	02/24/13 13:15	7439-92-1	

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ANALYTICAL RESULTS

Project: FRANCIS FARM LF GWM FEB.2013
Pace Project No.: 92148500

Sample: MW-21 **Lab ID: 92148500011** Collected: 02/18/13 17:05 Received: 02/19/13 09:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 ICP Groundwater	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Nickel	ND	ug/L	5.0	1.7	1	02/22/13 20:35	02/24/13 13:15	7440-02-0	
Selenium	ND	ug/L	10.0	0.10	1	02/22/13 20:35	02/24/13 13:15	7782-49-2	
Silver	ND	ug/L	5.0	0.10	1	02/22/13 20:35	02/24/13 13:15	7440-22-4	
Thallium	ND	ug/L	5.4	3.0	1	02/22/13 20:35	02/24/13 13:15	7440-28-0	
Vanadium	**1.3J**	ug/L	5.0	0.20	1	02/22/13 20:35	02/24/13 13:15	7440-62-2	
Zinc	**7.6J**	ug/L	10.0	0.40	1	02/22/13 20:35	02/24/13 13:15	7440-66-6	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470								
Mercury	ND	ug/L	0.20	0.10	1	02/21/13 19:45	02/22/13 16:10	7439-97-6	
8260 MSV Low Level Landfill	Analytical Method: EPA 8260								
Acetone	ND	ug/L	25.0	10.0	1		02/20/13 18:34	67-64-1	
Acetonitrile	ND	ug/L	50.0	2.2	1		02/20/13 18:34	75-05-8	
Acrylonitrile	ND	ug/L	10.0	1.9	1		02/20/13 18:34	107-13-1	
Allyl chloride	ND	ug/L	2.0	1.5	1		02/20/13 18:34	107-05-1	
Benzene	ND	ug/L	1.0	0.25	1		02/20/13 18:34	71-43-2	
Bromochloromethane	ND	ug/L	1.0	0.17	1		02/20/13 18:34	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	0.18	1		02/20/13 18:34	75-27-4	
Bromoform	ND	ug/L	1.0	0.26	1		02/20/13 18:34	75-25-2	
Bromomethane	ND	ug/L	2.0	0.29	1		02/20/13 18:34	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	0.96	1		02/20/13 18:34	78-93-3	
Carbon disulfide	ND	ug/L	2.0	1.2	1		02/20/13 18:34	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.25	1		02/20/13 18:34	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.23	1		02/20/13 18:34	108-90-7	
Chloroethane	ND	ug/L	1.0	0.54	1		02/20/13 18:34	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		02/20/13 18:34	67-66-3	
Chloromethane	ND	ug/L	1.0	0.11	1		02/20/13 18:34	74-87-3	
Chloroprene	ND	ug/L	5.0	0.27	1		02/20/13 18:34	126-99-8	
1,2-Dibromo-3-chloropropane	ND	ug/L	5.0	2.5	1		02/20/13 18:34	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		02/20/13 18:34	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.27	1		02/20/13 18:34	106-93-4	
Dibromomethane	ND	ug/L	1.0	0.21	1		02/20/13 18:34	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	0.30	1		02/20/13 18:34	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	0.24	1		02/20/13 18:34	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	0.33	1		02/20/13 18:34	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	1.0	1.0	1		02/20/13 18:34	110-57-6	
Dichlorodifluoromethane	ND	ug/L	1.0	0.21	1		02/20/13 18:34	75-71-8	
1,1-Dichloroethane	ND	ug/L	1.0	0.32	1		02/20/13 18:34	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		02/20/13 18:34	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.56	1		02/20/13 18:34	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.19	1		02/20/13 18:34	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.49	1		02/20/13 18:34	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.27	1		02/20/13 18:34	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	0.28	1		02/20/13 18:34	142-28-9	
2,2-Dichloropropane	ND	ug/L	1.0	0.13	1		02/20/13 18:34	594-20-7	
1,1-Dichloropropene	ND	ug/L	1.0	0.49	1		02/20/13 18:34	563-58-6	

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ANALYTICAL RESULTS

Project: FRANCIS FARM LF GWM FEB.2013
Pace Project No.: 92148500

Sample: MW-21 **Lab ID: 92148500011** Collected: 02/18/13 17:05 Received: 02/19/13 09:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level Landfill	Analytical Method: EPA 8260								
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.13	1		02/20/13 18:34	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.26	1		02/20/13 18:34	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.30	1		02/20/13 18:34	100-41-4	
Ethyl methacrylate	ND	ug/L	1.0	0.20	1		02/20/13 18:34	97-63-2	
2-Hexanone	ND	ug/L	5.0	0.46	1		02/20/13 18:34	591-78-6	
Iodomethane	ND	ug/L	5.0	0.32	1		02/20/13 18:34	74-88-4	
Isobutanol	ND	ug/L	100	35.0	1		02/20/13 18:34	78-83-1	
Methacrylonitrile	ND	ug/L	10.0	0.93	1		02/20/13 18:34	126-98-7	
Methylene Chloride	ND	ug/L	1.0	0.97	1		02/20/13 18:34	75-09-2	
Methyl methacrylate	ND	ug/L	2.0	2.0	1		02/20/13 18:34	80-62-6	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	0.33	1		02/20/13 18:34	108-10-1	
Naphthalene	ND	ug/L	1.0	0.24	1		02/20/13 18:34	91-20-3	
Propionitrile	ND	ug/L	20.0	3.6	1		02/20/13 18:34	107-12-0	
Styrene	ND	ug/L	1.0	0.26	1		02/20/13 18:34	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	0.33	1		02/20/13 18:34	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.40	1		02/20/13 18:34	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		02/20/13 18:34	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		02/20/13 18:34	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		02/20/13 18:34	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.29	1		02/20/13 18:34	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.47	1		02/20/13 18:34	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	0.20	1		02/20/13 18:34	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	0.41	1		02/20/13 18:34	96-18-4	
Vinyl acetate	ND	ug/L	2.0	0.35	1		02/20/13 18:34	108-05-4	
Vinyl chloride	ND	ug/L	1.0	0.62	1		02/20/13 18:34	75-01-4	
Xylene (Total)	ND	ug/L	2.0	0.66	1		02/20/13 18:34	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	0.66	1		02/20/13 18:34	179601-23-1	
o-Xylene	ND	ug/L	1.0	0.23	1		02/20/13 18:34	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	99	%	70-130		1		02/20/13 18:34	460-00-4	
Dibromofluoromethane (S)	108	%	70-130		1		02/20/13 18:34	1868-53-7	
1,2-Dichloroethane-d4 (S)	103	%	70-130		1		02/20/13 18:34	17060-07-0	
Toluene-d8 (S)	101	%	70-130		1		02/20/13 18:34	2037-26-5	
4500CNE Cyanide, Total	Analytical Method: SM 4500-CN-E								
Cyanide	ND	mg/L	0.0050	0.0050	1		02/23/13 14:51	57-12-5	

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ANALYTICAL RESULTS

Project: FRANCIS FARM LF GWM FEB.2013
Pace Project No.: 92148500

Sample: MW-1A **Lab ID: 92148500012** Collected: 02/19/13 16:05 Received: 02/20/13 08:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Monitoring Well Data	Analytical Method:								
Collected By	**MPS**				1		02/28/13 16:31		
Collected Date	**2/19/13**				1		02/28/13 16:31		
Collected Time	**16:05**				1		02/28/13 16:31		
Field pH	**6.3**	Std. Units	0.10	0.10	1		02/28/13 16:31		
Field Temperature	**13.8**	deg C	0.50	0.50	1		02/28/13 16:31		
Static Water Level	**43.70**	feet			1		02/28/13 16:31		
Field Specific Conductance	**445**	umhos/cm	1.0	1.0	1		02/28/13 16:31		
Turbidity	**5.06**	NTU	1.0	1.0	1		02/28/13 16:31		
8081 Organochlorine Pesticides	Analytical Method: EPA 8081 Preparation Method: EPA 3510								
Aldrin	ND	ug/L	0.050	0.050	1	02/25/13 13:20	03/05/13 07:38	309-00-2	
alpha-BHC	ND	ug/L	0.050	0.050	1	02/25/13 13:20	03/05/13 07:38	319-84-6	
beta-BHC	ND	ug/L	0.050	0.050	1	02/25/13 13:20	03/05/13 07:38	319-85-7	
delta-BHC	ND	ug/L	0.050	0.050	1	02/25/13 13:20	03/05/13 07:38	319-86-8	
gamma-BHC (Lindane)	ND	ug/L	0.050	0.050	1	02/25/13 13:20	03/05/13 07:38	58-89-9	
Chlordane (Technical)	ND	ug/L	0.20	0.20	1	02/25/13 13:20	03/05/13 07:38	57-74-9	
4,4'-DDD	ND	ug/L	0.050	0.050	1	02/25/13 13:20	03/05/13 07:38	72-54-8	
4,4'-DDE	ND	ug/L	0.050	0.050	1	02/25/13 13:20	03/05/13 07:38	72-55-9	
4,4'-DDT	ND	ug/L	0.050	0.050	1	02/25/13 13:20	03/05/13 07:38	50-29-3	
Dieldrin	ND	ug/L	0.050	0.050	1	02/25/13 13:20	03/05/13 07:38	60-57-1	
Endosulfan I	ND	ug/L	0.050	0.050	1	02/25/13 13:20	03/05/13 07:38	959-98-8	
Endosulfan II	ND	ug/L	0.050	0.050	1	02/25/13 13:20	03/05/13 07:38	33213-65-9	
Endosulfan sulfate	ND	ug/L	0.050	0.050	1	02/25/13 13:20	03/05/13 07:38	1031-07-8	
Endrin	ND	ug/L	0.050	0.050	1	02/25/13 13:20	03/05/13 07:38	72-20-8	
Endrin aldehyde	ND	ug/L	0.050	0.050	1	02/25/13 13:20	03/05/13 07:38	7421-93-4	
Endrin ketone	ND	ug/L	0.050	0.050	1	02/25/13 13:20	03/05/13 07:38	53494-70-5	
Heptachlor	ND	ug/L	0.050	0.050	1	02/25/13 13:20	03/05/13 07:38	76-44-8	
Heptachlor epoxide	ND	ug/L	0.050	0.050	1	02/25/13 13:20	03/05/13 07:38	1024-57-3	
Hexachlorobenzene	ND	ug/L	0.050	0.050	1	02/25/13 13:20	03/05/13 07:38	118-74-1	
Methoxychlor	ND	ug/L	0.15	0.15	1	02/25/13 13:20	03/05/13 07:38	72-43-5	
Mirex	ND	ug/L	0.15	0.15	1	02/25/13 13:20	03/05/13 07:38	2385-85-5	
Toxaphene	ND	ug/L	0.20	0.20	1	02/25/13 13:20	03/05/13 07:38	8001-35-2	
Surrogates									
Tetrachloro-m-xylene (S)	78	%	20-130		1	02/25/13 13:20	03/05/13 07:38	877-09-8	
Decachlorobiphenyl (S)	63	%	20-130		1	02/25/13 13:20	03/05/13 07:38	2051-24-3	
6010 ICP Groundwater	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Antimony	ND	ug/L	5.0	2.6	1	02/22/13 20:35	02/24/13 17:42	7440-36-0	
Arsenic	ND	ug/L	10.0	2.7	1	02/22/13 20:35	02/24/13 17:42	7440-38-2	
Barium	**267**	ug/L	5.0	0.20	1	02/22/13 20:35	02/24/13 17:42	7440-39-3	
Beryllium	ND	ug/L	1.0	0.10	1	02/22/13 20:35	02/24/13 17:42	7440-41-7	
Cadmium	ND	ug/L	1.0	0.50	1	02/22/13 20:35	02/24/13 17:42	7440-43-9	
Chromium	ND	ug/L	5.0	0.40	1	02/22/13 20:35	02/24/13 17:42	7440-47-3	
Cobalt	**26.1**	ug/L	5.0	0.60	1	02/22/13 20:35	02/24/13 17:42	7440-48-4	
Copper	**1.6J**	ug/L	5.0	0.30	1	02/22/13 20:35	02/24/13 17:42	7440-50-8	
Lead	ND	ug/L	5.0	4.0	1	02/22/13 20:35	02/24/13 17:42	7439-92-1	

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ANALYTICAL RESULTS

Project: FRANCIS FARM LF GWM FEB.2013
Pace Project No.: 92148500

Sample: MW-1A **Lab ID: 92148500012** Collected: 02/19/13 16:05 Received: 02/20/13 08:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 ICP Groundwater	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Nickel	**2.4J**	ug/L	5.0	1.7	1	02/22/13 20:35	02/24/13 17:42	7440-02-0	
Selenium	**1.4J**	ug/L	10.0	0.10	1	02/22/13 20:35	02/24/13 17:42	7782-49-2	
Silver	ND	ug/L	5.0	0.10	1	02/22/13 20:35	02/24/13 17:42	7440-22-4	
Thallium	ND	ug/L	5.4	3.0	1	02/22/13 20:35	02/24/13 17:42	7440-28-0	
Vanadium	ND	ug/L	5.0	0.20	1	02/22/13 20:35	02/24/13 17:42	7440-62-2	
Zinc	**123**	ug/L	10.0	0.40	1	02/22/13 20:35	02/24/13 17:42	7440-66-6	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470								
Mercury	ND	ug/L	0.20	0.10	1	02/21/13 19:45	02/22/13 16:34	7439-97-6	
8260 MSV Low Level Landfill	Analytical Method: EPA 8260								
Acetone	ND	ug/L	25.0	10.0	1		02/23/13 03:45	67-64-1	
Acetonitrile	ND	ug/L	50.0	2.2	1		02/23/13 03:45	75-05-8	
Acrylonitrile	ND	ug/L	10.0	1.9	1		02/23/13 03:45	107-13-1	
Allyl chloride	ND	ug/L	2.0	1.5	1		02/23/13 03:45	107-05-1	
Benzene	ND	ug/L	1.0	0.25	1		02/23/13 03:45	71-43-2	
Bromochloromethane	ND	ug/L	1.0	0.17	1		02/23/13 03:45	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	0.18	1		02/23/13 03:45	75-27-4	
Bromoform	ND	ug/L	1.0	0.26	1		02/23/13 03:45	75-25-2	
Bromomethane	ND	ug/L	2.0	0.29	1		02/23/13 03:45	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	0.96	1		02/23/13 03:45	78-93-3	
Carbon disulfide	ND	ug/L	2.0	1.2	1		02/23/13 03:45	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.25	1		02/23/13 03:45	56-23-5	
Chlorobenzene	**3.1**	ug/L	1.0	0.23	1		02/23/13 03:45	108-90-7	
Chloroethane	**2.1**	ug/L	1.0	0.54	1		02/23/13 03:45	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		02/23/13 03:45	67-66-3	
Chloromethane	ND	ug/L	1.0	0.11	1		02/23/13 03:45	74-87-3	
Chloroprene	ND	ug/L	5.0	0.27	1		02/23/13 03:45	126-99-8	
1,2-Dibromo-3-chloropropane	ND	ug/L	5.0	2.5	1		02/23/13 03:45	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		02/23/13 03:45	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.27	1		02/23/13 03:45	106-93-4	
Dibromomethane	ND	ug/L	1.0	0.21	1		02/23/13 03:45	74-95-3	
1,2-Dichlorobenzene	**0.76J**	ug/L	1.0	0.30	1		02/23/13 03:45	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	0.24	1		02/23/13 03:45	541-73-1	
1,4-Dichlorobenzene	**0.53J**	ug/L	1.0	0.33	1		02/23/13 03:45	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	1.0	1.0	1		02/23/13 03:45	110-57-6	
Dichlorodifluoromethane	ND	ug/L	1.0	0.21	1		02/23/13 03:45	75-71-8	
1,1-Dichloroethane	**1.4**	ug/L	1.0	0.32	1		02/23/13 03:45	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		02/23/13 03:45	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.56	1		02/23/13 03:45	75-35-4	
cis-1,2-Dichloroethene	**0.50J**	ug/L	1.0	0.19	1		02/23/13 03:45	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.49	1		02/23/13 03:45	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.27	1		02/23/13 03:45	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	0.28	1		02/23/13 03:45	142-28-9	
2,2-Dichloropropane	ND	ug/L	1.0	0.13	1		02/23/13 03:45	594-20-7	
1,1-Dichloropropene	ND	ug/L	1.0	0.49	1		02/23/13 03:45	563-58-6	

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ANALYTICAL RESULTS

Project: FRANCIS FARM LF GWM FEB.2013
Pace Project No.: 92148500

Sample: MW-1A **Lab ID: 92148500012** Collected: 02/19/13 16:05 Received: 02/20/13 08:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level Landfill	Analytical Method: EPA 8260								
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.13	1		02/23/13 03:45	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.26	1		02/23/13 03:45	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.30	1		02/23/13 03:45	100-41-4	
Ethyl methacrylate	ND	ug/L	1.0	0.20	1		02/23/13 03:45	97-63-2	
2-Hexanone	ND	ug/L	5.0	0.46	1		02/23/13 03:45	591-78-6	
Iodomethane	ND	ug/L	5.0	0.32	1		02/23/13 03:45	74-88-4	
Isobutanol	ND	ug/L	100	35.0	1		02/23/13 03:45	78-83-1	
Methacrylonitrile	ND	ug/L	10.0	0.93	1		02/23/13 03:45	126-98-7	
Methylene Chloride	ND	ug/L	1.0	0.97	1		02/23/13 03:45	75-09-2	
Methyl methacrylate	ND	ug/L	2.0	2.0	1		02/23/13 03:45	80-62-6	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	0.33	1		02/23/13 03:45	108-10-1	
Naphthalene	**0.91J**	ug/L	1.0	0.24	1		02/23/13 03:45	91-20-3	
Propionitrile	ND	ug/L	20.0	3.6	1		02/23/13 03:45	107-12-0	
Styrene	ND	ug/L	1.0	0.26	1		02/23/13 03:45	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	0.33	1		02/23/13 03:45	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.40	1		02/23/13 03:45	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		02/23/13 03:45	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		02/23/13 03:45	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		02/23/13 03:45	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.29	1		02/23/13 03:45	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.47	1		02/23/13 03:45	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	0.20	1		02/23/13 03:45	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	0.41	1		02/23/13 03:45	96-18-4	
Vinyl acetate	ND	ug/L	2.0	0.35	1		02/23/13 03:45	108-05-4	
Vinyl chloride	ND	ug/L	1.0	0.62	1		02/23/13 03:45	75-01-4	
Xylene (Total)	ND	ug/L	2.0	0.66	1		02/23/13 03:45	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	0.66	1		02/23/13 03:45	179601-23-1	
o-Xylene	ND	ug/L	1.0	0.23	1		02/23/13 03:45	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	99	%	70-130		1		02/23/13 03:45	460-00-4	
Dibromofluoromethane (S)	109	%	70-130		1		02/23/13 03:45	1868-53-7	
1,2-Dichloroethane-d4 (S)	103	%	70-130		1		02/23/13 03:45	17060-07-0	
Toluene-d8 (S)	98	%	70-130		1		02/23/13 03:45	2037-26-5	
4500CNE Cyanide, Total	Analytical Method: SM 4500-CN-E								
Cyanide	ND	mg/L	0.0050	0.0050	1		02/23/13 15:06	57-12-5	

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ANALYTICAL RESULTS

Project: FRANCIS FARM LF GWM FEB.2013
Pace Project No.: 92148500

Sample: MW-4 **Lab ID: 92148500013** Collected: 02/19/13 16:30 Received: 02/20/13 08:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Monitoring Well Data	Analytical Method:								
Collected By	**MPS**				1		02/28/13 16:32		
Collected Date	**2/19/13**				1		02/28/13 16:32		
Collected Time	**16:30**				1		02/28/13 16:32		
Field pH	**5.7**	Std. Units	0.10	0.10	1		02/28/13 16:32		
Field Temperature	**12.8**	deg C	0.50	0.50	1		02/28/13 16:32		
Static Water Level	**71.47**	feet			1		02/28/13 16:32		
Field Specific Conductance	**193**	umhos/cm	1.0	1.0	1		02/28/13 16:32		
Turbidity	**1.89**	NTU	1.0	1.0	1		02/28/13 16:32		
8081 Organochlorine Pesticides	Analytical Method: EPA 8081 Preparation Method: EPA 3510								
Aldrin	ND	ug/L	0.050	0.050	1	02/25/13 13:20	03/05/13 07:55	309-00-2	
alpha-BHC	**0.054**	ug/L	0.050	0.050	1	02/25/13 13:20	03/05/13 07:55	319-84-6	
beta-BHC	ND	ug/L	0.050	0.050	1	02/25/13 13:20	03/05/13 07:55	319-85-7	
delta-BHC	ND	ug/L	0.050	0.050	1	02/25/13 13:20	03/05/13 07:55	319-86-8	
gamma-BHC (Lindane)	ND	ug/L	0.050	0.050	1	02/25/13 13:20	03/05/13 07:55	58-89-9	
Chlordane (Technical)	ND	ug/L	0.20	0.20	1	02/25/13 13:20	03/05/13 07:55	57-74-9	
4,4'-DDD	ND	ug/L	0.050	0.050	1	02/25/13 13:20	03/05/13 07:55	72-54-8	
4,4'-DDE	ND	ug/L	0.050	0.050	1	02/25/13 13:20	03/05/13 07:55	72-55-9	
4,4'-DDT	ND	ug/L	0.050	0.050	1	02/25/13 13:20	03/05/13 07:55	50-29-3	
Dieldrin	ND	ug/L	0.050	0.050	1	02/25/13 13:20	03/05/13 07:55	60-57-1	
Endosulfan I	ND	ug/L	0.050	0.050	1	02/25/13 13:20	03/05/13 07:55	959-98-8	
Endosulfan II	ND	ug/L	0.050	0.050	1	02/25/13 13:20	03/05/13 07:55	33213-65-9	
Endosulfan sulfate	ND	ug/L	0.050	0.050	1	02/25/13 13:20	03/05/13 07:55	1031-07-8	
Endrin	ND	ug/L	0.050	0.050	1	02/25/13 13:20	03/05/13 07:55	72-20-8	
Endrin aldehyde	ND	ug/L	0.050	0.050	1	02/25/13 13:20	03/05/13 07:55	7421-93-4	
Endrin ketone	ND	ug/L	0.050	0.050	1	02/25/13 13:20	03/05/13 07:55	53494-70-5	
Heptachlor	ND	ug/L	0.050	0.050	1	02/25/13 13:20	03/05/13 07:55	76-44-8	
Heptachlor epoxide	ND	ug/L	0.050	0.050	1	02/25/13 13:20	03/05/13 07:55	1024-57-3	
Hexachlorobenzene	ND	ug/L	0.050	0.050	1	02/25/13 13:20	03/05/13 07:55	118-74-1	
Methoxychlor	ND	ug/L	0.15	0.15	1	02/25/13 13:20	03/05/13 07:55	72-43-5	
Mirex	ND	ug/L	0.15	0.15	1	02/25/13 13:20	03/05/13 07:55	2385-85-5	
Toxaphene	ND	ug/L	0.20	0.20	1	02/25/13 13:20	03/05/13 07:55	8001-35-2	
Surrogates									
Tetrachloro-m-xylene (S)	76	%	20-130		1	02/25/13 13:20	03/05/13 07:55	877-09-8	
Decachlorobiphenyl (S)	33	%	20-130		1	02/25/13 13:20	03/05/13 07:55	2051-24-3	
6010 ICP Groundwater	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Antimony	ND	ug/L	5.0	2.6	1	02/22/13 20:35	02/24/13 17:45	7440-36-0	
Arsenic	ND	ug/L	10.0	2.7	1	02/22/13 20:35	02/24/13 17:45	7440-38-2	
Barium	**128**	ug/L	5.0	0.20	1	02/22/13 20:35	02/24/13 17:45	7440-39-3	
Beryllium	ND	ug/L	1.0	0.10	1	02/22/13 20:35	02/24/13 17:45	7440-41-7	
Cadmium	ND	ug/L	1.0	0.50	1	02/22/13 20:35	02/24/13 17:45	7440-43-9	
Chromium	ND	ug/L	5.0	0.40	1	02/22/13 20:35	02/24/13 17:45	7440-47-3	
Cobalt	**6.0**	ug/L	5.0	0.60	1	02/22/13 20:35	02/24/13 17:45	7440-48-4	
Copper	**1.4J**	ug/L	5.0	0.30	1	02/22/13 20:35	02/24/13 17:45	7440-50-8	
Lead	ND	ug/L	5.0	4.0	1	02/22/13 20:35	02/24/13 17:45	7439-92-1	

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ANALYTICAL RESULTS

Project: FRANCIS FARM LF GWM FEB.2013
Pace Project No.: 92148500

Sample: MW-4 **Lab ID: 92148500013** Collected: 02/19/13 16:30 Received: 02/20/13 08:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 ICP Groundwater	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Nickel	ND	ug/L	5.0	1.7	1	02/22/13 20:35	02/24/13 17:45	7440-02-0	
Selenium	**2.5J**	ug/L	10.0	0.10	1	02/22/13 20:35	02/24/13 17:45	7782-49-2	
Silver	**0.52J**	ug/L	5.0	0.10	1	02/22/13 20:35	02/24/13 17:45	7440-22-4	
Thallium	ND	ug/L	5.4	3.0	1	02/22/13 20:35	02/24/13 17:45	7440-28-0	
Vanadium	ND	ug/L	5.0	0.20	1	02/22/13 20:35	02/24/13 17:45	7440-62-2	
Zinc	**24.0**	ug/L	10.0	0.40	1	02/22/13 20:35	02/24/13 17:45	7440-66-6	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470								
Mercury	ND	ug/L	0.20	0.10	1	02/21/13 19:45	02/22/13 16:37	7439-97-6	
8260 MSV Low Level Landfill	Analytical Method: EPA 8260								
Acetone	ND	ug/L	25.0	10.0	1		02/23/13 04:01	67-64-1	
Acetonitrile	ND	ug/L	50.0	2.2	1		02/23/13 04:01	75-05-8	
Acrylonitrile	ND	ug/L	10.0	1.9	1		02/23/13 04:01	107-13-1	
Allyl chloride	ND	ug/L	2.0	1.5	1		02/23/13 04:01	107-05-1	
Benzene	**17.1**	ug/L	1.0	0.25	1		02/23/13 04:01	71-43-2	
Bromochloromethane	ND	ug/L	1.0	0.17	1		02/23/13 04:01	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	0.18	1		02/23/13 04:01	75-27-4	
Bromoform	ND	ug/L	1.0	0.26	1		02/23/13 04:01	75-25-2	
Bromomethane	ND	ug/L	2.0	0.29	1		02/23/13 04:01	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	0.96	1		02/23/13 04:01	78-93-3	
Carbon disulfide	ND	ug/L	2.0	1.2	1		02/23/13 04:01	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.25	1		02/23/13 04:01	56-23-5	
Chlorobenzene	**0.56J**	ug/L	1.0	0.23	1		02/23/13 04:01	108-90-7	
Chloroethane	**1.3**	ug/L	1.0	0.54	1		02/23/13 04:01	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		02/23/13 04:01	67-66-3	
Chloromethane	ND	ug/L	1.0	0.11	1		02/23/13 04:01	74-87-3	
Chloroprene	ND	ug/L	5.0	0.27	1		02/23/13 04:01	126-99-8	
1,2-Dibromo-3-chloropropane	ND	ug/L	5.0	2.5	1		02/23/13 04:01	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		02/23/13 04:01	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.27	1		02/23/13 04:01	106-93-4	
Dibromomethane	ND	ug/L	1.0	0.21	1		02/23/13 04:01	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	0.30	1		02/23/13 04:01	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	0.24	1		02/23/13 04:01	541-73-1	
1,4-Dichlorobenzene	**5.6**	ug/L	1.0	0.33	1		02/23/13 04:01	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	1.0	1.0	1		02/23/13 04:01	110-57-6	
Dichlorodifluoromethane	ND	ug/L	1.0	0.21	1		02/23/13 04:01	75-71-8	
1,1-Dichloroethane	**27.5**	ug/L	1.0	0.32	1		02/23/13 04:01	75-34-3	
1,2-Dichloroethane	**1.6**	ug/L	1.0	0.12	1		02/23/13 04:01	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.56	1		02/23/13 04:01	75-35-4	
cis-1,2-Dichloroethene	**31.4**	ug/L	1.0	0.19	1		02/23/13 04:01	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.49	1		02/23/13 04:01	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.27	1		02/23/13 04:01	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	0.28	1		02/23/13 04:01	142-28-9	
2,2-Dichloropropane	ND	ug/L	1.0	0.13	1		02/23/13 04:01	594-20-7	
1,1-Dichloropropene	ND	ug/L	1.0	0.49	1		02/23/13 04:01	563-58-6	

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ANALYTICAL RESULTS

Project: FRANCIS FARM LF GWM FEB.2013
Pace Project No.: 92148500

Sample: MW-4 **Lab ID: 92148500013** Collected: 02/19/13 16:30 Received: 02/20/13 08:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level Landfill	Analytical Method: EPA 8260								
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.13	1		02/23/13 04:01	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.26	1		02/23/13 04:01	10061-02-6	
Ethylbenzene	**0.46J**	ug/L	1.0	0.30	1		02/23/13 04:01	100-41-4	
Ethyl methacrylate	ND	ug/L	1.0	0.20	1		02/23/13 04:01	97-63-2	
2-Hexanone	ND	ug/L	5.0	0.46	1		02/23/13 04:01	591-78-6	
Iodomethane	ND	ug/L	5.0	0.32	1		02/23/13 04:01	74-88-4	
Isobutanol	ND	ug/L	100	35.0	1		02/23/13 04:01	78-83-1	
Methacrylonitrile	ND	ug/L	10.0	0.93	1		02/23/13 04:01	126-98-7	
Methylene Chloride	**21.4**	ug/L	1.0	0.97	1		02/23/13 04:01	75-09-2	
Methyl methacrylate	ND	ug/L	2.0	2.0	1		02/23/13 04:01	80-62-6	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	0.33	1		02/23/13 04:01	108-10-1	
Naphthalene	**5.2**	ug/L	1.0	0.24	1		02/23/13 04:01	91-20-3	
Propionitrile	ND	ug/L	20.0	3.6	1		02/23/13 04:01	107-12-0	
Styrene	ND	ug/L	1.0	0.26	1		02/23/13 04:01	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	0.33	1		02/23/13 04:01	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.40	1		02/23/13 04:01	79-34-5	
Tetrachloroethene	**5.8**	ug/L	1.0	0.46	1		02/23/13 04:01	127-18-4	
Toluene	**1.3**	ug/L	1.0	0.26	1		02/23/13 04:01	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		02/23/13 04:01	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.29	1		02/23/13 04:01	79-00-5	
Trichloroethene	**6.1**	ug/L	1.0	0.47	1		02/23/13 04:01	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	0.20	1		02/23/13 04:01	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	0.41	1		02/23/13 04:01	96-18-4	
Vinyl acetate	ND	ug/L	2.0	0.35	1		02/23/13 04:01	108-05-4	
Vinyl chloride	ND	ug/L	1.0	0.62	1		02/23/13 04:01	75-01-4	
Xylene (Total)	**7.5**	ug/L	2.0	0.66	1		02/23/13 04:01	1330-20-7	
m&p-Xylene	**5.6**	ug/L	2.0	0.66	1		02/23/13 04:01	179601-23-1	
o-Xylene	**1.9**	ug/L	1.0	0.23	1		02/23/13 04:01	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	99	%	70-130		1		02/23/13 04:01	460-00-4	
Dibromofluoromethane (S)	112	%	70-130		1		02/23/13 04:01	1868-53-7	
1,2-Dichloroethane-d4 (S)	106	%	70-130		1		02/23/13 04:01	17060-07-0	
Toluene-d8 (S)	101	%	70-130		1		02/23/13 04:01	2037-26-5	
4500CNE Cyanide, Total	Analytical Method: SM 4500-CN-E								
Cyanide	ND	mg/L	0.0050	0.0050	1		02/23/13 15:07	57-12-5	

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ANALYTICAL RESULTS

Project: FRANCIS FARM LF GWM FEB.2013
Pace Project No.: 92148500

Sample: MW-5 **Lab ID: 92148500014** Collected: 02/19/13 16:45 Received: 02/20/13 08:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Monitoring Well Data	Analytical Method:								
Collected By	**MPS**				1		02/28/13 16:33		
Collected Date	**2/19/13**				1		02/28/13 16:33		
Collected Time	**16:45**				1		02/28/13 16:33		
Field pH	**5.9**	Std. Units	0.10	0.10	1		02/28/13 16:33		
Field Temperature	**12.2**	deg C	0.50	0.50	1		02/28/13 16:33		
Static Water Level	**75.88**	feet			1		02/28/13 16:33		
Field Specific Conductance	**242**	umhos/cm	1.0	1.0	1		02/28/13 16:33		
Turbidity	**10.08**	NTU	1.0	1.0	1		02/28/13 16:33		
8081 Organochlorine Pesticides	Analytical Method: EPA 8081 Preparation Method: EPA 3510								
Aldrin	ND	ug/L	0.050	0.050	1	02/25/13 13:20	03/05/13 08:13	309-00-2	
alpha-BHC	ND	ug/L	0.050	0.050	1	02/25/13 13:20	03/05/13 08:13	319-84-6	
beta-BHC	ND	ug/L	0.050	0.050	1	02/25/13 13:20	03/05/13 08:13	319-85-7	
delta-BHC	ND	ug/L	0.050	0.050	1	02/25/13 13:20	03/05/13 08:13	319-86-8	
gamma-BHC (Lindane)	ND	ug/L	0.050	0.050	1	02/25/13 13:20	03/05/13 08:13	58-89-9	
Chlordane (Technical)	ND	ug/L	0.20	0.20	1	02/25/13 13:20	03/05/13 08:13	57-74-9	
4,4'-DDD	ND	ug/L	0.050	0.050	1	02/25/13 13:20	03/05/13 08:13	72-54-8	
4,4'-DDE	ND	ug/L	0.050	0.050	1	02/25/13 13:20	03/05/13 08:13	72-55-9	
4,4'-DDT	ND	ug/L	0.050	0.050	1	02/25/13 13:20	03/05/13 08:13	50-29-3	
Dieldrin	ND	ug/L	0.050	0.050	1	02/25/13 13:20	03/05/13 08:13	60-57-1	
Endosulfan I	ND	ug/L	0.050	0.050	1	02/25/13 13:20	03/05/13 08:13	959-98-8	
Endosulfan II	ND	ug/L	0.050	0.050	1	02/25/13 13:20	03/05/13 08:13	33213-65-9	
Endosulfan sulfate	ND	ug/L	0.050	0.050	1	02/25/13 13:20	03/05/13 08:13	1031-07-8	
Endrin	ND	ug/L	0.050	0.050	1	02/25/13 13:20	03/05/13 08:13	72-20-8	
Endrin aldehyde	ND	ug/L	0.050	0.050	1	02/25/13 13:20	03/05/13 08:13	7421-93-4	
Endrin ketone	ND	ug/L	0.050	0.050	1	02/25/13 13:20	03/05/13 08:13	53494-70-5	
Heptachlor	ND	ug/L	0.050	0.050	1	02/25/13 13:20	03/05/13 08:13	76-44-8	
Heptachlor epoxide	ND	ug/L	0.050	0.050	1	02/25/13 13:20	03/05/13 08:13	1024-57-3	
Hexachlorobenzene	ND	ug/L	0.050	0.050	1	02/25/13 13:20	03/05/13 08:13	118-74-1	
Methoxychlor	ND	ug/L	0.15	0.15	1	02/25/13 13:20	03/05/13 08:13	72-43-5	
Mirex	ND	ug/L	0.15	0.15	1	02/25/13 13:20	03/05/13 08:13	2385-85-5	
Toxaphene	ND	ug/L	0.20	0.20	1	02/25/13 13:20	03/05/13 08:13	8001-35-2	
Surrogates									
Tetrachloro-m-xylene (S)	50	%	20-130		1	02/25/13 13:20	03/05/13 08:13	877-09-8	
Decachlorobiphenyl (S)	52	%	20-130		1	02/25/13 13:20	03/05/13 08:13	2051-24-3	
6010 ICP Groundwater	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Antimony	ND	ug/L	5.0	2.6	1	02/22/13 20:35	02/24/13 17:48	7440-36-0	
Arsenic	ND	ug/L	10.0	2.7	1	02/22/13 20:35	02/24/13 17:48	7440-38-2	
Barium	**229**	ug/L	5.0	0.20	1	02/22/13 20:35	02/24/13 17:48	7440-39-3	
Beryllium	ND	ug/L	1.0	0.10	1	02/22/13 20:35	02/24/13 17:48	7440-41-7	
Cadmium	ND	ug/L	1.0	0.50	1	02/22/13 20:35	02/24/13 17:48	7440-43-9	
Chromium	**1.5J**	ug/L	5.0	0.40	1	02/22/13 20:35	02/24/13 17:48	7440-47-3	
Cobalt	**14.8**	ug/L	5.0	0.60	1	02/22/13 20:35	02/24/13 17:48	7440-48-4	
Copper	**7.3**	ug/L	5.0	0.30	1	02/22/13 20:35	02/24/13 17:48	7440-50-8	
Lead	ND	ug/L	5.0	4.0	1	02/22/13 20:35	02/24/13 17:48	7439-92-1	

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ANALYTICAL RESULTS

Project: FRANCIS FARM LF GWM FEB.2013
Pace Project No.: 92148500

Sample: MW-5 **Lab ID: 92148500014** Collected: 02/19/13 16:45 Received: 02/20/13 08:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 ICP Groundwater	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Nickel	**6.0**	ug/L	5.0	1.7	1	02/22/13 20:35	02/24/13 17:48	7440-02-0	
Selenium	**1.3J**	ug/L	10.0	0.10	1	02/22/13 20:35	02/24/13 17:48	7782-49-2	
Silver	**0.59J**	ug/L	5.0	0.10	1	02/22/13 20:35	02/24/13 17:48	7440-22-4	
Thallium	ND	ug/L	5.4	3.0	1	02/22/13 20:35	02/24/13 17:48	7440-28-0	
Vanadium	**4.1J**	ug/L	5.0	0.20	1	02/22/13 20:35	02/24/13 17:48	7440-62-2	
Zinc	**11.5**	ug/L	10.0	0.40	1	02/22/13 20:35	02/24/13 17:48	7440-66-6	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470								
Mercury	ND	ug/L	0.20	0.10	1	02/21/13 19:45	02/22/13 16:40	7439-97-6	
8260 MSV Low Level Landfill	Analytical Method: EPA 8260								
Acetone	ND	ug/L	25.0	10.0	1		02/23/13 04:17	67-64-1	
Acetonitrile	ND	ug/L	50.0	2.2	1		02/23/13 04:17	75-05-8	
Acrylonitrile	ND	ug/L	10.0	1.9	1		02/23/13 04:17	107-13-1	
Allyl chloride	ND	ug/L	2.0	1.5	1		02/23/13 04:17	107-05-1	
Benzene	**4.1**	ug/L	1.0	0.25	1		02/23/13 04:17	71-43-2	
Bromochloromethane	ND	ug/L	1.0	0.17	1		02/23/13 04:17	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	0.18	1		02/23/13 04:17	75-27-4	
Bromoform	ND	ug/L	1.0	0.26	1		02/23/13 04:17	75-25-2	
Bromomethane	ND	ug/L	2.0	0.29	1		02/23/13 04:17	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	0.96	1		02/23/13 04:17	78-93-3	
Carbon disulfide	ND	ug/L	2.0	1.2	1		02/23/13 04:17	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.25	1		02/23/13 04:17	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.23	1		02/23/13 04:17	108-90-7	
Chloroethane	**2.4**	ug/L	1.0	0.54	1		02/23/13 04:17	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		02/23/13 04:17	67-66-3	
Chloromethane	ND	ug/L	1.0	0.11	1		02/23/13 04:17	74-87-3	
Chloroprene	ND	ug/L	5.0	0.27	1		02/23/13 04:17	126-99-8	
1,2-Dibromo-3-chloropropane	ND	ug/L	5.0	2.5	1		02/23/13 04:17	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		02/23/13 04:17	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.27	1		02/23/13 04:17	106-93-4	
Dibromomethane	ND	ug/L	1.0	0.21	1		02/23/13 04:17	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	0.30	1		02/23/13 04:17	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	0.24	1		02/23/13 04:17	541-73-1	
1,4-Dichlorobenzene	**1.1**	ug/L	1.0	0.33	1		02/23/13 04:17	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	1.0	1.0	1		02/23/13 04:17	110-57-6	
Dichlorodifluoromethane	ND	ug/L	1.0	0.21	1		02/23/13 04:17	75-71-8	
1,1-Dichloroethane	**7.9**	ug/L	1.0	0.32	1		02/23/13 04:17	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		02/23/13 04:17	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.56	1		02/23/13 04:17	75-35-4	
cis-1,2-Dichloroethene	**10.4**	ug/L	1.0	0.19	1		02/23/13 04:17	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.49	1		02/23/13 04:17	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.27	1		02/23/13 04:17	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	0.28	1		02/23/13 04:17	142-28-9	
2,2-Dichloropropane	ND	ug/L	1.0	0.13	1		02/23/13 04:17	594-20-7	
1,1-Dichloropropene	ND	ug/L	1.0	0.49	1		02/23/13 04:17	563-58-6	

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ANALYTICAL RESULTS

Project: FRANCIS FARM LF GWM FEB.2013
Pace Project No.: 92148500

Sample: MW-5 **Lab ID: 92148500014** Collected: 02/19/13 16:45 Received: 02/20/13 08:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level Landfill	Analytical Method: EPA 8260								
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.13	1		02/23/13 04:17	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.26	1		02/23/13 04:17	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.30	1		02/23/13 04:17	100-41-4	
Ethyl methacrylate	ND	ug/L	1.0	0.20	1		02/23/13 04:17	97-63-2	
2-Hexanone	ND	ug/L	5.0	0.46	1		02/23/13 04:17	591-78-6	
Iodomethane	ND	ug/L	5.0	0.32	1		02/23/13 04:17	74-88-4	
Isobutanol	ND	ug/L	100	35.0	1		02/23/13 04:17	78-83-1	
Methacrylonitrile	ND	ug/L	10.0	0.93	1		02/23/13 04:17	126-98-7	
Methylene Chloride	ND	ug/L	1.0	0.97	1		02/23/13 04:17	75-09-2	
Methyl methacrylate	ND	ug/L	2.0	2.0	1		02/23/13 04:17	80-62-6	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	0.33	1		02/23/13 04:17	108-10-1	
Naphthalene	**0.82J**	ug/L	1.0	0.24	1		02/23/13 04:17	91-20-3	
Propionitrile	ND	ug/L	20.0	3.6	1		02/23/13 04:17	107-12-0	
Styrene	ND	ug/L	1.0	0.26	1		02/23/13 04:17	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	0.33	1		02/23/13 04:17	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.40	1		02/23/13 04:17	79-34-5	
Tetrachloroethene	**4.4**	ug/L	1.0	0.46	1		02/23/13 04:17	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		02/23/13 04:17	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		02/23/13 04:17	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.29	1		02/23/13 04:17	79-00-5	
Trichloroethene	**3.3**	ug/L	1.0	0.47	1		02/23/13 04:17	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	0.20	1		02/23/13 04:17	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	0.41	1		02/23/13 04:17	96-18-4	
Vinyl acetate	ND	ug/L	2.0	0.35	1		02/23/13 04:17	108-05-4	
Vinyl chloride	ND	ug/L	1.0	0.62	1		02/23/13 04:17	75-01-4	
Xylene (Total)	**0.88J**	ug/L	2.0	0.66	1		02/23/13 04:17	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	0.66	1		02/23/13 04:17	179601-23-1	
o-Xylene	**0.76J**	ug/L	1.0	0.23	1		02/23/13 04:17	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	98	%	70-130		1		02/23/13 04:17	460-00-4	
Dibromofluoromethane (S)	107	%	70-130		1		02/23/13 04:17	1868-53-7	
1,2-Dichloroethane-d4 (S)	103	%	70-130		1		02/23/13 04:17	17060-07-0	
Toluene-d8 (S)	98	%	70-130		1		02/23/13 04:17	2037-26-5	
4500CNE Cyanide, Total	Analytical Method: SM 4500-CN-E								
Cyanide	ND	mg/L	0.0050	0.0050	1		02/23/13 15:08	57-12-5	

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ANALYTICAL RESULTS

Project: FRANCIS FARM LF GWM FEB.2013
Pace Project No.: 92148500

Sample: MW-12 **Lab ID: 92148500015** Collected: 02/19/13 17:10 Received: 02/20/13 08:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Monitoring Well Data	Analytical Method:								
Collected By	**MPS**				1		02/28/13 16:34		
Collected Date	**2/19/13**				1		02/28/13 16:34		
Collected Time	**17:10**				1		02/28/13 16:34		
Field pH	**6.5**	Std. Units	0.10	0.10	1		02/28/13 16:34		
Field Temperature	**11.0**	deg C	0.50	0.50	1		02/28/13 16:34		
Static Water Level	**75.57**	feet			1		02/28/13 16:34		
Field Specific Conductance	**80**	umhos/cm	1.0	1.0	1		02/28/13 16:34		
Turbidity	**40**	NTU	1.0	1.0	1		02/28/13 16:34		
8081 Organochlorine Pesticides	Analytical Method: EPA 8081 Preparation Method: EPA 3510								
Aldrin	ND	ug/L	0.050	0.050	1	02/25/13 13:20	03/05/13 08:30	309-00-2	
alpha-BHC	ND	ug/L	0.050	0.050	1	02/25/13 13:20	03/05/13 08:30	319-84-6	
beta-BHC	ND	ug/L	0.050	0.050	1	02/25/13 13:20	03/05/13 08:30	319-85-7	
delta-BHC	ND	ug/L	0.050	0.050	1	02/25/13 13:20	03/05/13 08:30	319-86-8	
gamma-BHC (Lindane)	ND	ug/L	0.050	0.050	1	02/25/13 13:20	03/05/13 08:30	58-89-9	
Chlordane (Technical)	ND	ug/L	0.20	0.20	1	02/25/13 13:20	03/05/13 08:30	57-74-9	
4,4'-DDD	ND	ug/L	0.050	0.050	1	02/25/13 13:20	03/05/13 08:30	72-54-8	
4,4'-DDE	ND	ug/L	0.050	0.050	1	02/25/13 13:20	03/05/13 08:30	72-55-9	
4,4'-DDT	ND	ug/L	0.050	0.050	1	02/25/13 13:20	03/05/13 08:30	50-29-3	
Dieldrin	ND	ug/L	0.050	0.050	1	02/25/13 13:20	03/05/13 08:30	60-57-1	
Endosulfan I	ND	ug/L	0.050	0.050	1	02/25/13 13:20	03/05/13 08:30	959-98-8	
Endosulfan II	ND	ug/L	0.050	0.050	1	02/25/13 13:20	03/05/13 08:30	33213-65-9	
Endosulfan sulfate	ND	ug/L	0.050	0.050	1	02/25/13 13:20	03/05/13 08:30	1031-07-8	
Endrin	ND	ug/L	0.050	0.050	1	02/25/13 13:20	03/05/13 08:30	72-20-8	
Endrin aldehyde	ND	ug/L	0.050	0.050	1	02/25/13 13:20	03/05/13 08:30	7421-93-4	
Endrin ketone	ND	ug/L	0.050	0.050	1	02/25/13 13:20	03/05/13 08:30	53494-70-5	
Heptachlor	ND	ug/L	0.050	0.050	1	02/25/13 13:20	03/05/13 08:30	76-44-8	
Heptachlor epoxide	ND	ug/L	0.050	0.050	1	02/25/13 13:20	03/05/13 08:30	1024-57-3	
Hexachlorobenzene	ND	ug/L	0.050	0.050	1	02/25/13 13:20	03/05/13 08:30	118-74-1	
Methoxychlor	ND	ug/L	0.15	0.15	1	02/25/13 13:20	03/05/13 08:30	72-43-5	
Mirex	ND	ug/L	0.15	0.15	1	02/25/13 13:20	03/05/13 08:30	2385-85-5	
Toxaphene	ND	ug/L	0.20	0.20	1	02/25/13 13:20	03/05/13 08:30	8001-35-2	
Surrogates									
Tetrachloro-m-xylene (S)	73	%	20-130		1	02/25/13 13:20	03/05/13 08:30	877-09-8	
Decachlorobiphenyl (S)	37	%	20-130		1	02/25/13 13:20	03/05/13 08:30	2051-24-3	
6010 ICP Groundwater	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Antimony	ND	ug/L	5.0	2.6	1	02/22/13 20:35	02/24/13 17:51	7440-36-0	
Arsenic	ND	ug/L	10.0	2.7	1	02/22/13 20:35	02/24/13 17:51	7440-38-2	
Barium	**216**	ug/L	5.0	0.20	1	02/22/13 20:35	02/24/13 17:51	7440-39-3	
Beryllium	ND	ug/L	1.0	0.10	1	02/22/13 20:35	02/24/13 17:51	7440-41-7	
Cadmium	ND	ug/L	1.0	0.50	1	02/22/13 20:35	02/24/13 17:51	7440-43-9	
Chromium	**16.0**	ug/L	5.0	0.40	1	02/22/13 20:35	02/24/13 17:51	7440-47-3	
Cobalt	**7.0**	ug/L	5.0	0.60	1	02/22/13 20:35	02/24/13 17:51	7440-48-4	
Copper	**9.0**	ug/L	5.0	0.30	1	02/22/13 20:35	02/24/13 17:51	7440-50-8	
Lead	ND	ug/L	5.0	4.0	1	02/22/13 20:35	02/24/13 17:51	7439-92-1	

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ANALYTICAL RESULTS

Project: FRANCIS FARM LF GWM FEB.2013
Pace Project No.: 92148500

Sample: MW-12 **Lab ID: 92148500015** Collected: 02/19/13 17:10 Received: 02/20/13 08:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 ICP Groundwater	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Nickel	**11.3**	ug/L	5.0	1.7	1	02/22/13 20:35	02/24/13 17:51	7440-02-0	
Selenium	**0.84J**	ug/L	10.0	0.10	1	02/22/13 20:35	02/24/13 17:51	7782-49-2	
Silver	**0.44J**	ug/L	5.0	0.10	1	02/22/13 20:35	02/24/13 17:51	7440-22-4	
Thallium	ND	ug/L	5.4	3.0	1	02/22/13 20:35	02/24/13 17:51	7440-28-0	
Vanadium	**20.8**	ug/L	5.0	0.20	1	02/22/13 20:35	02/24/13 17:51	7440-62-2	
Zinc	**13.6**	ug/L	10.0	0.40	1	02/22/13 20:35	02/24/13 17:51	7440-66-6	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470								
Mercury	ND	ug/L	0.20	0.10	1	02/21/13 19:45	02/22/13 16:42	7439-97-6	
8260 MSV Low Level Landfill	Analytical Method: EPA 8260								
Acetone	ND	ug/L	25.0	10.0	1		02/23/13 04:33	67-64-1	
Acetonitrile	ND	ug/L	50.0	2.2	1		02/23/13 04:33	75-05-8	
Acrylonitrile	ND	ug/L	10.0	1.9	1		02/23/13 04:33	107-13-1	
Allyl chloride	ND	ug/L	2.0	1.5	1		02/23/13 04:33	107-05-1	
Benzene	ND	ug/L	1.0	0.25	1		02/23/13 04:33	71-43-2	
Bromochloromethane	ND	ug/L	1.0	0.17	1		02/23/13 04:33	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	0.18	1		02/23/13 04:33	75-27-4	
Bromoform	ND	ug/L	1.0	0.26	1		02/23/13 04:33	75-25-2	
Bromomethane	ND	ug/L	2.0	0.29	1		02/23/13 04:33	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	0.96	1		02/23/13 04:33	78-93-3	
Carbon disulfide	ND	ug/L	2.0	1.2	1		02/23/13 04:33	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.25	1		02/23/13 04:33	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.23	1		02/23/13 04:33	108-90-7	
Chloroethane	ND	ug/L	1.0	0.54	1		02/23/13 04:33	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		02/23/13 04:33	67-66-3	
Chloromethane	ND	ug/L	1.0	0.11	1		02/23/13 04:33	74-87-3	
Chloroprene	ND	ug/L	5.0	0.27	1		02/23/13 04:33	126-99-8	
1,2-Dibromo-3-chloropropane	ND	ug/L	5.0	2.5	1		02/23/13 04:33	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		02/23/13 04:33	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.27	1		02/23/13 04:33	106-93-4	
Dibromomethane	ND	ug/L	1.0	0.21	1		02/23/13 04:33	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	0.30	1		02/23/13 04:33	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	0.24	1		02/23/13 04:33	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	0.33	1		02/23/13 04:33	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	1.0	1.0	1		02/23/13 04:33	110-57-6	
Dichlorodifluoromethane	ND	ug/L	1.0	0.21	1		02/23/13 04:33	75-71-8	
1,1-Dichloroethane	ND	ug/L	1.0	0.32	1		02/23/13 04:33	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		02/23/13 04:33	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.56	1		02/23/13 04:33	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.19	1		02/23/13 04:33	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.49	1		02/23/13 04:33	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.27	1		02/23/13 04:33	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	0.28	1		02/23/13 04:33	142-28-9	
2,2-Dichloropropane	ND	ug/L	1.0	0.13	1		02/23/13 04:33	594-20-7	
1,1-Dichloropropene	ND	ug/L	1.0	0.49	1		02/23/13 04:33	563-58-6	

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ANALYTICAL RESULTS

Project: FRANCIS FARM LF GWM FEB.2013
Pace Project No.: 92148500

Sample: MW-12 **Lab ID: 92148500015** Collected: 02/19/13 17:10 Received: 02/20/13 08:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level Landfill	Analytical Method: EPA 8260								
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.13	1		02/23/13 04:33	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.26	1		02/23/13 04:33	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.30	1		02/23/13 04:33	100-41-4	
Ethyl methacrylate	ND	ug/L	1.0	0.20	1		02/23/13 04:33	97-63-2	
2-Hexanone	ND	ug/L	5.0	0.46	1		02/23/13 04:33	591-78-6	
Iodomethane	ND	ug/L	5.0	0.32	1		02/23/13 04:33	74-88-4	
Isobutanol	ND	ug/L	100	35.0	1		02/23/13 04:33	78-83-1	
Methacrylonitrile	ND	ug/L	10.0	0.93	1		02/23/13 04:33	126-98-7	
Methylene Chloride	ND	ug/L	1.0	0.97	1		02/23/13 04:33	75-09-2	
Methyl methacrylate	ND	ug/L	2.0	2.0	1		02/23/13 04:33	80-62-6	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	0.33	1		02/23/13 04:33	108-10-1	
Naphthalene	ND	ug/L	1.0	0.24	1		02/23/13 04:33	91-20-3	
Propionitrile	ND	ug/L	20.0	3.6	1		02/23/13 04:33	107-12-0	
Styrene	ND	ug/L	1.0	0.26	1		02/23/13 04:33	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	0.33	1		02/23/13 04:33	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.40	1		02/23/13 04:33	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		02/23/13 04:33	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		02/23/13 04:33	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		02/23/13 04:33	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.29	1		02/23/13 04:33	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.47	1		02/23/13 04:33	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	0.20	1		02/23/13 04:33	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	0.41	1		02/23/13 04:33	96-18-4	
Vinyl acetate	ND	ug/L	2.0	0.35	1		02/23/13 04:33	108-05-4	
Vinyl chloride	ND	ug/L	1.0	0.62	1		02/23/13 04:33	75-01-4	
Xylene (Total)	ND	ug/L	2.0	0.66	1		02/23/13 04:33	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	0.66	1		02/23/13 04:33	179601-23-1	
o-Xylene	ND	ug/L	1.0	0.23	1		02/23/13 04:33	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	98	%	70-130		1		02/23/13 04:33	460-00-4	
Dibromofluoromethane (S)	109	%	70-130		1		02/23/13 04:33	1868-53-7	
1,2-Dichloroethane-d4 (S)	105	%	70-130		1		02/23/13 04:33	17060-07-0	
Toluene-d8 (S)	100	%	70-130		1		02/23/13 04:33	2037-26-5	
4500CNE Cyanide, Total	Analytical Method: SM 4500-CN-E								
Cyanide	ND	mg/L	0.0050	0.0050	1		02/23/13 15:11	57-12-5	

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ANALYTICAL RESULTS

Project: FRANCIS FARM LF GWM FEB.2013
Pace Project No.: 92148500

Sample: MW-13 **Lab ID: 92148500016** Collected: 02/19/13 17:30 Received: 02/20/13 08:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Monitoring Well Data	Analytical Method:								
Collected By	**MPS**				1		02/28/13 16:35		
Collected Date	**2/19/13**				1		02/28/13 16:35		
Collected Time	**17:35**				1		02/28/13 16:35		
Field pH	**6.2**	Std. Units	0.10	0.10	1		02/28/13 16:35		
Field Temperature	**12.2**	deg C	0.50	0.50	1		02/28/13 16:35		
Static Water Level	**84.04**	feet			1		02/28/13 16:35		
Field Specific Conductance	**5.0**	umhos/cm	1.0	1.0	1		02/28/13 16:35		
Turbidity	**2.56**	NTU	1.0	1.0	1		02/28/13 16:35		
8081 Organochlorine Pesticides	Analytical Method: EPA 8081 Preparation Method: EPA 3510								
Aldrin	ND	ug/L	0.050	0.050	1	02/25/13 13:20	03/05/13 08:48	309-00-2	
alpha-BHC	ND	ug/L	0.050	0.050	1	02/25/13 13:20	03/05/13 08:48	319-84-6	
beta-BHC	ND	ug/L	0.050	0.050	1	02/25/13 13:20	03/05/13 08:48	319-85-7	
delta-BHC	ND	ug/L	0.050	0.050	1	02/25/13 13:20	03/05/13 08:48	319-86-8	
gamma-BHC (Lindane)	ND	ug/L	0.050	0.050	1	02/25/13 13:20	03/05/13 08:48	58-89-9	
Chlordane (Technical)	ND	ug/L	0.20	0.20	1	02/25/13 13:20	03/05/13 08:48	57-74-9	
4,4'-DDD	ND	ug/L	0.050	0.050	1	02/25/13 13:20	03/05/13 08:48	72-54-8	
4,4'-DDE	ND	ug/L	0.050	0.050	1	02/25/13 13:20	03/05/13 08:48	72-55-9	
4,4'-DDT	ND	ug/L	0.050	0.050	1	02/25/13 13:20	03/05/13 08:48	50-29-3	
Dieldrin	ND	ug/L	0.050	0.050	1	02/25/13 13:20	03/05/13 08:48	60-57-1	
Endosulfan I	ND	ug/L	0.050	0.050	1	02/25/13 13:20	03/05/13 08:48	959-98-8	
Endosulfan II	ND	ug/L	0.050	0.050	1	02/25/13 13:20	03/05/13 08:48	33213-65-9	
Endosulfan sulfate	ND	ug/L	0.050	0.050	1	02/25/13 13:20	03/05/13 08:48	1031-07-8	
Endrin	ND	ug/L	0.050	0.050	1	02/25/13 13:20	03/05/13 08:48	72-20-8	
Endrin aldehyde	ND	ug/L	0.050	0.050	1	02/25/13 13:20	03/05/13 08:48	7421-93-4	
Endrin ketone	ND	ug/L	0.050	0.050	1	02/25/13 13:20	03/05/13 08:48	53494-70-5	
Heptachlor	ND	ug/L	0.050	0.050	1	02/25/13 13:20	03/05/13 08:48	76-44-8	
Heptachlor epoxide	ND	ug/L	0.050	0.050	1	02/25/13 13:20	03/05/13 08:48	1024-57-3	
Hexachlorobenzene	ND	ug/L	0.050	0.050	1	02/25/13 13:20	03/05/13 08:48	118-74-1	
Methoxychlor	ND	ug/L	0.15	0.15	1	02/25/13 13:20	03/05/13 08:48	72-43-5	
Mirex	ND	ug/L	0.15	0.15	1	02/25/13 13:20	03/05/13 08:48	2385-85-5	
Toxaphene	ND	ug/L	0.20	0.20	1	02/25/13 13:20	03/05/13 08:48	8001-35-2	
Surrogates									
Tetrachloro-m-xylene (S)	93	%	20-130		1	02/25/13 13:20	03/05/13 08:48	877-09-8	
Decachlorobiphenyl (S)	75	%	20-130		1	02/25/13 13:20	03/05/13 08:48	2051-24-3	
6010 ICP Groundwater	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Antimony	ND	ug/L	5.0	2.6	1	02/22/13 20:35	02/24/13 17:54	7440-36-0	
Arsenic	ND	ug/L	10.0	2.7	1	02/22/13 20:35	02/24/13 17:54	7440-38-2	
Barium	**815**	ug/L	5.0	0.20	1	02/22/13 20:35	02/24/13 17:54	7440-39-3	
Beryllium	ND	ug/L	1.0	0.10	1	02/22/13 20:35	02/24/13 17:54	7440-41-7	
Cadmium	ND	ug/L	1.0	0.50	1	02/22/13 20:35	02/24/13 17:54	7440-43-9	
Chromium	**0.51J**	ug/L	5.0	0.40	1	02/22/13 20:35	02/24/13 17:54	7440-47-3	
Cobalt	**20.7**	ug/L	5.0	0.60	1	02/22/13 20:35	02/24/13 17:54	7440-48-4	
Copper	**0.96J**	ug/L	5.0	0.30	1	02/22/13 20:35	02/24/13 17:54	7440-50-8	
Lead	ND	ug/L	5.0	4.0	1	02/22/13 20:35	02/24/13 17:54	7439-92-1	

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ANALYTICAL RESULTS

Project: FRANCIS FARM LF GWM FEB.2013
Pace Project No.: 92148500

Sample: MW-13 **Lab ID: 92148500016** Collected: 02/19/13 17:30 Received: 02/20/13 08:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 ICP Groundwater	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Nickel	**36.5**	ug/L	5.0	1.7	1	02/22/13 20:35	02/24/13 17:54	7440-02-0	
Selenium	ND	ug/L	10.0	0.10	1	02/22/13 20:35	02/24/13 17:54	7782-49-2	
Silver	**0.68J**	ug/L	5.0	0.10	1	02/22/13 20:35	02/24/13 17:54	7440-22-4	
Thallium	ND	ug/L	5.4	3.0	1	02/22/13 20:35	02/24/13 17:54	7440-28-0	
Vanadium	**0.85J**	ug/L	5.0	0.20	1	02/22/13 20:35	02/24/13 17:54	7440-62-2	
Zinc	**5.6J**	ug/L	10.0	0.40	1	02/22/13 20:35	02/24/13 17:54	7440-66-6	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470								
Mercury	ND	ug/L	0.20	0.10	1	02/21/13 19:45	02/22/13 16:45	7439-97-6	
8260 MSV Low Level Landfill	Analytical Method: EPA 8260								
Acetone	ND	ug/L	25.0	10.0	1		02/23/13 04:49	67-64-1	
Acetonitrile	ND	ug/L	50.0	2.2	1		02/23/13 04:49	75-05-8	
Acrylonitrile	ND	ug/L	10.0	1.9	1		02/23/13 04:49	107-13-1	
Allyl chloride	ND	ug/L	2.0	1.5	1		02/23/13 04:49	107-05-1	
Benzene	**3.5**	ug/L	1.0	0.25	1		02/23/13 04:49	71-43-2	
Bromochloromethane	ND	ug/L	1.0	0.17	1		02/23/13 04:49	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	0.18	1		02/23/13 04:49	75-27-4	
Bromoform	ND	ug/L	1.0	0.26	1		02/23/13 04:49	75-25-2	
Bromomethane	ND	ug/L	2.0	0.29	1		02/23/13 04:49	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	0.96	1		02/23/13 04:49	78-93-3	
Carbon disulfide	ND	ug/L	2.0	1.2	1		02/23/13 04:49	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.25	1		02/23/13 04:49	56-23-5	
Chlorobenzene	**0.36J**	ug/L	1.0	0.23	1		02/23/13 04:49	108-90-7	
Chloroethane	ND	ug/L	1.0	0.54	1		02/23/13 04:49	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		02/23/13 04:49	67-66-3	
Chloromethane	ND	ug/L	1.0	0.11	1		02/23/13 04:49	74-87-3	
Chloroprene	ND	ug/L	5.0	0.27	1		02/23/13 04:49	126-99-8	
1,2-Dibromo-3-chloropropane	ND	ug/L	5.0	2.5	1		02/23/13 04:49	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		02/23/13 04:49	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.27	1		02/23/13 04:49	106-93-4	
Dibromomethane	ND	ug/L	1.0	0.21	1		02/23/13 04:49	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	0.30	1		02/23/13 04:49	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	0.24	1		02/23/13 04:49	541-73-1	
1,4-Dichlorobenzene	**5.2**	ug/L	1.0	0.33	1		02/23/13 04:49	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	1.0	1.0	1		02/23/13 04:49	110-57-6	
Dichlorodifluoromethane	ND	ug/L	1.0	0.21	1		02/23/13 04:49	75-71-8	
1,1-Dichloroethane	**2.7**	ug/L	1.0	0.32	1		02/23/13 04:49	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		02/23/13 04:49	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.56	1		02/23/13 04:49	75-35-4	
cis-1,2-Dichloroethene	**14.2**	ug/L	1.0	0.19	1		02/23/13 04:49	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.49	1		02/23/13 04:49	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.27	1		02/23/13 04:49	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	0.28	1		02/23/13 04:49	142-28-9	
2,2-Dichloropropane	ND	ug/L	1.0	0.13	1		02/23/13 04:49	594-20-7	
1,1-Dichloropropene	ND	ug/L	1.0	0.49	1		02/23/13 04:49	563-58-6	

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ANALYTICAL RESULTS

Project: FRANCIS FARM LF GWM FEB.2013
Pace Project No.: 92148500

Sample: MW-13 **Lab ID: 92148500016** Collected: 02/19/13 17:30 Received: 02/20/13 08:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level Landfill	Analytical Method: EPA 8260								
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.13	1		02/23/13 04:49	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.26	1		02/23/13 04:49	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.30	1		02/23/13 04:49	100-41-4	
Ethyl methacrylate	ND	ug/L	1.0	0.20	1		02/23/13 04:49	97-63-2	
2-Hexanone	ND	ug/L	5.0	0.46	1		02/23/13 04:49	591-78-6	
Iodomethane	ND	ug/L	5.0	0.32	1		02/23/13 04:49	74-88-4	
Isobutanol	ND	ug/L	100	35.0	1		02/23/13 04:49	78-83-1	
Methacrylonitrile	ND	ug/L	10.0	0.93	1		02/23/13 04:49	126-98-7	
Methylene Chloride	ND	ug/L	1.0	0.97	1		02/23/13 04:49	75-09-2	
Methyl methacrylate	ND	ug/L	2.0	2.0	1		02/23/13 04:49	80-62-6	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	0.33	1		02/23/13 04:49	108-10-1	
Naphthalene	ND	ug/L	1.0	0.24	1		02/23/13 04:49	91-20-3	
Propionitrile	ND	ug/L	20.0	3.6	1		02/23/13 04:49	107-12-0	
Styrene	ND	ug/L	1.0	0.26	1		02/23/13 04:49	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	0.33	1		02/23/13 04:49	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.40	1		02/23/13 04:49	79-34-5	
Tetrachloroethene	**0.78J**	ug/L	1.0	0.46	1		02/23/13 04:49	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		02/23/13 04:49	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		02/23/13 04:49	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.29	1		02/23/13 04:49	79-00-5	
Trichloroethene	**0.67J**	ug/L	1.0	0.47	1		02/23/13 04:49	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	0.20	1		02/23/13 04:49	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	0.41	1		02/23/13 04:49	96-18-4	
Vinyl acetate	ND	ug/L	2.0	0.35	1		02/23/13 04:49	108-05-4	
Vinyl chloride	ND	ug/L	1.0	0.62	1		02/23/13 04:49	75-01-4	
Xylene (Total)	**2.8**	ug/L	2.0	0.66	1		02/23/13 04:49	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	0.66	1		02/23/13 04:49	179601-23-1	
o-Xylene	**2.8**	ug/L	1.0	0.23	1		02/23/13 04:49	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	100	%	70-130		1		02/23/13 04:49	460-00-4	
Dibromofluoromethane (S)	107	%	70-130		1		02/23/13 04:49	1868-53-7	
1,2-Dichloroethane-d4 (S)	103	%	70-130		1		02/23/13 04:49	17060-07-0	
Toluene-d8 (S)	101	%	70-130		1		02/23/13 04:49	2037-26-5	
4500CNE Cyanide, Total	Analytical Method: SM 4500-CN-E								
Cyanide	ND	mg/L	0.0050	0.0050	1		02/28/13 11:56	57-12-5	

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ANALYTICAL RESULTS

Project: FRANCIS FARM LF GWM FEB.2013
Pace Project No.: 92148500

Sample: MW-11 **Lab ID: 92148500017** Collected: 02/20/13 11:20 Received: 02/20/13 17:15 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Monitoring Well Data	Analytical Method:								
Collected By	**MPS**				1		02/28/13 16:36		
Collected Date	**2/20/13**				1		02/28/13 16:36		
Collected Time	**11:20**				1		02/28/13 16:36		
Field pH	**6.6**	Std. Units	0.10	0.10	1		02/28/13 16:36		
Field Temperature	**15.2**	deg C	0.50	0.50	1		02/28/13 16:36		
Static Water Level	**78.87**	feet			1		02/28/13 16:36		
Field Specific Conductance	**667**	umhos/cm	1.0	1.0	1		02/28/13 16:36		
Turbidity	**2.53**	NTU	1.0	1.0	1		02/28/13 16:36		
8081 Organochlorine Pesticides	Analytical Method: EPA 8081 Preparation Method: EPA 3510								
Aldrin	ND	ug/L	0.050	0.050	1	02/25/13 13:20	03/05/13 09:05	309-00-2	
alpha-BHC	ND	ug/L	0.050	0.050	1	02/25/13 13:20	03/05/13 09:05	319-84-6	
beta-BHC	ND	ug/L	0.050	0.050	1	02/25/13 13:20	03/05/13 09:05	319-85-7	
delta-BHC	ND	ug/L	0.050	0.050	1	02/25/13 13:20	03/05/13 09:05	319-86-8	
gamma-BHC (Lindane)	**0.21**	ug/L	0.050	0.050	1	02/25/13 13:20	03/05/13 09:05	58-89-9	
Chlordane (Technical)	ND	ug/L	0.20	0.20	1	02/25/13 13:20	03/05/13 09:05	57-74-9	
4,4'-DDD	ND	ug/L	0.050	0.050	1	02/25/13 13:20	03/05/13 09:05	72-54-8	
4,4'-DDE	ND	ug/L	0.050	0.050	1	02/25/13 13:20	03/05/13 09:05	72-55-9	
4,4'-DDT	ND	ug/L	0.050	0.050	1	02/25/13 13:20	03/05/13 09:05	50-29-3	
Dieldrin	ND	ug/L	0.050	0.050	1	02/25/13 13:20	03/05/13 09:05	60-57-1	
Endosulfan I	ND	ug/L	0.050	0.050	1	02/25/13 13:20	03/05/13 09:05	959-98-8	
Endosulfan II	ND	ug/L	0.050	0.050	1	02/25/13 13:20	03/05/13 09:05	33213-65-9	
Endosulfan sulfate	ND	ug/L	0.050	0.050	1	02/25/13 13:20	03/05/13 09:05	1031-07-8	
Endrin	ND	ug/L	0.050	0.050	1	02/25/13 13:20	03/05/13 09:05	72-20-8	
Endrin aldehyde	ND	ug/L	0.050	0.050	1	02/25/13 13:20	03/05/13 09:05	7421-93-4	
Endrin ketone	ND	ug/L	0.050	0.050	1	02/25/13 13:20	03/05/13 09:05	53494-70-5	
Heptachlor	ND	ug/L	0.050	0.050	1	02/25/13 13:20	03/05/13 09:05	76-44-8	
Heptachlor epoxide	ND	ug/L	0.050	0.050	1	02/25/13 13:20	03/05/13 09:05	1024-57-3	
Hexachlorobenzene	ND	ug/L	0.050	0.050	1	02/25/13 13:20	03/05/13 09:05	118-74-1	
Methoxychlor	ND	ug/L	0.15	0.15	1	02/25/13 13:20	03/05/13 09:05	72-43-5	
Mirex	ND	ug/L	0.15	0.15	1	02/25/13 13:20	03/05/13 09:05	2385-85-5	
Toxaphene	ND	ug/L	0.20	0.20	1	02/25/13 13:20	03/05/13 09:05	8001-35-2	
Surrogates									
Tetrachloro-m-xylene (S)	123	%	20-130		1	02/25/13 13:20	03/05/13 09:05	877-09-8	
Decachlorobiphenyl (S)	74	%	20-130		1	02/25/13 13:20	03/05/13 09:05	2051-24-3	
6010 ICP Groundwater	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Antimony	ND	ug/L	5.0	2.6	1	02/22/13 20:35	02/24/13 17:58	7440-36-0	
Arsenic	ND	ug/L	10.0	2.7	1	02/22/13 20:35	02/24/13 17:58	7440-38-2	
Barium	**95.5**	ug/L	5.0	0.20	1	02/22/13 20:35	02/24/13 17:58	7440-39-3	
Beryllium	ND	ug/L	1.0	0.10	1	02/22/13 20:35	02/24/13 17:58	7440-41-7	
Cadmium	ND	ug/L	1.0	0.50	1	02/22/13 20:35	02/24/13 17:58	7440-43-9	
Chromium	ND	ug/L	5.0	0.40	1	02/22/13 20:35	02/24/13 17:58	7440-47-3	
Cobalt	**4.3J**	ug/L	5.0	0.60	1	02/22/13 20:35	02/24/13 17:58	7440-48-4	
Copper	**1.7J**	ug/L	5.0	0.30	1	02/22/13 20:35	02/24/13 17:58	7440-50-8	
Lead	ND	ug/L	5.0	4.0	1	02/22/13 20:35	02/24/13 17:58	7439-92-1	

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ANALYTICAL RESULTS

Project: FRANCIS FARM LF GWM FEB.2013
Pace Project No.: 92148500

Sample: MW-11 **Lab ID: 92148500017** Collected: 02/20/13 11:20 Received: 02/20/13 17:15 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 ICP Groundwater	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Nickel	**2.7J**	ug/L	5.0	1.7	1	02/22/13 20:35	02/24/13 17:58	7440-02-0	
Selenium	ND	ug/L	10.0	0.10	1	02/22/13 20:35	02/24/13 17:58	7782-49-2	
Silver	**0.68J**	ug/L	5.0	0.10	1	02/22/13 20:35	02/24/13 17:58	7440-22-4	
Thallium	ND	ug/L	5.4	3.0	1	02/22/13 20:35	02/24/13 17:58	7440-28-0	
Vanadium	ND	ug/L	5.0	0.20	1	02/22/13 20:35	02/24/13 17:58	7440-62-2	
Zinc	**9.9J**	ug/L	10.0	0.40	1	02/22/13 20:35	02/24/13 17:58	7440-66-6	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470								
Mercury	ND	ug/L	0.20	0.10	1	02/21/13 19:45	02/22/13 16:48	7439-97-6	
8260 MSV Low Level Landfill	Analytical Method: EPA 8260								
Acetone	ND	ug/L	25.0	10.0	1		02/23/13 05:05	67-64-1	
Acetonitrile	ND	ug/L	50.0	2.2	1		02/23/13 05:05	75-05-8	
Acrylonitrile	ND	ug/L	10.0	1.9	1		02/23/13 05:05	107-13-1	
Allyl chloride	ND	ug/L	2.0	1.5	1		02/23/13 05:05	107-05-1	
Benzene	**0.46J**	ug/L	1.0	0.25	1		02/23/13 05:05	71-43-2	
Bromochloromethane	ND	ug/L	1.0	0.17	1		02/23/13 05:05	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	0.18	1		02/23/13 05:05	75-27-4	
Bromoform	ND	ug/L	1.0	0.26	1		02/23/13 05:05	75-25-2	
Bromomethane	ND	ug/L	2.0	0.29	1		02/23/13 05:05	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	0.96	1		02/23/13 05:05	78-93-3	
Carbon disulfide	ND	ug/L	2.0	1.2	1		02/23/13 05:05	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.25	1		02/23/13 05:05	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.23	1		02/23/13 05:05	108-90-7	
Chloroethane	ND	ug/L	1.0	0.54	1		02/23/13 05:05	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		02/23/13 05:05	67-66-3	
Chloromethane	ND	ug/L	1.0	0.11	1		02/23/13 05:05	74-87-3	
Chloroprene	ND	ug/L	5.0	0.27	1		02/23/13 05:05	126-99-8	
1,2-Dibromo-3-chloropropane	ND	ug/L	5.0	2.5	1		02/23/13 05:05	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		02/23/13 05:05	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.27	1		02/23/13 05:05	106-93-4	
Dibromomethane	ND	ug/L	1.0	0.21	1		02/23/13 05:05	74-95-3	
1,2-Dichlorobenzene	**5.9**	ug/L	1.0	0.30	1		02/23/13 05:05	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	0.24	1		02/23/13 05:05	541-73-1	
1,4-Dichlorobenzene	**1.6**	ug/L	1.0	0.33	1		02/23/13 05:05	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	1.0	1.0	1		02/23/13 05:05	110-57-6	
Dichlorodifluoromethane	ND	ug/L	1.0	0.21	1		02/23/13 05:05	75-71-8	
1,1-Dichloroethane	**5.7**	ug/L	1.0	0.32	1		02/23/13 05:05	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		02/23/13 05:05	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.56	1		02/23/13 05:05	75-35-4	
cis-1,2-Dichloroethene	**17.3**	ug/L	1.0	0.19	1		02/23/13 05:05	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.49	1		02/23/13 05:05	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.27	1		02/23/13 05:05	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	0.28	1		02/23/13 05:05	142-28-9	
2,2-Dichloropropane	ND	ug/L	1.0	0.13	1		02/23/13 05:05	594-20-7	
1,1-Dichloropropene	ND	ug/L	1.0	0.49	1		02/23/13 05:05	563-58-6	

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ANALYTICAL RESULTS

Project: FRANCIS FARM LF GWM FEB.2013
Pace Project No.: 92148500

Sample: MW-11 **Lab ID: 92148500017** Collected: 02/20/13 11:20 Received: 02/20/13 17:15 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level Landfill	Analytical Method: EPA 8260								
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.13	1		02/23/13 05:05	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.26	1		02/23/13 05:05	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.30	1		02/23/13 05:05	100-41-4	
Ethyl methacrylate	ND	ug/L	1.0	0.20	1		02/23/13 05:05	97-63-2	
2-Hexanone	ND	ug/L	5.0	0.46	1		02/23/13 05:05	591-78-6	
Iodomethane	ND	ug/L	5.0	0.32	1		02/23/13 05:05	74-88-4	
Isobutanol	ND	ug/L	100	35.0	1		02/23/13 05:05	78-83-1	
Methacrylonitrile	ND	ug/L	10.0	0.93	1		02/23/13 05:05	126-98-7	
Methylene Chloride	ND	ug/L	1.0	0.97	1		02/23/13 05:05	75-09-2	
Methyl methacrylate	ND	ug/L	2.0	2.0	1		02/23/13 05:05	80-62-6	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	0.33	1		02/23/13 05:05	108-10-1	
Naphthalene	ND	ug/L	1.0	0.24	1		02/23/13 05:05	91-20-3	
Propionitrile	ND	ug/L	20.0	3.6	1		02/23/13 05:05	107-12-0	
Styrene	ND	ug/L	1.0	0.26	1		02/23/13 05:05	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	0.33	1		02/23/13 05:05	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.40	1		02/23/13 05:05	79-34-5	
Tetrachloroethene	**0.69J**	ug/L	1.0	0.46	1		02/23/13 05:05	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		02/23/13 05:05	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		02/23/13 05:05	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.29	1		02/23/13 05:05	79-00-5	
Trichloroethene	**0.82J**	ug/L	1.0	0.47	1		02/23/13 05:05	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	0.20	1		02/23/13 05:05	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	0.41	1		02/23/13 05:05	96-18-4	
Vinyl acetate	ND	ug/L	2.0	0.35	1		02/23/13 05:05	108-05-4	
Vinyl chloride	ND	ug/L	1.0	0.62	1		02/23/13 05:05	75-01-4	
Xylene (Total)	ND	ug/L	2.0	0.66	1		02/23/13 05:05	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	0.66	1		02/23/13 05:05	179601-23-1	
o-Xylene	ND	ug/L	1.0	0.23	1		02/23/13 05:05	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	97	%	70-130		1		02/23/13 05:05	460-00-4	
Dibromofluoromethane (S)	110	%	70-130		1		02/23/13 05:05	1868-53-7	
1,2-Dichloroethane-d4 (S)	104	%	70-130		1		02/23/13 05:05	17060-07-0	
Toluene-d8 (S)	100	%	70-130		1		02/23/13 05:05	2037-26-5	
4500CNE Cyanide, Total	Analytical Method: SM 4500-CN-E								
Cyanide	ND	mg/L	0.0050	0.0050	1		02/28/13 12:00	57-12-5	

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ANALYTICAL RESULTS

Project: FRANCIS FARM LF GWM FEB.2013
Pace Project No.: 92148500

Sample: MW-14 **Lab ID: 92148500018** Collected: 02/20/13 10:35 Received: 02/20/13 17:15 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Monitoring Well Data	Analytical Method:								
Collected By	**MPS**				1		02/28/13 16:37		
Collected Date	**2/20/13**				1		02/28/13 16:37		
Collected Time	**10:35**				1		02/28/13 16:37		
Field pH	**6.5**	Std. Units	0.10	0.10	1		02/28/13 16:37		
Field Temperature	**14.2**	deg C	0.50	0.50	1		02/28/13 16:37		
Static Water Level	**86.32**	feet			1		02/28/13 16:37		
Field Specific Conductance	**716**	umhos/cm	1.0	1.0	1		02/28/13 16:37		
Turbidity	**9.66**	NTU	1.0	1.0	1		02/28/13 16:37		
8081 Organochlorine Pesticides	Analytical Method: EPA 8081 Preparation Method: EPA 3510								
Aldrin	ND	ug/L	0.050	0.050	1	02/27/13 10:39	03/05/13 15:44	309-00-2	
alpha-BHC	ND	ug/L	0.050	0.050	1	02/27/13 10:39	03/05/13 15:44	319-84-6	
beta-BHC	ND	ug/L	0.050	0.050	1	02/27/13 10:39	03/05/13 15:44	319-85-7	
delta-BHC	ND	ug/L	0.050	0.050	1	02/27/13 10:39	03/05/13 15:44	319-86-8	
gamma-BHC (Lindane)	ND	ug/L	0.050	0.050	1	02/27/13 10:39	03/05/13 15:44	58-89-9	
Chlordane (Technical)	ND	ug/L	0.20	0.20	1	02/27/13 10:39	03/05/13 15:44	57-74-9	
4,4'-DDD	ND	ug/L	0.050	0.050	1	02/27/13 10:39	03/05/13 15:44	72-54-8	
4,4'-DDE	ND	ug/L	0.050	0.050	1	02/27/13 10:39	03/05/13 15:44	72-55-9	
4,4'-DDT	ND	ug/L	0.050	0.050	1	02/27/13 10:39	03/05/13 15:44	50-29-3	
Dieldrin	ND	ug/L	0.050	0.050	1	02/27/13 10:39	03/05/13 15:44	60-57-1	
Endosulfan I	ND	ug/L	0.050	0.050	1	02/27/13 10:39	03/05/13 15:44	959-98-8	
Endosulfan II	ND	ug/L	0.050	0.050	1	02/27/13 10:39	03/05/13 15:44	33213-65-9	
Endosulfan sulfate	ND	ug/L	0.050	0.050	1	02/27/13 10:39	03/05/13 15:44	1031-07-8	
Endrin	ND	ug/L	0.050	0.050	1	02/27/13 10:39	03/05/13 15:44	72-20-8	
Endrin aldehyde	ND	ug/L	0.050	0.050	1	02/27/13 10:39	03/05/13 15:44	7421-93-4	
Endrin ketone	ND	ug/L	0.050	0.050	1	02/27/13 10:39	03/05/13 15:44	53494-70-5	
Heptachlor	ND	ug/L	0.050	0.050	1	02/27/13 10:39	03/05/13 15:44	76-44-8	
Heptachlor epoxide	ND	ug/L	0.050	0.050	1	02/27/13 10:39	03/05/13 15:44	1024-57-3	
Hexachlorobenzene	ND	ug/L	0.050	0.050	1	02/27/13 10:39	03/05/13 15:44	118-74-1	
Methoxychlor	ND	ug/L	0.15	0.15	1	02/27/13 10:39	03/05/13 15:44	72-43-5	
Mirex	ND	ug/L	0.15	0.15	1	02/27/13 10:39	03/05/13 15:44	2385-85-5	
Toxaphene	ND	ug/L	0.20	0.20	1	02/27/13 10:39	03/05/13 15:44	8001-35-2	
Surrogates									
Tetrachloro-m-xylene (S)	79	%	20-130		1	02/27/13 10:39	03/05/13 15:44	877-09-8	
Decachlorobiphenyl (S)	45	%	20-130		1	02/27/13 10:39	03/05/13 15:44	2051-24-3	
6010 ICP Groundwater	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Antimony	ND	ug/L	5.0	2.6	1	02/22/13 20:35	02/24/13 18:01	7440-36-0	
Arsenic	ND	ug/L	10.0	2.7	1	02/22/13 20:35	02/24/13 18:01	7440-38-2	
Barium	**238**	ug/L	5.0	0.20	1	02/22/13 20:35	02/24/13 18:01	7440-39-3	
Beryllium	ND	ug/L	1.0	0.10	1	02/22/13 20:35	02/24/13 18:01	7440-41-7	
Cadmium	ND	ug/L	1.0	0.50	1	02/22/13 20:35	02/24/13 18:01	7440-43-9	
Chromium	**1.9J**	ug/L	5.0	0.40	1	02/22/13 20:35	02/24/13 18:01	7440-47-3	
Cobalt	**6.2**	ug/L	5.0	0.60	1	02/22/13 20:35	02/24/13 18:01	7440-48-4	
Copper	**2.4J**	ug/L	5.0	0.30	1	02/22/13 20:35	02/24/13 18:01	7440-50-8	
Lead	ND	ug/L	5.0	4.0	1	02/22/13 20:35	02/24/13 18:01	7439-92-1	

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ANALYTICAL RESULTS

Project: FRANCIS FARM LF GWM FEB.2013
Pace Project No.: 92148500

Sample: MW-14 **Lab ID: 92148500018** Collected: 02/20/13 10:35 Received: 02/20/13 17:15 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 ICP Groundwater	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Nickel	**2.0J**	ug/L	5.0	1.7	1	02/22/13 20:35	02/24/13 18:01	7440-02-0	
Selenium	ND	ug/L	10.0	0.10	1	02/22/13 20:35	02/24/13 18:01	7782-49-2	
Silver	**0.71J**	ug/L	5.0	0.10	1	02/22/13 20:35	02/24/13 18:01	7440-22-4	
Thallium	ND	ug/L	5.4	3.0	1	02/22/13 20:35	02/24/13 18:01	7440-28-0	
Vanadium	**0.61J**	ug/L	5.0	0.20	1	02/22/13 20:35	02/24/13 18:01	7440-62-2	
Zinc	**13.7**	ug/L	10.0	0.40	1	02/22/13 20:35	02/24/13 18:01	7440-66-6	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470								
Mercury	ND	ug/L	0.20	0.10	1	02/21/13 19:45	02/22/13 16:50	7439-97-6	
8260 MSV Low Level Landfill	Analytical Method: EPA 8260								
Acetone	ND	ug/L	25.0	10.0	1		02/22/13 22:27	67-64-1	
Acetonitrile	ND	ug/L	50.0	2.2	1		02/22/13 22:27	75-05-8	
Acrylonitrile	ND	ug/L	10.0	1.9	1		02/22/13 22:27	107-13-1	
Allyl chloride	ND	ug/L	2.0	1.5	1		02/22/13 22:27	107-05-1	
Benzene	**1.2**	ug/L	1.0	0.25	1		02/22/13 22:27	71-43-2	
Bromochloromethane	ND	ug/L	1.0	0.17	1		02/22/13 22:27	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	0.18	1		02/22/13 22:27	75-27-4	
Bromoform	ND	ug/L	1.0	0.26	1		02/22/13 22:27	75-25-2	
Bromomethane	ND	ug/L	2.0	0.29	1		02/22/13 22:27	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	0.96	1		02/22/13 22:27	78-93-3	
Carbon disulfide	ND	ug/L	2.0	1.2	1		02/22/13 22:27	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.25	1		02/22/13 22:27	56-23-5	
Chlorobenzene	**1.5**	ug/L	1.0	0.23	1		02/22/13 22:27	108-90-7	
Chloroethane	ND	ug/L	1.0	0.54	1		02/22/13 22:27	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		02/22/13 22:27	67-66-3	
Chloromethane	ND	ug/L	1.0	0.11	1		02/22/13 22:27	74-87-3	
Chloroprene	ND	ug/L	5.0	0.27	1		02/22/13 22:27	126-99-8	
1,2-Dibromo-3-chloropropane	ND	ug/L	5.0	2.5	1		02/22/13 22:27	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		02/22/13 22:27	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.27	1		02/22/13 22:27	106-93-4	
Dibromomethane	ND	ug/L	1.0	0.21	1		02/22/13 22:27	74-95-3	
1,2-Dichlorobenzene	**76.7**	ug/L	1.0	0.30	1		02/22/13 22:27	95-50-1	
1,3-Dichlorobenzene	**0.40J**	ug/L	1.0	0.24	1		02/22/13 22:27	541-73-1	
1,4-Dichlorobenzene	**18.1**	ug/L	1.0	0.33	1		02/22/13 22:27	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	1.0	1.0	1		02/22/13 22:27	110-57-6	
Dichlorodifluoromethane	ND	ug/L	1.0	0.21	1		02/22/13 22:27	75-71-8	
1,1-Dichloroethane	**0.76J**	ug/L	1.0	0.32	1		02/22/13 22:27	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		02/22/13 22:27	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.56	1		02/22/13 22:27	75-35-4	
cis-1,2-Dichloroethene	**20.6**	ug/L	1.0	0.19	1		02/22/13 22:27	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.49	1		02/22/13 22:27	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.27	1		02/22/13 22:27	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	0.28	1		02/22/13 22:27	142-28-9	
2,2-Dichloropropane	ND	ug/L	1.0	0.13	1		02/22/13 22:27	594-20-7	
1,1-Dichloropropene	ND	ug/L	1.0	0.49	1		02/22/13 22:27	563-58-6	

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ANALYTICAL RESULTS

Project: FRANCIS FARM LF GWM FEB.2013
Pace Project No.: 92148500

Sample: MW-14 **Lab ID: 92148500018** Collected: 02/20/13 10:35 Received: 02/20/13 17:15 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level Landfill	Analytical Method: EPA 8260								
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.13	1		02/22/13 22:27	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.26	1		02/22/13 22:27	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.30	1		02/22/13 22:27	100-41-4	
Ethyl methacrylate	ND	ug/L	1.0	0.20	1		02/22/13 22:27	97-63-2	
2-Hexanone	ND	ug/L	5.0	0.46	1		02/22/13 22:27	591-78-6	
Iodomethane	ND	ug/L	5.0	0.32	1		02/22/13 22:27	74-88-4	
Isobutanol	ND	ug/L	100	35.0	1		02/22/13 22:27	78-83-1	
Methacrylonitrile	ND	ug/L	10.0	0.93	1		02/22/13 22:27	126-98-7	
Methylene Chloride	ND	ug/L	1.0	0.97	1		02/22/13 22:27	75-09-2	
Methyl methacrylate	ND	ug/L	2.0	2.0	1		02/22/13 22:27	80-62-6	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	0.33	1		02/22/13 22:27	108-10-1	
Naphthalene	ND	ug/L	1.0	0.24	1		02/22/13 22:27	91-20-3	
Propionitrile	ND	ug/L	20.0	3.6	1		02/22/13 22:27	107-12-0	
Styrene	ND	ug/L	1.0	0.26	1		02/22/13 22:27	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	0.33	1		02/22/13 22:27	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.40	1		02/22/13 22:27	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		02/22/13 22:27	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		02/22/13 22:27	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		02/22/13 22:27	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.29	1		02/22/13 22:27	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.47	1		02/22/13 22:27	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	0.20	1		02/22/13 22:27	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	0.41	1		02/22/13 22:27	96-18-4	
Vinyl acetate	ND	ug/L	2.0	0.35	1		02/22/13 22:27	108-05-4	
Vinyl chloride	ND	ug/L	1.0	0.62	1		02/22/13 22:27	75-01-4	
Xylene (Total)	ND	ug/L	2.0	0.66	1		02/22/13 22:27	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	0.66	1		02/22/13 22:27	179601-23-1	
o-Xylene	ND	ug/L	1.0	0.23	1		02/22/13 22:27	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	100	%	70-130		1		02/22/13 22:27	460-00-4	
Dibromofluoromethane (S)	104	%	70-130		1		02/22/13 22:27	1868-53-7	
1,2-Dichloroethane-d4 (S)	101	%	70-130		1		02/22/13 22:27	17060-07-0	
Toluene-d8 (S)	100	%	70-130		1		02/22/13 22:27	2037-26-5	
4500CNE Cyanide, Total	Analytical Method: SM 4500-CN-E								
Cyanide	**0.0053**	mg/L	0.0050	0.0050	1		02/28/13 12:01	57-12-5	

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ANALYTICAL RESULTS

Project: FRANCIS FARM LF GWM FEB.2013
Pace Project No.: 92148500

Sample: MW-15 **Lab ID: 92148500019** Collected: 02/20/13 10:55 Received: 02/20/13 17:15 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Monitoring Well Data	Analytical Method:								
Collected By	**MPS**				1		02/28/13 17:04		
Collected Date	**2/20/13**				1		02/28/13 17:04		
Collected Time	**10:55**				1		02/28/13 17:04		
Field pH	**7.5**	Std. Units	0.10	0.10	1		02/28/13 17:04		
Field Temperature	**14.0**	deg C	0.50	0.50	1		02/28/13 17:04		
Static Water Level	**82.51**	feet			1		02/28/13 17:04		
Field Specific Conductance	**678**	umhos/cm	1.0	1.0	1		02/28/13 17:04		
Turbidity	**3.39**	NTU	1.0	1.0	1		02/28/13 17:04		
8081 Organochlorine Pesticides	Analytical Method: EPA 8081 Preparation Method: EPA 3510								
Aldrin	ND	ug/L	0.050	0.050	1	02/27/13 10:39	03/05/13 16:01	309-00-2	
alpha-BHC	ND	ug/L	0.050	0.050	1	02/27/13 10:39	03/05/13 16:01	319-84-6	
beta-BHC	ND	ug/L	0.050	0.050	1	02/27/13 10:39	03/05/13 16:01	319-85-7	
delta-BHC	ND	ug/L	0.050	0.050	1	02/27/13 10:39	03/05/13 16:01	319-86-8	
gamma-BHC (Lindane)	ND	ug/L	0.050	0.050	1	02/27/13 10:39	03/05/13 16:01	58-89-9	
Chlordane (Technical)	ND	ug/L	0.20	0.20	1	02/27/13 10:39	03/05/13 16:01	57-74-9	
4,4'-DDD	ND	ug/L	0.050	0.050	1	02/27/13 10:39	03/05/13 16:01	72-54-8	
4,4'-DDE	ND	ug/L	0.050	0.050	1	02/27/13 10:39	03/05/13 16:01	72-55-9	
4,4'-DDT	ND	ug/L	0.050	0.050	1	02/27/13 10:39	03/05/13 16:01	50-29-3	
Dieldrin	ND	ug/L	0.050	0.050	1	02/27/13 10:39	03/05/13 16:01	60-57-1	
Endosulfan I	ND	ug/L	0.050	0.050	1	02/27/13 10:39	03/05/13 16:01	959-98-8	
Endosulfan II	ND	ug/L	0.050	0.050	1	02/27/13 10:39	03/05/13 16:01	33213-65-9	
Endosulfan sulfate	ND	ug/L	0.050	0.050	1	02/27/13 10:39	03/05/13 16:01	1031-07-8	
Endrin	ND	ug/L	0.050	0.050	1	02/27/13 10:39	03/05/13 16:01	72-20-8	
Endrin aldehyde	ND	ug/L	0.050	0.050	1	02/27/13 10:39	03/05/13 16:01	7421-93-4	
Endrin ketone	ND	ug/L	0.050	0.050	1	02/27/13 10:39	03/05/13 16:01	53494-70-5	
Heptachlor	ND	ug/L	0.050	0.050	1	02/27/13 10:39	03/05/13 16:01	76-44-8	
Heptachlor epoxide	ND	ug/L	0.050	0.050	1	02/27/13 10:39	03/05/13 16:01	1024-57-3	
Hexachlorobenzene	ND	ug/L	0.050	0.050	1	02/27/13 10:39	03/05/13 16:01	118-74-1	
Methoxychlor	ND	ug/L	0.15	0.15	1	02/27/13 10:39	03/05/13 16:01	72-43-5	
Mirex	ND	ug/L	0.15	0.15	1	02/27/13 10:39	03/05/13 16:01	2385-85-5	
Toxaphene	ND	ug/L	0.20	0.20	1	02/27/13 10:39	03/05/13 16:01	8001-35-2	
Surrogates									
Tetrachloro-m-xylene (S)	75	%	20-130		1	02/27/13 10:39	03/05/13 16:01	877-09-8	
Decachlorobiphenyl (S)	51	%	20-130		1	02/27/13 10:39	03/05/13 16:01	2051-24-3	
6010 ICP Groundwater	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Antimony	ND	ug/L	5.0	2.6	1	02/22/13 20:35	02/24/13 18:04	7440-36-0	
Arsenic	ND	ug/L	10.0	2.7	1	02/22/13 20:35	02/24/13 18:04	7440-38-2	
Barium	**42.6**	ug/L	5.0	0.20	1	02/22/13 20:35	02/24/13 18:04	7440-39-3	
Beryllium	ND	ug/L	1.0	0.10	1	02/22/13 20:35	02/24/13 18:04	7440-41-7	
Cadmium	ND	ug/L	1.0	0.50	1	02/22/13 20:35	02/24/13 18:04	7440-43-9	
Chromium	ND	ug/L	5.0	0.40	1	02/22/13 20:35	02/24/13 18:04	7440-47-3	
Cobalt	**0.97J**	ug/L	5.0	0.60	1	02/22/13 20:35	02/24/13 18:04	7440-48-4	
Copper	**1.4J**	ug/L	5.0	0.30	1	02/22/13 20:35	02/24/13 18:04	7440-50-8	
Lead	ND	ug/L	5.0	4.0	1	02/22/13 20:35	02/24/13 18:04	7439-92-1	

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ANALYTICAL RESULTS

Project: FRANCIS FARM LF GWM FEB.2013
Pace Project No.: 92148500

Sample: MW-15 **Lab ID: 92148500019** Collected: 02/20/13 10:55 Received: 02/20/13 17:15 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 ICP Groundwater	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Nickel	ND	ug/L	5.0	1.7	1	02/22/13 20:35	02/24/13 18:04	7440-02-0	
Selenium	ND	ug/L	10.0	0.10	1	02/22/13 20:35	02/24/13 18:04	7782-49-2	
Silver	**0.70J**	ug/L	5.0	0.10	1	02/22/13 20:35	02/24/13 18:04	7440-22-4	
Thallium	ND	ug/L	5.4	3.0	1	02/22/13 20:35	02/24/13 18:04	7440-28-0	
Vanadium	ND	ug/L	5.0	0.20	1	02/22/13 20:35	02/24/13 18:04	7440-62-2	
Zinc	**3.3J**	ug/L	10.0	0.40	1	02/22/13 20:35	02/24/13 18:04	7440-66-6	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470								
Mercury	ND	ug/L	0.20	0.10	1	02/25/13 17:45	02/28/13 15:07	7439-97-6	
8260 MSV Low Level Landfill	Analytical Method: EPA 8260								
Acetone	ND	ug/L	25.0	10.0	1		02/22/13 22:43	67-64-1	
Acetonitrile	ND	ug/L	50.0	2.2	1		02/22/13 22:43	75-05-8	
Acrylonitrile	ND	ug/L	10.0	1.9	1		02/22/13 22:43	107-13-1	
Allyl chloride	ND	ug/L	2.0	1.5	1		02/22/13 22:43	107-05-1	
Benzene	**0.84J**	ug/L	1.0	0.25	1		02/22/13 22:43	71-43-2	
Bromochloromethane	ND	ug/L	1.0	0.17	1		02/22/13 22:43	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	0.18	1		02/22/13 22:43	75-27-4	
Bromoform	ND	ug/L	1.0	0.26	1		02/22/13 22:43	75-25-2	
Bromomethane	ND	ug/L	2.0	0.29	1		02/22/13 22:43	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	0.96	1		02/22/13 22:43	78-93-3	
Carbon disulfide	ND	ug/L	2.0	1.2	1		02/22/13 22:43	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.25	1		02/22/13 22:43	56-23-5	
Chlorobenzene	**0.28J**	ug/L	1.0	0.23	1		02/22/13 22:43	108-90-7	
Chloroethane	ND	ug/L	1.0	0.54	1		02/22/13 22:43	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		02/22/13 22:43	67-66-3	
Chloromethane	ND	ug/L	1.0	0.11	1		02/22/13 22:43	74-87-3	
Chloroprene	ND	ug/L	5.0	0.27	1		02/22/13 22:43	126-99-8	
1,2-Dibromo-3-chloropropane	ND	ug/L	5.0	2.5	1		02/22/13 22:43	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		02/22/13 22:43	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.27	1		02/22/13 22:43	106-93-4	
Dibromomethane	ND	ug/L	1.0	0.21	1		02/22/13 22:43	74-95-3	
1,2-Dichlorobenzene	**9.2**	ug/L	1.0	0.30	1		02/22/13 22:43	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	0.24	1		02/22/13 22:43	541-73-1	
1,4-Dichlorobenzene	**1.6**	ug/L	1.0	0.33	1		02/22/13 22:43	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	1.0	1.0	1		02/22/13 22:43	110-57-6	
Dichlorodifluoromethane	ND	ug/L	1.0	0.21	1		02/22/13 22:43	75-71-8	
1,1-Dichloroethane	**0.76J**	ug/L	1.0	0.32	1		02/22/13 22:43	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		02/22/13 22:43	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.56	1		02/22/13 22:43	75-35-4	
cis-1,2-Dichloroethene	**10.6**	ug/L	1.0	0.19	1		02/22/13 22:43	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.49	1		02/22/13 22:43	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.27	1		02/22/13 22:43	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	0.28	1		02/22/13 22:43	142-28-9	
2,2-Dichloropropane	ND	ug/L	1.0	0.13	1		02/22/13 22:43	594-20-7	
1,1-Dichloropropene	ND	ug/L	1.0	0.49	1		02/22/13 22:43	563-58-6	

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ANALYTICAL RESULTS

Project: FRANCIS FARM LF GWM FEB.2013
Pace Project No.: 92148500

Sample: MW-15 **Lab ID: 92148500019** Collected: 02/20/13 10:55 Received: 02/20/13 17:15 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level Landfill	Analytical Method: EPA 8260								
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.13	1		02/22/13 22:43	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.26	1		02/22/13 22:43	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.30	1		02/22/13 22:43	100-41-4	
Ethyl methacrylate	ND	ug/L	1.0	0.20	1		02/22/13 22:43	97-63-2	
2-Hexanone	ND	ug/L	5.0	0.46	1		02/22/13 22:43	591-78-6	
Iodomethane	ND	ug/L	5.0	0.32	1		02/22/13 22:43	74-88-4	
Isobutanol	ND	ug/L	100	35.0	1		02/22/13 22:43	78-83-1	
Methacrylonitrile	ND	ug/L	10.0	0.93	1		02/22/13 22:43	126-98-7	
Methylene Chloride	ND	ug/L	1.0	0.97	1		02/22/13 22:43	75-09-2	
Methyl methacrylate	ND	ug/L	2.0	2.0	1		02/22/13 22:43	80-62-6	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	0.33	1		02/22/13 22:43	108-10-1	
Naphthalene	ND	ug/L	1.0	0.24	1		02/22/13 22:43	91-20-3	
Propionitrile	ND	ug/L	20.0	3.6	1		02/22/13 22:43	107-12-0	
Styrene	ND	ug/L	1.0	0.26	1		02/22/13 22:43	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	0.33	1		02/22/13 22:43	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.40	1		02/22/13 22:43	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		02/22/13 22:43	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		02/22/13 22:43	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		02/22/13 22:43	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.29	1		02/22/13 22:43	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.47	1		02/22/13 22:43	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	0.20	1		02/22/13 22:43	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	0.41	1		02/22/13 22:43	96-18-4	
Vinyl acetate	ND	ug/L	2.0	0.35	1		02/22/13 22:43	108-05-4	
Vinyl chloride	ND	ug/L	1.0	0.62	1		02/22/13 22:43	75-01-4	
Xylene (Total)	ND	ug/L	2.0	0.66	1		02/22/13 22:43	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	0.66	1		02/22/13 22:43	179601-23-1	
o-Xylene	ND	ug/L	1.0	0.23	1		02/22/13 22:43	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	102	%	70-130		1		02/22/13 22:43	460-00-4	
Dibromofluoromethane (S)	103	%	70-130		1		02/22/13 22:43	1868-53-7	
1,2-Dichloroethane-d4 (S)	101	%	70-130		1		02/22/13 22:43	17060-07-0	
Toluene-d8 (S)	99	%	70-130		1		02/22/13 22:43	2037-26-5	
4500CNE Cyanide, Total	Analytical Method: SM 4500-CN-E								
Cyanide	**0.0056**	mg/L	0.0050	0.0050	1		02/28/13 12:01	57-12-5	

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ANALYTICAL RESULTS

Project: FRANCIS FARM LF GWM FEB.2013
Pace Project No.: 92148500

Sample: MW-2A **Lab ID: 92148500020** Collected: 02/21/13 16:05 Received: 02/22/13 08:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Monitoring Well Data	Analytical Method:								
Collected By	**MPS**				1		02/28/13 17:05		
Collected Date	**2/21/13**				1		02/28/13 17:05		
Collected Time	**16:05**				1		02/28/13 17:05		
Field pH	**6.0**	Std. Units	0.10	0.10	1		02/28/13 17:05		
Field Temperature	**13.4**	deg C	0.50	0.50	1		02/28/13 17:05		
Static Water Level	**23.13**	feet			1		02/28/13 17:05		
Field Specific Conductance	**33.2**	umhos/cm	1.0	1.0	1		02/28/13 17:05		
Turbidity	**4.28**	NTU	1.0	1.0	1		02/28/13 17:05		
8081 Organochlorine Pesticides	Analytical Method: EPA 8081 Preparation Method: EPA 3510								
Aldrin	ND	ug/L	0.050	0.050	1	02/27/13 10:39	03/05/13 16:19	309-00-2	
alpha-BHC	ND	ug/L	0.050	0.050	1	02/27/13 10:39	03/05/13 16:19	319-84-6	
beta-BHC	ND	ug/L	0.050	0.050	1	02/27/13 10:39	03/05/13 16:19	319-85-7	
delta-BHC	ND	ug/L	0.050	0.050	1	02/27/13 10:39	03/05/13 16:19	319-86-8	
gamma-BHC (Lindane)	ND	ug/L	0.050	0.050	1	02/27/13 10:39	03/05/13 16:19	58-89-9	
Chlordane (Technical)	ND	ug/L	0.20	0.20	1	02/27/13 10:39	03/05/13 16:19	57-74-9	
4,4'-DDD	ND	ug/L	0.050	0.050	1	02/27/13 10:39	03/05/13 16:19	72-54-8	
4,4'-DDE	ND	ug/L	0.050	0.050	1	02/27/13 10:39	03/05/13 16:19	72-55-9	
4,4'-DDT	ND	ug/L	0.050	0.050	1	02/27/13 10:39	03/05/13 16:19	50-29-3	
Dieldrin	ND	ug/L	0.050	0.050	1	02/27/13 10:39	03/05/13 16:19	60-57-1	
Endosulfan I	ND	ug/L	0.050	0.050	1	02/27/13 10:39	03/05/13 16:19	959-98-8	
Endosulfan II	ND	ug/L	0.050	0.050	1	02/27/13 10:39	03/05/13 16:19	33213-65-9	
Endosulfan sulfate	ND	ug/L	0.050	0.050	1	02/27/13 10:39	03/05/13 16:19	1031-07-8	
Endrin	ND	ug/L	0.050	0.050	1	02/27/13 10:39	03/05/13 16:19	72-20-8	
Endrin aldehyde	ND	ug/L	0.050	0.050	1	02/27/13 10:39	03/05/13 16:19	7421-93-4	
Endrin ketone	ND	ug/L	0.050	0.050	1	02/27/13 10:39	03/05/13 16:19	53494-70-5	
Heptachlor	ND	ug/L	0.050	0.050	1	02/27/13 10:39	03/05/13 16:19	76-44-8	
Heptachlor epoxide	ND	ug/L	0.050	0.050	1	02/27/13 10:39	03/05/13 16:19	1024-57-3	
Hexachlorobenzene	ND	ug/L	0.050	0.050	1	02/27/13 10:39	03/05/13 16:19	118-74-1	
Methoxychlor	ND	ug/L	0.15	0.15	1	02/27/13 10:39	03/05/13 16:19	72-43-5	
Mirex	ND	ug/L	0.15	0.15	1	02/27/13 10:39	03/05/13 16:19	2385-85-5	
Toxaphene	ND	ug/L	0.20	0.20	1	02/27/13 10:39	03/05/13 16:19	8001-35-2	
Surrogates									
Tetrachloro-m-xylene (S)	76	%	20-130		1	02/27/13 10:39	03/05/13 16:19	877-09-8	
Decachlorobiphenyl (S)	83	%	20-130		1	02/27/13 10:39	03/05/13 16:19	2051-24-3	
6010 ICP Groundwater	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Antimony	ND	ug/L	5.0	2.6	1	02/23/13 13:50	02/24/13 19:22	7440-36-0	
Arsenic	ND	ug/L	10.0	2.7	1	02/23/13 13:50	02/24/13 19:22	7440-38-2	
Barium	**221**	ug/L	5.0	0.20	1	02/23/13 13:50	02/24/13 19:22	7440-39-3	
Beryllium	ND	ug/L	1.0	0.10	1	02/23/13 13:50	02/24/13 19:22	7440-41-7	
Cadmium	ND	ug/L	1.0	0.50	1	02/23/13 13:50	02/24/13 19:22	7440-43-9	
Chromium	ND	ug/L	5.0	0.40	1	02/23/13 13:50	02/24/13 19:22	7440-47-3	
Cobalt	**49.7**	ug/L	5.0	0.60	1	02/23/13 13:50	02/24/13 19:22	7440-48-4	
Copper	**3.8J**	ug/L	5.0	0.30	1	02/23/13 13:50	02/24/13 19:22	7440-50-8	
Lead	ND	ug/L	5.0	4.0	1	02/23/13 13:50	02/24/13 19:22	7439-92-1	

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ANALYTICAL RESULTS

Project: FRANCIS FARM LF GWM FEB.2013
Pace Project No.: 92148500

Sample: MW-2A **Lab ID: 92148500020** Collected: 02/21/13 16:05 Received: 02/22/13 08:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 ICP Groundwater	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Nickel	**2.6J**	ug/L	5.0	1.7	1	02/23/13 13:50	02/24/13 19:22	7440-02-0	
Selenium	**4.2J**	ug/L	10.0	0.10	1	02/23/13 13:50	02/24/13 19:22	7782-49-2	
Silver	ND	ug/L	5.0	0.10	1	02/23/13 13:50	02/24/13 19:22	7440-22-4	
Thallium	ND	ug/L	5.4	3.0	1	02/23/13 13:50	02/24/13 19:22	7440-28-0	
Vanadium	ND	ug/L	5.0	0.20	1	02/23/13 13:50	02/24/13 19:22	7440-62-2	
Zinc	**25.7**	ug/L	10.0	0.40	1	02/23/13 13:50	02/24/13 19:22	7440-66-6	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470								
Mercury	ND	ug/L	0.20	0.10	1	02/25/13 17:45	02/28/13 15:28	7439-97-6	
8260 MSV Low Level Landfill	Analytical Method: EPA 8260								
Acetone	**14.6J**	ug/L	25.0	10.0	1		02/24/13 13:39	67-64-1	
Acetonitrile	ND	ug/L	50.0	2.2	1		02/24/13 13:39	75-05-8	
Acrylonitrile	ND	ug/L	10.0	1.9	1		02/24/13 13:39	107-13-1	
Allyl chloride	ND	ug/L	2.0	1.5	1		02/24/13 13:39	107-05-1	
Benzene	**0.45J**	ug/L	1.0	0.25	1		02/24/13 13:39	71-43-2	
Bromochloromethane	ND	ug/L	1.0	0.17	1		02/24/13 13:39	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	0.18	1		02/24/13 13:39	75-27-4	
Bromoform	ND	ug/L	1.0	0.26	1		02/24/13 13:39	75-25-2	
Bromomethane	ND	ug/L	2.0	0.29	1		02/24/13 13:39	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	0.96	1		02/24/13 13:39	78-93-3	
Carbon disulfide	ND	ug/L	2.0	1.2	1		02/24/13 13:39	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.25	1		02/24/13 13:39	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.23	1		02/24/13 13:39	108-90-7	
Chloroethane	ND	ug/L	1.0	0.54	1		02/24/13 13:39	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		02/24/13 13:39	67-66-3	
Chloromethane	ND	ug/L	1.0	0.11	1		02/24/13 13:39	74-87-3	
Chloroprene	ND	ug/L	5.0	0.27	1		02/24/13 13:39	126-99-8	
1,2-Dibromo-3-chloropropane	ND	ug/L	5.0	2.5	1		02/24/13 13:39	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		02/24/13 13:39	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.27	1		02/24/13 13:39	106-93-4	
Dibromomethane	ND	ug/L	1.0	0.21	1		02/24/13 13:39	74-95-3	
1,2-Dichlorobenzene	**0.33J**	ug/L	1.0	0.30	1		02/24/13 13:39	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	0.24	1		02/24/13 13:39	541-73-1	
1,4-Dichlorobenzene	**2.2**	ug/L	1.0	0.33	1		02/24/13 13:39	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	1.0	1.0	1		02/24/13 13:39	110-57-6	
Dichlorodifluoromethane	ND	ug/L	1.0	0.21	1		02/24/13 13:39	75-71-8	
1,1-Dichloroethane	**0.52J**	ug/L	1.0	0.32	1		02/24/13 13:39	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		02/24/13 13:39	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.56	1		02/24/13 13:39	75-35-4	
cis-1,2-Dichloroethene	**1.6**	ug/L	1.0	0.19	1		02/24/13 13:39	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.49	1		02/24/13 13:39	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.27	1		02/24/13 13:39	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	0.28	1		02/24/13 13:39	142-28-9	
2,2-Dichloropropane	ND	ug/L	1.0	0.13	1		02/24/13 13:39	594-20-7	
1,1-Dichloropropene	ND	ug/L	1.0	0.49	1		02/24/13 13:39	563-58-6	

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ANALYTICAL RESULTS

Project: FRANCIS FARM LF GWM FEB.2013
Pace Project No.: 92148500

Sample: MW-2A **Lab ID: 92148500020** Collected: 02/21/13 16:05 Received: 02/22/13 08:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level Landfill	Analytical Method: EPA 8260								
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.13	1		02/24/13 13:39	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.26	1		02/24/13 13:39	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.30	1		02/24/13 13:39	100-41-4	
Ethyl methacrylate	ND	ug/L	1.0	0.20	1		02/24/13 13:39	97-63-2	
2-Hexanone	ND	ug/L	5.0	0.46	1		02/24/13 13:39	591-78-6	
Iodomethane	ND	ug/L	5.0	0.32	1		02/24/13 13:39	74-88-4	
Isobutanol	ND	ug/L	100	35.0	1		02/24/13 13:39	78-83-1	
Methacrylonitrile	ND	ug/L	10.0	0.93	1		02/24/13 13:39	126-98-7	
Methylene Chloride	ND	ug/L	1.0	0.97	1		02/24/13 13:39	75-09-2	
Methyl methacrylate	ND	ug/L	2.0	2.0	1		02/24/13 13:39	80-62-6	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	0.33	1		02/24/13 13:39	108-10-1	
Naphthalene	ND	ug/L	1.0	0.24	1		02/24/13 13:39	91-20-3	
Propionitrile	ND	ug/L	20.0	3.6	1		02/24/13 13:39	107-12-0	
Styrene	ND	ug/L	1.0	0.26	1		02/24/13 13:39	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	0.33	1		02/24/13 13:39	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.40	1		02/24/13 13:39	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		02/24/13 13:39	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		02/24/13 13:39	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		02/24/13 13:39	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.29	1		02/24/13 13:39	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.47	1		02/24/13 13:39	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	0.20	1		02/24/13 13:39	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	0.41	1		02/24/13 13:39	96-18-4	
Vinyl acetate	ND	ug/L	2.0	0.35	1		02/24/13 13:39	108-05-4	
Vinyl chloride	ND	ug/L	1.0	0.62	1		02/24/13 13:39	75-01-4	
Xylene (Total)	ND	ug/L	2.0	0.66	1		02/24/13 13:39	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	0.66	1		02/24/13 13:39	179601-23-1	
o-Xylene	ND	ug/L	1.0	0.23	1		02/24/13 13:39	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	105	%	70-130		1		02/24/13 13:39	460-00-4	
Dibromofluoromethane (S)	108	%	70-130		1		02/24/13 13:39	1868-53-7	
1,2-Dichloroethane-d4 (S)	100	%	70-130		1		02/24/13 13:39	17060-07-0	
Toluene-d8 (S)	98	%	70-130		1		02/24/13 13:39	2037-26-5	
4500CNE Cyanide, Total	Analytical Method: SM 4500-CN-E								
Cyanide	**0.0064**	mg/L	0.0050	0.0050	1		02/28/13 12:23	57-12-5	

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ANALYTICAL RESULTS

Project: FRANCIS FARM LF GWM FEB.2013
Pace Project No.: 92148500

Sample: MW-3A **Lab ID: 92148500021** Collected: 02/21/13 15:30 Received: 02/22/13 08:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Monitoring Well Data	Analytical Method:								
Collected By	**MPS**				1		02/28/13 17:06		
Collected Date	**2/21/13**				1		02/28/13 17:06		
Collected Time	**15:30**				1		02/28/13 17:06		
Field pH	**6.1**	Std. Units	0.10	0.10	1		02/28/13 17:06		
Field Temperature	**12.9**	deg C	0.50	0.50	1		02/28/13 17:06		
Static Water Level	**34.92**	feet			1		02/28/13 17:06		
Field Specific Conductance	**347**	umhos/cm	1.0	1.0	1		02/28/13 17:06		
Turbidity	**6.73**	NTU	1.0	1.0	1		02/28/13 17:06		
8081 Organochlorine Pesticides	Analytical Method: EPA 8081 Preparation Method: EPA 3510								
Aldrin	ND	ug/L	0.050	0.050	1	02/27/13 10:39	03/05/13 17:11	309-00-2	
alpha-BHC	ND	ug/L	0.050	0.050	1	02/27/13 10:39	03/05/13 17:11	319-84-6	
beta-BHC	ND	ug/L	0.050	0.050	1	02/27/13 10:39	03/05/13 17:11	319-85-7	
delta-BHC	ND	ug/L	0.050	0.050	1	02/27/13 10:39	03/05/13 17:11	319-86-8	
gamma-BHC (Lindane)	ND	ug/L	0.050	0.050	1	02/27/13 10:39	03/05/13 17:11	58-89-9	
Chlordane (Technical)	ND	ug/L	0.20	0.20	1	02/27/13 10:39	03/05/13 17:11	57-74-9	
4,4'-DDD	ND	ug/L	0.050	0.050	1	02/27/13 10:39	03/05/13 17:11	72-54-8	
4,4'-DDE	ND	ug/L	0.050	0.050	1	02/27/13 10:39	03/05/13 17:11	72-55-9	
4,4'-DDT	ND	ug/L	0.050	0.050	1	02/27/13 10:39	03/05/13 17:11	50-29-3	
Dieldrin	ND	ug/L	0.050	0.050	1	02/27/13 10:39	03/05/13 17:11	60-57-1	
Endosulfan I	ND	ug/L	0.050	0.050	1	02/27/13 10:39	03/05/13 17:11	959-98-8	
Endosulfan II	ND	ug/L	0.050	0.050	1	02/27/13 10:39	03/05/13 17:11	33213-65-9	
Endosulfan sulfate	ND	ug/L	0.050	0.050	1	02/27/13 10:39	03/05/13 17:11	1031-07-8	
Endrin	ND	ug/L	0.050	0.050	1	02/27/13 10:39	03/05/13 17:11	72-20-8	
Endrin aldehyde	ND	ug/L	0.050	0.050	1	02/27/13 10:39	03/05/13 17:11	7421-93-4	
Endrin ketone	ND	ug/L	0.050	0.050	1	02/27/13 10:39	03/05/13 17:11	53494-70-5	
Heptachlor	ND	ug/L	0.050	0.050	1	02/27/13 10:39	03/05/13 17:11	76-44-8	
Heptachlor epoxide	ND	ug/L	0.050	0.050	1	02/27/13 10:39	03/05/13 17:11	1024-57-3	
Hexachlorobenzene	ND	ug/L	0.050	0.050	1	02/27/13 10:39	03/05/13 17:11	118-74-1	
Methoxychlor	ND	ug/L	0.15	0.15	1	02/27/13 10:39	03/05/13 17:11	72-43-5	
Mirex	ND	ug/L	0.15	0.15	1	02/27/13 10:39	03/05/13 17:11	2385-85-5	
Toxaphene	ND	ug/L	0.20	0.20	1	02/27/13 10:39	03/05/13 17:11	8001-35-2	
Surrogates									
Tetrachloro-m-xylene (S)	63	%	20-130		1	02/27/13 10:39	03/05/13 17:11	877-09-8	
Decachlorobiphenyl (S)	60	%	20-130		1	02/27/13 10:39	03/05/13 17:11	2051-24-3	
6010 ICP Groundwater	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Antimony	ND	ug/L	5.0	2.6	1	02/23/13 13:50	02/24/13 19:26	7440-36-0	
Arsenic	ND	ug/L	10.0	2.7	1	02/23/13 13:50	02/24/13 19:26	7440-38-2	
Barium	**172**	ug/L	5.0	0.20	1	02/23/13 13:50	02/24/13 19:26	7440-39-3	
Beryllium	ND	ug/L	1.0	0.10	1	02/23/13 13:50	02/24/13 19:26	7440-41-7	
Cadmium	ND	ug/L	1.0	0.50	1	02/23/13 13:50	02/24/13 19:26	7440-43-9	
Chromium	ND	ug/L	5.0	0.40	1	02/23/13 13:50	02/24/13 19:26	7440-47-3	
Cobalt	**84.3**	ug/L	5.0	0.60	1	02/23/13 13:50	02/24/13 19:26	7440-48-4	
Copper	**12.8**	ug/L	5.0	0.30	1	02/23/13 13:50	02/24/13 19:26	7440-50-8	
Lead	ND	ug/L	5.0	4.0	1	02/23/13 13:50	02/24/13 19:26	7439-92-1	

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ANALYTICAL RESULTS

Project: FRANCIS FARM LF GWM FEB.2013
Pace Project No.: 92148500

Sample: MW-3A **Lab ID: 92148500021** Collected: 02/21/13 15:30 Received: 02/22/13 08:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 ICP Groundwater	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Nickel	**11.9**	ug/L	5.0	1.7	1	02/23/13 13:50	02/24/13 19:26	7440-02-0	
Selenium	**6.8J**	ug/L	10.0	0.10	1	02/23/13 13:50	02/24/13 19:26	7782-49-2	
Silver	ND	ug/L	5.0	0.10	1	02/23/13 13:50	02/24/13 19:26	7440-22-4	
Thallium	ND	ug/L	5.4	3.0	1	02/23/13 13:50	02/24/13 19:26	7440-28-0	
Vanadium	ND	ug/L	5.0	0.20	1	02/23/13 13:50	02/24/13 19:26	7440-62-2	
Zinc	**14.2**	ug/L	10.0	0.40	1	02/23/13 13:50	02/24/13 19:26	7440-66-6	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470								
Mercury	ND	ug/L	0.20	0.10	1	02/25/13 17:45	02/28/13 15:31	7439-97-6	
8260 MSV Low Level Landfill	Analytical Method: EPA 8260								
Acetone	ND	ug/L	25.0	10.0	1		02/24/13 13:55	67-64-1	
Acetonitrile	ND	ug/L	50.0	2.2	1		02/24/13 13:55	75-05-8	
Acrylonitrile	ND	ug/L	10.0	1.9	1		02/24/13 13:55	107-13-1	
Allyl chloride	ND	ug/L	2.0	1.5	1		02/24/13 13:55	107-05-1	
Benzene	**0.39J**	ug/L	1.0	0.25	1		02/24/13 13:55	71-43-2	
Bromochloromethane	ND	ug/L	1.0	0.17	1		02/24/13 13:55	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	0.18	1		02/24/13 13:55	75-27-4	
Bromoform	ND	ug/L	1.0	0.26	1		02/24/13 13:55	75-25-2	
Bromomethane	ND	ug/L	2.0	0.29	1		02/24/13 13:55	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	0.96	1		02/24/13 13:55	78-93-3	
Carbon disulfide	ND	ug/L	2.0	1.2	1		02/24/13 13:55	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.25	1		02/24/13 13:55	56-23-5	
Chlorobenzene	**0.34J**	ug/L	1.0	0.23	1		02/24/13 13:55	108-90-7	
Chloroethane	**2.7**	ug/L	1.0	0.54	1		02/24/13 13:55	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		02/24/13 13:55	67-66-3	
Chloromethane	ND	ug/L	1.0	0.11	1		02/24/13 13:55	74-87-3	
Chloroprene	ND	ug/L	5.0	0.27	1		02/24/13 13:55	126-99-8	
1,2-Dibromo-3-chloropropane	ND	ug/L	5.0	2.5	1		02/24/13 13:55	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		02/24/13 13:55	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.27	1		02/24/13 13:55	106-93-4	
Dibromomethane	ND	ug/L	1.0	0.21	1		02/24/13 13:55	74-95-3	
1,2-Dichlorobenzene	**0.53J**	ug/L	1.0	0.30	1		02/24/13 13:55	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	0.24	1		02/24/13 13:55	541-73-1	
1,4-Dichlorobenzene	**0.49J**	ug/L	1.0	0.33	1		02/24/13 13:55	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	1.0	1.0	1		02/24/13 13:55	110-57-6	
Dichlorodifluoromethane	ND	ug/L	1.0	0.21	1		02/24/13 13:55	75-71-8	
1,1-Dichloroethane	**7.0**	ug/L	1.0	0.32	1		02/24/13 13:55	75-34-3	
1,2-Dichloroethane	**0.63J**	ug/L	1.0	0.12	1		02/24/13 13:55	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.56	1		02/24/13 13:55	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.19	1		02/24/13 13:55	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.49	1		02/24/13 13:55	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.27	1		02/24/13 13:55	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	0.28	1		02/24/13 13:55	142-28-9	
2,2-Dichloropropane	ND	ug/L	1.0	0.13	1		02/24/13 13:55	594-20-7	
1,1-Dichloropropene	ND	ug/L	1.0	0.49	1		02/24/13 13:55	563-58-6	

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ANALYTICAL RESULTS

Project: FRANCIS FARM LF GWM FEB.2013
Pace Project No.: 92148500

Sample: MW-3A **Lab ID: 92148500021** Collected: 02/21/13 15:30 Received: 02/22/13 08:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level Landfill	Analytical Method: EPA 8260								
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.13	1		02/24/13 13:55	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.26	1		02/24/13 13:55	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.30	1		02/24/13 13:55	100-41-4	
Ethyl methacrylate	ND	ug/L	1.0	0.20	1		02/24/13 13:55	97-63-2	
2-Hexanone	ND	ug/L	5.0	0.46	1		02/24/13 13:55	591-78-6	
Iodomethane	ND	ug/L	5.0	0.32	1		02/24/13 13:55	74-88-4	
Isobutanol	ND	ug/L	100	35.0	1		02/24/13 13:55	78-83-1	
Methacrylonitrile	ND	ug/L	10.0	0.93	1		02/24/13 13:55	126-98-7	
Methylene Chloride	ND	ug/L	1.0	0.97	1		02/24/13 13:55	75-09-2	
Methyl methacrylate	ND	ug/L	2.0	2.0	1		02/24/13 13:55	80-62-6	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	0.33	1		02/24/13 13:55	108-10-1	
Naphthalene	ND	ug/L	1.0	0.24	1		02/24/13 13:55	91-20-3	
Propionitrile	ND	ug/L	20.0	3.6	1		02/24/13 13:55	107-12-0	
Styrene	ND	ug/L	1.0	0.26	1		02/24/13 13:55	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	0.33	1		02/24/13 13:55	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.40	1		02/24/13 13:55	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		02/24/13 13:55	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		02/24/13 13:55	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		02/24/13 13:55	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.29	1		02/24/13 13:55	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.47	1		02/24/13 13:55	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	0.20	1		02/24/13 13:55	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	0.41	1		02/24/13 13:55	96-18-4	
Vinyl acetate	ND	ug/L	2.0	0.35	1		02/24/13 13:55	108-05-4	
Vinyl chloride	ND	ug/L	1.0	0.62	1		02/24/13 13:55	75-01-4	
Xylene (Total)	ND	ug/L	2.0	0.66	1		02/24/13 13:55	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	0.66	1		02/24/13 13:55	179601-23-1	
o-Xylene	ND	ug/L	1.0	0.23	1		02/24/13 13:55	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	103	%	70-130		1		02/24/13 13:55	460-00-4	
Dibromofluoromethane (S)	109	%	70-130		1		02/24/13 13:55	1868-53-7	
1,2-Dichloroethane-d4 (S)	100	%	70-130		1		02/24/13 13:55	17060-07-0	
Toluene-d8 (S)	99	%	70-130		1		02/24/13 13:55	2037-26-5	
4500CNE Cyanide, Total	Analytical Method: SM 4500-CN-E								
Cyanide	ND	mg/L	0.0050	0.0050	1		03/06/13 13:39	57-12-5	

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ANALYTICAL RESULTS

Project: FRANCIS FARM LF GWM FEB.2013
Pace Project No.: 92148500

Sample: MW-16 **Lab ID: 92148500022** Collected: 02/21/13 11:30 Received: 02/22/13 08:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Monitoring Well Data	Analytical Method:								
Collected By	**MPS**				1		02/28/13 17:07		
Collected Date	**2/21/13**				1		02/28/13 17:07		
Collected Time	**11:30**				1		02/28/13 17:07		
Field pH	**6.2**	Std. Units	0.10	0.10	1		02/28/13 17:07		
Field Temperature	**12.0**	deg C	0.50	0.50	1		02/28/13 17:07		
Static Water Level	**59.51**	feet			1		02/28/13 17:07		
Field Specific Conductance	**107**	umhos/cm	1.0	1.0	1		02/28/13 17:07		
Turbidity	**2.14**	NTU	1.0	1.0	1		02/28/13 17:07		
8081 Organochlorine Pesticides	Analytical Method: EPA 8081 Preparation Method: EPA 3510								
Aldrin	ND	ug/L	0.050	0.050	1	02/27/13 10:39	03/05/13 17:29	309-00-2	
alpha-BHC	ND	ug/L	0.050	0.050	1	02/27/13 10:39	03/05/13 17:29	319-84-6	
beta-BHC	ND	ug/L	0.050	0.050	1	02/27/13 10:39	03/05/13 17:29	319-85-7	
delta-BHC	ND	ug/L	0.050	0.050	1	02/27/13 10:39	03/05/13 17:29	319-86-8	
gamma-BHC (Lindane)	ND	ug/L	0.050	0.050	1	02/27/13 10:39	03/05/13 17:29	58-89-9	
Chlordane (Technical)	ND	ug/L	0.20	0.20	1	02/27/13 10:39	03/05/13 17:29	57-74-9	
4,4'-DDD	ND	ug/L	0.050	0.050	1	02/27/13 10:39	03/05/13 17:29	72-54-8	
4,4'-DDE	ND	ug/L	0.050	0.050	1	02/27/13 10:39	03/05/13 17:29	72-55-9	
4,4'-DDT	ND	ug/L	0.050	0.050	1	02/27/13 10:39	03/05/13 17:29	50-29-3	
Dieldrin	ND	ug/L	0.050	0.050	1	02/27/13 10:39	03/05/13 17:29	60-57-1	
Endosulfan I	ND	ug/L	0.050	0.050	1	02/27/13 10:39	03/05/13 17:29	959-98-8	
Endosulfan II	ND	ug/L	0.050	0.050	1	02/27/13 10:39	03/05/13 17:29	33213-65-9	
Endosulfan sulfate	ND	ug/L	0.050	0.050	1	02/27/13 10:39	03/05/13 17:29	1031-07-8	
Endrin	ND	ug/L	0.050	0.050	1	02/27/13 10:39	03/05/13 17:29	72-20-8	
Endrin aldehyde	ND	ug/L	0.050	0.050	1	02/27/13 10:39	03/05/13 17:29	7421-93-4	
Endrin ketone	ND	ug/L	0.050	0.050	1	02/27/13 10:39	03/05/13 17:29	53494-70-5	
Heptachlor	ND	ug/L	0.050	0.050	1	02/27/13 10:39	03/05/13 17:29	76-44-8	
Heptachlor epoxide	ND	ug/L	0.050	0.050	1	02/27/13 10:39	03/05/13 17:29	1024-57-3	
Hexachlorobenzene	ND	ug/L	0.050	0.050	1	02/27/13 10:39	03/05/13 17:29	118-74-1	
Methoxychlor	ND	ug/L	0.15	0.15	1	02/27/13 10:39	03/05/13 17:29	72-43-5	
Mirex	ND	ug/L	0.15	0.15	1	02/27/13 10:39	03/05/13 17:29	2385-85-5	
Toxaphene	ND	ug/L	0.20	0.20	1	02/27/13 10:39	03/05/13 17:29	8001-35-2	
Surrogates									
Tetrachloro-m-xylene (S)	76	%	20-130		1	02/27/13 10:39	03/05/13 17:29	877-09-8	
Decachlorobiphenyl (S)	53	%	20-130		1	02/27/13 10:39	03/05/13 17:29	2051-24-3	
6010 ICP Groundwater	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Antimony	ND	ug/L	5.0	2.6	1	02/23/13 13:50	02/24/13 19:39	7440-36-0	
Arsenic	ND	ug/L	10.0	2.7	1	02/23/13 13:50	02/24/13 19:39	7440-38-2	
Barium	**118**	ug/L	5.0	0.20	1	02/23/13 13:50	02/24/13 19:39	7440-39-3	
Beryllium	ND	ug/L	1.0	0.10	1	02/23/13 13:50	02/24/13 19:39	7440-41-7	
Cadmium	ND	ug/L	1.0	0.50	1	02/23/13 13:50	02/24/13 19:39	7440-43-9	
Chromium	ND	ug/L	5.0	0.40	1	02/23/13 13:50	02/24/13 19:39	7440-47-3	
Cobalt	**0.72J**	ug/L	5.0	0.60	1	02/23/13 13:50	02/24/13 19:39	7440-48-4	
Copper	**1.5J**	ug/L	5.0	0.30	1	02/23/13 13:50	02/24/13 19:39	7440-50-8	
Lead	ND	ug/L	5.0	4.0	1	02/23/13 13:50	02/24/13 19:39	7439-92-1	

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ANALYTICAL RESULTS

Project: FRANCIS FARM LF GWM FEB.2013
Pace Project No.: 92148500

Sample: MW-16 **Lab ID: 92148500022** Collected: 02/21/13 11:30 Received: 02/22/13 08:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 ICP Groundwater	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Nickel	ND	ug/L	5.0	1.7	1	02/23/13 13:50	02/24/13 19:39	7440-02-0	
Selenium	**3.1J**	ug/L	10.0	0.10	1	02/23/13 13:50	02/24/13 19:39	7782-49-2	
Silver	**0.55J**	ug/L	5.0	0.10	1	02/23/13 13:50	02/24/13 19:39	7440-22-4	
Thallium	ND	ug/L	5.4	3.0	1	02/23/13 13:50	02/24/13 19:39	7440-28-0	
Vanadium	**0.88J**	ug/L	5.0	0.20	1	02/23/13 13:50	02/24/13 19:39	7440-62-2	
Zinc	**7.1J**	ug/L	10.0	0.40	1	02/23/13 13:50	02/24/13 19:39	7440-66-6	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470								
Mercury	ND	ug/L	0.20	0.10	1	02/25/13 17:45	02/28/13 15:33	7439-97-6	
8260 MSV Low Level Landfill	Analytical Method: EPA 8260								
Acetone	ND	ug/L	25.0	10.0	1		02/24/13 14:11	67-64-1	
Acetonitrile	ND	ug/L	50.0	2.2	1		02/24/13 14:11	75-05-8	
Acrylonitrile	ND	ug/L	10.0	1.9	1		02/24/13 14:11	107-13-1	
Allyl chloride	ND	ug/L	2.0	1.5	1		02/24/13 14:11	107-05-1	
Benzene	ND	ug/L	1.0	0.25	1		02/24/13 14:11	71-43-2	
Bromochloromethane	ND	ug/L	1.0	0.17	1		02/24/13 14:11	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	0.18	1		02/24/13 14:11	75-27-4	
Bromoform	ND	ug/L	1.0	0.26	1		02/24/13 14:11	75-25-2	
Bromomethane	ND	ug/L	2.0	0.29	1		02/24/13 14:11	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	0.96	1		02/24/13 14:11	78-93-3	
Carbon disulfide	ND	ug/L	2.0	1.2	1		02/24/13 14:11	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.25	1		02/24/13 14:11	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.23	1		02/24/13 14:11	108-90-7	
Chloroethane	ND	ug/L	1.0	0.54	1		02/24/13 14:11	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		02/24/13 14:11	67-66-3	
Chloromethane	ND	ug/L	1.0	0.11	1		02/24/13 14:11	74-87-3	
Chloroprene	ND	ug/L	5.0	0.27	1		02/24/13 14:11	126-99-8	
1,2-Dibromo-3-chloropropane	ND	ug/L	5.0	2.5	1		02/24/13 14:11	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		02/24/13 14:11	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.27	1		02/24/13 14:11	106-93-4	
Dibromomethane	ND	ug/L	1.0	0.21	1		02/24/13 14:11	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	0.30	1		02/24/13 14:11	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	0.24	1		02/24/13 14:11	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	0.33	1		02/24/13 14:11	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	1.0	1.0	1		02/24/13 14:11	110-57-6	
Dichlorodifluoromethane	ND	ug/L	1.0	0.21	1		02/24/13 14:11	75-71-8	
1,1-Dichloroethane	**0.58J**	ug/L	1.0	0.32	1		02/24/13 14:11	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		02/24/13 14:11	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.56	1		02/24/13 14:11	75-35-4	
cis-1,2-Dichloroethene	**0.39J**	ug/L	1.0	0.19	1		02/24/13 14:11	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.49	1		02/24/13 14:11	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.27	1		02/24/13 14:11	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	0.28	1		02/24/13 14:11	142-28-9	
2,2-Dichloropropane	ND	ug/L	1.0	0.13	1		02/24/13 14:11	594-20-7	
1,1-Dichloropropene	ND	ug/L	1.0	0.49	1		02/24/13 14:11	563-58-6	

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ANALYTICAL RESULTS

Project: FRANCIS FARM LF GWM FEB.2013
Pace Project No.: 92148500

Sample: MW-16 **Lab ID: 92148500022** Collected: 02/21/13 11:30 Received: 02/22/13 08:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level Landfill	Analytical Method: EPA 8260								
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.13	1		02/24/13 14:11	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.26	1		02/24/13 14:11	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.30	1		02/24/13 14:11	100-41-4	
Ethyl methacrylate	ND	ug/L	1.0	0.20	1		02/24/13 14:11	97-63-2	
2-Hexanone	ND	ug/L	5.0	0.46	1		02/24/13 14:11	591-78-6	
Iodomethane	ND	ug/L	5.0	0.32	1		02/24/13 14:11	74-88-4	
Isobutanol	ND	ug/L	100	35.0	1		02/24/13 14:11	78-83-1	
Methacrylonitrile	ND	ug/L	10.0	0.93	1		02/24/13 14:11	126-98-7	
Methylene Chloride	ND	ug/L	1.0	0.97	1		02/24/13 14:11	75-09-2	
Methyl methacrylate	ND	ug/L	2.0	2.0	1		02/24/13 14:11	80-62-6	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	0.33	1		02/24/13 14:11	108-10-1	
Naphthalene	ND	ug/L	1.0	0.24	1		02/24/13 14:11	91-20-3	
Propionitrile	ND	ug/L	20.0	3.6	1		02/24/13 14:11	107-12-0	
Styrene	ND	ug/L	1.0	0.26	1		02/24/13 14:11	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	0.33	1		02/24/13 14:11	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.40	1		02/24/13 14:11	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		02/24/13 14:11	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		02/24/13 14:11	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		02/24/13 14:11	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.29	1		02/24/13 14:11	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.47	1		02/24/13 14:11	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	0.20	1		02/24/13 14:11	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	0.41	1		02/24/13 14:11	96-18-4	
Vinyl acetate	ND	ug/L	2.0	0.35	1		02/24/13 14:11	108-05-4	
Vinyl chloride	ND	ug/L	1.0	0.62	1		02/24/13 14:11	75-01-4	
Xylene (Total)	ND	ug/L	2.0	0.66	1		02/24/13 14:11	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	0.66	1		02/24/13 14:11	179601-23-1	
o-Xylene	ND	ug/L	1.0	0.23	1		02/24/13 14:11	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	99	%	70-130		1		02/24/13 14:11	460-00-4	
Dibromofluoromethane (S)	107	%	70-130		1		02/24/13 14:11	1868-53-7	
1,2-Dichloroethane-d4 (S)	100	%	70-130		1		02/24/13 14:11	17060-07-0	
Toluene-d8 (S)	98	%	70-130		1		02/24/13 14:11	2037-26-5	
4500CNE Cyanide, Total	Analytical Method: SM 4500-CN-E								
Cyanide	ND	mg/L	0.0050	0.0050	1		03/06/13 13:41	57-12-5	

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ANALYTICAL RESULTS

Project: FRANCIS FARM LF GWM FEB.2013
Pace Project No.: 92148500

Sample: MW-17 **Lab ID: 92148500023** Collected: 02/21/13 11:10 Received: 02/22/13 08:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Monitoring Well Data	Analytical Method:								
Collected By	**MPS**				1		02/28/13 17:08		
Collected Date	**2/21/13**				1		02/28/13 17:08		
Collected Time	**11:10**				1		02/28/13 17:08		
Field pH	**6.3**	Std. Units	0.10	0.10	1		02/28/13 17:08		
Field Temperature	**11.5**	deg C	0.50	0.50	1		02/28/13 17:08		
Static Water Level	**53.39**	feet			1		02/28/13 17:08		
Field Specific Conductance	**75**	umhos/cm	1.0	1.0	1		02/28/13 17:08		
Turbidity	**1.32**	NTU	1.0	1.0	1		02/28/13 17:08		
8081 Organochlorine Pesticides	Analytical Method: EPA 8081 Preparation Method: EPA 3510								
Aldrin	ND	ug/L	0.050	0.050	1	02/27/13 10:39	03/05/13 17:47	309-00-2	
alpha-BHC	ND	ug/L	0.050	0.050	1	02/27/13 10:39	03/05/13 17:47	319-84-6	
beta-BHC	ND	ug/L	0.050	0.050	1	02/27/13 10:39	03/05/13 17:47	319-85-7	
delta-BHC	ND	ug/L	0.050	0.050	1	02/27/13 10:39	03/05/13 17:47	319-86-8	
gamma-BHC (Lindane)	ND	ug/L	0.050	0.050	1	02/27/13 10:39	03/05/13 17:47	58-89-9	
Chlordane (Technical)	ND	ug/L	0.20	0.20	1	02/27/13 10:39	03/05/13 17:47	57-74-9	
4,4'-DDD	ND	ug/L	0.050	0.050	1	02/27/13 10:39	03/05/13 17:47	72-54-8	
4,4'-DDE	ND	ug/L	0.050	0.050	1	02/27/13 10:39	03/05/13 17:47	72-55-9	
4,4'-DDT	ND	ug/L	0.050	0.050	1	02/27/13 10:39	03/05/13 17:47	50-29-3	
Dieldrin	ND	ug/L	0.050	0.050	1	02/27/13 10:39	03/05/13 17:47	60-57-1	
Endosulfan I	ND	ug/L	0.050	0.050	1	02/27/13 10:39	03/05/13 17:47	959-98-8	
Endosulfan II	ND	ug/L	0.050	0.050	1	02/27/13 10:39	03/05/13 17:47	33213-65-9	
Endosulfan sulfate	ND	ug/L	0.050	0.050	1	02/27/13 10:39	03/05/13 17:47	1031-07-8	
Endrin	ND	ug/L	0.050	0.050	1	02/27/13 10:39	03/05/13 17:47	72-20-8	
Endrin aldehyde	ND	ug/L	0.050	0.050	1	02/27/13 10:39	03/05/13 17:47	7421-93-4	
Endrin ketone	ND	ug/L	0.050	0.050	1	02/27/13 10:39	03/05/13 17:47	53494-70-5	
Heptachlor	ND	ug/L	0.050	0.050	1	02/27/13 10:39	03/05/13 17:47	76-44-8	
Heptachlor epoxide	ND	ug/L	0.050	0.050	1	02/27/13 10:39	03/05/13 17:47	1024-57-3	
Hexachlorobenzene	ND	ug/L	0.050	0.050	1	02/27/13 10:39	03/05/13 17:47	118-74-1	
Methoxychlor	ND	ug/L	0.15	0.15	1	02/27/13 10:39	03/05/13 17:47	72-43-5	
Mirex	ND	ug/L	0.15	0.15	1	02/27/13 10:39	03/05/13 17:47	2385-85-5	
Toxaphene	ND	ug/L	0.20	0.20	1	02/27/13 10:39	03/05/13 17:47	8001-35-2	
Surrogates									
Tetrachloro-m-xylene (S)	80	%	20-130		1	02/27/13 10:39	03/05/13 17:47	877-09-8	
Decachlorobiphenyl (S)	63	%	20-130		1	02/27/13 10:39	03/05/13 17:47	2051-24-3	
6010 ICP Groundwater	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Antimony	ND	ug/L	5.0	2.6	1	02/23/13 13:50	02/24/13 19:42	7440-36-0	
Arsenic	ND	ug/L	10.0	2.7	1	02/23/13 13:50	02/24/13 19:42	7440-38-2	
Barium	**65.6**	ug/L	5.0	0.20	1	02/23/13 13:50	02/24/13 19:42	7440-39-3	
Beryllium	ND	ug/L	1.0	0.10	1	02/23/13 13:50	02/24/13 19:42	7440-41-7	
Cadmium	ND	ug/L	1.0	0.50	1	02/23/13 13:50	02/24/13 19:42	7440-43-9	
Chromium	**1.7J**	ug/L	5.0	0.40	1	02/23/13 13:50	02/24/13 19:42	7440-47-3	
Cobalt	**0.61J**	ug/L	5.0	0.60	1	02/23/13 13:50	02/24/13 19:42	7440-48-4	
Copper	**1.8J**	ug/L	5.0	0.30	1	02/23/13 13:50	02/24/13 19:42	7440-50-8	
Lead	ND	ug/L	5.0	4.0	1	02/23/13 13:50	02/24/13 19:42	7439-92-1	

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ANALYTICAL RESULTS

Project: FRANCIS FARM LF GWM FEB.2013
Pace Project No.: 92148500

Sample: MW-17 **Lab ID: 92148500023** Collected: 02/21/13 11:10 Received: 02/22/13 08:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 ICP Groundwater	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Nickel	ND	ug/L	5.0	1.7	1	02/23/13 13:50	02/24/13 19:42	7440-02-0	
Selenium	**2.5J**	ug/L	10.0	0.10	1	02/23/13 13:50	02/24/13 19:42	7782-49-2	
Silver	**0.63J**	ug/L	5.0	0.10	1	02/23/13 13:50	02/24/13 19:42	7440-22-4	
Thallium	ND	ug/L	5.4	3.0	1	02/23/13 13:50	02/24/13 19:42	7440-28-0	
Vanadium	**1.0J**	ug/L	5.0	0.20	1	02/23/13 13:50	02/24/13 19:42	7440-62-2	
Zinc	**4.9J**	ug/L	10.0	0.40	1	02/23/13 13:50	02/24/13 19:42	7440-66-6	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470								
Mercury	ND	ug/L	0.20	0.10	1	02/25/13 17:45	02/28/13 15:36	7439-97-6	
8260 MSV Low Level Landfill	Analytical Method: EPA 8260								
Acetone	ND	ug/L	25.0	10.0	1		02/24/13 14:27	67-64-1	
Acetonitrile	ND	ug/L	50.0	2.2	1		02/24/13 14:27	75-05-8	
Acrylonitrile	ND	ug/L	10.0	1.9	1		02/24/13 14:27	107-13-1	
Allyl chloride	ND	ug/L	2.0	1.5	1		02/24/13 14:27	107-05-1	
Benzene	ND	ug/L	1.0	0.25	1		02/24/13 14:27	71-43-2	
Bromochloromethane	ND	ug/L	1.0	0.17	1		02/24/13 14:27	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	0.18	1		02/24/13 14:27	75-27-4	
Bromoform	ND	ug/L	1.0	0.26	1		02/24/13 14:27	75-25-2	
Bromomethane	ND	ug/L	2.0	0.29	1		02/24/13 14:27	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	0.96	1		02/24/13 14:27	78-93-3	
Carbon disulfide	ND	ug/L	2.0	1.2	1		02/24/13 14:27	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.25	1		02/24/13 14:27	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.23	1		02/24/13 14:27	108-90-7	
Chloroethane	ND	ug/L	1.0	0.54	1		02/24/13 14:27	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		02/24/13 14:27	67-66-3	
Chloromethane	ND	ug/L	1.0	0.11	1		02/24/13 14:27	74-87-3	
Chloroprene	ND	ug/L	5.0	0.27	1		02/24/13 14:27	126-99-8	
1,2-Dibromo-3-chloropropane	ND	ug/L	5.0	2.5	1		02/24/13 14:27	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		02/24/13 14:27	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.27	1		02/24/13 14:27	106-93-4	
Dibromomethane	ND	ug/L	1.0	0.21	1		02/24/13 14:27	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	0.30	1		02/24/13 14:27	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	0.24	1		02/24/13 14:27	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	0.33	1		02/24/13 14:27	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	1.0	1.0	1		02/24/13 14:27	110-57-6	
Dichlorodifluoromethane	ND	ug/L	1.0	0.21	1		02/24/13 14:27	75-71-8	
1,1-Dichloroethane	ND	ug/L	1.0	0.32	1		02/24/13 14:27	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		02/24/13 14:27	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.56	1		02/24/13 14:27	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.19	1		02/24/13 14:27	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.49	1		02/24/13 14:27	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.27	1		02/24/13 14:27	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	0.28	1		02/24/13 14:27	142-28-9	
2,2-Dichloropropane	ND	ug/L	1.0	0.13	1		02/24/13 14:27	594-20-7	
1,1-Dichloropropene	ND	ug/L	1.0	0.49	1		02/24/13 14:27	563-58-6	

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ANALYTICAL RESULTS

Project: FRANCIS FARM LF GWM FEB.2013
Pace Project No.: 92148500

Sample: MW-17 **Lab ID: 92148500023** Collected: 02/21/13 11:10 Received: 02/22/13 08:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level Landfill	Analytical Method: EPA 8260								
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.13	1		02/24/13 14:27	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.26	1		02/24/13 14:27	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.30	1		02/24/13 14:27	100-41-4	
Ethyl methacrylate	ND	ug/L	1.0	0.20	1		02/24/13 14:27	97-63-2	
2-Hexanone	ND	ug/L	5.0	0.46	1		02/24/13 14:27	591-78-6	
Iodomethane	ND	ug/L	5.0	0.32	1		02/24/13 14:27	74-88-4	
Isobutanol	ND	ug/L	100	35.0	1		02/24/13 14:27	78-83-1	
Methacrylonitrile	ND	ug/L	10.0	0.93	1		02/24/13 14:27	126-98-7	
Methylene Chloride	ND	ug/L	1.0	0.97	1		02/24/13 14:27	75-09-2	
Methyl methacrylate	ND	ug/L	2.0	2.0	1		02/24/13 14:27	80-62-6	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	0.33	1		02/24/13 14:27	108-10-1	
Naphthalene	ND	ug/L	1.0	0.24	1		02/24/13 14:27	91-20-3	
Propionitrile	ND	ug/L	20.0	3.6	1		02/24/13 14:27	107-12-0	
Styrene	ND	ug/L	1.0	0.26	1		02/24/13 14:27	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	0.33	1		02/24/13 14:27	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.40	1		02/24/13 14:27	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		02/24/13 14:27	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		02/24/13 14:27	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		02/24/13 14:27	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.29	1		02/24/13 14:27	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.47	1		02/24/13 14:27	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	0.20	1		02/24/13 14:27	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	0.41	1		02/24/13 14:27	96-18-4	
Vinyl acetate	ND	ug/L	2.0	0.35	1		02/24/13 14:27	108-05-4	
Vinyl chloride	ND	ug/L	1.0	0.62	1		02/24/13 14:27	75-01-4	
Xylene (Total)	ND	ug/L	2.0	0.66	1		02/24/13 14:27	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	0.66	1		02/24/13 14:27	179601-23-1	
o-Xylene	ND	ug/L	1.0	0.23	1		02/24/13 14:27	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	101	%	70-130		1		02/24/13 14:27	460-00-4	
Dibromofluoromethane (S)	110	%	70-130		1		02/24/13 14:27	1868-53-7	
1,2-Dichloroethane-d4 (S)	101	%	70-130		1		02/24/13 14:27	17060-07-0	
Toluene-d8 (S)	100	%	70-130		1		02/24/13 14:27	2037-26-5	
4500CNE Cyanide, Total	Analytical Method: SM 4500-CN-E								
Cyanide	ND	mg/L	0.0050	0.0050	1		03/06/13 13:43	57-12-5	

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ANALYTICAL RESULTS

Project: FRANCIS FARM LF GWM FEB.2013
Pace Project No.: 92148500

Sample: MW-18 **Lab ID: 92148500024** Collected: 02/21/13 10:55 Received: 02/22/13 08:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Monitoring Well Data	Analytical Method:								
Collected By	**MPS**				1		02/28/13 17:09		
Collected Date	**2/21/13**				1		02/28/13 17:09		
Collected Time	**10:55**				1		02/28/13 17:09		
Field pH	**6.1**	Std. Units	0.10	0.10	1		02/28/13 17:09		
Field Temperature	**11.7**	deg C	0.50	0.50	1		02/28/13 17:09		
Static Water Level	**24.63**	feet			1		02/28/13 17:09		
Field Specific Conductance	**65**	umhos/cm	1.0	1.0	1		02/28/13 17:09		
Turbidity	**7.73**	NTU	1.0	1.0	1		02/28/13 17:09		
8081 Organochlorine Pesticides	Analytical Method: EPA 8081 Preparation Method: EPA 3510								
Aldrin	ND	ug/L	0.050	0.050	1	02/27/13 10:39	03/05/13 18:04	309-00-2	
alpha-BHC	ND	ug/L	0.050	0.050	1	02/27/13 10:39	03/05/13 18:04	319-84-6	
beta-BHC	ND	ug/L	0.050	0.050	1	02/27/13 10:39	03/05/13 18:04	319-85-7	
delta-BHC	ND	ug/L	0.050	0.050	1	02/27/13 10:39	03/05/13 18:04	319-86-8	
gamma-BHC (Lindane)	ND	ug/L	0.050	0.050	1	02/27/13 10:39	03/05/13 18:04	58-89-9	
Chlordane (Technical)	ND	ug/L	0.20	0.20	1	02/27/13 10:39	03/05/13 18:04	57-74-9	
4,4'-DDD	ND	ug/L	0.050	0.050	1	02/27/13 10:39	03/05/13 18:04	72-54-8	
4,4'-DDE	ND	ug/L	0.050	0.050	1	02/27/13 10:39	03/05/13 18:04	72-55-9	
4,4'-DDT	ND	ug/L	0.050	0.050	1	02/27/13 10:39	03/05/13 18:04	50-29-3	
Dieldrin	ND	ug/L	0.050	0.050	1	02/27/13 10:39	03/05/13 18:04	60-57-1	
Endosulfan I	ND	ug/L	0.050	0.050	1	02/27/13 10:39	03/05/13 18:04	959-98-8	
Endosulfan II	ND	ug/L	0.050	0.050	1	02/27/13 10:39	03/05/13 18:04	33213-65-9	
Endosulfan sulfate	ND	ug/L	0.050	0.050	1	02/27/13 10:39	03/05/13 18:04	1031-07-8	
Endrin	ND	ug/L	0.050	0.050	1	02/27/13 10:39	03/05/13 18:04	72-20-8	
Endrin aldehyde	ND	ug/L	0.050	0.050	1	02/27/13 10:39	03/05/13 18:04	7421-93-4	
Endrin ketone	ND	ug/L	0.050	0.050	1	02/27/13 10:39	03/05/13 18:04	53494-70-5	
Heptachlor	ND	ug/L	0.050	0.050	1	02/27/13 10:39	03/05/13 18:04	76-44-8	
Heptachlor epoxide	ND	ug/L	0.050	0.050	1	02/27/13 10:39	03/05/13 18:04	1024-57-3	
Hexachlorobenzene	ND	ug/L	0.050	0.050	1	02/27/13 10:39	03/05/13 18:04	118-74-1	
Methoxychlor	ND	ug/L	0.15	0.15	1	02/27/13 10:39	03/05/13 18:04	72-43-5	
Mirex	ND	ug/L	0.15	0.15	1	02/27/13 10:39	03/05/13 18:04	2385-85-5	
Toxaphene	ND	ug/L	0.20	0.20	1	02/27/13 10:39	03/05/13 18:04	8001-35-2	
Surrogates									
Tetrachloro-m-xylene (S)	67	%	20-130		1	02/27/13 10:39	03/05/13 18:04	877-09-8	
Decachlorobiphenyl (S)	49	%	20-130		1	02/27/13 10:39	03/05/13 18:04	2051-24-3	
6010 ICP Groundwater	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Antimony	ND	ug/L	5.0	2.6	1	02/23/13 13:50	02/24/13 19:45	7440-36-0	
Arsenic	ND	ug/L	10.0	2.7	1	02/23/13 13:50	02/24/13 19:45	7440-38-2	
Barium	**91.5**	ug/L	5.0	0.20	1	02/23/13 13:50	02/24/13 19:45	7440-39-3	
Beryllium	ND	ug/L	1.0	0.10	1	02/23/13 13:50	02/24/13 19:45	7440-41-7	
Cadmium	ND	ug/L	1.0	0.50	1	02/23/13 13:50	02/24/13 19:45	7440-43-9	
Chromium	**2.6J**	ug/L	5.0	0.40	1	02/23/13 13:50	02/24/13 19:45	7440-47-3	
Cobalt	**2.1J**	ug/L	5.0	0.60	1	02/23/13 13:50	02/24/13 19:45	7440-48-4	
Copper	**2.7J**	ug/L	5.0	0.30	1	02/23/13 13:50	02/24/13 19:45	7440-50-8	
Lead	ND	ug/L	5.0	4.0	1	02/23/13 13:50	02/24/13 19:45	7439-92-1	

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ANALYTICAL RESULTS

Project: FRANCIS FARM LF GWM FEB.2013
Pace Project No.: 92148500

Sample: MW-18 **Lab ID: 92148500024** Collected: 02/21/13 10:55 Received: 02/22/13 08:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 ICP Groundwater	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Nickel	**2.8J**	ug/L	5.0	1.7	1	02/23/13 13:50	02/24/13 19:45	7440-02-0	
Selenium	**4.7J**	ug/L	10.0	0.10	1	02/23/13 13:50	02/24/13 19:45	7782-49-2	
Silver	**0.57J**	ug/L	5.0	0.10	1	02/23/13 13:50	02/24/13 19:45	7440-22-4	
Thallium	ND	ug/L	5.4	3.0	1	02/23/13 13:50	02/24/13 19:45	7440-28-0	
Vanadium	**2.9J**	ug/L	5.0	0.20	1	02/23/13 13:50	02/24/13 19:45	7440-62-2	
Zinc	**12.4**	ug/L	10.0	0.40	1	02/23/13 13:50	02/24/13 19:45	7440-66-6	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470								
Mercury	ND	ug/L	0.20	0.10	1	02/25/13 17:45	02/28/13 15:39	7439-97-6	
8260 MSV Low Level Landfill	Analytical Method: EPA 8260								
Acetone	ND	ug/L	25.0	10.0	1		02/24/13 14:42	67-64-1	
Acetonitrile	ND	ug/L	50.0	2.2	1		02/24/13 14:42	75-05-8	
Acrylonitrile	ND	ug/L	10.0	1.9	1		02/24/13 14:42	107-13-1	
Allyl chloride	ND	ug/L	2.0	1.5	1		02/24/13 14:42	107-05-1	
Benzene	ND	ug/L	1.0	0.25	1		02/24/13 14:42	71-43-2	
Bromochloromethane	ND	ug/L	1.0	0.17	1		02/24/13 14:42	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	0.18	1		02/24/13 14:42	75-27-4	
Bromoform	ND	ug/L	1.0	0.26	1		02/24/13 14:42	75-25-2	
Bromomethane	ND	ug/L	2.0	0.29	1		02/24/13 14:42	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	0.96	1		02/24/13 14:42	78-93-3	
Carbon disulfide	ND	ug/L	2.0	1.2	1		02/24/13 14:42	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.25	1		02/24/13 14:42	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.23	1		02/24/13 14:42	108-90-7	
Chloroethane	ND	ug/L	1.0	0.54	1		02/24/13 14:42	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		02/24/13 14:42	67-66-3	
Chloromethane	ND	ug/L	1.0	0.11	1		02/24/13 14:42	74-87-3	
Chloroprene	ND	ug/L	5.0	0.27	1		02/24/13 14:42	126-99-8	
1,2-Dibromo-3-chloropropane	ND	ug/L	5.0	2.5	1		02/24/13 14:42	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		02/24/13 14:42	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.27	1		02/24/13 14:42	106-93-4	
Dibromomethane	ND	ug/L	1.0	0.21	1		02/24/13 14:42	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	0.30	1		02/24/13 14:42	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	0.24	1		02/24/13 14:42	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	0.33	1		02/24/13 14:42	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	1.0	1.0	1		02/24/13 14:42	110-57-6	
Dichlorodifluoromethane	ND	ug/L	1.0	0.21	1		02/24/13 14:42	75-71-8	
1,1-Dichloroethane	ND	ug/L	1.0	0.32	1		02/24/13 14:42	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		02/24/13 14:42	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.56	1		02/24/13 14:42	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.19	1		02/24/13 14:42	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.49	1		02/24/13 14:42	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.27	1		02/24/13 14:42	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	0.28	1		02/24/13 14:42	142-28-9	
2,2-Dichloropropane	ND	ug/L	1.0	0.13	1		02/24/13 14:42	594-20-7	
1,1-Dichloropropene	ND	ug/L	1.0	0.49	1		02/24/13 14:42	563-58-6	

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ANALYTICAL RESULTS

Project: FRANCIS FARM LF GWM FEB.2013
Pace Project No.: 92148500

Sample: MW-18 **Lab ID: 92148500024** Collected: 02/21/13 10:55 Received: 02/22/13 08:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level Landfill	Analytical Method: EPA 8260								
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.13	1		02/24/13 14:42	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.26	1		02/24/13 14:42	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.30	1		02/24/13 14:42	100-41-4	
Ethyl methacrylate	ND	ug/L	1.0	0.20	1		02/24/13 14:42	97-63-2	
2-Hexanone	ND	ug/L	5.0	0.46	1		02/24/13 14:42	591-78-6	
Iodomethane	ND	ug/L	5.0	0.32	1		02/24/13 14:42	74-88-4	
Isobutanol	ND	ug/L	100	35.0	1		02/24/13 14:42	78-83-1	
Methacrylonitrile	ND	ug/L	10.0	0.93	1		02/24/13 14:42	126-98-7	
Methylene Chloride	ND	ug/L	1.0	0.97	1		02/24/13 14:42	75-09-2	
Methyl methacrylate	ND	ug/L	2.0	2.0	1		02/24/13 14:42	80-62-6	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	0.33	1		02/24/13 14:42	108-10-1	
Naphthalene	ND	ug/L	1.0	0.24	1		02/24/13 14:42	91-20-3	
Propionitrile	ND	ug/L	20.0	3.6	1		02/24/13 14:42	107-12-0	
Styrene	ND	ug/L	1.0	0.26	1		02/24/13 14:42	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	0.33	1		02/24/13 14:42	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.40	1		02/24/13 14:42	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		02/24/13 14:42	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		02/24/13 14:42	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		02/24/13 14:42	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.29	1		02/24/13 14:42	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.47	1		02/24/13 14:42	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	0.20	1		02/24/13 14:42	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	0.41	1		02/24/13 14:42	96-18-4	
Vinyl acetate	ND	ug/L	2.0	0.35	1		02/24/13 14:42	108-05-4	
Vinyl chloride	ND	ug/L	1.0	0.62	1		02/24/13 14:42	75-01-4	
Xylene (Total)	ND	ug/L	2.0	0.66	1		02/24/13 14:42	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	0.66	1		02/24/13 14:42	179601-23-1	
o-Xylene	ND	ug/L	1.0	0.23	1		02/24/13 14:42	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	102	%	70-130		1		02/24/13 14:42	460-00-4	
Dibromofluoromethane (S)	106	%	70-130		1		02/24/13 14:42	1868-53-7	
1,2-Dichloroethane-d4 (S)	101	%	70-130		1		02/24/13 14:42	17060-07-0	
Toluene-d8 (S)	98	%	70-130		1		02/24/13 14:42	2037-26-5	
4500CNE Cyanide, Total	Analytical Method: SM 4500-CN-E								
Cyanide	ND	mg/L	0.0050	0.0050	1		03/06/13 13:44	57-12-5	

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ANALYTICAL RESULTS

Project: FRANCIS FARM LF GWM FEB.2013
Pace Project No.: 92148500

Sample: TRAVEL BLANK **Lab ID: 92148500025** Collected: 02/21/13 00:00 Received: 02/22/13 08:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level Landfill	Analytical Method: EPA 8260								
Acetone	ND	ug/L	25.0	10.0	1		02/24/13 14:58	67-64-1	
Acetonitrile	ND	ug/L	50.0	2.2	1		02/24/13 14:58	75-05-8	
Acrylonitrile	ND	ug/L	10.0	1.9	1		02/24/13 14:58	107-13-1	
Allyl chloride	ND	ug/L	2.0	1.5	1		02/24/13 14:58	107-05-1	
Benzene	ND	ug/L	1.0	0.25	1		02/24/13 14:58	71-43-2	
Bromochloromethane	ND	ug/L	1.0	0.17	1		02/24/13 14:58	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	0.18	1		02/24/13 14:58	75-27-4	
Bromoform	ND	ug/L	1.0	0.26	1		02/24/13 14:58	75-25-2	
Bromomethane	ND	ug/L	2.0	0.29	1		02/24/13 14:58	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	0.96	1		02/24/13 14:58	78-93-3	
Carbon disulfide	ND	ug/L	2.0	1.2	1		02/24/13 14:58	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.25	1		02/24/13 14:58	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.23	1		02/24/13 14:58	108-90-7	
Chloroethane	ND	ug/L	1.0	0.54	1		02/24/13 14:58	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		02/24/13 14:58	67-66-3	
Chloromethane	ND	ug/L	1.0	0.11	1		02/24/13 14:58	74-87-3	
Chloroprene	ND	ug/L	5.0	0.27	1		02/24/13 14:58	126-99-8	
1,2-Dibromo-3-chloropropane	ND	ug/L	5.0	2.5	1		02/24/13 14:58	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		02/24/13 14:58	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.27	1		02/24/13 14:58	106-93-4	
Dibromomethane	ND	ug/L	1.0	0.21	1		02/24/13 14:58	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	0.30	1		02/24/13 14:58	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	0.24	1		02/24/13 14:58	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	0.33	1		02/24/13 14:58	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	1.0	1.0	1		02/24/13 14:58	110-57-6	
Dichlorodifluoromethane	ND	ug/L	1.0	0.21	1		02/24/13 14:58	75-71-8	
1,1-Dichloroethane	ND	ug/L	1.0	0.32	1		02/24/13 14:58	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		02/24/13 14:58	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.56	1		02/24/13 14:58	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.19	1		02/24/13 14:58	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.49	1		02/24/13 14:58	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.27	1		02/24/13 14:58	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	0.28	1		02/24/13 14:58	142-28-9	
2,2-Dichloropropane	ND	ug/L	1.0	0.13	1		02/24/13 14:58	594-20-7	
1,1-Dichloropropene	ND	ug/L	1.0	0.49	1		02/24/13 14:58	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.13	1		02/24/13 14:58	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.26	1		02/24/13 14:58	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.30	1		02/24/13 14:58	100-41-4	
Ethyl methacrylate	ND	ug/L	1.0	0.20	1		02/24/13 14:58	97-63-2	
2-Hexanone	ND	ug/L	5.0	0.46	1		02/24/13 14:58	591-78-6	
Iodomethane	ND	ug/L	5.0	0.32	1		02/24/13 14:58	74-88-4	
Isobutanol	ND	ug/L	100	35.0	1		02/24/13 14:58	78-83-1	
Methacrylonitrile	ND	ug/L	10.0	0.93	1		02/24/13 14:58	126-98-7	
Methylene Chloride	ND	ug/L	1.0	0.97	1		02/24/13 14:58	75-09-2	
Methyl methacrylate	ND	ug/L	2.0	2.0	1		02/24/13 14:58	80-62-6	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	0.33	1		02/24/13 14:58	108-10-1	

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ANALYTICAL RESULTS

Project: FRANCIS FARM LF GWM FEB.2013
Pace Project No.: 92148500

Sample: TRAVEL BLANK **Lab ID: 92148500025** Collected: 02/21/13 00:00 Received: 02/22/13 08:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level Landfill	Analytical Method: EPA 8260								
Naphthalene	ND	ug/L	1.0	0.24	1		02/24/13 14:58	91-20-3	
Propionitrile	ND	ug/L	20.0	3.6	1		02/24/13 14:58	107-12-0	
Styrene	ND	ug/L	1.0	0.26	1		02/24/13 14:58	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	0.33	1		02/24/13 14:58	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.40	1		02/24/13 14:58	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		02/24/13 14:58	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		02/24/13 14:58	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		02/24/13 14:58	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.29	1		02/24/13 14:58	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.47	1		02/24/13 14:58	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	0.20	1		02/24/13 14:58	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	0.41	1		02/24/13 14:58	96-18-4	
Vinyl acetate	ND	ug/L	2.0	0.35	1		02/24/13 14:58	108-05-4	
Vinyl chloride	ND	ug/L	1.0	0.62	1		02/24/13 14:58	75-01-4	
Xylene (Total)	ND	ug/L	2.0	0.66	1		02/24/13 14:58	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	0.66	1		02/24/13 14:58	179601-23-1	
o-Xylene	ND	ug/L	1.0	0.23	1		02/24/13 14:58	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	103	%	70-130		1		02/24/13 14:58	460-00-4	
Dibromofluoromethane (S)	108	%	70-130		1		02/24/13 14:58	1868-53-7	
1,2-Dichloroethane-d4 (S)	100	%	70-130		1		02/24/13 14:58	17060-07-0	
Toluene-d8 (S)	97	%	70-130		1		02/24/13 14:58	2037-26-5	

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ANALYTICAL RESULTS

Project: FRANCIS FARM LF GWM FEB.2013
Pace Project No.: 92148500

Sample: EQUIPMENT BLANK **Lab ID: 92148500026** Collected: 02/21/13 00:00 Received: 02/22/13 08:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 ICP Groundwater	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Antimony	ND	ug/L	5.0	2.6	1	02/23/13 13:50	02/24/13 19:48	7440-36-0	
Arsenic	ND	ug/L	10.0	2.7	1	02/23/13 13:50	02/24/13 19:48	7440-38-2	
Barium	**0.25J**	ug/L	5.0	0.20	1	02/23/13 13:50	02/24/13 19:48	7440-39-3	
Beryllium	ND	ug/L	1.0	0.10	1	02/23/13 13:50	02/24/13 19:48	7440-41-7	
Cadmium	ND	ug/L	1.0	0.50	1	02/23/13 13:50	02/24/13 19:48	7440-43-9	
Chromium	ND	ug/L	5.0	0.40	1	02/23/13 13:50	02/24/13 19:48	7440-47-3	
Cobalt	ND	ug/L	5.0	0.60	1	02/23/13 13:50	02/24/13 19:48	7440-48-4	
Copper	**0.50J**	ug/L	5.0	0.30	1	02/23/13 13:50	02/24/13 19:48	7440-50-8	
Lead	ND	ug/L	5.0	4.0	1	02/23/13 13:50	02/24/13 19:48	7439-92-1	
Nickel	ND	ug/L	5.0	1.7	1	02/23/13 13:50	02/24/13 19:48	7440-02-0	
Selenium	**1.0J**	ug/L	10.0	0.10	1	02/23/13 13:50	02/24/13 19:48	7782-49-2	
Silver	**0.55J**	ug/L	5.0	0.10	1	02/23/13 13:50	02/24/13 19:48	7440-22-4	
Thallium	ND	ug/L	5.4	3.0	1	02/23/13 13:50	02/24/13 19:48	7440-28-0	
Vanadium	ND	ug/L	5.0	0.20	1	02/23/13 13:50	02/24/13 19:48	7440-62-2	
Zinc	**2.9J**	ug/L	10.0	0.40	1	02/23/13 13:50	02/24/13 19:48	7440-66-6	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470								
Mercury	ND	ug/L	0.20	0.10	1	02/25/13 17:45	02/28/13 15:41	7439-97-6	
8260 MSV Low Level Landfill	Analytical Method: EPA 8260								
Acetone	ND	ug/L	25.0	10.0	1		02/24/13 15:14	67-64-1	
Acetonitrile	ND	ug/L	50.0	2.2	1		02/24/13 15:14	75-05-8	
Acrylonitrile	ND	ug/L	10.0	1.9	1		02/24/13 15:14	107-13-1	
Allyl chloride	ND	ug/L	2.0	1.5	1		02/24/13 15:14	107-05-1	
Benzene	ND	ug/L	1.0	0.25	1		02/24/13 15:14	71-43-2	
Bromochloromethane	ND	ug/L	1.0	0.17	1		02/24/13 15:14	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	0.18	1		02/24/13 15:14	75-27-4	
Bromoform	ND	ug/L	1.0	0.26	1		02/24/13 15:14	75-25-2	
Bromomethane	ND	ug/L	2.0	0.29	1		02/24/13 15:14	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	0.96	1		02/24/13 15:14	78-93-3	
Carbon disulfide	ND	ug/L	2.0	1.2	1		02/24/13 15:14	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.25	1		02/24/13 15:14	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.23	1		02/24/13 15:14	108-90-7	
Chloroethane	ND	ug/L	1.0	0.54	1		02/24/13 15:14	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		02/24/13 15:14	67-66-3	
Chloromethane	ND	ug/L	1.0	0.11	1		02/24/13 15:14	74-87-3	
Chloroprene	ND	ug/L	5.0	0.27	1		02/24/13 15:14	126-99-8	
1,2-Dibromo-3-chloropropane	ND	ug/L	5.0	2.5	1		02/24/13 15:14	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		02/24/13 15:14	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.27	1		02/24/13 15:14	106-93-4	
Dibromomethane	ND	ug/L	1.0	0.21	1		02/24/13 15:14	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	0.30	1		02/24/13 15:14	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	0.24	1		02/24/13 15:14	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	0.33	1		02/24/13 15:14	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	1.0	1.0	1		02/24/13 15:14	110-57-6	
Dichlorodifluoromethane	ND	ug/L	1.0	0.21	1		02/24/13 15:14	75-71-8	

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ANALYTICAL RESULTS

Project: FRANCIS FARM LF GWM FEB.2013
Pace Project No.: 92148500

Sample: EQUIPMENT BLANK **Lab ID: 92148500026** Collected: 02/21/13 00:00 Received: 02/22/13 08:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level Landfill	Analytical Method: EPA 8260								
1,1-Dichloroethane	ND	ug/L	1.0	0.32	1		02/24/13 15:14	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		02/24/13 15:14	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.56	1		02/24/13 15:14	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.19	1		02/24/13 15:14	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.49	1		02/24/13 15:14	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.27	1		02/24/13 15:14	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	0.28	1		02/24/13 15:14	142-28-9	
2,2-Dichloropropane	ND	ug/L	1.0	0.13	1		02/24/13 15:14	594-20-7	
1,1-Dichloropropene	ND	ug/L	1.0	0.49	1		02/24/13 15:14	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.13	1		02/24/13 15:14	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.26	1		02/24/13 15:14	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.30	1		02/24/13 15:14	100-41-4	
Ethyl methacrylate	ND	ug/L	1.0	0.20	1		02/24/13 15:14	97-63-2	
2-Hexanone	ND	ug/L	5.0	0.46	1		02/24/13 15:14	591-78-6	
Iodomethane	ND	ug/L	5.0	0.32	1		02/24/13 15:14	74-88-4	
Isobutanol	ND	ug/L	100	35.0	1		02/24/13 15:14	78-83-1	
Methacrylonitrile	ND	ug/L	10.0	0.93	1		02/24/13 15:14	126-98-7	
Methylene Chloride	ND	ug/L	1.0	0.97	1		02/24/13 15:14	75-09-2	
Methyl methacrylate	ND	ug/L	2.0	2.0	1		02/24/13 15:14	80-62-6	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	0.33	1		02/24/13 15:14	108-10-1	
Naphthalene	ND	ug/L	1.0	0.24	1		02/24/13 15:14	91-20-3	
Propionitrile	ND	ug/L	20.0	3.6	1		02/24/13 15:14	107-12-0	
Styrene	ND	ug/L	1.0	0.26	1		02/24/13 15:14	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	0.33	1		02/24/13 15:14	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.40	1		02/24/13 15:14	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		02/24/13 15:14	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		02/24/13 15:14	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		02/24/13 15:14	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.29	1		02/24/13 15:14	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.47	1		02/24/13 15:14	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	0.20	1		02/24/13 15:14	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	0.41	1		02/24/13 15:14	96-18-4	
Vinyl acetate	ND	ug/L	2.0	0.35	1		02/24/13 15:14	108-05-4	
Vinyl chloride	ND	ug/L	1.0	0.62	1		02/24/13 15:14	75-01-4	
Xylene (Total)	ND	ug/L	2.0	0.66	1		02/24/13 15:14	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	0.66	1		02/24/13 15:14	179601-23-1	
o-Xylene	ND	ug/L	1.0	0.23	1		02/24/13 15:14	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	104	%	70-130		1		02/24/13 15:14	460-00-4	
Dibromofluoromethane (S)	106	%	70-130		1		02/24/13 15:14	1868-53-7	
1,2-Dichloroethane-d4 (S)	100	%	70-130		1		02/24/13 15:14	17060-07-0	
Toluene-d8 (S)	99	%	70-130		1		02/24/13 15:14	2037-26-5	

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QUALITY CONTROL DATA

Project: FRANCIS FARM LF GWM FEB.2013
Pace Project No.: 92148500

QC Batch: MERP/4944 — Analysis Method: EPA 7470
QC Batch Method: EPA 7470 — Analysis Description: 7470 Mercury
Associated Lab Samples: 92148500001, 92148500002, 92148500003, 92148500004

METHOD BLANK: 926559 — Matrix: Water
Associated Lab Samples: 92148500001, 92148500002, 92148500003, 92148500004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	ug/L	ND	0.20	02/22/13 12:50	

LABORATORY CONTROL SAMPLE: 926560

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	2.5	2.2	89	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 926561 926562

Parameter	Units	92148586010 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury	ug/L	ND	2.5	2.5	2.2	2.2	90	88	75-125	1	25	

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QUALITY CONTROL DATA

Project: FRANCIS FARM LF GWM FEB.2013
Pace Project No.: 92148500

QC Batch: MERP/4945 — Analysis Method: EPA 7470
QC Batch Method: EPA 7470 — Analysis Description: 7470 Mercury
Associated Lab Samples: 92148500005, 92148500006, 92148500007, 92148500008, 92148500009, 92148500010, 92148500011, 92148500012, 92148500013, 92148500014, 92148500015, 92148500016, 92148500017, 92148500018

METHOD BLANK: 926563 — Matrix: Water
Associated Lab Samples: 92148500005, 92148500006, 92148500007, 92148500008, 92148500009, 92148500010, 92148500011, 92148500012, 92148500013, 92148500014, 92148500015, 92148500016, 92148500017, 92148500018

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	ug/L	ND	0.20	02/22/13 14:05	

LABORATORY CONTROL SAMPLE: 926564

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	2.5	2.2	88	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 926565 926566

Parameter	Units	92148500005 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury	ug/L	ND	2.5	2.5	1.5	1.4	61	56	75-125	9	25	M1

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QUALITY CONTROL DATA

Project: FRANCIS FARM LF GWM FEB.2013
Pace Project No.: 92148500

QC Batch: MERP/4951 — Analysis Method: EPA 7470
QC Batch Method: EPA 7470 — Analysis Description: 7470 Mercury
Associated Lab Samples: 92148500019, 92148500020, 92148500021, 92148500022, 92148500023, 92148500024, 92148500026

METHOD BLANK: 928077 — Matrix: Water
Associated Lab Samples: 92148500019, 92148500020, 92148500021, 92148500022, 92148500023, 92148500024, 92148500026

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	ug/L	ND	0.20	02/28/13 14:36	

LABORATORY CONTROL SAMPLE: 928078

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	2.5	2.3	90	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 928079 928080

Parameter	Units	92148941004 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury	ug/L	ND	2.5	2.5	2.3	2.2	92	90	75-125	2	25	

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QUALITY CONTROL DATA

Project: FRANCIS FARM LF GWM FEB.2013
Pace Project No.: 92148500

QC Batch: MPRP/12676 — Analysis Method: EPA 6010
QC Batch Method: EPA 3010 — Analysis Description: 6010 MET NC Groundwater
Associated Lab Samples: 92148500001, 92148500002, 92148500003, 92148500004, 92148500005, 92148500006, 92148500007, 92148500008, 92148500009, 92148500010, 92148500011

METHOD BLANK: 927638 — Matrix: Water
Associated Lab Samples: 92148500001, 92148500002, 92148500003, 92148500004, 92148500005, 92148500006, 92148500007, 92148500008, 92148500009, 92148500010, 92148500011

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Antimony	ug/L	ND	5.0	02/24/13 11:51	
Arsenic	ug/L	ND	10.0	02/24/13 11:51	
Barium	ug/L	0.69J	5.0	02/24/13 11:51	
Beryllium	ug/L	0.10J	1.0	02/24/13 11:51	
Cadmium	ug/L	ND	1.0	02/24/13 11:51	
Chromium	ug/L	ND	5.0	02/24/13 11:51	
Cobalt	ug/L	ND	5.0	02/24/13 11:51	
Copper	ug/L	0.78J	5.0	02/24/13 11:51	
Lead	ug/L	ND	5.0	02/24/13 11:51	
Nickel	ug/L	ND	5.0	02/24/13 11:51	
Selenium	ug/L	2.0J	10.0	02/24/13 11:51	
Silver	ug/L	0.33J	5.0	02/24/13 11:51	
Thallium	ug/L	ND	5.4	02/24/13 11:51	
Vanadium	ug/L	ND	5.0	02/24/13 11:51	
Zinc	ug/L	1.4J	10.0	02/24/13 11:51	

LABORATORY CONTROL SAMPLE: 927639

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	ug/L	500	501	100	80-120	
Arsenic	ug/L	500	499	100	80-120	
Barium	ug/L	500	484	97	80-120	
Beryllium	ug/L	500	490	98	80-120	
Cadmium	ug/L	500	496	99	80-120	
Chromium	ug/L	500	491	98	80-120	
Cobalt	ug/L	500	493	99	80-120	
Copper	ug/L	500	499	100	80-120	
Lead	ug/L	500	491	98	80-120	
Nickel	ug/L	500	501	100	80-120	
Selenium	ug/L	500	492	98	80-120	
Silver	ug/L	250	245	98	80-120	
Thallium	ug/L	500	491	98	80-120	
Vanadium	ug/L	500	492	98	80-120	
Zinc	ug/L	500	496	99	80-120	

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QUALITY CONTROL DATA

Project: FRANCIS FARM LF GWM FEB.2013
Pace Project No.: 92148500

MATRIX SPIKE SAMPLE: 927640

Parameter	Units	92148006001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Antimony	ug/L	ND	500	522	104	75-125	
Arsenic	ug/L	ND	500	518	103	75-125	
Barium	ug/L	61.5	500	556	99	75-125	
Beryllium	ug/L	ND	500	505	101	75-125	
Cadmium	ug/L	ND	500	507	101	75-125	
Chromium	ug/L	ND	500	504	101	75-125	
Cobalt	ug/L	ND	500	503	100	75-125	
Copper	ug/L	ND	500	510	102	75-125	
Lead	ug/L	ND	500	492	98	75-125	
Nickel	ug/L	ND	500	510	101	75-125	
Selenium	ug/L	ND	500	510	101	75-125	
Silver	ug/L	ND	250	250	100	75-125	
Thallium	ug/L	ND	500	480	96	75-125	
Vanadium	ug/L	ND	500	516	103	75-125	
Zinc	ug/L	ND	500	515	102	75-125	

SAMPLE DUPLICATE: 927641

Parameter	Units	92148006002 Result	Dup Result	RPD	Max RPD	Qualifiers
Antimony	ug/L	ND	ND		25	
Arsenic	ug/L	ND	ND		25	
Barium	ug/L	21.8	22.1	1	25	
Beryllium	ug/L	ND	0.21J		25	
Cadmium	ug/L	ND	ND		25	
Chromium	ug/L	ND	0.86J		25	
Cobalt	ug/L	ND	ND		25	
Copper	ug/L	ND	3.2J		25	
Lead	ug/L	ND	ND		25	
Nickel	ug/L	ND	ND		25	
Selenium	ug/L	ND	2.0J		25	
Silver	ug/L	ND	0.52J		25	
Thallium	ug/L	ND	ND		25	
Vanadium	ug/L	ND	2.5J		25	
Zinc	ug/L	48.5	48.8	1	25	

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QUALITY CONTROL DATA

Project: FRANCIS FARM LF GWM FEB.2013
Pace Project No.: 92148500

QC Batch: MPRP/12677 — Analysis Method: EPA 6010
QC Batch Method: EPA 3010 — Analysis Description: 6010 MET NC Groundwater
Associated Lab Samples: 92148500012, 92148500013, 92148500014, 92148500015, 92148500016, 92148500017, 92148500018, 92148500019

METHOD BLANK: 927715 — Matrix: Water
Associated Lab Samples: 92148500012, 92148500013, 92148500014, 92148500015, 92148500016, 92148500017, 92148500018, 92148500019

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Antimony	ug/L	ND	5.0	02/24/13 17:11	
Arsenic	ug/L	ND	10.0	02/24/13 17:11	
Barium	ug/L	ND	5.0	02/24/13 17:11	
Beryllium	ug/L	ND	1.0	02/24/13 17:11	
Cadmium	ug/L	ND	1.0	02/24/13 17:11	
Chromium	ug/L	ND	5.0	02/24/13 17:11	
Cobalt	ug/L	ND	5.0	02/24/13 17:11	
Copper	ug/L	ND	5.0	02/24/13 17:11	
Lead	ug/L	ND	5.0	02/24/13 17:11	
Nickel	ug/L	ND	5.0	02/24/13 17:11	
Selenium	ug/L	3.8J	10.0	02/24/13 17:11	
Silver	ug/L	0.32J	5.0	02/24/13 17:11	
Thallium	ug/L	ND	5.4	02/24/13 17:11	
Vanadium	ug/L	ND	5.0	02/24/13 17:11	
Zinc	ug/L	2.6J	10.0	02/24/13 17:11	

LABORATORY CONTROL SAMPLE: 927716

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	ug/L	500	480	96	80-120	
Arsenic	ug/L	500	472	94	80-120	
Barium	ug/L	500	479	96	80-120	
Beryllium	ug/L	500	464	93	80-120	
Cadmium	ug/L	500	468	94	80-120	
Chromium	ug/L	500	473	95	80-120	
Cobalt	ug/L	500	468	94	80-120	
Copper	ug/L	500	483	97	80-120	
Lead	ug/L	500	469	94	80-120	
Nickel	ug/L	500	476	95	80-120	
Selenium	ug/L	500	468	94	80-120	
Silver	ug/L	250	236	94	80-120	
Thallium	ug/L	500	461	92	80-120	
Vanadium	ug/L	500	478	96	80-120	
Zinc	ug/L	500	462	92	80-120	

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QUALITY CONTROL DATA

Project: FRANCIS FARM LF GWM FEB.2013
Pace Project No.: 92148500

MATRIX SPIKE SAMPLE: 927717

Parameter	Units	92148470003 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Antimony	ug/L	ND	500	487	97	75-125	
Arsenic	ug/L	ND	500	479	96	75-125	
Barium	ug/L	32.5	500	518	97	75-125	
Beryllium	ug/L	ND	500	473	95	75-125	
Cadmium	ug/L	ND	500	473	95	75-125	
Chromium	ug/L	7.3	500	489	96	75-125	
Cobalt	ug/L	ND	500	479	95	75-125	
Copper	ug/L	ND	500	495	99	75-125	
Lead	ug/L	ND	500	470	94	75-125	
Nickel	ug/L	ND	500	487	96	75-125	
Selenium	ug/L	ND	500	479	95	75-125	
Silver	ug/L	ND	250	239	95	75-125	
Thallium	ug/L	5.8	500	465	92	75-125	
Vanadium	ug/L	ND	500	488	98	75-125	
Zinc	ug/L	ND	500	473	94	75-125	

SAMPLE DUPLICATE: 927718

Parameter	Units	92148470004 Result	Dup Result	RPD	Max RPD	Qualifiers
Antimony	ug/L	ND	ND		25	
Arsenic	ug/L	ND	ND		25	
Barium	ug/L	33.9	31.8	6	25	
Beryllium	ug/L	ND	ND		25	
Cadmium	ug/L	ND	ND		25	
Chromium	ug/L	ND	0.93J		25	
Cobalt	ug/L	ND	ND		25	
Copper	ug/L	ND	1.4J		25	
Lead	ug/L	ND	ND		25	
Nickel	ug/L	ND	ND		25	
Selenium	ug/L	ND	ND		25	
Silver	ug/L	ND	0.37J		25	
Thallium	ug/L	ND	ND		25	
Vanadium	ug/L	ND	1.5J		25	
Zinc	ug/L	ND	5.6J		25	

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QUALITY CONTROL DATA

Project: FRANCIS FARM LF GWM FEB.2013
Pace Project No.: 92148500

QC Batch: MPRP/12687 — Analysis Method: EPA 6010
QC Batch Method: EPA 3010 — Analysis Description: 6010 MET NC Groundwater
Associated Lab Samples: 92148500020, 92148500021, 92148500022, 92148500023, 92148500024, 92148500026

METHOD BLANK: 927847 — Matrix: Water
Associated Lab Samples: 92148500020, 92148500021, 92148500022, 92148500023, 92148500024, 92148500026

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Antimony	ug/L	ND	5.0	02/24/13 18:57	
Arsenic	ug/L	ND	10.0	02/24/13 18:57	
Barium	ug/L	ND	5.0	02/24/13 18:57	
Beryllium	ug/L	ND	1.0	02/24/13 18:57	
Cadmium	ug/L	ND	1.0	02/24/13 18:57	
Chromium	ug/L	ND	5.0	02/24/13 18:57	
Cobalt	ug/L	ND	5.0	02/24/13 18:57	
Copper	ug/L	0.60J	5.0	02/24/13 18:57	
Lead	ug/L	ND	5.0	02/24/13 18:57	
Nickel	ug/L	ND	5.0	02/24/13 18:57	
Selenium	ug/L	3.0J	10.0	02/24/13 18:57	
Silver	ug/L	0.50J	5.0	02/24/13 18:57	
Thallium	ug/L	ND	5.4	02/24/13 18:57	
Vanadium	ug/L	ND	5.0	02/24/13 18:57	
Zinc	ug/L	3.1J	10.0	02/24/13 18:57	

LABORATORY CONTROL SAMPLE: 927848

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	ug/L	500	502	100	80-120	
Arsenic	ug/L	500	493	99	80-120	
Barium	ug/L	500	504	101	80-120	
Beryllium	ug/L	500	485	97	80-120	
Cadmium	ug/L	500	489	98	80-120	
Chromium	ug/L	500	494	99	80-120	
Cobalt	ug/L	500	491	98	80-120	
Copper	ug/L	500	510	102	80-120	
Lead	ug/L	500	491	98	80-120	
Nickel	ug/L	500	498	100	80-120	
Selenium	ug/L	500	492	98	80-120	
Silver	ug/L	250	245	98	80-120	
Thallium	ug/L	500	483	97	80-120	
Vanadium	ug/L	500	503	101	80-120	
Zinc	ug/L	500	487	97	80-120	

MATRIX SPIKE SAMPLE: 927913

Parameter	Units	92148470013 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Antimony	ug/L	ND	500	469	94	75-125	
Arsenic	ug/L	ND	500	463	92	75-125	

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QUALITY CONTROL DATA

Project: FRANCIS FARM LF GWM FEB.2013
Pace Project No.: 92148500

MATRIX SPIKE SAMPLE: 927913

Parameter	Units	92148470013 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Barium	ug/L	85.1	500	546	92	75-125	
Beryllium	ug/L	ND	500	455	91	75-125	
Cadmium	ug/L	ND	500	455	91	75-125	
Chromium	ug/L	ND	500	463	92	75-125	
Cobalt	ug/L	ND	500	458	91	75-125	
Copper	ug/L	ND	500	478	95	75-125	
Lead	ug/L	ND	500	449	90	75-125	
Nickel	ug/L	ND	500	463	92	75-125	
Selenium	ug/L	ND	500	464	92	75-125	
Silver	ug/L	ND	250	230	92	75-125	
Thallium	ug/L	5.6	500	448	88	75-125	
Vanadium	ug/L	ND	500	470	94	75-125	
Zinc	ug/L	ND	500	459	90	75-125	

SAMPLE DUPLICATE: 927914

Parameter	Units	92148470014 Result	Dup Result	RPD	Max RPD	Qualifiers
Antimony	ug/L	ND	ND		25	
Arsenic	ug/L	ND	ND		25	
Barium	ug/L	46.3	47.0	2	25	
Beryllium	ug/L	ND	ND		25	
Cadmium	ug/L	ND	ND		25	
Chromium	ug/L	ND	ND		25	
Cobalt	ug/L	ND	1.6J		25	
Copper	ug/L	ND	1.7J		25	
Lead	ug/L	ND	ND		25	
Nickel	ug/L	ND	ND		25	
Selenium	ug/L	ND	6.7J		25	
Silver	ug/L	ND	0.52J		25	
Thallium	ug/L	5.6	ND		25	
Vanadium	ug/L	ND	ND		25	
Zinc	ug/L	ND	6.4J		25	

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QUALITY CONTROL DATA

Project: FRANCIS FARM LF GWM FEB.2013
Pace Project No.: 92148500

QC Batch: MSV/22090 Analysis Method: EPA 8260
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV Low Level Landfill
Associated Lab Samples: 92148500001, 92148500002, 92148500003, 92148500004, 92148500005, 92148500006, 92148500007, 92148500008, 92148500009, 92148500010, 92148500011

METHOD BLANK: 925758 Matrix: Water
Associated Lab Samples: 92148500001, 92148500002, 92148500003, 92148500004, 92148500005, 92148500006, 92148500007, 92148500008, 92148500009, 92148500010, 92148500011

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	ND	1.0	02/20/13 15:39	
1,1,1-Trichloroethane	ug/L	ND	1.0	02/20/13 15:39	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	02/20/13 15:39	
1,1,2-Trichloroethane	ug/L	ND	1.0	02/20/13 15:39	
1,1-Dichloroethane	ug/L	ND	1.0	02/20/13 15:39	
1,1-Dichloroethene	ug/L	ND	1.0	02/20/13 15:39	
1,1-Dichloropropene	ug/L	ND	1.0	02/20/13 15:39	
1,2,3-Trichloropropane	ug/L	ND	1.0	02/20/13 15:39	
1,2-Dibromo-3-chloropropane	ug/L	ND	5.0	02/20/13 15:39	
1,2-Dibromoethane (EDB)	ug/L	ND	1.0	02/20/13 15:39	
1,2-Dichlorobenzene	ug/L	ND	1.0	02/20/13 15:39	
1,2-Dichloroethane	ug/L	ND	1.0	02/20/13 15:39	
1,2-Dichloropropane	ug/L	ND	1.0	02/20/13 15:39	
1,3-Dichlorobenzene	ug/L	ND	1.0	02/20/13 15:39	
1,3-Dichloropropane	ug/L	ND	1.0	02/20/13 15:39	
1,4-Dichlorobenzene	ug/L	ND	1.0	02/20/13 15:39	
2,2-Dichloropropane	ug/L	ND	1.0	02/20/13 15:39	
2-Butanone (MEK)	ug/L	ND	5.0	02/20/13 15:39	
2-Hexanone	ug/L	ND	5.0	02/20/13 15:39	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	5.0	02/20/13 15:39	
Acetone	ug/L	ND	25.0	02/20/13 15:39	
Acetonitrile	ug/L	ND	50.0	02/20/13 15:39	
Acrylonitrile	ug/L	ND	10.0	02/20/13 15:39	
Allyl chloride	ug/L	ND	2.0	02/20/13 15:39	
Benzene	ug/L	ND	1.0	02/20/13 15:39	
Bromochloromethane	ug/L	ND	1.0	02/20/13 15:39	
Bromodichloromethane	ug/L	ND	1.0	02/20/13 15:39	
Bromoform	ug/L	ND	1.0	02/20/13 15:39	
Bromomethane	ug/L	ND	2.0	02/20/13 15:39	
Carbon disulfide	ug/L	ND	2.0	02/20/13 15:39	
Carbon tetrachloride	ug/L	ND	1.0	02/20/13 15:39	
Chlorobenzene	ug/L	ND	1.0	02/20/13 15:39	
Chloroethane	ug/L	ND	1.0	02/20/13 15:39	
Chloroform	ug/L	ND	1.0	02/20/13 15:39	
Chloromethane	ug/L	ND	1.0	02/20/13 15:39	
Chloroprene	ug/L	ND	5.0	02/20/13 15:39	
cis-1,2-Dichloroethene	ug/L	ND	1.0	02/20/13 15:39	
cis-1,3-Dichloropropene	ug/L	ND	1.0	02/20/13 15:39	
Dibromochloromethane	ug/L	ND	1.0	02/20/13 15:39	
Dibromomethane	ug/L	ND	1.0	02/20/13 15:39	
Dichlorodifluoromethane	ug/L	ND	1.0	02/20/13 15:39	

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QUALITY CONTROL DATA

Project: FRANCIS FARM LF GWM FEB.2013
Pace Project No.: 92148500

METHOD BLANK: 925758 Matrix: Water

Associated Lab Samples: 92148500001, 92148500002, 92148500003, 92148500004, 92148500005, 92148500006, 92148500007, 92148500008, 92148500009, 92148500010, 92148500011

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Ethyl methacrylate	ug/L	ND	1.0	02/20/13 15:39	
Ethylbenzene	ug/L	ND	1.0	02/20/13 15:39	
Iodomethane	ug/L	ND	5.0	02/20/13 15:39	
Isobutanol	ug/L	ND	100	02/20/13 15:39	
m&p-Xylene	ug/L	ND	2.0	02/20/13 15:39	
Methacrylonitrile	ug/L	ND	10.0	02/20/13 15:39	
Methyl methacrylate	ug/L	ND	2.0	02/20/13 15:39	
Methylene Chloride	ug/L	ND	1.0	02/20/13 15:39	
Naphthalene	ug/L	ND	1.0	02/20/13 15:39	
o-Xylene	ug/L	ND	1.0	02/20/13 15:39	
Propionitrile	ug/L	ND	20.0	02/20/13 15:39	
Styrene	ug/L	ND	1.0	02/20/13 15:39	
Tetrachloroethene	ug/L	ND	1.0	02/20/13 15:39	
Toluene	ug/L	ND	1.0	02/20/13 15:39	
trans-1,2-Dichloroethene	ug/L	ND	1.0	02/20/13 15:39	
trans-1,3-Dichloropropene	ug/L	ND	1.0	02/20/13 15:39	
trans-1,4-Dichloro-2-butene	ug/L	ND	1.0	02/20/13 15:39	
Trichloroethene	ug/L	ND	1.0	02/20/13 15:39	
Trichlorofluoromethane	ug/L	ND	1.0	02/20/13 15:39	
Vinyl acetate	ug/L	ND	2.0	02/20/13 15:39	
Vinyl chloride	ug/L	ND	1.0	02/20/13 15:39	
Xylene (Total)	ug/L	ND	2.0	02/20/13 15:39	
1,2-Dichloroethane-d4 (S)	%	105	70-130	02/20/13 15:39	
4-Bromofluorobenzene (S)	%	100	70-130	02/20/13 15:39	
Dibromofluoromethane (S)	%	109	70-130	02/20/13 15:39	
Toluene-d8 (S)	%	99	70-130	02/20/13 15:39	

LABORATORY CONTROL SAMPLE: 925759

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	50	60.7	121	70-130	
1,1,1-Trichloroethane	ug/L	50	56.7	113	70-130	
1,1,2,2-Tetrachloroethane	ug/L	50	55.6	111	70-130	
1,1,2-Trichloroethane	ug/L	50	53.9	108	70-130	
1,1-Dichloroethane	ug/L	50	57.1	114	70-130	
1,1-Dichloroethene	ug/L	50	51.2	102	70-132	
1,1-Dichloropropene	ug/L	50	58.3	117	70-130	
1,2,3-Trichloropropane	ug/L	50	56.6	113	70-130	
1,2-Dibromo-3-chloropropane	ug/L	50	59.3	119	70-130	
1,2-Dibromoethane (EDB)	ug/L	50	57.2	114	70-130	
1,2-Dichlorobenzene	ug/L	50	56.0	112	70-130	
1,2-Dichloroethane	ug/L	50	56.3	113	70-130	
1,2-Dichloropropane	ug/L	50	55.8	112	70-130	
1,3-Dichlorobenzene	ug/L	50	57.2	114	70-130	

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QUALITY CONTROL DATA

Project: FRANCIS FARM LF GWM FEB.2013
Pace Project No.: 92148500

LABORATORY CONTROL SAMPLE: 925759

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,3-Dichloropropane	ug/L	50	56.3	113	70-130	
1,4-Dichlorobenzene	ug/L	50	55.9	112	70-130	
2,2-Dichloropropane	ug/L	50	59.7	119	58-145	
2-Butanone (MEK)	ug/L	100	99.5	100	70-145	
2-Hexanone	ug/L	100	106	106	70-144	
4-Methyl-2-pentanone (MIBK)	ug/L	100	102	102	70-140	
Acetone	ug/L	100	99.8	100	50-175	
Acetonitrile	ug/L	500	542	108	70-130	
Acrylonitrile	ug/L	250	273	109	70-143	
Allyl chloride	ug/L	50	51.1	102	70-130	
Benzene	ug/L	50	57.4	115	70-130	
Bromochloromethane	ug/L	50	54.9	110	70-130	
Bromodichloromethane	ug/L	50	56.7	113	70-130	
Bromoform	ug/L	50	52.4	105	70-130	
Bromomethane	ug/L	50	57.3	115	54-130	
Carbon disulfide	ug/L	50	51.8	104	70-131	
Carbon tetrachloride	ug/L	50	59.0	118	70-132	
Chlorobenzene	ug/L	50	58.6	117	70-130	
Chloroethane	ug/L	50	48.9	98	64-134	
Chloroform	ug/L	50	56.5	113	70-130	
Chloromethane	ug/L	50	40.3	81	64-130	
Chloroprene	ug/L	50	51.8	104	70-130	
cis-1,2-Dichloroethene	ug/L	50	55.6	111	70-131	
cis-1,3-Dichloropropene	ug/L	50	57.8	116	70-130	
Dibromochloromethane	ug/L	50	60.7	121	70-130	
Dibromomethane	ug/L	50	53.6	107	70-131	
Dichlorodifluoromethane	ug/L	50	44.8	90	56-130	
Ethyl methacrylate	ug/L	50	54.1	108	70-130	
Ethylbenzene	ug/L	50	58.4	117	70-130	
Iodomethane	ug/L	100	96.1	96	49-180	
Isobutanol	ug/L	1000	1180	118	70-130	
m&p-Xylene	ug/L	100	117	117	70-130	
Methacrylonitrile	ug/L	500	548	110	70-130	
Methyl methacrylate	ug/L	50	53.6	107	70-130	
Methylene Chloride	ug/L	50	52.3	105	63-130	
Naphthalene	ug/L	50	56.2	112	70-138	
o-Xylene	ug/L	50	56.9	114	70-130	
Propionitrile	ug/L	500	550	110	70-130	
Styrene	ug/L	50	58.6	117	70-130	
Tetrachloroethene	ug/L	50	53.6	107	70-130	
Toluene	ug/L	50	56.7	113	70-130	
trans-1,2-Dichloroethene	ug/L	50	51.1	102	70-130	
trans-1,3-Dichloropropene	ug/L	50	57.7	115	70-132	
trans-1,4-Dichloro-2-butene	ug/L	50	48.5	97	70-141	
Trichloroethene	ug/L	50	51.2	102	70-130	
Trichlorofluoromethane	ug/L	50	50.1	100	62-133	
Vinyl acetate	ug/L	100	122	122	66-157	
Vinyl chloride	ug/L	50	51.4	103	69-130	

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QUALITY CONTROL DATA

Project: FRANCIS FARM LF GWM FEB.2013
Pace Project No.: 92148500

LABORATORY CONTROL SAMPLE: 925759

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Xylene (Total)	ug/L	150	174	116	70-130	
1,2-Dichloroethane-d4 (S)	%			107	70-130	
4-Bromofluorobenzene (S)	%			99	70-130	
Dibromofluoromethane (S)	%			100	70-130	
Toluene-d8 (S)	%			99	70-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 925760 925761

Parameter	Units	92148500002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,1-Dichloroethene	ug/L	ND	50	50	64.5	61.2	129	122	70-166	5	30	
Benzene	ug/L	ND	50	50	53.8	53.5	108	107	70-148	0	30	
Chlorobenzene	ug/L	ND	50	50	62.2	61.1	124	122	70-146	2	30	
Toluene	ug/L	ND	50	50	59.7	61.8	119	124	70-155	3	30	
Trichloroethene	ug/L	ND	50	50	52.7	53.1	105	106	69-151	1	30	
1,2-Dichloroethane-d4 (S)	%						104	103	70-130			
4-Bromofluorobenzene (S)	%						96	96	70-130			
Dibromofluoromethane (S)	%						107	107	70-130			
Toluene-d8 (S)	%						98	101	70-130			

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QUALITY CONTROL DATA

Project: FRANCIS FARM LF GWM FEB.2013
Pace Project No.: 92148500

QC Batch: MSV/22120 | Analysis Method: EPA 8260
QC Batch Method: EPA 8260 | Analysis Description: 8260 MSV Low Level Landfill
Associated Lab Samples: 92148500018, 92148500019

METHOD BLANK: 927303 | Matrix: Water
Associated Lab Samples: 92148500018, 92148500019

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	ND	1.0	02/22/13 22:11	
1,1,1-Trichloroethane	ug/L	ND	1.0	02/22/13 22:11	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	02/22/13 22:11	
1,1,2-Trichloroethane	ug/L	ND	1.0	02/22/13 22:11	
1,1-Dichloroethane	ug/L	ND	1.0	02/22/13 22:11	
1,1-Dichloroethene	ug/L	ND	1.0	02/22/13 22:11	
1,1-Dichloropropene	ug/L	ND	1.0	02/22/13 22:11	
1,2,3-Trichloropropane	ug/L	ND	1.0	02/22/13 22:11	
1,2-Dibromo-3-chloropropane	ug/L	ND	5.0	02/22/13 22:11	
1,2-Dibromoethane (EDB)	ug/L	ND	1.0	02/22/13 22:11	
1,2-Dichlorobenzene	ug/L	ND	1.0	02/22/13 22:11	
1,2-Dichloroethane	ug/L	ND	1.0	02/22/13 22:11	
1,2-Dichloropropane	ug/L	ND	1.0	02/22/13 22:11	
1,3-Dichlorobenzene	ug/L	ND	1.0	02/22/13 22:11	
1,3-Dichloropropane	ug/L	ND	1.0	02/22/13 22:11	
1,4-Dichlorobenzene	ug/L	ND	1.0	02/22/13 22:11	
2,2-Dichloropropane	ug/L	ND	1.0	02/22/13 22:11	
2-Butanone (MEK)	ug/L	ND	5.0	02/22/13 22:11	
2-Hexanone	ug/L	ND	5.0	02/22/13 22:11	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	5.0	02/22/13 22:11	
Acetone	ug/L	ND	25.0	02/22/13 22:11	
Acetonitrile	ug/L	ND	50.0	02/22/13 22:11	
Acrylonitrile	ug/L	ND	10.0	02/22/13 22:11	
Allyl chloride	ug/L	ND	2.0	02/22/13 22:11	
Benzene	ug/L	ND	1.0	02/22/13 22:11	
Bromochloromethane	ug/L	ND	1.0	02/22/13 22:11	
Bromodichloromethane	ug/L	ND	1.0	02/22/13 22:11	
Bromoform	ug/L	ND	1.0	02/22/13 22:11	
Bromomethane	ug/L	ND	2.0	02/22/13 22:11	
Carbon disulfide	ug/L	ND	2.0	02/22/13 22:11	
Carbon tetrachloride	ug/L	ND	1.0	02/22/13 22:11	
Chlorobenzene	ug/L	ND	1.0	02/22/13 22:11	
Chloroethane	ug/L	ND	1.0	02/22/13 22:11	
Chloroform	ug/L	ND	1.0	02/22/13 22:11	
Chloromethane	ug/L	ND	1.0	02/22/13 22:11	
Chloroprene	ug/L	ND	5.0	02/22/13 22:11	
cis-1,2-Dichloroethene	ug/L	ND	1.0	02/22/13 22:11	
cis-1,3-Dichloropropene	ug/L	ND	1.0	02/22/13 22:11	
Dibromochloromethane	ug/L	ND	1.0	02/22/13 22:11	
Dibromomethane	ug/L	ND	1.0	02/22/13 22:11	
Dichlorodifluoromethane	ug/L	ND	1.0	02/22/13 22:11	
Ethyl methacrylate	ug/L	ND	1.0	02/22/13 22:11	
Ethylbenzene	ug/L	ND	1.0	02/22/13 22:11	

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QUALITY CONTROL DATA

Project: FRANCIS FARM LF GWM FEB.2013
Pace Project No.: 92148500

METHOD BLANK: 927303 Matrix: Water

Associated Lab Samples: 92148500018, 92148500019

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Iodomethane	ug/L	ND	5.0	02/22/13 22:11	
Isobutanol	ug/L	ND	100	02/22/13 22:11	
m&p-Xylene	ug/L	ND	2.0	02/22/13 22:11	
Methacrylonitrile	ug/L	ND	10.0	02/22/13 22:11	
Methyl methacrylate	ug/L	ND	2.0	02/22/13 22:11	
Methylene Chloride	ug/L	ND	1.0	02/22/13 22:11	
Naphthalene	ug/L	ND	1.0	02/22/13 22:11	
o-Xylene	ug/L	ND	1.0	02/22/13 22:11	
Propionitrile	ug/L	ND	20.0	02/22/13 22:11	
Styrene	ug/L	ND	1.0	02/22/13 22:11	
Tetrachloroethene	ug/L	ND	1.0	02/22/13 22:11	
Toluene	ug/L	ND	1.0	02/22/13 22:11	
trans-1,2-Dichloroethene	ug/L	ND	1.0	02/22/13 22:11	
trans-1,3-Dichloropropene	ug/L	ND	1.0	02/22/13 22:11	
trans-1,4-Dichloro-2-butene	ug/L	ND	1.0	02/22/13 22:11	
Trichloroethene	ug/L	ND	1.0	02/22/13 22:11	
Trichlorofluoromethane	ug/L	ND	1.0	02/22/13 22:11	
Vinyl acetate	ug/L	ND	2.0	02/22/13 22:11	
Vinyl chloride	ug/L	ND	1.0	02/22/13 22:11	
Xylene (Total)	ug/L	ND	2.0	02/22/13 22:11	
1,2-Dichloroethane-d4 (S)	%	98	70-130	02/22/13 22:11	
4-Bromofluorobenzene (S)	%	99	70-130	02/22/13 22:11	
Dibromofluoromethane (S)	%	107	70-130	02/22/13 22:11	
Toluene-d8 (S)	%	98	70-130	02/22/13 22:11	

LABORATORY CONTROL SAMPLE: 927304

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	50	58.5	117	70-130	
1,1,1-Trichloroethane	ug/L	50	54.5	109	70-130	
1,1,2,2-Tetrachloroethane	ug/L	50	55.2	110	70-130	
1,1,2-Trichloroethane	ug/L	50	53.0	106	70-130	
1,1-Dichloroethane	ug/L	50	53.8	108	70-130	
1,1-Dichloroethene	ug/L	50	50.3	101	70-132	
1,1-Dichloropropene	ug/L	50	54.6	109	70-130	
1,2,3-Trichloropropane	ug/L	50	54.9	110	70-130	
1,2-Dibromo-3-chloropropane	ug/L	50	58.6	117	70-130	
1,2-Dibromoethane (EDB)	ug/L	50	57.5	115	70-130	
1,2-Dichlorobenzene	ug/L	50	55.1	110	70-130	
1,2-Dichloroethane	ug/L	50	53.3	107	70-130	
1,2-Dichloropropane	ug/L	50	53.8	108	70-130	
1,3-Dichlorobenzene	ug/L	50	56.0	112	70-130	
1,3-Dichloropropane	ug/L	50	55.6	111	70-130	
1,4-Dichlorobenzene	ug/L	50	54.3	109	70-130	
2,2-Dichloropropane	ug/L	50	52.0	104	58-145	

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QUALITY CONTROL DATA

Project: FRANCIS FARM LF GWM FEB.2013
Pace Project No.: 92148500

LABORATORY CONTROL SAMPLE: 927304

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
2-Butanone (MEK)	ug/L	100	111	111	70-145	
2-Hexanone	ug/L	100	104	104	70-144	
4-Methyl-2-pentanone (MIBK)	ug/L	100	99.1	99	70-140	
Acetone	ug/L	100	106	106	50-175	
Acetonitrile	ug/L	500	526	105	70-130	
Acrylonitrile	ug/L	250	266	106	70-143	
Allyl chloride	ug/L	50	42.9	86	70-130	
Benzene	ug/L	50	54.5	109	70-130	
Bromochloromethane	ug/L	50	54.5	109	70-130	
Bromodichloromethane	ug/L	50	54.6	109	70-130	
Bromoform	ug/L	50	50.6	101	70-130	
Bromomethane	ug/L	50	57.9	116	54-130	
Carbon disulfide	ug/L	50	47.8	96	70-131	
Carbon tetrachloride	ug/L	50	56.1	112	70-132	
Chlorobenzene	ug/L	50	55.3	111	70-130	
Chloroethane	ug/L	50	44.2	88	64-134	
Chloroform	ug/L	50	52.6	105	70-130	
Chloromethane	ug/L	50	40.3	81	64-130	
Chloroprene	ug/L	50	49.5	99	70-130	
cis-1,2-Dichloroethene	ug/L	50	53.1	106	70-131	
cis-1,3-Dichloropropene	ug/L	50	55.5	111	70-130	
Dibromochloromethane	ug/L	50	58.6	117	70-130	
Dibromomethane	ug/L	50	55.1	110	70-131	
Dichlorodifluoromethane	ug/L	50	46.3	93	56-130	
Ethyl methacrylate	ug/L	50	50.9	102	70-130	
Ethylbenzene	ug/L	50	55.2	110	70-130	
Iodomethane	ug/L	100	86.8	87	49-180	
Isobutanol	ug/L	1000	1120	112	70-130	
m&p-Xylene	ug/L	100	111	111	70-130	
Methacrylonitrile	ug/L	500	513	103	70-130	
Methyl methacrylate	ug/L	50	54.7	109	70-130	
Methylene Chloride	ug/L	50	49.8	100	63-130	
Naphthalene	ug/L	50	58.5	117	70-138	
o-Xylene	ug/L	50	53.8	108	70-130	
Propionitrile	ug/L	500	539	108	70-130	
Styrene	ug/L	50	56.1	112	70-130	
Tetrachloroethene	ug/L	50	52.6	105	70-130	
Toluene	ug/L	50	54.0	108	70-130	
trans-1,2-Dichloroethene	ug/L	50	49.0	98	70-130	
trans-1,3-Dichloropropene	ug/L	50	54.6	109	70-132	
trans-1,4-Dichloro-2-butene	ug/L	50	41.4	83	70-141	
Trichloroethene	ug/L	50	49.3	99	70-130	
Trichlorofluoromethane	ug/L	50	49.0	98	62-133	
Vinyl acetate	ug/L	100	114	114	66-157	
Vinyl chloride	ug/L	50	50.1	100	69-130	
Xylene (Total)	ug/L	150	165	110	70-130	
1,2-Dichloroethane-d4 (S)	%			101	70-130	
4-Bromofluorobenzene (S)	%			101	70-130	

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QUALITY CONTROL DATA

Project: FRANCIS FARM LF GWM FEB.2013
Pace Project No.: 92148500

LABORATORY CONTROL SAMPLE: 927304

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Dibromofluoromethane (S)	%			99	70-130	
Toluene-d8 (S)	%			99	70-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 927305 927306

Parameter	Units	92148938017 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,1-Dichloroethene	ug/L	ND	50	50	55.9	54.9	112	110	70-166	2	30	
Benzene	ug/L	1.9	50	50	54.6	52.0	105	100	70-148	5	30	
Chlorobenzene	ug/L	3.0J	50	50	65.1	61.9	124	118	70-146	5	30	
Toluene	ug/L	ND	50	50	58.8	54.3	118	109	70-155	8	30	
Trichloroethene	ug/L	ND	50	50	55.1	52.6	110	105	69-151	5	30	
1,2-Dichloroethane-d4 (S)	%						94	97	70-130			
4-Bromofluorobenzene (S)	%						100	101	70-130			
Dibromofluoromethane (S)	%						104	105	70-130			
Toluene-d8 (S)	%						97	97	70-130			

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QUALITY CONTROL DATA

Project: FRANCIS FARM LF GWM FEB.2013
Pace Project No.: 92148500

QC Batch: MSV/22121 Analysis Method: EPA 8260
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV Low Level Landfill
Associated Lab Samples: 92148500012, 92148500013, 92148500014, 92148500015, 92148500016, 92148500017

METHOD BLANK: 927307 Matrix: Water
Associated Lab Samples: 92148500012, 92148500013, 92148500014, 92148500015, 92148500016, 92148500017

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	ND	1.0	02/22/13 21:55	
1,1,1-Trichloroethane	ug/L	ND	1.0	02/22/13 21:55	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	02/22/13 21:55	
1,1,2-Trichloroethane	ug/L	ND	1.0	02/22/13 21:55	
1,1-Dichloroethane	ug/L	ND	1.0	02/22/13 21:55	
1,1-Dichloroethene	ug/L	ND	1.0	02/22/13 21:55	
1,1-Dichloropropene	ug/L	ND	1.0	02/22/13 21:55	
1,2,3-Trichloropropane	ug/L	ND	1.0	02/22/13 21:55	
1,2-Dibromo-3-chloropropane	ug/L	ND	5.0	02/22/13 21:55	
1,2-Dibromoethane (EDB)	ug/L	ND	1.0	02/22/13 21:55	
1,2-Dichlorobenzene	ug/L	ND	1.0	02/22/13 21:55	
1,2-Dichloroethane	ug/L	ND	1.0	02/22/13 21:55	
1,2-Dichloropropane	ug/L	ND	1.0	02/22/13 21:55	
1,3-Dichlorobenzene	ug/L	ND	1.0	02/22/13 21:55	
1,3-Dichloropropane	ug/L	ND	1.0	02/22/13 21:55	
1,4-Dichlorobenzene	ug/L	ND	1.0	02/22/13 21:55	
2,2-Dichloropropane	ug/L	ND	1.0	02/22/13 21:55	
2-Butanone (MEK)	ug/L	ND	5.0	02/22/13 21:55	
2-Hexanone	ug/L	ND	5.0	02/22/13 21:55	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	5.0	02/22/13 21:55	
Acetone	ug/L	ND	25.0	02/22/13 21:55	
Acetonitrile	ug/L	ND	50.0	02/22/13 21:55	
Acrylonitrile	ug/L	ND	10.0	02/22/13 21:55	
Allyl chloride	ug/L	ND	2.0	02/22/13 21:55	
Benzene	ug/L	ND	1.0	02/22/13 21:55	
Bromochloromethane	ug/L	ND	1.0	02/22/13 21:55	
Bromodichloromethane	ug/L	ND	1.0	02/22/13 21:55	
Bromoform	ug/L	ND	1.0	02/22/13 21:55	
Bromomethane	ug/L	ND	2.0	02/22/13 21:55	
Carbon disulfide	ug/L	ND	2.0	02/22/13 21:55	
Carbon tetrachloride	ug/L	ND	1.0	02/22/13 21:55	
Chlorobenzene	ug/L	ND	1.0	02/22/13 21:55	
Chloroethane	ug/L	ND	1.0	02/22/13 21:55	
Chloroform	ug/L	ND	1.0	02/22/13 21:55	
Chloromethane	ug/L	ND	1.0	02/22/13 21:55	
Chloroprene	ug/L	ND	5.0	02/22/13 21:55	
cis-1,2-Dichloroethene	ug/L	ND	1.0	02/22/13 21:55	
cis-1,3-Dichloropropene	ug/L	ND	1.0	02/22/13 21:55	
Dibromochloromethane	ug/L	ND	1.0	02/22/13 21:55	
Dibromomethane	ug/L	ND	1.0	02/22/13 21:55	
Dichlorodifluoromethane	ug/L	ND	1.0	02/22/13 21:55	
Ethyl methacrylate	ug/L	ND	1.0	02/22/13 21:55	
Ethylbenzene	ug/L	ND	1.0	02/22/13 21:55	

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QUALITY CONTROL DATA

Project: FRANCIS FARM LF GWM FEB.2013
Pace Project No.: 92148500

METHOD BLANK: 927307 Matrix: Water

Associated Lab Samples: 92148500012, 92148500013, 92148500014, 92148500015, 92148500016, 92148500017

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Iodomethane	ug/L	ND	5.0	02/22/13 21:55	
Isobutanol	ug/L	ND	100	02/22/13 21:55	
m&p-Xylene	ug/L	ND	2.0	02/22/13 21:55	
Methacrylonitrile	ug/L	ND	10.0	02/22/13 21:55	
Methyl methacrylate	ug/L	ND	2.0	02/22/13 21:55	
Methylene Chloride	ug/L	ND	1.0	02/22/13 21:55	
Naphthalene	ug/L	0.50J	1.0	02/22/13 21:55	
o-Xylene	ug/L	ND	1.0	02/22/13 21:55	
Propionitrile	ug/L	ND	20.0	02/22/13 21:55	
Styrene	ug/L	ND	1.0	02/22/13 21:55	
Tetrachloroethene	ug/L	ND	1.0	02/22/13 21:55	
Toluene	ug/L	ND	1.0	02/22/13 21:55	
trans-1,2-Dichloroethene	ug/L	ND	1.0	02/22/13 21:55	
trans-1,3-Dichloropropene	ug/L	ND	1.0	02/22/13 21:55	
trans-1,4-Dichloro-2-butene	ug/L	ND	1.0	02/22/13 21:55	
Trichloroethene	ug/L	ND	1.0	02/22/13 21:55	
Trichlorofluoromethane	ug/L	ND	1.0	02/22/13 21:55	
Vinyl acetate	ug/L	ND	2.0	02/22/13 21:55	
Vinyl chloride	ug/L	ND	1.0	02/22/13 21:55	
Xylene (Total)	ug/L	ND	2.0	02/22/13 21:55	
1,2-Dichloroethane-d4 (S)	%	98	70-130	02/22/13 21:55	
4-Bromofluorobenzene (S)	%	99	70-130	02/22/13 21:55	
Dibromofluoromethane (S)	%	104	70-130	02/22/13 21:55	
Toluene-d8 (S)	%	99	70-130	02/22/13 21:55	

LABORATORY CONTROL SAMPLE: 927308

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	50	56.5	113	70-130	
1,1,1-Trichloroethane	ug/L	50	52.7	105	70-130	
1,1,2,2-Tetrachloroethane	ug/L	50	53.8	108	70-130	
1,1,2-Trichloroethane	ug/L	50	52.2	104	70-130	
1,1-Dichloroethane	ug/L	50	52.8	106	70-130	
1,1-Dichloroethene	ug/L	50	49.4	99	70-132	
1,1-Dichloropropene	ug/L	50	54.0	108	70-130	
1,2,3-Trichloropropane	ug/L	50	53.5	107	70-130	
1,2-Dibromo-3-chloropropane	ug/L	50	60.9	122	70-130	
1,2-Dibromoethane (EDB)	ug/L	50	56.3	113	70-130	
1,2-Dichlorobenzene	ug/L	50	54.6	109	70-130	
1,2-Dichloroethane	ug/L	50	53.0	106	70-130	
1,2-Dichloropropane	ug/L	50	52.1	104	70-130	
1,3-Dichlorobenzene	ug/L	50	56.2	112	70-130	
1,3-Dichloropropane	ug/L	50	55.1	110	70-130	
1,4-Dichlorobenzene	ug/L	50	54.4	109	70-130	
2,2-Dichloropropane	ug/L	50	51.1	102	58-145	

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QUALITY CONTROL DATA

Project: FRANCIS FARM LF GWM FEB.2013
Pace Project No.: 92148500

LABORATORY CONTROL SAMPLE: 927308

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
2-Butanone (MEK)	ug/L	100	111	111	70-145	
2-Hexanone	ug/L	100	101	101	70-144	
4-Methyl-2-pentanone (MIBK)	ug/L	100	98.0	98	70-140	
Acetone	ug/L	100	108	108	50-175	
Acetonitrile	ug/L	500	523	105	70-130	
Acrylonitrile	ug/L	250	268	107	70-143	
Allyl chloride	ug/L	50	43.9	88	70-130	
Benzene	ug/L	50	53.0	106	70-130	
Bromochloromethane	ug/L	50	54.3	109	70-130	
Bromodichloromethane	ug/L	50	53.6	107	70-130	
Bromoform	ug/L	50	50.1	100	70-130	
Bromomethane	ug/L	50	57.8	116	54-130	
Carbon disulfide	ug/L	50	46.2	92	70-131	
Carbon tetrachloride	ug/L	50	55.5	111	70-132	
Chlorobenzene	ug/L	50	54.9	110	70-130	
Chloroethane	ug/L	50	43.6	87	64-134	
Chloroform	ug/L	50	52.9	106	70-130	
Chloromethane	ug/L	50	40.2	80	64-130	
Chloroprene	ug/L	50	49.0	98	70-130	
cis-1,2-Dichloroethene	ug/L	50	51.9	104	70-131	
cis-1,3-Dichloropropene	ug/L	50	53.8	108	70-130	
Dibromochloromethane	ug/L	50	57.9	116	70-130	
Dibromomethane	ug/L	50	55.6	111	70-131	
Dichlorodifluoromethane	ug/L	50	45.8	92	56-130	
Ethyl methacrylate	ug/L	50	51.6	103	70-130	
Ethylbenzene	ug/L	50	54.3	109	70-130	
Iodomethane	ug/L	100	82.8	83	49-180	
Isobutanol	ug/L	1000	1100	110	70-130	
m&p-Xylene	ug/L	100	108	108	70-130	
Methacrylonitrile	ug/L	500	518	104	70-130	
Methyl methacrylate	ug/L	50	53.9	108	70-130	
Methylene Chloride	ug/L	50	49.8	100	63-130	
Naphthalene	ug/L	50	59.0	118	70-138	
o-Xylene	ug/L	50	52.2	104	70-130	
Propionitrile	ug/L	500	536	107	70-130	
Styrene	ug/L	50	54.4	109	70-130	
Tetrachloroethene	ug/L	50	51.2	102	70-130	
Toluene	ug/L	50	51.9	104	70-130	
trans-1,2-Dichloroethene	ug/L	50	48.5	97	70-130	
trans-1,3-Dichloropropene	ug/L	50	54.5	109	70-132	
trans-1,4-Dichloro-2-butene	ug/L	50	41.0	82	70-141	
Trichloroethene	ug/L	50	48.4	97	70-130	
Trichlorofluoromethane	ug/L	50	48.7	97	62-133	
Vinyl acetate	ug/L	100	114	114	66-157	
Vinyl chloride	ug/L	50	49.7	99	69-130	
Xylene (Total)	ug/L	150	161	107	70-130	
1,2-Dichloroethane-d4 (S)	%			93	70-130	
4-Bromofluorobenzene (S)	%			99	70-130	

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QUALITY CONTROL DATA

Project: FRANCIS FARM LF GWM FEB.2013
Pace Project No.: 92148500

LABORATORY CONTROL SAMPLE: 927308

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Dibromofluoromethane (S)	%			100	70-130	
Toluene-d8 (S)	%			99	70-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 927309 927310

Parameter	Units	92148937001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,1-Dichloroethene	ug/L	ND	50	50	52.0	55.8	104	112	70-166	7	30	
Benzene	ug/L	ND	50	50	51.7	51.5	103	103	70-148	0	30	
Chlorobenzene	ug/L	ND	50	50	59.7	61.4	119	123	70-146	3	30	
Toluene	ug/L	ND	50	50	58.5	58.1	117	116	70-155	1	30	
Trichloroethene	ug/L	ND	50	50	54.6	53.5	109	107	69-151	2	30	
1,2-Dichloroethane-d4 (S)	%						97	98	70-130			
4-Bromofluorobenzene (S)	%						99	100	70-130			
Dibromofluoromethane (S)	%						104	99	70-130			
Toluene-d8 (S)	%						97	98	70-130			

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QUALITY CONTROL DATA

Project: FRANCIS FARM LF GWM FEB.2013
Pace Project No.: 92148500

QC Batch: MSV/22137 Analysis Method: EPA 8260
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV Low Level Landfill
Associated Lab Samples: 92148500020, 92148500021, 92148500022, 92148500023, 92148500024, 92148500025, 92148500026

METHOD BLANK: 927976 Matrix: Water
Associated Lab Samples: 92148500020, 92148500021, 92148500022, 92148500023, 92148500024, 92148500025, 92148500026

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	ND	1.0	02/24/13 12:20	
1,1,1-Trichloroethane	ug/L	ND	1.0	02/24/13 12:20	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	02/24/13 12:20	
1,1,2-Trichloroethane	ug/L	ND	1.0	02/24/13 12:20	
1,1-Dichloroethane	ug/L	ND	1.0	02/24/13 12:20	
1,1-Dichloroethene	ug/L	ND	1.0	02/24/13 12:20	
1,1-Dichloropropene	ug/L	ND	1.0	02/24/13 12:20	
1,2,3-Trichloropropane	ug/L	ND	1.0	02/24/13 12:20	
1,2-Dibromo-3-chloropropane	ug/L	ND	5.0	02/24/13 12:20	
1,2-Dibromoethane (EDB)	ug/L	ND	1.0	02/24/13 12:20	
1,2-Dichlorobenzene	ug/L	ND	1.0	02/24/13 12:20	
1,2-Dichloroethane	ug/L	ND	1.0	02/24/13 12:20	
1,2-Dichloropropane	ug/L	ND	1.0	02/24/13 12:20	
1,3-Dichlorobenzene	ug/L	ND	1.0	02/24/13 12:20	
1,3-Dichloropropane	ug/L	ND	1.0	02/24/13 12:20	
1,4-Dichlorobenzene	ug/L	ND	1.0	02/24/13 12:20	
2,2-Dichloropropane	ug/L	ND	1.0	02/24/13 12:20	
2-Butanone (MEK)	ug/L	ND	5.0	02/24/13 12:20	
2-Hexanone	ug/L	ND	5.0	02/24/13 12:20	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	5.0	02/24/13 12:20	
Acetone	ug/L	ND	25.0	02/24/13 12:20	
Acetonitrile	ug/L	ND	50.0	02/24/13 12:20	
Acrylonitrile	ug/L	ND	10.0	02/24/13 12:20	
Allyl chloride	ug/L	ND	2.0	02/24/13 12:20	
Benzene	ug/L	ND	1.0	02/24/13 12:20	
Bromochloromethane	ug/L	ND	1.0	02/24/13 12:20	
Bromodichloromethane	ug/L	ND	1.0	02/24/13 12:20	
Bromoform	ug/L	ND	1.0	02/24/13 12:20	
Bromomethane	ug/L	ND	2.0	02/24/13 12:20	
Carbon disulfide	ug/L	ND	2.0	02/24/13 12:20	
Carbon tetrachloride	ug/L	ND	1.0	02/24/13 12:20	
Chlorobenzene	ug/L	ND	1.0	02/24/13 12:20	
Chloroethane	ug/L	ND	1.0	02/24/13 12:20	
Chloroform	ug/L	ND	1.0	02/24/13 12:20	
Chloromethane	ug/L	ND	1.0	02/24/13 12:20	
Chloroprene	ug/L	ND	5.0	02/24/13 12:20	
cis-1,2-Dichloroethene	ug/L	ND	1.0	02/24/13 12:20	
cis-1,3-Dichloropropene	ug/L	ND	1.0	02/24/13 12:20	
Dibromochloromethane	ug/L	ND	1.0	02/24/13 12:20	
Dibromomethane	ug/L	ND	1.0	02/24/13 12:20	
Dichlorodifluoromethane	ug/L	ND	1.0	02/24/13 12:20	
Ethyl methacrylate	ug/L	ND	1.0	02/24/13 12:20	
Ethylbenzene	ug/L	ND	1.0	02/24/13 12:20	

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QUALITY CONTROL DATA

Project: FRANCIS FARM LF GWM FEB.2013
Pace Project No.: 92148500

METHOD BLANK: 927976 Matrix: Water

Associated Lab Samples: 92148500020, 92148500021, 92148500022, 92148500023, 92148500024, 92148500025, 92148500026

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Iodomethane	ug/L	ND	5.0	02/24/13 12:20	
Isobutanol	ug/L	ND	100	02/24/13 12:20	
m&p-Xylene	ug/L	ND	2.0	02/24/13 12:20	
Methacrylonitrile	ug/L	ND	10.0	02/24/13 12:20	
Methyl methacrylate	ug/L	ND	2.0	02/24/13 12:20	
Methylene Chloride	ug/L	ND	1.0	02/24/13 12:20	
Naphthalene	ug/L	ND	1.0	02/24/13 12:20	
o-Xylene	ug/L	ND	1.0	02/24/13 12:20	
Propionitrile	ug/L	ND	20.0	02/24/13 12:20	
Styrene	ug/L	ND	1.0	02/24/13 12:20	
Tetrachloroethene	ug/L	ND	1.0	02/24/13 12:20	
Toluene	ug/L	ND	1.0	02/24/13 12:20	
trans-1,2-Dichloroethene	ug/L	ND	1.0	02/24/13 12:20	
trans-1,3-Dichloropropene	ug/L	ND	1.0	02/24/13 12:20	
trans-1,4-Dichloro-2-butene	ug/L	ND	1.0	02/24/13 12:20	
Trichloroethene	ug/L	ND	1.0	02/24/13 12:20	
Trichlorofluoromethane	ug/L	ND	1.0	02/24/13 12:20	
Vinyl acetate	ug/L	ND	2.0	02/24/13 12:20	
Vinyl chloride	ug/L	ND	1.0	02/24/13 12:20	
Xylene (Total)	ug/L	ND	2.0	02/24/13 12:20	
1,2-Dichloroethane-d4 (S)	%	98	70-130	02/24/13 12:20	
4-Bromofluorobenzene (S)	%	103	70-130	02/24/13 12:20	
Dibromofluoromethane (S)	%	106	70-130	02/24/13 12:20	
Toluene-d8 (S)	%	96	70-130	02/24/13 12:20	

LABORATORY CONTROL SAMPLE: 927977

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	50	59.0	118	70-130	
1,1,1-Trichloroethane	ug/L	50	56.6	113	70-130	
1,1,2,2-Tetrachloroethane	ug/L	50	53.1	106	70-130	
1,1,2-Trichloroethane	ug/L	50	53.5	107	70-130	
1,1-Dichloroethane	ug/L	50	54.4	109	70-130	
1,1-Dichloroethene	ug/L	50	46.9	94	70-132	
1,1-Dichloropropene	ug/L	50	56.8	114	70-130	
1,2,3-Trichloropropane	ug/L	50	54.2	108	70-130	
1,2-Dibromo-3-chloropropane	ug/L	50	59.1	118	70-130	
1,2-Dibromoethane (EDB)	ug/L	50	57.1	114	70-130	
1,2-Dichlorobenzene	ug/L	50	57.0	114	70-130	
1,2-Dichloroethane	ug/L	50	53.1	106	70-130	
1,2-Dichloropropane	ug/L	50	54.5	109	70-130	
1,3-Dichlorobenzene	ug/L	50	57.7	115	70-130	
1,3-Dichloropropane	ug/L	50	56.0	112	70-130	
1,4-Dichlorobenzene	ug/L	50	56.1	112	70-130	
2,2-Dichloropropane	ug/L	50	60.0	120	58-145	

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QUALITY CONTROL DATA

Project: FRANCIS FARM LF GWM FEB.2013
Pace Project No.: 92148500

LABORATORY CONTROL SAMPLE: 927977

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
2-Butanone (MEK)	ug/L	100	108	108	70-145	
2-Hexanone	ug/L	100	99.1	99	70-144	
4-Methyl-2-pentanone (MIBK)	ug/L	100	98.5	99	70-140	
Acetone	ug/L	100	106	106	50-175	
Acetonitrile	ug/L	500	514	103	70-130	
Acrylonitrile	ug/L	250	261	104	70-143	
Allyl chloride	ug/L	50	45.2	90	70-130	
Benzene	ug/L	50	55.8	112	70-130	
Bromochloromethane	ug/L	50	58.7	117	70-130	
Bromodichloromethane	ug/L	50	56.6	113	70-130	
Bromoform	ug/L	50	53.0	106	70-130	
Bromomethane	ug/L	50	48.2	96	54-130	
Carbon disulfide	ug/L	50	48.9	98	70-131	
Carbon tetrachloride	ug/L	50	58.3	117	70-132	
Chlorobenzene	ug/L	50	55.9	112	70-130	
Chloroethane	ug/L	50	43.8	88	64-134	
Chloroform	ug/L	50	54.6	109	70-130	
Chloromethane	ug/L	50	42.0	84	64-130	
Chloroprene	ug/L	50	51.1	102	70-130	
cis-1,2-Dichloroethene	ug/L	50	53.4	107	70-131	
cis-1,3-Dichloropropene	ug/L	50	57.9	116	70-130	
Dibromochloromethane	ug/L	50	61.2	122	70-130	
Dibromomethane	ug/L	50	57.7	115	70-131	
Dichlorodifluoromethane	ug/L	50	46.5	93	56-130	
Ethyl methacrylate	ug/L	50	49.7	99	70-130	
Ethylbenzene	ug/L	50	55.1	110	70-130	
Iodomethane	ug/L	100	82.2	82	49-180	
Isobutanol	ug/L	1000	1030	103	70-130	
m&p-Xylene	ug/L	100	111	111	70-130	
Methacrylonitrile	ug/L	500	516	103	70-130	
Methyl methacrylate	ug/L	50	54.8	110	70-130	
Methylene Chloride	ug/L	50	50.8	102	63-130	
Naphthalene	ug/L	50	59.2	118	70-138	
o-Xylene	ug/L	50	54.6	109	70-130	
Propionitrile	ug/L	500	525	105	70-130	
Styrene	ug/L	50	55.5	111	70-130	
Tetrachloroethene	ug/L	50	54.7	109	70-130	
Toluene	ug/L	50	55.6	111	70-130	
trans-1,2-Dichloroethene	ug/L	50	51.6	103	70-130	
trans-1,3-Dichloropropene	ug/L	50	58.1	116	70-132	
trans-1,4-Dichloro-2-butene	ug/L	50	46.7	93	70-141	
Trichloroethene	ug/L	50	50.8	102	70-130	
Trichlorofluoromethane	ug/L	50	47.8	96	62-133	
Vinyl acetate	ug/L	100	118	118	66-157	
Vinyl chloride	ug/L	50	50.7	101	69-130	
Xylene (Total)	ug/L	150	166	110	70-130	
1,2-Dichloroethane-d4 (S)	%			92	70-130	
4-Bromofluorobenzene (S)	%			99	70-130	

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QUALITY CONTROL DATA

Project: FRANCIS FARM LF GWM FEB.2013
Pace Project No.: 92148500

LABORATORY CONTROL SAMPLE: 927977

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Dibromofluoromethane (S)	%			100	70-130	
Toluene-d8 (S)	%			98	70-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 927978 927979

Parameter	Units	92148504008 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,1-Dichloroethene	ug/L	ND	50	50	59.8	54.1	120	108	70-166	10	30	
Benzene	ug/L	ND	50	50	53.1	52.5	106	105	70-148	1	30	
Chlorobenzene	ug/L	ND	50	50	60.5	59.3	121	119	70-146	2	30	
Toluene	ug/L	ND	50	50	58.8	56.7	118	113	70-155	4	30	
Trichloroethene	ug/L	ND	50	50	52.7	52.2	105	104	69-151	1	30	
1,2-Dichloroethane-d4 (S)	%						101	102	70-130			
4-Bromofluorobenzene (S)	%						97	95	70-130			
Dibromofluoromethane (S)	%						107	109	70-130			
Toluene-d8 (S)	%						99	98	70-130			

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QUALITY CONTROL DATA

Project: FRANCIS FARM LF GWM FEB.2013
Pace Project No.: 92148500

QC Batch: OEXT/20955 — Analysis Method: EPA 8081
QC Batch Method: EPA 3510 — Analysis Description: 8081A GCS Pesticides
Associated Lab Samples: 92148500004, 92148500005, 92148500006, 92148500007, 92148500008, 92148500009, 92148500010, 92148500011, 92148500012, 92148500013, 92148500014, 92148500015, 92148500016, 92148500017

METHOD BLANK: 928244 — Matrix: Water
Associated Lab Samples: 92148500004, 92148500005, 92148500006, 92148500007, 92148500008, 92148500009, 92148500010, 92148500011, 92148500012, 92148500013, 92148500014, 92148500015, 92148500016, 92148500017

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
4,4'-DDD	ug/L	ND	0.050	03/04/13 23:09	
4,4'-DDE	ug/L	ND	0.050	03/04/13 23:09	
4,4'-DDT	ug/L	ND	0.050	03/04/13 23:09	
Aldrin	ug/L	ND	0.050	03/04/13 23:09	
alpha-BHC	ug/L	ND	0.050	03/04/13 23:09	
beta-BHC	ug/L	ND	0.050	03/04/13 23:09	
Chlordane (Technical)	ug/L	ND	0.20	03/04/13 23:09	
delta-BHC	ug/L	ND	0.050	03/04/13 23:09	
Dieldrin	ug/L	ND	0.050	03/04/13 23:09	
Endosulfan I	ug/L	ND	0.050	03/04/13 23:09	
Endosulfan II	ug/L	ND	0.050	03/04/13 23:09	
Endosulfan sulfate	ug/L	ND	0.050	03/04/13 23:09	
Endrin	ug/L	ND	0.050	03/04/13 23:09	
Endrin aldehyde	ug/L	ND	0.050	03/04/13 23:09	
Endrin ketone	ug/L	ND	0.050	03/04/13 23:09	
gamma-BHC (Lindane)	ug/L	ND	0.050	03/04/13 23:09	
Heptachlor	ug/L	ND	0.050	03/04/13 23:09	
Heptachlor epoxide	ug/L	ND	0.050	03/04/13 23:09	
Hexachlorobenzene	ug/L	ND	0.050	03/04/13 23:09	
Methoxychlor	ug/L	ND	0.15	03/04/13 23:09	
Mirex	ug/L	ND	0.15	03/04/13 23:09	
Toxaphene	ug/L	ND	0.20	03/04/13 23:09	
Decachlorobiphenyl (S)	%	73	20-130	03/04/13 23:09	
Tetrachloro-m-xylene (S)	%	82	20-130	03/04/13 23:09	

LABORATORY CONTROL SAMPLE: 928245

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
4,4'-DDD	ug/L	.25	0.22	88	20-150	
4,4'-DDE	ug/L	.25	0.20	82	20-150	
4,4'-DDT	ug/L	.25	0.21	85	20-150	
Aldrin	ug/L	.25	0.14	58	20-150	
alpha-BHC	ug/L	.25	0.22	89	20-150	
beta-BHC	ug/L	.25	0.22	88	20-150	
delta-BHC	ug/L	.25	0.22	87	20-150	
Dieldrin	ug/L	.25	0.23	94	20-150	
Endosulfan I	ug/L	.25	0.23	92	20-150	
Endosulfan II	ug/L	.25	0.23	94	20-150	
Endosulfan sulfate	ug/L	.25	0.21	85	20-150	
Endrin	ug/L	.25	0.22	90	20-150	

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QUALITY CONTROL DATA

Project: FRANCIS FARM LF GWM FEB.2013
Pace Project No.: 92148500

LABORATORY CONTROL SAMPLE: 928245

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Endrin aldehyde	ug/L	.25	0.22	90	20-150	
Endrin ketone	ug/L	.25	0.25	99	20-150	
gamma-BHC (Lindane)	ug/L	.25	0.22	89	20-150	
Heptachlor	ug/L	.25	0.17	67	20-150	
Heptachlor epoxide	ug/L	.25	0.21	86	20-150	
Hexachlorobenzene	ug/L	.25	0.23	94	20-150	
Methoxychlor	ug/L	.74	0.66	89	20-150	
Mirex	ug/L	.74	0.62	84	20-150	
Decachlorobiphenyl (S)	%			71	20-130	
Tetrachloro-m-xylene (S)	%			83	20-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 928246 928247

Parameter	Units	92148500017 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
4,4'-DDD	ug/L	ND	.5	.5	0.57	0.34	115	69	20-150	50	30	
4,4'-DDE	ug/L	ND	.5	.5	0.54	0.37	109	75	20-150	37	30	
4,4'-DDT	ug/L	ND	.5	.5	0.60	0.39	121	79	20-150	43	30	
Aldrin	ug/L	ND	.5	.5	0.47	0.29	95	59	20-150	46	30	
alpha-BHC	ug/L	ND	.5	.5	0.88	0.65	178	132	20-150	30	30	M3
beta-BHC	ug/L	ND	.5	.5	0.70	0.54	142	109	20-150	26	30	
delta-BHC	ug/L	ND	.5	.5	0.54	0.41	109	82	20-150	28	30	
Dieldrin	ug/L	ND	.5	.5	0.54	0.29	109	59	20-150	59	30	
Endosulfan I	ug/L	ND	.5	.5	0.53	0.29	106	59	20-150	58	30	
Endosulfan II	ug/L	ND	.5	.5	0.55	0.29	111	58	20-150	63	30	
Endosulfan sulfate	ug/L	ND	.5	.5	0.53	0.28	107	58	20-150	60	30	
Endrin	ug/L	ND	.5	.5	0.60	0.33	121	66	20-150	59	30	
Endrin aldehyde	ug/L	ND	.5	.5	0.52	0.31	106	64	20-150	50	30	
Endrin ketone	ug/L	ND	.5	.5	0.54	0.33	110	66	20-150	50	30	
gamma-BHC (Lindane)	ug/L	0.21	.5	.5	0.73	0.55	104	68	20-150	28	30	
Heptachlor	ug/L	ND	.5	.5	0.54	0.29	108	59	20-150	59	30	1g,R1
Heptachlor epoxide	ug/L	ND	.5	.5	0.49	0.28	98	56	20-150	56	30	
Hexachlorobenzene	ug/L	ND	.5	.5	0.59	0.39	119	79	20-150	41	30	
Methoxychlor	ug/L	ND	1.5	1.5	1.5	0.94	100	63	20-150	45	30	
Mirex	ug/L	ND	1.5	1.5	1.4	1.2	97	80	20-150	19	30	
Decachlorobiphenyl (S)	%						61	58	20-130			
Tetrachloro-m-xylene (S)	%						109	89	20-130			

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QUALITY CONTROL DATA

Project: FRANCIS FARM LF GWM FEB.2013
Pace Project No.: 92148500

QC Batch: OEXT/20981 Analysis Method: EPA 8081
QC Batch Method: EPA 3510 Analysis Description: 8081A GCS Pesticides
Associated Lab Samples: 92148500018, 92148500019, 92148500020, 92148500021, 92148500022, 92148500023, 92148500024

METHOD BLANK: 929343 Matrix: Water
Associated Lab Samples: 92148500018, 92148500019, 92148500020, 92148500021, 92148500022, 92148500023, 92148500024

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
4,4'-DDD	ug/L	ND	0.050	03/05/13 15:09	
4,4'-DDE	ug/L	ND	0.050	03/05/13 15:09	
4,4'-DDT	ug/L	ND	0.050	03/05/13 15:09	
Aldrin	ug/L	ND	0.050	03/05/13 15:09	
alpha-BHC	ug/L	ND	0.050	03/05/13 15:09	
beta-BHC	ug/L	ND	0.050	03/05/13 15:09	
Chlordane (Technical)	ug/L	ND	0.20	03/05/13 15:09	
delta-BHC	ug/L	ND	0.050	03/05/13 15:09	
Dieldrin	ug/L	ND	0.050	03/05/13 15:09	
Endosulfan I	ug/L	ND	0.050	03/05/13 15:09	
Endosulfan II	ug/L	ND	0.050	03/05/13 15:09	
Endosulfan sulfate	ug/L	ND	0.050	03/05/13 15:09	
Endrin	ug/L	ND	0.050	03/05/13 15:09	
Endrin aldehyde	ug/L	ND	0.050	03/05/13 15:09	
Endrin ketone	ug/L	ND	0.050	03/05/13 15:09	
gamma-BHC (Lindane)	ug/L	ND	0.050	03/05/13 15:09	
Heptachlor	ug/L	ND	0.050	03/05/13 15:09	
Heptachlor epoxide	ug/L	ND	0.050	03/05/13 15:09	
Hexachlorobenzene	ug/L	ND	0.050	03/05/13 15:09	
Methoxychlor	ug/L	ND	0.15	03/05/13 15:09	
Mirex	ug/L	ND	0.15	03/05/13 15:09	
Toxaphene	ug/L	ND	0.20	03/05/13 15:09	
Decachlorobiphenyl (S)	%	69	20-130	03/05/13 15:09	
Tetrachloro-m-xylene (S)	%	84	20-130	03/05/13 15:09	

LABORATORY CONTROL SAMPLE: 929344

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
4,4'-DDD	ug/L	.25	0.21	85	20-150	
4,4'-DDE	ug/L	.25	0.20	82	20-150	
4,4'-DDT	ug/L	.25	0.20	82	20-150	
Aldrin	ug/L	.25	0.11	44	20-150	
alpha-BHC	ug/L	.25	0.21	84	20-150	
beta-BHC	ug/L	.25	0.21	87	20-150	
delta-BHC	ug/L	.25	0.22	88	20-150	
Dieldrin	ug/L	.25	0.21	86	20-150	
Endosulfan I	ug/L	.25	0.21	84	20-150	
Endosulfan II	ug/L	.25	0.22	87	20-150	
Endosulfan sulfate	ug/L	.25	0.19	77	20-150	
Endrin	ug/L	.25	0.20	82	20-150	
Endrin aldehyde	ug/L	.25	0.21	86	20-150	

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(704)875-9092

QUALITY CONTROL DATA

Project: FRANCIS FARM LF GWM FEB.2013
Pace Project No.: 92148500

LABORATORY CONTROL SAMPLE: 929344

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Endrin ketone	ug/L	.25	0.23	91	20-150	
gamma-BHC (Lindane)	ug/L	.25	0.21	85	20-150	
Heptachlor	ug/L	.25	0.12	48	20-150	
Heptachlor epoxide	ug/L	.25	0.19	78	20-150	
Hexachlorobenzene	ug/L	.25	0.19	76	20-150	
Methoxychlor	ug/L	.74	0.59	79	20-150	
Mirex	ug/L	.74	0.61	82	20-150	
Decachlorobiphenyl (S)	%			65	20-130	
Tetrachloro-m-xylene (S)	%			76	20-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 929345 929346

Parameter	Units	92148500020 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
4,4'-DDD	ug/L	ND	.5	.5	0.53	0.50	108	102	20-150	5	30	
4,4'-DDE	ug/L	ND	.5	.5	0.53	0.50	107	102	20-150	5	30	
4,4'-DDT	ug/L	ND	.5	.5	0.55	0.50	110	102	20-150	8	30	
Aldrin	ug/L	ND	.5	.5	0.45	0.43	91	87	20-150	5	30	
alpha-BHC	ug/L	ND	.5	.5	0.41	0.41	84	82	20-150	2	30	
beta-BHC	ug/L	ND	.5	.5	0.47	0.45	95	92	20-150	3	30	
delta-BHC	ug/L	ND	.5	.5	0.42	0.40	85	81	20-150	4	30	
Dieldrin	ug/L	ND	.5	.5	0.52	0.50	105	102	20-150	3	30	
Endosulfan I	ug/L	ND	.5	.5	0.52	0.49	105	99	20-150	6	30	
Endosulfan II	ug/L	ND	.5	.5	0.52	0.49	105	100	20-150	5	30	
Endosulfan sulfate	ug/L	ND	.5	.5	0.48	0.45	96	91	20-150	6	30	
Endrin	ug/L	ND	.5	.5	0.54	0.51	109	103	20-150	6	30	
Endrin aldehyde	ug/L	ND	.5	.5	0.42	0.42	85	86	20-150	0	30	
Endrin ketone	ug/L	ND	.5	.5	0.51	0.48	103	97	20-150	6	30	
gamma-BHC (Lindane)	ug/L	ND	.5	.5	0.43	0.41	86	83	20-150	3	30	
Heptachlor	ug/L	ND	.5	.5	0.42	0.40	84	81	20-150	4	30	
Heptachlor epoxide	ug/L	ND	.5	.5	0.57	0.49	114	99	20-150	14	30	
Hexachlorobenzene	ug/L	ND	.5	.5	0.56	0.48	112	98	20-150	14	30	
Methoxychlor	ug/L	ND	1.5	1.5	1.4	1.4	96	91	20-150	5	30	
Mirex	ug/L	ND	1.5	1.5	1.4	1.3	93	90	20-150	3	30	
Decachlorobiphenyl (S)	%						76	74	20-130			
Tetrachloro-m-xylene (S)	%						76	78	20-130			

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QUALITY CONTROL DATA

Project: FRANCIS FARM LF GWM FEB.2013
Pace Project No.: 92148500

QC Batch: WETA/14604 — Analysis Method: SM 4500-CN-E
QC Batch Method: SM 4500-CN-E — Analysis Description: 4500CNE Cyanide, Total
Associated Lab Samples: 92148500004, 92148500005, 92148500006, 92148500007, 92148500008, 92148500009, 92148500010

METHOD BLANK: 927821 — Matrix: Water
Associated Lab Samples: 92148500004, 92148500005, 92148500006, 92148500007, 92148500008, 92148500009, 92148500010

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Cyanide	mg/L	ND	0.0050	02/23/13 14:26	

LABORATORY CONTROL SAMPLE: 927822

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Cyanide	mg/L	.1	0.099	99	80-120	

MATRIX SPIKE SAMPLE: 927823

Parameter	Units	92148715002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Cyanide	mg/L	ND	.1	ND	0	75-125	M0

SAMPLE DUPLICATE: 927824

Parameter	Units	92148716001 Result	Dup Result	RPD	Max RPD	Qualifiers
Cyanide	mg/L	ND	ND		20	

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QUALITY CONTROL DATA

Project: FRANCIS FARM LF GWM FEB.2013
Pace Project No.: 92148500

QC Batch: WETA/14605 — Analysis Method: SM 4500-CN-E
QC Batch Method: SM 4500-CN-E — Analysis Description: 4500CNE Cyanide, Total
Associated Lab Samples: 92148500011, 92148500012, 92148500013, 92148500014, 92148500015

METHOD BLANK: 927825 — Matrix: Water
Associated Lab Samples: 92148500011, 92148500012, 92148500013, 92148500014, 92148500015

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Cyanide	mg/L	ND	0.0050	02/23/13 14:50	

LABORATORY CONTROL SAMPLE: 927826

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Cyanide	mg/L	.1	0.11	109	80-120	

MATRIX SPIKE SAMPLE: 927827

Parameter	Units	92148500011 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Cyanide	mg/L	ND	.1	0.12	113	75-125	

SAMPLE DUPLICATE: 927828

Parameter	Units	92148504001 Result	Dup Result	RPD	Max RPD	Qualifiers
Cyanide	mg/L	ND	ND		20	

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QUALITY CONTROL DATA

Project: FRANCIS FARM LF GWM FEB.2013
Pace Project No.: 92148500

QC Batch: WETA/14634 — Analysis Method: SM 4500-CN-E
QC Batch Method: SM 4500-CN-E — Analysis Description: 4500CNE Cyanide, Total
Associated Lab Samples: 92148500016, 92148500017, 92148500018, 92148500019

METHOD BLANK: 929548 — Matrix: Water
Associated Lab Samples: 92148500016, 92148500017, 92148500018, 92148500019

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Cyanide	mg/L	ND	0.0050	02/28/13 11:42	

LABORATORY CONTROL SAMPLE: 929549

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Cyanide	mg/L	.1	0.10	105	80-120	

MATRIX SPIKE SAMPLE: 929550

Parameter	Units	92149309001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Cyanide	mg/L	ND	.1	0.13	123	75-125	

SAMPLE DUPLICATE: 929551

Parameter	Units	92149309002 Result	Dup Result	RPD	Max RPD	Qualifiers
Cyanide	mg/L	0.020	0.020	1	20	

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QUALITY CONTROL DATA

Project: FRANCIS FARM LF GWM FEB.2013
Pace Project No.: 92148500

QC Batch: WETA/14635
QC Batch Method: SM 4500-CN-E
Analysis Method: SM 4500-CN-E
Analysis Description: 4500CNE Cyanide, Total
Associated Lab Samples: 92148500020

METHOD BLANK: 929552
Matrix: Water
Associated Lab Samples: 92148500020

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Cyanide	mg/L	ND	0.0050	02/28/13 12:02	

LABORATORY CONTROL SAMPLE: 929553

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Cyanide	mg/L	.1	0.10	104	80-120	

MATRIX SPIKE SAMPLE: 929554

Parameter	Units	92148914002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Cyanide	mg/L	0.0077	.1	0.022	15	75-125	M1

SAMPLE DUPLICATE: 929555

Parameter	Units	92149138001 Result	Dup Result	RPD	Max RPD	Qualifiers
Cyanide	mg/L	ND	ND		20	

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QUALITY CONTROL DATA

Project: FRANCIS FARM LF GWM FEB.2013
Pace Project No.: 92148500

QC Batch: WETA/14666 — Analysis Method: SM 4500-CN-E
QC Batch Method: SM 4500-CN-E — Analysis Description: 4500CNE Cyanide, Total
Associated Lab Samples: 92148500021, 92148500022, 92148500023, 92148500024

METHOD BLANK: 931775 — Matrix: Water
Associated Lab Samples: 92148500021, 92148500022, 92148500023, 92148500024

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Cyanide	mg/L	ND	0.0050	03/06/13 13:37	

LABORATORY CONTROL SAMPLE: 931776

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Cyanide	mg/L	.1	0.098	98	80-120	

MATRIX SPIKE SAMPLE: 931777

Parameter	Units	92148500021 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Cyanide	mg/L	ND	.1	0.093	92	75-125	

SAMPLE DUPLICATE: 931778

Parameter	Units	92148500022 Result	Dup Result	RPD	Max RPD	Qualifiers
Cyanide	mg/L	ND	ND		20	

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QUALIFIERS

Project: FRANCIS FARM LF GWM FEB.2013
Pace Project No.: 92148500

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.

PRL - Pace Reporting 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.

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TNI - The NELAC Institute.

LABORATORIES

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

ANALYTE QUALIFIERS

1g	Footnote applies to all RPD greater than 30%.
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.
M3	Matrix spike recovery was outside laboratory control limits due to matrix interferences.
R1	RPD value was outside control limits.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: FRANCIS FARM LF GWM FEB.2013
Pace Project No.: 92148500

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92148500001	SW-1		FLD/		
92148500002	SW-2		FLD/		
92148500003	BLANTON BRANCH		FLD/		
92148500004	MW-6		FLD/		
92148500005	MW-7		FLD/		
92148500006	MW-8		FLD/		
92148500007	MW-9		FLD/		
92148500008	MW-10		FLD/		
92148500009	MW-19		FLD/		
92148500010	MW-20		FLD/		
92148500011	MW-21		FLD/		
92148500012	MW-1A		FLD/		
92148500013	MW-4		FLD/		
92148500014	MW-5		FLD/		
92148500015	MW-12		FLD/		
92148500016	MW-13		FLD/		
92148500017	MW-11		FLD/		
92148500018	MW-14		FLD/		
92148500019	MW-15		FLD/		
92148500020	MW-2A		FLD/		
92148500021	MW-3A		FLD/		
92148500022	MW-16		FLD/		
92148500023	MW-17		FLD/		
92148500024	MW-18		FLD/		
92148500004	MW-6	EPA 3510	OEXT/20955	EPA 8081	GCSV/14073
92148500005	MW-7	EPA 3510	OEXT/20955	EPA 8081	GCSV/14073
92148500006	MW-8	EPA 3510	OEXT/20955	EPA 8081	GCSV/14073
92148500007	MW-9	EPA 3510	OEXT/20955	EPA 8081	GCSV/14073
92148500008	MW-10	EPA 3510	OEXT/20955	EPA 8081	GCSV/14073
92148500009	MW-19	EPA 3510	OEXT/20955	EPA 8081	GCSV/14073
92148500010	MW-20	EPA 3510	OEXT/20955	EPA 8081	GCSV/14073
92148500011	MW-21	EPA 3510	OEXT/20955	EPA 8081	GCSV/14073
92148500012	MW-1A	EPA 3510	OEXT/20955	EPA 8081	GCSV/14073
92148500013	MW-4	EPA 3510	OEXT/20955	EPA 8081	GCSV/14073
92148500014	MW-5	EPA 3510	OEXT/20955	EPA 8081	GCSV/14073
92148500015	MW-12	EPA 3510	OEXT/20955	EPA 8081	GCSV/14073
92148500016	MW-13	EPA 3510	OEXT/20955	EPA 8081	GCSV/14073
92148500017	MW-11	EPA 3510	OEXT/20955	EPA 8081	GCSV/14073
92148500018	MW-14	EPA 3510	OEXT/20981	EPA 8081	GCSV/14083
92148500019	MW-15	EPA 3510	OEXT/20981	EPA 8081	GCSV/14083
92148500020	MW-2A	EPA 3510	OEXT/20981	EPA 8081	GCSV/14083
92148500021	MW-3A	EPA 3510	OEXT/20981	EPA 8081	GCSV/14083
92148500022	MW-16	EPA 3510	OEXT/20981	EPA 8081	GCSV/14083
92148500023	MW-17	EPA 3510	OEXT/20981	EPA 8081	GCSV/14083
92148500024	MW-18	EPA 3510	OEXT/20981	EPA 8081	GCSV/14083
92148500001	SW-1	EPA 3010	MPRP/12676	EPA 6010	ICP/11566
92148500002	SW-2	EPA 3010	MPRP/12676	EPA 6010	ICP/11566

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: FRANCIS FARM LF GWM FEB.2013
Pace Project No.: 92148500

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92148500003	BLANTON BRANCH	EPA 3010	MPRP/12676	EPA 6010	ICP/11566
92148500004	MW-6	EPA 3010	MPRP/12676	EPA 6010	ICP/11566
92148500005	MW-7	EPA 3010	MPRP/12676	EPA 6010	ICP/11566
92148500006	MW-8	EPA 3010	MPRP/12676	EPA 6010	ICP/11566
92148500007	MW-9	EPA 3010	MPRP/12676	EPA 6010	ICP/11566
92148500008	MW-10	EPA 3010	MPRP/12676	EPA 6010	ICP/11566
92148500009	MW-19	EPA 3010	MPRP/12676	EPA 6010	ICP/11566
92148500010	MW-20	EPA 3010	MPRP/12676	EPA 6010	ICP/11566
92148500011	MW-21	EPA 3010	MPRP/12676	EPA 6010	ICP/11566
92148500012	MW-1A	EPA 3010	MPRP/12677	EPA 6010	ICP/11567
92148500013	MW-4	EPA 3010	MPRP/12677	EPA 6010	ICP/11567
92148500014	MW-5	EPA 3010	MPRP/12677	EPA 6010	ICP/11567
92148500015	MW-12	EPA 3010	MPRP/12677	EPA 6010	ICP/11567
92148500016	MW-13	EPA 3010	MPRP/12677	EPA 6010	ICP/11567
92148500017	MW-11	EPA 3010	MPRP/12677	EPA 6010	ICP/11567
92148500018	MW-14	EPA 3010	MPRP/12677	EPA 6010	ICP/11567
92148500019	MW-15	EPA 3010	MPRP/12677	EPA 6010	ICP/11567
92148500020	MW-2A	EPA 3010	MPRP/12687	EPA 6010	ICP/11568
92148500021	MW-3A	EPA 3010	MPRP/12687	EPA 6010	ICP/11568
92148500022	MW-16	EPA 3010	MPRP/12687	EPA 6010	ICP/11568
92148500023	MW-17	EPA 3010	MPRP/12687	EPA 6010	ICP/11568
92148500024	MW-18	EPA 3010	MPRP/12687	EPA 6010	ICP/11568
92148500026	EQUIPMENT BLANK	EPA 3010	MPRP/12687	EPA 6010	ICP/11568
92148500001	SW-1	EPA 7470	MERP/4944	EPA 7470	MERC/4816
92148500002	SW-2	EPA 7470	MERP/4944	EPA 7470	MERC/4816
92148500003	BLANTON BRANCH	EPA 7470	MERP/4944	EPA 7470	MERC/4816
92148500004	MW-6	EPA 7470	MERP/4944	EPA 7470	MERC/4816
92148500005	MW-7	EPA 7470	MERP/4945	EPA 7470	MERC/4817
92148500006	MW-8	EPA 7470	MERP/4945	EPA 7470	MERC/4817
92148500007	MW-9	EPA 7470	MERP/4945	EPA 7470	MERC/4817
92148500008	MW-10	EPA 7470	MERP/4945	EPA 7470	MERC/4817
92148500009	MW-19	EPA 7470	MERP/4945	EPA 7470	MERC/4817
92148500010	MW-20	EPA 7470	MERP/4945	EPA 7470	MERC/4817
92148500011	MW-21	EPA 7470	MERP/4945	EPA 7470	MERC/4817
92148500012	MW-1A	EPA 7470	MERP/4945	EPA 7470	MERC/4817
92148500013	MW-4	EPA 7470	MERP/4945	EPA 7470	MERC/4817
92148500014	MW-5	EPA 7470	MERP/4945	EPA 7470	MERC/4817
92148500015	MW-12	EPA 7470	MERP/4945	EPA 7470	MERC/4817
92148500016	MW-13	EPA 7470	MERP/4945	EPA 7470	MERC/4817
92148500017	MW-11	EPA 7470	MERP/4945	EPA 7470	MERC/4817
92148500018	MW-14	EPA 7470	MERP/4945	EPA 7470	MERC/4817
92148500019	MW-15	EPA 7470	MERP/4951	EPA 7470	MERC/4822
92148500020	MW-2A	EPA 7470	MERP/4951	EPA 7470	MERC/4822
92148500021	MW-3A	EPA 7470	MERP/4951	EPA 7470	MERC/4822
92148500022	MW-16	EPA 7470	MERP/4951	EPA 7470	MERC/4822
92148500023	MW-17	EPA 7470	MERP/4951	EPA 7470	MERC/4822

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: FRANCIS FARM LF GWM FEB.2013
Pace Project No.: 92148500

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92148500024	MW-18	EPA 7470	MERP/4951	EPA 7470	MERC/4822
92148500026	EQUIPMENT BLANK	EPA 7470	MERP/4951	EPA 7470	MERC/4822
92148500001	SW-1	EPA 8260	MSV/22090		
92148500002	SW-2	EPA 8260	MSV/22090		
92148500003	BLANTON BRANCH	EPA 8260	MSV/22090		
92148500004	MW-6	EPA 8260	MSV/22090		
92148500005	MW-7	EPA 8260	MSV/22090		
92148500006	MW-8	EPA 8260	MSV/22090		
92148500007	MW-9	EPA 8260	MSV/22090		
92148500008	MW-10	EPA 8260	MSV/22090		
92148500009	MW-19	EPA 8260	MSV/22090		
92148500010	MW-20	EPA 8260	MSV/22090		
92148500011	MW-21	EPA 8260	MSV/22090		
92148500012	MW-1A	EPA 8260	MSV/22121		
92148500013	MW-4	EPA 8260	MSV/22121		
92148500014	MW-5	EPA 8260	MSV/22121		
92148500015	MW-12	EPA 8260	MSV/22121		
92148500016	MW-13	EPA 8260	MSV/22121		
92148500017	MW-11	EPA 8260	MSV/22121		
92148500018	MW-14	EPA 8260	MSV/22120		
92148500019	MW-15	EPA 8260	MSV/22120		
92148500020	MW-2A	EPA 8260	MSV/22137		
92148500021	MW-3A	EPA 8260	MSV/22137		
92148500022	MW-16	EPA 8260	MSV/22137		
92148500023	MW-17	EPA 8260	MSV/22137		
92148500024	MW-18	EPA 8260	MSV/22137		
92148500025	TRAVEL BLANK	EPA 8260	MSV/22137		
92148500026	EQUIPMENT BLANK	EPA 8260	MSV/22137		
92148500004	MW-6	SM 4500-CN-E	WETA/14604		
92148500005	MW-7	SM 4500-CN-E	WETA/14604		
92148500006	MW-8	SM 4500-CN-E	WETA/14604		
92148500007	MW-9	SM 4500-CN-E	WETA/14604		
92148500008	MW-10	SM 4500-CN-E	WETA/14604		
92148500009	MW-19	SM 4500-CN-E	WETA/14604		
92148500010	MW-20	SM 4500-CN-E	WETA/14604		
92148500011	MW-21	SM 4500-CN-E	WETA/14605		
92148500012	MW-1A	SM 4500-CN-E	WETA/14605		
92148500013	MW-4	SM 4500-CN-E	WETA/14605		
92148500014	MW-5	SM 4500-CN-E	WETA/14605		
92148500015	MW-12	SM 4500-CN-E	WETA/14605		
92148500016	MW-13	SM 4500-CN-E	WETA/14634		
92148500017	MW-11	SM 4500-CN-E	WETA/14634		
92148500018	MW-14	SM 4500-CN-E	WETA/14634		
92148500019	MW-15	SM 4500-CN-E	WETA/14634		
92148500020	MW-2A	SM 4500-CN-E	WETA/14635		

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www.pacelabs.com

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Pace Analytical Services, Inc.
2225 Riverside Dr.
Asheville, NC 28804
(828)254-7176

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

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: FRANCIS FARM LF GWM FEB.2013
Pace Project No.: 92148500

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92148500021	**MW-3A**	SM 4500-CN-E	WETA/14666		
92148500022	**MW-16**	SM 4500-CN-E	WETA/14666		
92148500023	**MW-17**	SM 4500-CN-E	WETA/14666		
92148500024	**MW-18**	SM 4500-CN-E	WETA/14666		

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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

1637581

Section A Required Client Information:

Company: Maywood Co
Address:
Email To:
Phone: 617-2042 Fax:
Requested Due Date/TAT:

Section B Required Project Information:

Report To: Stephen King
Copy To:
Purchase Order No.:
Project Name: Francis Farm LF SW 1
Project Number:

Section C Invoice Information:

Attention:
Company Name:
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	Composite Start TIME	Composite End/Grab DATE	Composite End/Grab TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test (Y/N)	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	SW-1					2-18-13	1445		4			1	3					pH Total Solids Tds		92148500
2	SW-2					2-18	1505		4			1	3					VOC		001
3	BLANTON BRANCH					2-18	1515		4			1	3					Metals		002
4																				003
5																				
6																				
7																				
8																				
9																				
10																				
11																				
12																				

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME
		2-18-13	1520	[signature] las.	2-18-13	1520
	[signature] las.	2-18-13	1915	[signature]	2/19/13	0930

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

ORIGINAL

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: MARK L. SWANN

SIGNATURE of SAMPLER: [signature] las. DATE Signed (MM/DD/YY): 2-18-13

*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.

F-ALL-Q-020rev.07, 15-May-2007

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CHAIN-OF-CUSTODY / Analytical Request Document

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Page: 2 of

1613448

Section A Required Client Information:

Company: HAYWOOD CO
Address:
Email To:
Phone: Fax:
Requested Due Date/TAT:

Section B Required Project Information:

Report To: Stephen King
Copy To:
Purchase Order No.:
Project Name: FRANCIS FARM MWS
Project Number:

Section C Invoice Information:

Attention:
Company Name:
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

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

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

Requested Analysis Filtered (Y/N)

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED Composite Start DATE	Composite Start TIME	Composite End/GRAB DATE	Composite End/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test Y/N: FLD	Static H_2O	VOC 8260 II	Mn, Fe, 13	8021	Cr-	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D. 92148500
1	MW-6					2-18	1535		7	2		1	3	1				Y	Y	Y	Y	X	X		-004
2	MW-7						1555		7	2		1	3	1				X	X	X	X	X	X		-005
3	MW-8						1615		7	2		1	3	1				Y	X	X	X	X	X		-006
4	MW-9						1630		7	2		1	3	1				Y	X	X	X	X	X		-007
5	MW-10						1645		7	2		1	3	1				Y	X	X	Y	X	X		-008
6	MW-19						1720		7	2		1	3	1				X	X	X	Y	X	X		-009
7	MW-20						1750		7	2		1	3	1				Y	X	X	X	X	X		-010
8	MW-21						1805		7	2		1	3	1				X	X	X	X	X	X		-011
9																									
10																									
11																									
12																									

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
		2-18-13	1820	[signature]	2-18-13	1820				
	[signature]	2-18-13	1915	[signature]	2/19	1915 0930	3.6	Y	N	Y

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

ORIGINAL

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: MARK P. SWANN

SIGNATURE of SAMPLER: [signature] DATE Signed (MM/DD/YY): 2-18-13

*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.

Pace Analytical www.pacelabs.com	Document Name: **Sample Condition Upon Receipt (SCUR)**	Document Revised: May 30, 2012
	Document No.: F-ASV-CS-003-rev.08	

WO# : 92148500

92148500

Client Name: Harwood 6 P

Where Received: ☐ Huntersville ☑ Asheville ☐ Eden ☐ Raleigh

Courier (Circle): Fed Ex UPS USPS Client Commercial Pace Other

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

Optional: Proj. Due Date:

Packing Material: ☐ Bubble Wrap ☑ Bubble Bags ☐ None ☐ Other

Circle Thermometer Used: IR Gun#2 - 80344039 **Type of Ice:** Wet Blue None ☐ Samples on ice, cooling process has begun

IR Gun Back Up- 111565135

Temp Correction Factor: Add / Subtract 0.1 C

Corrected Cooler Temp.: 3.6 C **Biological Tissue is Frozen:** Yes No N/A

Temp should be above freezing to 6°C

Date and Initials of person examining contents: DM 2/14

		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:	☑Yes ☐No ☐N/A	12.
-Includes date/time/ID/Analysis Matrix: WT		
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	DM
exceptions: VOA, coliform, TOC, O&G, WI-DRO (water)	☐Yes ☐No	Initial when completed
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: DM Date: 3/6 **SRF Review:** DM Date: 3/6

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)

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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: 3 of

1613450

Section A Required Client Information:

Company: HASWOOD Co	
Address:	
Email To:	
Phone:	Fax:
Requested Due Date/TAT:	

Section B Required Project Information:

Report To: Stephen King	
Copy To:	
Purchase Order No.:	
Project Name: FRANCIS FARM MW-1	
Project Number:	

Section C Invoice Information:

Attention:	
Company Name:	
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

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

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

Requested Analysis Filtered (Y/N)

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	Analysis Test: FID	Styrene	VOC	Methane	8081	Cr-	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D. 92148500
1	MW-1A					2-19-13	1605		7	2		1	3	1				Y	Y	X	Y	X	Y		-012 ~~001~~
2	MW-4					2-19	1630		7	2		1	3	1				Y	Y	Y	X	Y	Y		-013 ~~002~~
3	MW-5					2-19	1645		7	2		1	3	1				Y	X	X	Y	X	Y		-014 ~~003~~
4	MW-12					2-19	1710		7	2		1	3	1				X	X	Y	X	Y	Y		-015 ~~004~~
5	MW 13					2-19	1730		7	2		1	3	1				X	Y	X	X	X	X		-016 ~~005~~
6																									
7																									
8																									
9																									
10																									
11																									
12																									

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
		2-19-13	1800	[signature] Pace	2-19-13	1800				
	[signature] Pace	2-19-13	1840	[signature]	2/19/13	0800	4.1	Y	N	Y

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

ORIGINAL

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: MARK P. SWANT

SIGNATURE of SAMPLER: [signature] DATE Signed (MM/DD/YY): 2-19-13

*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.

F-ALL-Q-020rev.07, 15-May-2007

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CHAIN-OF-CUSTODY / Analytical Request Document

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Page: 4 of

1613451

Section A Required Client Information:

Company: Flatwood Co
Address:
Email To:
Phone: Fax:
Requested Due Date/TAT:

Section B Required Project Information:

Report To: Stephen King
Copy To:
Purchase Order No.:
Project Name: Frances Farm MW-1
Project Number:

Section C Invoice Information:

Attention:
Company Name:
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

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

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

Requested Analysis Filtered (Y/N)

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	Analysis Test (Y/N): FLD	Stat L	VOL	Mercury	8081	CN-	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	MW-11					2-20-13	1120		7	2		1	3	1				Y	Y	Y	Y	Y	Y		92148500-017
2	MW-14					2-20	1035		7	2		1	3	1				Y	Y	Y	Y	Y	Y		-018
3	MW 15					2-20	1055		7	2		1	3	1				Y	Y	Y	Y	Y	Y		-019
4																									
5																									
6																									
7																									
8																									
9																									
10																									
11																									
12																									

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME
		2-20-13	1130	[signature] Cas	2-20-13	1130
	[signature] Cas	2-20-13	1315	[signature]	2/20	1715

SAMPLE CONDITIONS

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

ORIGINAL

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: MARK R. SWANN

SIGNATURE of SAMPLER: [signature] Cas

DATE Signed (MM/DD/YY): 2-20-13

*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.

F-ALL-Q-020rev.07, 15-May-2007

Pace Analytical® www.pacelabs.com	Document Name: **Sample Condition Upon Receipt (SCUR)** Document No.: F-ASV-CS-003-rev.08	Document Revised: May 30, 2012

WO#: 92148500

92148500

Client Name: Hargrove 6 P

Where Received: ☐ Huntersville ☑ Asheville ☐ Eden ☐ Raleigh

Courier (Circle): Fed Ex UPS USPS Client Commercial Pace Other_____

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

Optional: Proj. Due Date:

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

Circle Thermometer Used: IR Gun #2 - 80344039 **Type of Ice:** Wet Blue None ☑ Samples on ice, cooling process has begun

IR Gun Back Up- 111565135

Temp Correction Factor: Add/Subtract 0.1 C

Corrected Cooler Temp.: 4.1 C **Biological Tissue is Frozen:** Yes No N/A

Temp should be above freezing to 6°C

Date and Initials of person examining contents: TM 2/20

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: WT	☑Yes	☐No	☐N/A	12.
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	TM
exceptions: VOA, coliform, TOC, O&G, WI-DRO (water)	☑Yes	☐No		Initial when completed
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: TM **Date:** 3/6 **SRF Review:** TM **Date:** 3/6

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)

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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: 5 of 5

1637514

Section A Required Client Information:

Company: HAYWOOD
Address:
Email To:
Phone: Fax:
Requested Due Date/TAT:

Section B Required Project Information:

Report To: Stephen Kirby
Copy To:
Purchase Order No.:
Project Name: FF MW's
Project Number:

Section C Invoice Information:

Attention:
Company Name:
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	Analysis Test (Y/N): FLD	Static H2O	VOC	Mod 11	PO4	Cnt	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	MW-2A				2-21-13	2-21-13	1605		7	2		1	3	1				X	X	X	X	X	X		-020
2	MW-3A						1530		7	2		1	3	1				X	X	X	X	X	X		-021
3	MW-16						1130		7	2		1	3	1				X	X	X	X	X	X		-022
4	MW-17						1110		7	2		1	3	1				X	X	X	X	X	X		-023
5	MW 18						1055		7	2		1	3	1				X	X	X	X	X	X		-024
6																									
7	TVL BLK								2				2												-025
8	EQUIP BLK								3			1	2												-026
9																									
10																									
11																									
12																									

92148500

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME
		2-21-13	1735	[signature] Lasi	2-21-13	1735
	[signature] Lasi	2-21-13	1810	[signature]	2/21/13	1810

SAMPLE CONDITIONS

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

ORIGINAL

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: MARK L. SWAYNE

SIGNATURE of SAMPLER:

DATE Signed (MM/DD/YY): 2-21-13

*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.

Pace Analytical www.pacelabs.com	Document Name: **Sample Condition Upon Receipt (SCUR)** Document No.: F-ASV-CS-003-rev.08	Document Revised: May 30, 2012

WO# 92148500

92148500

Client Name: Harwood 6 P

Where Received: ☐ Huntersville ☑ Asheville ☐ Eden ☐ Raleigh

Courier (Circle): Fed Ex UPS USPS Client Commercial Pace Other_____

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

Optional: Proj. Due Date:

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

Circle Thermometer Used: IR Gun#2 - 80344039 **Type of Ice:** Wet Blue None ☐ Samples on ice, cooling process has begun

IR Gun Back Up- 111565135

Temp Correction Factor: Add / Subtract 0.1 C

Corrected Cooler Temp.: 4.1 C **Biological Tissue is Frozen:** Yes No N/A

Temp should be above freezing to 6°C

Date and Initials of person examining contents: DM

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:	☑Yes ☐No ☐N/A	12.
-Includes date/time/ID/Analysis Matrix: WT		
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	DM
exceptions: VOA, coliform, TOC, O&G, WI-DRO (water)	☑Yes ☐No	Initial when completed
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: DM **Date:** 3/6 **SRF Review:** DM **Date:** 3/6

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)

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March 11, 2013

Mr. Andy Alexander
Bunnell-Lammons Engineering
6004 Ponders Court
Greenville, SC 29615

RE: Project: HAYWOOD CO. FF LF GWM-FEB 2013
Pace Project No.: 92148504

Dear Mr. Alexander:
Enclosed are the analytical results for sample(s) received by the laboratory between February 19, 2013 and February 22, 2013. 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.

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

Sincerely,

Lorri Patton

Lorri Patton for
Tom Williams
tom.williams@pacelabs.com
Project Manager

Enclosures

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CERTIFICATIONS

Project: HAYWOOD CO. FF LF GWM-FEB 2013
Pace Project No.: 92148504

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 Dr., 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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SAMPLE SUMMARY

Project: HAYWOOD CO. FF LF GWM-FEB 2013
Pace Project No.: 92148504

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92148504001	**MW-19D**	Water	02/18/13 17:35	02/19/13 09:30
92148504002	**MW-20D**	Water	02/18/13 18:10	02/19/13 09:30
92148504003	**MW-14D**	Water	02/21/13 14:15	02/22/13 08:30
92148504004	**MW-16D**	Water	02/21/13 13:30	02/22/13 08:30
92148504005	**MW-22**	Water	02/21/13 10:30	02/22/13 08:30
92148504006	**MW-23**	Water	02/21/13 17:10	02/22/13 08:30
92148504007	**MW-24**	Water	02/21/13 16:40	02/22/13 08:30
92148504008	**MW-25**	Water	02/21/13 12:55	02/22/13 08:30

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SAMPLE ANALYTE COUNT

Project: HAYWOOD CO. FF LF GWM-FEB 2013
Pace Project No.: 92148504

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92148504001	**MW-19D**	EPA 8081	RES	24	PASI-C
		EPA 6010	JMW	16	PASI-A
		EPA 7470	DMB	1	PASI-A
		EPA 8260	MCK	67	PASI-C
		SM 4500-CN-E	JDA	1	PASI-A
92148504002	**MW-20D**	EPA 8081	RES	24	PASI-C
		EPA 6010	JMW	16	PASI-A
		EPA 7470	DMB	1	PASI-A
		EPA 8260	MCK	67	PASI-C
		SM 4500-CN-E	JDA	1	PASI-A
92148504003	**MW-14D**	EPA 8081	RES	24	PASI-C
		EPA 6010	JMW	16	PASI-A
		EPA 7470	DMB	1	PASI-A
		EPA 8260	MCK	67	PASI-C
		SM 4500-CN-E	EWS	1	PASI-A
92148504004	**MW-16D**	EPA 8081	RES	24	PASI-C
		EPA 6010	JMW	16	PASI-A
		EPA 7470	DMB	1	PASI-A
		EPA 8260	MCK	67	PASI-C
		SM 4500-CN-E	EWS	1	PASI-A
92148504005	**MW-22**	EPA 8081	RES	24	PASI-C
		EPA 6010	JMW	16	PASI-A
		EPA 7470	DMB	1	PASI-A
		EPA 8260	MCK	67	PASI-C
		SM 4500-CN-E	EWS	1	PASI-A
92148504006	**MW-23**	EPA 8081	RES	24	PASI-C
		EPA 6010	JMW	16	PASI-A
		EPA 7470	DMB	1	PASI-A
		EPA 8260	MCK	67	PASI-C
		SM 4500-CN-E	EWS	1	PASI-A
92148504007	**MW-24**	EPA 8081	RES	24	PASI-C
		EPA 6010	JMW	16	PASI-A
		EPA 7470	DMB	1	PASI-A
		EPA 8260	MCK	67	PASI-C
		SM 4500-CN-E	EWS	1	PASI-A
92148504008	**MW-25**	EPA 8081	RES	24	PASI-C
		EPA 6010	JMW	16	PASI-A

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SAMPLE ANALYTE COUNT

Project: HAYWOOD CO. FF LF GWM-FEB 2013
Pace Project No.: 92148504

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		EPA 7470	DMB	1	PASI-A
		EPA 8260	MCK	67	PASI-C
		SM 4500-CN-E	EWS	1	PASI-A

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ANALYTICAL RESULTS

Project: HAYWOOD CO. FF LF GWM-FEB 2013
Pace Project No.: 92148504

Sample: MW-19D **Lab ID: 92148504001** Collected: 02/18/13 17:35 Received: 02/19/13 09:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Monitoring Well Data	Analytical Method:								
Collected By	**MPS**				1		02/28/13 17:14		
Collected Date	**2/18/13**				1		02/28/13 17:14		
Collected Time	**17:35**				1		02/28/13 17:14		
Field pH	**6.2**	Std. Units	0.10	0.10	1		02/28/13 17:14		
Field Temperature	**11.9**	deg C	0.50	0.50	1		02/28/13 17:14		
Static Water Level	**5.75**	feet			1		02/28/13 17:14		
Field Specific Conductance	**611**	umhos/cm	1.0	1.0	1		02/28/13 17:14		
Turbidity	**9.23**	NTU	1.0	1.0	1		02/28/13 17:14		
8081 Organochlorine Pesticides	Analytical Method: EPA 8081 Preparation Method: EPA 3510								
Aldrin	ND	ug/L	0.050	0.050	1	02/25/13 14:30	03/05/13 07:02	309-00-2	
alpha-BHC	ND	ug/L	0.050	0.050	1	02/25/13 14:30	03/05/13 07:02	319-84-6	
beta-BHC	ND	ug/L	0.050	0.050	1	02/25/13 14:30	03/05/13 07:02	319-85-7	
delta-BHC	ND	ug/L	0.050	0.050	1	02/25/13 14:30	03/05/13 07:02	319-86-8	
gamma-BHC (Lindane)	**0.061**	ug/L	0.050	0.050	1	02/25/13 14:30	03/05/13 07:02	58-89-9	
Chlordane (Technical)	ND	ug/L	0.20	0.20	1	02/25/13 14:30	03/05/13 07:02	57-74-9	
4,4'-DDD	ND	ug/L	0.050	0.050	1	02/25/13 14:30	03/05/13 07:02	72-54-8	
4,4'-DDE	ND	ug/L	0.050	0.050	1	02/25/13 14:30	03/05/13 07:02	72-55-9	
4,4'-DDT	ND	ug/L	0.050	0.050	1	02/25/13 14:30	03/05/13 07:02	50-29-3	
Dieldrin	ND	ug/L	0.050	0.050	1	02/25/13 14:30	03/05/13 07:02	60-57-1	
Endosulfan I	ND	ug/L	0.050	0.050	1	02/25/13 14:30	03/05/13 07:02	959-98-8	
Endosulfan II	ND	ug/L	0.050	0.050	1	02/25/13 14:30	03/05/13 07:02	33213-65-9	
Endosulfan sulfate	ND	ug/L	0.050	0.050	1	02/25/13 14:30	03/05/13 07:02	1031-07-8	
Endrin	ND	ug/L	0.050	0.050	1	02/25/13 14:30	03/05/13 07:02	72-20-8	
Endrin aldehyde	ND	ug/L	0.050	0.050	1	02/25/13 14:30	03/05/13 07:02	7421-93-4	
Endrin ketone	ND	ug/L	0.050	0.050	1	02/25/13 14:30	03/05/13 07:02	53494-70-5	
Heptachlor	ND	ug/L	0.050	0.050	1	02/25/13 14:30	03/05/13 07:02	76-44-8	
Heptachlor epoxide	ND	ug/L	0.050	0.050	1	02/25/13 14:30	03/05/13 07:02	1024-57-3	
Hexachlorobenzene	ND	ug/L	0.050	0.050	1	02/25/13 14:30	03/05/13 07:02	118-74-1	
Methoxychlor	ND	ug/L	0.15	0.15	1	02/25/13 14:30	03/05/13 07:02	72-43-5	
Mirex	ND	ug/L	0.15	0.15	1	02/25/13 14:30	03/05/13 07:02	2385-85-5	
Toxaphene	ND	ug/L	0.20	0.20	1	02/25/13 14:30	03/05/13 07:02	8001-35-2	
Surrogates									
Tetrachloro-m-xylene (S)	92	%	20-130		1	02/25/13 14:30	03/05/13 07:02	877-09-8	
Decachlorobiphenyl (S)	46	%	20-130		1	02/25/13 14:30	03/05/13 07:02	2051-24-3	
6010 ICP Groundwater	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Antimony	ND	ug/L	5.0	5.0	1	02/22/13 20:35	02/24/13 13:18	7440-36-0	
Arsenic	ND	ug/L	10.0	5.0	1	02/22/13 20:35	02/24/13 13:18	7440-38-2	
Barium	**265**	ug/L	5.0	5.0	1	02/22/13 20:35	02/24/13 13:18	7440-39-3	
Beryllium	ND	ug/L	1.0	1.0	1	02/22/13 20:35	02/24/13 13:18	7440-41-7	
Cadmium	ND	ug/L	1.0	1.0	1	02/22/13 20:35	02/24/13 13:18	7440-43-9	
Chromium	ND	ug/L	5.0	5.0	1	02/22/13 20:35	02/24/13 13:18	7440-47-3	
Cobalt	ND	ug/L	5.0	5.0	1	02/22/13 20:35	02/24/13 13:18	7440-48-4	
Copper	ND	ug/L	5.0	5.0	1	02/22/13 20:35	02/24/13 13:18	7440-50-8	
Lead	ND	ug/L	5.0	5.0	1	02/22/13 20:35	02/24/13 13:18	7439-92-1	

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ANALYTICAL RESULTS

Project: HAYWOOD CO. FF LF GWM-FEB 2013
Pace Project No.: 92148504

Sample: MW-19D **Lab ID: 92148504001** Collected: 02/18/13 17:35 Received: 02/19/13 09:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 ICP Groundwater	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Nickel	**6.6**	ug/L	5.0	5.0	1	02/22/13 20:35	02/24/13 13:18	7440-02-0	
Selenium	ND	ug/L	10.0	10.0	1	02/22/13 20:35	02/24/13 13:18	7782-49-2	
Silver	ND	ug/L	5.0	5.0	1	02/22/13 20:35	02/24/13 13:18	7440-22-4	
Thallium	ND	ug/L	5.4	5.4	1	02/22/13 20:35	02/24/13 13:18	7440-28-0	
Tin	ND	ug/L	5.0	5.0	1	02/22/13 20:35	02/24/13 13:18	7440-31-5	
Vanadium	ND	ug/L	5.0	5.0	1	02/22/13 20:35	02/24/13 13:18	7440-62-2	
Zinc	ND	ug/L	10.0	10.0	1	02/22/13 20:35	02/24/13 13:18	7440-66-6	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470								
Mercury	ND	ug/L	0.20	0.10	1	02/21/13 19:45	02/22/13 16:13	7439-97-6	
8260 MSV Low Level Landfill	Analytical Method: EPA 8260								
Acetone	ND	ug/L	25.0	10.0	1		02/20/13 18:50	67-64-1	
Acetonitrile	ND	ug/L	50.0	2.2	1		02/20/13 18:50	75-05-8	
Acrylonitrile	ND	ug/L	10.0	1.9	1		02/20/13 18:50	107-13-1	
Allyl chloride	ND	ug/L	2.0	1.5	1		02/20/13 18:50	107-05-1	
Benzene	ND	ug/L	1.0	0.25	1		02/20/13 18:50	71-43-2	
Bromochloromethane	ND	ug/L	1.0	0.17	1		02/20/13 18:50	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	0.18	1		02/20/13 18:50	75-27-4	
Bromoform	ND	ug/L	1.0	0.26	1		02/20/13 18:50	75-25-2	
Bromomethane	ND	ug/L	2.0	0.29	1		02/20/13 18:50	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	0.96	1		02/20/13 18:50	78-93-3	
Carbon disulfide	ND	ug/L	2.0	1.2	1		02/20/13 18:50	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.25	1		02/20/13 18:50	56-23-5	
Chlorobenzene	**2.3**	ug/L	1.0	0.23	1		02/20/13 18:50	108-90-7	
Chloroethane	**2.1**	ug/L	1.0	0.54	1		02/20/13 18:50	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		02/20/13 18:50	67-66-3	
Chloromethane	ND	ug/L	1.0	0.11	1		02/20/13 18:50	74-87-3	
Chloroprene	ND	ug/L	5.0	0.27	1		02/20/13 18:50	126-99-8	
1,2-Dibromo-3-chloropropane	ND	ug/L	5.0	2.5	1		02/20/13 18:50	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		02/20/13 18:50	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.27	1		02/20/13 18:50	106-93-4	
Dibromomethane	ND	ug/L	1.0	0.21	1		02/20/13 18:50	74-95-3	
1,2-Dichlorobenzene	**3.2**	ug/L	1.0	0.30	1		02/20/13 18:50	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	0.24	1		02/20/13 18:50	541-73-1	
1,4-Dichlorobenzene	**2.7**	ug/L	1.0	0.33	1		02/20/13 18:50	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	1.0	1.0	1		02/20/13 18:50	110-57-6	
Dichlorodifluoromethane	ND	ug/L	1.0	0.21	1		02/20/13 18:50	75-71-8	
1,1-Dichloroethane	**3.4**	ug/L	1.0	0.32	1		02/20/13 18:50	75-34-3	
1,2-Dichloroethane	**3.7**	ug/L	1.0	0.12	1		02/20/13 18:50	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.56	1		02/20/13 18:50	75-35-4	
cis-1,2-Dichloroethene	**0.78J**	ug/L	1.0	0.19	1		02/20/13 18:50	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.49	1		02/20/13 18:50	156-60-5	
1,2-Dichloropropane	**0.86J**	ug/L	1.0	0.27	1		02/20/13 18:50	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	0.28	1		02/20/13 18:50	142-28-9	
2,2-Dichloropropane	ND	ug/L	1.0	0.13	1		02/20/13 18:50	594-20-7	

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ANALYTICAL RESULTS

Project: HAYWOOD CO. FF LF GWM-FEB 2013
Pace Project No.: 92148504

Sample: MW-19D **Lab ID: 92148504001** Collected: 02/18/13 17:35 Received: 02/19/13 09:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level Landfill	Analytical Method: EPA 8260								
1,1-Dichloropropene	ND	ug/L	1.0	0.49	1		02/20/13 18:50	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.13	1		02/20/13 18:50	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.26	1		02/20/13 18:50	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.30	1		02/20/13 18:50	100-41-4	
Ethyl methacrylate	ND	ug/L	1.0	0.20	1		02/20/13 18:50	97-63-2	
2-Hexanone	ND	ug/L	5.0	0.46	1		02/20/13 18:50	591-78-6	
Iodomethane	ND	ug/L	5.0	0.32	1		02/20/13 18:50	74-88-4	
Isobutanol	ND	ug/L	100	35.0	1		02/20/13 18:50	78-83-1	
Methacrylonitrile	ND	ug/L	10.0	0.93	1		02/20/13 18:50	126-98-7	
Methylene Chloride	ND	ug/L	1.0	0.97	1		02/20/13 18:50	75-09-2	
Methyl methacrylate	ND	ug/L	2.0	2.0	1		02/20/13 18:50	80-62-6	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	0.33	1		02/20/13 18:50	108-10-1	
Naphthalene	ND	ug/L	1.0	0.24	1		02/20/13 18:50	91-20-3	
Propionitrile	ND	ug/L	20.0	3.6	1		02/20/13 18:50	107-12-0	
Styrene	ND	ug/L	1.0	0.26	1		02/20/13 18:50	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	0.33	1		02/20/13 18:50	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.40	1		02/20/13 18:50	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		02/20/13 18:50	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		02/20/13 18:50	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		02/20/13 18:50	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.29	1		02/20/13 18:50	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.47	1		02/20/13 18:50	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	0.20	1		02/20/13 18:50	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	0.41	1		02/20/13 18:50	96-18-4	
Vinyl acetate	ND	ug/L	2.0	0.35	1		02/20/13 18:50	108-05-4	
Vinyl chloride	ND	ug/L	1.0	0.62	1		02/20/13 18:50	75-01-4	
Xylene (Total)	ND	ug/L	2.0	0.66	1		02/20/13 18:50	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	0.66	1		02/20/13 18:50	179601-23-1	
o-Xylene	ND	ug/L	1.0	0.23	1		02/20/13 18:50	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	100	%	70-130		1		02/20/13 18:50	460-00-4	
Dibromofluoromethane (S)	112	%	70-130		1		02/20/13 18:50	1868-53-7	
1,2-Dichloroethane-d4 (S)	106	%	70-130		1		02/20/13 18:50	17060-07-0	
Toluene-d8 (S)	99	%	70-130		1		02/20/13 18:50	2037-26-5	
4500CNE Cyanide, Total	Analytical Method: SM 4500-CN-E								
Cyanide	ND	mg/L	0.0050	0.0050	1		02/23/13 14:53	57-12-5	

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ANALYTICAL RESULTS

Project: HAYWOOD CO. FF LF GWM-FEB 2013
Pace Project No.: 92148504

Sample: MW-20D **Lab ID: 92148504002** Collected: 02/18/13 18:10 Received: 02/19/13 09:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Monitoring Well Data	Analytical Method:								
Collected By	**MPS**				1		02/28/13 17:16		
Collected Date	**2/18/13**				1		02/28/13 17:16		
Collected Time	**18:10**				1		02/28/13 17:16		
Field pH	**6.7**	Std. Units	0.10	0.10	1		02/28/13 17:16		
Field Temperature	**11.4**	deg C	0.50	0.50	1		02/28/13 17:16		
Static Water Level	**0.27**	feet			1		02/28/13 17:16		
Field Specific Conductance	**84.7**	umhos/cm	1.0	1.0	1		02/28/13 17:16		
Turbidity	**27.8**	NTU	1.0	1.0	1		02/28/13 17:16		
8081 Organochlorine Pesticides	Analytical Method: EPA 8081 Preparation Method: EPA 3510								
Aldrin	ND	ug/L	0.050	0.050	1	02/25/13 14:30	03/05/13 07:20	309-00-2	
alpha-BHC	ND	ug/L	0.050	0.050	1	02/25/13 14:30	03/05/13 07:20	319-84-6	
beta-BHC	ND	ug/L	0.050	0.050	1	02/25/13 14:30	03/05/13 07:20	319-85-7	
delta-BHC	ND	ug/L	0.050	0.050	1	02/25/13 14:30	03/05/13 07:20	319-86-8	
gamma-BHC (Lindane)	ND	ug/L	0.050	0.050	1	02/25/13 14:30	03/05/13 07:20	58-89-9	
Chlordane (Technical)	ND	ug/L	0.20	0.20	1	02/25/13 14:30	03/05/13 07:20	57-74-9	
4,4'-DDD	ND	ug/L	0.050	0.050	1	02/25/13 14:30	03/05/13 07:20	72-54-8	
4,4'-DDE	ND	ug/L	0.050	0.050	1	02/25/13 14:30	03/05/13 07:20	72-55-9	
4,4'-DDT	ND	ug/L	0.050	0.050	1	02/25/13 14:30	03/05/13 07:20	50-29-3	
Dieldrin	ND	ug/L	0.050	0.050	1	02/25/13 14:30	03/05/13 07:20	60-57-1	
Endosulfan I	ND	ug/L	0.050	0.050	1	02/25/13 14:30	03/05/13 07:20	959-98-8	
Endosulfan II	ND	ug/L	0.050	0.050	1	02/25/13 14:30	03/05/13 07:20	33213-65-9	
Endosulfan sulfate	ND	ug/L	0.050	0.050	1	02/25/13 14:30	03/05/13 07:20	1031-07-8	
Endrin	ND	ug/L	0.050	0.050	1	02/25/13 14:30	03/05/13 07:20	72-20-8	
Endrin aldehyde	ND	ug/L	0.050	0.050	1	02/25/13 14:30	03/05/13 07:20	7421-93-4	
Endrin ketone	ND	ug/L	0.050	0.050	1	02/25/13 14:30	03/05/13 07:20	53494-70-5	
Heptachlor	ND	ug/L	0.050	0.050	1	02/25/13 14:30	03/05/13 07:20	76-44-8	
Heptachlor epoxide	ND	ug/L	0.050	0.050	1	02/25/13 14:30	03/05/13 07:20	1024-57-3	
Hexachlorobenzene	ND	ug/L	0.050	0.050	1	02/25/13 14:30	03/05/13 07:20	118-74-1	
Methoxychlor	ND	ug/L	0.15	0.15	1	02/25/13 14:30	03/05/13 07:20	72-43-5	
Mirex	ND	ug/L	0.15	0.15	1	02/25/13 14:30	03/05/13 07:20	2385-85-5	
Toxaphene	ND	ug/L	0.20	0.20	1	02/25/13 14:30	03/05/13 07:20	8001-35-2	
Surrogates									
Tetrachloro-m-xylene (S)	70	%	20-130		1	02/25/13 14:30	03/05/13 07:20	877-09-8	
Decachlorobiphenyl (S)	58	%	20-130		1	02/25/13 14:30	03/05/13 07:20	2051-24-3	
6010 ICP Groundwater	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Antimony	ND	ug/L	5.0	5.0	1	02/22/13 20:35	02/24/13 13:21	7440-36-0	
Arsenic	ND	ug/L	10.0	5.0	1	02/22/13 20:35	02/24/13 13:21	7440-38-2	
Barium	**54.5**	ug/L	5.0	5.0	1	02/22/13 20:35	02/24/13 13:21	7440-39-3	
Beryllium	ND	ug/L	1.0	1.0	1	02/22/13 20:35	02/24/13 13:21	7440-41-7	
Cadmium	ND	ug/L	1.0	1.0	1	02/22/13 20:35	02/24/13 13:21	7440-43-9	
Chromium	ND	ug/L	5.0	5.0	1	02/22/13 20:35	02/24/13 13:21	7440-47-3	
Cobalt	ND	ug/L	5.0	5.0	1	02/22/13 20:35	02/24/13 13:21	7440-48-4	
Copper	ND	ug/L	5.0	5.0	1	02/22/13 20:35	02/24/13 13:21	7440-50-8	
Lead	ND	ug/L	5.0	5.0	1	02/22/13 20:35	02/24/13 13:21	7439-92-1	

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ANALYTICAL RESULTS

Project: HAYWOOD CO. FF LF GWM-FEB 2013
Pace Project No.: 92148504

Sample: MW-20D **Lab ID: 92148504002** Collected: 02/18/13 18:10 Received: 02/19/13 09:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 ICP Groundwater	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Nickel	ND	ug/L	5.0	5.0	1	02/22/13 20:35	02/24/13 13:21	7440-02-0	
Selenium	ND	ug/L	10.0	10.0	1	02/22/13 20:35	02/24/13 13:21	7782-49-2	
Silver	ND	ug/L	5.0	5.0	1	02/22/13 20:35	02/24/13 13:21	7440-22-4	
Thallium	ND	ug/L	5.4	5.4	1	02/22/13 20:35	02/24/13 13:21	7440-28-0	
Tin	ND	ug/L	5.0	5.0	1	02/22/13 20:35	02/24/13 13:21	7440-31-5	
Vanadium	**5.1**	ug/L	5.0	5.0	1	02/22/13 20:35	02/24/13 13:21	7440-62-2	
Zinc	**21.4**	ug/L	10.0	10.0	1	02/22/13 20:35	02/24/13 13:21	7440-66-6	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470								
Mercury	ND	ug/L	0.20	0.10	1	02/21/13 19:45	02/22/13 16:16	7439-97-6	
8260 MSV Low Level Landfill	Analytical Method: EPA 8260								
Acetone	ND	ug/L	25.0	10.0	1		02/20/13 19:05	67-64-1	
Acetonitrile	ND	ug/L	50.0	2.2	1		02/20/13 19:05	75-05-8	
Acrylonitrile	ND	ug/L	10.0	1.9	1		02/20/13 19:05	107-13-1	
Allyl chloride	ND	ug/L	2.0	1.5	1		02/20/13 19:05	107-05-1	
Benzene	ND	ug/L	1.0	0.25	1		02/20/13 19:05	71-43-2	
Bromochloromethane	ND	ug/L	1.0	0.17	1		02/20/13 19:05	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	0.18	1		02/20/13 19:05	75-27-4	
Bromoform	ND	ug/L	1.0	0.26	1		02/20/13 19:05	75-25-2	
Bromomethane	ND	ug/L	2.0	0.29	1		02/20/13 19:05	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	0.96	1		02/20/13 19:05	78-93-3	
Carbon disulfide	ND	ug/L	2.0	1.2	1		02/20/13 19:05	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.25	1		02/20/13 19:05	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.23	1		02/20/13 19:05	108-90-7	
Chloroethane	ND	ug/L	1.0	0.54	1		02/20/13 19:05	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		02/20/13 19:05	67-66-3	
Chloromethane	ND	ug/L	1.0	0.11	1		02/20/13 19:05	74-87-3	
Chloroprene	ND	ug/L	5.0	0.27	1		02/20/13 19:05	126-99-8	
1,2-Dibromo-3-chloropropane	ND	ug/L	5.0	2.5	1		02/20/13 19:05	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		02/20/13 19:05	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.27	1		02/20/13 19:05	106-93-4	
Dibromomethane	ND	ug/L	1.0	0.21	1		02/20/13 19:05	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	0.30	1		02/20/13 19:05	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	0.24	1		02/20/13 19:05	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	0.33	1		02/20/13 19:05	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	1.0	1.0	1		02/20/13 19:05	110-57-6	
Dichlorodifluoromethane	ND	ug/L	1.0	0.21	1		02/20/13 19:05	75-71-8	
1,1-Dichloroethane	**0.97J**	ug/L	1.0	0.32	1		02/20/13 19:05	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		02/20/13 19:05	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.56	1		02/20/13 19:05	75-35-4	
cis-1,2-Dichloroethene	**0.86J**	ug/L	1.0	0.19	1		02/20/13 19:05	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.49	1		02/20/13 19:05	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.27	1		02/20/13 19:05	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	0.28	1		02/20/13 19:05	142-28-9	
2,2-Dichloropropane	ND	ug/L	1.0	0.13	1		02/20/13 19:05	594-20-7	

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ANALYTICAL RESULTS

Project: HAYWOOD CO. FF LF GWM-FEB 2013
Pace Project No.: 92148504

Sample: MW-20D **Lab ID: 92148504002** Collected: 02/18/13 18:10 Received: 02/19/13 09:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level Landfill	Analytical Method: EPA 8260								
1,1-Dichloropropene	ND	ug/L	1.0	0.49	1		02/20/13 19:05	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.13	1		02/20/13 19:05	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.26	1		02/20/13 19:05	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.30	1		02/20/13 19:05	100-41-4	
Ethyl methacrylate	ND	ug/L	1.0	0.20	1		02/20/13 19:05	97-63-2	
2-Hexanone	ND	ug/L	5.0	0.46	1		02/20/13 19:05	591-78-6	
Iodomethane	ND	ug/L	5.0	0.32	1		02/20/13 19:05	74-88-4	
Isobutanol	ND	ug/L	100	35.0	1		02/20/13 19:05	78-83-1	
Methacrylonitrile	ND	ug/L	10.0	0.93	1		02/20/13 19:05	126-98-7	
Methylene Chloride	ND	ug/L	1.0	0.97	1		02/20/13 19:05	75-09-2	
Methyl methacrylate	ND	ug/L	2.0	2.0	1		02/20/13 19:05	80-62-6	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	0.33	1		02/20/13 19:05	108-10-1	
Naphthalene	ND	ug/L	1.0	0.24	1		02/20/13 19:05	91-20-3	
Propionitrile	ND	ug/L	20.0	3.6	1		02/20/13 19:05	107-12-0	
Styrene	ND	ug/L	1.0	0.26	1		02/20/13 19:05	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	0.33	1		02/20/13 19:05	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.40	1		02/20/13 19:05	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		02/20/13 19:05	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		02/20/13 19:05	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		02/20/13 19:05	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.29	1		02/20/13 19:05	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.47	1		02/20/13 19:05	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	0.20	1		02/20/13 19:05	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	0.41	1		02/20/13 19:05	96-18-4	
Vinyl acetate	ND	ug/L	2.0	0.35	1		02/20/13 19:05	108-05-4	
Vinyl chloride	ND	ug/L	1.0	0.62	1		02/20/13 19:05	75-01-4	
Xylene (Total)	ND	ug/L	2.0	0.66	1		02/20/13 19:05	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	0.66	1		02/20/13 19:05	179601-23-1	
o-Xylene	ND	ug/L	1.0	0.23	1		02/20/13 19:05	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	98	%	70-130		1		02/20/13 19:05	460-00-4	
Dibromofluoromethane (S)	109	%	70-130		1		02/20/13 19:05	1868-53-7	
1,2-Dichloroethane-d4 (S)	104	%	70-130		1		02/20/13 19:05	17060-07-0	
Toluene-d8 (S)	98	%	70-130		1		02/20/13 19:05	2037-26-5	
4500CNE Cyanide, Total	Analytical Method: SM 4500-CN-E								
Cyanide	ND	mg/L	0.0050	0.0050	1		02/23/13 14:55	57-12-5	

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ANALYTICAL RESULTS

Project: HAYWOOD CO. FF LF GWM-FEB 2013
Pace Project No.: 92148504

Sample: MW-14D **Lab ID: 92148504003** Collected: 02/21/13 14:15 Received: 02/22/13 08:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Monitoring Well Data	Analytical Method:								
Collected By	**MPS**				1		03/06/13 14:08		
Collected Date	**2/21/13**				1		03/06/13 14:08		
Collected Time	**14:15**				1		03/06/13 14:08		
Field pH	**9.75**	Std. Units	0.10	0.10	1		03/06/13 14:08		
Field Temperature	**14.5**	deg C	0.50	0.50	1		03/06/13 14:08		
Static Water Level	**145.09**	feet			1		03/06/13 14:08		
Field Specific Conductance	**284**	umhos/cm	1.0	1.0	1		03/06/13 14:08		
Turbidity	**7.65**	NTU	1.0	1.0	1		03/06/13 14:08		
8081 Organochlorine Pesticides	Analytical Method: EPA 8081 Preparation Method: EPA 3510								
Aldrin	ND	ug/L	0.050	0.050	1	02/27/13 10:39	03/05/13 18:22	309-00-2	
alpha-BHC	ND	ug/L	0.050	0.050	1	02/27/13 10:39	03/05/13 18:22	319-84-6	
beta-BHC	ND	ug/L	0.050	0.050	1	02/27/13 10:39	03/05/13 18:22	319-85-7	
delta-BHC	ND	ug/L	0.050	0.050	1	02/27/13 10:39	03/05/13 18:22	319-86-8	
gamma-BHC (Lindane)	ND	ug/L	0.050	0.050	1	02/27/13 10:39	03/05/13 18:22	58-89-9	
Chlordane (Technical)	ND	ug/L	0.20	0.20	1	02/27/13 10:39	03/05/13 18:22	57-74-9	
4,4'-DDD	ND	ug/L	0.050	0.050	1	02/27/13 10:39	03/05/13 18:22	72-54-8	
4,4'-DDE	ND	ug/L	0.050	0.050	1	02/27/13 10:39	03/05/13 18:22	72-55-9	
4,4'-DDT	ND	ug/L	0.050	0.050	1	02/27/13 10:39	03/05/13 18:22	50-29-3	
Dieldrin	ND	ug/L	0.050	0.050	1	02/27/13 10:39	03/05/13 18:22	60-57-1	
Endosulfan I	ND	ug/L	0.050	0.050	1	02/27/13 10:39	03/05/13 18:22	959-98-8	
Endosulfan II	ND	ug/L	0.050	0.050	1	02/27/13 10:39	03/05/13 18:22	33213-65-9	
Endosulfan sulfate	ND	ug/L	0.050	0.050	1	02/27/13 10:39	03/05/13 18:22	1031-07-8	
Endrin	ND	ug/L	0.050	0.050	1	02/27/13 10:39	03/05/13 18:22	72-20-8	
Endrin aldehyde	ND	ug/L	0.050	0.050	1	02/27/13 10:39	03/05/13 18:22	7421-93-4	
Endrin ketone	ND	ug/L	0.050	0.050	1	02/27/13 10:39	03/05/13 18:22	53494-70-5	
Heptachlor	ND	ug/L	0.050	0.050	1	02/27/13 10:39	03/05/13 18:22	76-44-8	
Heptachlor epoxide	ND	ug/L	0.050	0.050	1	02/27/13 10:39	03/05/13 18:22	1024-57-3	
Hexachlorobenzene	ND	ug/L	0.050	0.050	1	02/27/13 10:39	03/05/13 18:22	118-74-1	
Methoxychlor	ND	ug/L	0.15	0.15	1	02/27/13 10:39	03/05/13 18:22	72-43-5	
Mirex	ND	ug/L	0.15	0.15	1	02/27/13 10:39	03/05/13 18:22	2385-85-5	
Toxaphene	ND	ug/L	0.20	0.20	1	02/27/13 10:39	03/05/13 18:22	8001-35-2	
Surrogates									
Tetrachloro-m-xylene (S)	89	%	20-130		1	02/27/13 10:39	03/05/13 18:22	877-09-8	
Decachlorobiphenyl (S)	33	%	20-130		1	02/27/13 10:39	03/05/13 18:22	2051-24-3	
6010 ICP Groundwater	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Antimony	ND	ug/L	5.0	5.0	1	02/23/13 13:50	02/24/13 19:51	7440-36-0	
Arsenic	ND	ug/L	10.0	5.0	1	02/23/13 13:50	02/24/13 19:51	7440-38-2	
Barium	**34.6**	ug/L	5.0	5.0	1	02/23/13 13:50	02/24/13 19:51	7440-39-3	
Beryllium	ND	ug/L	1.0	1.0	1	02/23/13 13:50	02/24/13 19:51	7440-41-7	
Cadmium	ND	ug/L	1.0	1.0	1	02/23/13 13:50	02/24/13 19:51	7440-43-9	
Chromium	ND	ug/L	5.0	5.0	1	02/23/13 13:50	02/24/13 19:51	7440-47-3	
Cobalt	ND	ug/L	5.0	5.0	1	02/23/13 13:50	02/24/13 19:51	7440-48-4	
Copper	ND	ug/L	5.0	5.0	1	02/23/13 13:50	02/24/13 19:51	7440-50-8	
Lead	ND	ug/L	5.0	5.0	1	02/23/13 13:50	02/24/13 19:51	7439-92-1	

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ANALYTICAL RESULTS

Project: HAYWOOD CO. FF LF GWM-FEB 2013
Pace Project No.: 92148504

Sample: MW-14D **Lab ID: 92148504003** Collected: 02/21/13 14:15 Received: 02/22/13 08:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 ICP Groundwater	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Nickel	ND	ug/L	5.0	5.0	1	02/23/13 13:50	02/24/13 19:51	7440-02-0	
Selenium	ND	ug/L	10.0	10.0	1	02/23/13 13:50	02/24/13 19:51	7782-49-2	
Silver	ND	ug/L	5.0	5.0	1	02/23/13 13:50	02/24/13 19:51	7440-22-4	
Thallium	ND	ug/L	5.4	5.4	1	02/23/13 13:50	02/24/13 19:51	7440-28-0	
Tin	ND	ug/L	5.0	5.0	1	02/23/13 13:50	02/24/13 19:51	7440-31-5	
Vanadium	**6.2**	ug/L	5.0	5.0	1	02/23/13 13:50	02/24/13 19:51	7440-62-2	
Zinc	ND	ug/L	10.0	10.0	1	02/23/13 13:50	02/24/13 19:51	7440-66-6	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470								
Mercury	ND	ug/L	0.20	0.10	1	02/25/13 17:45	02/28/13 15:44	7439-97-6	
8260 MSV Low Level Landfill	Analytical Method: EPA 8260								
Acetone	ND	ug/L	25.0	10.0	1		02/24/13 15:30	67-64-1	
Acetonitrile	ND	ug/L	50.0	2.2	1		02/24/13 15:30	75-05-8	
Acrylonitrile	ND	ug/L	10.0	1.9	1		02/24/13 15:30	107-13-1	
Allyl chloride	ND	ug/L	2.0	1.5	1		02/24/13 15:30	107-05-1	
Benzene	ND	ug/L	1.0	0.25	1		02/24/13 15:30	71-43-2	
Bromochloromethane	ND	ug/L	1.0	0.17	1		02/24/13 15:30	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	0.18	1		02/24/13 15:30	75-27-4	
Bromoform	ND	ug/L	1.0	0.26	1		02/24/13 15:30	75-25-2	
Bromomethane	ND	ug/L	2.0	0.29	1		02/24/13 15:30	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	0.96	1		02/24/13 15:30	78-93-3	
Carbon disulfide	**9.5**	ug/L	2.0	1.2	1		02/24/13 15:30	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.25	1		02/24/13 15:30	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.23	1		02/24/13 15:30	108-90-7	
Chloroethane	ND	ug/L	1.0	0.54	1		02/24/13 15:30	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		02/24/13 15:30	67-66-3	
Chloromethane	ND	ug/L	1.0	0.11	1		02/24/13 15:30	74-87-3	
Chloroprene	ND	ug/L	5.0	0.27	1		02/24/13 15:30	126-99-8	
1,2-Dibromo-3-chloropropane	ND	ug/L	5.0	2.5	1		02/24/13 15:30	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		02/24/13 15:30	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.27	1		02/24/13 15:30	106-93-4	
Dibromomethane	ND	ug/L	1.0	0.21	1		02/24/13 15:30	74-95-3	
1,2-Dichlorobenzene	**5.9**	ug/L	1.0	0.30	1		02/24/13 15:30	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	0.24	1		02/24/13 15:30	541-73-1	
1,4-Dichlorobenzene	**1.1**	ug/L	1.0	0.33	1		02/24/13 15:30	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	1.0	1.0	1		02/24/13 15:30	110-57-6	
Dichlorodifluoromethane	ND	ug/L	1.0	0.21	1		02/24/13 15:30	75-71-8	
1,1-Dichloroethane	ND	ug/L	1.0	0.32	1		02/24/13 15:30	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		02/24/13 15:30	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.56	1		02/24/13 15:30	75-35-4	
cis-1,2-Dichloroethene	**1.5**	ug/L	1.0	0.19	1		02/24/13 15:30	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.49	1		02/24/13 15:30	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.27	1		02/24/13 15:30	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	0.28	1		02/24/13 15:30	142-28-9	
2,2-Dichloropropane	ND	ug/L	1.0	0.13	1		02/24/13 15:30	594-20-7	

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ANALYTICAL RESULTS

Project: HAYWOOD CO. FF LF GWM-FEB 2013
Pace Project No.: 92148504

Sample: MW-14D **Lab ID: 92148504003** Collected: 02/21/13 14:15 Received: 02/22/13 08:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level Landfill	Analytical Method: EPA 8260								
1,1-Dichloropropene	ND	ug/L	1.0	0.49	1		02/24/13 15:30	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.13	1		02/24/13 15:30	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.26	1		02/24/13 15:30	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.30	1		02/24/13 15:30	100-41-4	
Ethyl methacrylate	ND	ug/L	1.0	0.20	1		02/24/13 15:30	97-63-2	
2-Hexanone	ND	ug/L	5.0	0.46	1		02/24/13 15:30	591-78-6	
Iodomethane	ND	ug/L	5.0	0.32	1		02/24/13 15:30	74-88-4	
Isobutanol	ND	ug/L	100	35.0	1		02/24/13 15:30	78-83-1	
Methacrylonitrile	ND	ug/L	10.0	0.93	1		02/24/13 15:30	126-98-7	
Methylene Chloride	ND	ug/L	1.0	0.97	1		02/24/13 15:30	75-09-2	
Methyl methacrylate	ND	ug/L	2.0	2.0	1		02/24/13 15:30	80-62-6	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	0.33	1		02/24/13 15:30	108-10-1	
Naphthalene	ND	ug/L	1.0	0.24	1		02/24/13 15:30	91-20-3	
Propionitrile	ND	ug/L	20.0	3.6	1		02/24/13 15:30	107-12-0	
Styrene	ND	ug/L	1.0	0.26	1		02/24/13 15:30	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	0.33	1		02/24/13 15:30	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.40	1		02/24/13 15:30	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		02/24/13 15:30	127-18-4	
Toluene	**0.32J**	ug/L	1.0	0.26	1		02/24/13 15:30	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		02/24/13 15:30	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.29	1		02/24/13 15:30	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.47	1		02/24/13 15:30	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	0.20	1		02/24/13 15:30	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	0.41	1		02/24/13 15:30	96-18-4	
Vinyl acetate	ND	ug/L	2.0	0.35	1		02/24/13 15:30	108-05-4	
Vinyl chloride	ND	ug/L	1.0	0.62	1		02/24/13 15:30	75-01-4	
Xylene (Total)	ND	ug/L	2.0	0.66	1		02/24/13 15:30	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	0.66	1		02/24/13 15:30	179601-23-1	
o-Xylene	ND	ug/L	1.0	0.23	1		02/24/13 15:30	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	104	%	70-130		1		02/24/13 15:30	460-00-4	
Dibromofluoromethane (S)	109	%	70-130		1		02/24/13 15:30	1868-53-7	
1,2-Dichloroethane-d4 (S)	98	%	70-130		1		02/24/13 15:30	17060-07-0	
Toluene-d8 (S)	99	%	70-130		1		02/24/13 15:30	2037-26-5	
4500CNE Cyanide, Total	Analytical Method: SM 4500-CN-E								
Cyanide	ND	mg/L	0.0050	0.0050	1		03/06/13 13:44	57-12-5	

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ANALYTICAL RESULTS

Project: HAYWOOD CO. FF LF GWM-FEB 2013
Pace Project No.: 92148504

Sample: MW-16D **Lab ID: 92148504004** Collected: 02/21/13 13:30 Received: 02/22/13 08:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Monitoring Well Data	Analytical Method:								
Collected By	**MPS**				1		03/06/13 14:09		
Collected Date	**2/21/13**				1		03/06/13 14:09		
Collected Time	**13:30**				1		03/06/13 14:09		
Field pH	**8.59**	Std. Units	0.10	0.10	1		03/06/13 14:09		
Field Temperature	**14.0**	deg C	0.50	0.50	1		03/06/13 14:09		
Static Water Level	**74.17**	feet			1		03/06/13 14:09		
Field Specific Conductance	**184.7**	umhos/cm	1.0	1.0	1		03/06/13 14:09		
Turbidity	**9.97**	NTU	1.0	1.0	1		03/06/13 14:09		
8081 Organochlorine Pesticides	Analytical Method: EPA 8081 Preparation Method: EPA 3510								
Aldrin	ND	ug/L	0.050	0.050	1	02/27/13 10:39	03/05/13 18:39	309-00-2	
alpha-BHC	ND	ug/L	0.050	0.050	1	02/27/13 10:39	03/05/13 18:39	319-84-6	
beta-BHC	ND	ug/L	0.050	0.050	1	02/27/13 10:39	03/05/13 18:39	319-85-7	
delta-BHC	ND	ug/L	0.050	0.050	1	02/27/13 10:39	03/05/13 18:39	319-86-8	
gamma-BHC (Lindane)	ND	ug/L	0.050	0.050	1	02/27/13 10:39	03/05/13 18:39	58-89-9	
Chlordane (Technical)	ND	ug/L	0.20	0.20	1	02/27/13 10:39	03/05/13 18:39	57-74-9	
4,4'-DDD	ND	ug/L	0.050	0.050	1	02/27/13 10:39	03/05/13 18:39	72-54-8	
4,4'-DDE	ND	ug/L	0.050	0.050	1	02/27/13 10:39	03/05/13 18:39	72-55-9	
4,4'-DDT	ND	ug/L	0.050	0.050	1	02/27/13 10:39	03/05/13 18:39	50-29-3	
Dieldrin	ND	ug/L	0.050	0.050	1	02/27/13 10:39	03/05/13 18:39	60-57-1	
Endosulfan I	ND	ug/L	0.050	0.050	1	02/27/13 10:39	03/05/13 18:39	959-98-8	
Endosulfan II	ND	ug/L	0.050	0.050	1	02/27/13 10:39	03/05/13 18:39	33213-65-9	
Endosulfan sulfate	ND	ug/L	0.050	0.050	1	02/27/13 10:39	03/05/13 18:39	1031-07-8	
Endrin	ND	ug/L	0.050	0.050	1	02/27/13 10:39	03/05/13 18:39	72-20-8	
Endrin aldehyde	ND	ug/L	0.050	0.050	1	02/27/13 10:39	03/05/13 18:39	7421-93-4	
Endrin ketone	ND	ug/L	0.050	0.050	1	02/27/13 10:39	03/05/13 18:39	53494-70-5	
Heptachlor	ND	ug/L	0.050	0.050	1	02/27/13 10:39	03/05/13 18:39	76-44-8	
Heptachlor epoxide	ND	ug/L	0.050	0.050	1	02/27/13 10:39	03/05/13 18:39	1024-57-3	
Hexachlorobenzene	ND	ug/L	0.050	0.050	1	02/27/13 10:39	03/05/13 18:39	118-74-1	
Methoxychlor	ND	ug/L	0.15	0.15	1	02/27/13 10:39	03/05/13 18:39	72-43-5	
Mirex	ND	ug/L	0.15	0.15	1	02/27/13 10:39	03/05/13 18:39	2385-85-5	
Toxaphene	ND	ug/L	0.20	0.20	1	02/27/13 10:39	03/05/13 18:39	8001-35-2	
Surrogates									
Tetrachloro-m-xylene (S)	88	%	20-130		1	02/27/13 10:39	03/05/13 18:39	877-09-8	
Decachlorobiphenyl (S)	30	%	20-130		1	02/27/13 10:39	03/05/13 18:39	2051-24-3	
6010 ICP Groundwater	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Antimony	ND	ug/L	5.0	5.0	1	02/23/13 13:50	02/24/13 19:54	7440-36-0	
Arsenic	ND	ug/L	10.0	5.0	1	02/23/13 13:50	02/24/13 19:54	7440-38-2	
Barium	**56.1**	ug/L	5.0	5.0	1	02/23/13 13:50	02/24/13 19:54	7440-39-3	
Beryllium	ND	ug/L	1.0	1.0	1	02/23/13 13:50	02/24/13 19:54	7440-41-7	
Cadmium	ND	ug/L	1.0	1.0	1	02/23/13 13:50	02/24/13 19:54	7440-43-9	
Chromium	**6.0**	ug/L	5.0	5.0	1	02/23/13 13:50	02/24/13 19:54	7440-47-3	
Cobalt	ND	ug/L	5.0	5.0	1	02/23/13 13:50	02/24/13 19:54	7440-48-4	
Copper	ND	ug/L	5.0	5.0	1	02/23/13 13:50	02/24/13 19:54	7440-50-8	
Lead	ND	ug/L	5.0	5.0	1	02/23/13 13:50	02/24/13 19:54	7439-92-1	

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ANALYTICAL RESULTS

Project: HAYWOOD CO. FF LF GWM-FEB 2013
Pace Project No.: 92148504

Sample: MW-16D **Lab ID: 92148504004** Collected: 02/21/13 13:30 Received: 02/22/13 08:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 ICP Groundwater	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Nickel	ND	ug/L	5.0	5.0	1	02/23/13 13:50	02/24/13 19:54	7440-02-0	
Selenium	ND	ug/L	10.0	10.0	1	02/23/13 13:50	02/24/13 19:54	7782-49-2	
Silver	ND	ug/L	5.0	5.0	1	02/23/13 13:50	02/24/13 19:54	7440-22-4	
Thallium	ND	ug/L	5.4	5.4	1	02/23/13 13:50	02/24/13 19:54	7440-28-0	
Tin	ND	ug/L	5.0	5.0	1	02/23/13 13:50	02/24/13 19:54	7440-31-5	
Vanadium	ND	ug/L	5.0	5.0	1	02/23/13 13:50	02/24/13 19:54	7440-62-2	
Zinc	ND	ug/L	10.0	10.0	1	02/23/13 13:50	02/24/13 19:54	7440-66-6	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470								
Mercury	ND	ug/L	0.20	0.10	1	02/25/13 17:45	02/28/13 15:47	7439-97-6	
8260 MSV Low Level Landfill	Analytical Method: EPA 8260								
Acetone	ND	ug/L	25.0	10.0	1		02/24/13 15:46	67-64-1	
Acetonitrile	ND	ug/L	50.0	2.2	1		02/24/13 15:46	75-05-8	
Acrylonitrile	ND	ug/L	10.0	1.9	1		02/24/13 15:46	107-13-1	
Allyl chloride	ND	ug/L	2.0	1.5	1		02/24/13 15:46	107-05-1	
Benzene	ND	ug/L	1.0	0.25	1		02/24/13 15:46	71-43-2	
Bromochloromethane	ND	ug/L	1.0	0.17	1		02/24/13 15:46	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	0.18	1		02/24/13 15:46	75-27-4	
Bromoform	ND	ug/L	1.0	0.26	1		02/24/13 15:46	75-25-2	
Bromomethane	ND	ug/L	2.0	0.29	1		02/24/13 15:46	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	0.96	1		02/24/13 15:46	78-93-3	
Carbon disulfide	ND	ug/L	2.0	1.2	1		02/24/13 15:46	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.25	1		02/24/13 15:46	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.23	1		02/24/13 15:46	108-90-7	
Chloroethane	ND	ug/L	1.0	0.54	1		02/24/13 15:46	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		02/24/13 15:46	67-66-3	
Chloromethane	ND	ug/L	1.0	0.11	1		02/24/13 15:46	74-87-3	
Chloroprene	ND	ug/L	5.0	0.27	1		02/24/13 15:46	126-99-8	
1,2-Dibromo-3-chloropropane	ND	ug/L	5.0	2.5	1		02/24/13 15:46	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		02/24/13 15:46	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.27	1		02/24/13 15:46	106-93-4	
Dibromomethane	ND	ug/L	1.0	0.21	1		02/24/13 15:46	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	0.30	1		02/24/13 15:46	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	0.24	1		02/24/13 15:46	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	0.33	1		02/24/13 15:46	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	1.0	1.0	1		02/24/13 15:46	110-57-6	
Dichlorodifluoromethane	ND	ug/L	1.0	0.21	1		02/24/13 15:46	75-71-8	
1,1-Dichloroethane	**1.1**	ug/L	1.0	0.32	1		02/24/13 15:46	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		02/24/13 15:46	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.56	1		02/24/13 15:46	75-35-4	
cis-1,2-Dichloroethene	**0.63J**	ug/L	1.0	0.19	1		02/24/13 15:46	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.49	1		02/24/13 15:46	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.27	1		02/24/13 15:46	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	0.28	1		02/24/13 15:46	142-28-9	
2,2-Dichloropropane	ND	ug/L	1.0	0.13	1		02/24/13 15:46	594-20-7	

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ANALYTICAL RESULTS

Project: HAYWOOD CO. FF LF GWM-FEB 2013
Pace Project No.: 92148504

Sample: MW-16D **Lab ID: 92148504004** Collected: 02/21/13 13:30 Received: 02/22/13 08:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level Landfill	Analytical Method: EPA 8260								
1,1-Dichloropropene	ND	ug/L	1.0	0.49	1		02/24/13 15:46	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.13	1		02/24/13 15:46	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.26	1		02/24/13 15:46	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.30	1		02/24/13 15:46	100-41-4	
Ethyl methacrylate	ND	ug/L	1.0	0.20	1		02/24/13 15:46	97-63-2	
2-Hexanone	ND	ug/L	5.0	0.46	1		02/24/13 15:46	591-78-6	
Iodomethane	ND	ug/L	5.0	0.32	1		02/24/13 15:46	74-88-4	
Isobutanol	ND	ug/L	100	35.0	1		02/24/13 15:46	78-83-1	
Methacrylonitrile	ND	ug/L	10.0	0.93	1		02/24/13 15:46	126-98-7	
Methylene Chloride	ND	ug/L	1.0	0.97	1		02/24/13 15:46	75-09-2	
Methyl methacrylate	ND	ug/L	2.0	2.0	1		02/24/13 15:46	80-62-6	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	0.33	1		02/24/13 15:46	108-10-1	
Naphthalene	ND	ug/L	1.0	0.24	1		02/24/13 15:46	91-20-3	
Propionitrile	ND	ug/L	20.0	3.6	1		02/24/13 15:46	107-12-0	
Styrene	ND	ug/L	1.0	0.26	1		02/24/13 15:46	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	0.33	1		02/24/13 15:46	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.40	1		02/24/13 15:46	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		02/24/13 15:46	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		02/24/13 15:46	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		02/24/13 15:46	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.29	1		02/24/13 15:46	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.47	1		02/24/13 15:46	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	0.20	1		02/24/13 15:46	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	0.41	1		02/24/13 15:46	96-18-4	
Vinyl acetate	ND	ug/L	2.0	0.35	1		02/24/13 15:46	108-05-4	
Vinyl chloride	ND	ug/L	1.0	0.62	1		02/24/13 15:46	75-01-4	
Xylene (Total)	ND	ug/L	2.0	0.66	1		02/24/13 15:46	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	0.66	1		02/24/13 15:46	179601-23-1	
o-Xylene	ND	ug/L	1.0	0.23	1		02/24/13 15:46	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	102	%	70-130		1		02/24/13 15:46	460-00-4	
Dibromofluoromethane (S)	109	%	70-130		1		02/24/13 15:46	1868-53-7	
1,2-Dichloroethane-d4 (S)	100	%	70-130		1		02/24/13 15:46	17060-07-0	
Toluene-d8 (S)	99	%	70-130		1		02/24/13 15:46	2037-26-5	
4500CNE Cyanide, Total	Analytical Method: SM 4500-CN-E								
Cyanide	ND	mg/L	0.0050	0.0050	1		03/06/13 13:45	57-12-5	

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ANALYTICAL RESULTS

Project: HAYWOOD CO. FF LF GWM-FEB 2013
Pace Project No.: 92148504

Sample: MW-22 **Lab ID: 92148504005** Collected: 02/21/13 10:30 Received: 02/22/13 08:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Monitoring Well Data	Analytical Method:								
Collected By	**MPS**				1		03/06/13 14:13		
Collected Date	**2/21/13**				1		03/06/13 14:13		
Collected Time	**10:30**				1		03/06/13 14:13		
Field pH	**5.8**	Std. Units	0.10	0.10	1		03/06/13 14:13		
Field Temperature	**9.8**	deg C	0.50	0.50	1		03/06/13 14:13		
Static Water Level	**1.63**	feet			1		03/06/13 14:13		
Field Specific Conductance	**75.8**	umhos/cm	1.0	1.0	1		03/06/13 14:13		
Turbidity	**9.26**	NTU	1.0	1.0	1		03/06/13 14:13		
8081 Organochlorine Pesticides	Analytical Method: EPA 8081 Preparation Method: EPA 3510								
Aldrin	ND	ug/L	0.050	0.050	1	02/27/13 10:39	03/05/13 18:57	309-00-2	
alpha-BHC	ND	ug/L	0.050	0.050	1	02/27/13 10:39	03/05/13 18:57	319-84-6	
beta-BHC	ND	ug/L	0.050	0.050	1	02/27/13 10:39	03/05/13 18:57	319-85-7	
delta-BHC	ND	ug/L	0.050	0.050	1	02/27/13 10:39	03/05/13 18:57	319-86-8	
gamma-BHC (Lindane)	ND	ug/L	0.050	0.050	1	02/27/13 10:39	03/05/13 18:57	58-89-9	
Chlordane (Technical)	ND	ug/L	0.20	0.20	1	02/27/13 10:39	03/05/13 18:57	57-74-9	
4,4'-DDD	ND	ug/L	0.050	0.050	1	02/27/13 10:39	03/05/13 18:57	72-54-8	
4,4'-DDE	ND	ug/L	0.050	0.050	1	02/27/13 10:39	03/05/13 18:57	72-55-9	
4,4'-DDT	ND	ug/L	0.050	0.050	1	02/27/13 10:39	03/05/13 18:57	50-29-3	
Dieldrin	ND	ug/L	0.050	0.050	1	02/27/13 10:39	03/05/13 18:57	60-57-1	
Endosulfan I	ND	ug/L	0.050	0.050	1	02/27/13 10:39	03/05/13 18:57	959-98-8	
Endosulfan II	ND	ug/L	0.050	0.050	1	02/27/13 10:39	03/05/13 18:57	33213-65-9	
Endosulfan sulfate	ND	ug/L	0.050	0.050	1	02/27/13 10:39	03/05/13 18:57	1031-07-8	
Endrin	ND	ug/L	0.050	0.050	1	02/27/13 10:39	03/05/13 18:57	72-20-8	
Endrin aldehyde	ND	ug/L	0.050	0.050	1	02/27/13 10:39	03/05/13 18:57	7421-93-4	
Endrin ketone	ND	ug/L	0.050	0.050	1	02/27/13 10:39	03/05/13 18:57	53494-70-5	
Heptachlor	ND	ug/L	0.050	0.050	1	02/27/13 10:39	03/05/13 18:57	76-44-8	
Heptachlor epoxide	ND	ug/L	0.050	0.050	1	02/27/13 10:39	03/05/13 18:57	1024-57-3	
Hexachlorobenzene	ND	ug/L	0.050	0.050	1	02/27/13 10:39	03/05/13 18:57	118-74-1	
Methoxychlor	ND	ug/L	0.15	0.15	1	02/27/13 10:39	03/05/13 18:57	72-43-5	
Mirex	ND	ug/L	0.15	0.15	1	02/27/13 10:39	03/05/13 18:57	2385-85-5	
Toxaphene	ND	ug/L	0.20	0.20	1	02/27/13 10:39	03/05/13 18:57	8001-35-2	
Surrogates									
Tetrachloro-m-xylene (S)	80	%	20-130		1	02/27/13 10:39	03/05/13 18:57	877-09-8	
Decachlorobiphenyl (S)	52	%	20-130		1	02/27/13 10:39	03/05/13 18:57	2051-24-3	
6010 ICP Groundwater	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Antimony	ND	ug/L	5.0	5.0	1	02/23/13 13:50	02/24/13 19:57	7440-36-0	
Arsenic	ND	ug/L	10.0	5.0	1	02/23/13 13:50	02/24/13 19:57	7440-38-2	
Barium	**103**	ug/L	5.0	5.0	1	02/23/13 13:50	02/24/13 19:57	7440-39-3	
Beryllium	ND	ug/L	1.0	1.0	1	02/23/13 13:50	02/24/13 19:57	7440-41-7	
Cadmium	ND	ug/L	1.0	1.0	1	02/23/13 13:50	02/24/13 19:57	7440-43-9	
Chromium	ND	ug/L	5.0	5.0	1	02/23/13 13:50	02/24/13 19:57	7440-47-3	
Cobalt	ND	ug/L	5.0	5.0	1	02/23/13 13:50	02/24/13 19:57	7440-48-4	
Copper	ND	ug/L	5.0	5.0	1	02/23/13 13:50	02/24/13 19:57	7440-50-8	
Lead	ND	ug/L	5.0	5.0	1	02/23/13 13:50	02/24/13 19:57	7439-92-1	

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ANALYTICAL RESULTS

Project: HAYWOOD CO. FF LF GWM-FEB 2013
Pace Project No.: 92148504

Sample: MW-22 **Lab ID: 92148504005** Collected: 02/21/13 10:30 Received: 02/22/13 08:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 ICP Groundwater	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Nickel	ND	ug/L	5.0	5.0	1	02/23/13 13:50	02/24/13 19:57	7440-02-0	
Selenium	ND	ug/L	10.0	10.0	1	02/23/13 13:50	02/24/13 19:57	7782-49-2	
Silver	ND	ug/L	5.0	5.0	1	02/23/13 13:50	02/24/13 19:57	7440-22-4	
Thallium	ND	ug/L	5.4	5.4	1	02/23/13 13:50	02/24/13 19:57	7440-28-0	
Tin	ND	ug/L	5.0	5.0	1	02/23/13 13:50	02/24/13 19:57	7440-31-5	
Vanadium	ND	ug/L	5.0	5.0	1	02/23/13 13:50	02/24/13 19:57	7440-62-2	
Zinc	ND	ug/L	10.0	10.0	1	02/23/13 13:50	02/24/13 19:57	7440-66-6	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470								
Mercury	ND	ug/L	0.20	0.10	1	02/27/13 17:55	02/28/13 13:12	7439-97-6	
8260 MSV Low Level Landfill	Analytical Method: EPA 8260								
Acetone	ND	ug/L	25.0	10.0	1		02/24/13 16:02	67-64-1	
Acetonitrile	ND	ug/L	50.0	2.2	1		02/24/13 16:02	75-05-8	
Acrylonitrile	ND	ug/L	10.0	1.9	1		02/24/13 16:02	107-13-1	
Allyl chloride	ND	ug/L	2.0	1.5	1		02/24/13 16:02	107-05-1	
Benzene	ND	ug/L	1.0	0.25	1		02/24/13 16:02	71-43-2	
Bromochloromethane	ND	ug/L	1.0	0.17	1		02/24/13 16:02	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	0.18	1		02/24/13 16:02	75-27-4	
Bromoform	ND	ug/L	1.0	0.26	1		02/24/13 16:02	75-25-2	
Bromomethane	ND	ug/L	2.0	0.29	1		02/24/13 16:02	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	0.96	1		02/24/13 16:02	78-93-3	
Carbon disulfide	ND	ug/L	2.0	1.2	1		02/24/13 16:02	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.25	1		02/24/13 16:02	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.23	1		02/24/13 16:02	108-90-7	
Chloroethane	ND	ug/L	1.0	0.54	1		02/24/13 16:02	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		02/24/13 16:02	67-66-3	
Chloromethane	ND	ug/L	1.0	0.11	1		02/24/13 16:02	74-87-3	
Chloroprene	ND	ug/L	5.0	0.27	1		02/24/13 16:02	126-99-8	
1,2-Dibromo-3-chloropropane	ND	ug/L	5.0	2.5	1		02/24/13 16:02	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		02/24/13 16:02	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.27	1		02/24/13 16:02	106-93-4	
Dibromomethane	ND	ug/L	1.0	0.21	1		02/24/13 16:02	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	0.30	1		02/24/13 16:02	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	0.24	1		02/24/13 16:02	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	0.33	1		02/24/13 16:02	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	1.0	1.0	1		02/24/13 16:02	110-57-6	
Dichlorodifluoromethane	ND	ug/L	1.0	0.21	1		02/24/13 16:02	75-71-8	
1,1-Dichloroethane	ND	ug/L	1.0	0.32	1		02/24/13 16:02	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		02/24/13 16:02	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.56	1		02/24/13 16:02	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.19	1		02/24/13 16:02	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.49	1		02/24/13 16:02	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.27	1		02/24/13 16:02	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	0.28	1		02/24/13 16:02	142-28-9	
2,2-Dichloropropane	ND	ug/L	1.0	0.13	1		02/24/13 16:02	594-20-7	

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Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS

Project: HAYWOOD CO. FF LF GWM-FEB 2013
Pace Project No.: 92148504

Sample: MW-22 **Lab ID: 92148504005** Collected: 02/21/13 10:30 Received: 02/22/13 08:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level Landfill	Analytical Method: EPA 8260								
1,1-Dichloropropene	ND	ug/L	1.0	0.49	1		02/24/13 16:02	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.13	1		02/24/13 16:02	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.26	1		02/24/13 16:02	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.30	1		02/24/13 16:02	100-41-4	
Ethyl methacrylate	ND	ug/L	1.0	0.20	1		02/24/13 16:02	97-63-2	
2-Hexanone	ND	ug/L	5.0	0.46	1		02/24/13 16:02	591-78-6	
Iodomethane	ND	ug/L	5.0	0.32	1		02/24/13 16:02	74-88-4	
Isobutanol	ND	ug/L	100	35.0	1		02/24/13 16:02	78-83-1	
Methacrylonitrile	ND	ug/L	10.0	0.93	1		02/24/13 16:02	126-98-7	
Methylene Chloride	ND	ug/L	1.0	0.97	1		02/24/13 16:02	75-09-2	
Methyl methacrylate	ND	ug/L	2.0	2.0	1		02/24/13 16:02	80-62-6	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	0.33	1		02/24/13 16:02	108-10-1	
Naphthalene	ND	ug/L	1.0	0.24	1		02/24/13 16:02	91-20-3	
Propionitrile	ND	ug/L	20.0	3.6	1		02/24/13 16:02	107-12-0	
Styrene	ND	ug/L	1.0	0.26	1		02/24/13 16:02	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	0.33	1		02/24/13 16:02	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.40	1		02/24/13 16:02	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		02/24/13 16:02	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		02/24/13 16:02	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		02/24/13 16:02	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.29	1		02/24/13 16:02	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.47	1		02/24/13 16:02	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	0.20	1		02/24/13 16:02	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	0.41	1		02/24/13 16:02	96-18-4	
Vinyl acetate	ND	ug/L	2.0	0.35	1		02/24/13 16:02	108-05-4	
Vinyl chloride	ND	ug/L	1.0	0.62	1		02/24/13 16:02	75-01-4	
Xylene (Total)	ND	ug/L	2.0	0.66	1		02/24/13 16:02	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	0.66	1		02/24/13 16:02	179601-23-1	
o-Xylene	ND	ug/L	1.0	0.23	1		02/24/13 16:02	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	101	%	70-130		1		02/24/13 16:02	460-00-4	
Dibromofluoromethane (S)	109	%	70-130		1		02/24/13 16:02	1868-53-7	
1,2-Dichloroethane-d4 (S)	100	%	70-130		1		02/24/13 16:02	17060-07-0	
Toluene-d8 (S)	97	%	70-130		1		02/24/13 16:02	2037-26-5	
4500CNE Cyanide, Total	Analytical Method: SM 4500-CN-E								
Cyanide	ND	mg/L	0.0050	0.0050	1		03/06/13 13:48	57-12-5	

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ANALYTICAL RESULTS

Project: HAYWOOD CO. FF LF GWM-FEB 2013
Pace Project No.: 92148504

Sample: MW-23 **Lab ID: 92148504006** Collected: 02/21/13 17:10 Received: 02/22/13 08:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Monitoring Well Data	Analytical Method:								
Collected By	**MPS**				1		03/06/13 14:14		
Collected Date	**2/21/13**				1		03/06/13 14:14		
Collected Time	**17:10**				1		03/06/13 14:14		
Field pH	**6.1**	Std. Units	0.10	0.10	1		03/06/13 14:14		
Field Temperature	**9.5**	deg C	0.50	0.50	1		03/06/13 14:14		
Static Water Level	**1.37**	feet			1		03/06/13 14:14		
Field Specific Conductance	**87.5**	umhos/cm	1.0	1.0	1		03/06/13 14:14		
Turbidity	**900**	NTU	1.0	1.0	1		03/06/13 14:14		
8081 Organochlorine Pesticides	Analytical Method: EPA 8081 Preparation Method: EPA 3510								
Aldrin	ND	ug/L	0.050	0.050	1	02/27/13 10:39	03/05/13 19:14	309-00-2	
alpha-BHC	ND	ug/L	0.050	0.050	1	02/27/13 10:39	03/05/13 19:14	319-84-6	
beta-BHC	ND	ug/L	0.050	0.050	1	02/27/13 10:39	03/05/13 19:14	319-85-7	
delta-BHC	ND	ug/L	0.050	0.050	1	02/27/13 10:39	03/05/13 19:14	319-86-8	
gamma-BHC (Lindane)	ND	ug/L	0.050	0.050	1	02/27/13 10:39	03/05/13 19:14	58-89-9	
Chlordane (Technical)	ND	ug/L	0.20	0.20	1	02/27/13 10:39	03/05/13 19:14	57-74-9	
4,4'-DDD	ND	ug/L	0.050	0.050	1	02/27/13 10:39	03/05/13 19:14	72-54-8	
4,4'-DDE	ND	ug/L	0.050	0.050	1	02/27/13 10:39	03/05/13 19:14	72-55-9	
4,4'-DDT	ND	ug/L	0.050	0.050	1	02/27/13 10:39	03/05/13 19:14	50-29-3	
Dieldrin	ND	ug/L	0.050	0.050	1	02/27/13 10:39	03/05/13 19:14	60-57-1	
Endosulfan I	ND	ug/L	0.050	0.050	1	02/27/13 10:39	03/05/13 19:14	959-98-8	
Endosulfan II	ND	ug/L	0.050	0.050	1	02/27/13 10:39	03/05/13 19:14	33213-65-9	
Endosulfan sulfate	ND	ug/L	0.050	0.050	1	02/27/13 10:39	03/05/13 19:14	1031-07-8	
Endrin	ND	ug/L	0.050	0.050	1	02/27/13 10:39	03/05/13 19:14	72-20-8	
Endrin aldehyde	ND	ug/L	0.050	0.050	1	02/27/13 10:39	03/05/13 19:14	7421-93-4	
Endrin ketone	ND	ug/L	0.050	0.050	1	02/27/13 10:39	03/05/13 19:14	53494-70-5	
Heptachlor	ND	ug/L	0.050	0.050	1	02/27/13 10:39	03/05/13 19:14	76-44-8	
Heptachlor epoxide	ND	ug/L	0.050	0.050	1	02/27/13 10:39	03/05/13 19:14	1024-57-3	
Hexachlorobenzene	ND	ug/L	0.050	0.050	1	02/27/13 10:39	03/05/13 19:14	118-74-1	
Methoxychlor	ND	ug/L	0.15	0.15	1	02/27/13 10:39	03/05/13 19:14	72-43-5	
Mirex	ND	ug/L	0.15	0.15	1	02/27/13 10:39	03/05/13 19:14	2385-85-5	
Toxaphene	ND	ug/L	0.20	0.20	1	02/27/13 10:39	03/05/13 19:14	8001-35-2	
Surrogates									
Tetrachloro-m-xylene (S)	75	%	20-130		1	02/27/13 10:39	03/05/13 19:14	877-09-8	
Decachlorobiphenyl (S)	52	%	20-130		1	02/27/13 10:39	03/05/13 19:14	2051-24-3	
6010 ICP Groundwater	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Antimony	ND	ug/L	5.0	5.0	1	02/23/13 13:50	02/24/13 20:00	7440-36-0	
Arsenic	**7.2J**	ug/L	10.0	5.0	1	02/23/13 13:50	02/24/13 20:00	7440-38-2	
Barium	**1470**	ug/L	5.0	5.0	1	02/23/13 13:50	02/24/13 20:00	7440-39-3	
Beryllium	**2.5**	ug/L	1.0	1.0	1	02/23/13 13:50	02/24/13 20:00	7440-41-7	
Cadmium	**2.4**	ug/L	1.0	1.0	1	02/23/13 13:50	02/24/13 20:00	7440-43-9	
Chromium	**292**	ug/L	5.0	5.0	1	02/23/13 13:50	02/24/13 20:00	7440-47-3	
Cobalt	**72.7**	ug/L	5.0	5.0	1	02/23/13 13:50	02/24/13 20:00	7440-48-4	
Copper	**207**	ug/L	5.0	5.0	1	02/23/13 13:50	02/24/13 20:00	7440-50-8	
Lead	**5.4**	ug/L	5.0	5.0	1	02/23/13 13:50	02/24/13 20:00	7439-92-1	

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ANALYTICAL RESULTS

Project: HAYWOOD CO. FF LF GWM-FEB 2013
Pace Project No.: 92148504

Sample: MW-23 **Lab ID: 92148504006** Collected: 02/21/13 17:10 Received: 02/22/13 08:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 ICP Groundwater	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Nickel	**104**	ug/L	5.0	5.0	1	02/23/13 13:50	02/24/13 20:00	7440-02-0	
Selenium	ND	ug/L	10.0	10.0	1	02/23/13 13:50	02/24/13 20:00	7782-49-2	
Silver	ND	ug/L	5.0	5.0	1	02/23/13 13:50	02/24/13 20:00	7440-22-4	
Thallium	ND	ug/L	5.4	5.4	1	02/23/13 13:50	02/24/13 20:00	7440-28-0	
Tin	ND	ug/L	5.0	5.0	1	02/23/13 13:50	02/24/13 20:00	7440-31-5	
Vanadium	**393**	ug/L	5.0	5.0	1	02/23/13 13:50	02/24/13 20:00	7440-62-2	
Zinc	**195**	ug/L	10.0	10.0	1	02/23/13 13:50	02/24/13 20:00	7440-66-6	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470								
Mercury	ND	ug/L	0.20	0.10	1	02/27/13 17:55	02/28/13 13:14	7439-97-6	
8260 MSV Low Level Landfill	Analytical Method: EPA 8260								
Acetone	ND	ug/L	25.0	10.0	1		02/24/13 16:17	67-64-1	
Acetonitrile	ND	ug/L	50.0	2.2	1		02/24/13 16:17	75-05-8	
Acrylonitrile	ND	ug/L	10.0	1.9	1		02/24/13 16:17	107-13-1	
Allyl chloride	ND	ug/L	2.0	1.5	1		02/24/13 16:17	107-05-1	
Benzene	ND	ug/L	1.0	0.25	1		02/24/13 16:17	71-43-2	
Bromochloromethane	ND	ug/L	1.0	0.17	1		02/24/13 16:17	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	0.18	1		02/24/13 16:17	75-27-4	
Bromoform	ND	ug/L	1.0	0.26	1		02/24/13 16:17	75-25-2	
Bromomethane	ND	ug/L	2.0	0.29	1		02/24/13 16:17	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	0.96	1		02/24/13 16:17	78-93-3	
Carbon disulfide	ND	ug/L	2.0	1.2	1		02/24/13 16:17	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.25	1		02/24/13 16:17	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.23	1		02/24/13 16:17	108-90-7	
Chloroethane	ND	ug/L	1.0	0.54	1		02/24/13 16:17	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		02/24/13 16:17	67-66-3	
Chloromethane	ND	ug/L	1.0	0.11	1		02/24/13 16:17	74-87-3	
Chloroprene	ND	ug/L	5.0	0.27	1		02/24/13 16:17	126-99-8	
1,2-Dibromo-3-chloropropane	ND	ug/L	5.0	2.5	1		02/24/13 16:17	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		02/24/13 16:17	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.27	1		02/24/13 16:17	106-93-4	
Dibromomethane	ND	ug/L	1.0	0.21	1		02/24/13 16:17	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	0.30	1		02/24/13 16:17	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	0.24	1		02/24/13 16:17	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	0.33	1		02/24/13 16:17	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	1.0	1.0	1		02/24/13 16:17	110-57-6	
Dichlorodifluoromethane	ND	ug/L	1.0	0.21	1		02/24/13 16:17	75-71-8	
1,1-Dichloroethane	ND	ug/L	1.0	0.32	1		02/24/13 16:17	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		02/24/13 16:17	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.56	1		02/24/13 16:17	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.19	1		02/24/13 16:17	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.49	1		02/24/13 16:17	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.27	1		02/24/13 16:17	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	0.28	1		02/24/13 16:17	142-28-9	
2,2-Dichloropropane	ND	ug/L	1.0	0.13	1		02/24/13 16:17	594-20-7	

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ANALYTICAL RESULTS

Project: HAYWOOD CO. FF LF GWM-FEB 2013
Pace Project No.: 92148504

Sample: MW-23 **Lab ID: 92148504006** Collected: 02/21/13 17:10 Received: 02/22/13 08:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level Landfill	Analytical Method: EPA 8260								
1,1-Dichloropropene	ND	ug/L	1.0	0.49	1		02/24/13 16:17	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.13	1		02/24/13 16:17	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.26	1		02/24/13 16:17	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.30	1		02/24/13 16:17	100-41-4	
Ethyl methacrylate	ND	ug/L	1.0	0.20	1		02/24/13 16:17	97-63-2	
2-Hexanone	ND	ug/L	5.0	0.46	1		02/24/13 16:17	591-78-6	
Iodomethane	ND	ug/L	5.0	0.32	1		02/24/13 16:17	74-88-4	
Isobutanol	ND	ug/L	100	35.0	1		02/24/13 16:17	78-83-1	
Methacrylonitrile	ND	ug/L	10.0	0.93	1		02/24/13 16:17	126-98-7	
Methylene Chloride	ND	ug/L	1.0	0.97	1		02/24/13 16:17	75-09-2	
Methyl methacrylate	ND	ug/L	2.0	2.0	1		02/24/13 16:17	80-62-6	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	0.33	1		02/24/13 16:17	108-10-1	
Naphthalene	ND	ug/L	1.0	0.24	1		02/24/13 16:17	91-20-3	
Propionitrile	ND	ug/L	20.0	3.6	1		02/24/13 16:17	107-12-0	
Styrene	ND	ug/L	1.0	0.26	1		02/24/13 16:17	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	0.33	1		02/24/13 16:17	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.40	1		02/24/13 16:17	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		02/24/13 16:17	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		02/24/13 16:17	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		02/24/13 16:17	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.29	1		02/24/13 16:17	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.47	1		02/24/13 16:17	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	0.20	1		02/24/13 16:17	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	0.41	1		02/24/13 16:17	96-18-4	
Vinyl acetate	ND	ug/L	2.0	0.35	1		02/24/13 16:17	108-05-4	
Vinyl chloride	ND	ug/L	1.0	0.62	1		02/24/13 16:17	75-01-4	
Xylene (Total)	ND	ug/L	2.0	0.66	1		02/24/13 16:17	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	0.66	1		02/24/13 16:17	179601-23-1	
o-Xylene	ND	ug/L	1.0	0.23	1		02/24/13 16:17	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	100	%	70-130		1		02/24/13 16:17	460-00-4	
Dibromofluoromethane (S)	107	%	70-130		1		02/24/13 16:17	1868-53-7	
1,2-Dichloroethane-d4 (S)	100	%	70-130		1		02/24/13 16:17	17060-07-0	
Toluene-d8 (S)	98	%	70-130		1		02/24/13 16:17	2037-26-5	
4500CNE Cyanide, Total	Analytical Method: SM 4500-CN-E								
Cyanide	ND	mg/L	0.0050	0.0050	1		03/06/13 13:49	57-12-5	

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ANALYTICAL RESULTS

Project: HAYWOOD CO. FF LF GWM-FEB 2013
Pace Project No.: 92148504

Sample: MW-24 **Lab ID: 92148504007** Collected: 02/21/13 16:40 Received: 02/22/13 08:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Monitoring Well Data	Analytical Method:								
Collected By	**MPS**				1		03/06/13 14:15		
Collected Date	**2/21/13**				1		03/06/13 14:15		
Collected Time	**16:40**				1		03/06/13 14:15		
Field pH	**6.2**	Std. Units	0.10	0.10	1		03/06/13 14:15		
Field Temperature	**11.2**	deg C	0.50	0.50	1		03/06/13 14:15		
Static Water Level	**3.77**	feet			1		03/06/13 14:15		
Field Specific Conductance	**56.4**	umhos/cm	1.0	1.0	1		03/06/13 14:15		
Turbidity	**4.53**	NTU	1.0	1.0	1		03/06/13 14:15		
8081 Organochlorine Pesticides	Analytical Method: EPA 8081 Preparation Method: EPA 3510								
Aldrin	ND	ug/L	0.050	0.050	1	02/27/13 10:39	03/05/13 19:32	309-00-2	
alpha-BHC	ND	ug/L	0.050	0.050	1	02/27/13 10:39	03/05/13 19:32	319-84-6	
beta-BHC	ND	ug/L	0.050	0.050	1	02/27/13 10:39	03/05/13 19:32	319-85-7	
delta-BHC	ND	ug/L	0.050	0.050	1	02/27/13 10:39	03/05/13 19:32	319-86-8	
gamma-BHC (Lindane)	ND	ug/L	0.050	0.050	1	02/27/13 10:39	03/05/13 19:32	58-89-9	
Chlordane (Technical)	ND	ug/L	0.20	0.20	1	02/27/13 10:39	03/05/13 19:32	57-74-9	
4,4'-DDD	ND	ug/L	0.050	0.050	1	02/27/13 10:39	03/05/13 19:32	72-54-8	
4,4'-DDE	ND	ug/L	0.050	0.050	1	02/27/13 10:39	03/05/13 19:32	72-55-9	
4,4'-DDT	ND	ug/L	0.050	0.050	1	02/27/13 10:39	03/05/13 19:32	50-29-3	
Dieldrin	ND	ug/L	0.050	0.050	1	02/27/13 10:39	03/05/13 19:32	60-57-1	
Endosulfan I	ND	ug/L	0.050	0.050	1	02/27/13 10:39	03/05/13 19:32	959-98-8	
Endosulfan II	ND	ug/L	0.050	0.050	1	02/27/13 10:39	03/05/13 19:32	33213-65-9	
Endosulfan sulfate	ND	ug/L	0.050	0.050	1	02/27/13 10:39	03/05/13 19:32	1031-07-8	
Endrin	ND	ug/L	0.050	0.050	1	02/27/13 10:39	03/05/13 19:32	72-20-8	
Endrin aldehyde	ND	ug/L	0.050	0.050	1	02/27/13 10:39	03/05/13 19:32	7421-93-4	
Endrin ketone	ND	ug/L	0.050	0.050	1	02/27/13 10:39	03/05/13 19:32	53494-70-5	
Heptachlor	ND	ug/L	0.050	0.050	1	02/27/13 10:39	03/05/13 19:32	76-44-8	
Heptachlor epoxide	ND	ug/L	0.050	0.050	1	02/27/13 10:39	03/05/13 19:32	1024-57-3	
Hexachlorobenzene	ND	ug/L	0.050	0.050	1	02/27/13 10:39	03/05/13 19:32	118-74-1	
Methoxychlor	ND	ug/L	0.15	0.15	1	02/27/13 10:39	03/05/13 19:32	72-43-5	
Mirex	ND	ug/L	0.15	0.15	1	02/27/13 10:39	03/05/13 19:32	2385-85-5	
Toxaphene	ND	ug/L	0.20	0.20	1	02/27/13 10:39	03/05/13 19:32	8001-35-2	
Surrogates									
Tetrachloro-m-xylene (S)	70	%	20-130		1	02/27/13 10:39	03/05/13 19:32	877-09-8	
Decachlorobiphenyl (S)	46	%	20-130		1	02/27/13 10:39	03/05/13 19:32	2051-24-3	
6010 ICP Groundwater	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Antimony	ND	ug/L	5.0	5.0	1	02/23/13 13:50	02/24/13 20:04	7440-36-0	
Arsenic	ND	ug/L	10.0	5.0	1	02/23/13 13:50	02/24/13 20:04	7440-38-2	
Barium	**31.6**	ug/L	5.0	5.0	1	02/23/13 13:50	02/24/13 20:04	7440-39-3	
Beryllium	ND	ug/L	1.0	1.0	1	02/23/13 13:50	02/24/13 20:04	7440-41-7	
Cadmium	ND	ug/L	1.0	1.0	1	02/23/13 13:50	02/24/13 20:04	7440-43-9	
Chromium	ND	ug/L	5.0	5.0	1	02/23/13 13:50	02/24/13 20:04	7440-47-3	
Cobalt	ND	ug/L	5.0	5.0	1	02/23/13 13:50	02/24/13 20:04	7440-48-4	
Copper	ND	ug/L	5.0	5.0	1	02/23/13 13:50	02/24/13 20:04	7440-50-8	
Lead	ND	ug/L	5.0	5.0	1	02/23/13 13:50	02/24/13 20:04	7439-92-1	

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ANALYTICAL RESULTS

Project: HAYWOOD CO. FF LF GWM-FEB 2013
Pace Project No.: 92148504

Sample: MW-24 **Lab ID: 92148504007** Collected: 02/21/13 16:40 Received: 02/22/13 08:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 ICP Groundwater	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Nickel	ND	ug/L	5.0	5.0	1	02/23/13 13:50	02/24/13 20:04	7440-02-0	
Selenium	ND	ug/L	10.0	10.0	1	02/23/13 13:50	02/24/13 20:04	7782-49-2	
Silver	ND	ug/L	5.0	5.0	1	02/23/13 13:50	02/24/13 20:04	7440-22-4	
Thallium	ND	ug/L	5.4	5.4	1	02/23/13 13:50	02/24/13 20:04	7440-28-0	
Tin	ND	ug/L	5.0	5.0	1	02/23/13 13:50	02/24/13 20:04	7440-31-5	
Vanadium	ND	ug/L	5.0	5.0	1	02/23/13 13:50	02/24/13 20:04	7440-62-2	
Zinc	ND	ug/L	10.0	10.0	1	02/23/13 13:50	02/24/13 20:04	7440-66-6	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470								
Mercury	ND	ug/L	0.20	0.10	1	02/27/13 17:55	02/28/13 13:17	7439-97-6	
8260 MSV Low Level Landfill	Analytical Method: EPA 8260								
Acetone	ND	ug/L	25.0	10.0	1		02/24/13 16:33	67-64-1	
Acetonitrile	ND	ug/L	50.0	2.2	1		02/24/13 16:33	75-05-8	
Acrylonitrile	ND	ug/L	10.0	1.9	1		02/24/13 16:33	107-13-1	
Allyl chloride	ND	ug/L	2.0	1.5	1		02/24/13 16:33	107-05-1	
Benzene	ND	ug/L	1.0	0.25	1		02/24/13 16:33	71-43-2	
Bromochloromethane	ND	ug/L	1.0	0.17	1		02/24/13 16:33	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	0.18	1		02/24/13 16:33	75-27-4	
Bromoform	ND	ug/L	1.0	0.26	1		02/24/13 16:33	75-25-2	
Bromomethane	ND	ug/L	2.0	0.29	1		02/24/13 16:33	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	0.96	1		02/24/13 16:33	78-93-3	
Carbon disulfide	ND	ug/L	2.0	1.2	1		02/24/13 16:33	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.25	1		02/24/13 16:33	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.23	1		02/24/13 16:33	108-90-7	
Chloroethane	ND	ug/L	1.0	0.54	1		02/24/13 16:33	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		02/24/13 16:33	67-66-3	
Chloromethane	ND	ug/L	1.0	0.11	1		02/24/13 16:33	74-87-3	
Chloroprene	ND	ug/L	5.0	0.27	1		02/24/13 16:33	126-99-8	
1,2-Dibromo-3-chloropropane	ND	ug/L	5.0	2.5	1		02/24/13 16:33	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		02/24/13 16:33	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.27	1		02/24/13 16:33	106-93-4	
Dibromomethane	ND	ug/L	1.0	0.21	1		02/24/13 16:33	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	0.30	1		02/24/13 16:33	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	0.24	1		02/24/13 16:33	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	0.33	1		02/24/13 16:33	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	1.0	1.0	1		02/24/13 16:33	110-57-6	
Dichlorodifluoromethane	ND	ug/L	1.0	0.21	1		02/24/13 16:33	75-71-8	
1,1-Dichloroethane	ND	ug/L	1.0	0.32	1		02/24/13 16:33	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		02/24/13 16:33	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.56	1		02/24/13 16:33	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.19	1		02/24/13 16:33	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.49	1		02/24/13 16:33	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.27	1		02/24/13 16:33	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	0.28	1		02/24/13 16:33	142-28-9	
2,2-Dichloropropane	ND	ug/L	1.0	0.13	1		02/24/13 16:33	594-20-7	

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ANALYTICAL RESULTS

Project: HAYWOOD CO. FF LF GWM-FEB 2013
Pace Project No.: 92148504

Sample: MW-24 **Lab ID: 92148504007** Collected: 02/21/13 16:40 Received: 02/22/13 08:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level Landfill	Analytical Method: EPA 8260								
1,1-Dichloropropene	ND	ug/L	1.0	0.49	1		02/24/13 16:33	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.13	1		02/24/13 16:33	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.26	1		02/24/13 16:33	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.30	1		02/24/13 16:33	100-41-4	
Ethyl methacrylate	ND	ug/L	1.0	0.20	1		02/24/13 16:33	97-63-2	
2-Hexanone	ND	ug/L	5.0	0.46	1		02/24/13 16:33	591-78-6	
Iodomethane	ND	ug/L	5.0	0.32	1		02/24/13 16:33	74-88-4	
Isobutanol	ND	ug/L	100	35.0	1		02/24/13 16:33	78-83-1	
Methacrylonitrile	ND	ug/L	10.0	0.93	1		02/24/13 16:33	126-98-7	
Methylene Chloride	ND	ug/L	1.0	0.97	1		02/24/13 16:33	75-09-2	
Methyl methacrylate	ND	ug/L	2.0	2.0	1		02/24/13 16:33	80-62-6	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	0.33	1		02/24/13 16:33	108-10-1	
Naphthalene	ND	ug/L	1.0	0.24	1		02/24/13 16:33	91-20-3	
Propionitrile	ND	ug/L	20.0	3.6	1		02/24/13 16:33	107-12-0	
Styrene	ND	ug/L	1.0	0.26	1		02/24/13 16:33	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	0.33	1		02/24/13 16:33	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.40	1		02/24/13 16:33	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		02/24/13 16:33	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		02/24/13 16:33	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		02/24/13 16:33	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.29	1		02/24/13 16:33	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.47	1		02/24/13 16:33	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	0.20	1		02/24/13 16:33	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	0.41	1		02/24/13 16:33	96-18-4	
Vinyl acetate	ND	ug/L	2.0	0.35	1		02/24/13 16:33	108-05-4	
Vinyl chloride	ND	ug/L	1.0	0.62	1		02/24/13 16:33	75-01-4	
Xylene (Total)	ND	ug/L	2.0	0.66	1		02/24/13 16:33	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	0.66	1		02/24/13 16:33	179601-23-1	
o-Xylene	ND	ug/L	1.0	0.23	1		02/24/13 16:33	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	103	%	70-130		1		02/24/13 16:33	460-00-4	
Dibromofluoromethane (S)	106	%	70-130		1		02/24/13 16:33	1868-53-7	
1,2-Dichloroethane-d4 (S)	100	%	70-130		1		02/24/13 16:33	17060-07-0	
Toluene-d8 (S)	97	%	70-130		1		02/24/13 16:33	2037-26-5	
4500CNE Cyanide, Total	Analytical Method: SM 4500-CN-E								
Cyanide	ND	mg/L	0.0050	0.0050	1		03/06/13 13:50	57-12-5	

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ANALYTICAL RESULTS

Project: HAYWOOD CO. FF LF GWM-FEB 2013
Pace Project No.: 92148504

Sample: MW-25 **Lab ID: 92148504008** Collected: 02/21/13 12:55 Received: 02/22/13 08:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Monitoring Well Data	Analytical Method:								
Collected By	**MPS**				1		03/06/13 14:16		
Collected Date	**2/21/13**				1		03/06/13 14:16		
Collected Time	**12:55**				1		03/06/13 14:16		
Field pH	**11.34**	Std. Units	0.10	0.10	1		03/06/13 14:16		
Field Temperature	**14.9**	deg C	0.50	0.50	1		03/06/13 14:16		
Static Water Level	**229.36**	feet			1		03/06/13 14:16		
Field Specific Conductance	**891**	umhos/cm	1.0	1.0	1		03/06/13 14:16		
Turbidity	**15.3**	NTU	1.0	1.0	1		03/06/13 14:16		
8081 Organochlorine Pesticides	Analytical Method: EPA 8081 Preparation Method: EPA 3510								
Aldrin	ND	ug/L	0.050	0.050	1	02/27/13 10:39	03/05/13 19:49	309-00-2	
alpha-BHC	ND	ug/L	0.050	0.050	1	02/27/13 10:39	03/05/13 19:49	319-84-6	
beta-BHC	ND	ug/L	0.050	0.050	1	02/27/13 10:39	03/05/13 19:49	319-85-7	
delta-BHC	ND	ug/L	0.050	0.050	1	02/27/13 10:39	03/05/13 19:49	319-86-8	
gamma-BHC (Lindane)	ND	ug/L	0.050	0.050	1	02/27/13 10:39	03/05/13 19:49	58-89-9	
Chlordane (Technical)	ND	ug/L	0.20	0.20	1	02/27/13 10:39	03/05/13 19:49	57-74-9	
4,4'-DDD	ND	ug/L	0.050	0.050	1	02/27/13 10:39	03/05/13 19:49	72-54-8	
4,4'-DDE	ND	ug/L	0.050	0.050	1	02/27/13 10:39	03/05/13 19:49	72-55-9	
4,4'-DDT	ND	ug/L	0.050	0.050	1	02/27/13 10:39	03/05/13 19:49	50-29-3	
Dieldrin	ND	ug/L	0.050	0.050	1	02/27/13 10:39	03/05/13 19:49	60-57-1	
Endosulfan I	ND	ug/L	0.050	0.050	1	02/27/13 10:39	03/05/13 19:49	959-98-8	
Endosulfan II	ND	ug/L	0.050	0.050	1	02/27/13 10:39	03/05/13 19:49	33213-65-9	
Endosulfan sulfate	ND	ug/L	0.050	0.050	1	02/27/13 10:39	03/05/13 19:49	1031-07-8	
Endrin	ND	ug/L	0.050	0.050	1	02/27/13 10:39	03/05/13 19:49	72-20-8	
Endrin aldehyde	ND	ug/L	0.050	0.050	1	02/27/13 10:39	03/05/13 19:49	7421-93-4	
Endrin ketone	ND	ug/L	0.050	0.050	1	02/27/13 10:39	03/05/13 19:49	53494-70-5	
Heptachlor	ND	ug/L	0.050	0.050	1	02/27/13 10:39	03/05/13 19:49	76-44-8	
Heptachlor epoxide	ND	ug/L	0.050	0.050	1	02/27/13 10:39	03/05/13 19:49	1024-57-3	
Hexachlorobenzene	ND	ug/L	0.050	0.050	1	02/27/13 10:39	03/05/13 19:49	118-74-1	
Methoxychlor	ND	ug/L	0.15	0.15	1	02/27/13 10:39	03/05/13 19:49	72-43-5	
Mirex	ND	ug/L	0.15	0.15	1	02/27/13 10:39	03/05/13 19:49	2385-85-5	
Toxaphene	ND	ug/L	0.20	0.20	1	02/27/13 10:39	03/05/13 19:49	8001-35-2	
Surrogates									
Tetrachloro-m-xylene (S)	68	%	20-130		1	02/27/13 10:39	03/05/13 19:49	877-09-8	
Decachlorobiphenyl (S)	32	%	20-130		1	02/27/13 10:39	03/05/13 19:49	2051-24-3	
6010 ICP Groundwater	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Antimony	ND	ug/L	5.0	5.0	1	02/23/13 13:50	02/24/13 20:07	7440-36-0	
Arsenic	ND	ug/L	10.0	5.0	1	02/23/13 13:50	02/24/13 20:07	7440-38-2	
Barium	**64.6**	ug/L	5.0	5.0	1	02/23/13 13:50	02/24/13 20:07	7440-39-3	
Beryllium	ND	ug/L	1.0	1.0	1	02/23/13 13:50	02/24/13 20:07	7440-41-7	
Cadmium	ND	ug/L	1.0	1.0	1	02/23/13 13:50	02/24/13 20:07	7440-43-9	
Chromium	**51.4**	ug/L	5.0	5.0	1	02/23/13 13:50	02/24/13 20:07	7440-47-3	
Cobalt	ND	ug/L	5.0	5.0	1	02/23/13 13:50	02/24/13 20:07	7440-48-4	
Copper	**12.3**	ug/L	5.0	5.0	1	02/23/13 13:50	02/24/13 20:07	7440-50-8	
Lead	ND	ug/L	5.0	5.0	1	02/23/13 13:50	02/24/13 20:07	7439-92-1	

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ANALYTICAL RESULTS

Project: HAYWOOD CO. FF LF GWM-FEB 2013
Pace Project No.: 92148504

Sample: MW-25 **Lab ID: 92148504008** Collected: 02/21/13 12:55 Received: 02/22/13 08:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 ICP Groundwater	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Nickel	**18.5**	ug/L	5.0	5.0	1	02/23/13 13:50	02/24/13 20:07	7440-02-0	
Selenium	ND	ug/L	10.0	10.0	1	02/23/13 13:50	02/24/13 20:07	7782-49-2	
Silver	ND	ug/L	5.0	5.0	1	02/23/13 13:50	02/24/13 20:07	7440-22-4	
Thallium	ND	ug/L	5.4	5.4	1	02/23/13 13:50	02/24/13 20:07	7440-28-0	
Tin	ND	ug/L	5.0	5.0	1	02/23/13 13:50	02/24/13 20:07	7440-31-5	
Vanadium	**24.5**	ug/L	5.0	5.0	1	02/23/13 13:50	02/24/13 20:07	7440-62-2	
Zinc	**39.2**	ug/L	10.0	10.0	1	02/23/13 13:50	02/24/13 20:07	7440-66-6	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470								
Mercury	ND	ug/L	0.20	0.10	1	02/27/13 17:55	02/28/13 13:20	7439-97-6	
8260 MSV Low Level Landfill	Analytical Method: EPA 8260								
Acetone	ND	ug/L	25.0	10.0	1		02/24/13 16:49	67-64-1	
Acetonitrile	ND	ug/L	50.0	2.2	1		02/24/13 16:49	75-05-8	
Acrylonitrile	ND	ug/L	10.0	1.9	1		02/24/13 16:49	107-13-1	
Allyl chloride	ND	ug/L	2.0	1.5	1		02/24/13 16:49	107-05-1	
Benzene	ND	ug/L	1.0	0.25	1		02/24/13 16:49	71-43-2	
Bromochloromethane	ND	ug/L	1.0	0.17	1		02/24/13 16:49	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	0.18	1		02/24/13 16:49	75-27-4	
Bromoform	ND	ug/L	1.0	0.26	1		02/24/13 16:49	75-25-2	
Bromomethane	ND	ug/L	2.0	0.29	1		02/24/13 16:49	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	0.96	1		02/24/13 16:49	78-93-3	
Carbon disulfide	**3.9**	ug/L	2.0	1.2	1		02/24/13 16:49	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.25	1		02/24/13 16:49	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.23	1		02/24/13 16:49	108-90-7	
Chloroethane	ND	ug/L	1.0	0.54	1		02/24/13 16:49	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		02/24/13 16:49	67-66-3	
Chloromethane	ND	ug/L	1.0	0.11	1		02/24/13 16:49	74-87-3	
Chloroprene	ND	ug/L	5.0	0.27	1		02/24/13 16:49	126-99-8	
1,2-Dibromo-3-chloropropane	ND	ug/L	5.0	2.5	1		02/24/13 16:49	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	0.21	1		02/24/13 16:49	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.27	1		02/24/13 16:49	106-93-4	
Dibromomethane	ND	ug/L	1.0	0.21	1		02/24/13 16:49	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	0.30	1		02/24/13 16:49	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	0.24	1		02/24/13 16:49	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	0.33	1		02/24/13 16:49	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	1.0	1.0	1		02/24/13 16:49	110-57-6	
Dichlorodifluoromethane	ND	ug/L	1.0	0.21	1		02/24/13 16:49	75-71-8	
1,1-Dichloroethane	**3.1**	ug/L	1.0	0.32	1		02/24/13 16:49	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		02/24/13 16:49	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.56	1		02/24/13 16:49	75-35-4	
cis-1,2-Dichloroethene	**2.0**	ug/L	1.0	0.19	1		02/24/13 16:49	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.49	1		02/24/13 16:49	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.27	1		02/24/13 16:49	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	0.28	1		02/24/13 16:49	142-28-9	
2,2-Dichloropropane	ND	ug/L	1.0	0.13	1		02/24/13 16:49	594-20-7	

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ANALYTICAL RESULTS

Project: HAYWOOD CO. FF LF GWM-FEB 2013
Pace Project No.: 92148504

Sample: MW-25 **Lab ID: 92148504008** Collected: 02/21/13 12:55 Received: 02/22/13 08:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level Landfill	Analytical Method: EPA 8260								
1,1-Dichloropropene	ND	ug/L	1.0	0.49	1		02/24/13 16:49	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.13	1		02/24/13 16:49	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.26	1		02/24/13 16:49	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.30	1		02/24/13 16:49	100-41-4	
Ethyl methacrylate	ND	ug/L	1.0	0.20	1		02/24/13 16:49	97-63-2	
2-Hexanone	ND	ug/L	5.0	0.46	1		02/24/13 16:49	591-78-6	
Iodomethane	ND	ug/L	5.0	0.32	1		02/24/13 16:49	74-88-4	
Isobutanol	ND	ug/L	100	35.0	1		02/24/13 16:49	78-83-1	
Methacrylonitrile	ND	ug/L	10.0	0.93	1		02/24/13 16:49	126-98-7	
Methylene Chloride	**2.4**	ug/L	1.0	0.97	1		02/24/13 16:49	75-09-2	
Methyl methacrylate	ND	ug/L	2.0	2.0	1		02/24/13 16:49	80-62-6	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	0.33	1		02/24/13 16:49	108-10-1	
Naphthalene	ND	ug/L	1.0	0.24	1		02/24/13 16:49	91-20-3	
Propionitrile	ND	ug/L	20.0	3.6	1		02/24/13 16:49	107-12-0	
Styrene	ND	ug/L	1.0	0.26	1		02/24/13 16:49	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	0.33	1		02/24/13 16:49	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.40	1		02/24/13 16:49	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		02/24/13 16:49	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		02/24/13 16:49	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		02/24/13 16:49	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.29	1		02/24/13 16:49	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.47	1		02/24/13 16:49	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	0.20	1		02/24/13 16:49	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	0.41	1		02/24/13 16:49	96-18-4	
Vinyl acetate	ND	ug/L	2.0	0.35	1		02/24/13 16:49	108-05-4	
Vinyl chloride	ND	ug/L	1.0	0.62	1		02/24/13 16:49	75-01-4	
Xylene (Total)	ND	ug/L	2.0	0.66	1		02/24/13 16:49	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	0.66	1		02/24/13 16:49	179601-23-1	
o-Xylene	ND	ug/L	1.0	0.23	1		02/24/13 16:49	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	103	%	70-130		1		02/24/13 16:49	460-00-4	
Dibromofluoromethane (S)	111	%	70-130		1		02/24/13 16:49	1868-53-7	
1,2-Dichloroethane-d4 (S)	103	%	70-130		1		02/24/13 16:49	17060-07-0	
Toluene-d8 (S)	98	%	70-130		1		02/24/13 16:49	2037-26-5	
4500CNE Cyanide, Total	Analytical Method: SM 4500-CN-E								
Cyanide	ND	mg/L	0.0050	0.0050	1		03/06/13 13:51	57-12-5	

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QUALITY CONTROL DATA

Project: HAYWOOD CO. FF LF GWM-FEB 2013
Pace Project No.: 92148504

QC Batch: MERP/4945 — Analysis Method: EPA 7470
QC Batch Method: EPA 7470 — Analysis Description: 7470 Mercury
Associated Lab Samples: 92148504001, 92148504002

METHOD BLANK: 926563 — Matrix: Water
Associated Lab Samples: 92148504001, 92148504002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	ug/L	ND	0.20	02/22/13 14:05	

LABORATORY CONTROL SAMPLE: 926564

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	2.5	2.2	88	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 926565 926566

Parameter	Units	92148500005 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury	ug/L	ND	2.5	2.5	1.5	1.4	61	56	75-125	9	25	M1

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QUALITY CONTROL DATA

Project: HAYWOOD CO. FF LF GWM-FEB 2013
Pace Project No.: 92148504

QC Batch: MERP/4951 — Analysis Method: EPA 7470
QC Batch Method: EPA 7470 — Analysis Description: 7470 Mercury
Associated Lab Samples: 92148504003, 92148504004

METHOD BLANK: 928077 — Matrix: Water
Associated Lab Samples: 92148504003, 92148504004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	ug/L	ND	0.20	02/28/13 14:36	

LABORATORY CONTROL SAMPLE: 928078

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	2.5	2.3	90	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 928079 928080

Parameter	Units	92148941004 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury	ug/L	ND	2.5	2.5	2.3	2.2	92	90	75-125	2	25	

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QUALITY CONTROL DATA

Project: HAYWOOD CO. FF LF GWM-FEB 2013
Pace Project No.: 92148504

QC Batch: MERP/4961 — Analysis Method: EPA 7470
QC Batch Method: EPA 7470 — Analysis Description: 7470 Mercury
Associated Lab Samples: 92148504005, 92148504006, 92148504007, 92148504008

METHOD BLANK: 929679 — Matrix: Water
Associated Lab Samples: 92148504005, 92148504006, 92148504007, 92148504008

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	ug/L	ND	0.20	02/28/13 12:13	

LABORATORY CONTROL SAMPLE: 929680

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	2.5	2.2	87	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 929681 929682

Parameter	Units	92149044006 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury	ug/L	ND	2.5	2.5	2.2	2.2	88	86	75-125	2	25	

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QUALITY CONTROL DATA

Project: HAYWOOD CO. FF LF GWM-FEB 2013
Pace Project No.: 92148504

QC Batch: MPRP/12676
QC Batch Method: EPA 3010
Analysis Method: EPA 6010
Analysis Description: 6010 MET NC Groundwater
Associated Lab Samples: 92148504001, 92148504002

METHOD BLANK: 927638
Matrix: Water
Associated Lab Samples: 92148504001, 92148504002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Antimony	ug/L	ND	5.0	02/24/13 11:51	
Arsenic	ug/L	ND	10.0	02/24/13 11:51	
Barium	ug/L	ND	5.0	02/24/13 11:51	
Beryllium	ug/L	ND	1.0	02/24/13 11:51	
Cadmium	ug/L	ND	1.0	02/24/13 11:51	
Chromium	ug/L	ND	5.0	02/24/13 11:51	
Cobalt	ug/L	ND	5.0	02/24/13 11:51	
Copper	ug/L	ND	5.0	02/24/13 11:51	
Lead	ug/L	ND	5.0	02/24/13 11:51	
Nickel	ug/L	ND	5.0	02/24/13 11:51	
Selenium	ug/L	ND	10.0	02/24/13 11:51	
Silver	ug/L	ND	5.0	02/24/13 11:51	
Thallium	ug/L	ND	5.4	02/24/13 11:51	
Tin	ug/L	ND	5.0	02/24/13 11:51	
Vanadium	ug/L	ND	5.0	02/24/13 11:51	
Zinc	ug/L	ND	10.0	02/24/13 11:51	

LABORATORY CONTROL SAMPLE: 927639

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	ug/L	500	501	100	80-120	
Arsenic	ug/L	500	499	100	80-120	
Barium	ug/L	500	484	97	80-120	
Beryllium	ug/L	500	490	98	80-120	
Cadmium	ug/L	500	496	99	80-120	
Chromium	ug/L	500	491	98	80-120	
Cobalt	ug/L	500	493	99	80-120	
Copper	ug/L	500	499	100	80-120	
Lead	ug/L	500	491	98	80-120	
Nickel	ug/L	500	501	100	80-120	
Selenium	ug/L	500	492	98	80-120	
Silver	ug/L	250	245	98	80-120	
Thallium	ug/L	500	491	98	80-120	
Tin	ug/L	500	502	100	80-120	
Vanadium	ug/L	500	492	98	80-120	
Zinc	ug/L	500	496	99	80-120	

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QUALITY CONTROL DATA

Project: HAYWOOD CO. FF LF GWM-FEB 2013
Pace Project No.: 92148504

MATRIX SPIKE SAMPLE: 927640

Parameter	Units	92148006001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Antimony	ug/L	ND	500	522	104	75-125	
Arsenic	ug/L	ND	500	518	103	75-125	
Barium	ug/L	61.5	500	556	99	75-125	
Beryllium	ug/L	ND	500	505	101	75-125	
Cadmium	ug/L	ND	500	507	101	75-125	
Chromium	ug/L	ND	500	504	101	75-125	
Cobalt	ug/L	ND	500	503	100	75-125	
Copper	ug/L	ND	500	510	102	75-125	
Lead	ug/L	ND	500	492	98	75-125	
Nickel	ug/L	ND	500	510	101	75-125	
Selenium	ug/L	ND	500	510	101	75-125	
Silver	ug/L	ND	250	250	100	75-125	
Thallium	ug/L	ND	500	480	96	75-125	
Tin	ug/L	ND	500	513	103	75-125	
Vanadium	ug/L	ND	500	516	103	75-125	
Zinc	ug/L	ND	500	515	102	75-125	

SAMPLE DUPLICATE: 927641

Parameter	Units	92148006002 Result	Dup Result	RPD	Max RPD	Qualifiers
Antimony	ug/L	ND	ND		25	
Arsenic	ug/L	ND	ND		25	
Barium	ug/L	21.8	22.1	1	25	
Beryllium	ug/L	ND	ND		25	
Cadmium	ug/L	ND	ND		25	
Chromium	ug/L	ND	ND		25	
Cobalt	ug/L	ND	ND		25	
Copper	ug/L	ND	ND		25	
Lead	ug/L	ND	ND		25	
Nickel	ug/L	ND	ND		25	
Selenium	ug/L	ND	ND		25	
Silver	ug/L	ND	ND		25	
Thallium	ug/L	ND	ND		25	
Tin	ug/L	ND	ND		25	
Vanadium	ug/L	ND	ND		25	
Zinc	ug/L	48.5	48.8	1	25	

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QUALITY CONTROL DATA

Project: HAYWOOD CO. FF LF GWM-FEB 2013
Pace Project No.: 92148504

QC Batch: MPRP/12687 — Analysis Method: EPA 6010
QC Batch Method: EPA 3010 — Analysis Description: 6010 MET NC Groundwater
Associated Lab Samples: 92148504003, 92148504004, 92148504005, 92148504006, 92148504007, 92148504008

METHOD BLANK: 927847 — Matrix: Water
Associated Lab Samples: 92148504003, 92148504004, 92148504005, 92148504006, 92148504007, 92148504008

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Antimony	ug/L	ND	5.0	02/24/13 18:57	
Arsenic	ug/L	ND	10.0	02/24/13 18:57	
Barium	ug/L	ND	5.0	02/24/13 18:57	
Beryllium	ug/L	ND	1.0	02/24/13 18:57	
Cadmium	ug/L	ND	1.0	02/24/13 18:57	
Chromium	ug/L	ND	5.0	02/24/13 18:57	
Cobalt	ug/L	ND	5.0	02/24/13 18:57	
Copper	ug/L	ND	5.0	02/24/13 18:57	
Lead	ug/L	ND	5.0	02/24/13 18:57	
Nickel	ug/L	ND	5.0	02/24/13 18:57	
Selenium	ug/L	ND	10.0	02/24/13 18:57	
Silver	ug/L	ND	5.0	02/24/13 18:57	
Thallium	ug/L	ND	5.4	02/24/13 18:57	
Tin	ug/L	ND	5.0	02/24/13 18:57	
Vanadium	ug/L	ND	5.0	02/24/13 18:57	
Zinc	ug/L	ND	10.0	02/24/13 18:57	

LABORATORY CONTROL SAMPLE: 927848

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	ug/L	500	502	100	80-120	
Arsenic	ug/L	500	493	99	80-120	
Barium	ug/L	500	504	101	80-120	
Beryllium	ug/L	500	485	97	80-120	
Cadmium	ug/L	500	489	98	80-120	
Chromium	ug/L	500	494	99	80-120	
Cobalt	ug/L	500	491	98	80-120	
Copper	ug/L	500	510	102	80-120	
Lead	ug/L	500	491	98	80-120	
Nickel	ug/L	500	498	100	80-120	
Selenium	ug/L	500	492	98	80-120	
Silver	ug/L	250	245	98	80-120	
Thallium	ug/L	500	483	97	80-120	
Tin	ug/L	500	498	100	80-120	
Vanadium	ug/L	500	503	101	80-120	
Zinc	ug/L	500	487	97	80-120	

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QUALITY CONTROL DATA

Project: HAYWOOD CO. FF LF GWM-FEB 2013
Pace Project No.: 92148504

MATRIX SPIKE SAMPLE: 927913

Parameter	Units	92148470013 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Antimony	ug/L	ND	500	469	94	75-125	
Arsenic	ug/L	ND	500	463	92	75-125	
Barium	ug/L	85.1	500	546	92	75-125	
Beryllium	ug/L	ND	500	455	91	75-125	
Cadmium	ug/L	ND	500	455	91	75-125	
Chromium	ug/L	ND	500	463	92	75-125	
Cobalt	ug/L	ND	500	458	91	75-125	
Copper	ug/L	ND	500	478	95	75-125	
Lead	ug/L	ND	500	449	90	75-125	
Nickel	ug/L	ND	500	463	92	75-125	
Selenium	ug/L	ND	500	464	92	75-125	
Silver	ug/L	ND	250	230	92	75-125	
Thallium	ug/L	5.6	500	448	88	75-125	
Tin	ug/L	ND	500	468	94	75-125	
Vanadium	ug/L	ND	500	470	94	75-125	
Zinc	ug/L	ND	500	459	90	75-125	

SAMPLE DUPLICATE: 927914

Parameter	Units	92148470014 Result	Dup Result	RPD	Max RPD	Qualifiers
Antimony	ug/L	ND	ND		25	
Arsenic	ug/L	ND	ND		25	
Barium	ug/L	46.3	47.0	2	25	
Beryllium	ug/L	ND	ND		25	
Cadmium	ug/L	ND	ND		25	
Chromium	ug/L	ND	ND		25	
Cobalt	ug/L	ND	ND		25	
Copper	ug/L	ND	ND		25	
Lead	ug/L	ND	ND		25	
Nickel	ug/L	ND	ND		25	
Selenium	ug/L	ND	ND		25	
Silver	ug/L	ND	ND		25	
Thallium	ug/L	5.6	ND		25	
Tin	ug/L	ND	ND		25	
Vanadium	ug/L	ND	ND		25	
Zinc	ug/L	ND	ND		25	

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QUALITY CONTROL DATA

Project: HAYWOOD CO. FF LF GWM-FEB 2013
Pace Project No.: 92148504

QC Batch: MSV/22090 | Analysis Method: EPA 8260
QC Batch Method: EPA 8260 | Analysis Description: 8260 MSV Low Level Landfill
Associated Lab Samples: 92148504001, 92148504002

METHOD BLANK: 925758 | Matrix: Water
Associated Lab Samples: 92148504001, 92148504002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	ND	1.0	02/20/13 15:39	
1,1,1-Trichloroethane	ug/L	ND	1.0	02/20/13 15:39	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	02/20/13 15:39	
1,1,2-Trichloroethane	ug/L	ND	1.0	02/20/13 15:39	
1,1-Dichloroethane	ug/L	ND	1.0	02/20/13 15:39	
1,1-Dichloroethene	ug/L	ND	1.0	02/20/13 15:39	
1,1-Dichloropropene	ug/L	ND	1.0	02/20/13 15:39	
1,2,3-Trichloropropane	ug/L	ND	1.0	02/20/13 15:39	
1,2-Dibromo-3-chloropropane	ug/L	ND	5.0	02/20/13 15:39	
1,2-Dibromoethane (EDB)	ug/L	ND	1.0	02/20/13 15:39	
1,2-Dichlorobenzene	ug/L	ND	1.0	02/20/13 15:39	
1,2-Dichloroethane	ug/L	ND	1.0	02/20/13 15:39	
1,2-Dichloropropane	ug/L	ND	1.0	02/20/13 15:39	
1,3-Dichlorobenzene	ug/L	ND	1.0	02/20/13 15:39	
1,3-Dichloropropane	ug/L	ND	1.0	02/20/13 15:39	
1,4-Dichlorobenzene	ug/L	ND	1.0	02/20/13 15:39	
2,2-Dichloropropane	ug/L	ND	1.0	02/20/13 15:39	
2-Butanone (MEK)	ug/L	ND	5.0	02/20/13 15:39	
2-Hexanone	ug/L	ND	5.0	02/20/13 15:39	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	5.0	02/20/13 15:39	
Acetone	ug/L	ND	25.0	02/20/13 15:39	
Acetonitrile	ug/L	ND	50.0	02/20/13 15:39	
Acrylonitrile	ug/L	ND	10.0	02/20/13 15:39	
Allyl chloride	ug/L	ND	2.0	02/20/13 15:39	
Benzene	ug/L	ND	1.0	02/20/13 15:39	
Bromochloromethane	ug/L	ND	1.0	02/20/13 15:39	
Bromodichloromethane	ug/L	ND	1.0	02/20/13 15:39	
Bromoform	ug/L	ND	1.0	02/20/13 15:39	
Bromomethane	ug/L	ND	2.0	02/20/13 15:39	
Carbon disulfide	ug/L	ND	2.0	02/20/13 15:39	
Carbon tetrachloride	ug/L	ND	1.0	02/20/13 15:39	
Chlorobenzene	ug/L	ND	1.0	02/20/13 15:39	
Chloroethane	ug/L	ND	1.0	02/20/13 15:39	
Chloroform	ug/L	ND	1.0	02/20/13 15:39	
Chloromethane	ug/L	ND	1.0	02/20/13 15:39	
Chloroprene	ug/L	ND	5.0	02/20/13 15:39	
cis-1,2-Dichloroethene	ug/L	ND	1.0	02/20/13 15:39	
cis-1,3-Dichloropropene	ug/L	ND	1.0	02/20/13 15:39	
Dibromochloromethane	ug/L	ND	1.0	02/20/13 15:39	
Dibromomethane	ug/L	ND	1.0	02/20/13 15:39	
Dichlorodifluoromethane	ug/L	ND	1.0	02/20/13 15:39	
Ethyl methacrylate	ug/L	ND	1.0	02/20/13 15:39	
Ethylbenzene	ug/L	ND	1.0	02/20/13 15:39	

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QUALITY CONTROL DATA

Project: HAYWOOD CO. FF LF GWM-FEB 2013
Pace Project No.: 92148504

METHOD BLANK: 925758 Matrix: Water

Associated Lab Samples: 92148504001, 92148504002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Iodomethane	ug/L	ND	5.0	02/20/13 15:39	
Isobutanol	ug/L	ND	100	02/20/13 15:39	
m&p-Xylene	ug/L	ND	2.0	02/20/13 15:39	
Methacrylonitrile	ug/L	ND	10.0	02/20/13 15:39	
Methyl methacrylate	ug/L	ND	2.0	02/20/13 15:39	
Methylene Chloride	ug/L	ND	1.0	02/20/13 15:39	
Naphthalene	ug/L	ND	1.0	02/20/13 15:39	
o-Xylene	ug/L	ND	1.0	02/20/13 15:39	
Propionitrile	ug/L	ND	20.0	02/20/13 15:39	
Styrene	ug/L	ND	1.0	02/20/13 15:39	
Tetrachloroethene	ug/L	ND	1.0	02/20/13 15:39	
Toluene	ug/L	ND	1.0	02/20/13 15:39	
trans-1,2-Dichloroethene	ug/L	ND	1.0	02/20/13 15:39	
trans-1,3-Dichloropropene	ug/L	ND	1.0	02/20/13 15:39	
trans-1,4-Dichloro-2-butene	ug/L	ND	1.0	02/20/13 15:39	
Trichloroethene	ug/L	ND	1.0	02/20/13 15:39	
Trichlorofluoromethane	ug/L	ND	1.0	02/20/13 15:39	
Vinyl acetate	ug/L	ND	2.0	02/20/13 15:39	
Vinyl chloride	ug/L	ND	1.0	02/20/13 15:39	
Xylene (Total)	ug/L	ND	2.0	02/20/13 15:39	
1,2-Dichloroethane-d4 (S)	%	105	70-130	02/20/13 15:39	
4-Bromofluorobenzene (S)	%	100	70-130	02/20/13 15:39	
Dibromofluoromethane (S)	%	109	70-130	02/20/13 15:39	
Toluene-d8 (S)	%	99	70-130	02/20/13 15:39	

LABORATORY CONTROL SAMPLE: 925759

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	50	60.7	121	70-130	
1,1,1-Trichloroethane	ug/L	50	56.7	113	70-130	
1,1,2,2-Tetrachloroethane	ug/L	50	55.6	111	70-130	
1,1,2-Trichloroethane	ug/L	50	53.9	108	70-130	
1,1-Dichloroethane	ug/L	50	57.1	114	70-130	
1,1-Dichloroethene	ug/L	50	51.2	102	70-132	
1,1-Dichloropropene	ug/L	50	58.3	117	70-130	
1,2,3-Trichloropropane	ug/L	50	56.6	113	70-130	
1,2-Dibromo-3-chloropropane	ug/L	50	59.3	119	70-130	
1,2-Dibromoethane (EDB)	ug/L	50	57.2	114	70-130	
1,2-Dichlorobenzene	ug/L	50	56.0	112	70-130	
1,2-Dichloroethane	ug/L	50	56.3	113	70-130	
1,2-Dichloropropane	ug/L	50	55.8	112	70-130	
1,3-Dichlorobenzene	ug/L	50	57.2	114	70-130	
1,3-Dichloropropane	ug/L	50	56.3	113	70-130	
1,4-Dichlorobenzene	ug/L	50	55.9	112	70-130	
2,2-Dichloropropane	ug/L	50	59.7	119	58-145	

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QUALITY CONTROL DATA

Project: HAYWOOD CO. FF LF GWM-FEB 2013
Pace Project No.: 92148504

LABORATORY CONTROL SAMPLE: 925759

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
2-Butanone (MEK)	ug/L	100	99.5	100	70-145	
2-Hexanone	ug/L	100	106	106	70-144	
4-Methyl-2-pentanone (MIBK)	ug/L	100	102	102	70-140	
Acetone	ug/L	100	99.8	100	50-175	
Acetonitrile	ug/L	500	542	108	70-130	
Acrylonitrile	ug/L	250	273	109	70-143	
Allyl chloride	ug/L	50	51.1	102	70-130	
Benzene	ug/L	50	57.4	115	70-130	
Bromochloromethane	ug/L	50	54.9	110	70-130	
Bromodichloromethane	ug/L	50	56.7	113	70-130	
Bromoform	ug/L	50	52.4	105	70-130	
Bromomethane	ug/L	50	57.3	115	54-130	
Carbon disulfide	ug/L	50	51.8	104	70-131	
Carbon tetrachloride	ug/L	50	59.0	118	70-132	
Chlorobenzene	ug/L	50	58.6	117	70-130	
Chloroethane	ug/L	50	48.9	98	64-134	
Chloroform	ug/L	50	56.5	113	70-130	
Chloromethane	ug/L	50	40.3	81	64-130	
Chloroprene	ug/L	50	51.8	104	70-130	
cis-1,2-Dichloroethene	ug/L	50	55.6	111	70-131	
cis-1,3-Dichloropropene	ug/L	50	57.8	116	70-130	
Dibromochloromethane	ug/L	50	60.7	121	70-130	
Dibromomethane	ug/L	50	53.6	107	70-131	
Dichlorodifluoromethane	ug/L	50	44.8	90	56-130	
Ethyl methacrylate	ug/L	50	54.1	108	70-130	
Ethylbenzene	ug/L	50	58.4	117	70-130	
Iodomethane	ug/L	100	96.1	96	49-180	
Isobutanol	ug/L	1000	1180	118	70-130	
m&p-Xylene	ug/L	100	117	117	70-130	
Methacrylonitrile	ug/L	500	548	110	70-130	
Methyl methacrylate	ug/L	50	53.6	107	70-130	
Methylene Chloride	ug/L	50	52.3	105	63-130	
Naphthalene	ug/L	50	56.2	112	70-138	
o-Xylene	ug/L	50	56.9	114	70-130	
Propionitrile	ug/L	500	550	110	70-130	
Styrene	ug/L	50	58.6	117	70-130	
Tetrachloroethene	ug/L	50	53.6	107	70-130	
Toluene	ug/L	50	56.7	113	70-130	
trans-1,2-Dichloroethene	ug/L	50	51.1	102	70-130	
trans-1,3-Dichloropropene	ug/L	50	57.7	115	70-132	
trans-1,4-Dichloro-2-butene	ug/L	50	48.5	97	70-141	
Trichloroethene	ug/L	50	51.2	102	70-130	
Trichlorofluoromethane	ug/L	50	50.1	100	62-133	
Vinyl acetate	ug/L	100	122	122	66-157	
Vinyl chloride	ug/L	50	51.4	103	69-130	
Xylene (Total)	ug/L	150	174	116	70-130	
1,2-Dichloroethane-d4 (S)	%			107	70-130	
4-Bromofluorobenzene (S)	%			99	70-130	

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QUALITY CONTROL DATA

Project: HAYWOOD CO. FF LF GWM-FEB 2013
Pace Project No.: 92148504

LABORATORY CONTROL SAMPLE: 925759

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Dibromofluoromethane (S)	%			100	70-130	
Toluene-d8 (S)	%			99	70-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 925760 925761

Parameter	Units	92148500002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,1-Dichloroethene	ug/L	ND	50	50	64.5	61.2	129	122	70-166	5	30	
Benzene	ug/L	ND	50	50	53.8	53.5	108	107	70-148	0	30	
Chlorobenzene	ug/L	ND	50	50	62.2	61.1	124	122	70-146	2	30	
Toluene	ug/L	ND	50	50	59.7	61.8	119	124	70-155	3	30	
Trichloroethene	ug/L	ND	50	50	52.7	53.1	105	106	69-151	1	30	
1,2-Dichloroethane-d4 (S)	%						104	103	70-130			
4-Bromofluorobenzene (S)	%						96	96	70-130			
Dibromofluoromethane (S)	%						107	107	70-130			
Toluene-d8 (S)	%						98	101	70-130			

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QUALITY CONTROL DATA

Project: HAYWOOD CO. FF LF GWM-FEB 2013
Pace Project No.: 92148504

QC Batch: MSV/22137 Analysis Method: EPA 8260
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV Low Level Landfill
Associated Lab Samples: 92148504003, 92148504004, 92148504005, 92148504006, 92148504007, 92148504008

METHOD BLANK: 927976 Matrix: Water
Associated Lab Samples: 92148504003, 92148504004, 92148504005, 92148504006, 92148504007, 92148504008

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	ND	1.0	02/24/13 12:20	
1,1,1-Trichloroethane	ug/L	ND	1.0	02/24/13 12:20	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	02/24/13 12:20	
1,1,2-Trichloroethane	ug/L	ND	1.0	02/24/13 12:20	
1,1-Dichloroethane	ug/L	ND	1.0	02/24/13 12:20	
1,1-Dichloroethene	ug/L	ND	1.0	02/24/13 12:20	
1,1-Dichloropropene	ug/L	ND	1.0	02/24/13 12:20	
1,2,3-Trichloropropane	ug/L	ND	1.0	02/24/13 12:20	
1,2-Dibromo-3-chloropropane	ug/L	ND	5.0	02/24/13 12:20	
1,2-Dibromoethane (EDB)	ug/L	ND	1.0	02/24/13 12:20	
1,2-Dichlorobenzene	ug/L	ND	1.0	02/24/13 12:20	
1,2-Dichloroethane	ug/L	ND	1.0	02/24/13 12:20	
1,2-Dichloropropane	ug/L	ND	1.0	02/24/13 12:20	
1,3-Dichlorobenzene	ug/L	ND	1.0	02/24/13 12:20	
1,3-Dichloropropane	ug/L	ND	1.0	02/24/13 12:20	
1,4-Dichlorobenzene	ug/L	ND	1.0	02/24/13 12:20	
2,2-Dichloropropane	ug/L	ND	1.0	02/24/13 12:20	
2-Butanone (MEK)	ug/L	ND	5.0	02/24/13 12:20	
2-Hexanone	ug/L	ND	5.0	02/24/13 12:20	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	5.0	02/24/13 12:20	
Acetone	ug/L	ND	25.0	02/24/13 12:20	
Acetonitrile	ug/L	ND	50.0	02/24/13 12:20	
Acrylonitrile	ug/L	ND	10.0	02/24/13 12:20	
Allyl chloride	ug/L	ND	2.0	02/24/13 12:20	
Benzene	ug/L	ND	1.0	02/24/13 12:20	
Bromochloromethane	ug/L	ND	1.0	02/24/13 12:20	
Bromodichloromethane	ug/L	ND	1.0	02/24/13 12:20	
Bromoform	ug/L	ND	1.0	02/24/13 12:20	
Bromomethane	ug/L	ND	2.0	02/24/13 12:20	
Carbon disulfide	ug/L	ND	2.0	02/24/13 12:20	
Carbon tetrachloride	ug/L	ND	1.0	02/24/13 12:20	
Chlorobenzene	ug/L	ND	1.0	02/24/13 12:20	
Chloroethane	ug/L	ND	1.0	02/24/13 12:20	
Chloroform	ug/L	ND	1.0	02/24/13 12:20	
Chloromethane	ug/L	ND	1.0	02/24/13 12:20	
Chloroprene	ug/L	ND	5.0	02/24/13 12:20	
cis-1,2-Dichloroethene	ug/L	ND	1.0	02/24/13 12:20	
cis-1,3-Dichloropropene	ug/L	ND	1.0	02/24/13 12:20	
Dibromochloromethane	ug/L	ND	1.0	02/24/13 12:20	
Dibromomethane	ug/L	ND	1.0	02/24/13 12:20	
Dichlorodifluoromethane	ug/L	ND	1.0	02/24/13 12:20	
Ethyl methacrylate	ug/L	ND	1.0	02/24/13 12:20	
Ethylbenzene	ug/L	ND	1.0	02/24/13 12:20	

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QUALITY CONTROL DATA

Project: HAYWOOD CO. FF LF GWM-FEB 2013
Pace Project No.: 92148504

METHOD BLANK: 927976 Matrix: Water

Associated Lab Samples: 92148504003, 92148504004, 92148504005, 92148504006, 92148504007, 92148504008

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Iodomethane	ug/L	ND	5.0	02/24/13 12:20	
Isobutanol	ug/L	ND	100	02/24/13 12:20	
m&p-Xylene	ug/L	ND	2.0	02/24/13 12:20	
Methacrylonitrile	ug/L	ND	10.0	02/24/13 12:20	
Methyl methacrylate	ug/L	ND	2.0	02/24/13 12:20	
Methylene Chloride	ug/L	ND	1.0	02/24/13 12:20	
Naphthalene	ug/L	ND	1.0	02/24/13 12:20	
o-Xylene	ug/L	ND	1.0	02/24/13 12:20	
Propionitrile	ug/L	ND	20.0	02/24/13 12:20	
Styrene	ug/L	ND	1.0	02/24/13 12:20	
Tetrachloroethene	ug/L	ND	1.0	02/24/13 12:20	
Toluene	ug/L	ND	1.0	02/24/13 12:20	
trans-1,2-Dichloroethene	ug/L	ND	1.0	02/24/13 12:20	
trans-1,3-Dichloropropene	ug/L	ND	1.0	02/24/13 12:20	
trans-1,4-Dichloro-2-butene	ug/L	ND	1.0	02/24/13 12:20	
Trichloroethene	ug/L	ND	1.0	02/24/13 12:20	
Trichlorofluoromethane	ug/L	ND	1.0	02/24/13 12:20	
Vinyl acetate	ug/L	ND	2.0	02/24/13 12:20	
Vinyl chloride	ug/L	ND	1.0	02/24/13 12:20	
Xylene (Total)	ug/L	ND	2.0	02/24/13 12:20	
1,2-Dichloroethane-d4 (S)	%	98	70-130	02/24/13 12:20	
4-Bromofluorobenzene (S)	%	103	70-130	02/24/13 12:20	
Dibromofluoromethane (S)	%	106	70-130	02/24/13 12:20	
Toluene-d8 (S)	%	96	70-130	02/24/13 12:20	

LABORATORY CONTROL SAMPLE: 927977

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	50	59.0	118	70-130	
1,1,1-Trichloroethane	ug/L	50	56.6	113	70-130	
1,1,2,2-Tetrachloroethane	ug/L	50	53.1	106	70-130	
1,1,2-Trichloroethane	ug/L	50	53.5	107	70-130	
1,1-Dichloroethane	ug/L	50	54.4	109	70-130	
1,1-Dichloroethene	ug/L	50	46.9	94	70-132	
1,1-Dichloropropene	ug/L	50	56.8	114	70-130	
1,2,3-Trichloropropane	ug/L	50	54.2	108	70-130	
1,2-Dibromo-3-chloropropane	ug/L	50	59.1	118	70-130	
1,2-Dibromoethane (EDB)	ug/L	50	57.1	114	70-130	
1,2-Dichlorobenzene	ug/L	50	57.0	114	70-130	
1,2-Dichloroethane	ug/L	50	53.1	106	70-130	
1,2-Dichloropropane	ug/L	50	54.5	109	70-130	
1,3-Dichlorobenzene	ug/L	50	57.7	115	70-130	
1,3-Dichloropropane	ug/L	50	56.0	112	70-130	
1,4-Dichlorobenzene	ug/L	50	56.1	112	70-130	
2,2-Dichloropropane	ug/L	50	60.0	120	58-145	

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QUALITY CONTROL DATA

Project: HAYWOOD CO. FF LF GWM-FEB 2013
Pace Project No.: 92148504

LABORATORY CONTROL SAMPLE: 927977

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
2-Butanone (MEK)	ug/L	100	108	108	70-145	
2-Hexanone	ug/L	100	99.1	99	70-144	
4-Methyl-2-pentanone (MIBK)	ug/L	100	98.5	99	70-140	
Acetone	ug/L	100	106	106	50-175	
Acetonitrile	ug/L	500	514	103	70-130	
Acrylonitrile	ug/L	250	261	104	70-143	
Allyl chloride	ug/L	50	45.2	90	70-130	
Benzene	ug/L	50	55.8	112	70-130	
Bromochloromethane	ug/L	50	58.7	117	70-130	
Bromodichloromethane	ug/L	50	56.6	113	70-130	
Bromoform	ug/L	50	53.0	106	70-130	
Bromomethane	ug/L	50	48.2	96	54-130	
Carbon disulfide	ug/L	50	48.9	98	70-131	
Carbon tetrachloride	ug/L	50	58.3	117	70-132	
Chlorobenzene	ug/L	50	55.9	112	70-130	
Chloroethane	ug/L	50	43.8	88	64-134	
Chloroform	ug/L	50	54.6	109	70-130	
Chloromethane	ug/L	50	42.0	84	64-130	
Chloroprene	ug/L	50	51.1	102	70-130	
cis-1,2-Dichloroethene	ug/L	50	53.4	107	70-131	
cis-1,3-Dichloropropene	ug/L	50	57.9	116	70-130	
Dibromochloromethane	ug/L	50	61.2	122	70-130	
Dibromomethane	ug/L	50	57.7	115	70-131	
Dichlorodifluoromethane	ug/L	50	46.5	93	56-130	
Ethyl methacrylate	ug/L	50	49.7	99	70-130	
Ethylbenzene	ug/L	50	55.1	110	70-130	
Iodomethane	ug/L	100	82.2	82	49-180	
Isobutanol	ug/L	1000	1030	103	70-130	
m&p-Xylene	ug/L	100	111	111	70-130	
Methacrylonitrile	ug/L	500	516	103	70-130	
Methyl methacrylate	ug/L	50	54.8	110	70-130	
Methylene Chloride	ug/L	50	50.8	102	63-130	
Naphthalene	ug/L	50	59.2	118	70-138	
o-Xylene	ug/L	50	54.6	109	70-130	
Propionitrile	ug/L	500	525	105	70-130	
Styrene	ug/L	50	55.5	111	70-130	
Tetrachloroethene	ug/L	50	54.7	109	70-130	
Toluene	ug/L	50	55.6	111	70-130	
trans-1,2-Dichloroethene	ug/L	50	51.6	103	70-130	
trans-1,3-Dichloropropene	ug/L	50	58.1	116	70-132	
trans-1,4-Dichloro-2-butene	ug/L	50	46.7	93	70-141	
Trichloroethene	ug/L	50	50.8	102	70-130	
Trichlorofluoromethane	ug/L	50	47.8	96	62-133	
Vinyl acetate	ug/L	100	118	118	66-157	
Vinyl chloride	ug/L	50	50.7	101	69-130	
Xylene (Total)	ug/L	150	166	110	70-130	
1,2-Dichloroethane-d4 (S)	%			92	70-130	
4-Bromofluorobenzene (S)	%			99	70-130	

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QUALITY CONTROL DATA

Project: HAYWOOD CO. FF LF GWM-FEB 2013
Pace Project No.: 92148504

LABORATORY CONTROL SAMPLE: 927977

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Dibromofluoromethane (S)	%			100	70-130	
Toluene-d8 (S)	%			98	70-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 927978 927979

Parameter	Units	92148504008 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,1-Dichloroethene	ug/L	ND	50	50	59.8	54.1	120	108	70-166	10	30	
Benzene	ug/L	ND	50	50	53.1	52.5	106	105	70-148	1	30	
Chlorobenzene	ug/L	ND	50	50	60.5	59.3	121	119	70-146	2	30	
Toluene	ug/L	ND	50	50	58.8	56.7	118	113	70-155	4	30	
Trichloroethene	ug/L	ND	50	50	52.7	52.2	105	104	69-151	1	30	
1,2-Dichloroethane-d4 (S)	%						101	102	70-130			
4-Bromofluorobenzene (S)	%						97	95	70-130			
Dibromofluoromethane (S)	%						107	109	70-130			
Toluene-d8 (S)	%						99	98	70-130			

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QUALITY CONTROL DATA

Project: HAYWOOD CO. FF LF GWM-FEB 2013
Pace Project No.: 92148504

QC Batch: OEXT/20957 — Analysis Method: EPA 8081
QC Batch Method: EPA 3510 — Analysis Description: 8081A GCS Pesticides
Associated Lab Samples: 92148504001, 92148504002

METHOD BLANK: 928268 — Matrix: Water
Associated Lab Samples: 92148504001, 92148504002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
4,4'-DDD	ug/L	ND	0.050	03/05/13 06:10	
4,4'-DDE	ug/L	ND	0.050	03/05/13 06:10	
4,4'-DDT	ug/L	ND	0.050	03/05/13 06:10	
Aldrin	ug/L	ND	0.050	03/05/13 06:10	
alpha-BHC	ug/L	ND	0.050	03/05/13 06:10	
beta-BHC	ug/L	ND	0.050	03/05/13 06:10	
Chlordane (Technical)	ug/L	ND	0.20	03/05/13 06:10	
delta-BHC	ug/L	ND	0.050	03/05/13 06:10	
Dieldrin	ug/L	ND	0.050	03/05/13 06:10	
Endosulfan I	ug/L	ND	0.050	03/05/13 06:10	
Endosulfan II	ug/L	ND	0.050	03/05/13 06:10	
Endosulfan sulfate	ug/L	ND	0.050	03/05/13 06:10	
Endrin	ug/L	ND	0.050	03/05/13 06:10	
Endrin aldehyde	ug/L	ND	0.050	03/05/13 06:10	
Endrin ketone	ug/L	ND	0.050	03/05/13 06:10	
gamma-BHC (Lindane)	ug/L	ND	0.050	03/05/13 06:10	
Heptachlor	ug/L	ND	0.050	03/05/13 06:10	
Heptachlor epoxide	ug/L	ND	0.050	03/05/13 06:10	
Hexachlorobenzene	ug/L	ND	0.050	03/05/13 06:10	
Methoxychlor	ug/L	ND	0.15	03/05/13 06:10	
Mirex	ug/L	ND	0.15	03/05/13 06:10	
Toxaphene	ug/L	ND	0.20	03/05/13 06:10	
Decachlorobiphenyl (S)	%	73	20-130	03/05/13 06:10	
Tetrachloro-m-xylene (S)	%	78	20-130	03/05/13 06:10	

LABORATORY CONTROL SAMPLE & LCSD: 928269 928563

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
4,4'-DDD	ug/L	.25	0.21	0.22	84	89	20-150	5	30	
4,4'-DDE	ug/L	.25	0.21	0.22	83	90	20-150	7	30	
4,4'-DDT	ug/L	.25	0.20	0.22	82	88	20-150	7	30	
Aldrin	ug/L	.25	0.16	0.19	65	75	20-150	15	30	
alpha-BHC	ug/L	.25	0.18	0.17	75	70	20-150	6	30	
beta-BHC	ug/L	.25	0.19	0.18	75	71	20-150	6	30	
delta-BHC	ug/L	.25	0.19	0.17	77	70	20-150	10	30	
Dieldrin	ug/L	.25	0.21	0.22	84	88	20-150	5	30	
Endosulfan I	ug/L	.25	0.20	0.21	81	83	20-150	3	30	
Endosulfan II	ug/L	.25	0.20	0.21	82	85	20-150	3	30	
Endosulfan sulfate	ug/L	.25	0.18	0.18	73	73	20-150	0	30	
Endrin	ug/L	.25	0.20	0.21	79	85	20-150	7	30	
Endrin aldehyde	ug/L	.25	0.19	0.18	76	74	20-150	2	30	

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QUALITY CONTROL DATA

Project: HAYWOOD CO. FF LF GWM-FEB 2013
Pace Project No.: 92148504

LABORATORY CONTROL SAMPLE & LCSD: 928269 928563

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Endrin ketone	ug/L	.25	0.21	0.21	86	84	20-150	3	30	
gamma-BHC (Lindane)	ug/L	.25	0.19	0.18	75	72	20-150	5	30	
Heptachlor	ug/L	.25	0.16	0.18	64	73	20-150	14	30	
Heptachlor epoxide	ug/L	.25	0.19	0.19	76	76	20-150	1	30	
Hexachlorobenzene	ug/L	.25	0.18	0.21	73	85	20-150	15	30	
Methoxychlor	ug/L	.74	0.61	0.63	83	85	20-150	3	30	
Mirex	ug/L	.74	0.59	0.64	79	87	20-150	9	30	
Decachlorobiphenyl (S)	%				66	67	20-130			
Tetrachloro-m-xylene (S)	%				67	78	20-130			

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QUALITY CONTROL DATA

Project: HAYWOOD CO. FF LF GWM-FEB 2013
Pace Project No.: 92148504

QC Batch: OEXT/20981 Analysis Method: EPA 8081
QC Batch Method: EPA 3510 Analysis Description: 8081A GCS Pesticides
Associated Lab Samples: 92148504003, 92148504004, 92148504005, 92148504006, 92148504007, 92148504008

METHOD BLANK: 929343 Matrix: Water
Associated Lab Samples: 92148504003, 92148504004, 92148504005, 92148504006, 92148504007, 92148504008

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
4,4'-DDD	ug/L	ND	0.050	03/05/13 15:09	
4,4'-DDE	ug/L	ND	0.050	03/05/13 15:09	
4,4'-DDT	ug/L	ND	0.050	03/05/13 15:09	
Aldrin	ug/L	ND	0.050	03/05/13 15:09	
alpha-BHC	ug/L	ND	0.050	03/05/13 15:09	
beta-BHC	ug/L	ND	0.050	03/05/13 15:09	
Chlordane (Technical)	ug/L	ND	0.20	03/05/13 15:09	
delta-BHC	ug/L	ND	0.050	03/05/13 15:09	
Dieldrin	ug/L	ND	0.050	03/05/13 15:09	
Endosulfan I	ug/L	ND	0.050	03/05/13 15:09	
Endosulfan II	ug/L	ND	0.050	03/05/13 15:09	
Endosulfan sulfate	ug/L	ND	0.050	03/05/13 15:09	
Endrin	ug/L	ND	0.050	03/05/13 15:09	
Endrin aldehyde	ug/L	ND	0.050	03/05/13 15:09	
Endrin ketone	ug/L	ND	0.050	03/05/13 15:09	
gamma-BHC (Lindane)	ug/L	ND	0.050	03/05/13 15:09	
Heptachlor	ug/L	ND	0.050	03/05/13 15:09	
Heptachlor epoxide	ug/L	ND	0.050	03/05/13 15:09	
Hexachlorobenzene	ug/L	ND	0.050	03/05/13 15:09	
Methoxychlor	ug/L	ND	0.15	03/05/13 15:09	
Mirex	ug/L	ND	0.15	03/05/13 15:09	
Toxaphene	ug/L	ND	0.20	03/05/13 15:09	
Decachlorobiphenyl (S)	%	69	20-130	03/05/13 15:09	
Tetrachloro-m-xylene (S)	%	84	20-130	03/05/13 15:09	

LABORATORY CONTROL SAMPLE: 929344

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
4,4'-DDD	ug/L	.25	0.21	85	20-150	
4,4'-DDE	ug/L	.25	0.20	82	20-150	
4,4'-DDT	ug/L	.25	0.20	82	20-150	
Aldrin	ug/L	.25	0.11	44	20-150	
alpha-BHC	ug/L	.25	0.21	84	20-150	
beta-BHC	ug/L	.25	0.21	87	20-150	
delta-BHC	ug/L	.25	0.22	88	20-150	
Dieldrin	ug/L	.25	0.21	86	20-150	
Endosulfan I	ug/L	.25	0.21	84	20-150	
Endosulfan II	ug/L	.25	0.22	87	20-150	
Endosulfan sulfate	ug/L	.25	0.19	77	20-150	
Endrin	ug/L	.25	0.20	82	20-150	
Endrin aldehyde	ug/L	.25	0.21	86	20-150	

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QUALITY CONTROL DATA

Project: HAYWOOD CO. FF LF GWM-FEB 2013
Pace Project No.: 92148504

LABORATORY CONTROL SAMPLE: 929344

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Endrin ketone	ug/L	.25	0.23	91	20-150	
gamma-BHC (Lindane)	ug/L	.25	0.21	85	20-150	
Heptachlor	ug/L	.25	0.12	48	20-150	
Heptachlor epoxide	ug/L	.25	0.19	78	20-150	
Hexachlorobenzene	ug/L	.25	0.19	76	20-150	
Methoxychlor	ug/L	.74	0.59	79	20-150	
Mirex	ug/L	.74	0.61	82	20-150	
Decachlorobiphenyl (S)	%			65	20-130	
Tetrachloro-m-xylene (S)	%			76	20-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 929345 929346

Parameter	Units	92148500020 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
4,4'-DDD	ug/L	ND	.5	.5	0.53	0.50	108	102	20-150	5	30	
4,4'-DDE	ug/L	ND	.5	.5	0.53	0.50	107	102	20-150	5	30	
4,4'-DDT	ug/L	ND	.5	.5	0.55	0.50	110	102	20-150	8	30	
Aldrin	ug/L	ND	.5	.5	0.45	0.43	91	87	20-150	5	30	
alpha-BHC	ug/L	ND	.5	.5	0.41	0.41	84	82	20-150	2	30	
beta-BHC	ug/L	ND	.5	.5	0.47	0.45	95	92	20-150	3	30	
delta-BHC	ug/L	ND	.5	.5	0.42	0.40	85	81	20-150	4	30	
Dieldrin	ug/L	ND	.5	.5	0.52	0.50	105	102	20-150	3	30	
Endosulfan I	ug/L	ND	.5	.5	0.52	0.49	105	99	20-150	6	30	
Endosulfan II	ug/L	ND	.5	.5	0.52	0.49	105	100	20-150	5	30	
Endosulfan sulfate	ug/L	ND	.5	.5	0.48	0.45	96	91	20-150	6	30	
Endrin	ug/L	ND	.5	.5	0.54	0.51	109	103	20-150	6	30	
Endrin aldehyde	ug/L	ND	.5	.5	0.42	0.42	85	86	20-150	0	30	
Endrin ketone	ug/L	ND	.5	.5	0.51	0.48	103	97	20-150	6	30	
gamma-BHC (Lindane)	ug/L	ND	.5	.5	0.43	0.41	86	83	20-150	3	30	
Heptachlor	ug/L	ND	.5	.5	0.42	0.40	84	81	20-150	4	30	
Heptachlor epoxide	ug/L	ND	.5	.5	0.57	0.49	114	99	20-150	14	30	
Hexachlorobenzene	ug/L	ND	.5	.5	0.56	0.48	112	98	20-150	14	30	
Methoxychlor	ug/L	ND	1.5	1.5	1.4	1.4	96	91	20-150	5	30	
Mirex	ug/L	ND	1.5	1.5	1.4	1.3	93	90	20-150	3	30	
Decachlorobiphenyl (S)	%						76	74	20-130			
Tetrachloro-m-xylene (S)	%						76	78	20-130			

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QUALITY CONTROL DATA

Project: HAYWOOD CO. FF LF GWM-FEB 2013
Pace Project No.: 92148504

QC Batch: WETA/14605 — Analysis Method: SM 4500-CN-E
QC Batch Method: SM 4500-CN-E — Analysis Description: 4500CNE Cyanide, Total
Associated Lab Samples: 92148504001, 92148504002

METHOD BLANK: 927825 — Matrix: Water
Associated Lab Samples: 92148504001, 92148504002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Cyanide	mg/L	ND	0.0050	02/23/13 14:50	

LABORATORY CONTROL SAMPLE: 927826

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Cyanide	mg/L	.1	0.11	109	80-120	

MATRIX SPIKE SAMPLE: 927827

Parameter	Units	92148500011 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Cyanide	mg/L	ND	.1	0.12	113	75-125	

SAMPLE DUPLICATE: 927828

Parameter	Units	92148504001 Result	Dup Result	RPD	Max RPD	Qualifiers
Cyanide	mg/L	ND	ND		20	

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Pace Analytical Services, Inc.
2225 Riverside Dr.
Asheville, NC 28804
(828)254-7176

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

QUALITY CONTROL DATA

Project: HAYWOOD CO. FF LF GWM-FEB 2013
Pace Project No.: 92148504

QC Batch: WETA/14666 — Analysis Method: SM 4500-CN-E
QC Batch Method: SM 4500-CN-E — Analysis Description: 4500CNE Cyanide, Total
Associated Lab Samples: 92148504003, 92148504004, 92148504005, 92148504006, 92148504007, 92148504008

METHOD BLANK: 931775 — Matrix: Water
Associated Lab Samples: 92148504003, 92148504004, 92148504005, 92148504006, 92148504007, 92148504008

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Cyanide	mg/L	ND	0.0050	03/06/13 13:37	

LABORATORY CONTROL SAMPLE: 931776

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Cyanide	mg/L	.1	0.098	98	80-120	

MATRIX SPIKE SAMPLE: 931777

Parameter	Units	92148500021 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Cyanide	mg/L	ND	.1	0.093	92	75-125	

SAMPLE DUPLICATE: 931778

Parameter	Units	92148500022 Result	Dup Result	RPD	Max RPD	Qualifiers
Cyanide	mg/L	ND	ND		20	

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QUALIFIERS

Project: HAYWOOD CO. FF LF GWM-FEB 2013
Pace Project No.: 92148504

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.

PRL - Pace Reporting 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

M1	Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

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(828)254-7176

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

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: HAYWOOD CO. FF LF GWM-FEB 2013
Pace Project No.: 92148504

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92148504001	MW-19D		FLD/		
92148504002	MW-20D		FLD/		
92148504003	MW-14D		FLD/		
92148504004	MW-16D		FLD/		
92148504005	MW-22		FLD/		
92148504006	MW-23		FLD/		
92148504007	MW-24		FLD/		
92148504008	MW-25		FLD/		
92148504001	MW-19D	EPA 3510	OEXT/20957	EPA 8081	GCSV/14074
92148504002	MW-20D	EPA 3510	OEXT/20957	EPA 8081	GCSV/14074
92148504003	MW-14D	EPA 3510	OEXT/20981	EPA 8081	GCSV/14083
92148504004	MW-16D	EPA 3510	OEXT/20981	EPA 8081	GCSV/14083
92148504005	MW-22	EPA 3510	OEXT/20981	EPA 8081	GCSV/14083
92148504006	MW-23	EPA 3510	OEXT/20981	EPA 8081	GCSV/14083
92148504007	MW-24	EPA 3510	OEXT/20981	EPA 8081	GCSV/14083
92148504008	MW-25	EPA 3510	OEXT/20981	EPA 8081	GCSV/14083
92148504001	MW-19D	EPA 3010	MPRP/12676	EPA 6010	ICP/11566
92148504002	MW-20D	EPA 3010	MPRP/12676	EPA 6010	ICP/11566
92148504003	MW-14D	EPA 3010	MPRP/12687	EPA 6010	ICP/11568
92148504004	MW-16D	EPA 3010	MPRP/12687	EPA 6010	ICP/11568
92148504005	MW-22	EPA 3010	MPRP/12687	EPA 6010	ICP/11568
92148504006	MW-23	EPA 3010	MPRP/12687	EPA 6010	ICP/11568
92148504007	MW-24	EPA 3010	MPRP/12687	EPA 6010	ICP/11568
92148504008	MW-25	EPA 3010	MPRP/12687	EPA 6010	ICP/11568
92148504001	MW-19D	EPA 7470	MERP/4945	EPA 7470	MERC/4817
92148504002	MW-20D	EPA 7470	MERP/4945	EPA 7470	MERC/4817
92148504003	MW-14D	EPA 7470	MERP/4951	EPA 7470	MERC/4822
92148504004	MW-16D	EPA 7470	MERP/4951	EPA 7470	MERC/4822
92148504005	MW-22	EPA 7470	MERP/4961	EPA 7470	MERC/4831
92148504006	MW-23	EPA 7470	MERP/4961	EPA 7470	MERC/4831
92148504007	MW-24	EPA 7470	MERP/4961	EPA 7470	MERC/4831
92148504008	MW-25	EPA 7470	MERP/4961	EPA 7470	MERC/4831
92148504001	MW-19D	EPA 8260	MSV/22090		
92148504002	MW-20D	EPA 8260	MSV/22090		
92148504003	MW-14D	EPA 8260	MSV/22137		
92148504004	MW-16D	EPA 8260	MSV/22137		
92148504005	MW-22	EPA 8260	MSV/22137		
92148504006	MW-23	EPA 8260	MSV/22137		
92148504007	MW-24	EPA 8260	MSV/22137		
92148504008	MW-25	EPA 8260	MSV/22137		
92148504001	MW-19D	SM 4500-CN-E	WETA/14605		
92148504002	MW-20D	SM 4500-CN-E	WETA/14605		
92148504003	MW-14D	SM 4500-CN-E	WETA/14666		

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(704)875-9092

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: HAYWOOD CO. FF LF GWM-FEB 2013
Pace Project No.: 92148504

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92148504004	**MW-16D**	SM 4500-CN-E	WETA/14666		
92148504005	**MW-22**	SM 4500-CN-E	WETA/14666		
92148504006	**MW-23**	SM 4500-CN-E	WETA/14666		
92148504007	**MW-24**	SM 4500-CN-E	WETA/14666		
92148504008	**MW-25**	SM 4500-CN-E	WETA/14666		

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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

1613449

Section A Required Client Information:

Company: BLE
Address:
Email To:
Phone: Fax:
Requested Due Date/TAT:

Section B Required Project Information:

Report To: Andy Alexander
Copy To:
Purchase Order No.:
Project Name: BLE wells
Project Number:

Section C Invoice Information:

Attention:
Company Name:
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	Analysis Test (Y/N)	Requested Analysis Filtered (Y/N): Fe, Static H2O, Sp Metals, 8081, Cr-	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D. 92148504
1	MW-19D					2-18-13	1735		7	2		1	3	1							001
2	MW-20D					2-17	1810		7	2		1	3	1							002
3																					
4																					
5																					
6																					
7																					
8																					
9																					
10																					
11																					
12																					

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
		2-18-13	1820		2-18-13	1820				
	[signature]	2-18-13	1915	[signature]	2/19/13	0930	3.6	Y	N	Y

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

ORIGINAL

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: MARK L. SWANSON

SIGNATURE of SAMPLER: [signature] DATE Signed (MM/DD/YY): 2-18-13

*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.

Pace Analytical www.pacelabs.com	Document Name: **Sample Condition Upon Receipt (SCUR)**	Document Revised: May 30, 2012 Page 1 of 2
	Document No.: F-ASV-CS-003-rev.08	

WO#: 92148504

92148504

Client Name: BLE Proje

Where Received: ☐ Huntersville ☑ Asheville ☐ Eden ☐ Raleigh

Courier (Circle): Fed Ex UPS USPS Client Commercial Pace Other_____

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

Optional Proj. Due Date

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

Circle Thermometer Used: IR Gun#2 80344039 **Type of Ice:** Wet Blue None ☑ Samples on ice, cooling process has begun

IR Gun Back Up- 111565135

Temp Correction Factor: Add / Subtract 0.1 C

Corrected Cooler Temp.: 3.6 C **Biological Tissue is Frozen:** Yes No N/A

Temp should be above freezing to 6°C

Date and Initials of person examining contents: 2/19 PM

		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:	☑Yes ☐No ☐N/A	12.
-Includes date/time/ID/Analysis Matrix: WT		
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	PM
exceptions: VOA, coliform, TOC, O&G, WI-DRO (water)	☐Yes ☐No	Initial when completed
Samples checked for dechlorination:	☑Yes ☐No ☐N/A	14.
Headspace in VOA Vials (>6mm):	☐Yes ☑No ☐N/A	15. PM
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: _____ **Date:** _____ **SRF Review:** _____ **Date:** _____

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)

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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.

1637513

Section A Required Client Information:

Company: BLE
Address:
Email To:
Phone: Fax:
Requested Due Date/TAT:

Section B Required Project Information:

Report To: Andy Alexander
Copy To:
Purchase Order No.:
Project Name: FF MW'1
Project Number:

Section C Invoice Information:

Attention:
Company Name:
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

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

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

Requested Analysis Filtered (Y/N)

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	Analysis Test (Y/N): FLD	Static	VOC	Metals	PCBs	CN	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	MW-14D					2-21-13	1415		7	2		1	3	1				Y	X	X	X	X	X		92148504-003
2	MW-16D						1330		7	2		1	3	1				Y	X	X	X	X	X		004
3	MW 22						1030		7	2		1	3	1				Y	X	X	X	X	X		005
4	MW 23						1710		7	2		1	3	1				X	X	X	X		X		006
5	MW 24						1640		7	2		1	3	1				X	X	X	X	X	X		007
6	MW 25D						1255		7	2		1	3	1				X	X	X	X	X	X		008
7																									
8																									
9																									
10																									
11																									
12																									

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
		2-21-13	1735	[signature] BLE	2-21-13	1735				
	[signature] BLE	2-21-13	1810	[signature]	2/22/13	0830	3.1	Y	N	Y
							Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)

ORIGINAL

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: MARK P. SWAMP

SIGNATURE of SAMPLER: [signature] BLE

DATE Signed (MM/DD/YY): 2-21-13

*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.

Pace Analytical www.pacelabs.com	Document Name: **Sample Condition Upon Receipt (SCUR)**	Document Revised: May 30, 2012 Page 1 of 2
	Document No.: F-ASV-CS-003-rev.08	

WO#: 92148504

92148504

Client Name: BLE Proje

Where Received: ☐ Huntersville ☑ Asheville ☐ Eden ☐ Raleigh

Courier (Circle): Fed Ex UPS USPS Client Commercial Pace Other

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

Packing Material: ☐ Bubble Wrap ☐ Bubble Bags ☐ None ☑ Other

Circle Thermometer Used: IR Gun#: 80344039 **Type of Ice:** Wet Blue None ☑ Samples on Ice, cooling process has begun

IR Gun Back Up- 111565135

Temp Correction Factor: Add / Subtract -0.1 C

Corrected Cooler Temp.: 3.6 3.1 C **Biological Tissue is Frozen:** Yes No N/A

Temp should be above freezing to 6°C

Date and Initials of person examining contents: DM 2/22

		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: WT	☑Yes ☐No ☐N/A	12.
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	DM
exceptions: VOA, coliform, TOC, O&G, WI-DRO (water)	☑Yes ☐No	Initial when completed
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: **Date:** **SRF Review:** **Date:**

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)

APPENDIX D

STATISTICAL CALCULATIONS

Haywood County Closed Landfill, Francis Farm
Haywood County, North Carolina
BLE Project Number J12-1957-33

COMPOUND	TOTAL	ND	DETECTED	%ND	STATISTICAL TEST
Total Antimony	75	74	1	98.7%	Poisson Prediction Limits
Total Arsenic	174	157	17	90.2%	Poisson Prediction Limits
Total Barium *	174	5	169	2.9%	Kruskal-Wallis
Total Beryllium	75	73	2	97.3%	Poisson Prediction Limits
Total Cadmium	174	149	25	85.6%	Kruskal-Wallis
Total Chromium	174	109	65	62.6%	Kruskal-Wallis
Total Cobalt	77	38	39	49.4%	Kruskal-Wallis
Total Copper	75	54	21	72.0%	Kruskal-Wallis
Total Lead	174	144	30	82.8%	Kruskal-Wallis
Total Mercury	149	142	7	95.3%	Poisson Prediction Limits
Total Nickel	85	49	36	57.6%	Kruskal-Wallis
Total Selenium	165	148	17	89.7%	Kruskal-Wallis
Total Silver	174	161	13	92.5%	Poisson Prediction Limits
Total Vanadium	75	53	22	70.7%	Poisson Prediction Limits
Total Zinc	75	31	44	41.3%	Kruskal-Wallis
Acetone	148	146	2	98.6%	Poisson Prediction Limits
Benzene	148	101	47	68.2%	Kruskal-Wallis
Carbon Disulfide	148	147	1	99.3%	Poisson Prediction Limits
Chlorobenzene	148	128	20	86.5%	Poisson Prediction Limits
Chloroethane	148	86	62	58.1%	Poisson Prediction Limits
1,2-Dichlorobenzene	148	120	28	81.1%	Poisson Prediction Limits
1,4-Dichlorobenzene	148	90	58	60.8%	Poisson Prediction Limits
1,1-Dichloroethane	148	42	106	28.4%	Kruskal-Wallis
1,2-Dichloroethane	148	118	30	79.7%	Poisson Prediction Limits
1,1-Dichloroethene	148	147	1	99.3%	Poisson Prediction Limits
cis-1,2-Dichloroethene	148	36	112	24.3%	Kruskal-Wallis
cis-1,3-Dichloropropene	148	147	1	99.3%	Poisson Prediction Limits
Ethylbenzene	148	142	6	95.9%	Poisson Prediction Limits
Dichloromethane	148	124	24	83.8%	Kruskal-Wallis
Tetrachloroethene	148	107	41	72.3%	Kruskal-Wallis
Toluene	148	135	13	91.2%	Poisson Prediction Limits
Trichloroethene	148	108	40	73.0%	Kruskal-Wallis
Vinyl Chloride	148	144	4	97.3%	Poisson Prediction Limits
Total Xylenes	148	128	20	86.5%	Poisson Prediction Limits
Naphthalene	45	42	3	93.3%	Insufficient Data. Not Tested.

Sampling Event	# Detected
N 1	3
N 2	8
N 3	11
N 4	13
N 5	20
N 6	14
N 7	21
N 8	43
N 9	33
N 10	34
N 11	42
N 12	29
N 13	7
N 14	22
N 15	14
N 16	35
N 17	40
N 18	32
N 19	35
N 20	40
N 21	38
N 22	42
N 23	126
N 24	113
N 25	101
N 26	117
N 27	94

LEGEND FOR THE FOLLOWING PAGES:

ND = *Not Detected* at the method detection limit
MCL = *Maximum Contaminant Level*; NCAC 2L Standard
NE = *Not Established*; NC has not established a MCL
NP = *Not Present* during sampling event
NS = *Not Sampled*
NT = *Not Tested*
NA = information *Not Available*
MDL = *Method Detection Limit*
"J" flagged values are not statisatically analyzed

Total Detected Concentrations (per compound) = 1127
Total Detected Concentrations (per event) = 1127
Are all accounted for ? Yes
Statistical Package Prepared By: IAI
Statistical Package Checked By: PJVH/MSP

Haywood County Closed Landfill, Francis Farm
Haywood County, North Carolina
BLE Project Number J12-1957-33

Compound: **Total Antimony (Sb)**
NC MCL (µg/l): Not Established
Method: Poisson Prediction Limits
Background: MW-4, MW-5, MW-12

	MW-4	MW-5	MW-12	MW-1A	MW-2A	MW-3A	MW-6	MW-7	MW-8	MW-9	MW-10	MW-11	MW-13	MW-14	MW-15	MDL
02/18/99	NT	NS	NP	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
08/16/99	NT	NS	NP	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
02/14/00	NT	NS	NP	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
08/14/00	NT	NT	NP	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
03/19/01	NT	NT	NP	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
08/27/02	NT	NT	NP	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
02/24/03	NT	NT	NP	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
08/11/03	NT	NT	NP	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
02/09/04	NT	NT	NP	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
08/16/04	NT	NT	NP	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
02/14/05	NT	NT	NP	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
09/01/05	NT	NT	NP	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
02/16/06	NT	NT	NP	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
08/30/06	NT	NT	NP	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
02/26/07	NT	NT	NP	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
08/13/07	NT	NT	NP	NT	NT	Dry	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
02/11/08	NT	NT	NP	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
08/25/08	NT	NT	NP	NT	NT	Dry	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
02/23/09	NT	NT	NP	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
08/24/09	NT	NT	NP	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
02/22/10	NT	NT	NP	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
08/30/10	NT	NT	NP	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
02/22/11	ND	ND	ND	ND	ND	ND	ND	ND	ND	**5.1**	ND	ND	ND	ND	ND	**5**
08/22/11	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**5**
02/22/12	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**5**
08/29/12	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**5**
02/18/13	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**5**

1) If not detected (ND), use half of the detection limit.

02/18/99	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
08/16/99	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
02/14/00	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
08/14/00	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
03/19/01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
08/27/02	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
02/24/03	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
08/11/03	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
02/09/04	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
08/16/04	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
02/14/05	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
09/01/05	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
02/16/06	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
08/30/06	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
02/26/07	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
08/13/07	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
02/11/08	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
08/25/08	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
02/23/09	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
08/24/09	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
02/22/10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
08/30/10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
02/22/11	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	5.1	2.5	2.5	2.5	2.5	2.5
08/22/11	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
02/22/12	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
08/29/12	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
02/18/13				2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5

2) Set the total number of data values for background wells (through the previous sampling event) equal to 'n' = 4.
Use 1/2 of the method detection limit to calculate the Total Poisson Count of the Sum (T_n).

$n = 12$
$T_{n1} = 30$

3) Using Gibbons' formula, calculate the upper Poisson Prediction limit T^*_k:

$$T^*_k = cT_{n1} + ct^2/2 + ct[T_{n1}(1+1/c) + t^2/4]^{-0.5}$$

where $c = k/n$
and where k = the number of future predicted measurements (one per well during the current sampling event)
and where t = the upper 99th percentile of the t-distribution with (n-1) degrees of freedom (Table 6 of the IFG).

$k = 12$
$n = 12$
$T_{n1} = 30$
$t[11,.01] = 2.718$
$c = 1$
$T_{n2} = 30$
$T^*_k = 55.1$

4) Compare the *Poisson Prediction Limit* (T^*_k) to the *Sum of the Concentrations Detected* (T_{n2}) in the wells during the most recent sampling event.
Since the Poisson Prediction Limit was not exceeded, there is no evidence of contamination

Haywood County Closed Landfill, Francis Farm
Haywood County, North Carolina
BLE Project Number J12-1957-33

Compound: **Total Arsenic (As)**
NC MCL (µg/l): 10
Method: Poisson Prediction Limits
Background: MW-4, MW-5, MW-12

	MW-4	MW-5	MW-12	MW-1A	MW-2A	MW-3A	MW-6	MW-7	MW-8	MW-9	MW-10	MW-11	MW-13	MW-14	MW-15	MDL
02/18/99	ND	NS	NP	ND	NS	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	5
08/16/99	ND	NS	NP	ND	NS	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	5
02/14/00	ND	NS	NP	ND	NS	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	5
08/14/00	ND	NT	NP	ND	NS	**10**	NP	NP	NP	NP	NP	NP	NP	NP	NP	5
03/19/01	ND	**11**	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	5
08/27/02	**5.8**	**25**	NP	ND	**23**	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	5
02/24/03	ND	**23**	NP	ND	**16**	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	5
08/11/03	ND	**9.9**	NP	ND	**6.5**	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	5
02/09/04	ND	**8.3**	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	5
08/16/04	ND	**6.1**	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	5
02/14/05	ND	**6.2**	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	5
09/01/05	ND	ND	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	5
02/16/06	ND	ND	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	5
08/30/06	ND	ND	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	5
02/26/07	ND	ND	NP	ND	**5.9**	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	5
08/13/07	ND	ND	NP	ND	ND	Dry	NP	NP	NP	NP	NP	NP	NP	NP	NP	5
02/11/08	ND	ND	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	5
08/25/08	ND	ND	NP	ND	ND	Dry	NP	NP	NP	NP	NP	NP	NP	NP	NP	5
02/23/09	ND	ND	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	5
08/24/09	ND	ND	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	5
02/22/10	ND	ND	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	5
08/30/10	ND	ND	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	5
02/22/11	ND	ND	ND	ND	ND	ND	ND	ND	ND	**5.8**	ND	**5.3**	ND	ND	ND	5
08/22/11	ND	ND	ND	ND	ND	ND	ND	**8.7**	ND	ND	ND	ND	ND	ND	ND	5
02/22/12	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5
08/29/12	ND	ND	ND	ND	ND	**5.3**	ND	ND	ND	ND	ND	ND	ND	ND	ND	5
02/18/13	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	10

1) If not detected (ND), use half of the detection limit.

02/18/99	2.5	-	-	2.5	-	2.5	-	-	-	-	-	-	-	-	-
08/16/99	2.5	-	-	2.5	-	2.5	-	-	-	-	-	-	-	-	-
02/14/00	2.5	-	-	2.5	-	2.5	-	-	-	-	-	-	-	-	-
08/14/00	2.5	-	-	2.5	-	10	-	-	-	-	-	-	-	-	-
03/19/01	2.5	11	-	2.5	2.5	2.5	-	-	-	-	-	-	-	-	-
08/27/02	5.8	25	-	2.5	23	-	-	-	-	-	-	-	-	-	-
02/24/03	2.5	23	-	2.5	16	2.5	-	-	-	-	-	-	-	-	-
08/11/03	2.5	9.9	-	2.5	6.5	2.5	-	-	-	-	-	-	-	-	-
02/09/04	2.5	8.3	-	2.5	2.5	2.5	-	-	-	-	-	-	-	-	-
08/16/04	2.5	6.1	-	2.5	2.5	2.5	-	-	-	-	-	-	-	-	-
02/14/05	2.5	6.2	-	2.5	2.5	2.5	-	-	-	-	-	-	-	-	-
09/01/05	2.5	2.5	-	2.5	2.5	2.5	-	-	-	-	-	-	-	-	-
02/16/06	2.5	2.5	-	2.5	2.5	2.5	-	-	-	-	-	-	-	-	-
08/30/06	2.5	2.5	-	2.5	2.5	2.5	-	-	-	-	-	-	-	-	-
02/26/07	2.5	2.5	-	2.5	5.9	2.5	-	-	-	-	-	-	-	-	-
08/13/07	2.5	2.5	-	2.5	2.5	-	-	-	-	-	-	-	-	-	-
02/11/08	2.5	2.5	-	2.5	2.5	2.5	-	-	-	-	-	-	-	-	-
08/25/08	2.5	2.5	-	2.5	2.5	-	-	-	-	-	-	-	-	-	-
02/23/09	2.5	2.5	-	2.5	2.5	2.5	-	-	-	-	-	-	-	-	-
08/24/09	2.5	2.5	-	2.5	2.5	2.5	-	-	-	-	-	-	-	-	-
02/22/10	2.5	2.5	-	2.5	2.5	2.5	-	-	-	-	-	-	-	-	-
08/30/10	2.5	2.5	-	2.5	2.5	2.5	-	-	-	-	-	-	-	-	-
02/22/11	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	5.8	2.5	5.3	2.5	2.5	2.5
08/22/11	2.5	2.5	2.5	2.5	2.5	2.5	2.5	8.7	2.5	2.5	2.5	2.5	2.5	2.5	2.5
02/22/12	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
08/29/12	2.5	2.5	2.5	2.5	2.5	5.3	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
02/18/13				5	5	5	5	5	5	5	5	5	5	5	5

2) Set the total number of data values for background wells (through the previous sampling event) equal to 'n' = 26.
Use 1/2 of the method detection limit to calculate the Total Poisson Count of the Sum (T_n).

$n = 52$
$T_{n1} = 205.3$

3) Using Gibbons' formula, calculate the upper Poisson Prediction limit T^*_k:

$$T^*_k = cT_{n1} + ct^2/2 + ct[T_{n1}(1+1/c) + t^2/4]^{-0.5}$$

where $c = k/n$
and where k = the number of future predicted measurements (one per well during the current sampling event)
and where t = the upper 99th percentile of the t-distribution with (n-1) degrees of freedom (Table 6 of the IFG).

$k = 12$
$n = 52$
$T_{n1} = 205.3$
$t[51,.01] = 2.405$
$c = 0.231$
$T_{n2} = 60$
$T^*_k = 66.4$

4) Compare the *Poisson Prediction Limit* (T^*_k) to the *Sum of the Concentrations Detected* (T_{n2}) in the wells during the most recent sampling event.
Since the Poisson Prediction Limit was not exceeded, there is no evidence of contamination.

Haywood County Closed Landfill, Francis Farm
Haywood County, North Carolina
BLE Project Number J12-1957-33

Compound: **Total Barium (Ba)**
NC MCL (µg/l): 700
Method: Kruskal-Wallis
Background: MW-4, MW-5, MW-12

	MW-4	MW-5	MW-12	MW-1A	MW-2A	MW-3A	MW-6	MW-7	MW-8	MW-9	MW-10	MW-11	MW-13	MW-14	MW-15	MDL
02/18/99	100	NS	NP	300	NS	400	NP	NP	NP	NP	NP	NP	NP	NP	NP	100
08/16/99	120	NS	NP	230	NS	260	NP	NP	NP	NP	NP	NP	NP	NP	NP	100
02/14/00	150	NS	NP	270	NS	240	NP	NP	NP	NP	NP	NP	NP	NP	NP	100
08/14/00	180	NT	NP	410	NS	310	NP	NP	NP	NP	NP	NP	NP	NP	NP	100
03/19/01	120	2000	NP	340	830	310	NP	NP	NP	NP	NP	NP	NP	NP	NP	100
08/27/02	150	2800	NP	250	2700	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	100
02/24/03	150	2500	NP	310	1800	330	NP	NP	NP	NP	NP	NP	NP	NP	NP	100
08/11/03	150	1200	NP	530	950	350	NP	NP	NP	NP	NP	NP	NP	NP	NP	5
02/09/04	120	890	NP	260	370	310	NP	NP	NP	NP	NP	NP	NP	NP	NP	5
08/16/04	140	1100	NP	280	300	310	NP	NP	NP	NP	NP	NP	NP	NP	NP	5
02/14/05	160	520	NP	310	300	300	NP	NP	NP	NP	NP	NP	NP	NP	NP	5
09/01/05	140	330	NP	280	280	210	NP	NP	NP	NP	NP	NP	NP	NP	NP	5
02/16/06	ND	ND	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	5
08/30/06	160	250	NP	290	220	240	NP	NP	NP	NP	NP	NP	NP	NP	NP	5
02/26/07	140	280	NP	210	240	300	NP	NP	NP	NP	NP	NP	NP	NP	NP	5
08/13/07	137	208	NP	176	256	Dry	NP	NP	NP	NP	NP	NP	NP	NP	NP	5
02/11/08	155	238	NP	165	229	41.7	NP	NP	NP	NP	NP	NP	NP	NP	NP	5
08/25/08	142	195	NP	150	265	Dry	NP	NP	NP	NP	NP	NP	NP	NP	NP	5
02/23/09	146	270	NP	220	215	206	NP	NP	NP	NP	NP	NP	NP	NP	NP	5
08/24/09	136	264	NP	203	173	210	NP	NP	NP	NP	NP	NP	NP	NP	NP	5
02/22/10	139	260	NP	269	250	224	NP	NP	NP	NP	NP	NP	NP	NP	NP	5
08/30/10	125	246	NP	192	203	206	NP	NP	NP	NP	NP	NP	NP	NP	NP	5
02/22/11	163	237	197	171	191	241	54	213	72.8	1190	193	138	977	309	68.7	5
08/22/11	133	280	191	189	189	214	66.8	1640	76.4	202	71.9	104	972	284	57.7	5
02/22/12	134	214	196	222	266	175	48.7	207	62.7	126	102	90.2	970	237	49.9	5
08/29/12	151	289	335	174	283	232	42.8	224	67.4	106	110	106	931	237	64	5
02/18/13	128	229	216	267	221	172	16.2	200	41.3	75.7	86	95.5	815	238	42.6	5
N_i	27	23	5	27	23	24	5	5	5	5	5	5	5	5	5	
sum of rank values (R_i)	1207.0	2857.5	463.5	2790.0	2599.5	2517.5	57.0	514.5	84.0	334.5	177.0	153.5	811.0	588.5	70.0	
avg rank value (Rbar)	44.7	124.2	92.7	103.3	113.0	104.9	11.4	102.9	16.8	66.9	35.4	30.7	162.2	117.7	14.0	

	Number of each rank value															Rank Value
rank value of NDs =	1	1	0	1	1	1	0	0	0	0	0	0	0	0	0	3
rank value of 16.2s =	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	6
rank value of 41.3s =	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	7
rank value of 41.7s =	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	8
rank value of 42.6s =	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	9
rank value of 42.8s =	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	10
rank value of 48.7s =	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	11
rank value of 49.9s =	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	12
rank value of 54s =	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	13
rank value of 57.7s =	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	14
rank value of 62.7s =	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	15
rank value of 64s =	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	16
rank value of 66.8s =	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	17
rank value of 67.4s =	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	18
rank value of 68.7s =	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	19
rank value of 71.9s =	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	20
rank value of 72.8s =	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	21
rank value of 75.7s =	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	22
rank value of 76.4s =	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	23
rank value of 86s =	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	24
rank value of 90.2s =	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	25
rank value of 95.5s =	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	26
rank value of 100s =	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	27
rank value of 102s =	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	28
rank value of 104s =	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	29
rank value of 106s =	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	30.5
rank value of 110s =	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	32
rank value of 120s =	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	34
rank value of 125s =	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	36
rank value of 126s =	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	37
rank value of 128s =	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	38
rank value of 133s =	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	39

rank value of 134s =	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	40
rank value of 136s =	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	41
rank value of 137s =	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	42
rank value of 138s =	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	43
rank value of 139s =	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	44
rank value of 140s =	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	46
rank value of 142s =	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	48
rank value of 146s =	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	49
rank value of 150s =	4	0	0	1	0	0	0	0	0	0	0	0	0	0	0	52
rank value of 151s =	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	55
rank value of 155s =	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	56
rank value of 160s =	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	57.5
rank value of 163s =	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	59
rank value of 165s =	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	60
rank value of 171s =	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	61
rank value of 172s =	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	62
rank value of 173s =	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	63
rank value of 174s =	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	64
rank value of 175s =	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	65
rank value of 176s =	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	66
rank value of 180s =	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	67
rank value of 189s =	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	68.5
rank value of 191s =	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	70.5
rank value of 192s =	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	72
rank value of 193s =	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	73
rank value of 195s =	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	74
rank value of 196s =	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	75
rank value of 197s =	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	76
rank value of 200s =	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	77
rank value of 202s =	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	78
rank value of 203s =	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	79.5
rank value of 206s =	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	81.5
rank value of 207s =	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	83
rank value of 208s =	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	84
rank value of 210s =	0	0	0	1	0	2	0	0	0	0	0	0	0	0	0	86
rank value of 213s =	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	88
rank value of 214s =	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	89.5
rank value of 215s =	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	91
rank value of 216s =	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	92
rank value of 220s =	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	93.5
rank value of 221s =	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	95
rank value of 222s =	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	96
rank value of 224s =	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	97.5
rank value of 229s =	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	99.5
rank value of 230s =	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	101
rank value of 232s =	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	102
rank value of 237s =	0	1	0	0	0	0	0	0	0	0	0	0	0	2	0	104
rank value of 238s =	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	106.5
rank value of 240s =	0	0	0	0	1	2	0	0	0	0	0	0	0	0	0	109
rank value of 241s =	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	111
rank value of 246s =	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	112
rank value of 250s =	0	1	0	1	1	0	0	0	0	0	0	0	0	0	0	114
rank value of 256s =	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	116
rank value of 260s =	0	1	0	1	0	1	0	0	0	0	0	0	0	0	0	118
rank value of 264s =	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	120
rank value of 265s =	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	121
rank value of 266s =	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	122
rank value of 267s =	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	123
rank value of 269s =	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	124
rank value of 270s =	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	125.5
rank value of 280s =	0	2	0	2	1	0	0	0	0	0	0	0	0	0	0	129
rank value of 283s =	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	132
rank value of 284s =	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	133
rank value of 289s =	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	134
rank value of 290s =	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	135
rank value of 300s =	0	0	0	1	2	2	0	0	0	0	0	0	0	0	0	138
rank value of 309s =	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	141
rank value of 310s =	0	0	0	2	0	4	0	0	0	0	0	0	0	0	0	144.5
rank value of 330s =	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	148.5
rank value of 335s =	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	150
rank value of 340s =	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	151
rank value of 350s =	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	152
rank value of 370s =	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	153
rank value of 400s =	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	154
rank value of 410s =	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	155
rank value of 520s =	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	156

rank value of 530s =	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	157
rank value of 815s =	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	158
rank value of 830s =	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	159
rank value of 890s =	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	160
rank value of 931s =	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	161
rank value of 950s =	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	162
rank value of 970s =	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	163
rank value of 972s =	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	164
rank value of 977s =	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	165
rank value of 1100s =	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	166
rank value of 1190s =	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	167
rank value of 1200s =	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	168
rank value of 1640s =	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	169
rank value of 1800s =	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	170
rank value of 2000s =	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	171
rank value of 2500s =	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	172
rank value of 2700s =	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	173
rank value of 2800s =	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	174
n =	**27**	**23**	**5**	**27**	**23**	**24**	**5**	**5**	**5**	**5**	**5**	**5**	**5**	**5**	**5**	

Sum of rank value calculations

3	3	0	3	3	3	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	6	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	7	0	0	0	0	0	0
0	0	0	0	0	8	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	9
0	0	0	0	0	0	10	0	0	0	0	0	0	0	0
0	0	0	0	0	0	11	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	12
0	0	0	0	0	0	13	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	14
0	0	0	0	0	0	0	0	15	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	16
0	0	0	0	0	0	17	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	18	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	19
0	0	0	0	0	0	0	0	0	0	20	0	0	0	0
0	0	0	0	0	0	0	0	21	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	22	0	0	0	0	0
0	0	0	0	0	0	0	0	23	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	24	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	25	0	0	0
0	0	0	0	0	0	0	0	0	0	0	26	0	0	0
27	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	28	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	29	0	0	0
0	0	0	0	0	0	0	0	0	30.5	0	30.5	0	0	0
0	0	0	0	0	0	0	0	0	0	32	0	0	0	0
102	0	0	0	0	0	0	0	0	0	0	0	0	0	0
36	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	37	0	0	0	0	0
38	0	0	0	0	0	0	0	0	0	0	0	0	0	0
39	0	0	0	0	0	0	0	0	0	0	0	0	0	0
40	0	0	0	0	0	0	0	0	0	0	0	0	0	0
41	0	0	0	0	0	0	0	0	0	0	0	0	0	0
42	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	43	0	0	0
44	0	0	0	0	0	0	0	0	0	0	0	0	0	0
138	0	0	0	0	0	0	0	0	0	0	0	0	0	0
48	0	0	0	0	0	0	0	0	0	0	0	0	0	0
49	0	0	0	0	0	0	0	0	0	0	0	0	0	0
208	0	0	52	0	0	0	0	0	0	0	0	0	0	0
55	0	0	0	0	0	0	0	0	0	0	0	0	0	0
56	0	0	0	0	0	0	0	0	0	0	0	0	0	0
115	0	0	0	0	0	0	0	0	0	0	0	0	0	0
59	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	60	0	0	0	0	0	0	0	0	0	0	0
0	0	0	61	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	62	0	0	0	0	0	0	0	0	0
0	0	0	0	63	0	0	0	0	0	0	0	0	0	0
0	0	0	64	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	65	0	0	0	0	0	0	0	0	0
0	0	0	66	0	0	0	0	0	0	0	0	0	0	0
67	0	0	0	0	0	0	0	0	0	0	0	0	0	0

0	0	0	68.5	68.5	0	0	0	0	0	0	0	0	0	0
0	0	70.5	0	70.5	0	0	0	0	0	0	0	0	0	0
0	0	0	72	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	73	0	0	0	0
0	74	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	75	0	0	0	0	0	0	0	0	0	0	0	0
0	0	76	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	77	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	78	0	0	0	0	0
0	0	0	79.5	79.5	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	163	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	83	0	0	0	0	0	0	0
0	84	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	86	0	172	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	88	0	0	0	0	0	0	0
0	89.5	0	0	0	89.5	0	0	0	0	0	0	0	0	0
0	0	0	0	91	0	0	0	0	0	0	0	0	0	0
0	0	92	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	93.5	93.5	0	0	0	0	0	0	0	0	0	0
0	0	0	0	95	0	0	0	0	0	0	0	0	0	0
0	0	0	96	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	97.5	0	97.5	0	0	0	0	0	0	0
0	99.5	0	0	99.5	0	0	0	0	0	0	0	0	0	0
0	0	0	101	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	102	0	0	0	0	0	0	0	0	0
0	104	0	0	0	0	0	0	0	0	0	0	0	208	0
0	106.5	0	0	0	0	0	0	0	0	0	0	0	106.5	0
0	0	0	0	109	218	0	0	0	0	0	0	0	0	0
0	0	0	0	0	111	0	0	0	0	0	0	0	0	0
0	112	0	0	0	0	0	0	0	0	0	0	0	0	0
0	114	0	114	114	0	0	0	0	0	0	0	0	0	0
0	0	0	0	116	0	0	0	0	0	0	0	0	0	0
0	118	0	118	0	118	0	0	0	0	0	0	0	0	0
0	120	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	121	0	0	0	0	0	0	0	0	0	0
0	0	0	0	122	0	0	0	0	0	0	0	0	0	0
0	0	0	123	0	0	0	0	0	0	0	0	0	0	0
0	0	0	124	0	0	0	0	0	0	0	0	0	0	0
0	125.5	0	125.5	0	0	0	0	0	0	0	0	0	0	0
0	258	0	258	129	0	0	0	0	0	0	0	0	0	0
0	0	0	0	132	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	133	0
0	134	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	135	0	0	0	0	0	0	0	0	0	0	0
0	0	0	138	276	276	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	141	0
0	0	0	289	0	578	0	0	0	0	0	0	0	0	0
0	148.5	0	0	0	148.5	0	0	0	0	0	0	0	0	0
0	0	150	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	151	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	152	0	0	0	0	0	0	0	0	0
0	0	0	0	153	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	154	0	0	0	0	0	0	0	0	0
0	0	0	155	0	0	0	0	0	0	0	0	0	0	0
0	156	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	157	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	158	0	0
0	0	0	0	159	0	0	0	0	0	0	0	0	0	0
0	160	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	161	0	0
0	0	0	0	162	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	163	0	0
0	0	0	0	0	0	0	0	0	0	0	0	164	0	0
0	0	0	0	0	0	0	0	0	0	0	0	165	0	0
0	166	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	167	0	0	0	0	0
0	168	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	169	0	0	0	0	0	0	0
0	0	0	0	170	0	0	0	0	0	0	0	0	0	0
0	171	0	0	0	0	0	0	0	0	0	0	0	0	0
0	172	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	173	0	0	0	0	0	0	0	0	0	0
0	174	0	0	0	0	0	0	0	0	0	0	0	0	0
sum of rank values (R_i)	**1207**	**2857.5**	**463.5**	**2790**	**2599.5**	**2517.5**	**57**	**514.5**	**84**	**334.5**	**177**	**153.5**	**811**	**588.5**	**70**

Compute the Kruskal-Wallis statistic:

$$H = \{[12/N(N+1)] * [\Sigma^{K}_{i=1} (R_i^2)/N_i]\} -3(N+1)$$

Well =	Background	MW-1A	MW-2A	MW-3A	MW-6	MW-7	MW-8	MW-9	MW-10	MW-11	MW-13	MW-14	MW-15
Ri^2/N_i =	372777.9	288300	293800	264075	649.8	52942.1	1411.2	22378.1	6265.8	4712.45	131544	69266.5	980

$N_{i\,bg}$ = 55
N = 174
H = 69.72

Adjust H for ties:

T_i = 936 sum of T1..T1

$H' = H/(1-(T_i/(N^3-N)))$
H' = 69.73
Chi-square = 21.03

Compare the calculated value H' to the tabulated Chi-square value with K-1 = # groups -1 = 12df at the 5% significance level from Table 1 of the IFG. The value is 21.03 which is less than H' =69.73.
Therefore, there is evidence of significant differences between the well groups.
Post-hoc pairwise comparisons are necessary (see below).

Calculate the critical values to compare each compliance well to the background wells:

Critical Value $(C_x) = P(N(N+1)/12)^{0.5} * (1/N_{i\,bg}+1/N_x)^{0.5}$
P = 2.33 Percentile of Standard Normal Distribution from Table 4 of IFG
N = total sample size
$N_{i\,bg}$ = total samples (N_i) of background data
N_x = total samples (N_i) of well x

Difference between average ranks (Dx) = Rbar (well x) - avg Rbar (background)

Well =	MW-1A	MW-2A	MW-3A	MW-6	MW-7	MW-8	MW-9	MW-10	MW-11	MW-13	MW-14	MW-15
Rbar (well x) =	103.3	113.0	104.9	11.4	102.9	16.8	66.9	35.4	30.7	162.2	117.7	14.0
avg Rbar (background) =	82.3	82.3	82.3	82.3	82.3	82.3	82.3	82.3	82.3	82.3	82.3	82.3
Dx =	21.0	30.7	22.6	-70.9	20.6	-65.5	-15.4	-46.9	-51.6	79.9	35.4	-68.3
Cx =	27.6	29.1	28.7	54.8	54.8	54.8	54.8	54.8	54.8	54.8	54.8	54.8
Statistical Significance ?	-	**Yes**	-	-	-	-	-	-	-	**Yes**	-	-
If SSI, is current event above MCL?	-	No	-	-	-	-	-	-	-	**Yes**	-	-

Compare each difference (Dx) with the corresponding critical value (Cx).
The Dx value for the above indicated wells do exceed the corresponding Cx value.
Therefore, we conclude that the concentration of Total Barium (Ba) averaged over these compliance wells are significantly greater than that of the background wells.
Shewart-CUSUM Control Charts should be performed for each failing well to check for statistical significance.

Compound: **Total Barium (Ba)**
NC MCL (µg/l): 700
Method: Levene's Test for Homogeneity
Background: MW-4, MW-5, MW-12

	MW-4	MW-5	MW-12	MW-1A	MW-2A	MW-3A	MW-6	MW-7	MW-8	MW-9	MW-10	MW-11	MW-13	MW-14	MW-15	MDL
2/18/99	100	NS	NP	300	NS	400	NP	NP	NP	NP	NP	NP	NP	NP	NP	100
8/16/99	120	NS	NP	230	NS	260	NP	NP	NP	NP	NP	NP	NP	NP	NP	100
2/14/00	150	NS	NP	270	NS	240	NP	NP	NP	NP	NP	NP	NP	NP	NP	100
8/14/00	180	NT	NP	410	NS	310	NP	NP	NP	NP	NP	NP	NP	NP	NP	100
3/19/01	120	2000	NP	340	830	310	NP	NP	NP	NP	NP	NP	NP	NP	NP	100
8/27/02	150	2800	NP	250	2700	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	100
2/24/03	150	2500	NP	310	1800	330	NP	NP	NP	NP	NP	NP	NP	NP	NP	100
8/11/03	150	1200	NP	530	950	350	NP	NP	NP	NP	NP	NP	NP	NP	NP	5
2/9/04	120	890	NP	260	370	310	NP	NP	NP	NP	NP	NP	NP	NP	NP	5
8/16/04	140	1100	NP	280	300	310	NP	NP	NP	NP	NP	NP	NP	NP	NP	5
2/14/05	160	520	NP	310	300	300	NP	NP	NP	NP	NP	NP	NP	NP	NP	5
9/1/05	140	330	NP	280	280	210	NP	NP	NP	NP	NP	NP	NP	NP	NP	5
2/16/06	ND	ND	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	5
8/30/06	160	250	NP	290	220	240	NP	NP	NP	NP	NP	NP	NP	NP	NP	5
2/26/07	140	280	NP	210	240	300	NP	NP	NP	NP	NP	NP	NP	NP	NP	5
8/13/07	137	208	NP	176	256	Dry	NP	NP	NP	NP	NP	NP	NP	NP	NP	5
2/11/08	155	238	NP	165	229	41.7	NP	NP	NP	NP	NP	NP	NP	NP	NP	5
8/25/08	142	195	NP	150	265	Dry	NP	NP	NP	NP	NP	NP	NP	NP	NP	5
2/23/09	146	270	NP	220	215	206	NP	NP	NP	NP	NP	NP	NP	NP	NP	5
8/24/09	136	264	NP	203	173	210	NP	NP	NP	NP	NP	NP	NP	NP	NP	5
2/22/10	139	260	NP	269	250	224	NP	NP	NP	NP	NP	NP	NP	NP	NP	5
8/30/10	125	246	NP	192	203	206	NP	NP	NP	NP	NP	NP	NP	NP	NP	5
2/22/11	163	237	197	171	191	241	54	213	72.8	1190	193	138	977	309	68.7	5
8/22/11	133	280	191	189	189	214	66.8	1640	76.4	202	71.9	104	972	284	57.7	5
2/22/12	134	214	196	222	266	175	48.7	207	62.7	126	102	90.2	970	237	49.9	5
8/29/12	151	289	335	174	283	232	42.8	224	67.4	106	110	106	931	237	64	5
2/18/13	128	229	216	267	221	172	16.2	200	41.3	75.7	86	95.5	815	238	42.6	5

If not detected (ND), use half of the detection limit.

	100			300		400									
	120			230		260									
	150			270		240									
	180			410		310									
	120	2000		340	830	310									
	150	2800		250	2700										
	150	2500		310	1800	330									
	150	1200		530	950	350									
	120	890		260	370	310									
	140	1100		280	300	310									
	160	520		310	300	300									
	140	330		280	280	210									
	2.5	2.5		2.5	2.5	2.5									
	160	250		290	220	240									
	140	280		210	240	300									
	137	208		176	256										
	155	238		165	229	41.7									
	142	195		150	265										
	146	270		220	215	206									
	136	264		203	173	210									
	139	260		269	250	224									
	125	246		192	203	206									
	163	237	197	171	191	241	54	213	72.8	1190	193	138	977	309	68.7
	133	280	191	189	189	214	66.8	1640	76.4	202	71.9	104	972	284	57.7
	134	214	196	222	266	175	48.7	207	62.7	126	102	90.2	970	237	49.9
	151	289	335	174	283	232	42.8	224	67.4	106	110	106	931	237	64
	128	229	216	267	221	172	16.2	200	41.3	75.7	86	95.5	815	238	42.6
n =	27	23	5	27	23	24	5	5	5	5	5	5	5	5	5
bar x_i =	135.98	643.59	227	247.06	466.67	241.43	45.7	496.8	64.12	339.94	112.58	106.74	933	261	56.58
z_{ij} =	35.981			52.944		158.58									
	15.981			17.056		18.575									
	14.019			22.944		1.425									
	44.019			162.94		68.575									
	15.981	1356.4		92.944	363.33	68.575									
	14.019	2156.4		2.9444	2233.3										
	14.019	1856.4		62.944	1333.3	88.575									
	14.019	556.41		282.94	483.33	108.58									
	15.981	246.41		12.944	96.674	68.575									
	4.0185	456.41		32.944	166.67	68.575									
	24.019	123.59		62.944	166.67	58.575									
	4.0185	313.59		32.944	186.67	31.425									
	133.48	641.09		244.56	464.17	238.93									
	24.019	393.59		42.944	246.67	1.425									
	4.0185	363.59		37.056	226.67	58.575									
	1.0185	435.59		71.056	210.67										
	19.019	405.59		82.056	237.67	199.73									
	6.0185	448.59		97.056	201.67										
	10.019	373.59		27.056	251.67	35.425									
	0.0185	379.59		44.056	293.67	31.425									
	3.0185	383.59		21.944	216.67	17.425									
	10.981	397.59		55.056	263.67	35.425									
	27.019	406.59	30	76.056	275.67	0.425	8.3	283.8	8.68	850.06	80.42	31.26	44	48	12.12
	2.9815	363.59	36	58.056	277.67	27.425	21.1	1143.2	12.28	137.94	40.68	2.74	39	23	1.12
	1.9815	429.59	31	25.056	200.67	66.425	3	289.8	1.42	213.94	10.58	16.54	37	24	6.68
	15.019	354.59	108	73.056	183.67	9.425	2.9	272.8	3.28	233.94	2.58	0.74	2	24	7.42

	7.9815	414.59	11	19.944	245.67	69.425	29.5	296.8	22.82	264.24	26.58	11.24	118	23	13.98
bar z_i =	17.877	576.39	43.2	67.202	383.77	63.813	12.96	457.28	9.696	340.02	32.168	12.504	48	28.4	8.264
n_i * bar z_i^2 =	8628.4	8E+06	9331.2	121934	3E+06	97729	839.81	1E+06	470.06	578082	5173.9	781.75	11520	4032.8	341.47

bar z = 140.1
N = 174

	SS	df	MS	F_{Ratio}
Between Well	9E+06	14	678393	3.08
Error	4E+07	159	220293	
Total	4E+07	173		

Since the F-ratio = 3.08 exceeds the tabulated value of F-critical = 0.00 (see Table 2 of IFG) with 14 and 159 df, the assumption of equal variances should be rejected.
Re-test the data set using the natural log of the above values.

	MW-4	MW-5	MW-12	MW-1A	MW-2A	MW-3A	MW-6	MW-7	MW-8	MW-9	MW-10	MW-11	MW-13	MW-14	MW-15
ln=	4.6052			5.7038		5.9915									
	4.7875			5.4381		5.5607									
	5.0106			5.5984		5.4806									
	5.193			6.0162		5.7366									
	4.7875	7.6009		5.8289	6.7214	5.7366									
	5.0106	7.9374		5.5215	7.901										
	5.0106	7.824		5.7366	7.4955	5.7991									
	5.0106	7.0901		6.2729	6.8565	5.8579									
	4.7875	6.7912		5.5607	5.9135	5.7366									
	4.9416	7.0031		5.6348	5.7038	5.7366									
	5.0752	6.2538		5.7366	5.7038	5.7038									
	4.9416	5.7991		5.6348	5.6348	5.3471									
	0.9163	0.9163		0.9163	0.9163	0.9163									
	5.0752	5.5215		5.6699	5.3936	5.4806									
	4.9416	5.6348		5.3471	5.4806	5.7038									
	4.92	5.3375		5.1705	5.5452										
	5.0434	5.4723		5.1059	5.4337	3.7305									
	4.9558	5.273		5.0106	5.5797										
	4.9836	5.5984		5.3936	5.3706	5.3279									
	4.9127	5.5759		5.3132	5.1533	5.3471									
	4.9345	5.5607		5.5947	5.5215	5.4116									
	4.8283	5.5053		5.2575	5.3132	5.3279									
	5.0938	5.4681	5.2832	5.1417	5.2523	5.4848	3.989	5.3613	4.2877	7.0817	5.2627	4.9273	6.8845	5.7333	4.2297
	4.8903	5.6348	5.2523	5.2417	5.2417	5.366	4.2017	7.4025	4.336	5.3083	4.2753	4.6444	6.8794	5.649	4.0553
	4.8978	5.366	5.2781	5.4027	5.5835	5.1648	3.8857	5.3327	4.1384	4.8363	4.625	4.502	6.8773	5.4681	3.91
	5.0173	5.6664	5.8141	5.1591	5.6454	5.4467	3.7565	5.4116	4.2106	4.6634	4.7005	4.6634	6.8363	5.4681	4.1589
	4.852	5.4337	5.3753	5.5872	5.3982	5.1475	2.785	5.2983	3.7209	4.3268	4.4543	4.5591	6.7032	5.4723	3.7519
n =	27	23	5	27	23	24	5	5	5	5	5	5	5	5	5
bar x_i =	4.7935	5.8376	5.4006	5.3331	5.5982	5.2726	3.7236	5.7613	4.1387	5.2433	4.6636	4.6592	6.8361	5.5581	4.0212
z_{ij} =	0.1883			0.3706		0.7189									
	0.006			0.1049		0.2881									
	0.2171			0.2653		0.208									
	0.3995			0.683		0.464									
	0.006	1.7633		0.4958	1.1232	0.464									
	0.2171	2.0998		0.1883	2.3028										
	0.2171	1.9865		0.4034	1.8973	0.5265									
	0.2171	1.2525		0.9397	1.2582	0.5853									
	0.006	0.9536		0.2275	0.3153	0.464									
	0.1482	1.1655		0.3016	0.1056	0.464									
	0.2817	0.4162		0.4034	0.1056	0.4312									
	0.1482	0.0385		0.3016	0.0366	0.0745									
	3.8772	4.9213		4.4169	4.6819	4.3563									
	0.2817	0.3161		0.3367	0.2046	0.208									
	0.1482	0.2028		0.014	0.1176	0.4312									
	0.1265	0.5		0.1627	0.053										
	0.2499	0.3653		0.2272	0.1645	1.5421									
	0.1623	0.5646		0.3225	0.0185										
	0.1901	0.2392		0.0605	0.2276	0.0553									
	0.1192	0.2616		0.0199	0.4449	0.0745									
	0.141	0.2769		0.2616	0.0768	0.139									
	0.0348	0.3322		0.0756	0.285	0.0553									
	0.3003	0.3695	0.1174	0.1915	0.346	0.2122	0.2654	0.4	0.149	1.8384	0.5991	0.268	0.0484	0.1752	0.2086
	0.0969	0.2028	0.1483	0.0914	0.3565	0.0934	0.4781	1.6412	0.1973	0.065	0.3883	0.0149	0.0432	0.0908	0.0341
	0.1043	0.4716	0.1225	0.0695	0.0147	0.1078	0.1621	0.4286	0.0004	0.407	0.0386	0.1572	0.0412	0.0901	0.1111
	0.2238	0.1712	0.4135	0.1741	0.0472	0.1741	0.033	0.3496	0.0719	0.5799	0.0369	0.0042	0.0001	0.0901	0.1377
	0.0585	0.4039	0.0253	0.2541	0.2001	0.1251	0.9386	0.463	0.4179	0.9165	0.2092	0.1001	0.1329	0.0859	0.2693
bar z_i =	0.3025	0.838	0.1654	0.4209	0.6254	0.5109	0.3754	0.6565	0.1673	0.7614	0.2544	0.1089	0.0532	0.1064	0.1522
n_i * bar z_i^2 =	2.4704	16.153	0.1368	4.7826	8.9949	6.2656	0.7047	2.1547	0.1399	2.8983	0.3237	0.0593	0.0141	0.0566	0.1158

bar z = 0.3666
N = 174

	SS	df	MS	F_{Ratio}
Between Well	21.89	14	1.56	1.03
Error	241.51	159	1.52	
Total	263.39	173		

Since the F-ratio = 1.03 exceeds the tabulated value of F-critical = 0.00 (see Table 2 of IFG) with 14 and 159 df, the assumption of equal variances should be rejected.
A non-parametric testing procedure should be used on the data set.

Haywood County Closed Landfill, Francis Farm
Haywood County, North Carolina
BLE Project Number J12-1957-33

Compound: **Total Barium**
NC MCL (µg/l): 700
Method: Skewness Test for Normality
Background: MW-4, MW-5, MW-12

	MW-4	MW-5	MW-12	MW-1A	MW-2A	MW-3A	MW-6	MW-7	MW-8	MW-9	MW-10	MW-11	MW-13	MW-14	MW-15	MDL
2/18/99	100	NS	NP	300	NS	400	NP	NP	NP	NP	NP	NP	NP	NP	NP	100
8/16/99	120	NS	NP	230	NS	260	NP	NP	NP	NP	NP	NP	NP	NP	NP	100
2/14/00	150	NS	NP	270	NS	240	NP	NP	NP	NP	NP	NP	NP	NP	NP	100
8/14/00	180	NT	NP	410	NS	310	NP	NP	NP	NP	NP	NP	NP	NP	NP	100
3/19/01	120	2000	NP	340	830	310	NP	NP	NP	NP	NP	NP	NP	NP	NP	100
8/27/02	150	2800	NP	250	2700	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	100
2/24/03	150	2500	NP	310	1800	330	NP	NP	NP	NP	NP	NP	NP	NP	NP	100
8/11/03	150	1200	NP	530	950	350	NP	NP	NP	NP	NP	NP	NP	NP	NP	5
2/9/04	120	890	NP	260	370	310	NP	NP	NP	NP	NP	NP	NP	NP	NP	5
8/16/04	140	1100	NP	280	300	310	NP	NP	NP	NP	NP	NP	NP	NP	NP	5
2/14/05	160	520	NP	310	300	300	NP	NP	NP	NP	NP	NP	NP	NP	NP	5
9/1/05	140	330	NP	280	280	210	NP	NP	NP	NP	NP	NP	NP	NP	NP	5
2/16/06	ND	ND	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	5
8/30/06	160	250	NP	290	220	240	NP	NP	NP	NP	NP	NP	NP	NP	NP	5
2/26/07	140	280	NP	210	240	300	NP	NP	NP	NP	NP	NP	NP	NP	NP	5
8/13/07	137	208	NP	176	256	Dry	NP	NP	NP	NP	NP	NP	NP	NP	NP	5
2/11/08	155	238	NP	165	229	41.7	NP	NP	NP	NP	NP	NP	NP	NP	NP	5
8/25/08	142	195	NP	150	265	Dry	NP	NP	NP	NP	NP	NP	NP	NP	NP	5
2/23/09	146	270	NP	220	215	206	NP	NP	NP	NP	NP	NP	NP	NP	NP	5
8/24/09	136	264	NP	203	173	210	NP	NP	NP	NP	NP	NP	NP	NP	NP	5
2/22/10	139	260	NP	269	250	224	NP	NP	NP	NP	NP	NP	NP	NP	NP	5
8/30/10	125	246	NP	192	203	206	NP	NP	NP	NP	NP	NP	NP	NP	NP	5
2/22/11	163	237	197	171	191	241	54	213	72.8	1190	193	138	977	309	68.7	5
8/22/11	133	280	191	189	189	214	66.8	1640	76.4	202	71.9	104	972	284	57.7	5
2/22/12	134	214	196	222	266	175	48.7	207	62.7	126	102	90.2	970	237	49.9	5
8/29/12	151	289	335	174	283	232	42.8	224	67.4	106	110	106	931	237	64	5
2/18/13	128	229	216	267	221	172	16.2	200	41.3	75.7	86	95.5	815	238	42.6	5

If not detected (ND), use half of the detection limit.

100			300		400									
120			230		260									
150			270		240									
180			410		310									
120	2000		340	830	310									
150	2800		250	2700										
150	2500		310	1800	330									
150	1200		530	950	350									
120	890		260	370	310									
140	1100		280	300	310									
160	520		310	300	300									
140	330		280	280	210									
2.5	2.5		2.5	2.5	2.5									
160	250		290	220	240									
140	280		210	240	300									
137	208		176	256										
155	238		165	229	41.7									
142	195		150	265										
146	270		220	215	206									
136	264		203	173	210									
139	260		269	250	224									
125	246		192	203	206									
163	237	197	171	191	241	54	213	72.8	1190	193	138	977	309	68.7
133	280	191	189	189	214	66.8	1640	76.4	202	71.9	104	972	284	57.7
134	214	196	222	266	175	48.7	207	62.7	126	102	90.2	970	237	49.9
151	289	335	174	283	232	42.8	224	67.4	106	110	106	931	237	64
128	229	216	267	221	172	16.2	200	41.3	75.7	86	95.5	815	238	42.6

X_i values =					
	-1E+07		-3692.9		604275
	-7E+06		-624082		-170556
	-5E+06		-93929		-429632
	-2E+06		845064		-162.49
	-7E+06	5E+09	14784	1E+08	-162.49
	-5E+06	2E+10	-280457	1E+10	
	-5E+06	1E+10	-162.49	3E+09	3075.9
	-5E+06	7E+08	1E+07	3E+08	41218
	-7E+06	2E+08	-170556	162263	-162.49
	-5E+06	5E+08	-44576	-3692.9	-162.49
	-4E+06	9E+06	-162.49	-3692.9	-3692.9
	-5E+06	3075.9	-44576	-44576	-1E+06
	-3E+07	-3E+07	-3E+07	-3E+07	-3E+07
	-4E+06	-280457	-16497	-869805	-429632
	-5E+06	-44576	-1E+06	-429632	-3692.9
	-6E+06	-1E+06	-3E+06	-210187	
	-4E+06	-464708	-3E+06	-646248	-2E+07
	-5E+06	-2E+06	-5E+06	-128458	
	-5E+06	-93929	-869805	-1E+06	-1E+06
	-6E+06	-136248	-1E+06	-3E+06	-1E+06
	-5E+06	-170556	-100265	-280457	-764979

-7E+06	-335078		-2E+06	-1E+06	-1E+06									
-4E+06	-482940	-2E+06	-3E+06	-2E+06	-412776	-2E+07	-1E+06	-1E+07	7E+08	-2E+06	-6E+06	3E+08	-269.2	-2E+07
-6E+06	-44576	-2E+06	-2E+06	-2E+06	-1E+06	-2E+07	2E+09	-1E+07	-1E+06	-1E+07	-9E+06	3E+08	-31128	-2E+07
-6E+06	-1E+06	-2E+06	-816270	-120971	-3E+06	-2E+07	-1E+06	-2E+07	-7E+06	-1E+07	-1E+07	3E+08	-482940	-2E+07
-4E+06	-18519	7464.2	-3E+06	-34192	-581282	-2E+07	-764979	-2E+07	-9E+06	-9E+06	-9E+06	2E+08	-482940	-2E+07
-7E+06	-646248	-983795	-113780	-842754	-3E+06	-3E+07	-2E+06	-2E+07	-1E+07	-1E+07	-1E+07	1E+08	-464708	-2E+07

X_{bar} = 315.46
SD = 431.7
N = 174
$1/N\Sigma_i(X_i-X_{bar})^3$ = 3E+08
γ_1 = 3.7882

Since the Coefficient of Skewness of 3.79 is greater than 1.0, the data appear to be significantly skewed.
Do not assume that the data follow a Normal distribution.
Perform the Skewness Test on the natural log of the values.

	MW-4	MW-5	MW-12	MW-1A	MW-2A	MW-3A	MW-6	MW-7	MW-8	MW-9	MW-10	MW-11	MW-13	MW-14	MW-15
ln =	4.6052			5.7038		5.9915									
	4.7875			5.4381		5.5607									
	5.0106			5.5984		5.4806									
	5.193			6.0162		5.7366									
	4.7875	7.6009		5.8289	6.7214	5.7366									
	5.0106	7.9374		5.5215	7.901										
	5.0106	7.824		5.7366	7.4955	5.7991									
	5.0106	7.0901		6.2729	6.8565	5.8579									
	4.7875	6.7912		5.5607	5.9135	5.7366									
	4.9416	7.0031		5.6348	5.7038	5.7366									
	5.0752	6.2538		5.7366	5.7038	5.7038									
	4.9416	5.7991		5.6348	5.6348	5.3471									
	0.9163	0.9163		0.9163	0.9163	0.9163									
	5.0752	5.5215		5.6699	5.3936	5.4806									
	4.9416	5.6348		5.3471	5.4806	5.7038									
	4.92	5.3375		5.1705	5.5452										
	5.0434	5.4723		5.1059	5.4337	3.7305									
	4.9558	5.273		5.0106	5.5797										
	4.9836	5.5984		5.3936	5.3706	5.3279									
	4.9127	5.5759		5.3132	5.1533	5.3471									
	4.9345	5.5607		5.5947	5.5215	5.4116									
	4.8283	5.5053		5.2575	5.3132	5.3279									
	5.0938	5.4681	5.2832	5.1417	5.2523	5.4848	3.989	5.3613	4.2877	7.0817	5.2627	4.9273	6.8845	5.7333	4.2297
	4.8903	5.6348	5.2523	5.2417	5.2417	5.366	4.2017	7.4025	4.336	5.3083	4.2753	4.6444	6.8794	5.649	4.0553
	4.8978	5.366	5.2781	5.4027	5.5835	5.1648	3.8857	5.3327	4.1384	4.8363	4.625	4.502	6.8773	5.4681	3.91
	5.0173	5.6664	5.8141	5.1591	5.6454	5.4467	3.7565	5.4116	4.2106	4.6634	4.7005	4.6634	6.8363	5.4681	4.1589
	4.852	5.4337	5.3753	5.5872	5.3982	5.1475	2.785	5.2983	3.7209	4.3268	4.4543	4.5591	6.7032	5.4723	3.7519

X_i values =	-0.2647			0.0952		0.4123									
	-0.0972			0.007		0.0308									
	-0.0132			0.0433		0.0127									
	-0.0002			0.4547		0.1172									
	-0.0972	13.039		0.1969	3.204	0.1172									
	-0.0132	19.469		0.0206	18.69										
	-0.0132	17.111		0.1172	11.365	0.1681									
	-0.0132	6.2587		1.079	4.1675	0.2278									
	-0.0972	3.6809		0.0308	0.2958	0.1172									
	-0.0285	5.4134		0.0582	0.0952	0.1172									
	-0.0051	1.02		0.1172	0.0952	0.0952									
	-0.0285	0.1681		0.0582	0.0582	0.001									
	-81.234	-81.234		-81.234	-81.234	-81.234									
	-0.0051	0.0206		0.0755	0.0031	0.0127									
	-0.0285	0.0582		0.001	0.0127	0.0952									
	-0.035	0.0007		-0.0005	0.0265										
	-0.0085	0.0114		-0.0028	0.0065	-3.489									
	-0.0247	2E-05		-0.0132	0.0368										
	-0.0183	0.0433		0.0031	0.0019	0.0005									
	-0.0374	0.0355		0.0003	-0.0008	0.001									
	-0.0306	0.0308		0.042	0.0206	0.0044									
	-0.0735	0.0172		1E-06	0.0003	0.0005									
	-0.0036	0.0108	5E-05	-0.0012	1E-07	0.0134	-1.9919	0.0015	-0.8833	6.1738	4E-06	-0.0328	4.389	0.1149	-1.0533
	-0.0454	0.0582	1E-07	-2E-07	-2E-07	0.0017	-1.1428	10.011	-0.7566	0.0002	-0.9181	-0.2191	4.3479	0.0649	-1.6934
	-0.0426	0.0017	3E-05	0.0038	0.038	-0.0006	-2.5239	0.0006	-1.3634	-0.0694	-0.2409	-0.4138	4.3315	0.0108	-2.391
	-0.0122	0.0737	0.1822	-0.0007	0.0632	0.0079	-3.3124	0.0044	-1.1137	-0.1989	-0.1634	-0.1989	4.0125	0.0108	-1.2891
	-0.0617	0.0065	0.0021	0.0393	0.0034	-0.001	-14.927	0.0001	-3.556	-0.7798	-0.4984	-0.3258	3.0865	0.0114	-3.3437

X_{bar} = 5.2472
SD = 1.099
N = 174
$1/N\Sigma_i(X_i-X_{bar})^3$ = -1.7857
γ_1 = 1.3571

Since the Coefficient of Skewness of 1.36 is greater than 1.0, the data appear to be significantly skewed.
Do not assume that the data follow a Normal distribution.
A non-parametric testing procedure should be used on the data set.

Compound: Total Barium
NC MCL (µg/l): 700
Method: Shewhart-CUSUM Control Chart

Part 1: Check for Normality

	MW-2A	MDL
3/19/2001	830	100
8/27/2002	2700	100
2/24/2003	1800	100
8/11/2003	950	5
2/9/2004	370	5
8/16/2004	300	5
2/14/2005	300	5
9/1/2005	280	5
2/16/2006	ND	5
8/30/2006	220	5
2/26/2007	240	5
8/13/2007	256	5
2/11/2008	229	5
8/25/2008	265	5
2/23/2009	215	5
8/24/2009	173	5
2/22/2010	250	5
8/30/2010	203	5
2/22/2011	191	5
8/22/2011	189	5
2/22/2012	266	5
8/29/2012	283	5
2/18/2013	221	5

If not detected (ND), use half of the detection limit.

	X_i values =
830	47961167.29
2700	11139261941
1800	2370331723
950	112906958.6
370	-903499.4516
300	-4630233.521
300	-4630233.521
280	-6505053.814
2.5	-100009714.5
220	-15009619.04
240	-11646746.57
256	-9350445.122
229	-13425935.28
265	-8202555.446
215	-15940964.87
173	-25327720.79
250	-10172316.86
203	-18331647.31
191	-20950144.01
189	-21409436.73
266	-8081142.367
283	-6196442.661
221	-14827814

X_{bar} = 466.673913
SD = 612.506579
N = 23
$1/N\Sigma_i(X_i-X_{bar})^3$ = 580648266.3
γ_1 = 2.701087125

Since the Coefficient of Skewness of 2.70 is greater than 1.0, the real data appear to be significantly skewed.
Do not assume that the data follow a Normal distribution.
Perform the Skewness Test on the natural log of the values.

ln =	X_i values =
6.721425701	1.417002628
7.901007052	12.21118482
7.495541944	6.829970094
6.856461985	1.991984951
5.913503006	0.031338333
5.703782475	0.00117612
5.703782475	0.00117612
5.634789603	4.88808E-05
0.916290732	-102.6304616
5.393627546	-0.00856463
5.480638923	-0.001625854
5.545177444	-0.000149289
5.433722004	-0.004451755
5.579729826	-6.32795E-06
5.370638028	-0.011788249
5.153291594	-0.088082307
5.521460918	-0.000452372
5.313205979	-0.023154063
5.252273428	-0.041404792
5.241747015	-0.045300468
5.583496309	-3.19597E-06
5.645446898	0.000105292
5.398162702	-0.008007627

X_{bar} = 5.598226243
SD = 1.252323517
N = 23
$1/N\Sigma_i(X_i-X_{bar})^3$ = -3.494759361
γ_1 = 1.902065204

Since the Coefficient of Skewness of 1.90 is greater than 1.0, the data appear to be significantly skewed.
Do not assume that the data follow a Normal distribution.
A non-parametric testing procedure should be used on the data set.

Haywood County Closed Landfill, Francis Farm
Haywood County, North Carolina
BLE Project Number J12-1957-33

Compound: **Total Barium**
NC MCL (µg/l): 700
Method: Kendall-Mann Non-Parametric Trend Test (Concentration vs. Time)
Background: MW-4, MW-5, MW-12

	MW-4	MW-5	MW-12	MW-1A	MW-2A	MW-3A	MW-6	MW-7	MW-8	MW-9	MW-10	MW-11	MW-13	MW-14	MW-15	MDL
02/18/99	100	NS	NP	300	NS	400	NP	NP	NP	NP	NP	NP	NP	NP	NP	100
08/16/99	120	NS	NP	230	NS	260	NP	NP	NP	NP	NP	NP	NP	NP	NP	100
02/14/00	150	NS	NP	270	NS	240	NP	NP	NP	NP	NP	NP	NP	NP	NP	100
08/14/00	180	NT	NP	410	NS	310	NP	NP	NP	NP	NP	NP	NP	NP	NP	100
03/19/01	120	2000	NP	340	830	310	NP	NP	NP	NP	NP	NP	NP	NP	NP	100
08/27/02	150	2800	NP	250	2700	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	100
02/24/03	150	2500	NP	310	1800	330	NP	NP	NP	NP	NP	NP	NP	NP	NP	100
08/11/03	150	1200	NP	530	950	350	NP	NP	NP	NP	NP	NP	NP	NP	NP	5
02/09/04	120	890	NP	260	370	310	NP	NP	NP	NP	NP	NP	NP	NP	NP	5
08/16/04	140	1100	NP	280	300	310	NP	NP	NP	NP	NP	NP	NP	NP	NP	5
02/14/05	160	520	NP	310	300	300	NP	NP	NP	NP	NP	NP	NP	NP	NP	5
09/01/05	140	330	NP	280	280	210	NP	NP	NP	NP	NP	NP	NP	NP	NP	5
02/16/06	ND	ND	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	5
08/30/06	160	250	NP	290	220	240	NP	NP	NP	NP	NP	NP	NP	NP	NP	5
02/26/07	140	280	NP	210	240	300	NP	NP	NP	NP	NP	NP	NP	NP	NP	5
08/13/07	137	208	NP	176	256	Dry	NP	NP	NP	NP	NP	NP	NP	NP	NP	5
02/11/08	155	238	NP	165	229	42	NP	NP	NP	NP	NP	NP	NP	NP	NP	5
08/25/08	142	195	NP	150	265	Dry	NP	NP	NP	NP	NP	NP	NP	NP	NP	5
02/23/09	146	270	NP	220	215	206	NP	NP	NP	NP	NP	NP	NP	NP	NP	5
08/24/09	136	264	NP	203	173	210	NP	NP	NP	NP	NP	NP	NP	NP	NP	5
02/22/10	139	260	NP	269	250	224	NP	NP	NP	NP	NP	NP	NP	NP	NP	5
08/30/10	125	246	NP	192	203	206	NP	NP	NP	NP	NP	NP	NP	NP	NP	5
02/22/11	163	237	197	171	191	241	54	213	73	1190	193	138	977	309	69	5
08/22/11	133	280	191	189	189	214	67	1640	76	202	72	104	972	284	58	5
02/22/12	134	214	196	222	266	175	49	207	63	126	102	90	970	237	50	5
08/29/12	151	289	335	174	283	232	43	224	67	106	110	106	931	237	64	5
02/18/13	128	229	216	267	221	172	16	200	41	76	86	96	815	238	43	5

If not detected (ND), use half of the detection limit.

02/18/99	300	-	400	-	-	-	-	-	-	-	-	-
08/16/99	230	-	260	-	-	-	-	-	-	-	-	-
02/14/00	270	-	240	-	-	-	-	-	-	-	-	-
08/14/00	410	-	310	-	-	-	-	-	-	-	-	-
03/19/01	340	830	310	-	-	-	-	-	-	-	-	-
08/27/02	250	2700	-	-	-	-	-	-	-	-	-	-
02/24/03	310	1800	330	-	-	-	-	-	-	-	-	-
08/11/03	530	950	350	-	-	-	-	-	-	-	-	-
02/09/04	260	370	310	-	-	-	-	-	-	-	-	-
08/16/04	280	300	310	-	-	-	-	-	-	-	-	-
02/14/05	310	300	300	-	-	-	-	-	-	-	-	-
09/01/05	280	280	210	-	-	-	-	-	-	-	-	-
02/16/06	2.5	2.5	2.5	-	-	-	-	-	-	-	-	-
08/30/06	290	220	240	-	-	-	-	-	-	-	-	-
02/26/07	210	240	300	-	-	-	-	-	-	-	-	-
08/13/07	176	256	-	-	-	-	-	-	-	-	-	-
02/11/08	165	229	41.7	-	-	-	-	-	-	-	-	-
08/25/08	150	265	-	-	-	-	-	-	-	-	-	-
02/23/09	220	215	206	-	-	-	-	-	-	-	-	-
08/24/09	203	173	210	-	-	-	-	-	-	-	-	-
02/22/10	269	250	224	-	-	-	-	-	-	-	-	-
08/30/10	192	203	206	-	-	-	-	-	-	-	-	-
02/22/11	171	191	241	54	213	72.8	1190	193	138	977	309	68.7
08/22/11	189	189	214	66.8	1640	76.4	202	71.9	104	972	284	57.7
02/22/12	222	266	175	48.7	207	62.7	126	102	90.2	970	237	49.9
08/29/12	174	283	232	42.8	224	67.4	106	110	106	931	237	64
02/18/13	267	221	172	16.2	200	41.3	75.7	86	95.5	815	238	42.6

Trendline Slope =	-	-0.2751	-	-	-	-	-	-	-	-0.1987	-	-
Standard Deviation =	-	612.51	-	-	-	-	-	-	-	68.473	-	-
number of observations n =	-	23	-	-	-	-	-	-	-	5	-	-
S =	-	-126	-	-	-	-	-	-	-	-10	-	-
uncorrected for ties τ =	-	-0.50	-	-	-	-	-	-	-	-1.00	-	-
U =	-	1	-	-	-	-	-	-	-	0	-	-
corrected for ties τ =	-	**-0.50**	-	-	-	-	-	-	-	**-1.00**	-	-
Concentration Trend	-	decrease	-	-	-	-	-	-	-	decrease	-	-

Haywood County Closed Landfill, Francis Farm
Haywood County, North Carolina
BLE Project Number J12-1957-33

Compound: **Total Beryllium (Be)**
NC MCL (µg/l): Not Established
Method: Poisson Prediction Limits
Background: MW-4, MW-5, MW-12

	MW-4	MW-5	MW-12	MW-1A	MW-2A	MW-3A	MW-6	MW-7	MW-8	MW-9	MW-10	MW-11	MW-13	MW-14	MW-15	MDL
02/18/99	NT	NS	NP	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
08/16/99	NT	NS	NP	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
02/14/00	NT	NS	NP	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
08/14/00	NT	NT	NP	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
03/19/01	NT	NT	NP	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
08/27/02	NT	NT	NP	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
02/24/03	NT	NT	NP	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
08/11/03	NT	NT	NP	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
02/09/04	NT	NT	NP	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
08/16/04	NT	NT	NP	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
02/14/05	NT	NT	NP	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
09/01/05	NT	NT	NP	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
02/16/06	NT	NT	NP	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
08/30/06	NT	NT	NP	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
02/26/07	NT	NT	NP	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
08/13/07	NT	NT	NP	NT	NT	Dry	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
02/11/08	NT	NT	NP	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
08/25/08	NT	NT	NP	NT	NT	Dry	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
02/23/09	NT	NT	NP	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
08/24/09	NT	NT	NP	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
02/22/10	NT	NT	NP	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
08/30/10	NT	NT	NP	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
02/22/11	ND	ND	ND	ND	ND	ND	ND	ND	ND	**3.6**	ND	ND	ND	ND	ND	**1**
08/22/11	ND	ND	ND	ND	ND	ND	ND	**2.4**	ND	ND	ND	ND	ND	ND	ND	**1**
02/22/12	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**1**
08/29/12	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**1**
02/18/13	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**1**

1) If not detected (ND), use half of the detection limit.

02/18/99	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
08/16/99	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
02/14/00	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
08/14/00	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
03/19/01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
08/27/02	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
02/24/03	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
08/11/03	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
02/09/04	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
08/16/04	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
02/14/05	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
09/01/05	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
02/16/06	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
08/30/06	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
02/26/07	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
08/13/07	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
02/11/08	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
08/25/08	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
02/23/09	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
08/24/09	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
02/22/10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
08/30/10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
02/22/11	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	3.6	0.5	0.5	0.5	0.5	0.5
08/22/11	0.5	0.5	0.5	0.5	0.5	0.5	0.5	2.4	0.5	0.5	0.5	0.5	0.5	0.5	0.5
02/22/12	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
08/29/12	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
02/18/13				0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5

2) Set the total number of data values for background wells (through the previous sampling event) equal to 'n' = 4.
Use 1/2 of the method detection limit to calculate the Total Poisson Count of the Sum (T_n).

$n = 12$
$T_{n1} = 6$

3) Using Gibbons' formula, calculate the upper Poisson Prediction limit T^*_k:

$$T^*_k = cT_{n1} + ct^2/2 + ct[T_{n1}(1+1/c) + t^2/4]^{0.5}$$

where $c = k/n$
and where k = the number of future predicted measurements (one per well during the current sampling event)
and where t = the upper 99th percentile of the t-distribution with (n-1) degrees of freedom (Table 6 of the IFG).

$k = 12$
$n = 12$
$T_{n1} = 6$
$t[11,.01] = 2.718$
$c = 1$
$T_{n2} = 6$
$T^*_k = 19.8$

4) Compare the *Poisson Prediction Limit* (T^*_k) to the *Sum of the Concentrations Detected* (T_{n2}) in the wells during the most recent sampling event.
Since the Poisson Prediction Limit was not exceeded, there is no evidence of contamination.

Haywood County Closed Landfill, Francis Farm
Haywood County, North Carolina
BLE Project Number J12-1957-33

Compound: **Total Cadmium (Cd)**
NC MCL (µg/l): 2
Method: Kruskal-Wallis
Background: MW-4, MW-5, MW-12

	MW-4	MW-5	MW-12	MW-1A	MW-2A	MW-3A	MW-6	MW-7	MW-8	MW-9	MW-10	MW-11	MW-13	MW-14	MW-15	MDL
02/18/99	ND	NS	NP	ND	NS	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	10
08/16/99	ND	NS	NP	2.5	NS	7.4	NP	NP	NP	NP	NP	NP	NP	NP	NP	10
02/14/00	1.4	NS	NP	2	NS	9.1	NP	NP	NP	NP	NP	NP	NP	NP	NP	10
08/14/00	1.3	NT	NP	4.9	NS	13	NP	NP	NP	NP	NP	NP	NP	NP	NP	10
03/19/01	ND	18	NP	2.6	12	6.9	NP	NP	NP	NP	NP	NP	NP	NP	NP	10
08/27/02	ND	21	NP	ND	25	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	10
02/24/03	ND	19	NP	2.1	22	6.2	NP	NP	NP	NP	NP	NP	NP	NP	NP	10
08/11/03	ND	ND	NP	2	3.1	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	1
02/09/04	ND	ND	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	1
08/16/04	ND	ND	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	1
02/14/05	ND	ND	NP	2.4	7	4	NP	NP	NP	NP	NP	NP	NP	NP	NP	1
09/01/05	ND	ND	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	1
02/16/06	ND	ND	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	1
08/30/06	ND	ND	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	1
02/26/07	ND	ND	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	1
08/13/07	ND	ND	NP	1.5	ND	Dry	NP	NP	NP	NP	NP	NP	NP	NP	NP	1
02/11/08	ND	ND	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	1
08/25/08	ND	ND	NP	ND	ND	Dry	NP	NP	NP	NP	NP	NP	NP	NP	NP	1
02/23/09	ND	ND	NP	2.2	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	1
08/24/09	ND	ND	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	1
02/22/10	ND	ND	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	1
08/30/10	ND	ND	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	1
02/22/11	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1
08/22/11	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1
02/22/12	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1
08/29/12	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1
02/18/13	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1
N_i	27	23	5	27	23	24	5	5	5	5	5	5	5	5	5	
sum of rank values (R_i)	2176.0	2013.0	375.0	2756.0	2190.0	2340.0	375.0	375.0	375.0	375.0	375.0	375.0	375.0	375.0	375.0	
avg rank value (Rbar)	80.6	87.5	75.0	102.1	95.2	97.5	75.0	75.0	75.0	75.0	75.0	75.0	75.0	75.0	75.0	

	Number of each rank value															Rank Value
rank value of NDs =	25	20	5	18	18	18	5	5	5	5	5	5	5	5	5	75
rank value of 1.3s =	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	150
rank value of 1.4s =	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	151
rank value of 1.5s =	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	152
rank value of 2s =	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	153.5
rank value of 2.1s =	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	155
rank value of 2.2s =	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	156
rank value of 2.4s =	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	157
rank value of 2.5s =	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	158
rank value of 2.6s =	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	159
rank value of 3.1s =	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	160
rank value of 4s =	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	161
rank value of 4.9s =	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	162
rank value of 6.2s =	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	163
rank value of 6.9s =	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	164
rank value of 7s =	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	165
rank value of 7.4s =	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	166
rank value of 9.1s =	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	167
rank value of 12s =	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	168
rank value of 13s =	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	169
rank value of 18s =	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	170
rank value of 19s =	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	171
rank value of 21s =	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	172
rank value of 22s =	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	173
rank value of 25s =	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	174
n =	27	23	5	27	23	24	5	5	5	5	5	5	5	5	5	

Sum of rank value calculations														
1875	1500	375	1350	1350	1350	375	375	375	375	375	375	375	375	375
150	0	0	0	0	0	0	0	0	0	0	0	0	0	0

	151	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	152	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	307	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	155	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	156	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	157	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	158	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	159	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	160	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	161	0	0	0	0	0	0	0	0	0
	0	0	0	162	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	163	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	164	0	0	0	0	0	0	0	0	0
	0	0	0	0	165	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	166	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	167	0	0	0	0	0	0	0	0	0
	0	0	0	0	168	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	169	0	0	0	0	0	0	0	0	0
	0	170	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	171	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	172	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	173	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	174	0	0	0	0	0	0	0	0	0	0
sum of rank values (R_i)	**2176**	**2013**	**375**	**2756**	**2190**	**2340**	**375**	**375**	**375**	**375**	**375**	**375**	**375**	**375**	**375**

Compute the Kruskal-Wallis statistic:

$$H = \{[12/N(N+1)] * [\Sigma^{K}_{i=1} (R_i^2)/N_i]\} -3(N+1)$$

Well =	**Background**	**MW-1A**	**MW-2A**	**MW-3A**	**MW-6**	**MW-7**	**MW-8**	**MW-9**	**MW-10**	**MW-11**	**MW-13**	**MW-14**	**MW-15**
Ri^2/N_i =	378729.0	281316	208526	228150	28125	28125	28125	28125	28125	28125	28125	28125	28125

$N_{i\ bg}$ = 55
N = 174
H = 6.96

Adjust H for ties:

T_i = 3307806 sum of T1..T2

$H' = H/(1-(T_i/(N^3-N)))$
H' = 18.70
Chi-square = 21.03

Compare the calculated value H' to the tabulated Chi-square value with K-1 = # groups -1 = 12df at the 5% significance level from Table 1 of the IFG. The value is 21.03 which is greater than H' =18.70. Therefore, the null hypothesis of no contamination at the 5% level holds true and significant evidence of contamination does not exist.

Haywood County Closed Landfill, Francis Farm
Haywood County, North Carolina
BLE Project Number J12-1957-33

Compound: **Total Chromium (Cr)**
NC MCL (µg/l): 10
Method: Kruskal-Wallis
Background: MW-4, MW-5, MW-12

	MW-4	MW-5	MW-12	MW-1A	MW-2A	MW-3A	MW-6	MW-7	MW-8	MW-9	MW-10	MW-11	MW-13	MW-14	MW-15	MDL
02/18/99	ND	NS	NP	ND	NS	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	20
08/16/99	35	NS	NP	61	NS	14	NP	NP	NP	NP	NP	NP	NP	NP	NP	20
02/14/00	11	NS	NP	7.2	NS	5.6	NP	NP	NP	NP	NP	NP	NP	NP	NP	20
08/14/00	5.4	NT	NP	7.4	NS	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	20
03/19/01	5.2	140	NP	12	32	7.7	NP	NP	NP	NP	NP	NP	NP	NP	NP	20
08/27/02	5.4	210	NP	ND	130	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	20
02/24/03	ND	200	NP	5.1	79	14	NP	NP	NP	NP	NP	NP	NP	NP	NP	20
08/11/03	81	81	NP	19	38	6.7	NP	NP	NP	NP	NP	NP	NP	NP	NP	2
02/09/04	ND	57	NP	ND	2.1	4.9	NP	NP	NP	NP	NP	NP	NP	NP	NP	2
08/16/04	3.3	52	NP	4	2.8	2	NP	NP	NP	NP	NP	NP	NP	NP	NP	2
02/14/05	4.1	11	NP	7.6	18	12	NP	NP	NP	NP	NP	NP	NP	NP	NP	2
09/01/05	ND	ND	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	2
02/16/06	ND	16	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	2
08/30/06	ND	ND	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	2
02/26/07	ND	ND	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	5
08/13/07	ND	ND	NP	ND	ND	Dry	NP	NP	NP	NP	NP	NP	NP	NP	NP	5
02/11/08	ND	6.3	NP	ND	ND	10.3	NP	NP	NP	NP	NP	NP	NP	NP	NP	5
08/25/08	ND	ND	NP	ND	ND	Dry	NP	NP	NP	NP	NP	NP	NP	NP	NP	5
02/23/09	ND	7.2	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	5
08/24/09	ND	6.5	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	5
02/22/10	ND	ND	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	5
08/30/10	ND	8.8	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	5
02/22/11	ND	ND	8.1	ND	ND	ND	ND	ND	6.3	161	17.6	ND	ND	ND	ND	5
08/22/11	ND	ND	8.3	ND	ND	ND	ND	105	ND	19.3	ND	ND	ND	ND	ND	5
02/22/12	ND	ND	11.1	ND	ND	ND	ND	5.2	6.9	10.6	6.2	ND	ND	ND	ND	5
08/29/12	ND	7.1	40.2	ND	6.2	5.5	6.1	9.7	ND	7.9	6.5	ND	ND	ND	ND	5
02/18/13	ND	ND	16	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5
N_i	27	23	5	27	23	24	5	5	5	5	5	5	5	5	5	
sum of rank values (R_i)	2106.5	2529.0	744.5	2155.0	1985.5	2106.5	344.0	540.5	424.5	669.0	520.0	275.0	275.0	275.0	275.0	
avg rank value (Rbar)	78.0	110.0	148.9	79.8	86.3	87.8	68.8	108.1	84.9	133.8	104.0	55.0	55.0	55.0	55.0	

	Number of each rank value															Rank Value
rank value of NDs =	19	10	0	19	15	14	4	2	3	1	2	5	5	5	5	55
rank value of 2s =	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	110
rank value of 2.1s =	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	111
rank value of 2.8s =	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	112
rank value of 3.3s =	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	113
rank value of 4s =	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	114
rank value of 4.1s =	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	115
rank value of 4.9s =	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	116
rank value of 5.1s =	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	117
rank value of 5.2s =	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	118.5
rank value of 5.4s =	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	120.5
rank value of 5.5s =	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	122
rank value of 5.6s =	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	123
rank value of 6.1s =	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	124
rank value of 6.2s =	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	125.5
rank value of 6.3s =	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	127.5
rank value of 6.5s =	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	129.5
rank value of 6.7s =	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	131
rank value of 6.9s =	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	132
rank value of 7.1s =	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	133
rank value of 7.2s =	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	134.5
rank value of 7.4s =	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	136
rank value of 7.6s =	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	137
rank value of 7.7s =	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	138
rank value of 7.9s =	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	139
rank value of 8.1s =	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	140
rank value of 8.3s =	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	141
rank value of 8.8s =	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	142
rank value of 9.7s =	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	143
rank value of 10.3s =	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	144
rank value of 10.6s =	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	145
rank value of 11s =	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	146.5

rank value of 11.1s =	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	148
rank value of 12s =	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	149.5
rank value of 14s =	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	151.5
rank value of 16s =	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	153.5
rank value of 17.6s =	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	155
rank value of 18s =	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	156
rank value of 19s =	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	157
rank value of 19.3s =	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	158
rank value of 32s =	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	159
rank value of 35s =	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	160
rank value of 38s =	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	161
rank value of 40.2s =	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	162
rank value of 52s =	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	163
rank value of 57s =	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	164
rank value of 61s =	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	165
rank value of 79s =	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	166
rank value of 81s =	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	167.5
rank value of 105s =	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	169
rank value of 130s =	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	170
rank value of 140s =	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	171
rank value of 161s =	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	172
rank value of 200s =	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	173
rank value of 210s =	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	174
n =	**27**	**23**	**5**	**27**	**23**	**24**	**5**	**5**	**5**	**5**	**5**	**5**	**5**	**5**	**5**	

Sum of rank value calculations

1045	550	0	1045	825	770	220	110	165	55	110	275	275	275	275
0	0	0	0	0	110	0	0	0	0	0	0	0	0	0
0	0	0	0	111	0	0	0	0	0	0	0	0	0	0
0	0	0	0	112	0	0	0	0	0	0	0	0	0	0
113	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	114	0	0	0	0	0	0	0	0	0	0	0
115	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	116	0	0	0	0	0	0	0	0	0
0	0	0	117	0	0	0	0	0	0	0	0	0	0	0
118.5	0	0	0	0	0	0	118.5	0	0	0	0	0	0	0
241	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	122	0	0	0	0	0	0	0	0	0
0	0	0	0	0	123	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	124	0	0	0	0	0	0	0	0
0	0	0	0	125.5	0	0	0	0	0	125.5	0	0	0	0
0	127.5	0	0	0	0	0	0	127.5	0	0	0	0	0	0
0	129.5	0	0	0	0	0	0	0	0	129.5	0	0	0	0
0	0	0	0	0	131	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	132	0	0	0	0	0	0
0	133	0	0	0	0	0	0	0	0	0	0	0	0	0
0	134.5	0	134.5	0	0	0	0	0	0	0	0	0	0	0
0	0	0	136	0	0	0	0	0	0	0	0	0	0	0
0	0	0	137	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	138	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	139	0	0	0	0	0
0	0	140	0	0	0	0	0	0	0	0	0	0	0	0
0	0	141	0	0	0	0	0	0	0	0	0	0	0	0
0	142	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	143	0	0	0	0	0	0	0
0	0	0	0	0	144	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	145	0	0	0	0	0
146.5	146.5	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	148	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	149.5	0	149.5	0	0	0	0	0	0	0	0	0
0	0	0	0	0	303	0	0	0	0	0	0	0	0	0
0	153.5	153.5	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	155	0	0	0	0
0	0	0	0	156	0	0	0	0	0	0	0	0	0	0
0	0	0	157	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	158	0	0	0	0	0
0	0	0	0	159	0	0	0	0	0	0	0	0	0	0
160	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	161	0	0	0	0	0	0	0	0	0	0
0	0	162	0	0	0	0	0	0	0	0	0	0	0	0
0	163	0	0	0	0	0	0	0	0	0	0	0	0	0
0	164	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	165	0	0	0	0	0	0	0	0	0	0	0

0	0	0	0	166	0	0	0	0	0	0	0	0	0	0
167.5	167.5	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	169	0	0	0	0	0	0	0
0	0	0	0	170	0	0	0	0	0	0	0	0	0	0
0	171	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	172	0	0	0	0	0
0	173	0	0	0	0	0	0	0	0	0	0	0	0	0
0	174	0	0	0	0	0	0	0	0	0	0	0	0	0
sum of rank values (R_i)	**2106.5**	**2529**	**744.5**	**2155**	**1985.5**	**2106.5**	**344**	**540.5**	**424.5**	**669**	**520**	**275**	**275**	**275**	**275**

Compute the Kruskal-Wallis statistic:

$$H = \{[12/N(N+1)] * [\Sigma^{K}_{i=1} (R_i^2)/N_i]\} -3(N+1)$$

Well =	**Background**	**MW-1A**	**MW-2A**	**MW-3A**	**MW-6**	**MW-7**	**MW-8**	**MW-9**	**MW-10**	**MW-11**	**MW-13**	**MW-14**	**MW-15**
Ri^2/N_i =	526261.8	172001	171400	184889	23667.2	58428.1	36040.1	89512.2	54080	15125	15125	15125	15125

$N_{i\,bg}$ = 55
N = 174
H = 17.57

Adjust H for ties:

T_i = 1294986 sum of T1..T4

$H' = H/(1-(T_i/(N^3-N)))$
H' = 23.30
Chi-square = 21.03

Compare the calculated value H' to the tabulated Chi-square value with K-1 = # groups -1 = 12df at the 5% significance level from Table 1 of the IFG. The value is 21.03 which is less than H' =23.30.
Therefore, there is evidence of significant differences between the well groups.
Post-hoc pairwise comparisons are necessary (see below).

Calculate the critical values to compare each compliance well to the background wells:

Critical Value (C_x) = $P(N(N+1)/12)^{0.5} * (1/N_{i\,bg}+1/N_x)^{0.5}$
P = 2.33 Percentile of Standard Normal Distribution from Table 4 of IFG
N = total sample size
$N_{i\,bg}$ = total samples (N_i) of background data
N_x = total samples (N_i) of well x

Difference between average ranks (Dx) = Rbar (well x) - avg Rbar (background)

Well =	MW-1A	MW-2A	MW-3A	MW-6	MW-7	MW-8	MW-9	MW-10	MW-11	MW-13	MW-14	MW-15
Rbar (well x) =	79.8	86.3	87.8	68.8	108.1	84.9	133.8	104.0	55.0	55.0	55.0	55.0
avg Rbar (background) =	97.8	97.8	97.8	97.8	97.8	97.8	97.8	97.8	97.8	97.8	97.8	97.8
Dx =	-18.0	-11.5	-10.0	-29.0	10.3	-12.9	36.0	6.2	-42.8	-42.8	-42.8	-42.8
Cx =	27.6	29.1	28.7	54.8	54.8	54.8	54.8	54.8	54.8	54.8	54.8	54.8
Statistical Significance ?	-	-	-	-	-	-	-	-	-	-	-	-
If SSI, is current event above MCL?	-	-	-	-	-	-	-	-	-	-	-	-

Compare each difference (Dx) with the corresponding critical value (Cx).
No compliance well's difference between average ranks exceeded its corresponding critical value at a 5% significance level. Therefore, we conclude that significant evidence of contamination does not exist at the 5% significance level.

Haywood County Closed Landfill, Francis Farm
Haywood County, North Carolina
BLE Project Number J12-1957-33

Compound: **Total Cobalt (Co)**
NC MCL (µg/l): NE
Method: Kruskal-Wallis
Background: MW-4, MW-5, MW-12

	MW-4	MW-5	MW-12	MW-1A	MW-2A	MW-3A	MW-6	MW-7	MW-8	MW-9	MW-10	MW-11	MW-13	MW-14	MW-15	MDL
02/18/99	NT	NS	NP	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
08/16/99	NT	NS	NP	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
02/14/00	NT	NS	NP	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
08/14/00	NT	NT	NP	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
03/19/01	NT	NT	NP	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
08/27/02	NT	NT	NP	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
02/24/03	NT	NT	NP	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
08/11/03	NT	NT	NP	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
02/09/04	NT	NT	NP	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
08/16/04	NT	NT	NP	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
02/14/05	NT	NT	NP	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
09/01/05	NT	NT	NP	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
02/16/06	NT	NT	NP	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
08/30/06	NT	NT	NP	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
02/26/07	NT	NT	NP	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
08/13/07	NT	NT	NP	NT	NT	Dry	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
02/11/08	NT	NT	NP	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
08/25/08	NT	NT	NP	NT	ND	Dry	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
02/23/09	ND	NT	NP	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
08/24/09	NT	NT	NP	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
02/22/10	NT	NT	NP	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
08/30/10	NT	NT	NP	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
02/22/11	**13.5**	**16.8**	**9.8**	**10.5**	**55.5**	**110**	ND	**5.4**	ND	**40.5**	**5.2**	**9.4**	ND	**6.1**	ND	**5**
08/22/11	**6.8**	**9.7**	ND	**8.9**	**45.4**	**51.9**	ND	**43.1**	ND	ND	ND	ND	ND	ND	ND	**5**
02/22/12	**5.7**	**5.8**	ND	**10.1**	**30.9**	**54**	ND	ND	ND	ND	ND	ND	**5.5**	ND	ND	**5**
08/29/12	**9.6**	**17.3**	**11.7**	**8.5**	**40**	**104**	ND	**5.1**	ND	ND	ND	ND	**15.8**	ND	ND	**5**
02/18/13	**6**	**14.8**	**7**	**26.1**	**49.7**	**84.3**	ND	ND	ND	ND	ND	ND	**20.7**	**6.2**	ND	**5**
N_i	6	5	5	5	6	5	5	5	5	5	5	5	5	5	5	
sum of rank values (R_i)	267.5	283.0	201.0	279.0	367.5	373.0	97.5	188.0	97.5	146.0	118.0	130.0	206.0	151.5	97.5	
avg rank value (Rbar)	44.6	56.6	40.2	55.8	61.3	74.6	19.5	37.6	19.5	29.2	23.6	26.0	41.2	30.3	19.5	

	Number of each rank value															Rank Value
rank value of NDs =	1	0	2	0	1	0	5	2	5	4	4	4	2	3	5	19.5
rank value of 5.1s =	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	39
rank value of 5.2s =	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	40
rank value of 5.4s =	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	41
rank value of 5.5s =	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	42
rank value of 5.7s =	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	43
rank value of 5.8s =	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	44
rank value of 6s =	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	45
rank value of 6.1s =	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	46
rank value of 6.2s =	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	47
rank value of 6.8s =	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	48
rank value of 7s =	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	49
rank value of 8.5s =	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	50
rank value of 8.9s =	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	51
rank value of 9.4s =	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	52
rank value of 9.6s =	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	53
rank value of 9.7s =	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	54
rank value of 9.8s =	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	55
rank value of 10.1s =	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	56
rank value of 10.5s =	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	57
rank value of 11.7s =	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	58
rank value of 13.5s =	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	59
rank value of 14.8s =	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	60
rank value of 15.8s =	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	61
rank value of 16.8s =	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	62
rank value of 17.3s =	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	63
rank value of 20.7s =	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	64
rank value of 26.1s =	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	65
rank value of 30.9s =	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	66
rank value of 40s =	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	67
rank value of 40.5s =	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	68
rank value of 43.1s =	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	69

rank value of 45.4s =	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	70
rank value of 49.7s =	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	71
rank value of 51.9s =	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	72
rank value of 54s =	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	73
rank value of 55.5s =	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	74
rank value of 84.3s =	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	75
rank value of 104s =	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	76
rank value of 110s =	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	77
n =	**6**	**5**	**5**	**5**	**6**	**5**	**5**	**5**	**5**	**5**	**5**	**5**	**5**	**5**	**5**	

Sum of rank value calculations

19.5	0	39	0	19.5	0	97.5	39	97.5	78	78	78	39	58.5	97.5
0	0	0	0	0	0	0	39	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	40	0	0	0	0
0	0	0	0	0	0	0	41	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	42	0	0
43	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	44	0	0	0	0	0	0	0	0	0	0	0	0	0
45	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	46	0
0	0	0	0	0	0	0	0	0	0	0	0	0	47	0
48	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	49	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	50	0	0	0	0	0	0	0	0	0	0	0
0	0	0	51	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	52	0	0	0
53	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	54	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	55	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	56	0	0	0	0	0	0	0	0	0	0	0
0	0	0	57	0	0	0	0	0	0	0	0	0	0	0
0	0	58	0	0	0	0	0	0	0	0	0	0	0	0
59	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	60	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	61	0	0
0	62	0	0	0	0	0	0	0	0	0	0	0	0	0
0	63	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	64	0	0
0	0	0	65	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	66	0	0	0	0	0	0	0	0	0	0
0	0	0	0	67	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	68	0	0	0	0	0
0	0	0	0	0	0	0	69	0	0	0	0	0	0	0
0	0	0	0	70	0	0	0	0	0	0	0	0	0	0
0	0	0	0	71	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	72	0	0	0	0	0	0	0	0	0
0	0	0	0	0	73	0	0	0	0	0	0	0	0	0
0	0	0	0	74	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	75	0	0	0	0	0	0	0	0	0
0	0	0	0	0	76	0	0	0	0	0	0	0	0	0
0	0	0	0	0	77	0	0	0	0	0	0	0	0	0
sum of rank values (R_i)	**267.5**	**283**	**201**	**279**	**367.5**	**373**	**97.5**	**188**	**97.5**	**146**	**118**	**130**	**206**	**151.5**	**97.5**

Compute the Kruskal-Wallis statistic:

$$H = \{[12/N(N+1)] * [\Sigma^{K}_{i=1} (R_i^2)/N_i]\} -3(N+1)$$

Well =	Background	MW-1A	MW-2A	MW-3A	MW-6	MW-7	MW-8	MW-9	MW-10	MW-11	MW-13	MW-14	MW-15
Ri^2/N_i =	35297.0	15568.2	22509.4	27825.8	1901.25	7068.8	1901.25	4263.2	2784.8	3380	8487.2	4590.45	1901.25

$N_{i\,bg}$ = 16
N = 77
H = 40.68

Adjust H for ties:

T_i = 54834 sum of T1..Tl

$H' = H/(1-(T_i/(N^3-N)))$
H' = 46.24
Chi-square = 21.03

Compare the calculated value H' to the tabulated Chi-square value with K-1 = # groups -1 = 12df at the 5% significance level from Table 1 of the IFG. The value is 21.03 which is less than H' =46.24.

Therefore, there is evidence of significant differences between the well groups.
Post-hoc pairwise comparisons are necessary (see below).

Calculate the critical values to compare each compliance well to the background wells:

Critical Value (C_x) = $P(N(N+1)/12)^{0.5} * (1/N_{i\,bg}+1/N_x)^{0.5}$

P = 2.33 Percentile of Standard Normal Distribution from Table 4 of IFG

N = total sample size

$N_{i\,bg}$ = total samples (N_i) of background data

N_x = total samples (N_i) of well x

Difference between average ranks (Dx) = Rbar (well x) - avg Rbar (background)

Well =	MW-1A	MW-2A	MW-3A	MW-6	MW-7	MW-8	MW-9	MW-10	MW-11	MW-13	MW-14	MW-15
Rbar (well x) =	55.8	61.3	74.6	19.5	37.6	19.5	29.2	23.6	26.0	41.2	30.3	19.5
avg Rbar (background) =	47.0	47.0	47.0	47.0	47.0	47.0	47.0	47.0	47.0	47.0	47.0	47.0
Dx =	8.8	14.3	27.6	-27.5	-9.4	-27.5	-17.8	-23.4	-21.0	-5.8	-16.7	-27.5
Cx =	26.7	25.0	26.7	26.7	26.7	26.7	26.7	26.7	26.7	26.7	26.7	26.7
Statistical Significance ?	-	-	**Yes**	-	-	-	-	-	-	-	-	-
If SSI, is current event above MCL?	-	-	No	-	-	-	-	-	-	-	-	-

Compare each difference (Dx) with the corresponding critical value (Cx).
The Dx value for the above indicated wells do exceed the corresponding Cx value.
Therefore, we conclude that the concentration of Total Cobalt (Co) averaged over these compliance wells are significantly greater than that of the background wells.
Shewart-CUSUM Control Charts should be performed for each failing well to check for statistical significance.
MW-3A does not have a sufficient database for intrawell testing at this time.

Haywood County Closed Landfill, Francis Farm
Haywood County, North Carolina
BLE Project Number J12-1957-33

Compound: **Total Copper (Cu)**
NC MCL (µg/l): 1,000
Method: Kruskal-Wallis
Background: MW-4, MW-5, MW-12

	MW-4	MW-5	MW-12	MW-1A	MW-2A	MW-3A	MW-6	MW-7	MW-8	MW-9	MW-10	MW-11	MW-13	MW-14	MW-15	MDL
02/18/99	NT	NS	NP	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
08/16/99	NT	NS	NP	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
02/14/00	NT	NS	NP	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
08/14/00	NT	NT	NP	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
03/19/01	NT	NT	NP	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
08/27/02	NT	NT	NP	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
02/24/03	NT	NT	NP	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
08/11/03	NT	NT	NP	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
02/09/04	NT	NT	NP	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
08/16/04	NT	NT	NP	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
02/14/05	NT	NT	NP	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
09/01/05	NT	NT	NP	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
02/16/06	NT	NT	NP	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
08/30/06	NT	NT	NP	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
02/26/07	NT	NT	NP	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
08/13/07	NT	NT	NP	NT	NT	Dry	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
02/11/08	NT	NT	NP	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
08/25/08	NT	NT	NP	NT	NT	Dry	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
02/23/09	NT	NT	NP	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
08/24/09	NT	NT	NP	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
02/22/10	NT	NT	NP	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
08/30/10	NT	NT	NP	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
02/22/11	ND	**155**	ND	ND	ND	**5.1**	ND	ND	ND	**64.3**	**10.7**	ND	ND	ND	ND	**5**
08/22/11	ND	**7.3**	ND	ND	ND	**7.9**	ND	**125**	ND	**7.9**	ND	**7.5**	ND	ND	ND	**5**
02/22/12	ND	ND	**8.3**	ND	ND	ND	ND	ND	**5.7**	**6.9**	ND	ND	ND	ND	ND	**5**
08/29/12	ND	**16.2**	**17.3**	ND	**5.6**	**9.2**	ND	**5.6**	ND	ND	**5**	ND	ND	ND	ND	**5**
02/18/13	ND	**7.3**	**9**	ND	ND	**12.8**	ND	ND	ND	ND	ND	ND	ND	ND	ND	**5**
N_i	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	
sum of rank values (R_i)	137.5	296.5	260.0	137.5	167.5	286.0	137.5	214.0	169.0	252.5	206.5	173.0	137.5	137.5	137.5	
avg rank value (Rbar)	27.5	59.3	52.0	27.5	33.5	57.2	27.5	42.8	33.8	50.5	41.3	34.6	27.5	27.5	27.5	

	Number of each rank value															Rank Value
rank value of NDs =	5	1	2	5	4	1	5	3	4	2	3	4	5	5	5	27.5
rank value of 5s =	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	55
rank value of 5.1s =	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	56
rank value of 5.6s =	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	57.5
rank value of 5.7s =	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	59
rank value of 6.9s =	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	60
rank value of 7.3s =	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	61.5
rank value of 7.5s =	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	63
rank value of 7.9s =	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	64.5
rank value of 8.3s =	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	66
rank value of 9s =	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	67
rank value of 9.2s =	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	68
rank value of 10.7s =	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	69
rank value of 12.8s =	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	70
rank value of 16.2s =	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	71
rank value of 17.3s =	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	72
rank value of 64.3s =	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	73
rank value of 125s =	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	74
rank value of 155s =	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	75

n =	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5

Sum of rank value calculations

137.5	27.5	55	137.5	110	27.5	137.5	82.5	110	55	82.5	110	137.5	137.5	137.5
0	0	0	0	0	0	0	0	0	0	55	0	0	0	0
0	0	0	0	0	56	0	0	0	0	0	0	0	0	0
0	0	0	0	57.5	0	0	57.5	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	59	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	60	0	0	0	0	0
0	123	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	63	0	0	0
0	0	0	0	0	64.5	0	0	0	64.5	0	0	0	0	0
0	0	66	0	0	0	0	0	0	0	0	0	0	0	0
0	0	67	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	68	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	69	0	0	0	0
0	0	0	0	0	70	0	0	0	0	0	0	0	0	0
0	71	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	72	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	73	0	0	0	0	0
0	0	0	0	0	0	0	74	0	0	0	0	0	0	0
0	75	0	0	0	0	0	0	0	0	0	0	0	0	0

sum of rank values (R_i)	**137.5**	**296.5**	**260**	**137.5**	**167.5**	**286**	**137.5**	**214**	**169**	**252.5**	**206.5**	**173**	**137.5**	**137.5**	**137.5**

Compute the Kruskal-Wallis statistic:

$$H = \{[12/N(N+1)] * [\Sigma^{K}_{i=1} (R_i^2)/N_i]\} -3(N+1)$$

Well =	**Background**	**MW-1A**	**MW-2A**	**MW-3A**	**MW-6**	**MW-7**	**MW-8**	**MW-9**	**MW-10**	**MW-11**	**MW-13**	**MW-14**	**MW-15**
Ri^2/N_i =	32109.1	3781.25	5611.25	16359.2	3781.25	9159.2	5712.2	12751.3	8528.45	5985.8	3781.25	3781.25	3781.25

$N_{i\ bg}$ = 15
N = 75
H = 14.36

Adjust H for ties:

T_i = 157428 sum of T1..T4

$H' = H/(1-(T_i/(N^3-N)))$
H' = 22.92
Chi-square = 21.03

Compare the calculated value H' to the tabulated Chi-square value with K-1 = # groups -1 = 12df at the 5% significance level from Table 1 of the IFG. The value is 21.03 which is less than H' =22.92.
Therefore, there is evidence of significant differences between the well groups.
Post-hoc pairwise comparisons are necessary (see below).

Calculate the critical values to compare each compliance well to the background wells:

Critical Value (C_x) = $P(N(N+1)/12)^{0.5} * (1/N_{i\,bg}+1/N_x)^{0.5}$

P = 2.33 Percentile of Standard Normal Distribution from Table 4 of IFG

N = total sample size

$N_{i\,bg}$ = total samples (N_i) of background data

N_x = total samples (N_i) of well x

Difference between average ranks (Dx) = Rbar (well x) - avg Rbar (background)

Well =	MW-1A	MW-2A	MW-3A	MW-6	MW-7	MW-8	MW-9	MW-10	MW-11	MW-13	MW-14	MW-15
Rbar (well x) =	27.5	33.5	57.2	27.5	42.8	33.8	50.5	41.3	34.6	27.5	27.5	27.5
avg Rbar (background) =	46.3	46.3	46.3	46.3	46.3	46.3	46.3	46.3	46.3	46.3	46.3	46.3
Dx =	-18.8	-12.8	10.9	-18.8	-3.5	-12.5	4.2	-5.0	-11.7	-18.8	-18.8	-18.8
Cx =	26.2	26.2	26.2	26.2	26.2	26.2	26.2	26.2	26.2	26.2	26.2	26.2
Statistical Significance ?	-	-	-	-	-	-	-	-	-	-	-	-
If SSI, is current event above MCL?	-	-	-	-	-	-	-	-	-	-	-	-

Compare each difference (Dx) with the corresponding critical value (Cx).
No compliance well's difference between average ranks exceeded its corresponding critical value at a 5% significance level. Therefore, we conclude that significant evidence of contamination does not exist at the 5% significance level.

Haywood County Closed Landfill, Francis Farm
Haywood County, North Carolina
BLE Project Number J12-1957-33

Compound: **Total Lead (Pb)**
NC MCL (µg/l): 15
Method: Kruskal-Wallis
Background: MW-4, MW-5, MW-12

	MW-4	MW-5	MW-12	MW-1A	MW-2A	MW-3A	MW-6	MW-7	MW-8	MW-9	MW-10	MW-11	MW-13	MW-14	MW-15	MDL
02/18/99	ND	NS	NP	ND	NS	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	**100**
08/16/99	ND	NS	NP	ND	NS	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	**100**
02/14/00	ND	NS	NP	ND	NS	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	**100**
08/14/00	ND	NT	NP	ND	NS	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	**100**
03/19/01	ND	**38**	NP	ND	**16**	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	**100**
08/27/02	ND	**47**	NP	ND	**31**	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	**100**
02/24/03	ND	**41**	NP	ND	**27**	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	**100**
08/11/03	**30**	**30**	NP	**10**	**28**	**17**	NP	NP	NP	NP	NP	NP	NP	NP	NP	**5**
02/09/04	ND	**18**	NP	ND	**9.4**	**7.4**	NP	NP	NP	NP	NP	NP	NP	NP	NP	**5**
08/16/04	ND	**23**	NP	ND	**11**	**9.4**	NP	NP	NP	NP	NP	NP	NP	NP	NP	**5**
02/14/05	ND	**7.9**	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	**5**
09/01/05	ND	ND	NP	ND	**14**	**7.4**	NP	NP	NP	NP	NP	NP	NP	NP	NP	**5**
02/16/06	ND	ND	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	**5**
08/30/06	**7.6**	**6.5**	NP	**5.2**	**5.7**	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	**5**
02/26/07	ND	ND	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	**5**
08/13/07	ND	ND	NP	ND	ND	Dry	NP	NP	NP	NP	NP	NP	NP	NP	NP	**5**
02/11/08	ND	ND	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	**5**
08/25/08	ND	ND	NP	ND	ND	Dry	NP	NP	NP	NP	NP	NP	NP	NP	NP	**5**
02/23/09	ND	ND	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	**5**
08/24/09	ND	ND	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	**5**
02/22/10	ND	ND	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	**5**
08/30/10	ND	ND	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	**5**
02/22/11	ND	**7.2**	ND	ND	ND	ND	ND	ND	ND	**16.2**	**6.3**	ND	ND	ND	ND	**5**
08/22/11	ND	ND	ND	ND	ND	ND	ND	**37.2**	ND	ND	ND	ND	ND	ND	ND	**5**
02/22/12	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**5**
08/29/12	ND	ND	**9.2**	ND	ND	**5.4**	ND	ND	ND	ND	ND	ND	ND	ND	ND	**5**
02/18/13	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**5**
N_i	27	23	5	27	23	24	5	5	5	5	5	5	5	5	5	
sum of rank values (R_i)	2134.0	2484.5	445.0	2115.5	2374.0	2146.0	362.5	461.0	362.5	452.0	438.0	362.5	362.5	362.5	362.5	
avg rank value (Rbar)	79.0	108.0	89.0	78.4	103.2	89.4	72.5	92.2	72.5	90.4	87.6	72.5	72.5	72.5	72.5	

	Number of each rank value															Rank Value
rank value of NDs =	25	14	4	25	15	19	5	4	5	4	4	5	5	5	5	72.5
rank value of 5.2s =	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	145
rank value of 5.4s =	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	146
rank value of 5.7s =	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	147
rank value of 6.3s =	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	148
rank value of 6.5s =	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	149
rank value of 7.2s =	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	150
rank value of 7.4s =	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	151.5
rank value of 7.6s =	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	153
rank value of 7.9s =	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	154
rank value of 9.2s =	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	155
rank value of 9.4s =	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	156.5
rank value of 10s =	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	158
rank value of 11s =	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	159
rank value of 14s =	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	160
rank value of 16s =	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	161
rank value of 16.2s =	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	162
rank value of 17s =	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	163
rank value of 18s =	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	164
rank value of 23s =	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	165
rank value of 27s =	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	166
rank value of 28s =	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	167
rank value of 30s =	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	168.5
rank value of 31s =	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	170
rank value of 37.2s =	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	171
rank value of 38s =	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	172
rank value of 41s =	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	173
rank value of 47s =	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	174
n =	**27**	**23**	**5**	**27**	**23**	**24**	**5**	**5**	**5**	**5**	**5**	**5**	**5**	**5**	**5**	

Sum of rank value calculations

1812.5	1015	290	1812.5	1087.5	1377.5	362.5	290	362.5	290	290	362.5	362.5	362.5	362.5
0	0	0	145	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	146	0	0	0	0	0	0	0	0	0
0	0	0	0	147	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	148	0	0	0	0
0	149	0	0	0	0	0	0	0	0	0	0	0	0	0
0	150	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	303	0	0	0	0	0	0	0	0	0
153	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	154	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	155	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	156.5	156.5	0	0	0	0	0	0	0	0	0
0	0	0	158	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	159	0	0	0	0	0	0	0	0	0	0
0	0	0	0	160	0	0	0	0	0	0	0	0	0	0
0	0	0	0	161	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	162	0	0	0	0	0
0	0	0	0	0	163	0	0	0	0	0	0	0	0	0
0	164	0	0	0	0	0	0	0	0	0	0	0	0	0
0	165	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	166	0	0	0	0	0	0	0	0	0	0
0	0	0	0	167	0	0	0	0	0	0	0	0	0	0
168.5	168.5	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	170	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	171	0	0	0	0	0	0	0
0	172	0	0	0	0	0	0	0	0	0	0	0	0	0
0	173	0	0	0	0	0	0	0	0	0	0	0	0	0
0	174	0	0	0	0	0	0	0	0	0	0	0	0	0
sum of rank values (R_i) **2134**	**2484.5**	**445**	**2115.5**	**2374**	**2146**	**362.5**	**461**	**362.5**	**452**	**438**	**362.5**	**362.5**	**362.5**	**362.5**

Compute the Kruskal-Wallis statistic:

$$H = \{[12/N(N+1)] * [\Sigma^{K}_{i=1} (R_i^2)/N_i]\} -3(N+1)$$

Well =	Background	MW-1A	MW-2A	MW-3A	MW-6	MW-7	MW-8	MW-9	MW-10	MW-11	MW-13	MW-14	MW-15
Ri^2/N_i =	466164.2	165753	245038	191888	26281.3	42504.2	26281.3	40860.8	38368.8	26281.3	26281.3	26281.3	26281.3

$N_{i\ bg}$ = 55
N = 174
H = 6.34

Adjust H for ties:

T_i = 2985858 sum of T1..T3

$H' = H/(1-(T_i/(N^3-N)))$
H' = 14.63
Chi-square = 21.03

Compare the calculated value H' to the tabulated Chi-square value with K-1 = # groups -1 = 17df at the 5% significance level from Table 1 of the IFG. The value is 21.03 which is greater than H' =14.63. Therefore, the null hypothesis of no contamination at the 5% level holds true and significant evidence of contamination does not exist.

Haywood County Closed Landfill, Francis Farm
Haywood County, North Carolina
BLE Project Number J12-1957-33

Compound: **Total Mercury (Hg)**
NC MCL (µg/l): 1
Method: Poisson Prediction Limits
Background: MW-4, MW-5, MW-12

	MW-4	MW-5	MW-12	MW-1A	MW-2A	MW-3A	MW-6	MW-7	MW-8	MW-9	MW-10	MW-11	MW-13	MW-14	MW-15	MDL
02/18/99	ND	NS	NP	ND	NS	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	0.2
08/16/99	ND	NS	NP	ND	NS	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	0.2
02/14/00	ND	NS	NP	ND	NS	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	0.2
08/14/00	ND	NT	NP	0.4	NS	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	0.2
03/19/01	ND	ND	NP	ND	0.2	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	0.2
08/27/02	ND	ND	NP	ND	ND	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	0.2
02/24/03	NT	NT	NP	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	0.2
08/11/03	ND	ND	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	0.2
02/09/04	ND	ND	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	0.2
08/16/04	0.3	ND	NP	1.4	3.5	0.6	NP	NP	NP	NP	NP	NP	NP	NP	NP	0.2
02/14/05	ND	ND	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	0.2
09/01/05	0.2	ND	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	0.2
02/16/06	ND	ND	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	0.2
08/30/06	ND	ND	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	0.2
02/26/07	ND	ND	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	0.2
08/13/07	ND	ND	NP	ND	ND	Dry	NP	NP	NP	NP	NP	NP	NP	NP	NP	0.2
02/11/08	ND	ND	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	0.2
08/25/08	ND	ND	NP	ND	ND	Dry	NP	NP	NP	NP	NP	NP	NP	NP	NP	0.2
02/23/09	ND	ND	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	0.2
08/24/09	ND	ND	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	0.2
02/22/10	ND	ND	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	0.2
08/30/10	ND	ND	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	0.2
02/22/11	NT	NT	ND	NT	NT	NT	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.2
08/22/11	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
02/22/12	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.2
08/29/12	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.2
02/18/13	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.2

Insufficient amount of data at this time for statictical testing.

1) If not detected (ND), use half of the detection limit.

02/18/99	0.1	-	-	0.1	-	0.1	-	-	-	-	-	-	-	-	-
08/16/99	0.1	-	-	0.1	-	0.1	-	-	-	-	-	-	-	-	-
02/14/00	0.1	-	-	0.1	-	0.1	-	-	-	-	-	-	-	-	-
08/14/00	0.1	-	-	0.4	-	0.1	-	-	-	-	-	-	-	-	-
03/19/01	0.1	0.1	-	0.1	0.2	0.1	-	-	-	-	-	-	-	-	-
08/27/02	0.1	0.1	-	0.1	0.1	-	-	-	-	-	-	-	-	-	-
02/24/03	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
08/11/03	0.1	0.1	-	0.1	0.1	0.1	-	-	-	-	-	-	-	-	-
02/09/04	0.1	0.1	-	0.1	0.1	0.1	-	-	-	-	-	-	-	-	-
08/16/04	0.3	0.1	-	1.4	3.5	0.6	-	-	-	-	-	-	-	-	-
02/14/05	0.1	0.1	-	0.1	0.1	0.1	-	-	-	-	-	-	-	-	-
09/01/05	0.2	0.1	-	0.1	0.1	0.1	-	-	-	-	-	-	-	-	-
02/16/06	0.1	0.1	-	0.1	0.1	0.1	-	-	-	-	-	-	-	-	-
08/30/06	0.1	0.1	-	0.1	0.1	0.1	-	-	-	-	-	-	-	-	-
02/26/07	0.1	0.1	-	0.1	0.1	0.1	-	-	-	-	-	-	-	-	-
08/13/07	0.1	0.1	-	0.1	0.1	-	-	-	-	-	-	-	-	-	-
02/11/08	0.1	0.1	-	0.1	0.1	0.1	-	-	-	-	-	-	-	-	-
08/25/08	0.1	0.1	-	0.1	0.1	-	-	-	-	-	-	-	-	-	-
02/23/09	0.1	0.1	-	0.1	0.1	0.1	-	-	-	-	-	-	-	-	-
08/24/09	0.1	0.1	-	0.1	0.1	0.1	-	-	-	-	-	-	-	-	-
02/22/10	0.1	0.1	-	0.1	0.1	0.1	-	-	-	-	-	-	-	-	-
08/30/10	0.1	0.1	-	0.1	0.1	0.1	-	-	-	-	-	-	-	-	-
02/22/11	-	-	0.1	-	-	-	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
08/22/11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
02/22/12	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
08/29/12	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
02/18/13				0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1

2) Set the total number of data values for background wells (through the previous sampling event) equal to 'n' = 23.
Use 1/2 of the method detection limit to calculate the Total Poisson Count of the Sum (T_n).

$n = 45$
$T_{n1} = 4.8$

3) Using Gibbons' formula, calculate the upper Poisson Prediction limit T^*_k:

$$T^*_k = cT_{n1} + ct^2/2 + ct[T_{n1}(1+1/c) + t^2/4]^{-0.5}$$

where $c = k/n$
and where k = the number of future predicted measurements (one per well during the current sampling event)
and where t = the upper 99th percentile of the t-distribution with (n-1) degrees of freedom (Table 6 of the IFG).

$k = 12$
$n = 45$
$T_{n1} = 4.8$
$t[44,.01] = 2.416$
$c = 0.267$
$T_{n2} = 1.2$
$T^*_k = 5.2$

4) Compare the *Poisson Prediction Limit* (T^*_k) to the *Sum of the Concentrations Detected* (T_{n2}) in the wells during the most recent sampling event.
Since the Poisson Prediction Limit was not exceeded, there is no evidence of contamination.

Haywood County Closed Landfill, Francis Farm
Haywood County, North Carolina
BLE Project Number J12-1957-33

Compound: **Total Nickel (Ni)**
NC MCL (µg/l): 100
Method: Kruskal-Wallis
Background: MW-4, MW-5, MW-12

	MW-4	MW-5	MW-12	MW-1A	MW-2A	MW-3A	MW-6	MW-7	MW-8	MW-9	MW-10	MW-11	MW-13	MW-14	MW-15	MDL
02/18/99	NT	NS	NP	NT	NS	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	50
08/16/99	NT	NS	NP	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	50
02/14/00	NT	NS	NP	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	50
08/14/00	NT	NT	NP	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	50
03/19/01	NT	NT	NP	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	50
08/27/02	ND	ND	NP	ND	ND	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	50
02/24/03	NT	NT	NP	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	50
08/11/03	NT	NT	NP	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	50
02/09/04	ND	ND	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	50
08/16/04	NT	NT	NP	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	50
02/14/05	NT	NT	NP	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	50
09/01/05	NT	NT	NP	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	50
02/16/06	NT	NT	NP	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	50
08/30/06	NT	NT	NP	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	50
02/26/07	NT	NT	NP	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	50
08/13/07	NT	NT	NP	NT	NT	Dry	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
02/11/08	NT	NT	NP	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
08/25/08	NT	NT	NP	NT	NT	Dry	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
02/23/09	NT	NT	NP	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
08/24/09	NT	NT	NP	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
02/22/10	NT	NT	NP	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
08/30/10	NT	NT	NP	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
02/22/11	**5**	**5.4**	**7.6**	ND	ND	**39**	**8**	ND	ND	**97.3**	**8.4**	ND	**15.9**	**7.5**	ND	**5**
08/22/11	**8.2**	**7.4**	**7.7**	ND	**5.7**	**11.6**	**5.5**	**62.1**	ND	**10.9**	ND	**5.2**	**20.1**	ND	ND	**5**
02/22/12	**9.2**	ND	**9.6**	ND	ND	**11**	ND	ND	ND	**5**	ND	ND	**24.6**	**5.2**	ND	**5**
08/29/12	**10.3**	**9.2**	**22.3**	ND	**13.3**	**23**	ND	**5.5**	ND	ND	ND	ND	**34.9**	ND	ND	**5**
02/18/13	ND	**6**	**11.3**	ND	ND	**11.9**	ND	ND	ND	ND	ND	ND	**36.5**	ND	ND	**5**
N_i	7	7	5	7	7	7	5	5	5	5	5	5	5	5	5	
sum of rank values (R_i)	325.0	312.5	341.0	175.0	257.0	430.0	193.5	214.5	125.0	255.5	165.0	152.5	396.0	187.5	125.0	
avg rank value (Rbar)	46.4	44.6	68.2	25.0	36.7	61.4	38.7	42.9	25.0	51.1	33.0	30.5	79.2	37.5	25.0	

	Number of each rank value															Rank Value
rank value of NDs =	3	3	0	7	5	2	3	3	5	2	4	4	0	3	5	25
rank value of 5s =	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	50.5
rank value of 5.2s =	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	52.5
rank value of 5.4s =	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	54
rank value of 5.5s =	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	55.5
rank value of 5.7s =	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	57
rank value of 6s =	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	58
rank value of 7.4s =	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	59
rank value of 7.5s =	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	60
rank value of 7.6s =	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	61
rank value of 7.7s =	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	62
rank value of 8s =	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	63
rank value of 8.2s =	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	64
rank value of 8.4s =	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	65
rank value of 9.2s =	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	66.5
rank value of 9.6s =	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	68
rank value of 10.3s =	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	69
rank value of 10.9s =	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	70
rank value of 11s =	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	71
rank value of 11.3s =	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	72
rank value of 11.6s =	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	73
rank value of 11.9s =	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	74
rank value of 13.3s =	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	75
rank value of 15.9s =	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	76
rank value of 20.1s =	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	77
rank value of 22.3s =	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	78
rank value of 23s =	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	79
rank value of 24.6s =	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	80
rank value of 34.9s =	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	81
rank value of 36.5s =	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	82
rank value of 39s =	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	83
rank value of 62.1s =	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	84

rank value of 97.3s =	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	85
n =	7	7	5	7	7	7	5	5	5	5	5	5	5	5	5	

Sum of rank value calculations

75	75	0	175	125	50	75	75	125	50	100	100	0	75	125
50.5	0	0	0	0	0	0	0	0	50.5	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	52.5	0	52.5	0
0	54	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	55.5	55.5	0	0	0	0	0	0	0
0	0	0	0	57	0	0	0	0	0	0	0	0	0	0
0	58	0	0	0	0	0	0	0	0	0	0	0	0	0
0	59	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	60	0
0	0	61	0	0	0	0	0	0	0	0	0	0	0	0
0	0	62	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	63	0	0	0	0	0	0	0	0
64	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	65	0	0	0	0
66.5	66.5	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	68	0	0	0	0	0	0	0	0	0	0	0	0
69	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	70	0	0	0	0	0
0	0	0	0	0	71	0	0	0	0	0	0	0	0	0
0	0	72	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	73	0	0	0	0	0	0	0	0	0
0	0	0	0	0	74	0	0	0	0	0	0	0	0	0
0	0	0	0	75	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	76	0	0
0	0	0	0	0	0	0	0	0	0	0	0	77	0	0
0	0	78	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	79	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	80	0	0
0	0	0	0	0	0	0	0	0	0	0	0	81	0	0
0	0	0	0	0	0	0	0	0	0	0	0	82	0	0
0	0	0	0	0	83	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	84	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	85	0	0	0	0	0
sum of rank values (R_i)	325	312.5	341	175	257	430	193.5	214.5	125	255.5	165	152.5	396	187.5	125

Compute the Kruskal-Wallis statistic:

$$H = \{[12/N(N+1)] * [\Sigma^{K}_{i=1} (R_i^2)/N_i]\} -3(N+1)$$

Well =	Background	MW-1A	MW-2A	MW-3A	MW-6	MW-7	MW-8	MW-9	MW-10	MW-11	MW-13	MW-14	MW-15
Ri^2/N_i =	50392.8	4375	9435.57	26414.3	7488.45	9202.05	3125	13056.1	5445	4651.25	31363.2	7031.25	3125

$N_{i\ bg}$ = 19
N = 85
H = 29.45

Adjust H for ties:

T_i = 117624 sum of T1..T4

$H' = H/(1-(T_i/(N^3-N)))$
H' = 36.43
Chi-square = 21.03

Compare the calculated value H' to the tabulated Chi-square value with K-1 = # groups -1 = 12df at the 5% significance level from Table 1 of the IFG. The value is 21.03 which is less than H' =36.43.
Therefore, there is evidence of significant differences between the well groups.
Post-hoc pairwise comparisons are necessary (see below).

Calculate the critical values to compare each compliance well to the background wells:

Critical Value (C_x) = $P(N(N+1)/12)^{0.5} * (1/N_{i\ bg}+1/N_x)^{0.5}$
P = 2.33 Percentile of Standard Normal Distribution from Table 4 of IFG
N = total sample size
$N_{i\ bg}$ = total samples (N_i) of background data
N_x = total samples (N_i) of well x

Difference between average ranks (Dx) = Rbar (well x) - avg Rbar (background)

Well =	MW-1A	MW-2A	MW-3A	MW-6	MW-7	MW-8	MW-9	MW-10	MW-11	MW-13	MW-14	MW-15
Rbar (well x) =	25.0	36.7	61.4	38.7	42.9	25.0	51.1	33.0	30.5	79.2	37.5	25.0
avg Rbar (background) =	51.5	51.5	51.5	51.5	51.5	51.5	51.5	51.5	51.5	51.5	51.5	51.5
Dx =	-26.5	-14.8	9.9	-12.8	-8.6	-26.5	-0.4	-18.5	-21.0	27.7	-14.0	-26.5
Cx =	25.4	25.4	25.4	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.9
Statistical Significance ?	-	-	-	-	-	-	-	-	-	-	-	-
If SSI, is current event above MCL?	-	-	-	-	-	-	-	-	-	-	-	-

Compare each difference (Dx) with the corresponding critical value (Cx).
No compliance well's difference between average ranks exceeded its corresponding critical value at a 5% significance level. Therefore, we conclude that significant evidence of contamination does not exist at the 5% significance level.

Haywood County Closed Landfill, Francis Farm
Haywood County, North Carolina
BLE Project Number J12-1957-33

Compound: **Total Selenium (Se)**
NC MCL (µg/l): 20
Method: Kruskal-Wallis
Background: MW-4, MW-5, MW-12

	MW-4	MW-5	MW-12	MW-1A	MW-2A	MW-3A	MW-6	MW-7	MW-8	MW-9	MW-10	MW-11	MW-13	MW-14	MW-15	MDL
02/18/99	ND	NS	NP	ND	NS	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	5
08/16/99	ND	NS	NP	ND	NS	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	5
02/14/00	ND	NS	NP	ND	NS	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	5
08/14/00	ND	NT	NP	ND	NS	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	5
03/19/01	ND	ND	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	5
08/27/02	NT	NT	NP	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	5
02/24/03	NT	NT	NP	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	5
08/11/03	ND	ND	NP	ND	**7.3**	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	5
02/09/04	ND	ND	NP	**6.9**	**13**	**16**	NP	NP	NP	NP	NP	NP	NP	NP	NP	5
08/16/04	ND	ND	NP	**5.5**	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	5
02/14/05	**5.3**	ND	NP	**16**	**39**	**24**	NP	NP	NP	NP	NP	NP	NP	NP	NP	5
09/01/05	**6.9**	ND	NP	**10**	**8.9**	**9.5**	NP	NP	NP	NP	NP	NP	NP	NP	NP	5
02/16/06	ND	ND	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	5
08/30/06	ND	ND	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	5
02/26/07	ND	ND	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	10
08/13/07	ND	ND	NP	ND	**29.2**	Dry	NP	NP	NP	NP	NP	NP	NP	NP	NP	10
02/11/08	ND	ND	NP	ND	**13.5**	**81.7**	NP	NP	NP	NP	NP	NP	NP	NP	NP	10
08/25/08	ND	ND	NP	ND	**13.9**	Dry	NP	NP	NP	NP	NP	NP	NP	NP	NP	10
02/23/09	ND	ND	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	10
08/24/09	ND	ND	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	10
02/22/10	ND	ND	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	10
08/30/10	ND	ND	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	10
02/22/11	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	10
08/22/11	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	10
02/22/12	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	10
08/29/12	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	10
02/18/13	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	10
N_i	25	21	5	25	21	23	5	5	5	5	5	5	5	5	5	
sum of rank values (R_i)	2014.0	1564.5	372.5	2182.5	2151.0	2058.0	372.5	372.5	372.5	372.5	372.5	372.5	372.5	372.5	372.5	
avg rank value (Rbar)	80.6	74.5	74.5	87.3	102.4	89.5	74.5	74.5	74.5	74.5	74.5	74.5	74.5	74.5	74.5	

	Number of each rank value															Rank Value
rank value of NDs =	23	21	5	21	14	19	5	5	5	5	5	5	5	5	5	74.5
rank value of 5.3s =	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	149
rank value of 5.5s =	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	150
rank value of 6.9s =	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	151.5
rank value of 7.3s =	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	153
rank value of 8.9s =	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	154
rank value of 9.5s =	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	155
rank value of 10s =	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	156
rank value of 13s =	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	157
rank value of 13.5s =	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	158
rank value of 13.9s =	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	159
rank value of 16s =	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	160.5
rank value of 24s =	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	162
rank value of 29.2s =	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	163
rank value of 39s =	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	164
rank value of 81.7s =	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	165
n =	**25**	**21**	**5**	**25**	**21**	**23**	**5**	**5**	**5**	**5**	**5**	**5**	**5**	**5**	**5**	

Sum of rank value calculations														
1713.5	1564.5	372.5	1564.5	1043	1415.5	372.5	372.5	372.5	372.5	372.5	372.5	372.5	372.5	372.5
149	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	150	0	0	0	0	0	0	0	0	0	0	0
151.5	0	0	151.5	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	153	0	0	0	0	0	0	0	0	0	0
0	0	0	0	154	0	0	0	0	0	0	0	0	0	0

0	0	0	0	0	155	0	0	0	0	0	0	0	0	0
0	0	0	156	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	157	0	0	0	0	0	0	0	0	0	0
0	0	0	0	158	0	0	0	0	0	0	0	0	0	0
0	0	0	0	159	0	0	0	0	0	0	0	0	0	0
0	0	0	160.5	0	160.5	0	0	0	0	0	0	0	0	0
0	0	0	0	0	162	0	0	0	0	0	0	0	0	0
0	0	0	0	163	0	0	0	0	0	0	0	0	0	0
0	0	0	0	164	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	165	0	0	0	0	0	0	0	0	0
sum of rank values (R_i)	**2014**	**1564.5**	**372.5**	**2182.5**	**2151**	**2058**	**372.5**	**372.5**	**372.5**	**372.5**	**372.5**	**372.5**	**372.5**	**372.5**	**372.5**

Compute the Kruskal-Wallis statistic:

$$H = \{[12/N(N+1)] * [\Sigma^{K}_{i=1} (R_i^2)/N_i]\} -3(N+1)$$

Well =	**Background**	**MW-1A**	**MW-2A**	**MW-3A**	**MW-6**	**MW-7**	**MW-8**	**MW-9**	**MW-10**	**MW-11**	**MW-13**	**MW-14**	**MW-15**
Ri^2/N_i =	306086.3	190532	220324	184146	27751.3	27751.3	27751.3	27751.3	27751.3	27751.3	27751.3	27751.3	27751.3

$N_{i\,bg}$ = 51
N = 165
H = 6.21

Adjust H for ties:

T_i = 3241656 sum of T1..T2

$H' = H/(1-(T_i/(N^3-N)))$
H' = 22.30
Chi-square = 21.03

Compare the calculated value H' to the tabulated Chi-square value with K-1 = # groups -1 = 17df at the 5% significance level from Table 1 of the IFG. The value is 21.03 which is less than H' =22.30.
Therefore, there is evidence of significant differences between the well groups.
Post-hoc pairwise comparisons are necessary (see below).

Calculate the critical values to compare each compliance well to the background wells:

Critical Value (C_x) = $P(N(N+1)/12)^{0.5} * (1/N_{i\,bg}+1/N_x)^{0.5}$
P = 2.33 Percentile of Standard Normal Distribution
from Table 4 of IFG
N = total sample size
$N_{i\,bg}$ = total samples (N_i) of background data
N_x = total samples (N_i) of well x

Difference between average ranks (Dx) = Rbar (well x) - avg Rbar (background)

Well =	MW-1A	MW-2A	MW-3A	MW-6	MW-7	MW-8	MW-9	MW-10	MW-11	MW-13	MW-14	MW-15
Rbar (well x) =	87.3	102.4	89.5	74.5	74.5	74.5	74.5	74.5	74.5	74.5	74.5	74.5
avg Rbar (background) =	77.5	77.5	77.5	77.5	77.5	77.5	77.5	77.5	77.5	77.5	77.5	77.5
Dx =	9.8	25.0	12.0	-3.0	-3.0	-3.0	-3.0	-3.0	-3.0	-3.0	-3.0	-3.0
Cx =	27.2	28.9	28.0	52.2	52.2	52.2	52.2	52.2	52.2	52.2	52.2	52.2
Statistical Significance ?	-	-	-	-	-	-	-	-	-	-	-	-
If SSI, is current event above MCL?	-	-	-	-	-	-	-	-	-	-	-	-

Compare each difference (Dx) with the corresponding critical value (Cx).
No compliance well's difference between average ranks exceeded its corresponding critical value at a 5% significance level. Therefore, we conclude that significant evidence of contamination does not exist at the 5% significance level.

Haywood County Closed Landfill, Francis Farm
Haywood County, North Carolina
BLE Project Number J12-1957-33

Compound: **Total Silver (Ag)**
NC MCL (µg/l): 20
Method: Poisson Prediction Limits
Background: MW-4, MW-5, MW-12

	MW-4	MW-5	MW-12	MW-1A	MW-2A	MW-3A	MW-6	MW-7	MW-8	MW-9	MW-10	MW-11	MW-13	MW-14	MW-15	MDL
02/18/99	ND	NS	NP	ND	NS	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	50
08/16/99	ND	NS	NP	ND	NS	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	50
02/14/00	ND	NS	NP	4.3	NS	4.9	NP	NP	NP	NP	NP	NP	NP	NP	NP	50
08/14/00	4	NT	NP	8.9	NS	7.8	NP	NP	NP	NP	NP	NP	NP	NP	NP	50
03/19/01	ND	ND	NP	ND	6.6	4.7	NP	NP	NP	NP	NP	NP	NP	NP	NP	50
08/27/02	ND	ND	NP	ND	ND	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	50
02/24/03	4.1	ND	NP	7.3	3.5	8.5	NP	NP	NP	NP	NP	NP	NP	NP	NP	50
08/11/03	ND	ND	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	2
02/09/04	ND	ND	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	2
08/16/04	ND	ND	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	2
02/14/05	ND	ND	NP	ND	5.8	3.6	NP	NP	NP	NP	NP	NP	NP	NP	NP	2
09/01/05	ND	ND	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	2
02/16/06	ND	ND	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	2
08/30/06	ND	ND	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	2
02/26/07	ND	ND	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	5
08/13/07	ND	ND	NP	ND	ND	Dry	NP	NP	NP	NP	NP	NP	NP	NP	NP	5
02/11/08	ND	ND	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	5
08/25/08	ND	ND	NP	ND	ND	Dry	NP	NP	NP	NP	NP	NP	NP	NP	NP	5
02/23/09	ND	ND	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	5
08/24/09	ND	ND	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	5
02/22/10	ND	ND	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	5
08/30/10	ND	ND	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	5
02/22/11	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5
08/22/11	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5
02/22/12	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5
08/29/12	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5
02/18/13	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5

1) If not detected (ND), use half of the detection limit.

02/18/99	25	-	-	25	-	25	-	-	-	-	-	-	-	-	-
08/16/99	25	-	-	25	-	25	-	-	-	-	-	-	-	-	-
02/14/00	25	-	-	4.3	-	4.9	-	-	-	-	-	-	-	-	-
08/14/00	4	-	-	8.9	-	7.8	-	-	-	-	-	-	-	-	-
03/19/01	25	25	-	25	6.6	4.7	-	-	-	-	-	-	-	-	-
08/27/02	25	25	-	25	25	-	-	-	-	-	-	-	-	-	-
02/24/03	4.1	25	-	7.3	3.5	8.5	-	-	-	-	-	-	-	-	-
08/11/03	1	1	-	1	1	1	-	-	-	-	-	-	-	-	-
02/09/04	1	1	-	1	1	1	-	-	-	-	-	-	-	-	-
08/16/04	1	1	-	1	1	1	-	-	-	-	-	-	-	-	-
02/14/05	1	1	-	1	5.8	3.6	-	-	-	-	-	-	-	-	-
09/01/05	1	1	-	1	1	1	-	-	-	-	-	-	-	-	-
02/16/06	1	1	-	1	1	1	-	-	-	-	-	-	-	-	-
08/30/06	1	1	-	1	1	1	-	-	-	-	-	-	-	-	-
02/26/07	2.5	2.5	-	2.5	2.5	2.5	-	-	-	-	-	-	-	-	-
08/13/07	2.5	2.5	-	2.5	2.5	-	-	-	-	-	-	-	-	-	-
02/11/08	2.5	2.5	-	2.5	2.5	2.5	-	-	-	-	-	-	-	-	-
08/25/08	2.5	2.5	-	2.5	2.5	-	-	-	-	-	-	-	-	-	-
02/23/09	2.5	2.5	-	2.5	2.5	2.5	-	-	-	-	-	-	-	-	-
08/24/09	2.5	2.5	-	2.5	2.5	2.5	-	-	-	-	-	-	-	-	-
02/22/10	2.5	2.5	-	2.5	2.5	2.5	-	-	-	-	-	-	-	-	-
08/30/10	2.5	2.5	-	2.5	2.5	2.5	-	-	-	-	-	-	-	-	-
02/22/11	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
08/22/11	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
02/22/12	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
08/29/12	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
02/18/13				2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5

2) Set the total number of data values for background wells (through the previous sampling event) equal to 'n' = 26.
Use 1/2 of the method detection limit to calculate the Total Poisson Count of the Sum (T_n).

$n = 52$
$T_{n1} = 292.1$

3) Using Gibbons' formula, calculate the upper Poisson Prediction limit T^*_k:

$$T^*_k = cT_{n1} + ct^2/2 + ct[T_{n1}(1+1/c) + t^2/4]^{-0.5}$$

where $c = k/n$
and where k = the number of future predicted measurements (one per well during the current sampling event)
and where t = the upper 99th percentile of the t-distribution with (n-1) degrees of freedom (Table 6 of the IFG).

$k = 12$
$n = 52$
$T_{n1} = 292.1$
$t[51,.01] = 2.405$
$c = 0.231$
$T_{n2} = 30$
$T^*_k = 90.0$

4) Compare the *Poisson Prediction Limit* (T^*_k) to the *Sum of the Concentrations Detected* (T_{n2}) in the wells during the most recent sampling event.
Since the Poisson Prediction Limit was not exceeded, there is no evidence of contamination.

Haywood County Closed Landfill, Francis Farm
Haywood County, North Carolina
BLE Project Number J12-1957-33

Compound: **Total Vanadium (V)**
NC MCL (µg/l): Not Established
Method: Poisson Prediction Limits
Background: MW-4, MW-5, MW-12

	MW-4	MW-5	MW-12	MW-1A	MW-2A	MW-3A	MW-6	MW-7	MW-8	MW-9	MW-10	MW-11	MW-13	MW-14	MW-15	MDL
02/18/99	NT	NS	NP	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
08/16/99	NT	NS	NP	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
02/14/00	NT	NS	NP	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
08/14/00	NT	NT	NP	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
03/19/01	NT	NT	NP	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
08/27/02	NT	NT	NP	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
02/24/03	NT	NT	NP	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
08/11/03	NT	NT	NP	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
02/09/04	NT	NT	NP	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
08/16/04	NT	NT	NP	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
02/14/05	NT	NT	NP	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
09/01/05	NT	NT	NP	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
02/16/06	NT	NT	NP	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
08/30/06	NT	NT	NP	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
02/26/07	NT	NT	NP	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
08/13/07	NT	NT	NP	NT	NT	Dry	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
02/11/08	NT	NT	NP	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
08/25/08	NT	NT	NP	NT	NT	Dry	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
02/23/09	NT	NT	NP	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
08/24/09	NT	NT	NP	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
02/22/10	NT	NT	NP	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
08/30/10	NT	NT	NP	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
02/22/11	**6.1**	ND	**7.8**	ND	ND	ND	ND	ND	**5.6**	**205**	**22.8**	ND	ND	ND	ND	**5**
08/22/11	ND	ND	**8.1**	ND	ND	ND	ND	**185**	ND	**23.1**	ND	ND	ND	ND	ND	**5**
02/22/12	ND	ND	**14.1**	ND	ND	ND	ND	ND	**8.8**	**12.5**	**8.6**	ND	**5**	ND	ND	**5**
08/29/12	ND	**14.7**	**49**	ND	**8.1**	**5.9**	ND	**9.9**	ND	**10.6**	**10**	ND	ND	ND	ND	**5**
02/18/13	ND	ND	**20.8**	ND	ND	ND	ND	ND	**5.3**	ND	ND	ND	ND	ND	ND	**5**

1) If not detected (ND), use half of the detection limit.

02/18/99	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
08/16/99	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
02/14/00	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
08/14/00	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
03/19/01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
08/27/02	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
02/24/03	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
08/11/03	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
02/09/04	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
08/16/04	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
02/14/05	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
09/01/05	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
02/16/06	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
08/30/06	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
02/26/07	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
08/13/07	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
02/11/08	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
08/25/08	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
02/23/09	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
08/24/09	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
02/22/10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
08/30/10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
02/22/11	6.1	2.5	7.8	2.5	2.5	2.5	2.5	2.5	5.6	205	22.8	2.5	2.5	2.5	2.5
08/22/11	2.5	2.5	8.1	2.5	2.5	2.5	2.5	185	2.5	23.1	2.5	2.5	2.5	2.5	2.5
02/22/12	2.5	2.5	14.1	2.5	2.5	2.5	2.5	2.5	8.8	12.5	8.6	2.5	5	2.5	2.5
08/29/12	2.5	14.7	49	2.5	8.1	5.9	2.5	9.9	2.5	10.6	10	2.5	2.5	2.5	2.5
02/18/13				2.5	2.5	2.5	2.5	2.5	5.3	2.5	2.5	2.5	2.5	2.5	2.5

2) Set the total number of data values for background wells (through the previous sampling event) equal to 'n' = 4.
Use 1/2 of the method detection limit to calculate the Total Poisson Count of the Sum (T_n).

$n = 12$
$T_{n1} = 114.8$

3) Using Gibbons' formula, calculate the upper Poisson Prediction limit T^*_k:

$$T^*_k = cT_{n1} + ct^2/2 + ct[T_{n1}(1+1/c) + t^2/4]^{0.5}$$

where $c = k/n$
and where k = the number of future predicted measurements (one per well during the current sampling event)
and where t = the upper 99th percentile of the t-distribution with (n-1) degrees of freedom (Table 6 of the IFG).

$k = 12$
$n = 12$
$T_{n1} = 114.8$
$t[11,.01] = 2.718$
$c = 1$
$T_{n2} = 32.8$
$T^*_k = 159.8$

4) Compare the *Poisson Prediction Limit* (T^*_k) to the *Sum of the Concentrations Detected* (T_{n2}) in the wells during the most recent sampling event.
Since the Poisson Prediction Limit was not exceeded, there is no evidence of contamination.

Haywood County Closed Landfill, Francis Farm
Haywood County, North Carolina
BLE Project Number J12-1957-33

Compound: **Total Zinc (Zn)**
NC MCL (µg/l): 1000
Method: Kruskal-Wallis
Background: MW-4, MW-5, MW-12

	MW-4	MW-5	MW-12	MW-1A	MW-2A	MW-3A	MW-6	MW-7	MW-8	MW-9	MW-10	MW-11	MW-13	MW-14	MW-15	MDL
02/18/99	NT	NS	NP	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
08/16/99	NT	NS	NP	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
02/14/00	NT	NS	NP	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
08/14/00	NT	NT	NP	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
03/19/01	NT	NT	NP	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
08/27/02	NT	NT	NP	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
02/24/03	NT	NT	NP	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
08/11/03	NT	NT	NP	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
02/09/04	NT	NT	NP	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
08/16/04	NT	NT	NP	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
02/14/05	NT	NT	NP	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
09/01/05	NT	NT	NP	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
02/16/06	NT	NT	NP	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
08/30/06	NT	NT	NP	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
02/26/07	NT	NT	NP	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
08/13/07	NT	NT	NP	NT	NT	Dry	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
02/11/08	NT	NT	NP	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
08/25/08	NT	NT	NP	NT	NT	Dry	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
02/23/09	NT	NT	NP	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
08/24/09	NT	NT	NP	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
02/22/10	NT	NT	NP	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
08/30/10	NT	NT	NP	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
02/22/11	**30.7**	**90.4**	**26.5**	ND	ND	ND	ND	**19.8**	ND	**162**	**36.7**	**10.3**	ND	**16**	ND	**10**
08/22/11	ND	**16.9**	ND	ND	ND	**59.2**	ND	**283**	ND	**15.9**	ND	**50.6**	ND	**21**	ND	**10**
02/22/12	ND	ND	**10.9**	**16.7**	ND	**10.5**	**10.4**	**16.7**	**16.8**	**23.1**	**31.8**	ND	**11**	**143**	ND	**10**
08/29/12	ND	**12.7**	**21**	ND	**28**	**194**	**37.8**	**20.3**	**14.5**	**10.4**	**19.5**	ND	**10.8**	**12.4**	ND	**10**
02/18/13	**24**	**11.5**	**13.6**	**123**	**25.7**	**14.2**	**19.5**	ND	**20.2**	ND	ND	ND	ND	**13.7**	ND	**10**
N_i	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	
sum of rank values (R_i)	172.0	217.0	214.5	167.5	172.0	238.0	185.0	249.5	182.0	227.5	215.5	148.0	122.0	259.5	80.0	
avg rank value (Rbar)	34.4	43.4	42.9	33.5	34.4	47.6	37.0	49.9	36.4	45.5	43.1	29.6	24.4	51.9	16.0	

	Number of each rank value															Rank Value
rank value of NDs =	3	1	1	3	3	1	2	1	2	1	2	3	3	0	5	16
rank value of 10.3s =	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	32
rank value of 10.4s =	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	33.5
rank value of 10.5s =	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	35
rank value of 10.8s =	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	36
rank value of 10.9s =	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	37
rank value of 11s =	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	38
rank value of 11.5s =	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	39
rank value of 12.4s =	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	40
rank value of 12.7s =	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	41
rank value of 13.6s =	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	42
rank value of 13.7s =	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	43
rank value of 14.2s =	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	44
rank value of 14.5s =	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	45
rank value of 15.9s =	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	46
rank value of 16s =	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	47
rank value of 16.7s =	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	48.5
rank value of 16.8s =	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	50
rank value of 16.9s =	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	51
rank value of 19.5s =	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	52.5
rank value of 19.8s =	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	54
rank value of 20.2s =	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	55
rank value of 20.3s =	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	56
rank value of 21s =	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0	57.5
rank value of 23.1s =	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	59
rank value of 24s =	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	60
rank value of 25.7s =	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	61
rank value of 26.5s =	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	62
rank value of 28s =	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	63
rank value of 30.7s =	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	64
rank value of 31.8s =	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	65
rank value of 36.7s =	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	66
rank value of 37.8s =	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	67
rank value of 50.6s =	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	68

rank value of 59.2s =	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	69
rank value of 90.4s =	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	70
rank value of 123s =	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	71
rank value of 143s =	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	72
rank value of 162s =	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	73
rank value of 194s =	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	74
rank value of 283s =	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	75
n =	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	

Sum of rank value calculations

48	16	16	48	48	16	32	16	32	16	32	48	48	0	80
0	0	0	0	0	0	0	0	0	0	0	32	0	0	0
0	0	0	0	0	0	33.5	0	0	33.5	0	0	0	0	0
0	0	0	0	0	35	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	36	0	0
0	0	37	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	38	0	0
0	39	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	40	0
0	41	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	42	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	43	0
0	0	0	0	0	44	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	45	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	46	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	47	0
0	0	0	48.5	0	0	0	48.5	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	50	0	0	0	0	0	0
0	51	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	52.5	0	0	0	52.5	0	0	0	0
0	0	0	0	0	0	0	54	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	55	0	0	0	0	0	0
0	0	0	0	0	0	0	56	0	0	0	0	0	0	0
0	0	57.5	0	0	0	0	0	0	0	0	0	0	57.5	0
0	0	0	0	0	0	0	0	0	59	0	0	0	0	0
60	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	61	0	0	0	0	0	0	0	0	0	0
0	0	62	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	63	0	0	0	0	0	0	0	0	0	0
64	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	65	0	0	0	0
0	0	0	0	0	0	0	0	0	0	66	0	0	0	0
0	0	0	0	0	0	67	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	68	0	0	0
0	0	0	0	0	69	0	0	0	0	0	0	0	0	0
0	70	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	71	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	72	0
0	0	0	0	0	0	0	0	0	73	0	0	0	0	0
0	0	0	0	0	74	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	75	0	0	0	0	0	0	0
sum of rank values (R_i)	172	217	214.5	167.5	172	238	185	249.5	182	227.5	215.5	148	122	259.5	80

Compute the Kruskal-Wallis statistic:

$$H = \{[12/N(N+1)] * [\Sigma^{K}_{i-1} (R_i^2)/N_i]\} -3(N+1)$$

Well =	Background	MW-1A	MW-2A	MW-3A	MW-6	MW-7	MW-8	MW-9	MW-10	MW-11	MW-13	MW-14	MW-15
R_i^2/N_i =	24280.8	5611.25	5916.8	11328.8	6845	12450.1	6624.8	10351.3	9288.05	4380.8	2976.8	13468.1	1280

$N_{i\,be}$ = 15
N = 75
H = 13.69

Adjust H for ties:

T_i = 29784 sum of T1..T2

$H' = H/(1-(T_i/(N^3-N)))$
H' = 14.73
Chi-square = 21.03

Compare the calculated value H' to the tabulated Chi-square value with K-1 = # groups -1 = 12df at the 5% significance level from Table 1 of the IFG. The value is 21.03 which is greater than H' =14.73. Therefore, the null hypothesis of no contamination at the 5% level holds true and significant evidence of contamination does not exist.

Haywood County Closed Landfill, Francis Farm
Haywood County, North Carolina
BLE Project Number J12-1957-33

Compound: **Acetone**
NC MCL (µg/l): 6000
Method: Poisson Prediction Limits
Background: MW-4, MW-5, MW-12

	MW-4	MW-5	MW-12	MW-1A	MW-2A	MW-3A	MW-6	MW-7	MW-8	MW-9	MW-10	MW-11	MW-13	MW-14	MW-15	MDL
02/18/99	NT	NS	NP	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
08/16/99	NT	NS	NP	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
02/14/00	NT	NS	NP	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
08/14/00	NT	NT	NP	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
03/19/01	NT	NT	NP	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
08/27/02	NT	NT	NP	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
02/24/03	NT	NT	NP	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
08/11/03	ND	ND	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	**10**
02/09/04	ND	ND	NP	ND	**25**	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	**10**
08/16/04	ND	ND	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	**100**
02/14/05	**53**	ND	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	**100**
09/01/05	ND	ND	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	**10**
02/16/06	ND	ND	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	**10**
08/30/06	ND	ND	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	**25**
02/26/07	ND	ND	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	**25**
08/13/07	ND	ND	NP	ND	ND	Dry	NP	NP	NP	NP	NP	NP	NP	NP	NP	**25**
02/11/08	ND	ND	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	**25**
08/25/08	ND	ND	NP	ND	ND	Dry	NP	NP	NP	NP	NP	NP	NP	NP	NP	**25**
02/23/09	ND	ND	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	**25**
08/24/09	ND	ND	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	**25**
02/22/10	ND	ND	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	**25**
08/30/10	ND	ND	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	**25**
02/22/11	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**25**
08/22/11	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**25**
02/22/12	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**25**
08/29/12	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**25**
02/18/13	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**25**

1) If not detected (ND), use half of the detection limit.

02/18/99	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
08/16/99	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
02/14/00	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
08/14/00	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
03/19/01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
08/27/02	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
02/24/03	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
08/11/03	5	5	-	5	5	5	-	-	-	-	-	-	-	-	-
02/09/04	5	5	-	5	25	5	-	-	-	-	-	-	-	-	-
08/16/04	50	50	-	50	50	50	-	-	-	-	-	-	-	-	-
02/14/05	53	50	-	50	50	50	-	-	-	-	-	-	-	-	-
09/01/05	5	5	-	5	5	5	-	-	-	-	-	-	-	-	-
02/16/06	5	5	-	5	5	5	-	-	-	-	-	-	-	-	-
08/30/06	12.5	12.5	-	12.5	12.5	12.5	-	-	-	-	-	-	-	-	-
02/26/07	12.5	12.5	-	12.5	12.5	12.5	-	-	-	-	-	-	-	-	-
08/13/07	12.5	12.5	-	12.5	12.5	-	-	-	-	-	-	-	-	-	-
02/11/08	12.5	12.5	-	12.5	12.5	12.5	-	-	-	-	-	-	-	-	-
08/25/08	12.5	12.5	-	12.5	12.5	-	-	-	-	-	-	-	-	-	-
02/23/09	12.5	12.5	-	12.5	12.5	12.5	-	-	-	-	-	-	-	-	-
08/24/09	12.5	12.5	-	12.5	12.5	12.5	-	-	-	-	-	-	-	-	-
02/22/10	12.5	12.5	-	12.5	12.5	12.5	-	-	-	-	-	-	-	-	-
08/30/10	12.5	12.5	-	12.5	12.5	12.5	-	-	-	-	-	-	-	-	-
02/22/11	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5
08/22/11	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5
02/22/12	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5
08/29/12	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5
02/18/13				12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5

2) Set the total number of data values for background wells (through the previous sampling event) equal to 'n' = 19.
Use 1/2 of the method detection limit to calculate the Total Poisson Count of the Sum (T_n).

$n = 42$
$T_{n1} = 618$

3) Using Gibbons' formula, calculate the upper Poisson Prediction limit T^*_k:

$$T^*_k = cT_{n1} + ct^2/2 + ct[T_{n1}(1+1/c) + t^2/4]^{-0.5}$$

where $c = k/n$
and where k = the number of future predicted measurements (one per well during the current sampling event)
and where t = the upper 99th percentile of the t-distribution with (n-1) degrees of freedom (Table 6 of the IFG).

$k = 12$
$n = 42$
$T_{n1} = 618$
$t[41,.01] = 2.421$
$c = 0.286$
$T_{n2} = 150$
$T^*_k = 213.9$

4) Compare the *Poisson Prediction Limit* (T^*_k) to the *Sum of the Concentrations Detected* (T_{n2}) in the wells during the most recent sampling event.
Since the Poisson Prediction Limit was not exceeded, there is no evidence of contamination.

Haywood County Closed Landfill, Francis Farm
Haywood County, North Carolina
BLE Project Number J12-1957-33

Compound: **Benzene**
NC MCL (µg/l): 1
Method: Kruskal-Wallis
Background: MW-4, MW-5, MW-12

	MW-4	MW-5	MW-12	MW-1A	MW-2A	MW-3A	MW-6	MW-7	MW-8	MW-9	MW-10	MW-11	MW-13	MW-14	MW-15	MDL
02/18/99	NT	NS	NP	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
08/16/99	NT	NS	NP	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
02/14/00	NT	NS	NP	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
08/14/00	NT	NT	NP	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
03/19/01	NT	NT	NP	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
08/27/02	NT	NT	NP	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
02/24/03	NT	NT	NP	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
08/11/03	**7.2**	**9**	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	5
02/09/04	**14**	ND	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	5
08/16/04	**13**	**6.1**	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	5
02/14/05	**20**	**7.1**	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	5
09/01/05	**13**	ND	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	5
02/16/06	ND	ND	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	5
08/30/06	**16**	ND	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	5
02/26/07	**15**	ND	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	5
08/13/07	**17**	**1.7**	NP	ND	ND	Dry	NP	NP	NP	NP	NP	NP	NP	NP	NP	1
02/11/08	**18.5**	**2**	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	1
08/25/08	**18.9**	**2.3**	NP	ND	ND	Dry	NP	NP	NP	NP	NP	NP	NP	NP	NP	1
02/23/09	**14.3**	**2.1**	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	1
08/24/09	**16.3**	**3**	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	1
02/22/10	**17.6**	**3.4**	NP	ND	ND	**1.5**	NP	NP	NP	NP	NP	NP	NP	NP	NP	1
08/30/10	**19.9**	**4.8**	NP	ND	**1.3**	**1.3**	NP	NP	NP	NP	NP	NP	NP	NP	NP	1
02/22/11	**15.5**	**5.1**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**5.3**	**1.3**	ND	1
08/22/11	**16.9**	**4.2**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**4.4**	**1.2**	ND	1
02/22/12	**16.9**	**3.9**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**5**	**1.3**	ND	1
08/29/12	**15.6**	**3.3**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**4.4**	**1.1**	ND	1
02/18/13	**17.1**	**4.1**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**3.5**	**1.2**	ND	1
N_i	20	20	5	20	20	18	5	5	5	5	5	5	5	5	5	
sum of rank values (R_i)	2691.0	2036.0	255.0	1020.0	1075.5	1031.5	255.0	255.0	255.0	255.0	255.0	255.0	610.0	522.0	255.0	
avg rank value (Rbar)	134.6	101.8	51.0	51.0	53.8	57.3	51.0	51.0	51.0	51.0	51.0	51.0	122.0	104.4	51.0	

	Number of each rank value															Rank Value
rank value of NDs =	1	5	5	20	19	16	5	5	5	5	5	5	0	0	5	51
rank value of 1.1s =	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	102
rank value of 1.2s =	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	103.5
rank value of 1.3s =	0	0	0	0	1	1	0	0	0	0	0	0	0	2	0	106.5
rank value of 1.5s =	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	109
rank value of 1.7s =	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	110
rank value of 2s =	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	111
rank value of 2.1s =	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	112
rank value of 2.3s =	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	113
rank value of 3s =	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	114
rank value of 3.3s =	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	115
rank value of 3.4s =	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	116
rank value of 3.5s =	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	117
rank value of 3.9s =	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	118
rank value of 4.1s =	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	119
rank value of 4.2s =	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	120
rank value of 4.4s =	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	121.5
rank value of 4.8s =	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	123
rank value of 5s =	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	124
rank value of 5.1s =	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	125
rank value of 5.3s =	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	126
rank value of 6.1s =	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	127
rank value of 7.1s =	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	128
rank value of 7.2s =	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	129
rank value of 9s =	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	130
rank value of 13s =	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	131.5
rank value of 14s =	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	133
rank value of 14.3s =	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	134
rank value of 15s =	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	135
rank value of 15.5s =	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	136
rank value of 15.6s =	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	137
rank value of 16s =	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	138

rank value of 16.3s =	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	139
rank value of 16.9s =	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	140.5
rank value of 17s =	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	142
rank value of 17.1s =	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	143
rank value of 17.6s =	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	144
rank value of 18.5s =	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	145
rank value of 18.9s =	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	146
rank value of 19.9s =	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	147
rank value of 20s =	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	148
n =	**20**	**20**	**5**	**20**	**20**	**18**	**5**	**5**	**5**	**5**	**5**	**5**	**5**	**5**	**5**	

Sum of rank value calculations

51	255	255	1020	969	816	255	255	255	255	255	255	0	0	255
0	0	0	0	0	0	0	0	0	0	0	0	0	102	0
0	0	0	0	0	0	0	0	0	0	0	0	0	207	0
0	0	0	0	106.5	106.5	0	0	0	0	0	0	0	213	0
0	0	0	0	0	109	0	0	0	0	0	0	0	0	0
0	110	0	0	0	0	0	0	0	0	0	0	0	0	0
0	111	0	0	0	0	0	0	0	0	0	0	0	0	0
0	112	0	0	0	0	0	0	0	0	0	0	0	0	0
0	113	0	0	0	0	0	0	0	0	0	0	0	0	0
0	114	0	0	0	0	0	0	0	0	0	0	0	0	0
0	115	0	0	0	0	0	0	0	0	0	0	0	0	0
0	116	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	117	0	0
0	118	0	0	0	0	0	0	0	0	0	0	0	0	0
0	119	0	0	0	0	0	0	0	0	0	0	0	0	0
0	120	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	243	0	0
0	123	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	124	0	0
0	125	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	126	0	0
0	127	0	0	0	0	0	0	0	0	0	0	0	0	0
0	128	0	0	0	0	0	0	0	0	0	0	0	0	0
129	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	130	0	0	0	0	0	0	0	0	0	0	0	0	0
263	0	0	0	0	0	0	0	0	0	0	0	0	0	0
133	0	0	0	0	0	0	0	0	0	0	0	0	0	0
134	0	0	0	0	0	0	0	0	0	0	0	0	0	0
135	0	0	0	0	0	0	0	0	0	0	0	0	0	0
136	0	0	0	0	0	0	0	0	0	0	0	0	0	0
137	0	0	0	0	0	0	0	0	0	0	0	0	0	0
138	0	0	0	0	0	0	0	0	0	0	0	0	0	0
139	0	0	0	0	0	0	0	0	0	0	0	0	0	0
281	0	0	0	0	0	0	0	0	0	0	0	0	0	0
142	0	0	0	0	0	0	0	0	0	0	0	0	0	0
143	0	0	0	0	0	0	0	0	0	0	0	0	0	0
144	0	0	0	0	0	0	0	0	0	0	0	0	0	0
145	0	0	0	0	0	0	0	0	0	0	0	0	0	0
146	0	0	0	0	0	0	0	0	0	0	0	0	0	0
147	0	0	0	0	0	0	0	0	0	0	0	0	0	0
148	0	0	0	0	0	0	0	0	0	0	0	0	0	0
sum of rank values (R_i)	**2691**	**2036**	**255**	**1020**	**1075.5**	**1031.5**	**255**	**255**	**255**	**255**	**255**	**255**	**610**	**522**	**255**

Compute the Kruskal-Wallis statistic:

$$H = \{[12/N(N+1)] * [\Sigma^{K}_{i=1} (R_i^2)/N_i]\} -3(N+1)$$

Well =	Background	MW-1A	MW-2A	MW-3A	MW-6	MW-7	MW-8	MW-9	MW-10	MW-11	MW-13	MW-14	MW-15
Ri^2/N_i =	551562.8	52020	57835	59110.7	13005	13005	13005	13005	13005	13005	74420	54496.8	13005

$N_{i\,bg}$ = 45
N = 148
H = 64.78

Adjust H for ties:

T_i = 1030284 sum of T1..T3

$H' = H/(1-(T_i/(N^3-N)))$
H' = 94.96
Chi-square = 21.03

Compare the calculated value H' to the tabulated Chi-square value with K-1 = # groups -1 = 12df at the 5% significance level from Table 1 of the IFG. The value is 21.03 which is less than H' =94.96.
Therefore, there is evidence of significant differences between the well groups.
Post-hoc pairwise comparisons are necessary (see below).

Calculate the critical values to compare each compliance well to the background wells:

Critical Value (C_x) = $P(N(N+1)/12)^{0.5} * (1/N_{i\,bg}+1/N_x)^{0.5}$

P = 2.33 Percentile of Standard Normal Distribution from Table 4 of IFG

N = total sample size

$N_{i\,bg}$ = total samples (N_i) of background data

N_x = total samples (N_i) of well x

Difference between average ranks (Dx) = Rbar (well x) - avg Rbar (background)

Well =	MW-1A	MW-2A	MW-3A	MW-6	MW-7	MW-8	MW-9	MW-10	MW-11	MW-13	MW-14	MW-15
Rbar (well x) =	51.0	53.8	57.3	51.0	51.0	51.0	51.0	51.0	51.0	122.0	104.4	51.0
avg Rbar (background) =	110.7	110.7	110.7	110.7	110.7	110.7	110.7	110.7	110.7	110.7	110.7	110.7
Dx =	-59.7	-56.9	-53.4	-59.7	-59.7	-59.7	-59.7	-59.7	-59.7	11.3	-6.3	-59.7
Cx =	26.8	26.8	27.9	47.1	47.1	47.1	47.1	47.1	47.1	47.1	47.1	47.1
Statistical Significance ?	-	-	-	-	-	-	-	-	-	-	-	-
If SSI, is current event above MCL?	-	-	-	-	-	-	-	-	-	-	-	-

Compare each difference (Dx) with the corresponding critical value (Cx).
No compliance well's difference between average ranks exceeded its corresponding critical value at a 5% significance level. Therefore, we conclude that significant evidence of contamination does not exist at the 5% significance level.

Haywood County Closed Landfill, Francis Farm
Haywood County, North Carolina
BLE Project Number J12-1957-33

Compound: **Carbon Disulfide**
NC MCL (µg/l): 700
Method: Poisson Prediction Limits
Background: MW-4, MW-5, MW-12

	MW-4	MW-5	MW-12	MW-1A	MW-2A	MW-3A	MW-6	MW-7	MW-8	MW-9	MW-10	MW-11	MW-13	MW-14	MW-15	MDL
02/18/99	NT	NS	NP	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
08/16/99	NT	NS	NP	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
02/14/00	NT	NS	NP	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
08/14/00	NT	NT	NP	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
03/19/01	NT	NT	NP	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
08/27/02	NT	NT	NP	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
02/24/03	NT	NT	NP	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
08/11/03	ND	ND	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	**10**
02/09/04	ND	ND	NP	**12**	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	**10**
08/16/04	ND	ND	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	**100**
02/14/05	ND	ND	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	**100**
09/01/05	ND	ND	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	**10**
02/16/06	ND	ND	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	**10**
08/30/06	ND	ND	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	**10**
02/26/07	ND	ND	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	**10**
08/13/07	ND	ND	NP	ND	ND	Dry	NP	NP	NP	NP	NP	NP	NP	NP	NP	**2**
02/11/08	ND	ND	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	**2**
08/25/08	ND	ND	NP	ND	ND	Dry	NP	NP	NP	NP	NP	NP	NP	NP	NP	**2**
02/23/09	ND	ND	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	**2**
08/24/09	ND	ND	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	**2**
02/22/10	ND	ND	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	**2**
08/30/10	ND	ND	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	**2**
02/22/11	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**2**
08/22/11	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**2**
02/22/12	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**2**
08/29/12	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**2**
02/18/13	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**2**

1) If not detected (ND), use half of the detection limit.

02/18/99	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
08/16/99	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
02/14/00	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
08/14/00	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
03/19/01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
08/27/02	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
02/24/03	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
08/11/03	5	5	-	5	5	5	-	-	-	-	-	-	-	-	-
02/09/04	5	5	-	12	5	5	-	-	-	-	-	-	-	-	-
08/16/04	50	50	-	50	50	50	-	-	-	-	-	-	-	-	-
02/14/05	50	50	-	50	50	50	-	-	-	-	-	-	-	-	-
09/01/05	5	5	-	5	5	5	-	-	-	-	-	-	-	-	-
02/16/06	5	5	-	5	5	5	-	-	-	-	-	-	-	-	-
08/30/06	5	5	-	5	5	5	-	-	-	-	-	-	-	-	-
02/26/07	5	5	-	5	5	5	-	-	-	-	-	-	-	-	-
08/13/07	1	1	-	1	1	-	-	-	-	-	-	-	-	-	-
02/11/08	1	1	-	1	1	1	-	-	-	-	-	-	-	-	-
08/25/08	1	1	-	1	1	-	-	-	-	-	-	-	-	-	-
02/23/09	1	1	-	1	1	1	-	-	-	-	-	-	-	-	-
08/24/09	1	1	-	1	1	1	-	-	-	-	-	-	-	-	-
02/22/10	1	1	-	1	1	1	-	-	-	-	-	-	-	-	-
08/30/10	1	1	-	1	1	1	-	-	-	-	-	-	-	-	-
02/22/11	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
08/22/11	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
02/22/12	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
08/29/12	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
02/18/13				1	1	1	1	1	1	1	1	1	1	1	1

2) Set the total number of data values for background wells (through the previous sampling event) equal to 'n' = 19.
Use 1/2 of the method detection limit to calculate the Total Poisson Count of the Sum (T_n).

$n = 42$
$T_{n1} = 286$

3) Using Gibbons' formula, calculate the upper Poisson Prediction limit T^*_k:

$$T^*_k = cT_{n1} + ct^2/2 + ct[T_{n1}(1+1/c) + t^2/4]^{0.5}$$

where $c = k/n$
and where k = the number of future predicted measurements (one per well during the current sampling event)
and where t = the upper 99th percentile of the t-distribution with (n-1) degrees of freedom (Table 6 of the IFG).

$k = 12$
$n = 42$
$T_{n1} = 286$
$t[41,.01] = 2.421$
$c = 0.286$
$T_{n2} = 12$
$T^*_k = 107.4$

4) Compare the *Poisson Prediction Limit* (T^*_k) to the *Sum of the Concentrations Detected* (T_{n2}) in the wells during the most recent sampling event.
Since the Poisson Prediction Limit was not exceeded, there is no evidence of contamination.

Haywood County Closed Landfill, Francis Farm
Haywood County, North Carolina
BLE Project Number J12-1957-33

Compound: **Chlorobenzene**
NC MCL (µg/l): 50
Method: Poisson Prediction Limits
Background: MW-4, MW-5, MW-12

	MW-4	MW-5	MW-12	MW-1A	MW-2A	MW-3A	MW-6	MW-7	MW-8	MW-9	MW-10	MW-11	MW-13	MW-14	MW-15	MDL
02/18/99	NT	NS	NP	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
08/16/99	NT	NS	NP	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
02/14/00	NT	NS	NP	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
08/14/00	NT	NT	NP	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
03/19/01	NT	NT	NP	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
08/27/02	NT	NT	NP	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
02/24/03	NT	NT	NP	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
08/11/03	ND	ND	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	5
02/09/04	ND	ND	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	5
08/16/04	ND	ND	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	5
02/14/05	ND	ND	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	5
09/01/05	ND	ND	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	5
02/16/06	ND	ND	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	5
08/30/06	ND	ND	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	5
02/26/07	ND	ND	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	5
08/13/07	ND	ND	NP	2.5	ND	Dry	NP	NP	NP	NP	NP	NP	NP	NP	NP	1
02/11/08	ND	ND	NP	2.5	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	1
08/25/08	ND	ND	NP	3.1	ND	Dry	NP	NP	NP	NP	NP	NP	NP	NP	NP	1
02/23/09	ND	ND	NP	2.7	ND	1	NP	NP	NP	NP	NP	NP	NP	NP	NP	1
08/24/09	ND	ND	NP	3.4	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	1
02/22/10	ND	ND	NP	4.5	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	1
08/30/10	ND	ND	NP	2.5	ND	1.2	NP	NP	NP	NP	NP	NP	NP	NP	NP	1
02/22/11	ND	ND	ND	1.8	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.6	ND	1
08/22/11	ND	ND	ND	2.6	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.7	ND	1
02/22/12	ND	ND	ND	2.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.5	ND	1
08/29/12	ND	ND	ND	2.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.4	ND	1
02/18/13	ND	ND	ND	3.1	ND	ND	ND	1.1	ND	ND	ND	ND	ND	1.5	ND	1

1) If not detected (ND), use half of the detection limit.

02/18/99	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
08/16/99	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
02/14/00	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
08/14/00	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
03/19/01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
08/27/02	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
02/24/03	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
08/11/03	2.5	2.5	-	2.5	2.5	2.5	-	-	-	-	-	-	-	-	-
02/09/04	2.5	2.5	-	2.5	2.5	2.5	-	-	-	-	-	-	-	-	-
08/16/04	2.5	2.5	-	2.5	2.5	2.5	-	-	-	-	-	-	-	-	-
02/14/05	2.5	2.5	-	2.5	2.5	2.5	-	-	-	-	-	-	-	-	-
09/01/05	2.5	2.5	-	2.5	2.5	2.5	-	-	-	-	-	-	-	-	-
02/16/06	2.5	2.5	-	2.5	2.5	2.5	-	-	-	-	-	-	-	-	-
08/30/06	2.5	2.5	-	2.5	2.5	2.5	-	-	-	-	-	-	-	-	-
02/26/07	2.5	2.5	-	2.5	2.5	2.5	-	-	-	-	-	-	-	-	-
08/13/07	0.5	0.5	-	2.5	0.5	-	-	-	-	-	-	-	-	-	-
02/11/08	0.5	0.5	-	2.5	0.5	0.5	-	-	-	-	-	-	-	-	-
08/25/08	0.5	0.5	-	3.1	0.5	-	-	-	-	-	-	-	-	-	-
02/23/09	0.5	0.5	-	2.7	0.5	1	-	-	-	-	-	-	-	-	-
08/24/09	0.5	0.5	-	3.4	0.5	0.5	-	-	-	-	-	-	-	-	-
02/22/10	0.5	0.5	-	4.5	0.5	0.5	-	-	-	-	-	-	-	-	-
08/30/10	0.5	0.5	-	2.5	0.5	1.2	-	-	-	-	-	-	-	-	-
02/22/11	0.5	0.5	0.5	1.8	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	1.6	0.5
08/22/11	0.5	0.5	0.5	2.6	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	1.7	0.5
02/22/12	0.5	0.5	0.5	2.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	1.5	0.5
08/29/12	0.5	0.5	0.5	2.3	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	1.4	0.5
02/18/13				3.1	0.5	0.5	0.5	1.1	0.5	0.5	0.5	0.5	0.5	1.5	0.5

2) Set the total number of data values for background wells (through the previous sampling event) equal to 'n' = 19.
Use 1/2 of the method detection limit to calculate the Total Poisson Count of the Sum (T_n).

$n = 42$
$T_{n1} = 53$

3) Using Gibbons' formula, calculate the upper Poisson Prediction limit T^*_k:

$$T^*_k = cT_{n1} + ct^2/2 + ct[T_{n1}(1+1/c) + t^2/4]^{-0.5}$$

where $c = k/n$
and where k = the number of future predicted measurements (one per well during the current sampling event)
and where t = the upper 99th percentile of the t-distribution with (n-1) degrees of freedom (Table 6 of the IFG).

$k = 12$
$n = 42$
$T_{n1} = 53$
$t[41,.01] = 2.421$
$c = 0.286$
$T_{n2} = 10.2$
$T^*_k = 26.7$

4) Compare the *Poisson Prediction Limit* (T^*_k) to the *Sum of the Concentrations Detected* (T_{n2}) in the wells during the most recent sampling event.
Since the Poisson Prediction Limit was not exceeded, there is no evidence of contamination.

Haywood County Closed Landfill, Francis Farm
Haywood County, North Carolina
BLE Project Number J12-1957-33

Compound: **Chloroethane**
NC MCL (µg/l): 3000
Method: Poisson Prediction Limits
Background: MW-4, MW-5, MW-12

	MW-4	MW-5	MW-12	MW-1A	MW-2A	MW-3A	MW-6	MW-7	MW-8	MW-9	MW-10	MW-11	MW-13	MW-14	MW-15	MDL
02/18/99	NT	NS	NP	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
08/16/99	NT	NS	NP	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
02/14/00	NT	NS	NP	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
08/14/00	NT	NT	NP	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
03/19/01	NT	NT	NP	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
08/27/02	NT	NT	NP	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
02/24/03	NT	NT	NP	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
08/11/03	**52**	**33**	NP	**20**	**11**	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	**10**
02/09/04	ND	ND	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	**10**
08/16/04	ND	ND	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	**10**
02/14/05	**16**	ND	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	**10**
09/01/05	ND	ND	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	**10**
02/16/06	ND	ND	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	**10**
08/30/06	ND	ND	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	**10**
02/26/07	ND	ND	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	**10**
08/13/07	**5.5**	**2.7**	NP	**2.3**	**4.8**	Dry	NP	NP	NP	NP	NP	NP	NP	NP	NP	**1**
02/11/08	**4.2**	**2.5**	NP	**2.5**	**2.1**	**7.6**	NP	NP	NP	NP	NP	NP	NP	NP	NP	**1**
08/25/08	**6.2**	**2.4**	NP	**2.6**	**4.2**	Dry	NP	NP	NP	NP	NP	NP	NP	NP	NP	**1**
02/23/09	**2.3**	**2.1**	NP	**1.8**	ND	**7.6**	NP	NP	NP	NP	NP	NP	NP	NP	NP	**1**
08/24/09	**2.8**	ND	NP	**2.3**	**4.7**	**6.1**	NP	NP	NP	NP	NP	NP	NP	NP	NP	**1**
02/22/10	**4.8**	**3.7**	NP	**3.5**	**1.3**	**4.8**	NP	NP	NP	NP	NP	NP	NP	NP	NP	**1**
08/30/10	**2.9**	**4.4**	NP	**1.9**	**4.7**	**5.6**	NP	NP	NP	NP	NP	NP	NP	NP	NP	**1**
02/22/11	**3.1**	**4**	ND	**1.5**	ND	**7.3**	ND	**1.3**	ND	ND	ND	ND	**1.3**	**1.3**	ND	**1**
08/22/11	**2.7**	**2.9**	ND	**2.2**	**2.5**	ND	ND	**1.2**	ND	ND	ND	ND	**1.2**	**1.6**	ND	**1**
02/22/12	**1.7**	**2.3**	ND	**1.7**	ND	**3.7**	ND	ND	ND	ND	ND	ND	**1.2**	**1.2**	ND	**1**
08/29/12	ND	ND	ND	ND	ND	**1.8**	ND	ND	ND	ND	ND	ND	ND	ND	ND	**1**
02/18/13	**1.3**	**2.4**	ND	**2.1**	ND	**2.7**	ND	**1.3**	ND	ND	ND	ND	ND	ND	ND	**1**

1) If not detected (ND), use half of the detection limit.

02/18/99	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
08/16/99	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
02/14/00	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
08/14/00	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
03/19/01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
08/27/02	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
02/24/03	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
08/11/03	52	33	-	20	11	5	-	-	-	-	-	-	-	-	-
02/09/04	5	5	-	5	5	5	-	-	-	-	-	-	-	-	-
08/16/04	5	5	-	5	5	5	-	-	-	-	-	-	-	-	-
02/14/05	16	5	-	5	5	5	-	-	-	-	-	-	-	-	-
09/01/05	5	5	-	5	5	5	-	-	-	-	-	-	-	-	-
02/16/06	5	5	-	5	5	5	-	-	-	-	-	-	-	-	-
08/30/06	5	5	-	5	5	5	-	-	-	-	-	-	-	-	-
02/26/07	5	5	-	5	5	5	-	-	-	-	-	-	-	-	-
08/13/07	5.5	2.7	-	2.3	4.8	-	-	-	-	-	-	-	-	-	-
02/11/08	4.2	2.5	-	2.5	2.1	7.6	-	-	-	-	-	-	-	-	-
08/25/08	6.2	2.4	-	2.6	4.2	-	-	-	-	-	-	-	-	-	-
02/23/09	2.3	2.1	-	1.8	0.5	7.6	-	-	-	-	-	-	-	-	-
08/24/09	2.8	0.5	-	2.3	4.7	6.1	-	-	-	-	-	-	-	-	-
02/22/10	4.8	3.7	-	3.5	1.3	4.8	-	-	-	-	-	-	-	-	-
08/30/10	2.9	4.4	-	1.9	4.7	5.6	-	-	-	-	-	-	-	-	-
02/22/11	3.1	4	0.5	1.5	0.5	7.3	0.5	1.3	0.5	0.5	0.5	0.5	1.3	1.3	0.5
08/22/11	2.7	2.9	0.5	2.2	2.5	0.5	0.5	1.2	0.5	0.5	0.5	0.5	1.2	1.6	0.5
02/22/12	1.7	2.3	0.5	1.7	0.5	3.7	0.5	0.5	0.5	0.5	0.5	0.5	1.2	1.2	0.5
08/29/12	0.5	0.5	0.5	0.5	0.5	1.8	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
02/18/13				2.1	0.5	2.7	0.5	1.3	0.5	0.5	0.5	0.5	0.5	0.5	0.5

2) Set the total number of data values for background wells (through the previous sampling event) equal to 'n' = 19.
Use 1/2 of the method detection limit to calculate the Total Poisson Count of the Sum (T_n).

$n = 42$
$T_{n1} = 232.7$

3) Using Gibbons' formula, calculate the upper Poisson Prediction limit T^*_k:

$$T^*_k = cT_{n1} + ct^2/2 + ct[T_{n1}(1+1/c) + t^2/4]^{0.5}$$

where $c = k/n$
and where k = the number of future predicted measurements (one per well during the current sampling event)
and where t = the upper 99th percentile of the t-distribution with (n-1) degrees of freedom (Table 6 of the IFG).

$k = 12$
$n = 42$
$T_{n1} = 232.7$
$t[41,.01] = 2.421$
$c = 0.286$
$T_{n2} = 10.6$
$T^*_k = 89.7$

4) Compare the *Poisson Prediction Limit* (T^*_k) to the *Sum of the Concentrations Detected* (T_{n2}) in the wells during the most recent sampling event.
Since the Poisson Prediction Limit was not exceeded, there is no evidence of contamination.

Haywood County Closed Landfill, Francis Farm
Haywood County, North Carolina
BLE Project Number J12-1957-33

Compound: **1,2-Dichlorobenzene**
NC MCL (µg/l): 20
Method: Poisson Prediction Limits
Background: MW-4, MW-5, MW-12

	MW-4	MW-5	MW-12	MW-1A	MW-2A	MW-3A	MW-6	MW-7	MW-8	MW-9	MW-10	MW-11	MW-13	MW-14	MW-15	MDL
02/18/99	NT	NS	NP	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
08/16/99	NT	NS	NP	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
02/14/00	NT	NS	NP	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
08/14/00	NT	NT	NP	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
03/19/01	NT	NT	NP	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
08/27/02	NT	NT	NP	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
02/24/03	NT	NT	NP	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
08/11/03	ND	ND	NP	ND	**22**	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	**5**
02/09/04	ND	ND	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	**5**
08/16/04	ND	ND	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	**5**
02/14/05	ND	ND	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	**5**
09/01/05	ND	ND	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	**5**
02/16/06	ND	ND	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	**5**
08/30/06	ND	ND	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	**5**
02/26/07	ND	ND	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	**5**
08/13/07	ND	ND	NP	ND	ND	Dry	NP	NP	NP	NP	NP	NP	NP	NP	NP	**1**
02/11/08	ND	ND	NP	ND	**1.2**	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	**1**
08/25/08	ND	ND	NP	ND	**1.9**	Dry	NP	NP	NP	NP	NP	NP	NP	NP	NP	**1**
02/23/09	ND	ND	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	**1**
08/24/09	ND	ND	NP	ND	**1.6**	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	**1**
02/22/10	ND	ND	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	**1**
08/30/10	ND	ND	NP	ND	**2.1**	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	**1**
02/22/11	ND	ND	ND	ND	ND	**1.1**	ND	**1.4**	ND	ND	ND	**4.2**	ND	**104**	**3.3**	**1**
08/22/11	ND	ND	ND	ND	**1.3**	ND	ND	**1.5**	ND	ND	ND	**4**	ND	**97.1**	**2.8**	**1**
02/22/12	ND	ND	ND	ND	ND	ND	ND	**1.6**	ND	ND	ND	**5**	ND	**75.9**	**4**	**1**
08/29/12	ND	ND	ND	ND	**1.8**	ND	ND	**1.6**	ND	ND	ND	**5.9**	ND	**70.7**	**4.4**	**1**
02/18/13	ND	ND	ND	ND	ND	ND	ND	**2.2**	ND	ND	ND	**5.9**	ND	**76.7**	**9.2**	**1**

1) If not detected (ND), use half of the detection limit.

02/18/99	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
08/16/99	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
02/14/00	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
08/14/00	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
03/19/01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
08/27/02	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
02/24/03	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
08/11/03	2.5	2.5	-	2.5	22	2.5	-	-	-	-	-	-	-	-	-
02/09/04	2.5	2.5	-	2.5	2.5	2.5	-	-	-	-	-	-	-	-	-
08/16/04	2.5	2.5	-	2.5	2.5	2.5	-	-	-	-	-	-	-	-	-
02/14/05	2.5	2.5	-	2.5	2.5	2.5	-	-	-	-	-	-	-	-	-
09/01/05	2.5	2.5	-	2.5	2.5	2.5	-	-	-	-	-	-	-	-	-
02/16/06	2.5	2.5	-	2.5	2.5	2.5	-	-	-	-	-	-	-	-	-
08/30/06	2.5	2.5	-	2.5	2.5	2.5	-	-	-	-	-	-	-	-	-
02/26/07	2.5	2.5	-	2.5	2.5	2.5	-	-	-	-	-	-	-	-	-
08/13/07	0.5	0.5	-	0.5	0.5	-	-	-	-	-	-	-	-	-	-
02/11/08	0.5	0.5	-	0.5	1.2	0.5	-	-	-	-	-	-	-	-	-
08/25/08	0.5	0.5	-	0.5	1.9	-	-	-	-	-	-	-	-	-	-
02/23/09	0.5	0.5	-	0.5	0.5	0.5	-	-	-	-	-	-	-	-	-
08/24/09	0.5	0.5	-	0.5	1.6	0.5	-	-	-	-	-	-	-	-	-
02/22/10	0.5	0.5	-	0.5	0.5	0.5	-	-	-	-	-	-	-	-	-
08/30/10	0.5	0.5	-	0.5	2.1	0.5	-	-	-	-	-	-	-	-	-
02/22/11	0.5	0.5	0.5	0.5	0.5	1.1	0.5	1.4	0.5	0.5	0.5	4.2	0.5	104	3.3
08/22/11	0.5	0.5	0.5	0.5	1.3	0.5	0.5	1.5	0.5	0.5	0.5	4	0.5	97.1	2.8
02/22/12	0.5	0.5	0.5	0.5	0.5	0.5	0.5	1.6	0.5	0.5	0.5	5	0.5	75.9	4
08/29/12	0.5	0.5	0.5	0.5	1.8	0.5	0.5	1.6	0.5	0.5	0.5	5.9	0.5	70.7	4.4
02/18/13				0.5	0.5	0.5	0.5	2.2	0.5	0.5	0.5	5.9	0.5	76.7	9.2

2) Set the total number of data values for background wells (through the previous sampling event) equal to 'n' = 19.
Use 1/2 of the method detection limit to calculate the Total Poisson Count of the Sum (T_n).

$n = 42$
$T_{n1} = 53$

3) Using Gibbons' formula, calculate the upper Poisson Prediction limit T^*_k:

$$T^*_k = cT_{n1} + ct^2/2 + ct[T_{n1}(1+1/c) + t^2/4]^{0.5}$$

where $c = k/n$
and where k = the number of future predicted measurements (one per well during the current sampling event)
and where t = the upper 99th percentile of the t-distribution with (n-1) degrees of freedom (Table 6 of the IFG).

$k = 12$
$n = 42$
$T_{n1} = 53$
$t[41,.01] = 2.421$
$c = 0.286$
$T_{n2} = 98$
$T^*_k = 26.7$

4) Compare the *Poisson Prediction Limit* (T^*_k) to the *Sum of the Concentrations Detected* (T_{n2}) in the wells during the most recent sampling event.
Since the Poisson Prediction Limit was exceeded, Wilcoxon Rank Sum Tests must be performed to test the possibility that the detected concentrations are statistically significant.

Haywood County Closed Landfill, Francis Farm
Haywood County, North Carolina
BLE Project Number J12-1957-33

Compound: **1,2-Dichlorobenzene**
NC MCL (µg/l): 20
Method: Wilcoxon Rank Sum
Background: MW-4, MW-5, MW-12

	MW-4	MW-5	MW-12	MW-7	MDL
02/18/99	NT	NS	NP	NP	NT
08/16/99	NT	NS	NP	NP	NT
02/14/00	NT	NS	NP	NP	NT
08/14/00	NT	NT	NP	NP	NT
03/19/01	NT	NT	NP	NP	NT
08/27/02	NT	NT	NP	NP	NT
02/24/03	NT	NT	NP	NP	NT
08/11/03	ND	ND	NP	NP	**5**
02/09/04	ND	ND	NP	NP	**5**
08/16/04	ND	ND	NP	NP	**5**
02/14/05	ND	ND	NP	NP	**5**
09/01/05	ND	ND	NP	NP	**5**
02/16/06	ND	ND	NP	NP	**5**
08/30/06	ND	ND	NP	NP	**5**
02/26/07	ND	ND	NP	NP	**5**
08/13/07	ND	ND	NP	NP	**1**
02/11/08	ND	ND	NP	NP	**1**
08/25/08	ND	ND	NP	NP	**1**
02/23/09	ND	ND	NP	NP	**1**
08/24/09	ND	ND	NP	NP	**1**
02/22/10	ND	ND	NP	NP	**1**
08/30/10	ND	ND	NP	NP	**1**
02/22/11	ND	ND	ND	**1.4**	**1**
08/22/11	ND	ND	ND	**1.5**	**1**
02/22/12	ND	ND	ND	**1.6**	**1**
08/29/12	ND	ND	ND	**1.6**	**1**
02/18/13	ND	ND	ND	**2.2**	**1**

1) Rank the N = 50 observations from the smallest to the largest from background wells and compliance well MW-7.

n =	5			
m =	45			
N =	50			
Ci (MW-7) =	240.0			
# samples =	20	20	5	5
sum of rank values (Ri) =	460.0	460.0	115.0	240.0
avg rank value (Rbar) =	23.0	23.0	23.0	48.0

	Number of each rank value				Rank Value
rank value of NDs =	20	20	5	0	23
rank value of 1.4s =	0	0	0	1	46
rank value of 1.5s =	0	0	0	1	47
rank value of 1.6s =	0	0	0	2	48.5
rank value of 2.2s =	0	0	0	1	50
	0	0	0	0	0
	0	0	0	0	0
	0	0	0	0	0
	0	0	0	0	0
	0	0	0	0	0
	0	0	0	0	0
	0	0	0	0	0
# samples =	**20**	**20**	**5**	**5**	

Sum of rank value calculations

	460	460	115	0
	0	0	0	46
	0	0	0	47
	0	0	0	97
	0	0	0	50
	0	0	0	0
	0	0	0	0
	0	0	0	0
	0	0	0	0
	0	0	0	0
	0	0	0	0
	0	0	0	0
sum of rank values (R_i)	**460**	**460**	**115**	**240**

2) Compute the Wilcoxon statistic by adding up the compliance well ranks and subtracting n/(n+1)/2.

$W = Ci - 1/2(n(n+1))$

$W = 225$

3) Compute the expected value and standard deviation of W.

$E(W) = 1/2mn$

$SD(W) = ((mn(N+1)/12)*(1-\Sigma^{g}_{i=1} (t_i^3 - t_i)/(N^3 - N)))^{0.5}$

$E(W) = 112.5$

Adjustment for tie values:

Tie Values:	$(t_i^3 - t_i)/(N^3 - N) =$
ND	0.729
1.4	0.000
1.5	0.000
1.6	0.000
2.2	0.000
0	0.000
0	0.000
0	0.000
0	0.000
0	0.000
0	0.000
0	0.000

$SD(W) = 16.099$

4) Form the appropriate Z-score.

$Z = (W - E(W) - 0.5)/SD(W)$

$Z = 6.957$

5) Compare the observed Z-score to the upper 0.01 percentile of the normal distribution.

$Z = 6.957$

$Z_{0.01} = 2.326$

Since Z is greater, there is significant evidence of contamination at the compliance well at the 1 percent significance level.

Haywood County Closed Landfill, Francis Farm
Haywood County, North Carolina
BLE Project Number J12-1957-33

Compound: **1,2-Dichlorobenzene**
NC MCL (µg/l): 20
Method: Wilcoxon Rank Sum
Background: MW-4, MW-5, MW-12

	MW-4	MW-5	MW-12	MW-11	MDL
02/18/99	NT	NS	NP	NP	NT
08/16/99	NT	NS	NP	NP	NT
02/14/00	NT	NS	NP	NP	NT
08/14/00	NT	NT	NP	NP	NT
03/19/01	NT	NT	NP	NP	NT
08/27/02	NT	NT	NP	NP	NT
02/24/03	NT	NT	NP	NP	NT
08/11/03	ND	ND	NP	NP	**5**
02/09/04	ND	ND	NP	NP	**5**
08/16/04	ND	ND	NP	NP	**5**
02/14/05	ND	ND	NP	NP	**5**
09/01/05	ND	ND	NP	NP	**5**
02/16/06	ND	ND	NP	NP	**5**
08/30/06	ND	ND	NP	NP	**5**
02/26/07	ND	ND	NP	NP	**5**
08/13/07	ND	ND	NP	NP	**1**
02/11/08	ND	ND	NP	NP	**1**
08/25/08	ND	ND	NP	NP	**1**
02/23/09	ND	ND	NP	NP	**1**
08/24/09	ND	ND	NP	NP	**1**
02/22/10	ND	ND	NP	NP	**1**
08/30/10	ND	ND	NP	NP	**1**
02/22/11	ND	ND	ND	**4.2**	**1**
08/22/11	ND	ND	ND	**4**	**1**
02/22/12	ND	ND	ND	**5**	**1**
08/29/12	ND	ND	ND	**5.9**	**1**
02/18/13	ND	ND	ND	**5.9**	**1**

1) Rank the N = 50 observations from the smallest to the largest from background wells and compliance well MW-11.

n = 5
m = 45
N = 50
Ci (MW-11) = 240.0

# samples =	20	20	5	5
sum of rank values (Ri) =	460.0	460.0	115.0	240.0
avg rank value (Rbar) =	23.0	23.0	23.0	48.0

	Number of each rank value				Rank Value
rank value of NDs =	20	20	5	0	23
rank value of 4s =	0	0	0	1	46
rank value of 4.2s =	0	0	0	1	47
rank value of 5s =	0	0	0	1	48
rank value of 5.9s =	0	0	0	2	49.5
	0	0	0	0	0
	0	0	0	0	0
	0	0	0	0	0
	0	0	0	0	0
	0	0	0	0	0
	0	0	0	0	0
	0	0	0	0	0
# samples =	**20**	**20**	**5**	**5**	

Sum of rank value calculations

	460	460	115	0
	0	0	0	46
	0	0	0	47
	0	0	0	48
	0	0	0	99
	0	0	0	0
	0	0	0	0
	0	0	0	0
	0	0	0	0
	0	0	0	0
	0	0	0	0
	0	0	0	0
sum of rank values (R_i)	**460**	**460**	**115**	**240**

2) Compute the Wilcoxon statistic by adding up the compliance well ranks and subtracting n/(n+1)/2.

$W = Ci - 1/2(n(n+1))$

$W = 225$

3) Compute the expected value and standard deviation of W.

$E(W) = 1/2mn$

$SD(W) = ((mn(N+1)/12)*(1-\Sigma^{g}_{i=1} (t_i^3 - t_i)/(N^3 - N)))^{0.5}$

$E(W) = 112.5$

Adjustment for tie values:

Tie Values:	$(t_i^3 - t_i)/(N^3 - N) =$
ND	0.729
4	0.000
4.2	0.000
5	0.000
5.9	0.000
0	0.000
0	0.000
0	0.000
0	0.000
0	0.000
0	0.000
0	0.000

$SD(W) = 16.099$

4) Form the appropriate Z-score.

$Z = (W - E(W) - 0.5)/SD(W)$

$Z = 6.957$

5) Compare the observed Z-score to the upper 0.01 percentile of the normal distribution.

$Z = 6.957$

$Z_{0.01} = 2.326$

Since Z is greater, there is significant evidence of contamination at the compliance well at the 1 percent significance level.

Haywood County Closed Landfill, Francis Farm
Haywood County, North Carolina
BLE Project Number J12-1957-33

Compound: **1,2-Dichlorobenzene**
NC MCL (µg/l): 20
Method: Wilcoxon Rank Sum
Background: MW-4, MW-5, MW-12

	MW-4	MW-5	MW-12	MW-14	MDL
02/18/99	NT	NS	NP	NP	NT
08/16/99	NT	NS	NP	NP	NT
02/14/00	NT	NS	NP	NP	NT
08/14/00	NT	NT	NP	NP	NT
03/19/01	NT	NT	NP	NP	NT
08/27/02	NT	NT	NP	NP	NT
02/24/03	NT	NT	NP	NP	NT
08/11/03	ND	ND	NP	NP	**5**
02/09/04	ND	ND	NP	NP	**5**
08/16/04	ND	ND	NP	NP	**5**
02/14/05	ND	ND	NP	NP	**5**
09/01/05	ND	ND	NP	NP	**5**
02/16/06	ND	ND	NP	NP	**5**
08/30/06	ND	ND	NP	NP	**5**
02/26/07	ND	ND	NP	NP	**5**
08/13/07	ND	ND	NP	NP	**1**
02/11/08	ND	ND	NP	NP	**1**
08/25/08	ND	ND	NP	NP	**1**
02/23/09	ND	ND	NP	NP	**1**
08/24/09	ND	ND	NP	NP	**1**
02/22/10	ND	ND	NP	NP	**1**
08/30/10	ND	ND	NP	NP	**1**
02/22/11	ND	ND	ND	**104**	**1**
08/22/11	ND	ND	ND	**97.1**	**1**
02/22/12	ND	ND	ND	**75.9**	**1**
08/29/12	ND	ND	ND	**70.7**	**1**
02/18/13	ND	ND	ND	**76.7**	**1**

1) Rank the N = 50 observations from the smallest to the largest from background wells and compliance well MW-14.

n = 5
m = 45
N = 50
Ci (MW-14) = 240.0

# samples =	20	20	5	5
sum of rank values (Ri) =	460.0	460.0	115.0	240.0
avg rank value (Rbar) =	23.0	23.0	23.0	48.0

	Number of each rank value				Rank Value
rank value of NDs =	20	20	5	0	23
rank value of 70.7s =	0	0	0	1	46
rank value of 75.9s =	0	0	0	1	47
rank value of 76.7s =	0	0	0	1	48
rank value of 97.1s =	0	0	0	1	49
rank value of 104s =	0	0	0	1	50
	0	0	0	0	0
	0	0	0	0	0
	0	0	0	0	0
	0	0	0	0	0
	0	0	0	0	0
	0	0	0	0	0
# samples =	**20**	**20**	**5**	**5**	

Sum of rank value calculations

	460	460	115	0
	0	0	0	46
	0	0	0	47
	0	0	0	48
	0	0	0	49
	0	0	0	50
	0	0	0	0
	0	0	0	0
	0	0	0	0
	0	0	0	0
	0	0	0	0
	0	0	0	0
sum of rank values (R_i)	**460**	**460**	**115**	**240**

2) Compute the Wilcoxon statistic by adding up the compliance well ranks and subtracting n/(n+1)/2.

$W = Ci - 1/2(n(n+1))$

$W = 225$

3) Compute the expected value and standard deviation of W.

$E(W) = 1/2mn$

$SD(W) = ((mn(N+1)/12)*(1-\Sigma^{g}_{i=1} (t_i^3 - t_i)/(N^3 - N)))^{0.5}$

$E(W) = 112.5$

Adjustment for tie values:

Tie Values:	$(t_i^3 - t_i)/(N^3 - N) =$
ND	0.729
70.7	0.000
75.9	0.000
76.7	0.000
97.1	0.000
104	0.000
0	0.000
0	0.000
0	0.000
0	0.000
0	0.000
0	0.000

$SD(W) = 16.100$

4) Form the appropriate Z-score.

$Z = (W - E(W) - 0.5)/SD(W)$

$Z = 6.957$

5) Compare the observed Z-score to the upper 0.01 percentile of the normal distribution.

$Z = 6.957$

$Z_{0.01} = 2.326$

Since Z is greater, there is significant evidence of contamination at the compliance well at the 1 percent significance level.

Haywood County Closed Landfill, Francis Farm
Haywood County, North Carolina
BLE Project Number J12-1957-33

Compound: **1,2-Dichlorobenzene**
NC MCL (µg/l): 20
Method: Wilcoxon Rank Sum
Background: MW-4, MW-5, MW-12

	MW-4	MW-5	MW-12	MW-15	MDL
02/18/99	NT	NS	NP	NP	NT
08/16/99	NT	NS	NP	NP	NT
02/14/00	NT	NS	NP	NP	NT
08/14/00	NT	NT	NP	NP	NT
03/19/01	NT	NT	NP	NP	NT
08/27/02	NT	NT	NP	NP	NT
02/24/03	NT	NT	NP	NP	NT
08/11/03	ND	ND	NP	NP	**5**
02/09/04	ND	ND	NP	NP	**5**
08/16/04	ND	ND	NP	NP	**5**
02/14/05	ND	ND	NP	NP	**5**
09/01/05	ND	ND	NP	NP	**5**
02/16/06	ND	ND	NP	NP	**5**
08/30/06	ND	ND	NP	NP	**5**
02/26/07	ND	ND	NP	NP	**5**
08/13/07	ND	ND	NP	NP	**1**
02/11/08	ND	ND	NP	NP	**1**
08/25/08	ND	ND	NP	NP	**1**
02/23/09	ND	ND	NP	NP	**1**
08/24/09	ND	ND	NP	NP	**1**
02/22/10	ND	ND	NP	NP	**1**
08/30/10	ND	ND	NP	NP	**1**
02/22/11	ND	ND	ND	**3.3**	**1**
08/22/11	ND	ND	ND	**2.8**	**1**
02/22/12	ND	ND	ND	**4**	**1**
08/29/12	ND	ND	ND	**4.4**	**1**
02/18/13	ND	ND	ND	**9.2**	**1**

1) Rank the N = 50 observations from the smallest to the largest from background wells and compliance well MW-15.

n = 5
m = 45
N = 50
Ci (MW-15) = 240.0

# samples =	20	20	5	5
sum of rank values (Ri) =	460.0	460.0	115.0	240.0
avg rank value (Rbar) =	23.0	23.0	23.0	48.0

	Number of each rank value				Rank Value
rank value of NDs =	20	20	5	0	23
rank value of 2.8s =	0	0	0	1	46
rank value of 3.3s =	0	0	0	1	47
rank value of 4s =	0	0	0	1	48
rank value of 4.4s =	0	0	0	1	49
rank value of 9.2s =	0	0	0	1	50
	0	0	0	0	0
	0	0	0	0	0
	0	0	0	0	0
	0	0	0	0	0
	0	0	0	0	0
	0	0	0	0	0
# samples =	**20**	**20**	**5**	**5**	

Sum of rank value calculations

	460	460	115	0
	0	0	0	46
	0	0	0	47
	0	0	0	48
	0	0	0	49
	0	0	0	50
	0	0	0	0
	0	0	0	0
	0	0	0	0
	0	0	0	0
	0	0	0	0
	0	0	0	0
sum of rank values (R_i)	**460**	**460**	**115**	**240**

2) Compute the Wilcoxon statistic by adding up the compliance well ranks and subtracting n/(n+1)/2.

$W = Ci - 1/2(n(n+1))$

$W = 225$

3) Compute the expected value and standard deviation of W.

$E(W) = 1/2mn$

$SD(W) = ((mn(N+1)/12)*(1-\Sigma^{g}_{i=1} (t_i^3 - t_i)/(N^3 - N)))^{0.5}$

$E(W) = 112.5$

Adjustment for tie values:

Tie Values:	$(t_i^3 - t_i)/(N^3 - N) =$
ND	0.729
2.8	0.000
3.3	0.000
4	0.000
4.4	0.000
9.2	0.000
0	0.000
0	0.000
0	0.000
0	0.000
0	0.000
0	0.000

$SD(W) = 16.100$

4) Form the appropriate Z-score.

$Z = (W - E(W) - 0.5)/SD(W)$

$Z = 6.957$

5) Compare the observed Z-score to the upper 0.01 percentile of the normal distribution.

$Z = 6.957$

$Z_{0.01} = 2.326$

Since Z is greater, there is significant evidence of contamination at the compliance well at the 1 percent significance level.

Haywood County Closed Landfill, Francis Farm
Haywood County, North Carolina
BLE Project Number J12-1957-33

Compound: **1,4-Dichlorobenzene**
NC MCL (µg/l): 6
Method: Poisson Prediction Limits
Background: MW-4, MW-5, MW-12

	MW-4	MW-5	MW-12	MW-1A	MW-2A	MW-3A	MW-6	MW-7	MW-8	MW-9	MW-10	MW-11	MW-13	MW-14	MW-15	MDL
02/18/99	NT	NS	NP	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
08/16/99	NT	NS	NP	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
02/14/00	NT	NS	NP	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
08/14/00	NT	NT	NP	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
03/19/01	NT	NT	NP	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
08/27/02	NT	NT	NP	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
02/24/03	NT	NT	NP	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
08/11/03	ND	ND	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	5
02/09/04	ND	ND	NP	ND	5.9	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	5
08/16/04	ND	ND	NP	ND	11	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	5
02/14/05	ND	ND	NP	ND	14	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	5
09/01/05	ND	ND	NP	ND	13	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	5
02/16/06	ND	ND	NP	ND	10	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	5
08/30/06	ND	ND	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	5
02/26/07	ND	ND	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	5
08/13/07	3.7	ND	NP	ND	12.1	Dry	NP	NP	NP	NP	NP	NP	NP	NP	NP	1
02/11/08	4.5	ND	NP	ND	10.8	1.1	NP	NP	NP	NP	NP	NP	NP	NP	NP	1
08/25/08	5.1	ND	NP	ND	8.6	Dry	NP	NP	NP	NP	NP	NP	NP	NP	NP	1
02/23/09	5.2	ND	NP	ND	6	1.3	NP	NP	NP	NP	NP	NP	NP	NP	NP	1
08/24/09	4.8	ND	NP	ND	10.3	1.1	NP	NP	NP	NP	NP	NP	NP	NP	NP	1
02/22/10	5.3	ND	NP	ND	2.4	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	1
08/30/10	4.7	ND	NP	ND	12.3	1.3	NP	NP	NP	NP	NP	NP	NP	NP	NP	1
02/22/11	4.7	1.3	ND	ND	7	1.2	ND	1.7	ND	ND	ND	1.4	5.9	21.4	ND	1
08/22/11	5.1	1.1	ND	ND	7.3	ND	ND	1.6	ND	ND	ND	1.5	5.6	21.7	ND	1
02/22/12	4.9	ND	ND	ND	3.1	ND	ND	1.6	ND	ND	ND	1.6	6	18.7	ND	1
08/29/12	5	ND	ND	ND	8.6	ND	ND	1.4	ND	ND	ND	1.8	5.6	17.5	ND	1
02/18/13	5.6	1.1	ND	ND	2.2	ND	ND	1.9	ND	ND	ND	1.6	5.2	18.1	1.6	1

1) If not detected (ND), use half of the detection limit.

02/18/99	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
08/16/99	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
02/14/00	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
08/14/00	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
03/19/01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
08/27/02	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
02/24/03	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
08/11/03	2.5	2.5	-	2.5	2.5	2.5	-	-	-	-	-	-	-	-	-
02/09/04	2.5	2.5	-	2.5	5.9	2.5	-	-	-	-	-	-	-	-	-
08/16/04	2.5	2.5	-	2.5	11	2.5	-	-	-	-	-	-	-	-	-
02/14/05	2.5	2.5	-	2.5	14	2.5	-	-	-	-	-	-	-	-	-
09/01/05	2.5	2.5	-	2.5	13	2.5	-	-	-	-	-	-	-	-	-
02/16/06	2.5	2.5	-	2.5	10	2.5	-	-	-	-	-	-	-	-	-
08/30/06	2.5	2.5	-	2.5	2.5	2.5	-	-	-	-	-	-	-	-	-
02/26/07	2.5	2.5	-	2.5	2.5	2.5	-	-	-	-	-	-	-	-	-
08/13/07	3.7	0.5	-	0.5	12.1	-	-	-	-	-	-	-	-	-	-
02/11/08	4.5	0.5	-	0.5	10.8	1.1	-	-	-	-	-	-	-	-	-
08/25/08	5.1	0.5	-	0.5	8.6	-	-	-	-	-	-	-	-	-	-
02/23/09	5.2	0.5	-	0.5	6	1.3	-	-	-	-	-	-	-	-	-
08/24/09	4.8	0.5	-	0.5	10.3	1.1	-	-	-	-	-	-	-	-	-
02/22/10	5.3	0.5	-	0.5	2.4	0.5	-	-	-	-	-	-	-	-	-
08/30/10	4.7	0.5	-	0.5	12.3	1.3	-	-	-	-	-	-	-	-	-
02/22/11	4.7	1.3	0.5	0.5	7	1.2	0.5	1.7	0.5	0.5	0.5	1.4	5.9	21.4	0.5
08/22/11	5.1	1.1	0.5	0.5	7.3	0.5	0.5	1.6	0.5	0.5	0.5	1.5	5.6	21.7	0.5
02/22/12	4.9	0.5	0.5	0.5	3.1	0.5	0.5	1.6	0.5	0.5	0.5	1.6	6	18.7	0.5
08/29/12	5	0.5	0.5	0.5	8.6	0.5	0.5	1.4	0.5	0.5	0.5	1.8	5.6	17.5	0.5
02/18/13				0.5	2.2	0.5	0.5	1.9	0.5	0.5	0.5	1.6	5.2	18.1	1.6

2) Set the total number of data values for background wells (through the previous sampling event) equal to 'n' = 19.
Use 1/2 of the method detection limit to calculate the Total Poisson Count of the Sum (T_n).

$n = 42$
$T_{n1} = 101.9$

3) Using Gibbons' formula, calculate the upper Poisson Prediction limit T^*_k:

$$T^*_k = cT_{n1} + ct^2/2 + ct[T_{n1}(1+1/c) + t^2/4]^{0.5}$$

where $c = k/n$
and where k = the number of future predicted measurements (one per well during the current sampling event)
and where t = the upper 99th percentile of the t-distribution with (n-1) degrees of freedom (Table 6 of the IFG).

$k = 12$
$n = 42$
$T_{n1} = 101.9$
$t[41,.01] = 2.421$
$c = 0.286$
$T_{n2} = 33.6$
$T^*_k = 44.8$

4) Compare the *Poisson Prediction Limit* (T^*_k) to the *Sum of the Concentrations Detected* (T_{n2}) in the wells during the most recent sampling event.
Since the Poisson Prediction Limit was not exceeded, there is no evidence of contamination.

Haywood County Closed Landfill, Francis Farm
Haywood County, North Carolina
BLE Project Number J12-1957-33

Compound: **1,1-Dichloroethane**
NC MCL (µg/l): 6
Method: Kruskal-Wallis
Background: MW-4, MW-5, MW-12

	MW-4	MW-5	MW-12	MW-1A	MW-2A	MW-3A	MW-6	MW-7	MW-8	MW-9	MW-10	MW-11	MW-13	MW-14	MW-15	MDL
02/18/99	NT	NS	NP	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
08/16/99	NT	NS	NP	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
02/14/00	NT	NS	NP	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
08/14/00	NT	NT	NP	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
03/19/01	NT	NT	NP	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
08/27/02	NT	NT	NP	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
02/24/03	NT	NT	NP	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
08/11/03	22	23	NP	8.8	5.2	10	NP	NP	NP	NP	NP	NP	NP	NP	NP	5
02/09/04	40	ND	NP	6.2	ND	8.2	NP	NP	NP	NP	NP	NP	NP	NP	NP	5
08/16/04	38	12	NP	ND	ND	12	NP	NP	NP	NP	NP	NP	NP	NP	NP	5
02/14/05	70	15	NP	5.5	ND	11	NP	NP	NP	NP	NP	NP	NP	NP	NP	5
09/01/05	42	10	NP	6.3	ND	8.6	NP	NP	NP	NP	NP	NP	NP	NP	NP	5
02/16/06	ND	7.1	NP	ND	ND	13	NP	NP	NP	NP	NP	NP	NP	NP	NP	5
08/30/06	42	5.7	NP	ND	7.6	23	NP	NP	NP	NP	NP	NP	NP	NP	NP	5
02/26/07	36	ND	NP	ND	ND	17	NP	NP	NP	NP	NP	NP	NP	NP	NP	5
08/13/07	40.3	4.3	NP	1.8	4.4	Dry	NP	NP	NP	NP	NP	NP	NP	NP	NP	1
02/11/08	39	4.7	NP	1.5	1.5	15.4	NP	NP	NP	NP	NP	NP	NP	NP	NP	1
08/25/08	39.3	5.4	NP	1.4	2.6	Dry	NP	NP	NP	NP	NP	NP	NP	NP	NP	1
02/23/09	29.9	5.2	NP	1.1	1	14.4	NP	NP	NP	NP	NP	NP	NP	NP	NP	1
08/24/09	30.5	7	NP	1.5	2.4	19.3	NP	NP	NP	NP	NP	NP	NP	NP	NP	1
02/22/10	34.5	10.1	NP	1.6	ND	15.5	NP	NP	NP	NP	NP	NP	NP	NP	NP	1
08/30/10	32.1	11.7	NP	1.6	2.5	27.8	NP	NP	NP	NP	NP	NP	NP	NP	NP	1
02/22/11	31.9	12.9	ND	1.2	1.4	17.5	ND	4.4	ND	ND	3.1	7.5	4.8	1.5	1	1
08/22/11	33.2	9.6	ND	1.4	1.7	14.7	ND	4.6	ND	1.5	2.8	9.6	4.3	1.3	ND	1
02/22/12	30.1	8.1	ND	1.2	ND	8.4	ND	3	ND	ND	2.1	8.5	4.7	ND	ND	1
08/29/12	26.5	7.4	ND	1.3	1.50	15.2	ND	2.6	ND	ND	1.8	6.8	3.3	ND	ND	1
02/18/13	27.5	7.9	ND	1.4	ND	7	ND	2.9	ND	ND	1.8	5.7	2.7	ND	ND	1
N_i	20	20	5	20	20	18	5	5	5	5	5	5	5	5	5	
sum of rank values (R_i)	2657.5	1873.5	107.5	1102.0	932.0	2096.0	107.5	377.0	107.5	142.5	341.0	492.0	391.0	169.5	129.5	
avg rank value (Rbar)	132.9	93.7	21.5	55.1	46.6	116.4	21.5	75.4	21.5	28.5	68.2	98.4	78.2	33.9	25.9	

	Number of each rank value															Rank Value
rank value of NDs =	1	2	5	4	9	0	5	0	5	4	0	0	0	3	4	21.5
rank value of 1s =	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	43.5
rank value of 1.1s =	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	45
rank value of 1.2s =	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	46.5
rank value of 1.3s =	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0	48.5
rank value of 1.4s =	0	0	0	3	1	0	0	0	0	0	0	0	0	0	0	51.5
rank value of 1.5s =	0	0	0	2	2	0	0	0	0	1	0	0	0	1	0	56.5
rank value of 1.6s =	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	60.5
rank value of 1.7s =	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	62
rank value of 1.8s =	0	0	0	1	0	0	0	0	0	0	2	0	0	0	0	64
rank value of 2.1s =	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	66
rank value of 2.4s =	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	67
rank value of 2.5s =	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	68
rank value of 2.6s =	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	69.5
rank value of 2.7s =	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	71
rank value of 2.8s =	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	72
rank value of 2.9s =	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	73
rank value of 3s =	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	74
rank value of 3.1s =	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	75
rank value of 3.3s =	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	76
rank value of 4.3s =	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	77.5
rank value of 4.4s =	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	79.5
rank value of 4.6s =	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	81
rank value of 4.7s =	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	82.5
rank value of 4.8s =	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	84
rank value of 5.2s =	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	85.5
rank value of 5.4s =	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	87
rank value of 5.5s =	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	88
rank value of 5.7s =	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	89.5
rank value of 6.2s =	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	91
rank value of 6.3s =	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	92
rank value of 6.8s =	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	93

rank value of 7s =	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	94.5
rank value of 7.1s =	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	96
rank value of 7.4s =	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	97
rank value of 7.5s =	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	98
rank value of 7.6s =	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	99
rank value of 7.9s =	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	100
rank value of 8.1s =	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	101
rank value of 8.2s =	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	102
rank value of 8.4s =	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	103
rank value of 8.5s =	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	104
rank value of 8.6s =	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	105
rank value of 8.8s =	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	106
rank value of 9.6s =	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	107.5
rank value of 10s =	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	109.5
rank value of 10.1s =	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	111
rank value of 11s =	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	112
rank value of 11.7s =	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	113
rank value of 12s =	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	114.5
rank value of 12.9s =	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	116
rank value of 13s =	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	117
rank value of 14.4s =	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	118
rank value of 14.7s =	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	119
rank value of 15s =	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	120
rank value of 15.2s =	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	121
rank value of 15.4s =	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	122
rank value of 15.5s =	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	123
rank value of 17s =	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	124
rank value of 17.5s =	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	125
rank value of 19.3s =	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	126
rank value of 22s =	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	127
rank value of 23s =	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	128.5
rank value of 26.5s =	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	130
rank value of 27.5s =	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	131
rank value of 27.8s =	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	132
rank value of 29.9s =	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	133
rank value of 30.1s =	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	134
rank value of 30.5s =	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	135
rank value of 31.9s =	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	136
rank value of 32.1s =	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	137
rank value of 33.2s =	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	138
rank value of 34.5s =	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	139
rank value of 36s =	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	140
rank value of 38s =	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	141
rank value of 39s =	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	142
rank value of 39.3s =	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	143
rank value of 40s =	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	144
rank value of 40.3s =	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	145
rank value of 42s =	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	146.5
rank value of 70s =	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	148
n =	**20**	**20**	**5**	**20**	**20**	**18**	**5**	**5**	**5**	**5**	**5**	**5**	**5**	**5**	**5**	

Sum of rank value calculations

21.5	43	107.5	86	193.5	0	107.5	0	107.5	86	0	0	0	64.5	86
0	0	0	0	43.5	0	0	0	0	0	0	0	0	0	43.5
0	0	0	45	0	0	0	0	0	0	0	0	0	0	0
0	0	0	93	0	0	0	0	0	0	0	0	0	0	0
0	0	0	48.5	0	0	0	0	0	0	0	0	0	48.5	0
0	0	0	154.5	51.5	0	0	0	0	0	0	0	0	0	0
0	0	0	113	113	0	0	0	0	56.5	0	0	0	56.5	0
0	0	0	121	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	62	0	0	0	0	0	0	0	0	0	0
0	0	0	64	0	0	0	0	0	0	128	0	0	0	0
0	0	0	0	0	0	0	0	0	0	66	0	0	0	0
0	0	0	0	67	0	0	0	0	0	0	0	0	0	0
0	0	0	0	68	0	0	0	0	0	0	0	0	0	0
0	0	0	0	69.5	0	0	69.5	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	71	0	0
0	0	0	0	0	0	0	0	0	0	72	0	0	0	0
0	0	0	0	0	0	0	73	0	0	0	0	0	0	0
0	0	0	0	0	0	0	74	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	75	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	76	0	0
0	77.5	0	0	0	0	0	0	0	0	0	0	77.5	0	0
0	0	0	0	79.5	0	0	79.5	0	0	0	0	0	0	0

0	0	0	0	0	0	0	81	0	0	0	0	0	0	0
0	82.5	0	0	0	0	0	0	0	0	0	0	82.5	0	0
0	0	0	0	0	0	0	0	0	0	0	0	84	0	0
0	85.5	0	0	85.5	0	0	0	0	0	0	0	0	0	0
0	87	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	88	0	0	0	0	0	0	0	0	0	0	0
0	89.5	0	0	0	0	0	0	0	0	0	89.5	0	0	0
0	0	0	91	0	0	0	0	0	0	0	0	0	0	0
0	0	0	92	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	93	0	0	0
0	94.5	0	0	0	94.5	0	0	0	0	0	0	0	0	0
0	96	0	0	0	0	0	0	0	0	0	0	0	0	0
0	97	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	98	0	0	0
0	0	0	0	99	0	0	0	0	0	0	0	0	0	0
0	100	0	0	0	0	0	0	0	0	0	0	0	0	0
0	101	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	102	0	0	0	0	0	0	0	0	0
0	0	0	0	0	103	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	104	0	0	0
0	0	0	0	0	105	0	0	0	0	0	0	0	0	0
0	0	0	106	0	0	0	0	0	0	0	0	0	0	0
0	107.5	0	0	0	0	0	0	0	0	0	107.5	0	0	0
0	109.5	0	0	0	109.5	0	0	0	0	0	0	0	0	0
0	111	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	112	0	0	0	0	0	0	0	0	0
0	113	0	0	0	0	0	0	0	0	0	0	0	0	0
0	114.5	0	0	0	114.5	0	0	0	0	0	0	0	0	0
0	116	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	117	0	0	0	0	0	0	0	0	0
0	0	0	0	0	118	0	0	0	0	0	0	0	0	0
0	0	0	0	0	119	0	0	0	0	0	0	0	0	0
0	120	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	121	0	0	0	0	0	0	0	0	0
0	0	0	0	0	122	0	0	0	0	0	0	0	0	0
0	0	0	0	0	123	0	0	0	0	0	0	0	0	0
0	0	0	0	0	124	0	0	0	0	0	0	0	0	0
0	0	0	0	0	125	0	0	0	0	0	0	0	0	0
0	0	0	0	0	126	0	0	0	0	0	0	0	0	0
127	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	128.5	0	0	0	128.5	0	0	0	0	0	0	0	0	0
130	0	0	0	0	0	0	0	0	0	0	0	0	0	0
131	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	132	0	0	0	0	0	0	0	0	0
133	0	0	0	0	0	0	0	0	0	0	0	0	0	0
134	0	0	0	0	0	0	0	0	0	0	0	0	0	0
135	0	0	0	0	0	0	0	0	0	0	0	0	0	0
136	0	0	0	0	0	0	0	0	0	0	0	0	0	0
137	0	0	0	0	0	0	0	0	0	0	0	0	0	0
138	0	0	0	0	0	0	0	0	0	0	0	0	0	0
139	0	0	0	0	0	0	0	0	0	0	0	0	0	0
140	0	0	0	0	0	0	0	0	0	0	0	0	0	0
141	0	0	0	0	0	0	0	0	0	0	0	0	0	0
142	0	0	0	0	0	0	0	0	0	0	0	0	0	0
143	0	0	0	0	0	0	0	0	0	0	0	0	0	0
144	0	0	0	0	0	0	0	0	0	0	0	0	0	0
145	0	0	0	0	0	0	0	0	0	0	0	0	0	0
293	0	0	0	0	0	0	0	0	0	0	0	0	0	0
148	0	0	0	0	0	0	0	0	0	0	0	0	0	0
sum of rank values (R_i)	**2657.5**	**1873.5**	**107.5**	**1102**	**932**	**2096**	**107.5**	**377**	**107.5**	**142.5**	**341**	**492**	**391**	**169.5**	**129.5**

Compute the Kruskal-Wallis statistic:

$$H = \{[12/N(N+1)] * [\Sigma^{K}_{i=1} (R_i^2)/N_i]\} -3(N+1)$$

Well =	Background	MW-1A	MW-2A	MW-3A	MW-6	MW-7	MW-8	MW-9	MW-10	MW-11	MW-13	MW-14	MW-15
Ri^2/N_i =	478126.3	60720.2	43431.2	244068	2311.25	28425.8	2311.25	4061.25	23256.2	48412.8	30576.2	5746.05	3354.05

$N_{i\,bg}$ = 45
N = 148
H = 83.46

Adjust H for ties:

T_i = 74436 sum of T1..T9

$H' = H/(1-(T_j/(N^3-N)))$

$H' = 85.42$

Chi-square = 21.03

Compare the calculated value H' to the tabulated Chi-square value with K-1 = # groups -1 = 12df at the 5% significance level from Table 1 of the IFG. The value is 21.03 which is less than H' =85.42.
Therefore, there is evidence of significant differences between the well groups.
Post-hoc pairwise comparisons are necessary (see below).

Calculate the critical values to compare each compliance well to the background wells:

Critical Value $(C_x) = P(N(N+1)/12)^{0.5} * (1/N_{i\,bg}+1/N_x)^{0.5}$

P = 2.33 Percentile of Standard Normal Distribution from Table 4 of IFG

N = 478126

$N_{i\,bg}$ = total samples (N_i) of background data

N_x = total samples (N_i) of well x

Difference between average ranks (Dx) = Rbar (well x) - avg Rbar (background)

Well =	MW-1A	MW-2A	MW-3A	MW-6	MW-7	MW-8	MW-9	MW-10	MW-11	MW-13	MW-14	MW-15
Rbar (well x) =	55.1	46.6	116.4	21.5	75.4	21.5	28.5	68.2	98.4	78.2	33.9	25.9
avg Rbar (background) =	103.1	103.1	103.1	103.1	103.1	103.1	103.1	103.1	103.1	103.1	103.1	103.1
Dx =	-48.0	-56.5	13.4	-81.6	-27.7	-81.6	-74.6	-34.9	-4.7	-24.9	-69.2	-77.2
Cx =	26.8	26.8	27.9	47.1	47.1	47.1	47.1	47.1	47.1	47.1	47.1	47.1
Statistical Significance ?	-	-	-	-	-	-	-	-	-	-	-	-
If SSI, is current event above MCL?	-	-	-	-	-	-	-	-	-	-	-	-

Compare each difference (Dx) with the corresponding critical value (Cx).
No compliance well's difference between average ranks exceeded its corresponding critical value at a 5% significance level. Therefore, we conclude that significant evidence of contamination does not exist at the 5% significance level.

Haywood County Closed Landfill, Francis Farm
Haywood County, North Carolina
BLE Project Number J12-1957-33

Compound: **1,2-Dichloroethane**
NC MCL (µg/l): 0.4
Method: Poisson Prediction Limits
Background: MW-4, MW-5, MW-12

	MW-4	MW-5	MW-12	MW-1A	MW-2A	MW-3A	MW-6	MW-7	MW-8	MW-9	MW-10	MW-11	MW-13	MW-14	MW-15	MDL
02/18/99	NT	NS	NP	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
08/16/99	NT	NS	NP	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
02/14/00	NT	NS	NP	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
08/14/00	NT	NT	NP	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
03/19/01	NT	NT	NP	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
08/27/02	NT	NT	NP	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
02/24/03	NT	NT	NP	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
08/11/03	ND	ND	NP	ND	ND	5	NP	NP	NP	NP	NP	NP	NP	NP	NP	5
02/09/04	ND	ND	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	5
08/16/04	ND	ND	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	5
02/14/05	ND	ND	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	5
09/01/05	ND	ND	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	5
02/16/06	ND	ND	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	5
08/30/06	ND	ND	NP	ND	ND	5	NP	NP	NP	NP	NP	NP	NP	NP	NP	5
02/26/07	ND	ND	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	5
08/13/07	1.3	ND	NP	1.1	ND	Dry	NP	NP	NP	NP	NP	NP	NP	NP	NP	1
02/11/08	1.5	ND	NP	ND	ND	3.2	NP	NP	NP	NP	NP	NP	NP	NP	NP	1
08/25/08	1.5	ND	NP	ND	ND	Dry	NP	NP	NP	NP	NP	NP	NP	NP	NP	1
02/23/09	1.6	ND	NP	ND	ND	4.1	NP	NP	NP	NP	NP	NP	NP	NP	NP	1
08/24/09	1.6	ND	NP	ND	ND	5.1	NP	NP	NP	NP	NP	NP	NP	NP	NP	1
02/22/10	1.7	ND	NP	1.2	ND	2.5	NP	NP	NP	NP	NP	NP	NP	NP	NP	1
08/30/10	1.7	ND	NP	1	ND	6.2	NP	NP	NP	NP	NP	NP	NP	NP	NP	1
02/22/11	2	ND	ND	ND	ND	2.8	ND	3	ND	ND	ND	ND	ND	ND	ND	1
08/22/11	2	ND	ND	ND	ND	2.1	ND	3.2	ND	ND	ND	ND	ND	ND	ND	1
02/22/12	1.7	ND	ND	ND	ND	ND	ND	2.2	ND	ND	ND	ND	ND	ND	ND	1
08/29/12	1.4	ND	ND	ND	ND	2.1	ND	1.7	ND	ND	ND	ND	ND	ND	ND	1
02/18/13	1.6	ND	ND	ND	ND	ND	ND	2.2	ND	ND	ND	ND	ND	ND	ND	1

1) If not detected (ND), use half of the detection limit.

02/18/99	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
08/16/99	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
02/14/00	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
08/14/00	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
03/19/01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
08/27/02	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
02/24/03	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
08/11/03	2.5	2.5	-	2.5	2.5	5	-	-	-	-	-	-	-	-	-
02/09/04	2.5	2.5	-	2.5	2.5	2.5	-	-	-	-	-	-	-	-	-
08/16/04	2.5	2.5	-	2.5	2.5	2.5	-	-	-	-	-	-	-	-	-
02/14/05	2.5	2.5	-	2.5	2.5	2.5	-	-	-	-	-	-	-	-	-
09/01/05	2.5	2.5	-	2.5	2.5	2.5	-	-	-	-	-	-	-	-	-
02/16/06	2.5	2.5	-	2.5	2.5	2.5	-	-	-	-	-	-	-	-	-
08/30/06	2.5	2.5	-	2.5	2.5	5	-	-	-	-	-	-	-	-	-
02/26/07	2.5	2.5	-	2.5	2.5	2.5	-	-	-	-	-	-	-	-	-
08/13/07	1.3	0.5	-	1.1	0.5	-	-	-	-	-	-	-	-	-	-
02/11/08	1.5	0.5	-	0.5	0.5	3.2	-	-	-	-	-	-	-	-	-
08/25/08	1.5	0.5	-	0.5	0.5	-	-	-	-	-	-	-	-	-	-
02/23/09	1.6	0.5	-	0.5	0.5	4.1	-	-	-	-	-	-	-	-	-
08/24/09	1.6	0.5	-	0.5	0.5	5.1	-	-	-	-	-	-	-	-	-
02/22/10	1.7	0.5	-	1.2	0.5	2.5	-	-	-	-	-	-	-	-	-
08/30/10	1.7	0.5	-	1	0.5	6.2	-	-	-	-	-	-	-	-	-
02/22/11	2	0.5	0.5	0.5	0.5	2.8	0.5	3	0.5	0.5	0.5	0.5	0.5	0.5	0.5
08/22/11	2	0.5	0.5	0.5	0.5	2.1	0.5	3.2	0.5	0.5	0.5	0.5	0.5	0.5	0.5
02/22/12	1.7	0.5	0.5	0.5	0.5	0.5	0.5	2.2	0.5	0.5	0.5	0.5	0.5	0.5	0.5
08/29/12	1.4	0.5	0.5	0.5	0.5	2.1	0.5	1.7	0.5	0.5	0.5	0.5	0.5	0.5	0.5
02/18/13				0.5	0.5	0.5	0.5	2.2	0.5	0.5	0.5	0.5	0.5	0.5	0.5

2) Set the total number of data values for background wells (through the previous sampling event) equal to 'n' = 19.
Use 1/2 of the method detection limit to calculate the Total Poisson Count of the Sum (T_n).

$n = 42$
$T_{n1} = 65.5$

3) Using Gibbons' formula, calculate the upper Poisson Prediction limit T^*_k:

$$T^*_k = cT_{n1} + ct^2/2 + ct[T_{n1}(1+1/c) + t^2/4]^{-0.5}$$

where $c = k/n$
and where k = the number of future predicted measurements (one per well during the current sampling event)
and where t = the upper 99th percentile of the t-distribution with (n-1) degrees of freedom (Table 6 of the IFG).

$k = 12$
$n = 42$
$T_{n1} = 65.5$
$t[41,.01] = 2.421$
$c = 0.286$
$T_{n2} = 7.7$
$T^*_k = 31.5$

4) Compare the *Poisson Prediction Limit* (T^*_k) to the *Sum of the Concentrations Detected* (T_{n2}) in the wells during the most recent sampling event.
Since the Poisson Prediction Limit was not exceeded, there is no evidence of contamination.

Haywood County Closed Landfill, Francis Farm
Haywood County, North Carolina
BLE Project Number J12-1957-33

Compound: **1,1-Dichloroethene**
NC MCL (µg/l): 7
Method: Poisson Prediction Limits
Background: MW-4, MW-5, MW-12

	MW-4	MW-5	MW-12	MW-1A	MW-2A	MW-3A	MW-6	MW-7	MW-8	MW-9	MW-10	MW-11	MW-13	MW-14	MW-15	MDL
02/18/99	NT	NS	NP	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
08/16/99	NT	NS	NP	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
02/14/00	NT	NS	NP	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
08/14/00	NT	NT	NP	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
03/19/01	NT	NT	NP	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
08/27/02	NT	NT	NP	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
02/24/03	NT	NT	NP	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
08/11/03	ND	ND	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	**5**
02/09/04	ND	**11**	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	**5**
08/16/04	ND	ND	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	**5**
02/14/05	ND	ND	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	**5**
09/01/05	ND	ND	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	**5**
02/16/06	ND	ND	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	**5**
08/30/06	ND	ND	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	**5**
02/26/07	ND	ND	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	**5**
08/13/07	ND	ND	NP	ND	ND	Dry	NP	NP	NP	NP	NP	NP	NP	NP	NP	**1**
02/11/08	ND	ND	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	**1**
08/25/08	ND	ND	NP	ND	ND	Dry	NP	NP	NP	NP	NP	NP	NP	NP	NP	**1**
02/23/09	ND	ND	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	**1**
08/24/09	ND	ND	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	**1**
02/22/10	ND	ND	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	**1**
08/30/10	ND	ND	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	**1**
02/22/11	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**1**
08/22/11	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**1**
02/22/12	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**1**
08/29/12	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**1**
02/18/13	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**1**

1) If not detected (ND), use half of the detection limit.

02/18/99	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
08/16/99	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
02/14/00	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
08/14/00	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
03/19/01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
08/27/02	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
02/24/03	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
08/11/03	2.5	2.5	-	2.5	2.5	2.5	-	-	-	-	-	-	-	-	-
02/09/04	2.5	11	-	2.5	2.5	2.5	-	-	-	-	-	-	-	-	-
08/16/04	2.5	2.5	-	2.5	2.5	2.5	-	-	-	-	-	-	-	-	-
02/14/05	2.5	2.5	-	2.5	2.5	2.5	-	-	-	-	-	-	-	-	-
09/01/05	2.5	2.5	-	2.5	2.5	2.5	-	-	-	-	-	-	-	-	-
02/16/06	2.5	2.5	-	2.5	2.5	2.5	-	-	-	-	-	-	-	-	-
08/30/06	2.5	2.5	-	2.5	2.5	2.5	-	-	-	-	-	-	-	-	-
02/26/07	2.5	2.5	-	2.5	2.5	2.5	-	-	-	-	-	-	-	-	-
08/13/07	0.5	0.5	-	0.5	0.5	-	-	-	-	-	-	-	-	-	-
02/11/08	0.5	0.5	-	0.5	0.5	0.5	-	-	-	-	-	-	-	-	-
08/25/08	0.5	0.5	-	0.5	0.5	-	-	-	-	-	-	-	-	-	-
02/23/09	0.5	0.5	-	0.5	0.5	0.5	-	-	-	-	-	-	-	-	-
08/24/09	0.5	0.5	-	0.5	0.5	0.5	-	-	-	-	-	-	-	-	-
02/22/10	0.5	0.5	-	0.5	0.5	0.5	-	-	-	-	-	-	-	-	-
08/30/10	0.5	0.5	-	0.5	0.5	0.5	-	-	-	-	-	-	-	-	-
02/22/11	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
08/22/11	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
02/22/12	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
08/29/12	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
02/18/13				0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5

2) Set the total number of data values for background wells (through the previous sampling event) equal to 'n' = 19.
Use 1/2 of the method detection limit to calculate the Total Poisson Count of the Sum (T_n).

$n = 42$
$T_{n1} = 61.5$

3) Using Gibbons' formula, calculate the upper Poisson Prediction limit T^*_k:

$$T^*_k = cT_{n1} + ct^2/2 + ct[T_{n1}(1+1/c) + t^2/4]^{0.5}$$

where $c = k/n$
and where k = the number of future predicted measurements (one per well during the current sampling event)
and where t = the upper 99th percentile of the t-distribution with (n-1) degrees of freedom (Table 6 of the IFG).

$k = 12$
$n = 42$
$T_{n1} = 61.5$
$t[41,.01] = 2.421$
$c = 0.286$
$T_{n2} = 6$
$T^*_k = 29.9$

4) Compare the *Poisson Prediction Limit* (T^*_k) to the *Sum of the Concentrations Detected* (T_{n2}) in the wells during the most recent sampling event.
Since the Poisson Prediction Limit was not exceeded, there is no evidence of contamination.

Haywood County Closed Landfill, Francis Farm
Haywood County, North Carolina
BLE Project Number J12-1957-33

Compound: cis-1,2-Dichloroethene
NC MCL (µg/l): 70
Method: Kruskal-Wallis
Background: MW-4, MW-5, MW-12

	MW-4	MW-5	MW-12	MW-1A	MW-2A	MW-3A	MW-6	MW-7	MW-8	MW-9	MW-10	MW-11	MW-13	MW-14	MW-15	MDL
02/18/99	NT	NS	NP	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
08/16/99	NT	NS	NP	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
02/14/00	NT	NS	NP	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
08/14/00	NT	NT	NP	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
03/19/01	NT	NT	NP	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
08/27/02	NT	NT	NP	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
02/24/03	NT	NT	NP	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
08/11/03	16	21	NP	13	50	5.6	NP	NP	NP	NP	NP	NP	NP	NP	NP	5
02/09/04	24	ND	NP	11	7.6	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	5
08/16/04	29	15	NP	9.7	12	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	5
02/14/05	48	20	NP	10	26	6	NP	NP	NP	NP	NP	NP	NP	NP	NP	5
09/01/05	31	13	NP	11	27	9.4	NP	NP	NP	NP	NP	NP	NP	NP	NP	5
02/16/06	ND	7.4	NP	ND	17	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	5
08/30/06	34	ND	NP	6.8	16	5.8	NP	NP	NP	NP	NP	NP	NP	NP	NP	5
02/26/07	30	ND	NP	ND	12	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	5
08/13/07	31.6	4.3	NP	5.1	9.7	Dry	NP	NP	NP	NP	NP	NP	NP	NP	NP	1
02/11/08	33.4	4.5	NP	3.8	ND	1.6	NP	NP	NP	NP	NP	NP	NP	NP	NP	1
08/25/08	34.5	5.8	NP	2.8	7.6	Dry	NP	NP	NP	NP	NP	NP	NP	NP	NP	1
02/23/09	27.7	5.4	NP	2.2	9.2	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	1
08/24/09	31.8	7.1	NP	2.1	11.2	2.2	NP	NP	NP	NP	NP	NP	NP	NP	NP	1
02/22/10	36.5	7.8	NP	1.2	5.8	2	NP	NP	NP	NP	NP	NP	NP	NP	NP	1
08/30/10	33.6	6.1	NP	1.5	6.2	3.4	NP	NP	NP	NP	NP	NP	NP	NP	NP	1
02/22/11	34.6	14.4	ND	1	5.6	1.6	ND	2.7	ND	ND	2.3	10.9	17.3	32.5	8.9	1
08/22/11	36.7	11.5	ND	ND	4	2.4	ND	3.6	ND	2.3	2.1	10.1	15.8	31.1	7.7	1
02/22/12	33.1	10.2	ND	ND	4.6	ND	ND	2.4	ND	ND	1.7	10.6	18.4	20.7	9	1
08/29/12	30.5	8	ND	ND	2.8	2.6	ND	2.2	ND	1.6	1.3	15.1	13.9	22.8	5.3	1
02/18/13	31.4	10.4	ND	ND	1.6	ND	ND	2.6	ND	ND	1.6	17.3	14.2	20.6	10.6	1
N_i	20	20	5	20	20	18	5	5	5	5	5	5	5	5	5	
sum of rank values (R_i)	2610.0	1621.0	92.5	1096.0	1780.5	804.0	92.5	286.0	92.5	152.0	230.0	525.0	571.5	642.0	430.5	
avg rank value (Rbar)	130.5	81.1	18.5	54.8	89.0	44.7	18.5	57.2	18.5	30.4	46.0	105.0	114.3	128.4	86.1	

	Number of each rank value															Rank Value
rank value of NDs =	1	3	5	6	1	7	5	0	5	3	0	0	0	0	0	18.5
rank value of 1s =	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	37
rank value of 1.2s =	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	38
rank value of 1.3s =	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	39
rank value of 1.5s =	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	40
rank value of 1.6s =	0	0	0	0	1	2	0	0	0	1	1	0	0	0	0	43
rank value of 1.7s =	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	46
rank value of 2s =	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	47
rank value of 2.1s =	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	48.5
rank value of 2.2s =	0	0	0	1	0	1	0	1	0	0	0	0	0	0	0	51
rank value of 2.3s =	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	53.5
rank value of 2.4s =	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	55.5
rank value of 2.6s =	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	57.5
rank value of 2.7s =	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	59
rank value of 2.8s =	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	60.5
rank value of 3.4s =	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	62
rank value of 3.6s =	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	63
rank value of 3.8s =	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	64
rank value of 4s =	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	65
rank value of 4.3s =	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	66
rank value of 4.5s =	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	67
rank value of 4.6s =	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	68
rank value of 5.1s =	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	69
rank value of 5.3s =	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	70
rank value of 5.4s =	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	71
rank value of 5.6s =	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	72.5
rank value of 5.8s =	0	1	0	0	1	1	0	0	0	0	0	0	0	0	0	75
rank value of 6s =	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	77
rank value of 6.1s =	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	78
rank value of 6.2s =	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	79
rank value of 6.8s =	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	80
rank value of 7.1s =	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	81

rank value of 7.4s =	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	82
rank value of 7.6s =	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	83.5
rank value of 7.7s =	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	85
rank value of 7.8s =	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	86
rank value of 8s =	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	87
rank value of 8.9s =	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	88
rank value of 9s =	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	89
rank value of 9.2s =	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	90
rank value of 9.4s =	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	91
rank value of 9.7s =	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	92.5
rank value of 10s =	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	94
rank value of 10.1s =	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	95
rank value of 10.2s =	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	96
rank value of 10.4s =	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	97
rank value of 10.6s =	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	98.5
rank value of 10.9s =	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	100
rank value of 11s =	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	101.5
rank value of 11.2s =	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	103
rank value of 11.5s =	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	104
rank value of 12s =	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	105.5
rank value of 13s =	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	107.5
rank value of 13.9s =	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	109
rank value of 14.2s =	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	110
rank value of 14.4s =	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	111
rank value of 15s =	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	112
rank value of 15.1s =	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	113
rank value of 15.8s =	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	114
rank value of 16s =	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	115.5
rank value of 17s =	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	117
rank value of 17.3s =	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	118.5
rank value of 18.4s =	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	120
rank value of 20s =	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	121
rank value of 20.6s =	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	122
rank value of 20.7s =	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	123
rank value of 21s =	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	124
rank value of 22.8s =	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	125
rank value of 24s =	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	126
rank value of 26s =	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	127
rank value of 27s =	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	128
rank value of 27.7s =	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	129
rank value of 29s =	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	130
rank value of 30s =	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	131
rank value of 30.5s =	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	132
rank value of 31s =	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	133
rank value of 31.1s =	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	134
rank value of 31.4s =	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	135
rank value of 31.6s =	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	136
rank value of 31.8s =	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	137
rank value of 32.5s =	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	138
rank value of 33.1s =	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	139
rank value of 33.4s =	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	140
rank value of 33.6s =	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	141
rank value of 34s =	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	142
rank value of 34.5s =	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	143
rank value of 34.6s =	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	144
rank value of 36.5s =	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	145
rank value of 36.7s =	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	146
rank value of 48s =	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	147
rank value of 50s =	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	148
n =	**20**	**20**	**5**	**20**	**20**	**18**	**5**	**5**	**5**	**5**	**5**	**5**	**5**	**5**	**5**	

Sum of rank value calculations

18.5	55.5	92.5	111	18.5	129.5	92.5	0	92.5	55.5	0	0	0	0	0
0	0	0	37	0	0	0	0	0	0	0	0	0	0	0
0	0	0	38	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	39	0	0	0	0
0	0	0	40	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	43	86	0	0	0	43	43	0	0	0	0
0	0	0	0	0	0	0	0	0	0	46	0	0	0	0
0	0	0	0	0	47	0	0	0	0	0	0	0	0	0
0	0	0	48.5	0	0	0	0	0	0	48.5	0	0	0	0
0	0	0	51	0	51	0	51	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	53.5	53.5	0	0	0	0
0	0	0	0	0	55.5	0	55.5	0	0	0	0	0	0	0

0	0	0	0	0	57.5	0	57.5	0	0	0	0	0	0
0	0	0	0	0	0	0	59	0	0	0	0	0	0
0	0	0	60.5	60.5	0	0	0	0	0	0	0	0	0
0	0	0	0	0	62	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	63	0	0	0	0	0	0
0	0	0	64	0	0	0	0	0	0	0	0	0	0
0	0	0	0	65	0	0	0	0	0	0	0	0	0
0	66	0	0	0	0	0	0	0	0	0	0	0	0
0	67	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	68	0	0	0	0	0	0	0	0	0
0	0	0	69	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	70
0	71	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	72.5	72.5	0	0	0	0	0	0	0	0
0	75	0	0	75	75	0	0	0	0	0	0	0	0
0	0	0	0	0	77	0	0	0	0	0	0	0	0
0	78	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	79	0	0	0	0	0	0	0	0	0
0	0	0	80	0	0	0	0	0	0	0	0	0	0
0	81	0	0	0	0	0	0	0	0	0	0	0	0
0	82	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	167	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	85
0	86	0	0	0	0	0	0	0	0	0	0	0	0
0	87	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	88
0	0	0	0	0	0	0	0	0	0	0	0	0	89
0	0	0	0	90	0	0	0	0	0	0	0	0	0
0	0	0	0	0	91	0	0	0	0	0	0	0	0
0	0	0	92.5	92.5	0	0	0	0	0	0	0	0	0
0	0	0	94	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	95	0	0
0	96	0	0	0	0	0	0	0	0	0	0	0	0
0	97	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	98.5	0	98.5
0	0	0	0	0	0	0	0	0	0	0	100	0	0
0	0	0	203	0	0	0	0	0	0	0	0	0	0
0	0	0	0	103	0	0	0	0	0	0	0	0	0
0	104	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	211	0	0	0	0	0	0	0	0	0
0	107.5	0	107.5	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	109	0
0	0	0	0	0	0	0	0	0	0	0	0	110	0
0	111	0	0	0	0	0	0	0	0	0	0	0	0
0	112	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	113	0	0
0	0	0	0	0	0	0	0	0	0	0	0	114	0
115.5	0	0	0	115.5	0	0	0	0	0	0	0	0	0
0	0	0	0	117	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	118.5	118.5	0
0	0	0	0	0	0	0	0	0	0	0	0	120	0
0	121	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	122
0	0	0	0	0	0	0	0	0	0	0	0	0	123
0	124	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	125
126	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	127	0	0	0	0	0	0	0	0	0
0	0	0	0	128	0	0	0	0	0	0	0	0	0
129	0	0	0	0	0	0	0	0	0	0	0	0	0
130	0	0	0	0	0	0	0	0	0	0	0	0	0
131	0	0	0	0	0	0	0	0	0	0	0	0	0
132	0	0	0	0	0	0	0	0	0	0	0	0	0
133	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	134	0
135	0	0	0	0	0	0	0	0	0	0	0	0	0
136	0	0	0	0	0	0	0	0	0	0	0	0	0
137	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	138	0
139	0	0	0	0	0	0	0	0	0	0	0	0	0
140	0	0	0	0	0	0	0	0	0	0	0	0	0
141	0	0	0	0	0	0	0	0	0	0	0	0	0
142	0	0	0	0	0	0	0	0	0	0	0	0	0
143	0	0	0	0	0	0	0	0	0	0	0	0	0
144	0	0	0	0	0	0	0	0	0	0	0	0	0
145	0	0	0	0	0	0	0	0	0	0	0	0	0

	146	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	147	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	148	0	0	0	0	0	0	0	0	0	0
sum of rank values (R_i)	**2610**	**1621**	**92.5**	**1096**	**1780.5**	**804**	**92.5**	**286**	**92.5**	**152**	**230**	**525**	**571.5**	**642**	**430.5**

Compute the Kruskal-Wallis statistic:

$$H = \{[12/N(N+1)] * [\Sigma^{K}_{i=1} (R_i^2)/N_i]\} -3(N+1)$$

Well =	**Background**	**MW-1A**	**MW-2A**	**MW-3A**	**MW-6**	**MW-7**	**MW-8**	**MW-9**	**MW-10**	**MW-11**	**MW-13**	**MW-14**	**MW-15**
Ri^2/N_i =	415392.3	60060.8	158509	35912	1711.25	16359.2	1711.25	4620.8	10580	55125	65322.5	82432.8	37066.1

$N_{i\,bg}$ = 45
N = 148
H = 67.13

Adjust H for ties:

T_i = 46872 sum of T1..T8

$H' = H/(1-(T_i/(N^3-N)))$
H' = 68.12
Chi-square = 21.03

Compare the calculated value H' to the tabulated Chi-square value with K-1 = # groups -1 = 12df at the 5% significance level from Table 1 of the IFG. The value is 21.03 which is less than H' =68.12.
Therefore, there is evidence of significant differences between the well groups.
Post-hoc pairwise comparisons are necessary (see below).

Calculate the critical values to compare each compliance well to the background wells:

Critical Value (C_x) = $P(N(N+1)/12)^{0.5} * (1/N_{i\,bg}+1/N_x)^{0.5}$
P = 415392 Percentile of Standard Normal Distribution from Table 4 of IFG
N = total sample size
$N_{i\,bg}$ = total samples (N_i) of background data
N_x = total samples (N_i) of well x

Difference between average ranks (Dx) = Rbar (well x) - avg Rbar (background)

Well =	MW-1A	MW-2A	MW-3A	MW-6	MW-7	MW-8	MW-9	MW-10	MW-11	MW-13	MW-14	MW-15
Rbar (well x) =	54.8	89.025	44.6667	18.5	57.2	18.5	30.4	46	105	114.3	128.4	86.1
avg Rbar (background) =	96.0778	96.0778	96.0778	96.0778	96.0778	96.0778	96.0778	96.0778	96.0778	96.0778	96.0778	96.0778
Dx =	-41.2778	-7.05278	-51.4111	-77.5778	-38.8778	-77.5778	-65.6778	-50.0778	8.92222	18.2222	32.3222	-9.97778
Cx =	4785499	4785499	4966147	8394320	8394320	8394320	8394320	8394320	8394320	8394320	8394320	8394320
Statistical Significance ?	-	-	-	-	-	-	-	-	-	-	-	-
If SSI, is current event above MCL?	-	-	-	-	-	-	-	-	-	-	-	-

Compare each difference (Dx) with the corresponding critical value (Cx).
No compliance well's difference between average ranks exceeded its corresponding critical value at a 5% significance level. Therefore, we conclude that significant evidence of contamination does not exist at the 5% significance level.

Haywood County Closed Landfill, Francis Farm
Haywood County, North Carolina
BLE Project Number J12-1957-33

Compound: **cis-1,3-Dichloropropene**
NC MCL (µg/l): 0.4
Method: Poisson Prediction Limits
Background: MW-4, MW-5, MW-12

	MW-4	MW-5	MW-12	MW-1A	MW-2A	MW-3A	MW-6	MW-7	MW-8	MW-9	MW-10	MW-11	MW-13	MW-14	MW-15	MDL
02/18/99	NT	NS	NP	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
08/16/99	NT	NS	NP	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
02/14/00	NT	NS	NP	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
08/14/00	NT	NT	NP	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
03/19/01	NT	NT	NP	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
08/27/02	NT	NT	NP	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
02/24/03	NT	NT	NP	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
08/11/03	ND	ND	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	**5**
02/09/04	ND	**8.1**	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	**5**
08/16/04	ND	ND	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	**10**
02/14/05	ND	ND	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	**10**
09/01/05	ND	ND	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	**5**
02/16/06	ND	ND	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	**5**
08/30/06	ND	ND	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	**5**
02/26/07	ND	ND	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	**5**
08/13/07	ND	ND	NP	ND	ND	Dry	NP	NP	NP	NP	NP	NP	NP	NP	NP	**1**
02/11/08	ND	ND	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	**1**
08/25/08	ND	ND	NP	ND	ND	Dry	NP	NP	NP	NP	NP	NP	NP	NP	NP	**1**
02/23/09	ND	ND	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	**1**
08/24/09	ND	ND	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	**1**
02/22/10	ND	ND	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	**1**
08/30/10	ND	ND	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	**1**
02/22/11	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**1**
08/22/11	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**1**
02/22/12	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**1**
08/29/12	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**1**
02/18/13	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**1**

1) If not detected (ND), use half of the detection limit

02/18/99	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
08/16/99	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
02/14/00	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
08/14/00	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
03/19/01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
08/27/02	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
02/24/03	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
08/11/03	2.5	2.5	-	2.5	2.5	2.5	-	-	-	-	-	-	-	-	-
02/09/04	2.5	8.1	-	2.5	2.5	2.5	-	-	-	-	-	-	-	-	-
08/16/04	5	5	-	5	5	5	-	-	-	-	-	-	-	-	-
02/14/05	5	5	-	5	5	5	-	-	-	-	-	-	-	-	-
09/01/05	2.5	2.5	-	2.5	2.5	2.5	-	-	-	-	-	-	-	-	-
02/16/06	2.5	2.5	-	2.5	2.5	2.5	-	-	-	-	-	-	-	-	-
08/30/06	2.5	2.5	-	2.5	2.5	2.5	-	-	-	-	-	-	-	-	-
02/26/07	2.5	2.5	-	2.5	2.5	2.5	-	-	-	-	-	-	-	-	-
08/13/07	0.5	0.5	-	0.5	0.5	-	-	-	-	-	-	-	-	-	-
02/11/08	0.5	0.5	-	0.5	0.5	0.5	-	-	-	-	-	-	-	-	-
08/25/08	0.5	0.5	-	0.5	0.5	-	-	-	-	-	-	-	-	-	-
02/23/09	0.5	0.5	-	0.5	0.5	0.5	-	-	-	-	-	-	-	-	-
08/24/09	0.5	0.5	-	0.5	0.5	0.5	-	-	-	-	-	-	-	-	-
02/22/10	0.5	0.5	-	0.5	0.5	0.5	-	-	-	-	-	-	-	-	-
08/30/10	0.5	0.5	-	0.5	0.5	0.5	-	-	-	-	-	-	-	-	-
02/22/11	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
08/22/11	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
02/22/12	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
08/29/12	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
02/18/13				0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5

2) Set the total number of data values for background wells (through the previous sampling event) equal to 'n' = 19.
Use 1/2 of the method detection limit to calculate the Total Poisson Count of the Sum (T_n).

$n = 42$
$T_{n1} = 68.6$

3) Using Gibbons' formula, calculate the upper Poisson Prediction limit T^*_k:

$$T^*_k = cT_{n1} + ct^2/2 + ct[T_{n1}(1+1/c) + t^2/4]^{-0.5}$$

where $c = k/n$
and where k = the number of future predicted measurements (one per well during the current sampling event)
and where t = the upper 99th percentile of the t-distribution with (n-1) degrees of freedom (Table 6 of the IFG).

$k = 12$
$n = 42$
$T_{n1} = 68.6$
$t[41,.01] = 2.421$
$c = 0.286$
$T_{n2} = 6$
$T^*_k = 32.6$

4) Compare the *Poisson Prediction Limit* (T^*_k) to the *Sum of the Concentrations Detected* (T_{n2}) in the wells during the most recent sampling event.
Since the Poisson Prediction Limit was not exceeded, there is no evidence of contamination

Haywood County Closed Landfill, Francis Farm
Haywood County, North Carolina
BLE Project Number J12-1957-33

Compound: **Ethylbenzene**
NC MCL (µg/l). 600
Method: Poisson Prediction Limits
Background: MW-4, MW-5, MW-12

	MW-4	MW-5	MW-12	MW-1A	MW-2A	MW-3A	MW-6	MW-7	MW-8	MW-9	MW-10	MW-11	MW-13	MW-14	MW-15	MDL
02/18/99	NT	NS	NP	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
08/16/99	NT	NS	NP	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
02/14/00	NT	NS	NP	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
08/14/00	NT	NT	NP	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
03/19/01	NT	NT	NP	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
08/27/02	NT	NT	NP	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
02/24/03	NT	NT	NP	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
08/11/03	ND	ND	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	5
02/09/04	ND	ND	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	5
08/16/04	ND	ND	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	5
02/14/05	ND	ND	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	5
09/01/05	ND	ND	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	5
02/16/06	ND	ND	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	5
08/30/06	ND	ND	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	5
02/26/07	ND	ND	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	5
08/13/07	**1.1**	ND	NP	ND	ND	Dry	NP	NP	NP	NP	NP	NP	NP	NP	NP	1
02/11/08	**2.8**	ND	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	1
08/25/08	**2.1**	ND	NP	ND	ND	Dry	NP	NP	NP	NP	NP	NP	NP	NP	NP	1
02/23/09	ND	ND	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	1
08/24/09	**1.7**	ND	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	1
02/22/10	**1.8**	ND	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	1
08/30/10	ND	ND	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	1
02/22/11	**1.7**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1
08/22/11	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1
02/22/12	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1
08/29/12	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1
02/18/13	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1

1) If not detected (ND), use half of the detection limit.

02/18/99	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
08/16/99	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
02/14/00	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
08/14/00	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
03/19/01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
08/27/02	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
02/24/03	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
08/11/03	2.5	2.5	-	2.5	2.5	2.5	-	-	-	-	-	-	-	-	-
02/09/04	2.5	2.5	-	2.5	2.5	2.5	-	-	-	-	-	-	-	-	-
08/16/04	2.5	2.5	-	2.5	2.5	2.5	-	-	-	-	-	-	-	-	-
02/14/05	2.5	2.5	-	2.5	2.5	2.5	-	-	-	-	-	-	-	-	-
09/01/05	2.5	2.5	-	2.5	2.5	2.5	-	-	-	-	-	-	-	-	-
02/16/06	2.5	2.5	-	2.5	2.5	2.5	-	-	-	-	-	-	-	-	-
08/30/06	2.5	2.5	-	2.5	2.5	2.5	-	-	-	-	-	-	-	-	-
02/26/07	2.5	2.5	-	2.5	2.5	2.5	-	-	-	-	-	-	-	-	-
08/13/07	1.1	0.5	-	0.5	0.5	-	-	-	-	-	-	-	-	-	-
02/11/08	2.8	0.5	-	0.5	0.5	0.5	-	-	-	-	-	-	-	-	-
08/25/08	2.1	0.5	-	0.5	0.5	-	-	-	-	-	-	-	-	-	-
02/23/09	0.5	0.5	-	0.5	0.5	0.5	-	-	-	-	-	-	-	-	-
08/24/09	1.7	0.5	-	0.5	0.5	0.5	-	-	-	-	-	-	-	-	-
02/22/10	1.8	0.5	-	0.5	0.5	0.5	-	-	-	-	-	-	-	-	-
08/30/10	0.5	0.5	-	0.5	0.5	0.5	-	-	-	-	-	-	-	-	-
02/22/11	1.7	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
08/22/11	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
02/22/12	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
08/29/12	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
02/18/13				0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5

2) Set the total number of data values for background wells (through the previous sampling event) equal to 'n' = 19.
Use 1/2 of the method detection limit to calculate the Total Poisson Count of the Sum (T_n).

$n = 42$
$T_{n1} = 61.2$

3) Using Gibbons' formula, calculate the upper Poisson Prediction limit T^*_k:

$$T^*_k = cT_{n1} + ct^2/2 + ct[T_{n1}(1+1/c) + t^2/4]^{-0.5}$$

where $c = k/n$
and where k = the number of future predicted measurements (one per well during the current sampling event)
and where t = the upper 99th percentile of the t-distribution with (n-1) degrees of freedom (Table 6 of the IFG).

$k = 12$
$n = 42$
$T_{n1} = 61.2$
$t[41,.01] = 2.421$
$c = 0.286$
$T_{n2} = 6$
$T^*_k = 29.8$

4) Compare the *Poisson Prediction Limit* (T^*_k) to the *Sum of the Concentrations Detected* (T_{n2}) in the wells during the most recent sampling event.
Since the Poisson Prediction Limit was not exceeded, there is no evidence of contamination.

Haywood County Closed Landfill, Francis Farm
Haywood County, North Carolina
BLE Project Number J12-1957-33

Compound: **Dichloromethane**
NC MCL (µg/l): 5
Method: Kruskal-Wallis
Background: MW-4, MW-5, MW-12

	MW-4	MW-5	MW-12	MW-1A	MW-2A	MW-3A	MW-6	MW-7	MW-8	MW-9	MW-10	MW-11	MW-13	MW-14	MW-15	MDL
02/18/99	NT	NS	NP	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
08/16/99	NT	NS	NP	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
02/14/00	NT	NS	NP	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
08/14/00	NT	NT	NP	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
03/19/01	NT	NT	NP	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
08/27/02	NT	NT	NP	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
02/24/03	NT	NT	NP	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
08/11/03	ND	**21**	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	**5**
02/09/04	ND	**8.7**	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	**5**
08/16/04	**6.1**	ND	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	**10**
02/14/05	**12**	**12**	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	**10**
09/01/05	**7.3**	**7.4**	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	**5**
02/16/06	ND	ND	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	**5**
08/30/06	**17**	ND	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	**5**
02/26/07	**15**	ND	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	**5**
08/13/07	**38.8**	**2.9**	NP	ND	ND	Dry	NP	NP	NP	NP	NP	NP	NP	NP	NP	**2**
02/11/08	**31.8**	ND	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	**2**
08/25/08	**43.7**	ND	NP	ND	ND	Dry	NP	NP	NP	NP	NP	NP	NP	NP	NP	**2**
02/23/09	**29.2**	ND	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	**2**
08/24/09	**40.8**	**2.4**	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	**2**
02/22/10	**42.8**	**2.9**	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	**2**
08/30/10	**41**	ND	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	**2**
02/22/11	**46.6**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**2**
08/22/11	**48.5**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**2**
02/22/12	**32.6**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**2**
08/29/12	**16.8**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**1**
02/18/13	**21.4**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**1**
N_i	20	20	5	20	20	18	5	5	5	5	5	5	5	5	5	
sum of rank values (R_i)	2555.0	1721.0	312.5	1250.0	1250.0	1125.0	312.5	312.5	312.5	312.5	312.5	312.5	312.5	312.5	312.5	
avg rank value (Rbar)	127.8	86.1	62.5	62.5	62.5	62.5	62.5	62.5	62.5	62.5	62.5	62.5	62.5	62.5	62.5	

Number of each rank value

																Rank Value
rank value of NDs =	3	13	5	20	20	18	5	5	5	5	5	5	5	5	5	62.5
rank value of 2.4s =	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	125
rank value of 2.9s =	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	126.5
rank value of 6.1s =	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	128
rank value of 7.3s =	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	129
rank value of 7.4s =	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	130
rank value of 8.7s =	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	131
rank value of 12s =	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	132.5
rank value of 15s =	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	134
rank value of 16.8s =	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	135
rank value of 17s =	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	136
rank value of 21s =	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	137
rank value of 21.4s =	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	138
rank value of 29.2s =	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	139
rank value of 31.8s =	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	140
rank value of 32.6s =	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	141
rank value of 38.8s =	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	142
rank value of 40.8s =	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	143
rank value of 41s =	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	144
rank value of 42.8s =	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	145
rank value of 43.7s =	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	146
rank value of 46.6s =	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	147
rank value of 48.5s =	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	148
n =	**20**	**20**	**5**	**20**	**20**	**18**	**5**	**5**	**5**	**5**	**5**	**5**	**5**	**5**	**5**	

Sum of rank value calculations

187.5	812.5	312.5	1250	1250	1125	312.5	312.5	312.5	312.5	312.5	312.5	312.5	312.5	312.5
0	125	0	0	0	0	0	0	0	0	0	0	0	0	0
0	253	0	0	0	0	0	0	0	0	0	0	0	0	0
128	0	0	0	0	0	0	0	0	0	0	0	0	0	0

129	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	130	0	0	0	0	0	0	0	0	0	0	0	0	0
0	131	0	0	0	0	0	0	0	0	0	0	0	0	0
132.5	132.5	0	0	0	0	0	0	0	0	0	0	0	0	0
134	0	0	0	0	0	0	0	0	0	0	0	0	0	0
135	0	0	0	0	0	0	0	0	0	0	0	0	0	0
136	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	137	0	0	0	0	0	0	0	0	0	0	0	0	0
138	0	0	0	0	0	0	0	0	0	0	0	0	0	0
139	0	0	0	0	0	0	0	0	0	0	0	0	0	0
140	0	0	0	0	0	0	0	0	0	0	0	0	0	0
141	0	0	0	0	0	0	0	0	0	0	0	0	0	0
142	0	0	0	0	0	0	0	0	0	0	0	0	0	0
143	0	0	0	0	0	0	0	0	0	0	0	0	0	0
144	0	0	0	0	0	0	0	0	0	0	0	0	0	0
145	0	0	0	0	0	0	0	0	0	0	0	0	0	0
146	0	0	0	0	0	0	0	0	0	0	0	0	0	0
147	0	0	0	0	0	0	0	0	0	0	0	0	0	0
148	0	0	0	0	0	0	0	0	0	0	0	0	0	0
sum of rank values (R_i)	**2555**	**1721**	**312.5**	**1250**	**1250**	**1125**	**312.5**	**312.5**	**312.5**	**312.5**	**312.5**	**312.5**	**312.5**	**312.5**

Compute the Kruskal-Wallis statistic:

$$H = \{[12/N(N+1)] * [\Sigma^{K}_{i=1} (R_i^2)/N_i]\} -3(N+1)$$

Well =	Background	MW-1A	MW-2A	MW-3A	MW-6	MW-7	MW-8	MW-9	MW-10	MW-11	MW-13	MW-14	MW-15
Ri^2/N_i =	467874.1	78125	78125	70312.5	19531.3	19531.3	19531.3	19531.3	19531.3	19531.3	19531.3	19531.3	19531.3

$N_{i\,bg}$ = 45
N = 148
H = 26.54

Adjust H for ties:

T_i = 1906512 sum of T1..T3

$H' = H/(1-(T_i/(N^3-N)))$
H' = 64.45
Chi-square = 21.03

Compare the calculated value H' to the tabulated Chi-square value with K-1 = # groups -1 = 17df at the 5% significance level from Table 1 of the IFG. The value is 21.03 which is less than H' =64.45.
Therefore, there is evidence of significant differences between the well groups.
Post-hoc pairwise comparisons are necessary (see below).

Calculate the critical values to compare each compliance well to the background wells:

Critical Value (C_x) = $P(N(N+1)/12)^{0.5} * (1/N_{i\,bg}+1/N_x)^{0.5}$
P = 2.33 Percentile of Standard Normal Distribution
from Table 4 of IFG
N = total sample size
$N_{i\,bg}$ = total samples (N_i) of background data
N_x = total samples (N_i) of well x

Difference between average ranks (Dx) = Rbar (well x) - avg Rbar (background)

Well =	MW-1A	MW-2A	MW-3A	MW-6	MW-7	MW-8	MW-9	MW-10	MW-11	MW-13	MW-14	MW-15
Rbar (well x) =	62.5	62.5	62.5	62.5	62.5	62.5	62.5	62.5	62.5	62.5	62.5	62.5
avg Rbar (background) =	102.0	102.0	102.0	102.0	102.0	102.0	102.0	102.0	102.0	102.0	102.0	102.0
Dx =	-39.5	-39.5	-39.5	-39.5	-39.5	-39.5	-39.5	-39.5	-39.5	-39.5	-39.5	-39.5
Cx =	26.8	26.8	27.9	47.1	47.1	47.1	47.1	47.1	47.1	47.1	47.1	47.1
Statistical Significance ?	-	-	-	-	-	-	-	-	-	-	-	-
If SSI, is current event above MCL?	-	-	-	-	-	-	-	-	-	-	-	-

Compare each difference (Dx) with the corresponding critical value (Cx).
No compliance well's difference between average ranks exceeded its corresponding critical value at a 5% significance level. Therefore, we conclude that significant evidence of contamination does not exist at the 5% significance level.

Haywood County Closed Landfill, Francis Farm
Haywood County, North Carolina
BLE Project Number J12-1957-33

Compound: **Tetrachloroethene**
NC MCL (µg/l): 0.7
Method: Kruskal-Wallis
Background: MW-4, MW-5, MW-12

	MW-4	MW-5	MW-12	MW-1A	MW-2A	MW-3A	MW-6	MW-7	MW-8	MW-9	MW-10	MW-11	MW-13	MW-14	MW-15	MDL
02/18/99	NT	NS	NP	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
08/16/99	NT	NS	NP	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
02/14/00	NT	NS	NP	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
08/14/00	NT	NT	NP	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
03/19/01	NT	NT	NP	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
08/27/02	NT	NT	NP	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
02/24/03	NT	NT	NP	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
08/11/03	ND	**8.9**	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	5
02/09/04	**9.6**	**6.2**	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	5
08/16/04	**7.9**	**5.8**	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	5
02/14/05	**15**	**6.4**	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	5
09/01/05	**9**	**5.4**	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	5
02/16/06	ND	ND	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	5
08/30/06	**8.3**	ND	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	5
02/26/07	**8.5**	ND	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	5
08/13/07	**8.1**	**3.6**	NP	ND	ND	Dry	NP	NP	NP	NP	NP	NP	NP	NP	NP	1
02/11/08	**8.2**	**3.5**	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	1
08/25/08	**7.9**	**3.9**	NP	ND	ND	Dry	NP	NP	NP	NP	NP	NP	NP	NP	NP	1
02/23/09	**6.6**	**3.9**	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	1
08/24/09	**6.6**	**4.2**	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	1
02/22/10	**7.8**	**5.1**	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	1
08/30/10	**8**	**6.3**	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	1
02/22/11	**6.7**	**5.6**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**2.2**	ND	ND	1
08/22/11	**7.5**	**4.6**	ND	ND	ND	ND	ND	ND	ND	**1.2**	ND	**1**	**1.7**	ND	ND	1
02/22/12	**5.9**	**3.7**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**1.6**	ND	ND	1
08/29/12	**5.8**	**3.7**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**1.5**	ND	ND	1
02/18/13	**5.8**	**4.4**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1
N_i	20	20	5	20	20	18	5	5	5	5	5	5	5	5	5	
sum of rank values (R_i)	2594.0	2261.0	270.0	1080.0	1080.0	972.0	270.0	270.0	270.0	325.0	270.0	324.0	500.0	270.0	270.0	
avg rank value (Rbar)	129.7	113.1	54.0	54.0	54.0	54.0	54.0	54.0	54.0	65.0	54.0	64.8	100.0	54.0	54.0	

	Number of each rank value															Rank Value
rank value of NDs =	2	3	5	20	20	18	5	5	5	4	5	4	1	5	5	54
rank value of 1s =	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	108
rank value of 1.2s =	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	109
rank value of 1.5s =	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	110
rank value of 1.6s =	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	111
rank value of 1.7s =	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	112
rank value of 2 2s =	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	113
rank value of 3.5s =	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	114
rank value of 3.6s =	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	115
rank value of 3.7s =	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	116.5
rank value of 3.9s =	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	118.5
rank value of 4.2s =	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	120
rank value of 4.4s =	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	121
rank value of 4.6s =	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	122
rank value of 5.1s =	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	123
rank value of 5.4s =	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	124
rank value of 5.6s =	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	125
rank value of 5.8s =	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	127
rank value of 5.9s =	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	129
rank value of 6.2s =	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	130
rank value of 6.3s =	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	131
rank value of 6.4s =	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	132
rank value of 6.6s =	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	133.5
rank value of 6.7s =	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	135
rank value of 7.5s =	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	136
rank value of 7.8s =	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	137
rank value of 7.9s =	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	138.5
rank value of 8s =	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	140
rank value of 8.1s =	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	141
rank value of 8.2s =	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	142
rank value of 8.3s =	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	143
rank value of 8.5s =	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	144

rank value of 8.9s =	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	145
rank value of 9s =	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	146
rank value of 9.6s =	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	147
rank value of 15s =	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	148
n =	**20**	**20**	**5**	**20**	**20**	**18**	**5**	**5**	**5**	**5**	**5**	**5**	**5**	**5**	**5**	

Sum of rank value calculations

108	162	270	1080	1080	972	270	270	270	216	270	216	54	270	270
0	0	0	0	0	0	0	0	0	0	0	108	0	0	0
0	0	0	0	0	0	0	0	0	109	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	110	0	0
0	0	0	0	0	0	0	0	0	0	0	0	111	0	0
0	0	0	0	0	0	0	0	0	0	0	0	112	0	0
0	0	0	0	0	0	0	0	0	0	0	0	113	0	0
0	114	0	0	0	0	0	0	0	0	0	0	0	0	0
0	115	0	0	0	0	0	0	0	0	0	0	0	0	0
0	233	0	0	0	0	0	0	0	0	0	0	0	0	0
0	237	0	0	0	0	0	0	0	0	0	0	0	0	0
0	120	0	0	0	0	0	0	0	0	0	0	0	0	0
0	121	0	0	0	0	0	0	0	0	0	0	0	0	0
0	122	0	0	0	0	0	0	0	0	0	0	0	0	0
0	123	0	0	0	0	0	0	0	0	0	0	0	0	0
0	124	0	0	0	0	0	0	0	0	0	0	0	0	0
0	125	0	0	0	0	0	0	0	0	0	0	0	0	0
254	127	0	0	0	0	0	0	0	0	0	0	0	0	0
129	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	130	0	0	0	0	0	0	0	0	0	0	0	0	0
0	131	0	0	0	0	0	0	0	0	0	0	0	0	0
0	132	0	0	0	0	0	0	0	0	0	0	0	0	0
267	0	0	0	0	0	0	0	0	0	0	0	0	0	0
135	0	0	0	0	0	0	0	0	0	0	0	0	0	0
136	0	0	0	0	0	0	0	0	0	0	0	0	0	0
137	0	0	0	0	0	0	0	0	0	0	0	0	0	0
277	0	0	0	0	0	0	0	0	0	0	0	0	0	0
140	0	0	0	0	0	0	0	0	0	0	0	0	0	0
141	0	0	0	0	0	0	0	0	0	0	0	0	0	0
142	0	0	0	0	0	0	0	0	0	0	0	0	0	0
143	0	0	0	0	0	0	0	0	0	0	0	0	0	0
144	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	145	0	0	0	0	0	0	0	0	0	0	0	0	0
146	0	0	0	0	0	0	0	0	0	0	0	0	0	0
147	0	0	0	0	0	0	0	0	0	0	0	0	0	0
148	0	0	0	0	0	0	0	0	0	0	0	0	0	0
sum of rank values (R_i)	**2594**	**2261**	**270**	**1080**	**1080**	**972**	**270**	**270**	**270**	**325**	**270**	**324**	**500**	**270**	**270**

Compute the Kruskal-Wallis statistic:

$$H = \{[12/N(N+1)] * [\Sigma^{K}_{i=1} (R_i^2)/N_i]\} -3(N+1)$$

Well =	Background	MW-1A	MW-2A	MW-3A	MW-6	MW-7	MW-8	MW-9	MW-10	MW-11	MW-13	MW-14	MW-15
Ri^2/N_i =	583680.6	58320	58320	52488	14580	14580	14580	21125	14580	20995.2	50000	14580	14580

$N_{i\,bg}$ = 45
N = 148
H = 60.39

Adjust H for ties:

T_i = 1224984 sum of T1..T3

$H' = H/(1-(T_i/(N^3-N)))$
H' = 97.07
Chi-square = 21.03

Compare the calculated value H' to the tabulated Chi-square value with K-1 = # groups -1 = 12df at the 5% significance level from Table 1 of the IFG. The value is 21.03 which is less than H' =97.07.
Therefore, there is evidence of significant differences between the well groups.
Post-hoc pairwise comparisons are necessary (see below).

Calculate the critical values to compare each compliance well to the background wells:

$$\text{Critical Value } (C_x) = P(N(N+1)/12)^{0.5} * (1/N_{i\,bg}+1/N_x)^{0.5}$$

P = 2.33 Percentile of Standard Normal Distribution
from Table 4 of IFG
N = total sample size
$N_{i\,bg}$ = total samples (N_i) of background data
N_x = total samples (N_i) of well x

Difference between average ranks (Dx) = Rbar (well x) - avg Rbar (background)

Well =	MW-1A	MW-2A	MW-3A	MW-6	MW-7	MW-8	MW-9	MW-10	MW-11	MW-13	MW-14	MW-15
Rbar (well x) =	54.0	54.0	54.0	54.0	54.0	54.0	65.0	54.0	64.8	100.0	54.0	54.0
avg Rbar (background) =	113.9	113.9	113.9	113.9	113.9	113.9	113.9	113.9	113.9	113.9	113.9	113.9
Dx =	-59.9	-59.9	-59.9	-59.9	-59.9	-59.9	-48.9	-59.9	-49.1	-13.9	-59.9	-59.9
Cx =	26.8	26.8	27.9	47.1	47.1	47.1	47.1	47.1	47.1	47.1	47.1	47.1
Statistical Significance ?	-	-	-	-	-	-	-	-	-	-	-	-
If SSI, is current event above MCL?	-	-	-	-	-	-	-	-	-	-	-	-

Compare each difference (Dx) with the corresponding critical value (Cx).
No compliance well's difference between average ranks exceeded its corresponding critical value at a 5% significance level. Therefore, we conclude that significant evidence of contamination does not exist at the 5% significance level.

Haywood County Closed Landfill, Francis Farm
Haywood County, North Carolina
BLE Project Number J12-1957-33

Compound: **Toluene**
NC MCL (µg/l): 600
Method: Poisson Prediction Limits
Background: MW-4, MW-5, MW-12

	MW-4	MW-5	MW-12	MW-1A	MW-2A	MW-3A	MW-6	MW-7	MW-8	MW-9	MW-10	MW-11	MW-13	MW-14	MW-15	MDL
02/18/99	NT	NS	NP	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
08/16/99	NT	NS	NP	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
02/14/00	NT	NS	NP	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
08/14/00	NT	NT	NP	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
03/19/01	NT	NT	NP	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
08/27/02	NT	NT	NP	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
02/24/03	NT	NT	NP	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
08/11/03	ND	ND	NP	ND	ND	**4500**	NP	NP	NP	NP	NP	NP	NP	NP	NP	**5**
02/09/04	ND	ND	NP	ND	ND	**34**	NP	NP	NP	NP	NP	NP	NP	NP	NP	**5**
08/16/04	ND	ND	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	**5**
02/14/05	ND	ND	NP	ND	ND	**6.5**	NP	NP	NP	NP	NP	NP	NP	NP	NP	**5**
09/01/05	ND	ND	NP	ND	ND	**120**	NP	NP	NP	NP	NP	NP	NP	NP	NP	**5**
02/16/06	ND	ND	NP	ND	ND	**6.5**	NP	NP	NP	NP	NP	NP	NP	NP	NP	**5**
08/30/06	ND	ND	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	**5**
02/26/07	ND	ND	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	**5**
08/13/07	**7.4**	ND	NP	ND	ND	Dry	NP	NP	NP	NP	NP	NP	NP	NP	NP	**1**
02/11/08	**20.5**	ND	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	**1**
08/25/08	**11.9**	ND	NP	ND	ND	Dry	NP	NP	NP	NP	NP	NP	NP	NP	NP	**1**
02/23/09	ND	ND	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	**1**
08/24/09	**4.1**	ND	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	**1**
02/22/10	**11.8**	ND	NP	ND	ND	**48.4**	NP	NP	NP	NP	NP	NP	NP	NP	NP	**1**
08/30/10	ND	ND	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	**1**
02/22/11	**11.4**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**1**
08/22/11	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**1**
02/22/12	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**1**
08/29/12	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**1**
02/18/13	**1.3**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**1**

1) If not detected (ND), use half of the detection limit.

02/18/99	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
08/16/99	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
02/14/00	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
08/14/00	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
03/19/01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
08/27/02	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
02/24/03	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
08/11/03	2.5	2.5	-	2.5	2.5	4500	-	-	-	-	-	-	-	-	-
02/09/04	2.5	2.5	-	2.5	2.5	34	-	-	-	-	-	-	-	-	-
08/16/04	2.5	2.5	-	2.5	2.5	2.5	-	-	-	-	-	-	-	-	-
02/14/05	2.5	2.5	-	2.5	2.5	6.5	-	-	-	-	-	-	-	-	-
09/01/05	2.5	2.5	-	2.5	2.5	120	-	-	-	-	-	-	-	-	-
02/16/06	2.5	2.5	-	2.5	2.5	6.5	-	-	-	-	-	-	-	-	-
08/30/06	2.5	2.5	-	2.5	2.5	2.5	-	-	-	-	-	-	-	-	-
02/26/07	2.5	2.5	-	2.5	2.5	2.5	-	-	-	-	-	-	-	-	-
08/13/07	7.4	0.5	-	0.5	0.5	-	-	-	-	-	-	-	-	-	-
02/11/08	20.5	0.5	-	0.5	0.5	0.5	-	-	-	-	-	-	-	-	-
08/25/08	11.9	0.5	-	0.5	0.5	-	-	-	-	-	-	-	-	-	-
02/23/09	0.5	0.5	-	0.5	0.5	0.5	-	-	-	-	-	-	-	-	-
08/24/09	4.1	0.5	-	0.5	0.5	0.5	-	-	-	-	-	-	-	-	-
02/22/10	11.8	0.5	-	0.5	0.5	48.4	-	-	-	-	-	-	-	-	-
08/30/10	0.5	0.5	-	0.5	0.5	0.5	-	-	-	-	-	-	-	-	-
02/22/11	11.4	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
08/22/11	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
02/22/12	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
08/29/12	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
02/18/13				0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5

2) Set the total number of data values for background wells (through the previous sampling event) equal to 'n' = 19.
Use 1/2 of the method detection limit to calculate the Total Poisson Count of the Sum (T_n).

$n = 42$
$T_{n1} = 117.1$

3) Using Gibbons' formula, calculate the upper Poisson Prediction limit T^*_k:

$$T^*_k = cT_{n1} + ct^2/2 + ct[T_{n1}(1+1/c) + t^2/4]^{-0.5}$$

where $c = k/n$
and where k = the number of future predicted measurements (one per well during the current sampling event)
and where t = the upper 99th percentile of the t-distribution with (n-1) degrees of freedom (Table 6 of the IFG).

$k = 12$
$n = 42$
$T_{n1} = 117.1$
$t[41,.01] = 2.421$
$c = 0.286$
$T_{n2} = 6$
$T^*_k = 50.2$

4) Compare the *Poisson Prediction Limit* (T^*_k) to the *Sum of the Concentrations Detected* (T_{n2}) in the wells during the most recent sampling event.
Since the Poisson Prediction Limit was not exceeded, there is no evidence of contamination.

Haywood County Closed Landfill, Francis Farm
Haywood County, North Carolina
BLE Project Number J12-1957-33

Compound: **Trichloroethene**
NC MCL (µg/l): 3
Method: Kruskal-Wallis
Background: MW-4, MW-5, MW-12

	MW-4	MW-5	MW-12	MW-1A	MW-2A	MW-3A	MW-6	MW-7	MW-8	MW-9	MW-10	MW-11	MW-13	MW-14	MW-15	MDL
02/18/99	NT	NS	NP	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
08/16/99	NT	NS	NP	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
02/14/00	NT	NS	NP	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
08/14/00	NT	NT	NP	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
03/19/01	NT	NT	NP	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
08/27/02	NT	NT	NP	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
02/24/03	NT	NT	NP	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
08/11/03	5.6	11	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	5
02/09/04	13	6.2	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	5
08/16/04	10	5.5	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	5
02/14/05	17	7	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	5
09/01/05	11	ND	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	5
02/16/06	ND	ND	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	5
08/30/06	11	ND	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	5
02/26/07	11	ND	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	5
08/13/07	9.9	2.7	NP	ND	ND	Dry	NP	NP	NP	NP	NP	NP	NP	NP	NP	1
02/11/08	9.9	2.7	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	1
08/25/08	10	3	NP	ND	ND	Dry	NP	NP	NP	NP	NP	NP	NP	NP	NP	1
02/23/09	8.1	3	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	1
08/24/09	7.8	3.5	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	1
02/22/10	9.1	4.7	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	1
08/30/10	9.1	5.8	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	1
02/22/11	7	4.8	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.7	ND	ND	1
08/22/11	7.9	3.7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.5	ND	ND	1
02/22/12	7.3	3.6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.6	ND	ND	1
08/29/12	7	3.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.1	1.3	ND	ND	1
02/18/13	6.1	3.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1
N_i	20	20	5	20	20	18	5	5	5	5	5	5	5	5	5	
sum of rank values (R_i)	2674.0	2183.5	272.5	1090.0	1090.0	981.0	272.5	272.5	272.5	272.5	272.5	327.0	500.5	272.5	272.5	
avg rank value (Rbar)	133.7	109.2	54.5	54.5	54.5	54.5	54.5	54.5	54.5	54.5	54.5	65.4	100.1	54.5	54.5	

	Number of each rank value															Rank Value
rank value of NDs =	1	4	5	20	20	18	5	5	5	5	5	4	1	5	5	54.5
rank value of 1.1s =	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	109
rank value of 1.3s =	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	110
rank value of 1.5s =	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	111
rank value of 1.6s =	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	112
rank value of 1.7s =	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	113
rank value of 2.7s =	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	114.5
rank value of 3s =	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	116.5
rank value of 3.3s =	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	118
rank value of 3.4s =	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	119
rank value of 3.5s =	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	120
rank value of 3.6s =	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	121
rank value of 3.7s =	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	122
rank value of 4.7s =	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	123
rank value of 4.8s =	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	124
rank value of 5.5s =	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	125
rank value of 5.6s =	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	126
rank value of 5.8s =	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	127
rank value of 6.1s =	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	128
rank value of 6.2s =	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	129
rank value of 7s =	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	131
rank value of 7.3s =	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	133
rank value of 7.8s =	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	134
rank value of 7.9s =	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	135
rank value of 8.1s =	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	136
rank value of 9.1s =	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	137.5
rank value of 9.9s =	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	139.5
rank value of 10s =	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	141.5
rank value of 11s =	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	144.5
rank value of 13s =	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	147
rank value of 17s =	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	148
n =	20	20	5	20	20	18	5	5	5	5	5	5	5	5	5	

Sum of rank value calculations															
54.5	218	272.5	1090	1090	981	272.5	272.5	272.5	272.5	272.5	218	54.5	272.5	272.5	

	0	0	0	0	0	0	0	0	0	0	0	109	0	0	0
	0	0	0	0	0	0	0	0	0	0	0	0	110	0	0
	0	0	0	0	0	0	0	0	0	0	0	0	111	0	0
	0	0	0	0	0	0	0	0	0	0	0	0	112	0	0
	0	0	0	0	0	0	0	0	0	0	0	0	113	0	0
	0	229	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	233	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	118	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	119	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	120	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	121	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	122	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	123	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	124	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	125	0	0	0	0	0	0	0	0	0	0	0	0	0
	126	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	127	0	0	0	0	0	0	0	0	0	0	0	0	0
	128	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	129	0	0	0	0	0	0	0	0	0	0	0	0	0
	262	131	0	0	0	0	0	0	0	0	0	0	0	0	0
	133	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	134	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	135	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	136	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	275	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	279	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	283	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	433.5	144.5	0	0	0	0	0	0	0	0	0	0	0	0	0
	147	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	148	0	0	0	0	0	0	0	0	0	0	0	0	0	0
sum of rank values (R_i)	**2674**	**2183.5**	**272.5**	**1090**	**1090**	**981**	**272.5**	**272.5**	**272.5**	**272.5**	**272.5**	**327**	**500.5**	**272.5**	**272.5**

Compute the Kruskal-Wallis statistic:

$$H = \{[12/N(N+1)] * [\Sigma^{K}_{i=1} (R_i^2)/N_i]\} -3(N+1)$$

Well =	Background	MW-1A	MW-2A	MW-3A	MW-6	MW-7	MW-8	MW-9	MW-10	MW-11	MW-13	MW-14	MW-15
Ri^2/N_i =	584820.0	59405	59405	53464.5	14851.25	14851.25	14851.25	14851.25	14851.25	21385.8	50100.05	14851.25	14851.25

$N_{i\,bg}$ = 45
N = 148
H = 60.46

Adjust H for ties:

T_i = 1259718 sum of T1..T3

$H' = H/(1-(T_i/(N^3-N)))$
H' = 98.89
Chi-square = 21.03

Compare the calculated value H' to the tabulated Chi-square value with K-1 = # groups -1 = 12df at the 5% significance level from Table 1 of the IFG. The value is 21.03 which is less than H' =98.89.
Therefore, there is evidence of significant differences between the well groups.
Post-hoc pairwise comparisons are necessary (see below).

Calculate the critical values to compare each compliance well to the background wells:

Critical Value (C_x) = $P(N(N+1)/12)^{0.5} * (1/N_{i\,bg}+1/N_x)^{0.5}$
P = 2.33 Percentile of Standard Normal Distribution from Table 4 of IFG
N = total sample size
$N_{i\,bg}$ = total samples (N_i) of background data
N_x = total samples (N_i) of well x

Difference between average ranks (Dx) = Rbar (well x) - avg Rbar (background)

Well =	MW-1A	MW-2A	MW-3A	MW-6	MW-7	MW-8	MW-9	MW-10	MW-11	MW-13	MW-14	MW-15
Rbar (well x) =	54.5	54.5	54.5	54.5	54.5	54.5	54.5	54.5	65.4	100.1	54.5	54.5
avg Rbar (background) =	114.0	114.0	114.0	114.0	114.0	114.0	114.0	114.0	114.0	114.0	114.0	114.0
Dx =	-59.5	-59.5	-59.5	-59.5	-59.5	-59.5	-59.5	-59.5	-48.6	-13.9	-59.5	-59.5
Cx =	26.8	26.8	27.9	47.1	47.1	47.1	47.1	47.1	47.1	47.1	47.1	47.1
Statistical Significance ?	-	-	-	-	-	-	-	-	-	-	-	-
If SSI, is current event above MCL?	-	-	-	-	-	-	-	-	-	-	-	-

Compare each difference (Dx) with the corresponding critical value (Cx).
No compliance well's difference between average ranks exceeded its corresponding critical value at a 5% significance level. Therefore, we conclude that significant evidence of contamination does not exist at the 5% significance level.

Haywood County Closed Landfill, Francis Farm
Haywood County, North Carolina
BLE Project Number J12-1957-33

Compound: **Vinyl Chloride**
NC MCL (µg/l): 0.03
Method: Poisson Prediction Limits
Background: MW-4, MW-5, MW-12

	MW-4	MW-5	MW-12	MW-1A	MW-2A	MW-3A	MW-6	MW-7	MW-8	MW-9	MW-10	MW-11	MW-13	MW-14	MW-15	MDL
02/18/99	NT	NS	NP	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
08/16/99	NT	NS	NP	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
02/14/00	NT	NS	NP	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
08/14/00	NT	NT	NP	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
03/19/01	NT	NT	NP	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
08/27/02	NT	NT	NP	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
02/24/03	NT	NT	NP	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
08/11/03	ND	ND	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	**5**
02/09/04	ND	ND	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	**5**
08/16/04	ND	ND	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	**10**
02/14/05	ND	ND	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	**10**
09/01/05	ND	ND	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	**5**
02/16/06	ND	ND	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	**5**
08/30/06	ND	ND	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	**5**
02/26/07	ND	ND	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	**5**
08/13/07	ND	ND	NP	ND	**1.5**	Dry	NP	NP	NP	NP	NP	NP	NP	NP	NP	**1**
02/11/08	ND	ND	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	**1**
08/25/08	ND	ND	NP	ND	ND	Dry	NP	NP	NP	NP	NP	NP	NP	NP	NP	**1**
02/23/09	ND	ND	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	**1**
08/24/09	ND	ND	NP	ND	**1.1**	**1.1**	NP	NP	NP	NP	NP	NP	NP	NP	NP	**1**
02/22/10	ND	ND	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	**1**
08/30/10	ND	ND	NP	ND	ND	**1.5**	NP	NP	NP	NP	NP	NP	NP	NP	NP	**1**
02/22/11	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**1**
08/22/11	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**1**
02/22/12	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**1**
08/29/12	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**1**
02/18/13	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**1**

1) If not detected (ND), use half of the detection limit.

02/18/99	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
08/16/99	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
02/14/00	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
08/14/00	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
03/19/01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
08/27/02	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
02/24/03	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
08/11/03	2.5	2.5	-	2.5	2.5	2.5	-	-	-	-	-	-	-	-	-
02/09/04	2.5	2.5	-	2.5	2.5	2.5	-	-	-	-	-	-	-	-	-
08/16/04	5	5	-	5	5	5	-	-	-	-	-	-	-	-	-
02/14/05	5	5	-	5	5	5	-	-	-	-	-	-	-	-	-
09/01/05	2.5	2.5	-	2.5	2.5	2.5	-	-	-	-	-	-	-	-	-
02/16/06	2.5	2.5	-	2.5	2.5	2.5	-	-	-	-	-	-	-	-	-
08/30/06	2.5	2.5	-	2.5	2.5	2.5	-	-	-	-	-	-	-	-	-
02/26/07	2.5	2.5	-	2.5	2.5	2.5	-	-	-	-	-	-	-	-	-
08/13/07	0.5	0.5	-	0.5	1.5	-	-	-	-	-	-	-	-	-	-
02/11/08	0.5	0.5	-	0.5	0.5	0.5	-	-	-	-	-	-	-	-	-
08/25/08	0.5	0.5	-	0.5	0.5	-	-	-	-	-	-	-	-	-	-
02/23/09	0.5	0.5	-	0.5	0.5	0.5	-	-	-	-	-	-	-	-	-
08/24/09	0.5	0.5	-	0.5	1.1	1.1	-	-	-	-	-	-	-	-	-
02/22/10	0.5	0.5	-	0.5	0.5	0.5	-	-	-	-	-	-	-	-	-
08/30/10	0.5	0.5	-	0.5	0.5	1.5	-	-	-	-	-	-	-	-	-
02/22/11	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
08/22/11	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
02/22/12	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
08/29/12	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
02/18/13				0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5

2) Set the total number of data values for background wells (through the previous sampling event) equal to 'n' = 19.
Use 1/2 of the method detection limit to calculate the Total Poisson Count of the Sum (T_n).

$n = 42$
$T_{n1} = 63$

3) Using Gibbons' formula, calculate the upper Poisson Prediction limit T^*_k:

$$T^*_k = cT_{n1} + ct^2/2 + ct[T_{n1}(1+1/c) + t^2/4]^{-0.5}$$

where $c = k/n$
and where k = the number of future predicted measurements (one per well during the current sampling event)
and where t = the upper 99th percentile of the t-distribution with (n-1) degrees of freedom (Table 6 of the IFG).

$k = 12$
$n = 42$
$T_{n1} = 63$
$t[41,.01] = 2.421$
$c = 0.286$
$T_{n2} = 6$
$T^*_k = 30.5$

4) Compare the *Poisson Prediction Limit* (T^*_k) to the *Sum of the Concentrations Detected* (T_{n2}) in the wells during the most recent sampling event.
Since the Poisson Prediction Limit was not exceeded, there is no evidence of contamination.

Haywood County Closed Landfill, Francis Farm
Haywood County, North Carolina
BLE Project Number J12-1957-33

Compound: **Total Xylenes**
NC MCL (µg/l): 500
Method: Poisson Prediction Limits
Background: MW-4, MW-5, MW-12

	MW-4	MW-5	MW-12	MW-1A	MW-2A	MW-3A	MW-6	MW-7	MW-8	MW-9	MW-10	MW-11	MW-13	MW-14	MW-15	MDL
02/18/99	NT	NS	NP	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
08/16/99	NT	NS	NP	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
02/14/00	NT	NS	NP	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
08/14/00	NT	NT	NP	NT	NS	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
03/19/01	NT	NT	NP	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
08/27/02	NT	NT	NP	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
02/24/03	NT	NT	NP	NT	NT	NT	NP	NP	NP	NP	NP	NP	NP	NP	NP	NT
08/11/03	ND	ND	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	10
02/09/04	ND	ND	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	10
08/16/04	ND	ND	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	5
02/14/05	ND	ND	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	5
09/01/05	ND	ND	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	10
02/16/06	ND	ND	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	10
08/30/06	ND	ND	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	10
02/26/07	ND	ND	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	10
08/13/07	6.1	ND	NP	ND	ND	Dry	NP	NP	NP	NP	NP	NP	NP	NP	NP	2
02/11/08	11.3	ND	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	2
08/25/08	7.7	ND	NP	ND	ND	Dry	NP	NP	NP	NP	NP	NP	NP	NP	NP	3
02/23/09	3.7	ND	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	2
08/24/09	7.2	ND	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	2
02/22/10	13.6	ND	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	2
08/30/10	6.4	2	NP	ND	ND	ND	NP	NP	NP	NP	NP	NP	NP	NP	NP	2
02/22/11	12.6	2.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	8.8	ND	ND	2
08/22/11	7.7	2.1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	7.7	ND	ND	2
02/22/12	6.6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	7.8	ND	ND	2
08/29/12	5.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	6.7	ND	ND	2
02/18/13	7.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.8	ND	ND	2

1) If not detected (ND), use half of the detection limit.

02/18/99	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
08/16/99	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
02/14/00	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
08/14/00	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
03/19/01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
08/27/02	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
02/24/03	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
08/11/03	5	5	-	5	5	5	-	-	-	-	-	-	-	-	-
02/09/04	5	5	-	5	5	5	-	-	-	-	-	-	-	-	-
08/16/04	2.5	2.5	-	2.5	2.5	2.5	-	-	-	-	-	-	-	-	-
02/14/05	2.5	2.5	-	2.5	2.5	2.5	-	-	-	-	-	-	-	-	-
09/01/05	5	5	-	5	5	5	-	-	-	-	-	-	-	-	-
02/16/06	5	5	-	5	5	5	-	-	-	-	-	-	-	-	-
08/30/06	5	5	-	5	5	5	-	-	-	-	-	-	-	-	-
02/26/07	5	5	-	5	5	5	-	-	-	-	-	-	-	-	-
08/13/07	6.1	1	-	1	1	-	-	-	-	-	-	-	-	-	-
02/11/08	11.3	1	-	1	1	1	-	-	-	-	-	-	-	-	-
08/25/08	7.7	1.5	-	1.5	1.5	-	-	-	-	-	-	-	-	-	-
02/23/09	3.7	1	-	1	1	1	-	-	-	-	-	-	-	-	-
08/24/09	7.2	1	-	1	1	1	-	-	-	-	-	-	-	-	-
02/22/10	13.6	1	-	1	1	1	-	-	-	-	-	-	-	-	-
08/30/10	6.4	2	-	1	1	1	-	-	-	-	-	-	-	-	-
02/22/11	12.6	2.5	1	1	1	1	1	1	1	1	1	1	8.8	1	1
08/22/11	7.7	2.1	1	1	1	1	1	1	1	1	1	1	7.7	1	1
02/22/12	6.6	1	1	1	1	1	1	1	1	1	1	1	7.8	1	1
08/29/12	5.3	1	1	1	1	1	1	1	1	1	1	1	6.7	1	1
02/18/13				1	1	1	1	1	1	1	1	1	2.8	1	1

2) Set the total number of data values for background wells (through the previous sampling event) equal to 'n' = 19.
Use 1/2 of the method detection limit to calculate the Total Poisson Count of the Sum (T_n).

$n = 42$
$T_{n1} = 177.3$

3) Using Gibbons' formula, calculate the upper Poisson Prediction limit T^*_k:

$$T^*_k = cT_{n1} + ct^2/2 + ct[T_{n1}(1+1/c) + t^2/4]^{-0.5}$$

where $c = k/n$
and where k = the number of future predicted measurements (one per well during the current sampling event)
and where t = the upper 99th percentile of the t-distribution with (n-1) degrees of freedom (Table 6 of the IFG).

$k = 12$
$n = 42$
$T_{n1} = 177.3$
$t[41,.01] = 2.421$
$c = 0.286$
$T_{n2} = 13.8$
$T^*_k = 71.1$

4) Compare the *Poisson Prediction Limit* (T^*_k) to the *Sum of the Concentrations Detected* (T_{n2}) in the wells during the most recent sampling event.
Since the Poisson Prediction Limit was not exceeded, there is no evidence of contamination.

Haywood County Closed Landfill, Francis Farm
Haywood County, North Carolina
BLE Project Number J12-1957-33

Compound: **Napthalene**
NC MCL (µg/l): 6
Method: Insufficient Data. Not Tested.
Background: MW-4, MW-5, MW-12

	MW-4	MW-5	MW-12	MW-1A	MW-2A	MW-3A	MW-6	MW-7	MW-8	MW-9	MW-10	MW-11	MW-13	MW-14	MW-15	MDL
02/18/99	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
08/16/99	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
02/14/00	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
08/14/00	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
03/19/01	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
08/27/02	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
02/24/03	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
08/11/03	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
02/09/04	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
08/16/04	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
02/14/05	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
09/01/05	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
02/16/06	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
08/30/06	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
02/26/07	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
08/13/07	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
02/11/08	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
08/25/08	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
02/23/09	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
08/24/09	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
02/22/10	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
08/30/10	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
02/22/11	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
08/22/11	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
02/22/12	**5.6**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**1**
08/29/12	**4.2**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**1**
02/18/13	**5.2**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**1**

Insufficient amount of data at this time for statictical testing.