



February 2, 2016

053-3184E F/N 120

Mr. Hilary M. Thornton
United States Environmental Protection Agency, Region IV
Atlanta Federal Center, 4WD-SRSEB, 11th Floor
61 Forsyth Street, SW
Atlanta, GA 30303-8960

**RE: WARD TRANSFORMER SUPERFUND SITE OU2 SRI/FFS
PROGRESS REPORT FOR JANUARY 2016**

Dear Mr. Thornton:

On behalf of the Ward Transformer Site Trust (Trust), Golder Associates NC, Inc. (Golder) is submitting this progress report pursuant to paragraph 39 of the Administrative Settlement Agreement and Order on Consent (AOC) for Supplemental Remedial Investigation/Focused Feasibility Study (SRI/FFS) for Operable Unit 2 (OU2) between the Trust and the United States Environmental Protection Agency (EPA).

ACTIONS PERFORMED DURING THE REPORTING PERIOD

During the December 2015 reporting period, Golder collected groundwater samples from background monitoring well MW-08, shallow monitoring wells MW-03R, MW-10 and MW-11, MW-12, MW-13, MW-14 and MW-15, and deep monitoring well MW-09, shown on Figure 1.

The samples were analyzed by CompuChem of Cary, North Carolina, for volatile organic compounds (VOCs) benzene, chlorobenzene, 1,4-dichlorobenzene, 1,2,4-trichlorobenzene by EPA Method 8260, and polychlorinated biphenyls (PCBs) by the Aroclor method (EPA Method SW846 8082). None of the wells exhibited turbidity greater than 10 Nephelometric Turbidity Units (NTU); therefore, no filtered samples were collected for PCB analysis. The sampling logs, data validation, and laboratory data packages are provided on a computer disk in Attachment 1.

The results are summarized in Table 1. There were no detections for PCBs. There were various VOC detections in wells MW-03R, MW-13, and MW-15. There were VOC exceedances of the EPA Maximum Contaminant Levels (MCLs) and/or the NC groundwater standards from well MW-03R for both primary and duplicate samples.

DATA RECEIVED

The sampling logs, data validation, and laboratory data packages from the December 2015 sampling event are provided on a computer disk in Attachment 1.

ANTICIPATED ACTIONS

Golder plans to conduct groundwater sampling in February 2016, as previously planned with EPA. CompuChem abruptly went out of business during this reporting period so Test America (TA) in Nashville, Tennessee, will be used for the February sampling event. The Sampling and Analysis Plan tables, presented as Attachment 2, have been revised to incorporate the Test America's laboratory information. Test America's Quality Assurance Manual is included on a computer disk in Attachment 1.

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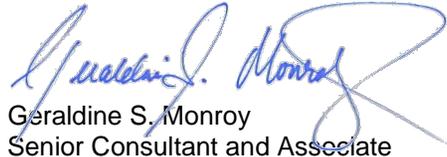
Should there be any questions regarding this Progress Report, please contact the undersigned or the Trust's Project Coordinator, Mr. Weir at 412-249-3118.

Sincerely,

GOLDER ASSOCIATES NC, INC.



Benjamin Draper, P.G.
Project Geologist



Geraldine S. Monroy
Senior Consultant and Associate

GM/BD/sdp

cc: Mr. William G. Weir, Civil & Environmental Consultants, Inc. (by email)
Mr. Daniel M. Darragh, Cohen & Grigsby, PC (by email)
Mr. Michael Brom, PCS Administration (USA), Inc. (by email)
Mr. Henry Lyon, Duke Energy Progress, LLP (by email)
Mr. Jason D. Witt, Murray Energy Corporation (by email)
Mr. Nile Testerman, NCDEQ (by email)

Table 1. December 2015 Analytical Testing Results

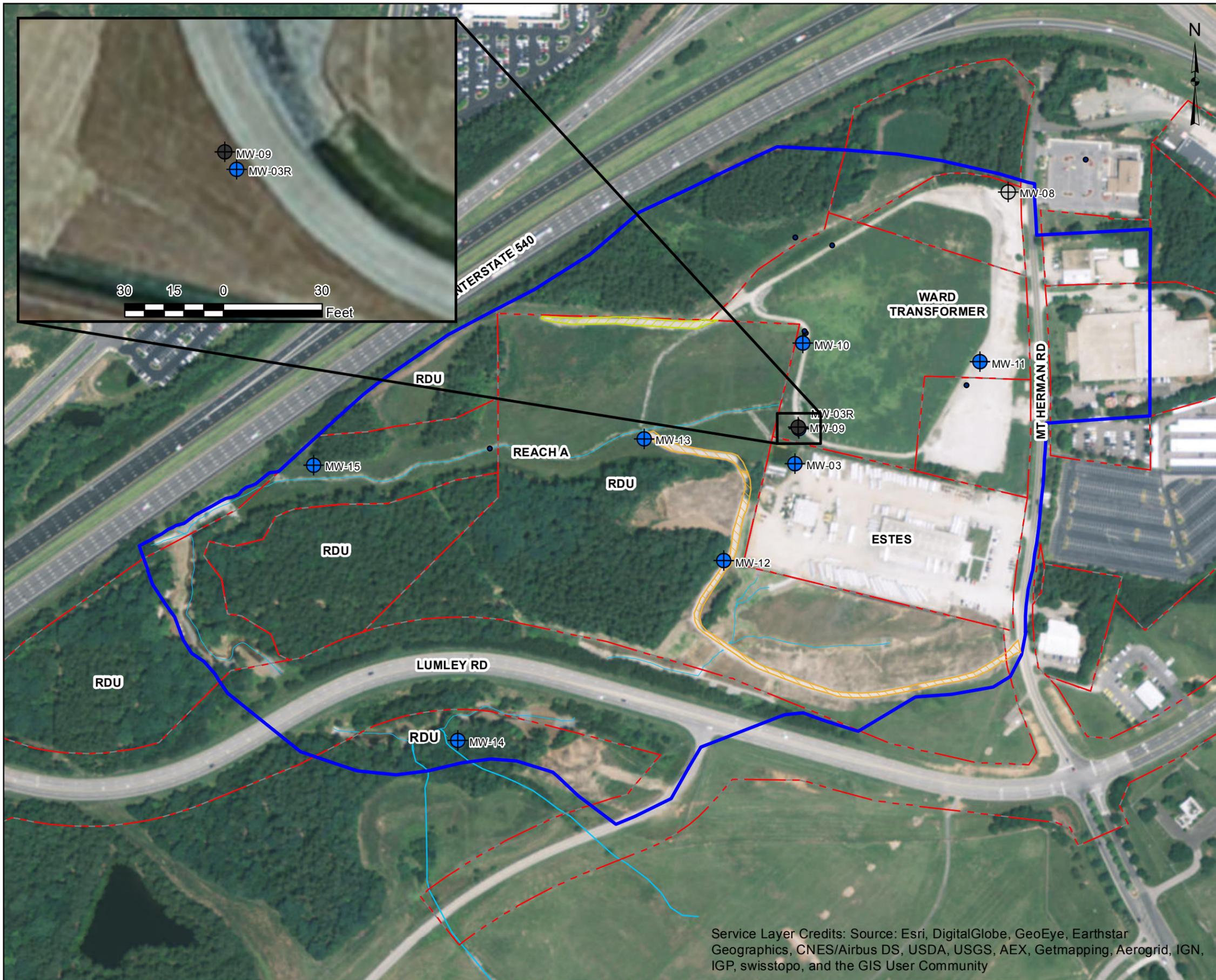
			Background Well	Shallow Wells								Deep Well
Parameter	EPA MCL	NC GW Std	MW-08 ug/L	MW-03R ug/L	MW-03R Duplicate ug/L	MW-10 ug/L	MW-11 ug/L	MW-12 ug/L	MW-13 ug/L	MW-14 ug/L	MW-15 ug/L	MW-09 ug/L
PCBs (SW8082)												
Aroclor-1016	0.5	0.09 (IMAC)	0.50 U/ 0.073 U	0.50 U/ 0.073 U	0.50 U/ 0.073 U	0.50 U/ 0.073 U	0.50 U/ 0.073 U	0.50 U/ 0.073 U	0.50 U/ 0.073 U	0.50 U/ 0.073 U	0.50 U/ 0.073 U	0.50 U/ 0.073 U
Aroclor-1221	0.5	0.09 (IMAC)	0.50 U/ 0.064 U	0.50 U/ 0.064 U	0.50 U/ 0.064 U	0.50 U/ 0.064 U	0.50 U/ 0.064 U	0.50 U/ 0.064 U	0.50 U/ 0.064 U	0.50 U/ 0.064 U	0.50 U/ 0.064 U	0.50 U/ 0.064 U
Aroclor-1232	0.5	0.09 (IMAC)	0.50 U/ 0.065 U	0.50 U/ 0.065 U	0.50 U/ 0.065 U	0.50 U/ 0.065 U	0.50 U/ 0.065 U	0.50 U/ 0.065 U	0.50 U/ 0.065 U	0.50 U/ 0.065 U	0.50 U/ 0.065 U	0.50 U/ 0.065 U
Aroclor-1242	0.5	0.09 (IMAC)	0.50 U/ 0.14 U	0.50 U/ 0.14 U	0.50 U/ 0.14 U	0.50 U/ 0.14 U	0.50 U/ 0.14 U	0.50 U/ 0.14 U	0.50 U/ 0.14 U	0.50 U/ 0.14 U	0.50 U/ 0.14 U	0.50 U/ 0.14 U
Aroclor-1248	0.5	0.09 (IMAC)	0.50 U/ 0.044 U	0.50 U/ 0.044 U	0.50 U/ 0.044 U	0.50 U/ 0.044 U	0.50 U/ 0.044 U	0.50 U/ 0.044 U	0.50 U/ 0.044 U	0.50 U/ 0.044 U	0.50 U/ 0.044 U	0.50 U/ 0.044 U
Aroclor-1254	0.5	0.09 (IMAC)	0.50 U/ 0.072 U	0.50 U/ 0.072 U	0.50 U/ 0.072 U	0.50 U/ 0.072 U	0.50 U/ 0.072 U	0.50 U/ 0.072 U	0.50 U/ 0.072 U	0.50 U/ 0.072 U	0.50 U/ 0.072 U	0.50 U/ 0.072 U
Aroclor-1260	0.5	0.09 (IMAC)	0.50 U/ 0.050 U	0.50 U/ 0.050 U	0.50 U/ 0.050 U	0.50 U/ 0.050 U	0.50 U/ 0.050 U	0.50 U/ 0.050 U	0.50 U/ 0.050 U	0.50 U/ 0.050 U	0.50 U/ 0.050 U	0.50 U/ 0.050 U
VOCs (SW8260)												
Benzene	5	1	0.50 U/ 0.030 U	6.9 J	9.8	0.50 U/ 0.030 U	0.50 U/ 0.030 U	0.50 U/ 0.030 U	0.088 J	0.50 U/ 0.030 U	0.50 U/ 0.030 U	0.50 U/ 0.030 U
Chlorobenzene	100	50	0.50 U/ 0.020 U	81	110	0.50 U/ 0.020 U	0.50 U/ 0.020 U	0.50 U/ 0.020 U	1.3	0.50 U/ 0.020 U	3.4	0.50 U/ 0.020 U
1,4-Dichlorobenzene	75	6	0.50 U/ 0.030 U	80	120	0.50 U/ 0.030 U	0.50 U/ 0.030 U	0.50 U/ 0.030 U	3.0	0.50 U/ 0.030 U	0.84	0.50 U/ 0.030 U
1,2,4-Trichlorobenzene	70	70	0.50 U/ 0.060 U	480 J	830 J	0.50 U/ 0.060 U	0.50 U/ 0.060 U	0.50 U/ 0.060 U	11	0.50 U/ 0.060 U	0.50 U/ 0.060 U	0.39 J

Notes:

1. IMAC = Interim Maximum Allowable Concentration. The NC regulations do not specify a standard for Aroclors, but IMAC was established in 2010.
2. The concentration is bolded and highlighted with standard color when exceeded. Yellow is for the EPA MCL. Blue is for the NC GW standard. If both standards are exceeded, the color for the higher standard is shown.
3. J = Identification of analyte is acceptable; reported value is an estimate.
4. U = Analyte not reported at or above the specified reporting limit/method detection limit

ATTACHMENT 1

Sampling Logs, Data Validation, and Laboratory Data Packages



LEGEND

- Property Boundaries
- OU2 Boundary
- Surface Water Drainage
- North Access Path
- South Access Path
- +
 Background Monitoring Well
- +
 Shallow Monitoring Well
- +
 Deep Monitoring Well
- +
 Proposed Stage 2 Monitoring Well

NOTES
Well MW-03R replaced well MW-03; MW-03 exhibited poor recovery and turbid water.

REFERENCE

Wake County GIS, 2010
Weston Solutions, Inc., 2005
Fleming Engineering, Inc., 2006 - 2014
Projection: North Carolina State Plane Datum: NAD 83

Stantec, 2015

300 0 300
Feet

PROJECT	Ward Transformer Superfund Site Raleigh, North Carolina		
TITLE	Well Locations		
 Golder Associates Atlanta, Georgia	PROJECT No. 053-3184E	SCALE AS SHOWN	REV. 0
	DESIGN -		
	GIS SSH NOV-2015		
	CHECK BD NOV-2015		
REVIEW GM NOV-2015			
Figure 1			

Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

D:\GIS\Ward_Tama_v-GIS\PROJECTS\OU2_RFS\Progress_Reports\Figure 1 Well Locations.mxd 18 Nov 2015 1:32:16 PM

ATTACHMENT 2

Sampling and Analysis Plan Revised Tables

**TABLE 2-1
Project Personnel**

Respondent Project Coordinator:	William G. Weir, P.G. Civil & Environmental Consultants, Inc. 333 Baldwin Road Pittsburg, PA 15205	Telephone: (412) 249-3118 Fax: (412) 429-2114 Email: bweir@cecinc.com
EPA Remedial Project Manager:	Hilary Thornton USEPA Region 4 61 Forsyth Street SW Atlanta, GA 30303	Telephone: (404) 562-8809 Fax: Email: Thornton.Hilary@epamail.epa.gov
SRI/FFS Manager:	Geraldine S. Monroy Golder Associates Inc. 3730 Chamblee Tucker Road Atlanta, GA 30341	Telephone (770) 496-1893 Fax: (770) 934-9476 Email: gina_monroy@golder.com
Field Team Leader:	Benjamin J. Draper Golder Associates NC, Inc. 5B Oak Branch Drive Greensboro, NC 27407	Telephone (336) 852-4903 Fax: (336) 852-4904 Email: benjamin_draper@golder.com
Quality Assurance Manager:	Cindi Lucas-Youmans Golder Associates Inc. 200 Century Parkway, Suite C Mt. Laurel, NJ 08054	Telephone (856) 793-2005 Fax: (856) 793-2006 Email: clucas@golder.com
Health and Safety Officer:	Christopher C. Brookshire Golder Associates Inc. 3730 Chamblee Tucker Road Atlanta, GA 30341	Telephone (770) 496-1893 Fax: (770) 934-9476 Email: chris_brookshire@golder.com
Laboratory Project Manager	Shali Brown Test America 2960 Foster Creighton Drive Nashville, TN 37204	Telephone (615) 726-0711 Fax (615)-276-3404 Email Shali.Brown@testamericainc.com
Lab Quality Assurance Officer:	Donovin Mulvaney Test America 2960 Foster Creighton Drive Nashville, TN 37204	Telephone (615) 301-5760 Fax (615)-276-3404 Email Donovin.Mulvaney@testamericainc.com

**TABLE 9-1
Analytical Methods, Sample Containers, Preservation, and
Analytical Hold Times for Aqueous Samples**

Parameter	EPA Analysis Methodology	Container		Minimum Sample	Preservation	Hold Time ⁽¹⁾
Total PCBs	SW-846 8082A	2-1000 ml	Amber Glass, Teflon-lined Lid	1000 ml	Cool 4 deg. C, dark	365 days ⁽²⁾
VOCs ⁽³⁾	SW-846 8260B	3-40 ml	Glass, Teflon- lined Lid	40 ml	Cool 4 deg. C, dark. HCl.	14 days

NOTES:

(1) Hold time based upon day of sample collection not verified time of sample receipt.

(2) 365 days for extraction, 40 days for analysis after commencement date of extraction.

(3) VOC analysis for only 4 analytes: benzene, chlorobenzene, 1,4-dichlorobenzene, and 1,2,4-trichlorobenzene.
HCl – hydrochloric acid

**TABLE 11-1
Target Compounds of Interest and Reporting Limits for Groundwater**

TARGET PARAMETERS	MATRIX	UNITS	REPORTING LIMITS
PCBs as Aroclors	Groundwater	µg/L	
Aroclor-1016			0.5
Aroclor-1221			0.5
Aroclor-1232			0.5
Aroclor-1242			0.5
Aroclor-1248			0.5
Aroclor-1254			0.5
Aroclor-1260			0.5
Volatile Organic Compounds	Groundwater	µg/L	
Benzene			0.5
Chlorobenzene			0.5
1,4-Dichlorobenzene			0.5
1,2,4-Trichlorobenzene			0.5

TABLE 12-1
Field And Laboratory Precision and Accuracy Criteria for Groundwater

Parameters	Matrix	Field Precision	Laboratory QC Limits	
Method 8082	Groundwater			
Target Spike Compound			% Recovery	% RPD
Aroclor 1016		50%	23%-139%	50%
Aroclor 1260		50%	36%-134%	50%
Method 8260	Groundwater			
Target Spike Compound			% Recovery	% RPD
Benzene		50%	80%-121%	17%
Chlorobenzene		50%	80%-120%	14%
1,4-Dichlorobenzene		50%	80%-120%	15%
1,2,4-Trichlorobenzene	50%	63%-133%	19%	

Notes:

1. The laboratory QC limits are reassessed on an annual basis based upon actual QC data collected; they may change slightly over the course of the project.