

Data Validation Report

Project:	Regional Groundwater Investigation - NWIRP Bethpage	
Laboratory:	ACCUTEST	
Service Request:	SG5943 (MC23413)	
Analyses/Method:	EPA Method 524.2 for VOCs (GC/MS) Capillary Column	
Validation Level:	Limited	
AECOM Project Number:	60266526.SA.DV	
Prepared by:	Rick Purdy/AECOM	Completed on: 09/13/2013
Reviewed by:	Lori Herberich/AECOM	File Name: SG5943_524.2

SUMMARY

The samples listed below were collected by Resolution Consultants from the Regional Groundwater Investigation - NWIRP Bethpage site on August 8, 2013 and March 15, 2013.

Sample ID	Matrix/Sample Type
TT102D2-GW-080813	Ground water
TRIP BLANK_03152013	Trip Blank

Data validation activities were conducted with reference to *Method 524.2, Measurement Of Purgeable Organic Compounds in Water by Capillary Column Gas Chromatography/Mass Spectrometry* (USEPA, 1995), *USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review* (June 2008), and *Quality Systems Manual (QSM) for Environmental Laboratories, Version 5* (DoD, July 2013). In the absence of method-specific information, laboratory quality control (QC) limits, project-specific requirements and/or professional judgment were used as appropriate.

REVIEW ELEMENTS

The data were evaluated based on the following parameters (where applicable to the method):

- ✓ Data completeness (chain-of-custody (COC))/sample integrity
- ✓ Holding times and sample preservation
- ✓ GC/MS performance checks
- ✓ Initial calibration/continuing calibration verification
- ✓ Laboratory blanks/trip blanks/equipment blanks
- ✓ Surrogate spike recoveries
- NA Matrix spike (MS) and/or matrix spike duplicate (MSD) results
- ✓ Blank Spike (BS) / Blank Spike Duplicate (BSD) results
- NA Field duplicates
- ✓ Internal standards
- ✓ Sample results/reporting issues

The symbol (✓) indicates that no validation qualifiers were applied based on this parameter. NA indicates that the parameter was not included as part of this data set or was not applicable to this validation and therefore not reviewed. The symbol (X) indicates that a QC nonconformance resulted in the qualification of data. Any QC nonconformance that resulted in the qualification of data is discussed below. In addition, nonconformances or other issues that were noted during validation, but did not result in qualification of data, may be discussed for informational purposes only.

The data appear valid as reported and may be used for decision making purposes. There were no data points qualified or rejected on the basis of this data review.

RESULTS

Data Completeness

The data package was reviewed and found to meet acceptance criteria for completeness:

- The COCs were reviewed for completeness of information relevant to the samples and requested analyses, and for signatures indicating transfer of sample custody.
- The laboratory sample login sheet(s) were reviewed for issues potentially affecting sample integrity, including the condition of sample containers upon receipt at the laboratory.
- Completeness of analyses was verified by comparing the reported results to the COC requests.

Holding Times/Sample Preservation

Sample preservation and preparation/analysis holding times were reviewed for conformance with the QC acceptance criteria.

The QC acceptance criteria were met.

GC/MS Performance Checks

The data were reviewed to ensure that the 4-bromofluorobenzene (BFB) tuning was performed at the correct frequency and that the method acceptance criteria were met.

The QC acceptance criteria were met.

Initial Calibration/Continuing Calibration Verification

Calibration data were reviewed for conformance with the QC acceptance criteria to ensure that:

- the initial calibration (ICAL) percent relative standard deviation (%RSD), correlation coefficient (r)/coefficient of determination (r^2), and/or response factor method acceptance criteria were met;
- the continuing calibration verification standard (CCV) method percent difference or percent drift (%Ds) and RF acceptance criteria were met; and
- the retention time method acceptance criteria were met.

The QC acceptance criteria were met.

Laboratory Blanks/Equipment Blanks/Trip Blanks

Laboratory method blanks and trip blanks were evaluated as to whether there were contaminants detected above the method detection limit (MDL).

Data validation qualifications for individual samples are based on the maximum contaminant concentration detected in all associated blanks.

Method, equipment rinsate and trip blank results were reviewed for conformance with the QC acceptance criteria. Sample results were qualified as follows:

For common lab contaminants (methylene chloride, acetone, 2-butanone):

Blank type	Blank result	Sample result	Action for samples
Method, Storage, Field, Trip, or Instrument*	Detects	Not detected	No qualification
	≤ 2x QL	< 2x QL	Report sample QL value with a U
		≥ 2x QL and ≤ 4x the QL	Report the sample result with a U**
		≥ 4x the QL	No qualifications
	> 2x QL	< 2x QL	Report sample QL value with a U
		≥ 2x QL and < blank contamination	Report the sample result with a U
		≥ 2x QL and ≥ blank contamination	If the result is ≤ 2x blank result, report the sample result U.** If the result is > 2x blank result, no qualification is required.**
* Qualifications based on instrument blank results affect only the sample analyzed immediately after the sample that has target compounds that exceed the calibration range or non-target compounds that exceed 100 g/L.			
**Based on professional judgment			

QL (Quantitation Limit) is equivalent to the lowest calibration standard.

Nonconformances are summarized in Attachment A in Table A-1. Qualification of the sample results was not required.

Surrogate Spike Recoveries

The surrogate recoveries (%Rs) were reviewed for conformance with the QC acceptance criteria.

All QC acceptance criteria were met.

MS/MSD Results

MS/MSD analyses were not performed on samples reported in this SDG. There were no validation actions taken on this basis.

BS/BSD Results

The BS/BSD %Rs and/or relative percent recoveries (RPDs) were reviewed for conformance with the QC acceptance criteria.

Data qualification to the analytes associated with the specific LCS %Rs or RPDs was as follows:

Nonconformances ¹	Action	
	Detected Compounds	Nondetected Compounds
%R or RPD > UL	J	No qualification
%R < LL	J	UJ
%R < 20% (see note 1)	J	R
(LL = lower limit, UL = upper limit)		
Notes:		
1. Based on NFG 2008 VOC guidance, professional judgment is used to reject (R) non-detects in all associated samples for any analyte with < 20% recovery. Also, professional judgment is used to estimate (UJ) rather the reject sample results previously negated (U) on the basis of blank contamination.		

1,4-Dioxane showed high recovery in the BSD sample.

Nonconformances are summarized in Attachment A in Table A-2. This compound was not detected in the sample. No data qualification was necessary.

Field Duplicate Results

There were no field duplicate samples submitted with this data set. No validation actions were taken on this basis.

Internal Standard Results

The internal standard (IS) recoveries were reviewed for conformance with the QC acceptance criteria.

All QC acceptance criteria were met.

Sample Results/Reporting Issues

Compounds that were not detected in the sample are reported as undetected (U) at the Limit of Detection (LOD).

Compounds detected at concentrations less than the Limit of Quantitation (LOQ) but greater than the LOD were qualified by the laboratory as estimated (J). This "J" qualifier was retained during data validation.

Any sample that was analyzed at a dilution due to high concentrations of target or non-target compounds or matrix interferences was checked to ensure that the results and/or sample specific QLs were adjusted accordingly by the laboratory.

QUALIFICATION ACTIONS

No sample results were qualified as a result of this data review.

ATTACHMENTS

Attachment A: Nonconformance Summary Tables

Attachment B: Qualifier Codes and Explanations

Attachment C: Reason Codes and Explanations

Attachment A**Non Conformance Summary Tables****Table A-1 - Field Blanks**

Blank ID	Compound	Result	QL	Units	Associated Samples
TRIP BLANK_03152013	METHYLENE CHLORIDE	1.2	0.50	UG/L	TT102D2-GW-080813

Table A-2 - BS/BSD Samples

BS/BSD ID	Compound	BS %R	BSD %R	LL	UL	RPD	RPD Limit	Associated Samples
T31064	1,4-DIOXANE		139	70	130		30	TT102D2-GW-080813 TRIP BLANK_03152013

Attachment B
Qualifier Codes and Explanations

Qualifier	Explanation
J	The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.
UJ	The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.
U	The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
R	The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence or absence of the analyte cannot be verified.

SG5943

CHAIN OF CUSTODY
Accutest Laboratories of New England
495 Technology Center West, Building One
TEL: 508-481-6200 FAX: 508-481-7753
www.acctest.com



Client / Reporting Information		Project Information		Requested Analysis (see TEST CODE sheet)		Matrix Codes	
Company Name Resolution Consultants	Project Name NATIP Bethpage	Company Name Bethpage	Project ID# 60266526 FI.WF			PW - Drinking Water GW - Ground Water WW - Water SW - Surface Water SO - Soil SL - Sludge SED - Sediment OI - Oil LIQ - Other Liquid AIR - Air SOL - Other Solid WP - Wagon FB - Field Blank EB - Equipment Blank RB - Rinsate Blank TB - Trip Blank	
Street Address 100 Red Schoolhouse Rd.	City Bethpage	State NY	Zip 11717	Billing Information (if different from Report to)			
City Chesham, NY	Project Contact Eileen Nivander	Street Address 60266526	City Chesham, NY	State NY	Zip 11717		
Phone # 815-435-4460	Project Manager Michael Zobel	City Chesham, NY	State NY	Zip 11717	City Chesham, NY	State NY	Zip 11717
Field ID / Point of Collection -1 TT102D2-GW-080713	Matrix # of Tests 3	Sampled By MZ	Date 8-8-13	Time 12:00	Number of preserved Bases 3		
Field ID / Point of Collection -2 Trib Blank	Matrix # of Tests 2	Sampled By -	Date 3-15-13	Time 14:45	Number of preserved Bases 2		
LAB USE ONLY							
Turnaround Time (Business days) <input type="checkbox"/> Std. 10 Business Days <input type="checkbox"/> Std. 5 Business Days (By Contract only) <input type="checkbox"/> 5 Day RUSH <input type="checkbox"/> 3 Day EMERGENCY <input type="checkbox"/> 2 Day EMERGENCY <input type="checkbox"/> 1 Day EMERGENCY Emergency & Rush T/A data available via LabLink							
Approved By (Acupal PM): Date: <input type="checkbox"/> Commercial "A" (Level 1) <input type="checkbox"/> Commercial "B" (Level 2) <input type="checkbox"/> FULLT1 (Level 3+4) <input type="checkbox"/> CT RCP <input type="checkbox"/> MA MCP Commercial "A" - Results Only Commercial "B" - Results + QC Summary							
Data Deliverable Information <input type="checkbox"/> NYASP Category A <input type="checkbox"/> NYASP Category B <input type="checkbox"/> State Forms <input type="checkbox"/> EDD Format <input type="checkbox"/> Other _____							
Comments / Special Instructions Sample Custody must be documented below each time samples change possession, including courier delivery. Relinquished by: Michael Zobel Date Time: 8-8-13 1300 Relinquished by: Fedex Date Time: 8-9-13 1300 Relinquished by: Fedex Date Time: 8-9-13 1300 Relinquished by: Fedex Date Time: 8-9-13 1300							
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Report of Analysis

Page 1 of 2

Client Sample ID: TT102D2-GW-080813	Date Sampled: 08/08/13
Lab Sample ID: MC23413-1	Date Received: 08/09/13
Matrix: AQ - Ground Water	Percent Solids: n/a
Method: EPA 524.2 REV 4.1	
Project: RCNYCR: NWIRP Bethpage, NY	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	T31081.D	1	08/15/13	JM	n/a	n/a	MST1082
Run #2							

Run #	Purge Volume
Run #1	5.0 ml
Run #2	

VOA List

CAS No.	Compound	Result	LOQ	LOD	Units	Q
67-64-1	Acetone	0.50 U	5.0	0.50	ug/l	
78-93-3	2-Butanone	0.25 U	0.50	0.25	ug/l	
71-43-2	Benzene	0.25 U	0.50	0.25	ug/l	
108-86-1	Bromobenzene	0.25 U	0.50	0.25	ug/l	
74-97-5	Bromochloromethane	0.25 U	0.50	0.25	ug/l	
75-27-4	Bromodichloromethane	0.25 U	0.50	0.25	ug/l	
75-25-2	Bromoform	0.25 U	0.50	0.25	ug/l	
74-83-9	Bromomethane	0.50 U	0.50	0.50	ug/l	
104-51-8	n-Butylbenzene	0.25 U	0.50	0.25	ug/l	
135-98-8	sec-Butylbenzene	0.25 U	0.50	0.25	ug/l	
98-06-6	tert-Butylbenzene	0.25 U	0.50	0.25	ug/l	
75-15-0	Carbon disulfide	0.25 U	0.50	0.25	ug/l	
108-90-7	Chlorobenzene	0.25 U	0.50	0.25	ug/l	
75-00-3	Chloroethane	0.50 U	0.50	0.50	ug/l	
67-66-3	Chloroform	0.25 U	0.50	0.25	ug/l	
74-87-3	Chloromethane	0.50 U	0.50	0.50	ug/l	
95-49-8	o-Chlorotoluene	0.25 U	0.50	0.25	ug/l	
106-43-4	p-Chlorotoluene	0.25 U	0.50	0.25	ug/l	
56-23-5	Carbon tetrachloride	0.25 U	0.50	0.25	ug/l	
75-34-3	1,1-Dichloroethane	0.25 U	0.50	0.25	ug/l	
75-35-4	1,1-Dichloroethylene	0.25 U	0.50	0.25	ug/l	
563-58-6	1,1-Dichloropropene	0.25 U	0.50	0.25	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	0.50 U	0.50	0.50	ug/l	
106-93-4	1,2-Dibromoethane	0.25 U	0.50	0.25	ug/l	
107-06-2	1,2-Dichloroethane	0.25 U	0.50	0.25	ug/l	
78-87-5	1,2-Dichloropropane	0.25 U	0.50	0.25	ug/l	
142-28-9	1,3-Dichloropropane	0.25 U	0.50	0.25	ug/l	
594-20-7	2,2-Dichloropropane	0.25 U	0.50	0.25	ug/l	
124-48-1	Dibromochloromethane	0.25 U	0.50	0.25	ug/l	
74-95-3	Dibromomethane	0.25 U	0.50	0.25	ug/l	
75-71-8	Dichlorodifluoromethane	0.50 U	0.50	0.50	ug/l	
10061-01-5	cis-1,3-Dichloropropene	0.25 U	0.50	0.25	ug/l	

U = Not detected LOD - Limit of Detection
 LOQ = Limit of Quantitation
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: TT102D2-GW-080813	Date Sampled: 08/08/13
Lab Sample ID: MC23413-1	Date Received: 08/09/13
Matrix: AQ - Ground Water	Percent Solids: n/a
Method: EPA 524.2 REV 4.1	
Project: RCNYCR: NWIRP Bethpage, NY	

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VOA List

CAS No.	Compound	Result	LOQ	LOD	Units	Q
541-73-1	m-Dichlorobenzene	0.25 U	0.50	0.25	ug/l	
95-50-1	o-Dichlorobenzene	0.25 U	0.50	0.25	ug/l	
106-46-7	p-Dichlorobenzene	0.25 U	0.50	0.25	ug/l	
156-60-5	trans-1,2-Dichloroethylene	0.50 U	0.50	0.50	ug/l	
156-59-2	cis-1,2-Dichloroethylene	0.25 U	0.50	0.25	ug/l	
10061-02-6	trans-1,3-Dichloropropene	0.25 U	0.50	0.25	ug/l	
123-91-1	1,4-Dioxane	25 U	25	25	ug/l	
100-41-4	Ethylbenzene	0.25 U	0.50	0.25	ug/l	
87-68-3	Hexachlorobutadiene	0.25 U	0.50	0.25	ug/l	
591-78-6	2-Hexanone	0.50 U	0.50	0.50	ug/l	
98-82-8	Isopropylbenzene	0.25 U	0.50	0.25	ug/l	
99-87-6	p-Isopropyltoluene	0.25 U	0.50	0.25	ug/l	
75-09-2	Methylene chloride	0.25 U	0.50	0.25	ug/l	
1634-04-4	Methyl Tert Butyl Ether	0.25 U	0.50	0.25	ug/l	
108-10-1	4-Methyl-2-pentanone	0.50 U	0.50	0.50	ug/l	
91-20-3	Naphthalene	0.25 U	0.50	0.25	ug/l	
103-65-1	n-Propylbenzene	0.25 U	0.50	0.25	ug/l	
100-42-5	Styrene	0.25 U	0.50	0.25	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	0.25 U	0.50	0.25	ug/l	
71-55-6	1,1,1-Trichloroethane	0.25 U	0.50	0.25	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	0.25 U	0.50	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	0.25 U	0.50	0.25	ug/l	
87-61-6	1,2,3-Trichlorobenzene	0.25 U	0.50	0.25	ug/l	
96-18-4	1,2,3-Trichloropropane	0.25 U	0.50	0.25	ug/l	
120-82-1	1,2,4-Trichlorobenzene	0.25 U	0.50	0.25	ug/l	
95-63-6	1,2,4-Trimethylbenzene	0.25 U	0.50	0.25	ug/l	
108-67-8	1,3,5-Trimethylbenzene	0.25 U	0.50	0.25	ug/l	
127-18-4	Tetrachloroethylene	0.25 U	0.50	0.25	ug/l	
108-88-3	Toluene	0.25 U	0.50	0.25	ug/l	
79-01-6	Trichloroethylene	0.25 U	0.50	0.25	ug/l	
75-69-4	Trichlorofluoromethane	0.25 U	0.50	0.25	ug/l	
75-01-4	Vinyl chloride	0.25 U	0.50	0.25	ug/l	
	m,p-Xylene	0.50 U	0.50	0.50	ug/l	
95-47-6	o-Xylene	0.25 U	0.50	0.25	ug/l	
1330-20-7	Xylenes (total)	0.25 U	0.50	0.25	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2199-69-1	1,2-Dichlorobenzene-d4	96%		70-130%
460-00-4	4-Bromofluorobenzene	95%		70-130%

U = Not detected LOD - Limit of Detection
 LOQ = Limit of Quantitation
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

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Report of Analysis

Page 1 of 2

Client Sample ID: TRIP BLANK	Date Sampled: 03/15/13
Lab Sample ID: MC23413-2	Date Received: 08/09/13
Matrix: AQ - Trip Blank Water	Percent Solids: n/a
Method: EPA 524.2 REV 4.1	
Project: RCNYCR: NWIRP Bethpage, NY	

Run #1	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	T31067.D	1	08/15/13	JM	n/a	n/a	MST1082
Run #2							

Run #1	Purge Volume
Run #1	5.0 ml
Run #2	

VOA List

CAS No.	Compound	Result	LOQ	LOD	Units	Q
67-64-1	Acetone	0.50 U	5.0	0.50	ug/l	
78-93-3	2-Butanone	0.25 U	0.50	0.25	ug/l	
71-43-2	Benzene	0.25 U	0.50	0.25	ug/l	
108-86-1	Bromobenzene	0.25 U	0.50	0.25	ug/l	
74-97-5	Bromochloromethane	0.25 U	0.50	0.25	ug/l	
75-27-4	Bromodichloromethane	0.25 U	0.50	0.25	ug/l	
75-25-2	Bromoform	0.25 U	0.50	0.25	ug/l	
74-83-9	Bromomethane	0.50 U	0.50	0.50	ug/l	
104-51-8	n-Butylbenzene	0.25 U	0.50	0.25	ug/l	
135-98-8	sec-Butylbenzene	0.25 U	0.50	0.25	ug/l	
98-06-6	tert-Butylbenzene	0.25 U	0.50	0.25	ug/l	
75-15-0	Carbon disulfide	0.25 U	0.50	0.25	ug/l	
108-90-7	Chlorobenzene	0.25 U	0.50	0.25	ug/l	
75-00-3	Chloroethane	0.50 U	0.50	0.50	ug/l	
67-66-3	Chloroform	0.25 U	0.50	0.25	ug/l	
74-87-3	Chloromethane	0.50 U	0.50	0.50	ug/l	
95-49-8	o-Chlorotoluene	0.25 U	0.50	0.25	ug/l	
106-43-4	p-Chlorotoluene	0.25 U	0.50	0.25	ug/l	
56-23-5	Carbon tetrachloride	0.25 U	0.50	0.25	ug/l	
75-34-3	1,1-Dichloroethane	0.25 U	0.50	0.25	ug/l	
75-35-4	1,1-Dichloroethylene	0.25 U	0.50	0.25	ug/l	
563-58-6	1,1-Dichloropropene	0.25 U	0.50	0.25	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	0.50 U	0.50	0.50	ug/l	
106-93-4	1,2-Dibromoethane	0.25 U	0.50	0.25	ug/l	
107-06-2	1,2-Dichloroethane	0.25 U	0.50	0.25	ug/l	
78-87-5	1,2-Dichloropropane	0.25 U	0.50	0.25	ug/l	
142-28-9	1,3-Dichloropropane	0.25 U	0.50	0.25	ug/l	
594-20-7	2,2-Dichloropropane	0.25 U	0.50	0.25	ug/l	
124-48-1	Dibromochloromethane	0.25 U	0.50	0.25	ug/l	
74-95-3	Dibromomethane	0.25 U	0.50	0.25	ug/l	
75-71-8	Dichlorodifluoromethane	0.50 U	0.50	0.50	ug/l	
10061-01-5	cis-1,3-Dichloropropene	0.25 U	0.50	0.25	ug/l	

U = Not detected LOD - Limit of Detection
 LOQ = Limit of Quantitation
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J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	TRIP BLANK	Date Sampled:	03/15/13
Lab Sample ID:	MC23413-2	Date Received:	08/09/13
Matrix:	AQ - Trip Blank Water	Percent Solids:	n/a
Method:	EPA 524.2 REV 4.1		
Project:	RCNYCR: NWIRP Bethpage, NY		

VOA List

CAS No.	Compound	Result	LOQ	LOD	Units	Q
541-73-1	m-Dichlorobenzene	0.25 U	0.50	0.25	ug/l	
95-50-1	o-Dichlorobenzene	0.25 U	0.50	0.25	ug/l	
106-46-7	p-Dichlorobenzene	0.25 U	0.50	0.25	ug/l	
156-60-5	trans-1,2-Dichloroethylene	0.50 U	0.50	0.50	ug/l	
156-59-2	cis-1,2-Dichloroethylene	0.25 U	0.50	0.25	ug/l	
10061-02-6	trans-1,3-Dichloropropene	0.25 U	0.50	0.25	ug/l	
123-91-1	1,4-Dioxane	25 U	25	25	ug/l	
100-41-4	Ethylbenzene	0.25 U	0.50	0.25	ug/l	
87-68-3	Hexachlorobutadiene	0.25 U	0.50	0.25	ug/l	
591-78-6	2-Hexanone	0.50 U	0.50	0.50	ug/l	
98-82-8	Isopropylbenzene	0.25 U	0.50	0.25	ug/l	
99-87-6	p-Isopropyltoluene	0.25 U	0.50	0.25	ug/l	
75-09-2	Methylene chloride	1.2	0.50	0.25	ug/l	
1634-04-4	Methyl Tert Butyl Ether	0.25 U	0.50	0.25	ug/l	
108-10-1	4-Methyl-2-pentanone	0.50 U	0.50	0.50	ug/l	
91-20-3	Naphthalene	0.25 U	0.50	0.25	ug/l	
103-65-1	n-Propylbenzene	0.25 U	0.50	0.25	ug/l	
100-42-5	Styrene	0.25 U	0.50	0.25	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	0.25 U	0.50	0.25	ug/l	
71-55-6	1,1,1-Trichloroethane	0.25 U	0.50	0.25	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	0.25 U	0.50	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	0.25 U	0.50	0.25	ug/l	
87-61-6	1,2,3-Trichlorobenzene	0.25 U	0.50	0.25	ug/l	
96-18-4	1,2,3-Trichloropropane	0.25 U	0.50	0.25	ug/l	
120-82-1	1,2,4-Trichlorobenzene	0.25 U	0.50	0.25	ug/l	
95-63-6	1,2,4-Trimethylbenzene	0.25 U	0.50	0.25	ug/l	
108-67-8	1,3,5-Trimethylbenzene	0.25 U	0.50	0.25	ug/l	
127-18-4	Tetrachloroethylene	0.25 U	0.50	0.25	ug/l	
108-88-3	Toluene	0.25 U	0.50	0.25	ug/l	
79-01-6	Trichloroethylene	0.25 U	0.50	0.25	ug/l	
75-69-4	Trichlorofluoromethane	0.25 U	0.50	0.25	ug/l	
75-01-4	Vinyl chloride	0.25 U	0.50	0.25	ug/l	
	m,p-Xylene	0.50 U	0.50	0.50	ug/l	
95-47-6	o-Xylene	0.25 U	0.50	0.25	ug/l	
1330-20-7	Xylenes (total)	0.25 U	0.50	0.25	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2199-69-1	1,2-Dichlorobenzene-d4	95%		70-130%
460-00-4	4-Bromofluorobenzene	98%		70-130%

U = Not detected LOD - Limit of Detection
 LOQ = Limit of Quantitation
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound